

BERKSHIRE PLANTS

an

Update of the Flora of Berkshire 2005-2014

by

MICHAEL J. CRAWLEY FRS

SILWOOD PARK
ASCOT
BERKS
SL5 7PY

PLEASE SEND RECORDS, COMMENTS AND CORRECTIONS TO

m.crawley@imperial.ac.uk

LYCOPODIACEAE

Huperzia selago (L.) Bernh. ex Schrank and Mart. *Fir Clubmoss* chh 6 †
Lycopodium selago L.

Extinct bog plant. A rare component of the *Erica tetralix-Sphagnum compactum* wet heath.
 NVC: M16

Its loss may have been due to drainage and habitat destruction, but it might be that long-term warming and reduced rainfall caused its demise, because several other species from *Erica tetralix* wet heath have declined, even in well managed nature reserves (e.g. *Myrica gale*, *Rhynchospora alba*, *Eriophorum vaginatum*, *Pinguicula vulgaris*, *Genista anglica*).

East Berks: no records from the heaths on the Bagshot Sands.

West Berks: very local in the Kennet Valley; recorded by Dr Beeke from Ufton Common [66] and Snelsmore Common [47] in 1806 and 1810 respectively, but never seen again.

Lycopodiella inundata (L.) Holub *Marsh Clubmoss* chh 6 ↓
Lycopodium inundatum L.

A short-lived perennial of bare peaty, silty or sandy areas on mires and heaths, lake margins and clay pits; submerged in winter but drying out in summer. Often associated with *Molinia caerulea*, *Erica tetralix*, *Drosera* spp., *Sphagnum compactum* and *S. tenellum*, the branches remain evergreen for 2 years. Much reduced by drainage. An early successional species of acid, nutrient-poor soils, relying on repeated disturbance for its persistence. Sensitive to eutrophication.
 NVC: M16

Ascot: Virginia Water (1805). The most recent records are from Tower Hill pits (1974), Dukeshill Golf Course (1984) and Swinley pits (1999).

East Berks: bare marshy spots on peaty heaths on Bagshot Heath (1696), Finchampstead (1893), Wokingham Heath (1897), Wellington College and Penny Hill [8865] (1951). Formerly abundant on bare pieces of peaty soil both north and south of Wellington College (now Crowthorne) Station. Last seen in Wellington College [8263] in 1965 and in Bracknell Forest [907651] in 1984. Atlas 2000: [86]

West Berks: several early nineteenth century records from the acid heaths of Inkpen Common [36], Greenham Common [46], Snelsmore Common [47], Ufton Common [66], but no post-1900 records.

Lycopodium clavatum L. *Stag's-horn Clubmoss* chh 6 †
Lepidotis clavata (L.) P. Beauv.

Probably extinct. On acid soil in woods and on bare heathy ground.

Ascot: Virginia Water; plants last seen in 1967.

East Berks: Lord Ball's Chapel on Bagshot Heath (1696), but this site may be in Surrey.

West Berks: the Elcot [36] record was pre-1897. Fence Wood [57] plants last seen in 1957.

SELAGINELLACEAE

Selaginella kraussiana (Kunze) A. Braun *Krauss's Clubmoss* ● chh 6
Lycopodium kraussianum Kunze

An ornamental plant, used as ground cover in conservatories and greenhouses

Silwood Park: a persistent, but fluctuating population on bare soil beneath *Amaryllis* at the base of the outside west wall of the Conservatory. The patch has persisted since before 1972, despite occasional weeding by over-enthusiastic gardeners. Survived restoration of the Conservatory roof in April 1996 but only just. Fully recovered by summer 2000. Formerly a weed of the beds inside the Conservatory, but suffered greatly during the years when the conservatory was empty and un-watered (1994-6). Atlas 2000: [96]

West Berks: a weed in glasshouses at Wyld Court [57] in 1967, and on a gravel path in Newbury [46] in 1971.

EQUISETACEAE

Equisetum hyemale L. *Rough Horsetail* grh 7
Hippochaete hyemalis (L.) Bruhin

East Berks: planted at Reading University and spreading on gravel paths (1964-68). Not seen since 1980.

Equisetum variegatum Schleich. ex F. Weber and D. Mohr *Variegated Horsetail* grh 5

A local speciality of calcareous springs, here growing a long way from its native stronghold in South Wales, and more than 100km away from any other sites. A winter-green plant with slender, perennial shoots on which last year's cones persist. The cones are apiculate (not rounded) at the apex. The teeth of the leaf sheaths have broad scarios margins, which are much wider than the black centres, giving the whole shoot a characteristic black-and-white striped appearance at each node. The stems are short (less than 20cm), and emerge from the water (or the moss) at a shallow angle (closer to prostrate than erect).

West Berks: "locally abundant on wet limestone in Cothill pit" [49] (OXF). First recorded by E.G. Arthurs and E.F. Warburg in 1959. This is one of the species singled out for mention in the SSSI declaration for Dry Sandford Pit (= Cothill pit). Still there on 24 November 2002, when it was occasional as scattered shoots in clear shallow water of calcareous springs (growing with the rare stonewort *Chara hispida*; Plate 16), and amongst marginal, lime-encrusted mosses (*Palustriella commutata*). Certainly not "locally abundant", yet found in several of the springs in full sun, but absent from shade in nearby *Phragmites* or *Schoenus nigricans* fen.

Equisetum fluviatile L. *Water Horsetail* hel 6
Equisetum limosum L

Rivers, ponds, ditches, slow streams, old gravel pits, water meads, ferruginous swamps and alder carrs, usually rooting under water and preferring still water. Locally abundant but absent from the Chalk and the Northern Clays.

NVC: A 8-10,22; M 13,22,27; OV 26,29,32; S 3-6,8,10,12,19,25,26,28; W 1,4,5

Ascot: Sunningwell Bog, locally frequent in ferruginous willow carr, in standing water beneath *Salix cinerea*, east of Bog Lane growing with frequent *Carex curta*, and in the wettest parts of the sunny *Juncus effusus* mire. Uncommon in the main ditch on the southern side of the A322, half way between Bracknell and Bagshot [896654] in May 2002. It is curious that the plant does not grow in Silwood Park, because the ferruginous swamp of Cascade Marsh looks like ideal habitat, and the plant is found just 1km upstream in the swampy remnants of Sunningwell Bog below St George's School [927683]. Occasional by the stream in the north-eastern corner of South Ascot Bog [928676], growing with *Hydrocotyle vulgaris* and *Molinia*.

East Berks: Bulmarsh, Sonning, Wargrave, Bisham, Old Windsor, Windsor Great Park, Coleman's Moor, Bracknell, Blackwater, Bagshot, Upper Lake at Sandhurst, Finchampstead. Moor Green Lakes nature reserve [8062] in 2001. The best and most accessible population is in alder carr adjacent to the boardwalk through Longmoor Bog at the western end of California Country Park, where it grows with abundant *Carex curta*. 2% (1km²). Atlas 2000: [76], [77], [78], [86], [88], [97]

West Berks: occasional around Wytham in the northern loop of the Thames [40, 50] and in the south-west [36, 47, 56, etc]. Particularly common on the wayside up to Wytham Wood [470086] and in Kennington Pond [519033] in 2002. Atlas 2000: all except [48], [68].

Equisetum x litorale Kühlew. ex Rupr. = **E. fluviatile x E. arvense** *Shore Horsetail*

Recorded by Druce from Cothill [49] in 1924 without a specimen

Equisetum arvense L. *Field Horsetail*

grh 4

Cultivated and waste ground, damp roadsides, gardens, allotments, railway banks and sidings. Abundant throughout. Hedge-banks, arable fields, gardens, railway tracks and waste ground. Also in the drier parts of *Salix cinerea* woodland. Frequent, but absent from the chalk ridge. Host to the beetles *Hippuriphila modeeri* and *Grypus equiseti*. Told from sterile *E. palustre* by the stem ridges: ignoring the edges there are 4 or 5 (not 3) clear ridges.

NVC: M 27; MG 4,10; OV 9,33; S 18,23; W 6,24

Silwood Park: the largest patch was between the gate onto Church Lane footpath, and the end of the track between Pond Field and Herons Brook Meadow. This population declined almost to extinction by 2002. An abundant weed in Silwood Park Nurseries. Also locally frequent in wet grassland. Occasional as a weed of arable land as at Pound Hill and Silwood Bottom (especially the northern half). Wet ground in Water Meadow West and Heronsbrook Meadow (e.g. in the NutNet plots in 2008).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	12

East Berks: 51% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Equisetum sylvaticum L. *Wood Horsetail*
Equisetum capillare Hoffm.

grh 4

Shady woods, damp heathy places. By streams and ferruginous swamps in oak and alder woods.
NVC: W6

Ascot: Windsor Great Park, locally dominant at the streamside on Breakheart Hill, by the road up the edge of Valley Gardens from Johnson's Pond up to Smiths Lawn. Not in Silwood Park.

East Berks: Bear Wood, Arborfield, Finchampstead and Sandhurst. <1% (1km²). Atlas 2000: [76], [96], [97]

West Berks: scattered but absent from calcareous soils in central Berks. Greenham Common [46], Boxford [47], Childswell [40], Goldfinch Bottom [56], Bagley Wood [50], Silchester [66]. Atlas 2000: [46], [40], [56], [50], [66]

Equisetum palustre L. *Marsh Horsetail*

grh 5

Marshy and boggy places, river banks, etc. By streams, in water meadows, marshes, fens and sometimes in *Sphagnum* bogs. Locally frequent but absent from the chalk. Often growing with *E. arvense*, from which sterile material is told by the stem ridges: ignoring the edges there are 3 (not 4 or 5) clear ridges.

NVC: M 13,22,24,27; MG 10; OV 26; S 4-7,16,18,25,26; W 1,4-6

Silwood Park: local and uncommon in wet grassland and woodland. Amongst *Lysimachia vulgaris* and *Carex acutiformis* in Cascade Marsh and at the edge of The Lake.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	2

East Berks: Sonning Meadows very fine, Coleman's Moor, Wokingham, Bracknell, Wellington College, Easthampstead, Bray, Waltham, Shottesbrooke, Cookham. Windsor Park, Virginia Water. With *Eriophorum angustifolium* in the *Myrica* bog at Mill Pond in Bracknell Forest [888654] in May 2004. 2% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet Valleys. In the spring at Dry Sandford Pit with *E. variegatum* (1979-2004). Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all squares

Equisetum telmateia Ehrh. *Great Horsetail*

grh 4

Equisetum fluviatile sensu L.(1754), non L.(1753)

Equisetum maximum

Wet shady places, swampy woods, marshes, springs, hedges, etc. Often with *Carex otrubae*.

NVC: S 18; W 5

Ascot: local and rare in Windsor Great Park, as by the pond in the wood to the west of The Village [953725]. Not in Silwood Park.

East Berks: locally common but absent from considerable areas. Ashley Hill and Bowsey Hill, Lindenhill Wood, Wokingham and Bracknell. Locally frequent at the western edge of the new car park at Dell Computers at Amen Corner in Bracknell [8469] in September 2004. < 1% (1km²). Atlas 2000: [76], [77], [87], [88], [97]

West Berks: widespread, but uncommon: locally abundant in wet places in parkland and woodland as at Compton Beauchamp [28], Badbury Hill and Little Coxwell [29], Kingston Lisle [38], Buckland [39], Benham Park [46], Chawley Brick Pit [4704], Hinksey and Foxcombe Hill [40], Crookham Common [56], South Hinksey [50]. The plant is seen at its most luxuriant in the roadside ditches on the way up from Wytham to Wytham Woods, just east of Keepers Cottage [469086]. Atlas 2000: [28], [29], [38], [39], [46], [40], [56], [59], [50]

OPHIOGLOSSACEAE

Ophioglossum vulgatum L. *Adder's-tongue*

grh 5 ↓

Water meadows, pastures, roadsides and damp grassy rides in woods; more rarely in dry grassland and lawns.

NVC: M 22; MG 5

Silwood Park: very rare in Garden Wood. Unintentionally introduced with turfs dug up to save the orchids from Crown Wood, Bracknell, in February 1981 during the construction of Martin's Heron housing development. Two fine plants with spores 6 June 1981, in a fenced part of the clearing by South Gravel. Extinct following clearance of the site for the construction of the TTC car park in 1987.

Ascot: once plentiful in Windsor Great Park, now much reduced. Still in ancient grasslands close to the Copper Horse and in Stag Meadow. The best place to guarantee to see the plant is in the damp grass at the roadside on Heartbreak Hill below the western edge of Valley Gardens. There were hundreds of plants on 30 May with *Listera ovata* beneath Bracken after the very late spring of 2013 at the northern apex of the Swinley Triangle on Ascot Heath [92249 70052].

East Berks: Wellington College, Bisham, Twyford, Park Place, Quarry Wood, Crazies Hill, Easthampstead, Virginia Water. Red Lodge, Swinley, Ashley Hill, Great Wood, Waltham, Finchampstead, Tidmarsh, Bracknell, Reading, Whiteknights Park. 1% (1km²). Atlas 2000: all squares

West Berks: widespread and occasional throughout, but rare or absent from Lambourn Downs and the Vale of the White Horse. Most frequent in the north-west [29], as around Watchfield, Coleshill, Brimstone Farm, Buscot and Eaton Hastings. A classic site is in the Thames-side Fritillary meadow at Grafton Lock [272988] where there are groups of *c.*20 plants in most years. In the western meadow on Long Leys Farm west of Cumnor [442045] in June 2002. Occasional in damper parts of the old airfield on Greenham Common [46]. Atlas 2000: all but [37], [47], [48], [66], [68], [69]

Botrychium lunaria (L.) Sw. *Moonwort*
Osmunda lunaria L.

grh 6 ↓

Dry grassy pastures and heaths on acid soil. Often under bracken. Rarely in lawn turf.

Ascot: a single plant survived for many years (1979-1995) in the lawn at John Brady's house, 24 Woodlands Ride [9167]; a garage has now been built on the site.

East Berks: very local and rare. Wellington College until 1928 (RNG). Atlas 2000: [86], [96]

West Berks: very rare, recorded in 1666 by Merrett from "Blind-Pinnocks" near Cumnor [40]. Wood, west of Downe House in 1964 [57], Radley Park in 1910 [59], Mortimer Common in 1950 [66]. Atlas 2000: [57], [66]

OSMUNDACEAE

Osmunda regalis L. *Royal Fern*
Struthiopteris regalis (L.) Bernh.

h 6

Ditches in Pine plantations on the Crown Estates, boggy spots in shady woods, and in *Molinia* mires. Rarely established in ditches by gardens.

NVC: M 25; W 5

Silwood Park: a fine clump by the pond in the Japanese Garden since before 1970, no doubt planted. In the ditch by Titness Park on Blacknest Road, much less likely to have been planted, but possibly a garden outcast.

Ascot: “in great abundance at the end of Sunninghill Heath in a ditch on the right hand going to Bracknell” (Lightfoot ms). Very local and rare on the northern and southern shores of Virginia Water and by Johnson’s Pond in June 2003. Swinley Brick Pits [903668], Buttersteep, Blane’s Allotment, Sunninghill, Sunninghill Park, Sunningdale Park, Frostfarm Plantation [9668], Tower Hill. Local and rare by the stream through the north-east corner of South Ascot Bog [928676] in May 2003. On the edges of Sole’s Pond east of Ascot Station 1979-2004.

East Berks: Coleman’s Moor (**OXF**), Finchampstead, Crowthorne, Owlsmoor, Lily Hill Park, Wildmoor Heath [838625]. 1% (1km²). Atlas 2000: [86], [96], [97]

West Berks: Woolstone [28], Youlbury [40], Foxhold [56], Fence Wood (**OXF**), Stanford Dingley [57]. By the pond at the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [28], [40], [56], [57]

¶ **Osmunda** *O. regalis* ‘Purpurascens’

ADIANTACEAE

Adiantum capillus-veneris L. *Maidenhair Fern*

• h 5

On damp mortared walls. Common as a weed inside greenhouses, but rare on walls outside.

Silwood Park: on east-facing brickwork of a greenhouse, low enough on the wall to be protected from desiccation by plants like *Briza maxima* growing on the cinder pot stand. It has been there since before 1979 but was not seen in 2006 or 2007. A common weed inside the derelict greenhouses in 2007 but declined in the conservatory of the Manor House. Much declined in the derelict greenhouses, but hanging on in a few places on interior brickwork; gone from outside on 26 January 2010

East Berks: walls in Reading. Long known from brickwork on the upstream face of Sonning Bridge over the R. Thames (1963); still there [755757] in 2004 with *Asplenium ruta-muraria* and abundant *Cymbalaria muralis*. < 1% (1km²). Atlas 2000: [77], [96], [97]

West Berks: locally frequent on the high, north-facing brick wall of the railway in Hungerford town centre [338686] (1979-2006) where the celebrated *Pilosella praealta* grows. The plant was particularly frequent all along the wall on 23 September 2006, but *Pilosella praealta* was much reduced. Also at Wyld Court [57] and Radley College [59]. Atlas 2000: [36], [57], [59]

Adiantum pedatum L. *Five-fingered Maidenhair Fern*

• h 5

Ascot: very rare (**RNG**) garden escape. On a small bridge close to the Surrey border on the north side of Virginia Water (1969).

PTERIDACEAE

Pteris cretica L. *Ribbon Fern*

• grh 6 ↓

East Berks: introduced on damp walls on Reading Town Hall (1963) and on walls and gravel paths outside a greenhouse at Reading University (1987).

MARSILEACEAE

Pilularia globulifera L. *Pillwort*

hel 6 ↓

Moist spots on heaths and gravelly margins of ponds in heathy situations. Scarce: A lowland fern of silty and peaty pond margins, and shallow pans and pools resulting from brick-earth or gravel extraction. An early successional species, soon lost when overtopped by more vigorous plant species. Often found with *Apium inundatum*, *Hydrocotyle vulgaris*, *Ranunculus flammula* and *Samolus valerandi*.

NVC: M 29; OV 35

East Berks: a local speciality of the Crowthorne Lake District. First recorded from a pond near Wellington College (OXF, 1891). Acid ponds, abundant at South Lake [752723] in 1968 (RDG), but not seen since. Its only surviving stations are at Heath Lake, Crowthorne [828652] and at several spots in Moor Green Lakes [8153 6229], [8086 6250], [8092 6226], [8091 6246] and [8090 6219] on Colebrook Lakes and Grove Lake in 2001.

West Berks: no records.

¶ **Pilularia** *P. globulifera*

POLYPODIACEAE

Polypodium vulgare L. *Polypody*

grh 4

Ctenopteris vulgaris (L.) Newman

Old walls, rare. Small ferns (10-25cm long) with coarse, thick, rigid texture (erect rather than arching fronds) typical of acid rocky substrates. The basal third of the frond is parallel sided (not tapering as a result of progressively shorter pinnae towards the base). The sori are reddish brown to bright orange, and contrast with the abundant yellow spores. The mean number of indurated cells of the annulus (stripes of thick-walled cells in the annulus making “rungs of a ladder”) ranges between 10 and 14 (not 7-9).

Silwood Park: planted as ground cover in Cannon Woods as part of the TTC landscaping in 1988, but suffered badly in the consecutive dry summers of 1995 and 1996. Still there, but rare in 2000.

Ascot: no records.

East Berks: common in the south-west but absent from east. Beech Hill, Spencer’s Wood, Riseley, Swallowfield, Sandpit Lane, The Leas, Barkham Manor, Fleet Copse, Rectory Farm, South Charvil, Heath Pond, Chapel Green, Ravenswood, Gardener’s Green, Pine Wood, Bisham Abbey, Dial Close. On riverside stonework at Boulter’s Lock. 4% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: widespread but uncommon; rare or absent from Lambourn Downs and the Vale of the White Horse. Atlas 2000: all but [48], [68], [69]

Polypodium x mantoniae Rothm. *Manton's Polypody* = **P. interjectum x P. vulgare**

Intermediate between the parents and usually highly sterile. In Berkshire the fronds are c.27cm long and have a narrower outline than *P. interjectum* with more nearly parallel sides towards the base, but the basal pinnae are noticeably shorter than the pinnae immediately above them. The mean number of "rungs of the ladder" is 9 or 10 but the range is from 8 to 12. The spores are empty.

West Berks: Kingston Bagpuize [4098]. Abundant on old limestone walls, as at Cothill [4699], Kingston Bagpuize [4098] and Sunningwell [4900].

Polypodium interjectum Shivas *Intermediate Polypody* grh 4

Larger ferns (15-60cm long) with less leathery texture (arching rather than erect fronds) typical of calcareous and neutral substrates. The basal third of the frond is tapered as a result of progressively shorter pinnae towards the base (not parallel sided). The sori are oval and yellow brown at maturity (not round and reddish or orange brown), and have abundant spores (few in hybrids). The mean number of indurated cells of the annulus ("rungs of the ladder") ranges between 7 and 9 (not 10-14) (but note that individual annuli can vary between 4 and 19). Commonly epiphytic on the trunks and larger branches of oak *Quercus robur*, and on the tops of old limestone walls; occasional on dry banks in woods.

East Berks: very few records: Sonning, Leighton Park. <1% (1km²). Atlas 2000: [77], [86]

West Berks: uncommon and local; in two main centres around Wytham and Appleton [40], and along the lower Kennet Valley, Great Wood, Greenham [56], Mortimer Common [66]. A single, but huge clump, on the churchyard wall at Theale [640713] in January 2004. Common on the top of limestone walls in Cothill Village. Atlas 2000: [46], [49], [40], [56], [66], [67]

¶ **Polypodium** *P. cambricum*, *P. glycyrrhiza* 'Longicaudatum', *P. interjectum* 'Cornubiense', *P. vulgare* 'Bifidocristatum'

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn *Bracken* grh 7
Pteris aquilina L., *Polypodium austriacum* Jacq.

Dry woods, bushy places, parkland on sandy soil, and heaths especially where burning has been poorly managed. Common on the Bagshot Sands. Forming dense monocultures in many freely drained habitats in both sun and shade. Absent from wet soils. Often taller than head-height. Rare on dams and walls in urban areas. The pinnule margins are rolled by midge *Dasyneura filicina*.

NVC: H 2,3; M 27; MG 1,5; OV 25,27; U 1,2,20; W 4,8,10,14-16,21-23,25

Silwood Park: the biggest and most abundant of the Silwood ferns. The most extensive bracken patches are on Gunness's Hill, Wood Bank, Cheapside (between Gravel Pit and The Farm), and in Hell Hill Wood. Quick to recover dominance (by August 2011) after construction of the new road to the renovated Farm.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
10	12	15	22	47

East Berks: a curiously patchy distribution at small scales; worthy of further study. 51% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

THELYPTERIDACEAE

Thelypteris palustris Schott *Marsh Fern* grh 7 †
Acrostichum thelypteris L.
Dryopteris thelypteris Asa Gray

Marshes, always extremely rare. None of the records were supported by specimens
 NVC: M 22, OV 26, S 25; W 5

Ascot: Windsor Park, Sunninghill Wells (1897). Not seen since then.

East Berks: near Loddon Bridge. Not seen recently.

West Berks: Marley Wood. Naturalised in the wild garden of Jarn Mound at Boars Hill [50]; last seen in 1965.

Phegopteris connectilis (Michx.) Watt *Beech Fern* grh 6 †
Phegopteris polypodioides Fee
Thelypteris phegopteris (L.) Slosson

West Berks: extinct. Found by Mr F. Tufnail in 1892 on a dry bank in woodland north-west of Mortimer Common [66]. Bowen placed a specimen in **RNG**.

Oreopteris limbosperma (All.) Holub *Lemon-scented Fern* h 7 ↓
Polypodium limbospermum All.
Polypodium oreopteris Ehrh.
Dryopteris montana Kuntze

Heathy places and steep banks in woods on acid soils.
 NVC: U 20; W 10

Ascot: very local and rare. By the wooded stream below Sunninghill Park; still there in 2000, but the ditch was bulldozed in 2001. Common in the ditch parallel with the metalled road through Blane's Allotment. Windsor Great Park and Virginia Water (but commonest on the Surrey side).

East Berks: rare and decreasing. Finchampstead Ridges (1966). Atlas 2000: [96]

West Berks: a rarity, lost from many of its former sites. "Existed a year or two ago in Bagley Wood and in woods near Cumnor and Wytham but collectors and cultivation have together nearly extirpated them" (Boswell, 1871). Now all but confined to the south of the county with outlying stations close to Wytham. Hen Wood [40], Snelmore Common [47], Foxhold, Crookham Common [56], Silchester

Common [66]. Bill Helyar found the plant in Benyons Inclosure [6260 6325] in 2005. Atlas 2000: [40], [47]

ASPLENIACEAE

Phyllitis scolopendrium (L.) Newman *Hart's-tongue*
Asplenium scolopendrium L.

h 7

On mortar on moist, sheltered walls and damp brickwork in shade; often on the steps down to the crypt beneath churches and in the mouth of brick-lined wells, drains and soak-aways. Less common on wooded banks than it is in the west country.

NVC: OV 40; W 8,12,21,22

Silwood Park: common on damp brickwork, especially around the basement windows of the Manor House. Inside the Wishing Well, about 1.5m below the lip. Locally abundant on the rockery in the Japanese Garden. Rare on the ground in woods. A single plant on the stone base of the War Memorial in the churchyard at St Michael's parish church at Ashurst on 7 July 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	5

Ascot: on the ground in birch woodland on the remnants of Sunningwell Bog in South Ascot. In the central storm-drain of Ascot Station southern car park. On the ornamental stonework of the bridge over Virginia Water [960690] in 2003. On brick railway bridges in Sunninghill and South Ascot.

East Berks: Swallowfield, Highlands, Newland Farm, Bearwood, commonly on brickwork throughout Reading, Sindlesham, Sonning, south Charvil, Twyford, Wargrave, Ruscombe, Park Place, Remenham, Holme Green, Sandhurst, Longmoor, Transport Research Laboratory, Wishmoor, Bowsey Hill, West End, Binfield, Newell Green, Winkfield Row, Scotlands, Warren Row, Dial Close, Maidenhead, Winkfield, Foliejon Park, Dedworth, Clewer, Windsor, Frogmore, Coronation Road, Sunningdale Park, Sunninghill Park. On the ruined chalky rock garden on the slope below Windsor Castle. 12% (1km²). Atlas 2000: all squares

West Berks: widespread but uncommon throughout. Dominant on brickwork on the steps down to the cellar below the church at Peasemore [47], sheltering (or perhaps in the long run threatening) the delicate fronds of *Cystopteris fragilis*. Atlas 2000: all squares except [27], [30], [69].

Asplenium adiantum-nigrum L. *Black Spleenwort*

h 6

On mortar on sheltered walls, and rarely on dry banks. Along with *Ceterach officinarum*, this is the rarest of our wall ferns.

NVC: OV 39,41

Silwood Park: very local and rare, in only two places. On crumbling brickwork on the top of the potting shed wall at The Greenhouses (1979-2008). This population has spread to ground level in the damp alley between the potting shed and the insecticide store by 26 July 2007. Just above the water level in the Lily Pond, a single plant on the coping stone, half way along the Manor House side in November 2003.

Ascot: Woodlands Ride, very rare on brickwork of the railway bridge that crosses into the forest [917673], on the south-facing sides of both parapets with abundant *A. ruta-muraria*.

East Berks: still on several of the old brick railway bridges in Reading, Loddon Mouth, Sonning, South Charvil, Ruscombe, Little Lowbrook Farm, Burdows Farm, Twyford, Wargrave, between flints on the church walls at Bisham Abbey, Bisham Wood, Finchampstead, Shottesbrooke Church, Old Windsor Bridge. Wokingham churchyard, locally frequent on both sides of the low brick wall bisecting of the newer part of the cemetery (1979-2004). Inside the rear porch of Wargrave church in an extremely dry place; 16 February 2002. 2% (1km²). Atlas 2000: all squares

West Berks: widespread, but scattered and uncommon, as around Wytham [40] and Abingdon Bridge [49], and along the Kennet Valley as at Cold Ash [56] and Beech Hill [66]. On flints on the porch of Kintbury Church [3866] from 1982-2004. On the wall of West Hanney church [4092] in 2001, old walls at Kingston Bagpuize House [49] and on the Roman walls at Calleva Atrebatum [66] in 2004. Atlas 2000: all squares except [27], [29], [30], [47], [58], [50], [69]

Asplenium trichomanes L. *Maidenhair Spleenwort*

h 5

Asplenium trichomanes subsp. **quadrialeans** D.E. Mey.

Asplenium trichomanes L. subsp. *lovisii* Rothm.

Sheltered walls and damp brickwork on railway and canal bridges. Much less common than *A. ruta-muraria*, but more frequent than *A. adiantum-nigrum*.

NVC: OV 39,41,42; W 8

Silwood Park: very local and rare. A single colony of 3 plants on damp sandstone above the pond in the Japanese Garden. The plants were under water for several weeks during the great floods of spring 2001. They looked dead after the flood waters receded, but recovered somewhat by autumn 2001. One plant, still struggling, in November 2003, but still there in July 2005 despite the high water level, and still one plant in October 2007 and two plants in October 2009. There were 4 plants on 1 February 2012. Recorded from Ashurst churchyard in 1960. There was 1 plant on the top rim of the fine stone grave of Harriet Ricardo (d. 1844) next to the south wall of the church (this is a copy of the second century BC Scipio sarcophagus in the Vatican), on 2 March 2001, but it is no longer there (presumably weeded out during tidying up). However, a single plant, on the same top ridge of the tomb on the church side of the sarcophagus, was rediscovered on 7 July 2009, and seen again on 27 July 2010, 15 May 2011 and 1 January 2012. One plant amongst countless *A. ruta-muraria* on damp brickwork of the east-facing churchyard wall, west of the tower, beneath the small plaque in memory of Jenny Farmer on 13 November 2003 and still there in July 2005. The shading shrubs were cut down to the ground on 20 January 2007, and it will be interesting to see how the single surviving plant performs. The plant is still alive but looking somewhat chlorotic on 7 July 2009 and 27 July 2010, but had gone by 15 May 2011. Very rare in the brick basement of the Manor House, opposite Phase One; a single plant in February 2004 amongst abundant *Phyllitis scolopendrium*, but not seen here since then (the ferns were all stripped out in 2006 during repointing). A single plant on 13 May 2009 at the junction of the turf and the stone, at the top of the brickwork at the southern end of the Ha Ha, 31.5m from the cedars; still there on 1 February 2012.

Ascot: very local and rare. One plant on brickwork in a shady alleyway off Sunninghill High Street [936677] on 19 June 2003. Gone by September 2003, presumably weeded out during repointing. Not seen on the local railway bridges until two individuals were found on the northern face of the brick railway bridge over St George's Lane in South Ascot on 26 January 2007 (with frequent *Phyllitis scolopendrium* and *Dryopteris filix-mas*).

East Berks: uncommon and scattered. Reading, Sonning, Wargrave, Maidenhead Station, Hurley, Burdows Farm, Little Lowbrook Farm, Bisham Abbey, Foliejon Park, Windsor. Locally abundant on brickwork facing of Lullebrook at The Odney Club in Cookham. Locally frequent on north-facing

brickwork of the railway opposite Tesco's Superstore at Kings Meadow in Reading [719738] on 11 October 2003. 1% (1km²). Atlas 2000: [77], [87], [96], [97]

West Berks: uncommon and scattered. Faringdon and Coleshill [29], but spectacularly abundant on the old stonework of the gates of West Woodhay House [3963]. Also from Inkpen and Kintbury [36], Great Shefford [37], Letcombe Regis [38], Pusey, on the walls of Stanford-in-the-Vale church [39], Kingston Bagpuize and Abingdon [49], old limestone walls in Wytham and Sunningwell [40], north of Hampstead Norreys [57], on the cellar stairs on Little Wittenham church [59], Burghfield, Kennington and South Hinksey churches [50], Sulhamstead and Upton Nervet [66], abundant on the stone steps to the cellar at Burghfield Church [670684] in August 2005, common (where the ivy has not smothered it) on the brickwork of the railway bridge north of the Seven Deadly Sins in Pangbourne, Englefield Park and Theale [67], Wallingford [68]. Atlas 2000: all but [48], [56], [58], [50], [69]

Asplenium ruta-muraria L. *Wall-rue*

h 6

Acrostichum ruta-muraria (L.) Lam.

Amesium ruta-muraria (L.) Newman

Much the commonest of our wall ferns. On old stone walls and on mortar in brickwork on railway bridges and damp walls in towns. Rare in ash woods.

NVC: OV 39,41,42; W 8

Silwood Park: rare, but locally frequent in the churchyard at Ashurst on east-facing brick walls opposite the tower and the ancient yew tree. Common also on the car-park side of the wall in July 2009.

Ascot: very local: on the grotto at Ascot Place, and on the Woodlands Ride railway bridge.

East Berks: common on old brickwork in Reading, Sonning Bridge, South Charvil, Borough Marsh, Ruscombe, Marsh Mills, Wokingham, Littlewick Green, Altmore, Little Lowbrook Farm, Shottesbrooke, Hurley, Burchett's Green, Cookham, Hurst, Wargrave, Ruscombe, Bisham, Maidenhead, Windsor, Shaw Farm, Frogmore, Windsor Castle and the Home Park. 6% (1km²). Atlas 2000: all squares

West Berks: widespread but always rather uncommon. On the ruined walls of Godstow Nunnery [4809] and the old brick walls of Hamstead Park [4166]. Atlas 2000: all but [27], [30] and [69].

Ceterach officinarum Willd. *Rustyback*

h 4

Asplenium ceterach L.

Asplenium vulgare Hill

Sheltered places on old limestone walls, commonest on the Golden Ridge, very local and rare elsewhere, as on crumbling brickwork or old concrete. One of the rarest, and certainly the most charismatic, of our wall ferns. Recent molecular evidence shows that the genus *Ceterach* should be subsumed within *Asplenium* where Linnaeus had originally placed it.

NVC: OV 39

Silwood Park: first recorded on 10 July 2011 on the west-facing side of the low brick wall separating the two levels of the Reactor Car Park. A single plant in fine condition, that was clearly more than two years old. The car park had not been used since security was stepped up and the rising bollards

were installed. Still there, with 4 new juvenile plants on mortar on the same side of the wall, on 1 June 2013.

Ascot: no other records.

East Berks: local and rare: on walls by the Thames in Reading, Fobney [7071], Sonning, Burdows Farm, Cookham Station, but absent from most of East Berks. < 1% (1km²). Atlas 2000: [77], [87], [88]. Very local and rare on 15 December 2012 in Trinity Place Windsor [96371 76521], on old mortared low stone walls in two places; one on its own on the dry side of the wall and another group of plants further along on the shady side growing amongst dense colonies of *Phyllitis scolopendrium*.

West Berks: scattered and uncommon, except on the Golden Ridge where it is frequent on old limestone walls (Plate 15): Bourton [2386], Buscot, locally abundant in Great Coxwell, on cemented brickwork by the main road in Faringdon [29], Hungerford [36], Letcombe Regis and Wantage [38], Stanford-in-the-Vale, Buckland, Hinton Waldrist, Pusey and Duxford [39], Newbury [46], Chilton, Ardington and East Hendred [48] East and West Hanney, Drayton and Marcham [49], village walls in Cumnor [4604], Wytham village and Abbey [40], Bottomhouse Farm [57], Sutton Courtenay, Culham Bridge, Radley and Thrupp [59], South Hinksey [50], on the Weak Bridge where the main road crosses the railway cutting at Basildon Park [618780], on the Roman walls at Silchester [66]. A few plants survived repointing of the old garden walls at Kingston Bagpuize House [4097] in 2003. Atlas 2000: all except [27], [30], [47], [56], [58], [68], [69]. Two small individuals, high up on the brickwork of the retaining wall at Newbury Station car park on 28 January 2012.

Matteuccia struthiopteris (L.) Tod. *Ostrich Fern*

• grh 6

Osmunda struthiopteris L.

Onoclea struthiopteris (L.) Roth

Struthiopteris germanica Willd.

One of the most popular garden ferns, sometimes increasing dramatically within the garden (as at Mortimer West End). Occasional as an outcast, but rarely naturalized.

Ascot: locally naturalised in bogs on the shores of Virginia Water in 1984.

West Berks: planted in the grounds of Kingston Bagpuize House [49] from 1988-2004. Frequent in the rockery at The Old Vicarage at Mortimer West End on 30 January 2012.

¶ **Matteuccia** *M. struthiopteris*

Onoclea sensibilis L. *Sensitive Fern*

• grh 6

Locally naturalised in damp shady places. An escaped garden plant.

NVC: W 5

Silwood Park: very rare but locally dominant in alder carr at Great Mead at the western end of The Lake, between the western edge of Rush Meadow and the northern bank of the Red Brook. Naturalized since before 1971. The patch had increased to 10m x 8m by May 2004, and was the same size in May 2008 and May 2010. Formerly abundant in the Japanese Garden, but extinct following extension of the lawn all the way up to the water's edge in 1995.

Ascot: near the lake in Blacknest Park [957683] in 2001.

West Berks: Kingston Bagpuize House [49] in 1988, probably planted.

¶ **Onoclea** *O. sensibilis*

Athyrium filix-femina (L.) Roth *Lady-fern*

h 7

Polypodium filix-femina L.

Damp sheltered woods on acid or humus-rich soil.

NVC: OV 27; S 3,25; W 4-6,8,10

Silwood Park: wet woodlands, typically much less common than *Dryopteris filix-mas* and *Dryopteris dilatata*, often picking out the stream lines through woods. Great Mead, Nash's Copse, etc. Uncommon at small scales.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	3	8	8	17

East Berks: occasional throughout, but absent or rare in the north on the chalk. Locally common on ditch banks in the pine plantations of Bracknell Forest. 11% (1km²). Atlas 2000: all squares

West Berks: occasional, but absent from the Chalk and the Northern clays. Atlas 2000: all squares

Gymnocarpium dryopteris (L.) Newman *Oak Fern*

• grh 7

Polypodium dryopteris L.

A woodland fern of northern Britain, alien with us.

Ascot: planted but spreading in shade by Virginia Water. First seen 1984.

Cystopteris fragilis (L.) Bernh. *Brittle Bladder-fern*

h 7

Polypodium fragile L.

On old mortar on damp shaded brick work, very rare.

East Berks: not in Druce. Colonist or casual on walls. Bray (1920), but not seen recently (**OXF**).

West Berks: recorded from the damp stair well leading to the cellar of the church at Peasmore [4577] in 1980. Still there in 2004 despite the development of a dense tangle of *Phyllitis scolopendrium*. This is the form that used to be called "var. *dentata* Hook." with small, blunt pinnae (11mm long, 6mm wide), rounded, more obtuse segments and blunt teeth (3-4 per edge). Towards the base of the frond, there is up to 5mm gap of bare stem between one pinna and the next.

DRYOPTERIDACEAE

Polystichum setiferum (Forssk.) T. Moore ex Woyn. *Soft Shield-fern*

h 7

Aspidium angulare (Kit. ex Willd.) C. Presl

Aspidium aculeatum (L.) Sw. var. *angulare* (Kit. ex Willd.) H. Watson

Polystichum angulare Presl.

Dry banks in woods and shady hedge-banks, often near water, in small quantity. Absent from calcareous soils. Told from *P. aculeatum* by the length of the lowest pinnae: in *P. setiferum* they are the same length as the penultimate pinnae, but in *P. aculeatum* the frond is tapered, so that the basal pinnae are only about half as long as the longest pair. The base of the pinnule makes a right angle (not an acute angle), with about 45 degrees on either side of the stalk. Most Berkshire plants are covered in dull pale golden scales, and have a long, bare section of stipe below the basal pinnae.

NVC: W 8

Silwood Park: not discovered until 19 May 2007 (the day of the first Cup Final at the new Wembley Stadium; Chelsea 1 Manchester United 0 a.e.t.). A single clump in Farm Wood [941693] amongst *Dryopteris filix-mas* and *D. affinis*, on the bank above the roadside ditch, halfway down the shaded part of the Farm Road. The plant was conspicuous by its pale, densely ginger-hairy rachis. Still just one plant on 15 May 2008, it was missed by the falling ash tree later that month, and therefore spared from burial (6 July 2008). Still one plant beneath *D. affinis* at the edge of Farm Road by The Lake on 31 August 2011.

Ascot: local and rare; Sunningdale Park. A single plant on the sunny, south facing side of the brick wall adjacent to the arch of St George's Lane under the railway in South Ascot on 13 October 2007.

East Berks: uncommon and scattered: recent records from Great Copse [7465], Westland's Copse and Spring Copse [76], Whiteknights Park, Bear Grove, Shinfield Grange, Leighton Park [77]. By the stream through the wood at Billingbear golf course [8272]. Ashley Wood [822812], Whitehouse Farm, Warren Row, Bisham Church, Northerams Wood, Bracknell [857687], northern end of Big Wood [8468], Chawridge Manor Farm [9073] and the woods around Foliejon. 1% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [96], [97]

West Berks: uncommon and more or less restricted to the southern third of the county. Cole's Pits, Fernham, Turf Pits Copse Faringdon [29], Inkpen [36], Inholmes [37], Newbury [46], Winterbourne Holt [47], Powder Hill Copse and Hen Wood [40], south of Thatcham Station, Aldermaston, Wasing Wood and Beenham [56], on the shady bank behind the church at Hermitage, Hurdle Shaw and Stanford Dingley [57], East Hagbourne [58], Bagley Wood [50], Stratfield Mortimer, Padworth and Burghfield [66], Little Heath and Tilehurst [67]. Atlas 2000: [29], [46], [47], [40], [56], [57], [50], [66], [67]

Polystichum aculeatum (L.) Roth *Hard Shield-fern*

h 7 ↓

Polypodium aculeatum L.

Woods and shady hedge-banks, often near water. Local and rather rare; seldom in quantity, and usually found as a single individual. The lowest, shielding pinnules are sessile and less than right-angled (acute) at the base, whereas *P. setiferum* has stalked basal pinnules that are more than 90 degrees (obtuse) at the base.

NVC: W 8

Ascot: on the grotto in Ascot Place.

East Berks: rare and decreasing. Highlands, Jouldern's Ford (**OXF**), Great Copse, The Leas, Dinton Pastures, Finchampstead, Wellington College, east of Wokingham [8372 6987], North Hanworth, White Waltham, New Lodge (**OXF**), Whistley Mill, Bowsey Hill, Ashley Hill, Bear Wood, Big Wood, Foliejon Park, Frogmore. 2% (1km²). Atlas 2000: [76], [86], [97]

West Berks: Badbury Hill [29], Inkpen and West Woodhay [36], Lambourn Woodlands [37], Balking [39], Skinners Green [46], Welford Park [47], Marley Wood [40], Aldermaston [56], The Slade [57], Bagley Wood south-east corner [50], Round Wood Copse [66], Cornwell Copse, Tilehurst, Little Heath and Sulham [67], Rush Court [69] Atlas 2000: [29], [37], [39], [46], [47], [40], [50], [66], [67], [69]

Polystichum munitum (Kaulf.) C. Presl *Western Sword-fern* ● h 7
Aspidium munitum Kaulf.

Ascot: planted and locally naturalised at Virginia Water in 2001.

¶ **Polystichum** *P. acrostichoides*, *P. aculeatum* ‘Grandiceps’, *P. munitum*, *P. polyblepharum*, *P. rigens*, *P. setiferum* ‘Acutilobum’, ‘Congentum’, ‘Dahlem’, ‘Divisilobum’, ‘Herrenhausen’ and ‘Plumosodiversilobum’, *P. tsussimense*

Cyrtomium falcatum (L.f.) C.Presl *House Holly-fern* ● grh 6 ↓
Polypodium falcatum L.f.
Phanerophlebia falcata (L. f.) Copel.

A rare greenhouse escape found on brick walls and in other shady places.

East Berks: Reading Town Hall (1968).

West Berks: Newbury [46] in 1982, Kingston Bagpuize House [49] in 1968.

Dryopteris filix-mas (L.) Schott *Male-fern* h 7
Polypodium filix-mas L.

Woods, copses and hedge-banks, often forming large stands on the woodland floor. The commonest member of the genus in towns. Told from *D. affinis* by the much less scaly rhachis, and absence of a black spot at the point where the pinnae stalks meet the rhachis, and by the round-ended, tapered (not parallel-sided, truncate) pinnules. Told from *D. dilatata* by its fronds elegantly tapered to the base (not triangular with a long, bare stalk). The tips of the fronds are often galled by the fly *Chirosia parvicornis*.

NVC: OV 27; W 5,6,8,10,12,14,21,22,24,25

Silwood Park: the second commonest of our woodland ferns, after *D. dilatata*. Found in more than 50% of 1ha plots. Particularly abundant in the drier, up-slope parts of Farm Wood, typically beneath dead or dying Elms, where it out-numbers *D. dilatata* (the dominant fern at the wetter, bottom of the slope). Very rare in the Chalk Plots, confined to tall heather in Plot 2 on 26 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	2	7	16	51

East Berks: 61% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Dryopteris affinis (Lowe) Fraser-Jenk. *Scaly Male-fern* h 7
Nephrodium affine Lowe

Woods, including dry oak woods and damp alder woods, almost always on acid soils and in small quantity. Occasional, absent from the northern clays and much of East Berkshire. Much less abundant than *D. filix-mas* but not uncommon.

NVC: W 6,8,10,22

These are apogamous diploids or triploids derived from hybridisation between *D. oreades*, the non-British *D. caucasica*, and at least one other ancestral diploid (Stace, 1997). New sporophytes grow directly from gametophyte tissue without the formation of archegonia. The distributions of the 3 commonest subspecies within Berkshire have yet to be worked out.

Dryopteris affinis* subsp. *affinis

Aspidium distans Viv.

Lastrea pseudomas Wollaston

Shiny leaves and very densely golden-scaly petioles, lowest pinnae half as long as the longest. Pinnules sub-truncate.

Silwood Park: a single, magnificent shuttlecock of shoots, each 105 cm long, in The Alders between Rush Meadow and The Lake [94033 69136] on 3 June 2012. The tips of the pinules are rounded and have a few inconspicuous teeth. The lowest pinnae (7 cm) were much less than half the length of the longest (18 cm).

Ascot: no other records.

East Berks: scattered records from old woodland. Under-recorded.

West Berks: Gutterside Wood (det. A.C. Jermy).

Dryopteris affinis* subsp. *cambrensis Fraser-Jenk.

This is mainly a northern and western taxon with densely reddish-golden-scaly petioles and broadly rounded pinnules, the lowest with a substantial rounded basal lobe overlapping the central rachis. The lowest pinnae is less than half as long as the longest.

Silwood Park: several plants in woodland at the western end of the Japanese Garden, probably introduced from Cornwall in the early 1990s, have very dense ginger scales on the rachis and rounded pinnules.

Dryopteris affinis* subsp. *borreri (Newman) Fraser-Jenk.

Polystichum abbreviatum DC.

The closest taxon to *D. filix-mas* with scarcely shiny leaves and only moderately dense, light-golden-scaly petioles. The lowest pinnae is more than half as long as the longest (i.e. the frond is not very tapered). Pinnules with rounded ends with a large tooth on each shoulder, and well toothed sides. This is much the most widespread taxon with us. Found on brickwork in towns as well as in woodland and stream valleys.

Silwood Park: local, in the wood on the back of the dam of Silwood Lake, The Willows, Rush Meadow, Guinness's Thicket, Water Meadow, Farm Wood, Nash's Copse, Observatory Ridge and in the churchyard at Ashurst. Growing amongst *D. filix-mas* in the swamp at the edge of The Lake

below Farm Road. In full sun in the middle of Rookery Slope in 2002. Out-numbered 8 to 1 by *D. filix-mas* and 16 to 1 by *D. dilatata* in Farm Wood in May 2007.

Ascot: Swinley brick pits, with brambles under Scots pines. North of the railway at Englemere. In the shady part of South Ascot churchyard.

East Berks: occasional in Beech Hill Coverts [7064], rare and scattered in Great Wood [7365], Great Wood [8576], Ashley Hill [822812] and [835812], Easthampstead, Windsor Great Park, Sandhurst, Bracknell, Finchampstead, Whitehouse Farm [707660] and Owlsmoor (in a wet ditch). 3% (1km²). In the swamp at the eastern end of Upper Lake at the Royal Military Academy Sandhurst. Atlas 2000: [76], [86], [87], [88], [96]

West Berks: commonest in the Kennet Valley (e.g. superb in the woods to the north of Greenham Common [46] and [56]), but also at Wytham and Chawley Brick Pit [40], Bagley Wood [50], Folly Wood [36], Redhill Wood and Irish Hill [46], Ash woods at RAF Welford [47], Burghfield [66], Moor Copse [67]. Atlas 2000: [28], [29], [36], [37], [46], [47], [48], [49], [40], [56], [57], [58], [66], [67]

Dryopteris cristata (L.) A. Gray *Crested Buckler-fern*
Polypodium cristatum L.

h 7

One of our greatest rarities. A *Red Data Book* species of base poor fens, requiring full sun and intolerant of shading by encroaching *Betula pubescens*. Grows with *D. carthusiana* and various *Sphagnum* spp. close to, or underneath, *Salix cinerea*. The site is drying out despite the best efforts of Ted Green to block all of the drains and hence to restore the water table to its former level.
NVC: M 25

East Berks: in *Molinia* bog, south of the Lower Star Post [879633], by the stream through Wishmoor Bottom that forms the Surrey border. First found by C. P. Petch in 1968 and subsequently followed as its population fluctuated, often close to local extinction. Always commoner on the Surrey side of the stream until recently, but there were 3 plants on the Berkshire side in 1988 and 2 on the Berkshire side in 1998 on peat on the sides of freshly cut dragonfly ponds. In May 2004 there were more than 10 plants on the Berkshire side in 5 locations close to the Wish Stream, just south-west of the road bridge. Following a severe heath fire on Wishmoor Bottom at Easter 2007, there were no plants found on the Berks side of the stream on 22 May 2007. Three willows had been cleared on the Surrey bank, presumably to encourage the fern: there were several plants amongst willow regrowth in the southernmost of these sites, but the other two areas were not occupied (however, there was abundant regrowth of *D. carthusiana*). After a fairly lengthy search on 14 October 2007, Fred Rumsey found "one non-sporing patch (possibly more than one individual but difficult to tell) on the vc.22 side of the stream at [87907 63202] close to 3 young and now dead pines and not too far from the small dug-out pool. Apart from the burnt remains of a few of the bigger shrubs and small pines you wouldn't know that there'd been a fire there" by October 2007. The plant was restricted to the single willow clearing on the Surrey side of the stream on 15 May 2008 (when both sides of the whole length of the Wish Stream were searched, following reports (erroneous as it turns out) of the plants "frequent beneath Bog Myrtle by the Power Line"; presumably *D. carthusiana* had been seen)

Dryopteris carthusiana (Vill.) H.P. Fuchs *Narrow Buckler-fern*
Polypodium carthusianum Villars
Polypodium filix-femina L. var. spinosum Weiss
Dryopteris spinulosa Kuntze

h 7

Damp thickets, woods, mires and heaths. Told from small *D. dilatata* by the pale scales on its lower stipe, lacking a dark central stripe. Also found growing in full sun in *Molinia* bogs on acid peat as at Wishmoor Bottom where it grows with *D. cristata* (above).

NVC: M 25, W 1,4-6

Silwood Park: locally frequent in alder woods and wet oak woodland, especially in Cascade Marsh, Gunness's Thicket and Rookery Copse. Also in ditches, shady stream banks and alder stumps. Much commoner than was formerly believed. Very uncommon in the dryer, up-slope parts of Farm Wood.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	2	22	22

Ascot: growing in shade in ferruginous swamp with *Carex curta* and *Hydrocotyle vulgaris* beneath *Salix cinerea* in Sunningwell Bog, east of St George's Lane in July 2002. Very tall plants (25cm) amongst *Hypericum elodes* on the edge of Englemere Pond.

East Berks: occasional in woodlands, often growing with *D. dilatata*, and perhaps overlooked in the past. Blackwater, Finchampstead, Sandhurst, Wellington College, Long Moor, Bagshot, Sunninghill, Windsor Park, near Loddon Bridge. Woods, including dry pine plantations and wet alder woods, almost always on acid soils and in small quantity. Absent from calcareous soils except for a wood at Kingston Lisle. Farley Hill, Earley, Heath Lake, Pond Wood, Ashley Hill, Bracknell, Great Hazes Wood, New Lodge, Crowthorne, and in the Crown Estates woodlands at Holliday Plain [9274]. 14% (1km²). Atlas 2000: all but [78]

West Berks: scattered, mainly in the south. Frequent in the ash woods at RAF Welford [47]. Atlas 2000: [28], [29], [38], [39], [46], [47], [49], [40], [56], [57], [66]

Dryopteris x deweveri (J.T. Jansen) Wacht. = **D. carthusiana x D. dilatata** h 7
Aspidium x deweveri J. Jansen

West Berks: collected by A.H.G. Alston from Bucklebury [56] in 1934 (BM).

Dryopteris dilatata (Hoffm.) A.Gray *Broad Buckler-fern* h 7
Polypodium dilatatum Hoffm.

Woods, thickets, shady stream banks, willowherb stands and heaths. Known by its large, triangular fronds and stem scales with dark central stripes. The tips of the fronds are often rolled into distorted galls by the fly *Chirosia parvicornis*.

NVC: OV 27; S 3,6; W 4,6,8,10,12,14-16,25

Silwood Park: our commonest woodland fern, often forming a complete carpet on the woodland floor. Particularly abundant in the lower, damper parts of Farm Wood where it greatly outnumbers *D. filix-mas* (the reverse is true at the dryer top of Farm Wood).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	9	14	20	37

East Berks: frequent throughout, but no records from surprisingly many 1km squares: Wellington College, Sandhurst, Blackwater, Finchampstead, Riseley, Long Moor, Wokingham, Bearwood,

Earley, Bulmarsh, Coleman's Moor, Bracknell, Easthampstead, Binfield, Windsor Park, Cranbourne Chase, Ashley Hill, Bowsey Hill, Waltham. 27% (1km²). Atlas 2000: all squares

West Berks: widespread and common throughout, but absent from the northern clays, Lambourn Downs and the Vale of the White Horse. Atlas 2000: all except [68], [69]

¶ **Dryopteris** *D. cycadina*, *D. erythrosora*, *D. goldieana*, *D. sieboldii*, *D. wallichiana*

BLECHNACEAE

Blechnum spicant (L.) Roth *Hard-fern* h 6
Osmunda spicant L.
Acrostichum spicant (L.) Willd.

Woods, heaths and golf courses, especially on ditch-sides on acid soils, and in the more shady parts of heathland.

NVC: W 4,10,15,16

Silwood Park: local and uncommon in acid woodlands. Common in the ditch by Farm Road (1979-2004), by the gas line through Nash's Copse, on a dry, upturned rootball in Cascade Marsh and in the Japanese Garden. Locally frequent in May 2002 in Wood Bank on the edge of a trench created when a massive oak was uprooted in the storm of 16 October 1987.

Ascot: locally frequent in South Ascot Bog and on heathy parts of the southern shore of Virginia Water.

East Berks: uncommon but locally frequent. Wokingham, Ambarrow, Sandhurst, Wellington, Finchampstead, Swinley, ditches and banks throughout the pine plantations of Bracknell Forest, Bagshot, Owls Moor, Wishmoor Bottom, Long Moor, Bear Wood, Easthampstead. 7% (1km²). Atlas 2000: [76], [86], [87], [96], [97]

West Berks: local and absent from large areas. Found around Wytham [40] and along the Kennet Valley [36-66], Mortimer, Snelsmore Common [47], Greenham Common, Burghfield, Aldermaston, Ufton, Padworth, Wickham, but rare or absent elsewhere. Atlas 2000: [36], [46], [47], [40], [56], [57], [50], [66], [67]

Blechnum cordatum (Desv.) Hieron. *Chilean Hard-fern* • h 6
Lomaria cordata Desv.
Blechnum chilense (Kaulf.) Mett.

East Berks: much planted around Virginia Water and locally naturalised on shady banks.

¶ **Blechnum** *B. penna-marina*, *B. tabulare*

¶ **Woodwardia** *W. radicans*

The National Collection of ferns is held in Valley Gardens and Savill Gardens at Virginia Water. There are 132 species and 154 cultivars, accessible and well-labelled.

AZOLLACEAE

Azolla filiculoides Lam. *Water Fern*
Azolla caroliniana Willd.

• hyd 6

Our only floating fern, often colouring the whole pond surface bright red in late summer. Introduced for ornament and escaping in the classic birds' feet manner. Forms a tangled mat with *Lemna* spp., cutting off light and air from the body of the pond. Often found with *Myosotis scorpioides* and *Ranunculus sceleratus* at the water's edge. This plant has the distinction of being the first species to be targeted for biological weed control in Britain by the sponsored release of an alien insect. Biocontrol through the release of alien insects has a long and distinguished history in countries where alien plants are more of a problem than they are in Britain: South Africa, Australia and the USA have been in the biocontrol business for more than 100 years. It was not until September 2004, however, that reared individuals of the Azolla weevil, *Stenopelmus rufinusus*, were released into the R. Lambourn to control the fern. This insect is native to South Africa but has been known in Britain since 1921, strictly restricted to Water Fern, so the first introduction of a novel alien insect for biocontrol in Britain has yet to be undertaken.

NVC: A 1,5; OV 32; S 23

Silwood Park: grown in four experimental water troughs in the open Polytunnel at CABI in April 2004, but not yet seen outside.

Ascot: no records.

East Berks: local and uncommon in rivers and ponds. Not in Druce. Shinfield Grange (RNG, 1966), Leighton Park (1961), Holyport (1967). Lake at Dinton Pastures, fen drain at Holyport, Crazies Hill, Heriots, Widbrook Common, Bray. 1% (1km²). Atlas 2000: [76], [77], [87], [88], [97]

West Berks: established in and near the R. Pang in 1913, rare in ponds elsewhere. Still spreading and steadily increasing its range. Harwell in 1960 [48], Thatcham in 1974 [56], Ladygrove Park Didcot in 1987 [59], Theale in 1983 [66], Pangbourne in 1913, Sulham in 1912 and Bradfield (LAN) in 1957 [67]. The R. Lambourn population [37] was targeted for biocontrol in 2004 (see above). Atlas 2000: [37], [38], [48], [56], [59], [67]

GINKGOACEAE

Ginkgo biloba L. *Maidenhair tree*

• mm 5

Known as 200 million year old fossil before discovery in cultivation in east China. Dioecious with an XX (female) and XY (male) sex chromosome system. Highly pollution tolerant and therefore an excellent urban street tree. Superb autumn colour; purest golden yellow.

Silwood Park: commonly planted in formal areas. The plant in the pinetum by the tractor shed survived transplanting from Ashurst Lodge when the property was sold in 1986. No known cases of self-seeding in Berkshire.

¶ **Ginkgo** *G. biloba*

PINACEAE

Abies alba Mill. *European Silver-fir* ● mm 5

Often self-sown. Crushed foliage is not scented. Cones in true firs are held upright like candles (in spruce, the cones hang downwards). The needles of *Abies* leave a neat circular scar when pulled away from the shoot (the needles of *Picea* bring a “heel” of wood away with them).

East Berks: on many of the larger estates; e.g. Ascot Place, Home Park.

West Berks: Buscot, Newbury, Silchester.

Abies nordmanniana (Steven) Spach *Caucasian Fir* ● mm 5

Rarely self-sown. Fruity smell when crushed. This is the most popular Christmas tree these days, replacing *Picea abies*. There are large plantations of Christmas trees on both sides of the M4 motorway on the high ground between Newbury and Reading (see pp. 90, 138).

Abies grandis (Douglas ex D.Don) Lindl. *Giant Fir* ● mm 5

An uncommon forest plantation tree, but a frequent ornamental. Highly aromatic foliage with fruity orange flavour. The commonest self-sown *Abies* with us.

Ascot: occasionally naturalised in parkland, as at Sunninghill Park. Grows well, but not self-seeding in Silwood Park. A single self-sown individual, 1.6m tall, beneath mature beech trees on the rim of the railway cutting in Sunninghill off Truss Hill Road, west of the B3020 railway bridge [935 676] on 28 March 2013 growing with *Ulex europaeus*.

East Berks: locally frequent in the Crown Estates woodlands in and around Windsor Great Park. Arborfield Court [76]. 1% (1km²). Atlas 2000: [86], [87], [97]

West Berks: Grove Wood, Faringdon [29], Welford Park [47], Tubney Wood [40], Ashampstead Common [57], Bagley Wood [50]. Atlas 2000: [29], [47], [40], [57], [50]

[**Abies procera** Rehder *Noble Fir*] ● mm 5

Occasionally self-sown, but no confirmed Berkshire records. Not scented. Told from *A. alba* by the needles not forming a parting along the upper surface of the twig.

¶ **Abies** *A. alba*, *A. amabilis*, *A. balsamea*, *A. balsamea f. hudsonia*, *A. balsamea* ‘Nana’, *A. bracteata*, *A. cephalonica*, *A. cilicica*, *A. concolor*, *A. concolor var. lowiana*, *A. delavayi*, *A. delavayi var. delavayi*, *A. durangensis var. coahuilensis*, *A. fargesii*, *A. firma*, *A. grandis*, *A. homolepis*, *A. kawakamii*, *A. koreana*, *A. koreana* ‘Silberlocke’, *A. lasiocarpa*, *A. magnifica*, *A. magnifica* ‘Glauca’, *A. nebrodensis*, *A. nephrolepis*, *A. nordmanniana*, *A. nordmanniana* ‘Golden Spreader’, *A. numidica*, *A. pindrow*, *A. pinsapo*, *A. pinsapo* ‘Glauca’, *A. procera*, *A. recurvata*, *A. recurvata var. ernestii*, *A. religiosa*, *A. sachalinensis*, *A. sibirica*, *A. spectabilis*, *A. squamata*, *A. veitchii*

Pseudotsuga menziesii (Mirb.) Franco *Douglas Fir* ● mm 5

Plantations and parks, often planted in large stands and occasionally self-seeding; rare or absent on chalk. Strong, sweet fruity resinous smell. Immediately distinguishable by its cones which have 3-pronged tassels emerging from beneath each scale. Forms an enormous tree, vying in stature with the biggest of the wellingtonias.

NVC: W 10

East Berks: occasional throughout; commonest in the Crown Estates woodlands. 1% (1km²). Atlas 2000: [86], [87], [97]

West Berks: generally distributed except on Lambourn Downs and in the Vale of the White Horse. Atlas 2000: [48], [49], [40], [59]

¶ **Pseudotsuga** *P. japonica*, *P. macrocarpa*, *P. menziesii*, *P. menziesii* ‘Glauca Pendula’, *P. rehderi*.

Tsuga heterophylla (Raf.) Sarg. *Western Hemlock-spruce* ● mm 5 ↑

Plantations and old woods where it seeds freely. One of the commonest self-sown alien conifers, with shade tolerant seedlings capable of surviving many years on the woodland floor. A beautiful specimen tree if allowed to let its lowest branches droop down unhindered onto a lawn, it is furnished with leaves in an unbroken sweep from top to bottom, even in old age. Seedlings are found in plantations, woods, hedgerows, rough grass and waste ground in towns and villages, but seldom far from the parent tree.

Ascot: in the Crown Estates woodlands at Blane’s Allotment, Swinley Park, Whitmoor Bog, The Tip, The Orangery, Tower Hill, Swinley, Kingsride, Woodlands Ride, Sunninghill, Brookside, Cranbourne, South Forest, Windsor Great Park.

East Berks: regenerating in most of our conifer plantations and parklands. Locally frequent on the firing range at Poppy Hills. 7% (1km²). Atlas 2000: [76], [86], [87], [88], [96], [97]

West Berks: Atlas 2000: [29], [36], [39], [46], [49], [40], [59], [50], [66], [67]

¶ **Tsuga** *T. canadensis*, *T. canadensis* ‘Abbott’s Pygmy’, *T. canadensis* ‘Compacta’, *T. canadensis* ‘Jeddeloh’, *T. canadensis* ‘Pendula’, *T. caroliniana*, *T. chinensis*, *T. diversifolia*, *T. dumosa*, *T. heterophylla*, *T. mertensiana*, *T. sieboldii*, *T. yunnanensis*.

Picea glauca (Moench) Voss *White Spruce* ● mm 5

Crushed foliage smells of mice, tinged with blackcurrant or grapefruit. Occasionally planted, but not recorded as self-seeding in Berkshire.

Picea engelmannii W. Parry ex Engelm. *Engelmann Spruce* ● mm 5

Crushed foliage smells of menthol. Occasionally planted, but not recorded as self-seeding in Berkshire.

Picea omorika (Pancic) Purk. *Serbian Spruce* ● mm 5

Commonly planted in Windsor Great Park but rare elsewhere. Not regenerating. Foliage not scented.

Picea sitchensis (Bong.) Carriere *Sitka Spruce* ● mm 5

An abundant forest tree, also widely planted in parkland. Occasionally self-sown, especially on rides in conifer plantations. Foliage not scented. This is the commonest spruce with blue-green needles with sharp points (cf. cultivars of *P. pungens*).

East Berks: occasional around Reading. Atlas 2000: [77], [86]

West Berks: first recorded from Bagley Wood [50] in 1927. Atlas 2000: [28], [29], [38], [39], [59], [50]

Picea abies (L.) H. Karst. *Norway Spruce* ● mm 5

Plantations on acid soils and as single trees elsewhere. Occasionally self-sown. Foliage not scented. This is the old-fashioned Christmas tree that dropped all of its needles on the carpet as soon as it was brought indoors. Smaller, greener, less pointy needles than Sitka spruce. The pineapple-like galls of *Adelges abietis* are common on the branch tips. Prone to “bent top”, caused by caterpillars of the moth *Dioryctria abietella*.

Silwood Park: widely planted but seldom regenerating from seed. The dominant tree in Hayes Wood, Rookery Copse, Farm Wood and Four Acre Field, conifer plantations. Scattered throughout the mixed plantations. Locally dominant along the boundary below the churchyard at Ashurst.

East Berks: the most commonly self-sown spruce. 1% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [46], [69]

¶ **Picea** *P. abies*, *P. abies* ‘Crippsii’, *P. abies* ‘Cruenta’, *P. abies* ‘Globosa’, *P. abies* ‘Little Gem’, *P. abies* ‘Nidiformis’, *P. alcockiana*, *P. asperata*, *P. balfouriana*, *P. brachytyla*, *P. breweriana*, *P. engelmannii*, *P. glauca*, *P. glauca* ‘Alberta Blue’, *P. glauca* var. *albertiana* ‘Conica’, *P. glauca* ‘Echiniformis’, *P. glehnii*, *P. jezoensis*, *P. koyamae*, *P. likiangensis*, *P. mariana*, *P. mariana* ‘Nana’, *P. meyeri*, *P. montigena*, *P. omorika*, *P. omorika* ‘Pendula’, *P. orientalis* ‘Aurea’, *P. polita*, *P. pungens*, *P. pungens* ‘Fat Albert’, *P. pungens* ‘Globosa’, *P. pungens* ‘Hoopsii’, *P. pungens* ‘Koster’, *P. purpurea*, *P. retroflexa*, *P. rubens*, *P. schrenkiana*, *P. sitchensis*, *P. smithiana*, *P. wilsonii*,

Larix decidua Mill. *European Larch* ● mm 3

In plantations, but more often as single trees; occasionally self-sown. Cone scales without recurved tips, not at all rose-like when viewed from above. Leaves with an inconspicuous stripe beneath. Widespread and generally distributed. White wax of Larch Adelgid *Adelges laricis* often conspicuous on the needles, and the cases of the needle-miner *Coleophora laricella* may be found.

NVC: W 8,10

Silwood Park: planted, but not regenerating from seed. Most abundant at the south end of Hayes wood, surrounding the Rubbish Tip, occasional in South Lodge Wood, Cannon Path and Mann’s Copse.

East Berks: self-sown in 4% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [46], [68]

Larix x marschlinsii Coaz *Hybrid Larch* = **L. decidua x L. kaempferi** ● mm 3
 Larix x hybrida Farquhar ex Rehder, non Schroeder
 Larix x eurolepis A. Henry, nom. illegit.
 Larix x henryana Rehder

This is the common larch of commercial forestry. Cones ovoid, much longer than wide. A bit rose-like when viewed from above. Leaves with a more conspicuous stripe beneath.

East Berks: self-sown in 1% (1km²). Atlas 2000: [86], [87], [97]

West Berks: Coxwell [29], Upton [58], etc. Atlas 2000: [28], [29], [38], [58], [59]

Larix kaempferi (Lindl.) Carrière *Japanese Larch* ● mm 3
 Larix leptolepis (Siebold and Zucc.) Endl.

Planted and sometimes self-sown. Cones sub-globose, less than 1.25 times as long as wide. Cone scales with recurved tips, so the cone is rose-like when viewed from above. Leaves with a more conspicuous stripe beneath.

East Berks: the least commonly self-sown of the three larches with us. Surrells Wood and Charity Wood [8173]. <1% (1km²). Atlas 2000: [76], [87], [88]

West Berks: Coxwell [29], Buckland Warren [39], Frilford Heath [49]. Atlas 2000: [29], [38], [39], [49], [50]

¶ **Larix** *L. decidua* ‘Pendula’, *L. decidua* ‘Poulii’, *L. gmelinii*, *L. griffithii*, *L. kaempferi*, *L. kaempferi* ‘Nana Prostrata’, *L. kaempferi* ‘Pendula’, *L. laricina*, *L. x marschlinsii*, *L. occidentalis*, *L. x pendula* ‘Pendulina’, *L. potaninii*, *L. sibirica*, *L. sieboldii*

¶ **Pseudolarix** *P. amabilis*, *P. crassifolius*, *P.* ‘Cyril Watson’, *P. ferox*, *P. laetus*, *P. lessonii* ‘Gold Splash’, *P.* ‘Linearifolius’, *P.* ‘Purpureus’

Cedrus libani A. Rich. *Cedar-of-Lebanon* ● mm 5

The classic specimen tree of Berkshire estates and country houses. A specimen in Fort Belvedere planted in 1760 was 33.5m tall and 5.7m in girth in 1968. The biggest heronry serving East Berkshire is in the cedars in Fort Belvedere, just over the border in Surrey. None of the cedars is known to self-seed in Berkshire. The three cedars are easily told apart from a great distance by the way they hold their shoot tips: either level, ascending or drooping. L is for level is for Lebanon.

Silwood Park: two superb specimens, presumably planted on the same day c. 1800, between the Lily Pond and the Croquet Lawn. The eastern tree is roughly 3 times the bulk of the western individual and is slowly falling apart (it began to shed limbs in 1980), but miraculously survived the great storms of October 1987 and January 1990 unscathed. Another fine tree is in Shenstone Park, where the Blue Star had stood. Seedlings have never been found.

East Berks: there is a particularly good specimen at Winkfield Church.

West Berks: fine trees can be seen in parkland at Buckland [3498], Hamstead Marshall [4165] and Wickham [3971].

Cedrus deodara (Roxb. ex D. Don) G. Don *Deodar* ● mm 5

Drooping shoot tips; D is for Deodar. Does not self-sow with us.

Silwood Park: a specimen in Tittenhurst Park was 29m x 3.9m in 1968. Several big trees in Silwood, including the conspicuous individual at the Heath end of East Block, and the beautiful young tree in the lawn by the Squash Court. The plant died suddenly in its prime, failing to open any new needles in May 2007.

East Berks: fine specimens on the village green at Hurley.

Cedrus atlantica (Endl.) Carrière *Atlas Cedar* ● mm 5

Silwood Park: the largest cedars in Silwood, in a group of 3 by the main drive. Ascending shoot tips; A is for Atlas. Almost all the Atlas cedars are *C. atlantica* 'Glauca'. The very rare pendulous form grows on John Lennon's former estate at Tittenhurst (across the road from Silwood Park). Not self-seeding.

¶ **Cedrus** *C. deodara*, *C. deodara* 'Aurea', *C. deodara* 'Aurea Pendula', *C. libani*, *C. libani* subsp. *atlantica*, *C. libani* subsp. *atlantica* Glauca, *C. libani* subsp. *brevifolia*, *C. libani* subsp. *libani*, *C. libani* subsp. *libani* 'Comte de Dijon',

Pinus sylvestris L. *Scots Pine* ● mm 5

Dry heathy woods, native in Scotland but widely planted and thoroughly naturalised in Berkshire. Locally abundant in extensive plantations in the south and east of the county. Frequent on acid soils in south-east Berkshire (especially on the Bagshot Sands), occasional in woods and plantations on the chalk, but rare on the northern clays. An outstandingly beautiful tree in maturity with its angular, spreading canopy and flaky salmon pink bark which all but glows in the low winter sunlight. The needles are bluish green (not grass-green as in *P. radiata* or *P. contorta*, or dark green as in *P. nigra*). Regenerating freely by seed and often a pest on heathland nature reserves, where its saplings need to be pulled up every 5 years or so. White waxy growths of the adelgid *Pineus pini* are sometimes conspicuous on the needles; sawfly caterpillars on this year's needles are likely to be *Diprion pini* and on last year's *Neodiprion sertifer*; Pine Looper Moth *Bupalus piniaria* caterpillars hang from the foliage on long silken threads, while more cryptic species like the Pine Shoot Moth *Rhyacionia buoliana* are stem miners. *Hylobius abietis*, the Pine weevil, is common on young pines in spring, eating off the bark in spirals. Resin galls of the moth *Petrova resinella* can be found on young shoots. NVC: H 2; M 16; W 4,6,10,14-16

Silwood Park: one of the most conspicuous features of the Parkland, typically under-planted with rhododendrons. The largest individual (311cm bhg in 1979) was felled along with the rest of Garden Wood for the construction of the Biology buildings in 1987. Many more pines were blown down in the January 1990 storm than were lost in October 1987.

East Berks: a characteristic landscape feature over the whole of the acid sands from Finchampstead to Windsor Park and Bagshot. Specimen trees are planted in all the large estates, even on the chalk as at Park Place, Bisham Wood, Ashley Hill, Stubbing's Heath, Earley, Bearwood. Growing in standing water in the marginal swamp at Englemere Pond. Regenerating freely on the abandoned trackbed of Platform 4 at Ascot Station (Plate 16). 39% (1km²). Atlas 2000: all squares.

West Berks: there are intrusive and brooding pine plantations at Gainfield and Buckland Warren [39]. Atlas 2000: all squares

Pinus nigra J.F. Arnold ● mm 5

Pinus nigra subsp. **nigra** *Austrian Pine*

Pinus laricio Savi subsp. *nigricans* (Host) Arcang.

Large, gaunt, dark specimen trees often used in boundary plantings and as shelter belts. Crown with long, spreading side branches, and short, stiff needles (8-12cm). Upper branches dark grey (not salmon pink as in *P. sylvestris*), and needles dark green (not blue-green *P. sylvestris* or grass-green as in *P. radiata*). Self-sown in willowherb, bramble and other dense cover, as well as in woodland clearings and on tracksides.

NVC: OV 27; W 10

Silwood Park: common in the boundary between Ashurst Orchard and the churchyard (263cm bhg in 1979). The largest (355cm bhg in 1979) was in the wood at Ashurst. Common in South Lodge Wood and along Buckhurst Road. Not self-seeding.

East Berks: 3% (1km²). Atlas 2000: all squares.

West Berks: widespread and generally distributed. Extensively used for shelterbelts on the bleak chalk downs above Letcombe Bassett [3785]. Plantations at Gainfield [39]. Locally abundant along stretches of the ancient drovers road of The Fair Mile [5583]. Atlas 2000: all except [46], [47]

Pinus nigra subsp. **laricio** Maire *Corsican Pine* ● mm 5

Crown columnar with short side branches, and longer (10-18cm) flexible (not brittle) needles. Much less commonly planted than Austrian Pine as an ornamental, but an occasional forest crop on sandy soils. No records of natural regeneration in Berkshire.

Silwood Park: a large tree, planted in 1979 by Ted Green in the same hole as *Pseudotsuga menziesii* (a curious example of conifer bundle planting) on the corner of the road between Southwood Hall and the Jiff Greenhouses.

Pinus contorta Douglas ex Loudon *Lodgepole Pine* ● mm 5

The common pine of commercial plantations. Easily recognised by its dark, grass-green (not blue-green) needles in groups of 2 (not 3), and cone scales with a sharp, hooked prickle. Not self-sowing with us.

Silwood Park: one of the commonest planted pines (e.g. by the Buckhurst road entrance), but not self-sowing.

East Berks: scattered throughout.

West Berks: Frilford [49]

Pinus pinaster Aiton *Maritime Pine* ● mm 5

Planted occasionally in groups throughout the Crown Estates. Occasionally self-sown. Host to a number of rare fungi, most notably the Mediterranean alien *Pisolithus arhizus* (see p. 1271).

East Berks: self-sown in conifer plantations on Bagshot Heath. Also in Whiteknights Park.

West Berks: Frilford [4497], Tilehurst [6874].

Pinus radiata D. Don *Monterey Pine* ● mm 5

Pinus insignis Douglas ex Loudon

Known at once by its bright, grass-green foliage. Closer up, you will notice that the needles are in bundles of 3 (it is the only common 3-needled pine in Berkshire; the others are all either 2- or 5-needled). Much planted as a shelter belt, but not self-sown with us. Generally distributed.

Silwood Park: a conspicuous mature plantation in the far corner of Nursery Field (most blown down in the storm of January 1990), and a successful screening tree for the appalling William Penney Halls, but not regenerating.

East Berks: self-sown on the campus at Whiteknights Park.

West Berks: Inholmes [3373] in 1964, Hinton Waldrist [3799], Greathouse Wood [5973], Bagley Wood [5002] in 1926.

Pinus strobus L. *Weymouth Pine* ● mm 5

A gaunt, open tree with banana shaped cones and needles in groups of 5. Occasionally self-sown. Widely distributed, but commoner on the acid sands than on the chalk or the clay. Prone to Blister Rust *Cronartium ribicola*, a fungus that has currants *Ribes* spp as its alternate host.

Silwood Park: the commonest 5-needled pine, regenerating in Garden Wood. Most of the largest trees (up to 148cm bhg) blew down in the great storms of October 1987 and January 1990. The elegant, gnarled tree overhanging The Tip snapped at 2m in July 2003 and fell into the nettles.

East Berks: Farley Hill, Easthampstead Park, Whiteknights Park, Wellington College (all 1967). Not self-seeding as far as I can tell.

West Berks: Inholmes [3373], Hinton Waldrist [3799], Greathouse Wood [5973], Bagley Wood [5002] all 1967. All planted, I suspect.

Pinus wallichiana A.B. Jack. *Bhutan Pine* ● mm 5

Pinus chylla Lodd. nom. nud.

Specimen trees with pendulous needles in groups of 5. Cones rather larger than in *P. strobus*, with tips of cone scales distinctly thickened, and a much more elegant canopy with longer needles.

East Berks: Whiteknights Park (1970)

West Berks: regenerating at Pusey [39] in 1963, Welford [47], Ashampstead Common [57], Bagley Wood [50] in 1921.

¶ **Pinus**

The pinetum by the southern (original main) gate into Silwood Park was laid out in 1981 amongst mature conifers including *Cupressus glabra*, *Thuja plicata* and *Chamaecyparis nootkatensis*. The first pines to be planted were *P. coulteri* (which did well) and *P. muricata*, *P. rigida*, *P. jeffreyi* and *P. ponderosa* (which grew only moderately well and produced rather scrawny trees by 2006). In the Croquet Lawn heather bed, *P. taeda* grew very well and *P. flexilis* moderately well. The *P. monticola* by the tractor shed grew quickly, then suddenly dropped down dead in 19??.

P. albicaulis, *P. aristata* ‘Cecilia’, *P. armandii*, *P. attenuata*, *P. ayacahuite*, *P. ayacahuite* var. *veitchii*, *P. balfouriana*, *P. banksiana*, *P. bhutanica*, *P. bungeana*, *P. canariensis*, *P. cembra*, *P. cembra* ‘Compacta Glauca’, *P. cembra* ‘Stricta’, *P. cembroides*, *P. cembroides* var. *edulis*, *P. contorta*, *P. coulteri*, *P. densata*, *P. densiflora*, *P. densiflora* ‘Oculus Draconis’, *P. edulis*, *P. engelmannii*, *P. flexilis*, *P. gerardiana*, *P. gordoniana*, *P. greggii*, *P. halepensis*, *P. halepensis* subsp. *bruttia*, *P. hartwegii*, *P. heldreichii* var. *leucodermis*, *P. heldreichii* var. *leucodermis* ‘Aureospicata’, *P. heldreichii* ‘Schmidtii’, *P. x holfordiana*, *P. x hunnewellii*, *P. jeffreyi*, *P. koraiensis*, *P. kwangtungensis*, *P. lambertiana*, *P. monophylla*, *P. montezumae*, *P. monticola*, *P. mugo*, *P. mugo* ‘Gnom’, *P. mugo* ‘Mops’, *P. muricata*, *P. nigra*, *P. nigra* subsp. *laricio*, *P. nigra* subsp. *laricio* ‘Moseri’, *P. nigra* subsp. *nigra*, *P. nigra* subsp. *nigra* ‘Strypemonde’, *P. palustris*, *P. parviflora*, *P. patula*, *P. peuce*, *P. pinaster*, *P. pinea*, *P. ponderosa*, *P. pseudostrobus*, *P. pumila*, *P. pumila* ‘Glauc’, *P. pungens* ‘Glauc’, *P. radiata*, *P. resinosa*, *P. rigida*, *P. roxburghii*, *P. rudis*, *P. sabineana*, *P. strobiformis*, *P. strobis*, *P. strobis* ‘Prostrata’, *P. strobis* ‘Radiata’, *P. sylvestris* ‘Aurea’, *P. sylvestris* ‘Beuvronensis’, *P. sylvestris* ‘Fastigiata’, *P. sylvestris* ‘Watereri’, *P. sylvestris* ‘Westonbirt’, *P. tabuliformis*, *P. tabuliformis* var. *mukdensis*, *P. taeda*, *P. taiwanensis*, *P. thunbergii*, *P. virginiana*, *P. wallichiana*, *P. yunnanensis*.

PODOCARPACEAE

¶ **Podocarpus** *P. macrophyllus*, *P. nivalis*, *P. nubigenus*, *P. salignus*, *P. totara*

¶ **Prumnopitys** *P. andina*

¶ **Saxegothea** *S. conspicua*

CUPRESSACEAE

X Cupressocyparis leylandii (A.B. Jack. & Dallim.) Dallim. *Leyland Cypress* ● mm 6

This is the scourge of suburbia, and the cause of countless disputes between neighbours. Far too vigorous for use as a hedging plant in small gardens, growing at over 1m per year. Can make a magnificent specimen tree when free grown especially in one of its coloured forms like ‘Haggerston Grey’ (blue) or ‘Castlewellan’ (golden). The foliage is unscented.

Silwood Park: the trees planted on the Science Park in 1988 were 15m tall by 2000; they were felled by contractors in spring 2005 without consultation. The shelterbelt between the Header House greenhouses and the student residences (planted in the early 1980s to screen the construction of Southwood Halls from the Manor House, 8 years or so before the CABI library was built and completely blocked the view) was cut down in spring 2000 at the student’s behest, because the trees were so tall (> 20m) that they were taking all the light. A fascinating seed bank flora sprang up in late

summer 2000 on the bare ground where the cypresses had been growing (see *Verbascum virgatum*, *Datura stramonium*, *Solanum nigrum*).

East Berks: planted in towns throughout, but not self-sown.

West Berks: towns and villages throughout. Atlas 2000: [40]

¶ X **Cupressocyparis** X *C. leylandii* ‘Castlewellan’, ‘Haggerston Grey’, ‘Robinson’s Gold’. X *C. notabilis*, X *C. ovensii*

Cupressus macrocarpa Hartw. ex Gordon *Monterey Cypress* ● mm 6

An occasional road-side specimen tree and sometimes planted as hedging, especially in golden-foliaged forms like ‘Golderest’. Crushed foliage is fragrant of lemon. Not self-seeding.

¶ **Cupressus** *C. arizonica* var. *arizonica*, *C. arizonica* var. *glabra* ‘Conica’, *C. arizonica* ‘Pyramidalis’, *C. lusitanica*, *C. macrocarpa*, *C. macrocarpa* ‘Crippsii’, *C. macrocarpa* ‘Donard Gold’, *C. macrocarpa* ‘Golderest’, *C. sempervirens* ‘Green Spire’, *C. sempervirens* ‘Stricta’, *C. sempervirens* ‘Swane’s Gold’, *C. torulosa* ‘Cashmeriana’

Chamaecyparis nootkatensis (Lamb.) Spach *Nootka Cypress* ● mm 6

This is a huge, pyramidal tree at maturity, with beautiful pendulous foliage, hanging in long curtains from down-swept branches. Uncommon in plantations and on larger estates. Crushed foliage has a heavy, oily unpleasant smell.

Silwood Park: the most conspicuous conifers in the pinetum. Three ‘Pendula’ cultivars were planted by the main drive through the Science Park in 1988 and were well-formed by 2004. Not self-seeding in Silwood.

Chamaecyparis lawsoniana (A. Murray bis) Parl. *Lawson’s Cypress* ● mm 6 ↑
Cupressus lawsoniana A. Murray

A common hedging plant in towns and villages. Fruiting freely and producing abundant seedlings. Crushed foliage has a resinous parsley-like smell (not fruit cake, as with *Thuja plicata*). Also seeding freely in acid woodlands near experimental plantations, with moderately shade tolerant seedlings. Commonly self-sown in gardens on the Bagshot sands, and on walls and waste ground, often a long way from parent trees. Regeneration is hastened by exclusion of rabbits.

Silwood Park: the commonest self-sown cypress, with densities as high as 1 per 10m² in Garden Wood and along the Cannon Path. Ashurst Warren, Silwood Farm, Rookery Slope, Ashurst Path, Tennis Court, The Heath. The dense thicket of self-sown trees in South Lodge Wood behind the Tennis Court [9455 6844] was felled, aged 35 years, in November 2004 to provide fuel for the student’s Guy Fawkes bonfire. The area was fenced against deer and rabbits and planted with species *Rhododendrons* and Silwood-grown native trees over the winter of 2004-05. By the third growing season, seedlings were abundant throughout the fenced area on 4 June 2007. The massive hedge planted to separate Ashurst from the Orchard after the properties were separated in 1988 was topped (at their expense) in 2005 and the corner by Four Acre Field was cut back to the mesh fence on 21 October 2007 to free-up the young oak from encroaching branches. The abundant yellow-leaved plants around the Reactor Road are ‘Winston Churchill’, which are told from the other common golden cultivars by their pointed (not domed) top and irregular shoot angles.

Ascot: commonly self sown at Froggnall [940681] in September 2005 in both sun and shade.

East Berks: widespread and generally distributed; commonly self-sown, as at Simon's Wood (NT), Finchampstead, in built-up areas like Whitley [7270], and by the R. Thames in Maidenhead [9081]. 6% (1km²). Atlas 2000: all except [87]

West Berks: self-sown on urban waste ground at New Hinksey [50], and potentially invasive of heathland, as at Inkpen Common [36]. Atlas 2000: all except [47], [57], [58], [69]

Chamaecyparis pisifera (Siebold and Zucc.) Siebold and Zucc. *Sawara Cypress* ● mm 6
Retinispora pisifera Siebold and Zucc.

Crushed foliage has an acrid resinous smell (not fruity).

Silwood Park: seedlings by the Tennis Court in 1999.

¶ **Chamaecyparis** *C. lawsoniana*, *C. lawsoniana* cultivars including 'Alumii', 'Aurea Densa', 'Chilworth Silver', 'Columnaris', 'Darleyensis', 'Ellwoodii', 'Ellwood's Gold', 'Ellwood's Gold Pillar', 'Erecta Argenteovariegata', 'Erecta Aurea', 'Erecta Filiformis', 'Fletcheri', 'Grayswood Feather', 'Grayswood Pillar', 'Green Hedger', 'Intertexta', 'Kilmacurragh', 'Lane', 'Lutea', 'Merrist Wood', 'Minima Aurea', 'Minima Glauca', 'Pelt's Blue', 'Pembury Blue', 'Pottenii', 'Pygmaea Argentea', 'Stardust', 'Stewartii', 'Stewartii Erecta', 'Triomf van Boskoop', 'Watereri', 'Westermannii', 'White Spot', 'William Churchill', 'Wisselii', *C. nootkatensis*, *C. nootkatensis* 'Pendula', *C. obtusa* 'Aurea', *C. obtusa* 'Aurora', *C. obtusa* 'Autumn Gold', *C. obtusa* 'Contorta', *C. obtusa* 'Crippsii', *C. obtusa* 'Ericoides', *C. obtusa* 'Nana', *C. obtusa* 'Nana Aurea', *C. obtusa* 'Nana Gracilis', *C. pisifera*, *C. pisifera* 'Boulevard', *C. pisifera* 'Filifera Aurea', *C. pisifera* 'Golden Mop', *C. pisifera* 'Plumosa Aurea', *C. pisifera* 'Squarrosa', *C. pisifera* 'Squarrosa Lutea', *C. thyoides*, *C. thyoides* 'Andelyensis', *C. thyoides* 'Andelyensis Nana', *C. thyoides* 'Ericoides'.

Thuja plicata Donn ex D. Don *Western Red-cedar* ● mm 5 ↑

Common in plantations and as a specimen tree in estates and larger gardens. Crushed leaves smell deliciously of fruit cake (cf. the bitter parsley smell of *Chamaecyparis lawsoniana*). Self-seeding in conifer plantations on the Bagshot sands. Seedlings occasionally found on waste ground in towns.

Silwood Park: shapely specimen trees by the Machinery Centre and on the Science Park with seedlings found occasionally as at Ashurst Warren, Tennis Court, Drive Lawns, William Penney and Heronsbrook.

Ascot: two seedlings in a derelict garden on Sunninghill High Street, growing with *Conyza sumatrensis* and *Persicaria maculosa* on 13 October 2005. A seedling beneath the wall of the car park at Ascot Station on 28 October 2009.

East Berks: uncommon as self-sown plants but generally distributed. Widespread as a specimen tree in gardens. Locally abundant in the Crown Estates woodlands as in [9373]. Self-sown on stonework by the R. Thames in Maidenhead [9081] in 2002. In Moore Copse [7466] with other evergreens planted for pheasant cover. 6% (1km²). Atlas 2000: all squares.

West Berks: widespread but scattered, least common on the chalk. Self-sown in damp shade at Faringdon church [2995] in 2002. There is a big, and floristically very dull, plantation above the

railway to the north-west of Pangbourne [620770] where massive lianas of *Clematis vitalba* grow up through the coniferous murk into the sunshine above. Atlas 2000: [28], [29], [38], [46], [49], [40], [56], [57], [59], [50], [66], [67]

¶ **Thuja** *T. koraiensis*, *T. occidentalis*, *T. occidentalis* ‘Cloth of Gold’, *T. occidentalis* ‘Danica’, *T. occidentalis* ‘Holmstrup’, *T. occidentalis* ‘Little Gem’, *T. occidentalis* ‘Lutea Nana’, *T. occidentalis* ‘Rheingold’, *T. occidentalis* ‘Smaragd’ (the last two both badly damaged at the base by rabbits), *T. orientalis*, *T. orientalis* ‘Aurea Nana’, *T. orientalis* ‘Elegantissima’, *T. orientalis* ‘Filiformis Erecta’, *T. orientalis* ‘Semperaurea’, *T. plicata*, *T. plicata* ‘Atrovirens’, *T. plicata* ‘Aurea’, *T. plicata* ‘Fastigiata’, *T. plicata* ‘Irish Gold’, *T. plicata* ‘Semperaurescens’, *T. plicata* ‘Stoneham Gold’, *T. plicata* ‘Zebrina’, *T. standishii*

¶ **Thujopsis** *T. dolabrata* and vars ‘Aurea’, ‘Nana’, ‘Variegata’

¶ **Microbiota** *M. decussata*

Juniperus communis L.

mm 5 ↓

Juniperus communis subsp. **communis** *Common Juniper*

Grassy chalk downs and hawthorn scrub. Once locally common, now much declined. Turner (1664) wrote “it grows much upon the hills and woody grounds in Berkshire”. Nowadays, however, recruitment failure is common, even on nature reserves managed for the encouragement of Juniper. NVC: CG 2; W 21

East Berks: extinct as a native plant. Occasionally in Bisham Wood, and between Henley and Pinkneys Green. Gone from these sites by 1968. Much decreased generally as a result of the twin evils of scrub encroachment and destruction of chalk grassland for arable agriculture. Atlas 2000: none

West Berks: in Victorian times, it was occasional all the way along the chalk ridge from Streatley to Lambourn. Now much declined, but still to be found in scattered locations along the Ridgeway as at Chilton [48], east of Hermitage, Aldworth Church and Applepie Hill [57], Aston Upthorpe Downs [544835], Ridgeway [5282], Lowbury Hill, Oven Bottom, Moulsoford Downs, Streatley Warren, Streatley Hill and Blewbury chalk pit [all 58]. Apparently extinct at Weston [37], Letcombe [38], Ashampstead [57], Basildon and Pangbourne [67]. Atlas 2000: [48], [40], [57], [58], [50], [67]

¶ **Juniperus** *J. chinensis*, *J. chinensis* ‘Aurea’, *J. chinensis* ‘Blaauw’, *J. chinensis* ‘Kaizuka’, *J. chinensis* ‘Obelisk’, *J. chinensis* ‘Plumosa Aurea’, *J. chinensis* ‘Pyramidalis’, *J. communis* ‘Compressa’, *J. communis* ‘Green Carpet’, *J. communis* ‘Hibernica’, *J. communis* ‘Hornibrookii’, *J. communis* ‘Repanda’, *J. communis* ‘Windsor Gem’, *J. conferta*, *J. depeana* var. *pachyphlaea*, *J. drupacea*, *J. excelsa* var. *polycarpus*, *J. horizontalis*, *J. horizontalis* ‘Blue Pygmy’, *J. horizontalis* ‘Emerald Spreader’, *J. horizontalis* ‘Plumosa’, *J. horizontalis* ‘Wiltonii’, *J. x pfitzeriana* ‘Old Gold’, *J. x pfitzeriana* ‘Pfitzeriana’, *J. x pfitzeriana* ‘Pfitzeriana Compacta’, *J. procera*, *J. procumbens* ‘Nana’, *J. recurva* ‘Densa’, *J. rigida*, *J. sabina*, *J. sargentii*, *J. scopulorum* ‘Blue Heaven’, *J. scopulorum* ‘Repens’, *J. scopulorum* ‘Skyrocket’, *J. squamata* ‘Blue Carpet’, *J. squamata* ‘Blue Star’, *J. squamata* ‘Holger’, *J. virginiana* ‘Grey Owl’, *J. virginiana* ‘Sulphur Spray’, *J. wallichiana*

¶ **Athrotaxis** *A. cupressoides*, *A. x laxifolia*, *A. selaginoides*

¶ **Calocedrus** *C. decurrens*, *C. decurrens* ‘Depressa’

ARAUCARIACEAE

Araucaria araucana (Molina) K. Koch *Monkey-puzzle* ● mm 5
Araucaria imbricata Pavón

Much planted ornamental in plantations and parkland, but seldom self-seeding.

Silwood Park: the giant tree by the Tennis Court produces viable seed from time to time. The two young plants, sentinel (but rather embarrassed looking) at the end of the Tennis Court, were nurtured from seed by head gardener Colin Merryman, potted up, then planted out when they were 2 years old.

West Berks: Buckland Warren [39], Ashampstead Common [57] and Bagley Wood [50]. Two huge trees on the top of the hill at Midgham Church [5567], overlooking the Kennet Valley.

¶ **Araucaria** *A. araucana*, *A. heterophylla*

CEPHALOTAXACEAE

¶ **Cephalotaxus** *C. fortunei*, *C. harringtonia* var. *drupacea*

TAXACEAE

Taxus baccata L. *Yew* mm 3

Oak and beech woods, especially on the chalk. Bird-sown seedlings crop up in gardens, on old brick walls and waste places. Probably planted in other situations like hedgerows. Many of the trees in churchyards are of great antiquity, some of them dating from pre-Christian, pagan shrines. Unlike other conifers, Yew gives no resin, and has single sexed (dioecious) trees, with the females producing fleshy fruited seeds (arils). The Irish Yew, var. 'Fastigiata', has vertically-held branches and is common in churchyards. Galls like miniature artichokes on the tips of the shoots are caused by Yew Gall Midge *Taxomyia taxi*.

NVC: OV 41,42; W 8,10,12-15,21

Silwood Park: common in all the woodlands, but regenerating only sparingly (as along the Cannon Path). Seedlings are more common on brickwork and waste ground. The magnificent specimen between the Manor and the Clock Tower was 182cm bhg in 1979. The enormous old tree next to the Church at Ashurst is held together by a massive iron band, 2m off the ground; it is said to be more than 1,000 years old and to pre-date the Norman church. The lowest large branch, just above the iron ring, fell off in February 2013. Big old trees on top of the hill in Farm Wood, above The Lake, mark the outline of the former garden of the original mansion at Eastmore.

East Berks: widespread and generally distributed (at least one plant in every churchyard). Best at Park Place and Bisham on the chalk; Hurst, Culham Court, Ruscombe churchyard. Rare in ancient woodland at Billingbear [8272]. Uncommon on the Bagshot sands, but found at Caesar's Camp and Bearwood. 44% (1km²). Atlas 2000: all squares.

West Berks: widespread, but commonest on the eastern chalk. Undoubtedly wild in the neighbourhood of Aldworth [57]. Irish Yew, var. 'Fastigiata', is abundant in the churchyard at Sutton Courtenay [59]. Atlas 2000: all squares

¶ **Taxus** *T. baccata* 'Adpressa Variegata', *T. baccata* 'Dovastoniana', *T. baccata* 'Dovastonii Aurea', *T. baccata* 'Fastigiata Aureomarginata', *T. baccata* 'Fastigiata' (= 'Hibernica'), *T. baccata* 'Repandens', *T. baccata* 'Repens Aurea', *T. baccata* 'Semperaurea', *T. baccata* 'Standishii', *T. brevifolia*, *T. cuspidata*, *T. x media* 'Hicksii'

TAXODIACEAE

¶ **Cryptomeria japonica** (L.f.) D. Don *Japanese Red-cedar* ● mm 5

An uncommon specimen tree in Berkshire, but the cultivar 'Elegans' is common; it looks nothing at all like proper *C. japonica* (more like a bronzy ornamental juniper). Not self-seeding.

West Berks: in Bagley Wood [50] in 1977, no doubt planted.

¶ **Cryptomeria** *C. japonica* 'Bandai-sugi', 'Elegans', 'Elegans Compacta', 'Littleworth Gnom'

¶ **Cunninghamia** *C. lanceolata*

¶ **Metasequoia** *M. glyptostroboides*

Taxodium distichum (L.) Rich. *Swamp Cypress* ● mm 5

A massive deciduous conifer often planted near water, and developing 'woody knees' (pneumatophores) at ground level. Told from the superficially similar *Metasequoia glyptostroboides* by its apparently alternate (not opposite) leaves and leaflets. Always planted in Berkshire and not self-seeding.

East Berks: a grand avenue of tall trees lines the Thames Path at Maidenhead Court [906836], opposite the beautifully planted hanging woodlands of Cliveden.

¶ **Taxodium** *T. distichum*, *T. distichum* var. *imbricatum* 'Nutans'

Sequoia sempervirens (D. Don) Endl. *Coastal Redwood* ● mm 5
Taxodium sempervirens D. Don

Much less widely planted than wellingtonia, but sometimes (unlike that species) producing seedlings.

Silwood Park: rare, but very fast-growing; the specimen by the Tennis Court was planted in 1988, yet was 15m tall by 2000. No seedlings recorded.

East Berks: the best population is the grove of mature trees on the roundabout where the A308 road comes close to the Long Walk below Windsor Castle [968756]. Bearwood, Whiteknights, Old Windsor, etc. A specimen in Windsor Great Park was 37m x 5.6m in 1968. Occasional throughout the Crown Estates woodlands, but no seedlings recorded. <1% (1km²). Atlas 2000: [76], [77], [97]

West Berks: planted in ornamental woodlands, and occasionally seeding as at Buckland [39], Tubney [49], Aldermaston Park [56] and Bagley Woods [50]. Atlas 2000: [50]

Sequoiadendron giganteum (Lindl.) Buchholz *Wellingtonia* ● mm 5

These trees form some of our most outstanding landscape features, often visible from miles away. Grows best on acid sandy soils, but by no means confined to them. There were several mass-plantings in the late nineteenth century, most notably by John Walter, proprietor of *The Times* newspaper, at Wellingtonia Avenue in Crowthorne [86], where a double avenue of trees lines the dead straight road, all the way from Wellington College up onto Finchampstead Ridges (see p.185). Wellingtonia trunks are remarkably strong and resilient in high winds. For example, none were blown over or snapped during the great storms of October 1987 or January 1990. Not self-seeding with us.

Silwood Park: several young trees planted behind the Japanese Garden, but just one giant mature tree in South Lodge Wood. No regeneration.

Ascot: planted all around Buckhurst Park, along Mill Lane and Buckhurst Road at *c.* 20m spacing; some have died and gone, but most of them are very uniform in size. These trees are as big as any in the vicinity. Avenues (once grand approaches to the races, but now suburbia) on the western edge of Ascot Racecourse. A specimen in Tittenhurst Park was 38.4m x 6.0m in 1968.

East Berks: planted at Wellington College, Finchampstead, Highlands near Spencer's Wood, Whiteknights Park, Knowl Hill Church, Holyport, Park Wood Bisham. Very fine at Forest Farm, Cranbourne. Good avenues between Shaw Farm and Frogmore.

West Berks: particularly fine in Buckland Park [39], Hamstead Park and Benham Park [46], Marcham [49], Besselsleigh [40], Ashampstead Common [57], and Burghfield [66]. High up on the remote downs at Brightwalton [47].

¶ **Sciadopitys** *S. verticillata*

The National Collection of Dwarf Conifers is housed in the Heather Garden at Valley Gardens above Virginia Water. It comprises 342 species in various genera and an amazing 2,480 cultivars.

WINTERACEAE

Possessed of more archaic features than any other extant plant family.

¶ **Drimys** *D. lanceolata*, *D. winteri*

¶ **Pseudowintera** *P. colorata*

MAGNOLIACEAE

The National Collection of *Magnolia* is in Savill and Valley Gardens at Virginia Water and has 34 species and 310 cultivars. Silwood's collection of 31 cultivars is modest by comparison:

¶ **Magnolia** *M. acuminata*, *M.* ‘Betty’, *M. campbellii*, *M. campbellii* ‘Charles Raffill’, *M. denudata*, *M.* ‘Elizabeth’, *M.* ‘Galaxy’, *M.* ‘George Henry Kern’, *M. grandiflora*, *M. grandiflora* ‘Exmouth’, *M. grandiflora* ‘Goliath’, *M.* ‘Heaven Scent’, *M. hypoleuca*, *M.* ‘Iolanthe’, *M.* ‘Jane’, *M.* × *kewensis* ‘Wada’s Memory’, *M. kobus*, *M. liliiflora* ‘Nigra’, *M.* × *loebneri* ‘Leonard Messel’, *M.* × *loebneri* ‘Merrill’, *M. salicifolia*, *M. sargentiana* var. *robusta*, *M. sieboldii*, *M. sieboldii* subsp. *sinensis*, *M.* × *soulangeana*, *M.* × *soulangeana* ‘Alba’, *M.* × *soulangeana* ‘Brozzonii’, *M.* × *soulangeana* ‘Lennei’, *M.* × *soulangeana* ‘Rustica Rubra’, *M. stellata*, *M.* ‘Susan’, *M. wilsonii*

Liriodendron tulipifera *L. Tulip Tree* ● mm 5

Ascot: very local and rare. Seedlings coming up abundantly on wooded waste ground in North Ascot [9169] close to the parent tree. Sadly, this site is destined to be destroyed for the construction of ‘luxury homes’ in Kennel Green Park in 2002.

¶ **Liriodendron** *L. chinense*, *L. tulipifera*, *L. tulipifera* ‘Aureomarginatum’, *L. tulipifera* ‘Aureum’, *L. tulipifera* ‘Crispum’, *L. tulipifera* ‘Fastigiatum’

LAURACEAE

Laurus nobilis *L. Bay* ● mm 5

Much grown by back doors as a source of culinary bay leaves. Also common as a specimen in pots on terraces and occasionally in wilder situations in shrubberies. Rarely clipped as a hedge. Seldom self-sown.

Silwood Park: a massive plant on waste ground near Sunninghill crossroads on the site of a former garden (1979-2004).

¶ **Lindera** *L. benzoin*, *L. erythrocarpa*, *L. megaphylla*, *L. obtusiloba*

¶ **Sassafras** *S. albidum*

¶ **Umbellularia** *U. californica* *Headache Tree*

CALYCANTHACEAE

¶ **Chimonanthus** *C. praecox* *Wintersweet*

ARISTOLOCHIACEAE

Asarum europaeum *L. Asarabacca* ● grh 5 †

An ancient introduction in woods and shady places, now extinct.

East Berks: by the roadside from Henley to Maidenhead (Abbot, 1802), but this record was never confirmed.

West Berks: three old records from [57] but no recent sightings. At The Homestead, Hawkridge [5472] (OXF) in 1915, Frilsham [5373] in 1915 (RNG), and in a wood at Yattendon [5474] in 1912 (OXF).

Aristolochia clematitis L. *Birthwort*

• grh 6

An ancient introduction, used as an aid to parturition (hence the English name) and often associated with ancient ruins.

East Berks: unconfirmed records from Reading ‘monastery’ (1650) and a hedge near Windsor (1805).

West Berks: long-known from Godstow Nunnery [483090] where the population has been monitored by the *Ashmolean Rare Plants Group* since 1997. It flowers every year, and while flower numbers vary considerably (there were 70 on 18 June 2006), there are about 150 non-flowering shoots in most years. In August 2005 there were 379 shoots, with 188 in 2006, 239 in 2007, 265 in 2008 and 222 in 2009 (*Ashmolean Rare Plants Group* 2009 Newsletter). In 2012, there were 535 shoots, of which 10% were in flower. Also recently recorded in nearby Wytham village (2000-04).

SCHISANDRACEAE

¶ **Schisandra** *S. chinensis*, *S. grandiflora*, *S. sphenanthera*

NYMPHAEACEAE

Nymphaea alba L. *White Water-lily*

hyd 7

Castalea speciosa Salisb.

Rivers, ponds, ornamental lakes, gravel pits, canals, swamps and quiet backwaters. The White Water Lily is a most beautiful feature in our river scenery; generations of painters of the Thames have delineated it on their canvas. “In the still recesses of the river about Oxford we found the queen of the water-nymphs ... in the greatest luxuriance both in the number, and in the extraordinary size of the flowers and leaves” (Hall in Druce). One of the few plants that is truly boat-tolerant (*Sparganium emersum* is another). The leaves are often conspicuously holed and furrowed by the Water-Lily Beetle *Galerucella nymphaeae*.

NVC: A 7,8,9,10,11,15; S 4,5,6,8,13

Silwood Park: locally abundant in The Lake, with a good patch just west of the jetty at the Farm, and another in the southern inflow arm. Planted in all the ornamental ponds and in the Japanese Garden. Many were destroyed when the Lily Pond was dredged out in summer 1990.

Ascot: Sole’s Pond, Englemere and Blacknest Park.

East Berks: found in the Thames, Loddon, and at Virginia Water. Frequent in Reading’s Lake District [66] and [67]. 11% (1km²). Atlas 2000: all but [78]

West Berks: at intervals in the Thames from Lechlade [29] to Wytham [40], and from Abingdon [49] to Wallingford [68]. In the Kennet canal between Newbury and Hamstead Marshall [46] down to Beenham [56] and Aldermaston Wharf [66]. Common in Reading’s Lake District [67]. The

commonest water lily planted in ornamental ponds and lakes, as at Benham Park [4367]. Atlas 2000: [29], [36], [38], [39], [46], [47], [49], [40], [56], [57], [59], [50], [66], [67]

Nymphaea odorata Dryander *Fragrant Water-lily* • hyd 7

East Berks: flooded gravel pits at Tri Lakes, Yateley (RNG) [8261] in 1987.

¶ ***Nymphaea*** *N.* ‘Attraction’, *N.* ‘Charlene Strawn’, *N.* ‘Colonel A.J. Welch’, *N.* ‘Escarboucle’, *N.* ‘Fabiola’, *N.* ‘Firecrest’, *N.* ‘Froebelii’, *N.* ‘Gladstoneana’, *N.* ‘Gonnère’, *N.* ‘James Brydon’, *N.* ‘Madame Wilfon Gonnère’, *N.* ‘Marliacea Chromatella’, *N.* ‘Pygmaea Helvola’, *N.* ‘René Gérard’, *N.* ‘Sioux’

Nuphar lutea (L.) Sm. *Yellow Water-lily* hyd 6
Nymphaea lutea L.

Rivers, canals, lakes, ditches and ponds. Our commonest water-lily, and one of the most boat-tolerant of aquatic plants.

NVC: A 5,7,8,10,11,13,15; S 8,14

Silwood Park: abundant in The Lake, the dominant water lily all round the margin, with a large patch in the centre. Not in the ornamental ponds.

East Berks: common and generally distributed along the rivers of the county. Abundant in the Loddon and the Thames (Bisham, Aston, Remenham, Wargrave, etc.). Less common in many of the ornamental lakes than *Nymphaea alba* as at Sandhurst. 6% (1km²). Atlas 2000: all squares.

West Berks: common along the Thames from Lechlade [29] to Reading and the Kennet from Hungerford [36] to Reading. Also scattered records from village ponds. Locally frequent, but absent from the chalk. Still frequent in the main channel of the Thames despite severe damage by motor boats. In the lake at Benham Park [440674]. Atlas 2000: all but [38], [47], [48]

CERATOPHYLLACEAE

Ceratophyllum demersum L. *Rigid Hornwort* hyd 7

Rivers, canals, ditches and ponds, in nutrient rich water. Not common but scattered through the county. Known from other bottle-brush-like water plants by its leaves in complete whorls, the leaves themselves forked in two, then forked again, and bearing large, sparse teeth.

NVC: A 2,3,5,8,11,12,15,16; S 8,18

Silwood Park: the most abundant water plant in the Lily Pond. Often dredged out and thrown away in great quantities. Much the commonest aquatic plant in the Japanese Garden Pond, often clogging up the entire underwater volume by autumn. Occasional in the Water Tank, growing with *Myriophyllum spicatum*.

East Berks: ponds at the foot of Winter Hill (this is the Cock Marsh site), Remenham, Park Place Lake, Bearwood, Stud Green, Winkfield, Lower Lake at Sandhurst (both v.c.22 and 17), Bracknell, Frogmore, Home Park, Maidenhead. Moor Green Lakes nature reserve [8062] in 2001. Atlas 2000: all but [96]

West Berks: in the Kennet canal from Hungerford [36] to Reading [76]. Also Coleshill [29], Basildon [36], Cothill [49], Farmoor and Wytham Meads [40], Thrupp [59], South Hinksey [50], Pingewood [66]. Frequent in Reading's Lake District [67]. Atlas 2000: all but [27], [30], [47], [68], [69]

RANUNCULACEAE

Caltha palustris L. *Marsh-marigold*

hel 3 ↓

River-sides, wet meadows, marshes and mires. Wet places in oak and alder woods. Absent from the chalk. Much less common than former records would lead us to expect. It has clearly suffered a marked decline in recent years, through drainage of pond margins, filling of farm ponds, and municipal tidying up.

NVC: M 13,22,27; MG 4,10,13; OV 26,29; S 3,7,8,10,12,19,23,25; W 1,5,6

Silwood Park: locally abundant throughout the alder carr swamp on the inflow to The Lake downstream from Cascade Bridge, and sparingly around the lake margins. Frequent on the lakeside adjacent to The Farm. The distribution has changed subtly over the years; it is less abundant by Cascade Bridge but more abundant towards Guinness's Bridge in 2002. One clump established on the northern bank, where the gas pipeline crosses the outflow stream in Water Meadow. In the pond of the Japanese Garden, 1979-2004. Planted in 2002 in the willow carr by the Walled Garden; established but inconspicuous in April 2003-04 because the roe deer have eaten off all the flower buds. By the outflow stream below Herons Brook.

East Berks: widespread, but uncommon to the east of Wokingham [86]. 6% (1km²). Atlas 2000: all squares.

West Berks: widespread but uncommon on the high ground in the vicinity of Lambourn [37] and Beeton [47]. Atlas 2000: all squares

¶ ***Trollius*** *T. chinensis* 'Golden Queen', *T. pumilus*

Helleborus foetidus L. *Stinking Hellebore*

chh 3

Old woods, chiefly of beech on calcareous soils. Commonly planted in gardens and churchyards, and many of the roadside plants are certainly garden escapes. Told from *H. viridis* by leaves all on the stem (not basal) and bracts entire (not deeply divided). Most conspicuous in February when its pale, yellowish green flowers contrast with a still lifeless backdrop.

Silwood Park: naturalised sparingly in the Japanese Garden.

East Berks: in hedgerows about Hurdle Shaw [582797] and below Grims Ditch [592795]. In woods at Windsor, Rose Hill, Park Place. Locally frequent on banks around Maidenhead sewage works [8980] in 2001. Whitley [7270] and Bulmershe [7573] in 2002. 2% (1km²). Atlas 2000: all squares, but mainly as garden escapes.

West Berks: very local and rare. Most frequent in the Pang Valley; Yattendon, Hermitage, Bradfield, Bucklebury, Streatley and Tomb Farm [57], Basildon and Sulham [67], Cleve Lock [68], but also at Ashbury [28], Buscot Lock [29], Buckland [39], Marcham and Kingston Bagpuize [49] and Radley [59]. Atlas 2000: [28], [38], [39], [49], [57], [58], [67]

Helleborus viridis L. *Green Hellebore*

hp 2 ↓

Helleborus viridis subsp. **occidentalis** (Reut.) Schiffn.*Helleborus occidentalis* Reuter

Woods and bushy places, rare. Old oak woods, very local and rare. Most of the plants are garden escapes or relics of cultivation. Told from *H. orientalis* by smaller flowers (3-5cm across, not 5-7cm) and follicles fused for about one quarter of their length (not free to the base).

West Berks: Pusey [39], Newbury and Enborne [46], Peasmore [47], Hendred [48], Kingston Bagpuize and Frilford [49], Mutton Copse [587795] has about 200 plants, Streatley [58], Pangbourne [67]. Atlas 2000: [39], [46], [47], [57]

Mount Hill above Bagnor [447704], mentioned in *Around the Three Valleys* by Lesley Dunlop and Dick Greenaway. Found by Jan Haseler on 1 March 2012, about 40 clumps in the NE quadrant of the track intersection.

Helleborus niger L. *Christmas-rose*

● chh 3

Occasionally grown in churchyards, but rare as a garden outcast. Seldom surviving long in the face of herbivory from slugs and snails.

Silwood Park: rare as a persistent outcast in woods behind the Japanese Garden.

East Berks: Shottesbrooke churchyard [87], Sunninghill churchyard [96]. Atlas 2000: [86], [88]

Helleborus argutifolius Viv. *Corsican Hellebore*

● chh 3

Helleborus corsicus Willd., nom. nud.*Helleborus lividus* Aiton subsp. *corsicus* P. Fourn., nom. nud.

Frequently planted in churchyards. This is the massive, pale yellowish-green hellebore that is occasionally found as a garden escape in woods and on waste ground and roadsides.

Silwood Park: the most frequent hellebore in plantations (e.g. behind the Japanese Garden).

East Berks: uncommon. On waste ground at Waltham St Lawrence [8276] in 2002, and in Cookham Dean [8785] in July 2003. One patch by the railway at Winnersh [7870] in April 2004. Atlas 2000: [76], [87], [96]

West Berks: a scarce but persistent garden outcast, as at Kingston Bagpuize [4098]. Atlas 2000: [36], [56], [66], [67]

Helleborus orientalis Lam. *Lenten-rose*

● chh 3

Estates, churchyards, etc., always planted but sometimes long-persistent. Hybridizes freely with other Hellebores, producing offspring of baffling complexity.

Silwood Park: a few stragglers behind the Japanese Garden.

East Berks: no records.

West Berks: in East Garston churchyard [3676], where it grows in the cover of the famous thatched-roofed wall. It is freely self-sown in the woodland garden at Kingston Bagpuize House [4098].

¶ **Helleborus** *H. argutifolius*, *H. cyclophyllus*, *H. foetidus*, *H. foetidus* Wester Flisk group, *H. lividus*, *H. niger*, *H. niger* ‘Potter’s Wheel’, *H. x nigercors*, *H. orientalis* ‘Ashwood Garden hybrids’, *H. orientalis* ‘Ballard’s group’, *H. purpurascens*, *H. x sternii*, *H. x sternii* Blackthorn group, *H. viridis* subsp. *occidentalis*

Eranthis hyemalis (L.) Salisb. *Winter Aconite* ● grh 1
Helleborus hyemalis L.

Churchyards, plantations, stately parks, and waste ground in villages; rare and never as a native plant. Most abundant on the clay.

Ascot: very rare. Sunningdale churchyard in February 2001 in small quantity, obviously planted.

East Berks: very uncommon (not in Druce), and all but confined to churchyards and gardens of the larger estates. Swallowfield, Rowes Farm, Streatley Hill, Shottesbrooke Church, Scotlands, Finchampstead, Burchett’s Green, Stubbings. Recently at Wargrave church, and at the base of the chalk slope below Windsor Castle. 1% (1km²). Atlas 2000: all but [78]

West Berks: Shrivenham [28], abundant in Buscot Park, Eaton Hastings church, Faringdon and Little Coxwell [29], Inkpen [36], Sparsholt and Childrey [38], Longworth Manor [39], Benham Park [46], Boxford and Welford Park [47], West Ilsley, Ginge, East Hendred and Harwell [48], West Hanney, Drayton, Marcham, Kingston Bagpuize House and Frilford [49], common at Bessels Leigh school, Wytham and Sunningwell, Long Copse [473046] on 25 March 2007 growing with *Scilla siberica* [40], Hyde End Mill [56], Bucklebury and Aldworth [57], Streatley [58], Wittenham and Sutton Courtenay [59], Bagley Wood [50], Burghfield and Padworth [66], Theale [67]. Atlas 2000: all but [30], [68], [69]

Nigella damascena L. *Love-in-a-mist* ● th 5 ↑

A classic cottage garden plant, seeding freely and found commonly on pavements, walls and waste ground in towns and villages throughout.

Silwood Park: on open waste ground by the CABI greenhouses; self-sown, June 2000-02002. Below the churchyard wall at Ashurst from 1980-2004. Pavements in Cheapside. A single plant on imported topsoil at Ashurst Lysimeters on 11 June 2004, and another single plant in Ashurst Lysimeters on 1 September 2009, following herbicide treatment and cultivation in late spring 2009.

Ascot: abundantly self-sown in cracks in pavements and alleyways between the High Street and the Racecourse in Ascot in November 2001. Rare on the sandy construction site on Dry Arch Road on 2 August 2004.

East Berks: towns and villages throughout. First recorded from Battle Farm, Reading, in 1965. 19% (1km²). Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: one of the most frequent garden escapes, found in almost every village. Moulsoford Downs [58] in 1963, Didcot tip [59] in 1965, Newbury tip [474680] in 1971. Common in towns in 2002 as at Botley [40] and New Hinksey [50]. Locally abundant on cinder in railway sidings at

Didcot Parkway Station [5290] in 2003. Atlas 2000: [28], [29], [36], [38], [46], [49], [40], [58], [50], [68]

¶ **Xanthorhiza** *X. simplicissima*

Aconitum napellus L. *Monk's-hood*

• grh 5

Aconitum napellus subsp. **napellus**

Aconitum anglicum Stapf

Alien of meadows and hedges; rare and certainly introduced. An uncommon colonist of streambanks and waste ground near gardens.

Ascot: no records

East Berks: Ashley Hill in 1893 (**OXF**), Winnersh in 1959 (**RNG**), near Long Moor in 1897. No recent records

West Berks: early records from Bagley Wood [50] in 1918 (**OXF**), Bradfield [67] in 1897 (still there), and Welford Park [47] in 1918. Recently at Pusey [39], Benham Park and Newbury [46], Brimpton [56], Cold Ash, Hermitage and Stanford Dingley [57], Bagley Wood [50], Hogmoor Copse, Tidmarsh [67]

Consolida ajacis (L.) Schur *Larkspur*

• th 6 ↑

Delphinium ajacis L., *Consolida ambigua* auct., non (L.) P. Ball and Heyw., *D. ambiguum* L.

Casual or colonist of arable fields on dry soils, once occasional, now very rare and sporadic as an arable weed. Commonly cultivated as a garden annual and frequently escaping to be found in cracks in paving in towns and villages, and on waste ground.

Silwood Park: very rare recent arrival. A single plant by the new road to the renovated Silwood Farm on 29 August 2011. Probably imported with topsoil in autumn 2010 used for landscaping the banks close to the gate onto Buckhurst Road.

Ascot: common for several years (1995-99) on the pavement of Upper Village Road in Sunninghill.

East Berks: waste ground near Cookham Lock (1871), Wargrave, Maidenhead, Reading, Smallmead, Woodley. <1% (1km²).

West Berks: first record from Long Wittenham [59] in 1859 (Lightfoot, **OXF**) and Frilford [49] in 1935 (**OXF**). Recently at Wickham [37], Abingdon and Frilford [49], Botley and Boar's Hill [40], Compton [57], Aston Upthorpe and Streatley [58], Didcot [59], Basildon [67], Wallingford [68].

¶ **Delphinium** We have never grown many delphiniums at Silwood, because feeding slugs at great expense has never seemed like an appealing idea.

¶ **Cimicifuga** *C. racemosa*, *C. simplex* var. *matsumurae* 'Elstead', *C. simplex* var. *matsumurae* 'White Pearl', *C. simplex* var. *simplex* *Atropurpurea* group

Anemone nemorosa L. *Wood Anemone*

grh 3

Woods, hedge-banks and bushy places, preferring slightly shaded places. Very abundant in woods on chalk, less common in dry oak woods and damp alder woods, rare on acid soils.

NVC: W 8,10,12,14,21,25

Silwood Park: unaccountably local and rare; absent from large areas of apparently suitable habitat. The only extensive patch is at the back of the Farm, between the Farm Track and the Cheapside Footpath. This is also the site of Silwood's only extensive population of Dog's Mercury. Locally abundant on Gunness's Bridge. Rare in the corner of Nash's Copse, locally frequent in Water Meadow East next to Herons Brook, by the Outflow Stream through Water Meadow West, in Cascade Marsh, and under rhododendrons in Mann's Copse. Increased in Water Meadow West following bramble clearance in 2005, and occasional in the edge of the grassland as well as underneath the trees on 11 April 2007.

East Berks: widespread but only locally abundant, and often missing from apparently suitable woodlands. Beech Hill, Farley Court, Park Farm, Bearwood, abundant in Simon's Lane, Maiden Erleigh, throughout Reading, frequent in Remenham Wood, Culham Court, Crazies Hill, Big Wood, Shepherd Meadow, Easthampstead, Wykery Copse, Stanlake Park, Moss End, Paddock Wood, Ockwells Manor, Chawridge Gorse, common in the churchyard at Bisham, Scotlands, Inkydown Wood, Winter Hill, Canon Court Farm, St Leonard's Hill, Stag Meadow, Windsor Great Park. 8% (1km²). Atlas 2000: all squares

West Berks: generally distributed, but absent or rare on Lambourn Downs and in the Vale of the White Horse. Frequent in the Kennet Valley and in the woodlands of the Northern Loop. The best woodland display is Radley Large Wood [5201]. Atlas 2000: all but [30], [68], [69]

Anemone apennina L. *Blue Anemone*

• grh 4

Planted in churchyards and the grounds of larger estates. Told from *A. blanda* (the other common blue flowered *Anemone* of gardens), by lower sides of sepals and basal leaves sparsely pubescent (not glabrous).

Ascot: no records. Not in Silwood Park.

East Berks: in the woods at Park Place in 1964.

West Berks: Childrey Rectory [38], Shellingford [39], Frilford [49], Hawkrigge (1910) and Compton (1919, OXF) [57]. Recently from Baulking [3190], Letcombe Bassett church [3785] and Wantage church [3987].

Anemone blanda Schott and Kotschy *Balkan Anemone*

• grh 4

The other blue flowered *Anemone*, more rarely naturalised than *A. apennina* but more commonly planted in churchyards. Differing in its glabrous sepals and lower leaves which are hairless and purple-flushed below. Care is needed with planted and relic *A. blanda* 'White Splendour', which might be overlooked as *A. nemorosa* (which has 6-9 not 10-15 sepals)

Silwood Park: rare in the churchyard at Ashurst. Naturalised in grass, February 1999.

Ascot: rare but long persistent in the churchyard at South Ascot 1971-2004. *A. blanda* 'White Splendour' rare in rough grass in South Ascot churchyard on 22 April 2003.

East Berks: recently from Wokingham churchyard, Sonning, Warfield and Waltham St Lawrence.

West Berks: Sutton Courtenay churchyard in 2000.

Anemone ranunculoides L. *Yellow Anemone* ● grh 4 ↓

Plantations, very rare.

West Berks: first recorded from Tubney Wood [49] in 1897. Childrey rectory [38] about 200 plants in 1963. Sparsholt rectory [38] in 1970.

Anemone coronaria L. *Crown Anemone* ● grh 4

Spectacular, poppy-like Anemones with red, white or blue flowers, rarely seen outside gardens.

Ascot: very rare in the churchyard at South Ascot, with purple-blue flowers on 28 April 2002.

East Berks: on old allotment ground at Bulmershe [7573] in June 2002.

West Berks: a single, blue-flowered plant in the churchyard at Sunningwell [4900] on 2 May 2002.

Anemone x fulgens *Scarlet Anemone* ● grt 4

A tuberous perennial with stunning scarlet flowers in April. Very rare in graveyards, but abundant and long persistent where it has been planted.

West Berks: dominating the entire surface of several graves in Great Coxwell churchyard [2693], where the plant has self-sown into adjacent grass; 1996-2004.

Anemone x hybrida Paxton *Japanese Anemone* ● grh 8
Anemone x japonica hort., non (Thunb.) Siebold and Zucc.

A very common bedding perennial, found as a garden outcast on waste ground, pavement cracks, and banks in towns and villages. Absent from the most acid soils.

Ascot: rare. A single clump on waste ground in Course Road, Ascot, in November 2003. Self sown in pavement cracks on School Road Sunninghill on 10 September 2005.

East Berks: Swallowfield, Shinfield, Oxford Road in West Reading, West Whitley, Bulmershe, Earley, Twyford, Kiln Ride, Pine Wood, Brookers Row, College Town, Shottesbrooke, Warren Row, Lee Lane, Maidenhead, East Maidenhead, Furze Platt, Halfway House, Cookham. 4% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: scattered in towns and villages throughout, as at Wantage [38], Newbury [46] and Blewbury [58]. Atlas 2000: [38], [46], [58], [59]

¶ **Anemone** *A. apennina*, *A. blanda* 'White Splendour', *A. hupehensis* 'Bowles' Pink', *A. hupehensis* var. *japonica* 'Bressingham Glow', *A. hupehensis* var. *japonica* 'Prinz Heinrich', *A. hupehensis* 'Praecox', *A. hupehensis* 'September Charm', *A. hupehensis* 'Splendens', *A. x hybrida*, *A. x hybrida* 'Honorine Jobert', *A. x hybrida* 'Königin Charlotte', *A. x hybrida* 'Monterosa', *A. x hybrida*

‘Pamina’, *A. x hybrida* ‘Richard Ahrends’, *A. x hybrida* ‘Whirlwind’, *A. nemorosa* ‘Robinsoniana’, *A. ranunculoides*, *A. tomentosa* ‘Robustissima’

Hepatica nobilis Schreb. *Liverleaf*

• grh 4 ↓

Anemone hepatica L.

An occasional garden plant, long persistent where planted in woodland and shady wild gardens. Seldom seen as a garden escape.

West Berks: in an old garden at Frilford [49] in 1965.

¶ **Hepatica** *H. nobilis*, *H. transsilvanica*

Pulsatilla vulgaris Mill. *Pasqueflower*

h 4 ↓

Anemone pulsatilla L.

A local speciality of grassy chalk downs, at its southern British limit in Berkshire (see p. 13). “The Pasque Flower occurs in Berkshire over a small area, where it is by no means continuous, but is found in scattered patches, which are more frequent on the slopes than on the tops of the chalk downs” (Druce). Most colonies occur on steep south or south-west facing slopes on the escarpment of the chalk where the turf is characteristically species-rich. Threatened by scrub encroachment and poor grazing management.

NVC: CG 2,3,5

Silwood Park: a very rare casual, self-sown in gravel in the northernmost of the cold frames on the pot-standing at the Greenhouses. Three plants in flower on 21 April 2001 (**K**); still there in 2004. The origin of the seed is unknown.

East Berks: planted at Park Place, but there are no native records from the grasslands of the northern chalk.

West Berks: local and rare. First specimens from Hampstead Norreys [57] in 1865 (**OXF**), Lowbury Hill [5382] in 1889 (**OXF**), Pusey [39] in 1895 (**OXF**) and Wembury [48] in 1910 (**OXF**). Cherbury Camp [39], Ilsley Downs and Ridgeway above Lockinge [48], Aldworth downs (**LAN**) [5579], Aston Upthorpe Downs [544835] where there were 12 plants in 1988 and 26 in 2001, Blewbury Downs (**OXF**) and Moulsoford Downs [all 58]. Formerly on Unhill and Yewtree Downs [58], Streatley and Pangbourne Downs (the head-quarters of the plant in Berkshire according to Pamplin in 1854) [67]. Vulnerable to acid rain and fertilizer pollution, even in its protected sites. The Aston Upthorpe site has declined dramatically over the past 30 years, and is now in poor condition, despite the introduction of new Pasqueflowers by conservationists. On 29 May 2005 Susan Erskine counted 55 plants, of which 26 were surviving transplants and 3 were new recruits. There were still 55 plants on 23 April 2006 [547835] and 56% survival but with very low seed set in 2009, presumably as a result of heavy rabbit grazing. There were just 11 fruiting plants in 2012 (Kathy Warden). It is odd that it never grew on the western chalk; for instance, Weathercock Hill above Ashdown Park [28] looks to be ideal habitat. Atlas 2000: [39], [48], [58]

¶ **Pulsatilla** *P. alpina* subsp. *apiifolia*, *P. halleri* subsp. *slavica*, *P. vernalis*, *P. vulgaris* ‘Alba’, *P. vulgaris* var. *rubra*

Clematis vitalba L. *Traveller’s-joy*

m 7

Woods, hedges, chalk grassland, roadsides, quarries, railway banks, wood borders and urban waste ground on calcareous substrates. It tends to be abundant in woods where honeysuckle *Lonicera periclymenum* is absent or rare. The distribution of *Clematis* within Berkshire is rather peculiar. A person might walk across the sandy heaths of Finchampstead, Sandhurst, Ascot and Bagshot and remark that *Clematis* was not to be seen in the county. Another traveler, journeying from Reading past Sonning and Wargrave to Henley or from Henley to Marlow and Maidenhead might say with equal truth: 'What a conspicuous feature of the vegetation of Berkshire is the *Clematis* !' (Druce).
NVC: CG 3,5; W 8,12,13,21

Silwood Park: no records.

Ascot: very local and rare. A massive liana grew in the hedge of Agatha Christie's former house (called 'Styles') on Charters Road in Sunningdale, close to the boundary stream with Surrey. The vine was destroyed in 1997 when the Cypress hedge was cut down to let some light into the front of the property. Also on waste ground at Ascot Station. A single plant in the temporary fence at the eastern (Winkfield Road) end of the construction site at the new racecourse at Ascot [925690] in October 2005.

East Berks: occasional, but rare or absent from most of the Bagshot and Reading beds, except where calcareous deposits overlie the acid substrates (e.g. at White Waltham). Locally common on urban waste ground (e.g. along Oxford Road in West Reading and by the R. Thames in Maidenhead). Beech Hill, Swallowfield, Finchampstead, Reading, Sheeplands Farm, Wargrave, Blackwater River, Wargrave, Twyford, Quarry Wood Bisham, Ashley Hill, Park Place, Remenham, Culham, Cockpole Green, Craziest Hill, Heath Pond, Road Research Laboratory, Bracknell, Hare Hatch, The Walthams, Shottesbrooke, Littlewick Green, Woodlands Park, Warren Row, Hurley, Ashley Hill, Burchett's Green, Furze Platt, particularly abundant at Pinkneys Green, Maidenhead, East Maidenhead, Bisham, Winter Hill, Cookham, Odney Club, Stubbings Heath, Bray, Clewer Green, Clewer, common on the banks of the Thames at Windsor Racecourse, Windsor, Home Park, very rare on the chalk slope below Windsor Castle. Common on railway ground at Kings Meadows Reading in September 2007. Very rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 19% (1km²). Atlas 2000: all squares, but very patchy at a smaller scale.

West Berks: abundant on the chalk and frequent on the coralline oolite, but practically absent from the clays. Sometimes produces massive, heavy lianas as in Rivar Copse [3562], Uffington Wood [3086] and Northridge Bottom [6277]. On the ruins of the Prince of Wales pub at Challow Station [3590]. Abundant on urban waste ground in south-west Oxford [4906], Newbury [4767] and Abingdon [4997]. Common in the Reading Lake District [67]. On the exit slip road of the A4 from the M4 at J12 near Theale [649715] on 30 September 2009. Atlas 2000: all squares

Clematis tangutica (Maxim.) Korsh. *Orange-peel Clematis*
Clematis orientalis L. var. *tangutica* Maxim.

• m 7

A rare, late-flowering garden escape with waxy, brilliant orange flowers (with sepals less than 4cm). Sometimes long persistent and occasionally self-sown. Told from *C. orientalis* by its serrate (not entire or sparsely toothed) leaf margins. The orange sepals of *C. tangutica* are hairless on the outside and silky hairy on the inside, while the greenish yellow sepals of *C. orientalis* are silky hairy outside as well as inside. There is much confusion about the relationship of the famous garden cultivar *C. 'Orange Peel'* to *C. tibetana* subsp. *vernayi* Fischer and *C. orientalis* L. The cultivar 'Bill MacKenzie' has single yellow flowers to 8cm across, and may be a hybrid between *C. tangutica* and *C. orientalis* or *C. tangutica* and *C. tibetana* subsp. *vernayi*. As Christopher Lloyd says in his classic book on *Clematis* (Viking, 1989): "May the Saints preserve us !"

East Berks: on a fence on waste ground in Cookham [8985] in September 2002.

West Berks: a rare garden escape. Dry Sandford Pit [49], first recorded in 1976 (**OXF**). In cracks in tarmac on a derelict plot in New Hinksey [519042] on 28 September 2002, clearly self-sown. On old walls at Kingston Bagpuize [4098] in July 2003.

Clematis cirrhosa L.

• m 2

A popular early-flowering climber in gardens, but very rare as an escape.

East Berks: self sown on a derelict wall off College Road, Reading [737727], in full flower on 30 October 2004.

¶ **Clematis** *C.* 'Abundance', *C.* 'Alba Luxurians', *C. alpina*, *C. alpina* 'Frances Rivis', *C. alpina* 'Pamela Jackman', *C. alpina* 'Ruby', *C. alpina* 'Willy', *C. armandii*, *C. armandii* 'Apple Blossom', *C. armandii* 'Bowl of Beauty', *C. armandii* 'Snowdrift', *C.* 'Asao', *C.* 'Ascotiensis', *C.* 'Beauty of Worcester', *C.* 'Bees' Jubilee', *C.* 'Bill MacKenzie', *C. campaniflora*, *C.* 'Carnaby', *C. chrysocoma*, *C. cirrhosa* var. *balearica*, *C. cirrhosa* 'Freckles', *C. cirrhosa* 'Wisley Cream', *C.* 'Comtesse de Bouchaud', *C.* 'Daniel Deronda', *C.* 'Duchess of Albany', *C. x durandii*, *C.* 'Elsa Späth', *C. x eriostemon* 'Hendersonii', *C.* 'Ernest Markham', *C.* 'Etoile Rose', *C.* 'Etoile Violette', *C.* 'Fireworks', *C. flammula*, *C. florida* 'Sieboldii', *C.* 'Gravetye Beauty', *C.* 'H.F. Young', *C.* 'Hagley Hybrid', *C.* 'Henryi', *C. heracleifolia* var. *davidiana* 'Wyevale', *C.* 'Huldine', *C. integrifolia*, *C.* 'Jackmanii', *C. x jouniana* 'Praecox', *C.* 'Kermesina', *C.* 'Lasurstern', *C.* 'Little Nell', *C. macropetala*, *C. macropetala* 'Markham's Pink', *C.* 'Madame Julia Correvon', *C.* 'Marie Boisselot', *C. marmoraria*, *C. montana*, *C. montana* 'Elizabeth', *C. montana* f. *grandiflora*, *C. montana* 'Marjorie', *C. montana* 'Pink Perfection', *C. montana* var. *rubens*, *C. montana* 'Tetrarose', *C. montana* var. *wilsonii*, *C.* 'Mrs Cholmondeley', *C.* 'Nelly Moser', *C.* 'Niobe', *C.* 'Perle d'Azur', *C.* 'Polish Spirit', *C. rehderiana*, *C.* 'Rouge Cardinal', *C.* 'Royal Velours', *C. tangutica*, *C. tangutica* 'Lambton Park', *C. tibetana* subsp. *vernayi*, *C. x triternata* 'Rubromarginata', *C.* 'Ville de Lyon', *C. viticella* 'Purpurea Plena Elegans', *C.* 'Vyvyan Pennell', *C.* 'Wada's Primrose'

Ranunculus acris L. *Meadow Buttercup*

hp 5

Meadows and pastures, open woodland and disturbed ground; abundant and generally distributed. Grassland, frequent to abundant, least common on the chalk ridge. This is the buttercup found on soils of intermediate wetness; *R. repens* grows in wetter places, and *R. bulbosus* in drier places. A poor competitor for soil phosphorus (P), increasing dramatically in abundance when fertilizer P is added without nitrogen (N), or when N application is stopped but P application is continued (as illustrated at Park Grass, Rothamsted).

NVC: M 13,22,24,27; MG 1,4-7,9,10; OV 26; S 5,7,19,26; U 20; W 5,6,8,24

Silwood Park: the least common of our 3 widespread buttercups. Occasional in the mesic grasslands like Nash's Field. Common in the roadside verge opposite Knight Frank where its tall flowering stems are conspicuous in May before the first grass-cut.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	0	1	7	16

East Berks: much less frequent than *R. repens*, and commonest in old meadows. Fine expanses of the plant on Review Ground in Windsor Great Park [9674], and in water meadows such as Widbrook Common [8984] (see Plate 7). 64% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Ranunculus repens L. *Creeping Buttercup*

hs 5

Waste ground, cornfields, ditch- and river-banks, woodland rides, damp alder woods, damp grasslands, lawns, roadsides and waste ground. Common except on the grassy chalk downs and in the heathy districts of the Bagshot sands. The leaves are mined by the fly *Phytomyza ranunculi*, and galled by the midge *Dasyneura ranunculi*. One of our most frequent wildflowers, locally abundant in a huge range of habitats:

NVC: CG 3,4; M 22,27, MG 1,4-7,9,10,13; OV 4,7,10,12,15,19-23,25,26,28-33;

S 5,7,12,15,16,18,19,23,26,28; U 20; W 1,5,6,8,10,14,21,24

Silwood Park: often the most abundant dicot in wet grassland and woodland habitats. Frequent as an arable and garden weed and on mud at the lakeside. Common in the Walled Garden beneath *Holcus lanatus* or *Arrhenatherum elatius*. Locally dominant in some of the experiments, as in Oak Mead spring 2000 following a ragwort monoculture which had flowered and died in summer 1999. The ground had been cultivated in early 1998 and left to be rabbit grazed. Very common in the seed bank of the spoil stripped from the Church Lane footpath in 2001 and piled by the Kissing Gate in summer 2002. Abundant in the top corner of Silwood Bottom on 22 May 2007, following autumn cultivation in 2006. By the ferruginous flush at the bottom of Farm Wood in 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
18	29	33	49	93

East Berks: widespread; 97% (1km²). Only *Trifolium repens*, *Dactylis glomerata*, *Plantago lanceolata*, *Plantago major*, *Poa annua*, *Cirsium arvense*, *Rumex obtusifolius* and *Urtica dioica* are more frequent at this scale. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Ranunculus repens ‘Flore Pleno’ *Double-flowered Buttercup*

• hs 5

This is the double flowered form, which is a rare garden plant. The multiple petals are shiny golden yellow.

East Berks: a very rare garden escape on pavements in Reading in 1999.

Ranunculus bulbosus L. *Bulbous Buttercup*

hs 4

Very common in meadows, pastures, dry banks, graveyards and lawns, preferring sunny, drier situations than *R. acris*. Frequent to abundant on calcareous soils, less common on acid soils, the first buttercup into flower in most years. Much the commonest buttercup in chalk downland. Intolerant on nitrogen fertilization.

NVC: CG 2-5; MG 1,4,5,7; OV 23; W 12

Silwood Park: commonest on lawn banks adjacent to the Main Drive, and in the graveyard at Ashurst. Common in the early years of the experiment (1986) in fenced cultivated blocks in Nash’s Field, but declined rapidly and was rare by 1996. Cultivation was resumed in 2003 after a 4 year break for Ryan Keane’s PhD on alien *Bromus* species, and *R. bulbosus* was occasional only in the fenced cultivated plot D in May 2003-04. Rare in fenced cultivated plots in Nursery Field in May 2004. Flowering freely on 20 May 2007 where deer and rabbit fences had been erected in 2005 on lawns around Silwood. Occasional inside the rabbit fences in Nash’s Field on 18 May 2008 (erected in 1996 to allow succession to woodland) and in the fenced part of Block R (insecticide and molluscicides) where lime but no nitrogen had been applied.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
8	14	21	10	19

Ascot: locally frequent in churchyards, as at South Ascot.

East Berks: the least frequent of the 3 common meadow Buttercups; 37% (1km²). Atlas 2000: all squares

West Berks: very early flowering in Cumnor churchyard on 25 February 2001. Atlas 2000: all squares

Ranunculus sardous Crantz *Hairy Buttercup* th 6

Waste ground and moist, clayey places, pond sides, etc. Neither Druce nor Bowen had seen any Berkshire specimens. This distinctive species, with its reflexed sepals, hairy receptacle, and its single ring of tubercles just inside the border of the smooth, hairless achene, is most unlikely to have been overlooked and must, therefore, have increased substantially since their time (but there is no evidence that it is currently increasing in distribution or abundance).

Silwood Park: local, rare and sporadic. From imported topsoil on Garden Wood Bank; 2 plants on 26 August 1989. A single plant amongst *Bergenia* by the entrance to North Block on 2 July 1992. Three large plants on 14 October 1994 in the holding bed by the Horticultural Greenhouses, perhaps introduced with bare-rooted perennials from Blooms at Diss in Norfolk. By the side of the path to the TTC on 24 June 1998. Several plants in cultivated ground at the edge of the lawn of the west bed in front of Munro Building on 31 July 2009; an exciting rediscovery of a species thought to have gone from this site.

East Berks: Earley, Blackwater Lane, Wellington College. <1% (1km²). Atlas 2000: [77], [86], [96]

West Berks: Faringdon [29], first recorded from Kintbury [36] in 1871 and Stroud Green [46] in 1897, Down House [57], Silchester [66]. Atlas 2000: [29], [36], [40], [57]

Ranunculus marginatus d'Urv. *St. Martin's Buttercup* ● th 5 ↓

A very rare casual with us, this has been an abundant weed of arable and bulb fields in the Isles of Scilly since the 1950s. Native to the Middle East.

East Berks: on bare soil at Reading Station [715737] in 1983.

Ranunculus parviflorus L. *Small-flowered Buttercup* th 5 ↓

A scarce plant of dry arable fields, sunny banks, open disturbed ground and woodland rides on sandy soil. Found in rabbit scrapes, tracksides, flower beds, gravel paths, cliff edges, etc. often with *Cardamine hirsuta* and *Veronica arvensis*. Exhibits great size plasticity and range of flowering dates (from April to December in particularly mild, damp years). Very local and decreasing.

East Berks: Pinkneys Green in 1919 (RDG) and Winter Hill in 1897. Not seen recently, until found on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008 where it was local and rare on compacted bare ground on the top of the heap.

West Berks: cultivated ground in Lower Seeds and Upper Seeds at Wytham [40] (still there in 2003), Castle Hill, Sinodun Hills [59], Bagley Wood and Kennington [50], Aldermaston (**RDG**) in 1930 [56], Grazeley [66], Bradfield [67]. The best site on which to see this plant is Greenham Common, in open ground at the eastern end [516644] that had been kept free of perennial plant cover by disturbance from military vehicles (now managed to conserve rare annual plants including *Apera interrupta*). Many plants growing on chippings by the public footpath, close to the bend in the path by the railway [522913] at Didcot Industrial Estate on 12 June 2010 by Frank Hunt. Atlas 2000: [40], [56]

Ranunculus arvensis L. *Corn Buttercup* o th 6 ↓

Cornfields, formerly locally abundant and widely distributed, but now much declined as a result of herbicide use. Decreases under spring cultivation. Rare and sporadic as a casual of waste ground and rubbish tips.
NVC: OV 9

East Berks: Hurley, Sonning (**RNG**), Bisham, Maidenhead (**HULL**), White Waltham, Wargrave, Old Windsor, Finchampstead (**RNG**), Wellington College, Wokingham, Shinfield. Atlas 2000: [76], [87]

West Berks: locally frequent on the Upper Greensand, rare and sporadic elsewhere. Compton Beauchamp [28], Challow [38], Baulking and Buckland [39], Chieveley and Hermitage (**RNG**) [47], Ardington and Harwell [48], East Hagbourne and North Moreton [58], Brightwell and Didcot [59], Sugworth [50], Burghfield [66], Tilehurst (**RDG**) [67]. Recently at Eaton Hastings [2697] and Step Farm [2795]. Atlas 2000: all except [37], [46], [57], [68]

Ranunculus auricomus L. *Goldilocks Buttercup* hs 4 ↓

Woods and hedgerows; once locally common and widely distributed in shady places, but now rarely found in any quantity. Its presence is the mark of a superior woodland.
NVC: M 26; W 8

Ascot: very local and rare, Swinley brick pits. Not in Silwood Park.

East Berks: local and uncommon; perhaps declining; absent from very acid soils in the south. Riseley, Hall Farm, Farley Court, Swallowfield churchyard, Wokingham [8372 6986], Jocks Copse, Chawridge Gorse, Scotlands, Pudding Hill, Park Wood, Inkydown Wood, Winter Hill, Park Place, Bowsey Hill, Wellington College, Wargrave, Maidenhead Thicket, Windsor, Cookham Dean, Ham Island, Buck Farm Copse [858745]. 2% (1km²). Atlas 2000: all squares

West Berks: widely scattered but absent from the chalk ridge. Beckett Park [28], Buscot and Little Coxwell [29], Hungerford [36], White Shute Hill [37], Wantage [38], Buckland [39], Marcham [49], Appleton and Wytham Woods [40], Aldermaston [56], in the woodlands around Ashampstead [57], locally abundant in the churchyard at Stanford Dingley, Yattendon and Bucklebury [57], Streatley [58], Sutton Courtenay Manor and Little Wittenham Wood [59], frequent in Radley Large Wood [5201], Burghfield [66], common in Moor Copse and Bradfield [67]. Atlas 2000: all except [47], [58], [68]

Ranunculus sceleratus L. *Celery-leaved Buttercup* hel 5

Margins of rivers, streams and ponds, wet grassland, muddy ditches and damp arable fields. Rather local and absent from the chalk. Often growing with *Agrostis stolonifera*, *Glyceria maxima*, *Myosotis scorpioides* and *Rorippa islandica*.

NVC: A 1,20; MG 13; OV 32; S 4,12,23

Ascot: Swinley Brick Pits, Virginia Water. Rare on damp compacted topsoil at South Ascot playing fields during levelling operations on 15 July 2001. In a damp part of the set-aside (formerly maize) east of the racecourse [925700] in May 2003. Not in Silwood Park, but very close by in Blacknest Park [956685]; this site was cleared for building work to begin in December 2001. Also on the edge of the Marist Convent pond at Froggnall [941682], a single plant in September 2005.

East Berks: scattered throughout but uncommon in the far east (east of 90). Gravelly Bridge, Arborfield, Reading, Dinton Pastures, M4/A329(M) Interchange, Billingbear, Remenham, Crazies Hill, Keephatch, Shepherd Meadow, Grange Farm, Lock's House, Beenhams Heath, Waltham St Lawrence, Jocks Copse, Hazelwood Copse, Braywoodside, Thimble Farm, Stud Green, Mount Skipet, Dial Close, Cookham, Fifield, Berks Polo Club, Cranbourne Court. 7% (1km²). Atlas 2000: all squares

West Berks: widespread but absent from a 15km wide strip of the chalk (north from 70 to 85). Common all along the R. Thames. Frequent in Reading's Lake District [66] and [67] in 2002. Atlas 2000: all except [37], [47], [48]

Ranunculus lingua L. *Greater Spearwort*

h 6 ↓

Lake sides, river banks, marshes, ditches on nutrient rich mud, and wet woodland; rare and decreasing, but often planted.

NVC: M 9; S 1,4,22; W 5

Ascot: on the southern shore of Virginia Water, opposite Temple Bungalow [965690] in 2003 growing with *Acorus calamus*. Fernbank Road, where it is certainly planted. In Sole's Pond east of Ascot Station (1975-2004).

East Berks: Cookham by the water called the Strand. Riseley, Swallowfield, Dinton Pastures, The Throat, ponds at Cranbourne, Leiper Hill. Planted in recent years in many of the ponds in Windsor Great Park. <1% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: in The Wilderness at Kintbury in 1918 [36], by the R. Cole opposite Sevenhampton Place [312898], Wantage old canal [38], by the Land Brook south of Charney Bassett [379931], Buckland [39], Hoe Benham [46], Abingdon [49], Thames meadows at Wytham Ditches (RNG) [40], Chapel Row, Thatcham (RNG), Carbin's Wood and Brimpton pit [56], Yattendon in 1902 and 1922 (RNG) [57], Barrow Hills [59]. There were 24 plants in Hagley Pool ditch [4710] in August 2006. Atlas 2000: [38], [49], [40], [56]. [57], [59]

Ranunculus flammula L. *Lesser Spearwort*

h 5

Ranunculus flammula subsp. **flammula**

Heaths, bogs and watery places, damp woodland rides, marshes and margins of ponds. Very variable. Druce describes 4 forms: 'latifolius' from Bagley [50], Fence Woods [57], Knowl Hill [87]; 'ovatus' from Bagshot Heath [86]; 'serratus' commonly; 'tenuifolius' from heathy ponds near Bracknell [86].

NVC: A 22; M 13,22,24,27; MG 13; OV 30,31,35; S 4,8,10,12-14,19; W 1,5

Silwood Park: very local but frequent in the wet woodland at Great Mead and throughout Cascade Marsh. Occasional in The Willows, Water Meadow, on the northern shore of The Lake and by Farm Road. Locally abundant with *Carex remota* and *Galium palustre* in Great Mead on 15 June 2009.

Ascot: Swinley, Englemere, Ascot Station.

East Berks: rather local, but common where it occurs. Highlands, Longmoor Bog, California Country Park, Ashenbury Park, Dinton Pastures, Billingbear, Queens Mere, Chapel Green, Heath Lake, Shepherd Meadow, Sandhurst, Wishmoor Bottom, Martins Heron, Brooklands Farm, Yates Farm, Ockwells Manor, Hurley, Ashley Hill, Winter Hill, Cock Marsh, Windsor Great Park. Frequent over much of the species-rich wet ground at Cock Marsh [881868].
8% (1km²). Atlas 2000: all squares but [78]

West Berks: occasional, but absent from calcareous soil. Found only in the Kennet valley (south of 75), except for a few locations in the Northern loop of the Thames around Wytham. Atlas 2000: all but [37], [38], [39], [48], [69], [69]

Ranunculus ficaria L. *Lesser Celandine*

grt 3

Ficaria verna Hudson

Ranunculus ficaria subsp. **ficaria**

Ranunculus ficaria L. var. *fertilis* Clapham, nom. inval.

Damp places in woods, brook-sides, hedges, banks, open fields, damp meadows and gardens, locally dominant under trees in parks. Common except on chalk and dry heaths. The 'black-leaved' cultivar 'Brazen Hussy' is a rare garden outcast. Flowered about 3 weeks earlier during the warm 1990s than it did previously.

NVC: MG 1,9; S 5; W 6,8,10,12,24,25

Silwood Park: locally abundant in hedge-bottoms, damp woodlands and wet grasslands. Ashurst Orchard, Nash's Copse, Water Meadow, Pond Field, etc. Two plants in flower at the Lysimeters on 14 April 2007 in an early spring. Rare on 20 April 2008 in a cool spring on bare ground at Ashurst Lysimeters that had been herbicided thoroughly in late summer 2007.

Ascot: particularly abundant beneath the pollarded Lime trees in Sunningdale churchyard.

East Berks: common wherever woodland fragments or ancient hedgerows survive. 41% (1km²). Atlas 2000: all squares

West Berks: frequent and locally abundant throughout. A giant form, with leaves the size of Marsh Marigolds and curious double flowers grows in great abundance on the verge at California Farm, south of Farnborough [435805]. Atlas 2000: all squares

Ranunculus ficaria subsp. **bulbilifer** Lambinon

Ficaria bulbifera Holub

Occasional on waysides and plantations throughout, typically on disturbed ground. After flowering, there are fawn-coloured egg-like tubers in the leaf axils. Under-recorded but probably widespread, even though it is much less common than subsp. *ficaria* in semi-natural habitats.

Silwood Park: robust plants in bare patches in grassy ground in the verge of London Road, opposite Knight Frank (1985-2004).

East Berks: more frequent in disturbed grassy places than in woodland. Occasional throughout. Reading, Bracknell, Maidenhead, Cookham, Windsor. Locally frequent on badger mounds in the banks of a shady sunken path between Warren Row and Hurley [8181] in 2004.

West Berks: occasional throughout, as at Little Coxwell and Longcot [29], Newbury [46], Kennington [50]

Ranunculus ficaria subsp. **ficariiformis** (F.W. Schultz) Rouy and Foucaud
Ranunculus ficariiformis F. Schultz

East Berks: a rare garden escape. Reading.

Ranunculus ficaria subsp. **chrysocephalus** P.D. Sell

East Berks: a rare garden escape. Windsor.

Water crowfoots (**Ranunculus** Subgenus **Batrachium** (DC) A. Gray)

The white flowered water buttercups with hair-like (capillary) submerged leaves (in which form they often overwinter) and sometimes terrestrial summer leaves that are more obviously buttercup-like. Except in the cleanest chalk streams, the water crowfoots are in serious trouble. They are present in greatly reduced abundance in polluted surface waters and have suffered enormously from draining and stream cleaning operations. The taxonomy of the group is now well worked out (Stace, 1997), but a complete understanding of the distributions of species within Berkshire still requires more work.

Ranunculus hederaceus L. *Ivy-leaved Crowfoot* hyd 6 ↓

Shallow streams, muddy borders of ponds, wet places; rare and decreasing.
NVC: A 8; OV 35

East Berks: Coleman's Moor (**RDG**), Blackwater, Windsor Great Park in 1888, Wellington College, Sandhurst, Finchampstead (**OXF**), Arborfield, Riseley, Ambarrow (**RNG**), Bulmarsh, Warren Row. Still at Bearwood, Chapel Green near Wokingham and Shinfield Grange (**RNG**). Atlas 2000: no records.

West Berks: first recorded in 1858 from South Hinksey church (**OXF**). Much reduced; 25 of Druce's 29 localities are lost, including all of the Thames-side locations. Survives only in the Kennet Valley e.g. [4167]: Hamstead Marshall [46], Turners Green [56], Mortimer [66]. Atlas 2000: [36], [46], [56]

Ranunculus omiophyllus Ten. *Round-leaved Crowfoot* hel 5
Ranunculus lenormandii F. Schultz
Ranunculus hederaceus L. subsp. omiophyllus (Ten.) Cout.

A local speciality of ferruginous swamps and flooded tracks. All its leaves are laminar, and divided to less than half way. The sepals are reflexed and the achenes glabrous. Told from *R. hederaceus* by petals > 4.5mm, much longer than sepals (2-3 times). Found in sun or shade on wet mud and in shallow acid ponds and streams in heathy districts. Local and rather rare.
NVC: A 11

Ascot: one of the surviving specialities of Sunningwell Bog. A single plant on bare drying mud beneath *Salix cinerea* in the north-west corner of the Bog [927683] in May 1980; still there in 2002. On 18 May 2003 there were two good patches, each more than 1m across, in standing water next to the sunken tin bath tub, with *Carex viridula* subsp. *oedocarpa* and *Dryopteris carthusiana*. A single plant beneath birch, by the ferruginous ditch that runs through the middle of Wells Wood [932684]. North side of the railway on Whitmoor Bog [8968] in 1999. In deep tractor ruts in two places near the crossroads of the grassy tracks on Icehouse Hill close to the Lime Avenue in Swinley Park [895675] on 20 May 2003. Not in Silwood Park

East Berks: confined to acid ponds on the Bagshot sands in the south of the area. Rare and decreasing. Bagshot Heath in 1871, Blackwater below Finchampstead, ditch near Bracknell, Windsor Park, Swinley, Wokingham. Finchampstead Leas [7560], Heath Lake at Crowthorne (**RNG**) [8365], Bracknell [8565]. Locally frequent on the margins of Heath Lake in 1994. By a shallow muddy pond to the east of Wokingham [8326 6895] in April 2003. Atlas 2000: [76], [86], [97]

West Berks: no records.

Ranunculus trichophyllus Chaix *Thread-leaved Water-crowfoot* hyd 3
Ranunculus drouetii F. Schultz

Still shallow ponds in a range of wetland habitats. The earliest water-crowfoot to flower (March-April).

NVC: A 1,8,9,11,20; OV 35; S 23

East Berks: Winter Hill, Wargrave, Arborfield, White Waltham, Stubbings Heath. Ponds, ditches and gravel pits with nutrient rich water. Bearwood, Twyford, Cookham Down. Absent from east of 80. Atlas 2000: [76], [77], [87], [88]

West Berks: Little Coxwell [29], Childrey [38], Buckland and Denchworth [39], Chieveley and Chapel Wood [47], Cothill, Marcham (**LAN**), Ardingtonmead Farm and Frilford [49], Newbridge and Wytham [40], Abingdon, Didcot and Radley [59], Pingewood [66], Tidmarsh [67] Atlas 2000: [28], [29], [36], [38], [39], [46], [47], [49], [40], [57], [59], [66], [67]

Ranunculus aquatilis L. *Common Water-crowfoot* hyd 5
Ranunculus heterophyllus Wigg.

Shallow water of rivers, ponds, brooks and ditches on nutrient rich mud, flowering in May and June. Cattle-poached pond edges are a favoured habitat, often growing with *R. trichophyllus*, *Glyceria fluitans*, *Lemna minor* and *Callitriche obtusangula*.

East Berks: local and uncommon: Whistely Green (**RNG**), Wargrave, Pudders Farm [808811], Cock Marsh. Atlas 2000: no records.

West Berks: Buscot and Little Coxwell [29], meadows under Wytham [40], R. Enborne [56], R. Pang [57], Mortimer (**RNG**) and Burghfield (**RDG**) [66], in the Thames at Pangbourne [67]. Atlas 2000: [46], [40], [56]

Ranunculus x virzionensis A.Felix = **R. aquatilis x R. peltatus**

East Berks: Stokes Farm, Wokingham [8065] in 1918 (**RNG**).

Ranunculus peltatus Schrank *Pond Water-crowfoot*
Ranunculus aquatilis L. subsp. *peltatus* (Schrank) Syme

hyd 5

Ponds, ditches and calcareous streams and gravel pits. Capillary leaves shorter than internodes, with divergent segments and less than 100 ultimate segments. Often found in the upper reaches of chalk streams that dry out in summer (replaced downstream in deeper and more permanent water by *R. penicillatus* subsp. *pseudofluitans*).
 NVC: A 2,11,12,20,23; OV 32

East Berks: Woodley (**LAN**), Wokingham, Earley, Winkfield, Arborfield, Shurlock Row, Blackwater, plentiful in Virginia Water, Wargrave, Cookham, Maidenhead, Binfield, Ruscombe. Moor Green Lakes nature reserve [8062] in 2001. Atlas 2000: [76], [87], [88], [97]

West Berks: specimens from Bradfield (**RDG**) and Theale (**RDG**) [67] in 1916. Lechlade [29] to Wytham [40], Inkpen [36], Lambourn [37], Wantage [38], Hamstead Marshall and Newbury [46], Beedon [47], Ilsley [48], Abingdon [49], Aldermaston [56], Hampstead Norreys and Bucklebury [57], Burghfield [66], Tidmarsh [67]. Atlas 2000: [36], [37], [38], [46], [47], [40], [56], [66]

Ranunculus penicillatus (Dumort.) Bab. *Stream Water-crowfoot*
Ranunculus penicillatus subsp. **pseudofluitans** (Syme) S.D. Webster
Batrachium penicillatum Dumort.
Ranunculus aquatilis L. var. *pseudofluitans* Syme
Ranunculus pseudofluitans (Syme) Newbould ex Baker and Foggitt
Ranunculus aquatilis L. subsp. *pseudofluitans* (Syme) Clapham
Ranunculus calcareus Butcher

hyd 5

Our commonest and most widely distributed deep-water crowfoot, often forming dense beds which span the entire channel. Quiet pools on the river are white with its blossom. Typically replaced in more sluggish or eutrophic rivers by other kinds of aquatic plants like *Myriophyllum spicatum* or *Potamogeton* spp. Pollution sensitive, but responds quickly to improvements in water quality. Capillary leaves usually 6-8 x forked, ultimate segments more than 100 (or > 200).
 NVC: A 15,17

East Berks: commonest in the R. Loddon as at Swallowfield, but also in the R. Thames at Sonning, Reading, and Wargrave, and at Smallmead [7169]. In The Cut where it flows next to the M4 Motorway at Beenhams Heath [8575]. Atlas 2000: [76], [77], [87]

West Berks: locally dominant in fast flowing calcareous streams like the Rivers Lambourn, Pang and Kennet. Wantage [38], Welford Park, Boxford and Winterbourne [47], Wytham [40], Brimpton [56], Stanford Dingley [57], Cholsey and Blewbury [58], Tidmarsh [67], and the Kennet from Hungerford [36] to Reading [67]. Atlas 2000: [29], [36], [37], [46], [47], [49], [40], [56], [57], [58], [59], [67]

Ranunculus fluitans Lam. *River Water-crowfoot*

hyd 6 ↓

Rivers and fast-flowing calcareous streams. Flowering from June onwards. Often replaces *R. penicillatus* subsp. *pseudofluitans* downstream where the water is deeper, faster flowing and more eutrophic. Hard to separate from *R. penicillatus* subsp. *pseudofluitans* and *R. peltatus* (see Stace 1997 for details). Capillary leaves seldom more than 4x forked.
 NVC: A 19; S 23

East Berks: locally abundant in Druce's time at Sonning, Sandford Mill, Henley, between Wargrave and Maidenhead and in the Thames at Reading. Probably extinct in the Lower Thames by Bowen's time. Atlas 2000: no records.

West Berks: confined to the larger rivers: R. Cole above and below [204988], R. Thames at Faringdon [29], Northmoor Lock and Wytham [40], R. Kennet at Hungerford and Kintbury (RNG) [36], Hamstead Marshall and Newbury [46] and Woolhampton, Thatcham and Aldermaston [56]. Enborne at Brimpton [56]. In the R. Kennet at [5265] and [5666] in 2006 (D. Broughton). Atlas 2000: [46]

Ranunculus circinatus Sibth. *Fan-leaved Water-crowfoot* hyd 6 ↓
Ranunculus divaricatus Schrank

Ponds, ditches, gravel pits, canals, and streams. Rather common and widely distributed in a range of still water habitats between 1m and 3m deep (it is intolerant of desiccation). Relatively easy to identify: all leaves capillary, rigid and circular in outline, with all the segments lying in the same plane. Apparently much less common than in Druce's time as a result of habitat destruction (water pollution, filling in of farm ponds, loss of ditches following conversion of grazing land to arable, etc.).

NVC: A 3,5,8,11,15,20; OV 32

East Berks: very local. Bearwood Lake (RNG), Sandhurst [829614], South Lake [755722]. Atlas 2000: [76], [77], [86], [96]

West Berks: specimens from [49] Abingdon (OXF) in 1852 and Marcham (OXF) in 1895, Pangbourne (HULL) [67] in 1897. Buscot Lake [29], Newbury [46], Aldermaston (LAN) and Brimpton pit [56], Radley [59], Kennington pit and South Hinksey [50]. Atlas 2000: [29], [40], [56], [59], [50]

¶ **Ranunculus** *R. aconitifolius* 'Flore Pleno', *R. constantinopolitanus* 'Plenus', *R. crenatus*, *R. ficaria* 'Brazen Hussy', *R. ficaria* 'Collarette', *R. gramineus*, *R. montanus* 'Molten Gold'

Adonis annua L. *Pheasant's-eye* ○ th 7 ↓

Cornfields on gravelly or chalky soil, local, rare and mostly casual.

NVC: OV 15

East Berks: a rare weed at Wargrave (1897). At Stratfield Saye in 1986. Not seen since.

West Berks: the first records (1809) were from around Yattendon [57]. Other nineteenth century records from Wantage (LAN) [38], Aston Tirrold (RNG), the Streatley area (RNG and RDG) and Aston Upthorpe [58], South Hinksey (OXF) [50], Theale (RDG) [67]. The most recent records were from arable land in the vicinity of Aston Upthorpe and Aston Tirrold in 1977. Atlas 2000: no records.

Myosurus minimus L. *Mousetail* th 4 ↓

A rarity of damp arable fields on gravelly or flinty soil. Seasonally inundated ground, gateways and suchlike, subject to trampling, compaction and poaching by horses or cattle, or on cultivated ground, gardens or grassland margins. A sporadic and unpredictable arable weed. Subject to competitive exclusion by vigorous grasses and herbs if grazing is stopped. Much reduced in Berkshire. Druce says

it is “very local but abundant where it does occur”. Bowen says it is “very local and sporadic”. Now it is simply rare.

NVC: OV 21

East Berks: Old Windsor, Windsor (1913), Cookham, Finchampstead, Sonning; Shinfield (1977), Great Lea Common (1988), Sonning (1951), Maiden Erleigh (1977), Whiteknights Park (1986), Wokingham (1952). Rare or absent to the east of 80. One of the most reliable spots to see Mousetail is by the track between Great Lea Common and the M4 Motorway [707687]. <1% (1km²). Atlas 2000: [76], [77], [88]

West Berks: early records from Frilsham (**RNG**) [57] in 1896 and Burghfield (**RDG**) [66] in 1911. Hungerford [36], Enborne and Newbury [46], Snelsmore Common and Peasmore [47], Beenham and Thatcham [56], Cholsey [58], Home Farm at Little Wittenham, Didcot (**OXF**) and Radley [59], Mortimer and Beenham [66], Sulham and Calcot [67]. In a field margin at Little Wittenham Nature Reserve [563919] (Kevin Walker). Absent from the north and the west. Atlas 2000: [36], [46], [47], [56], [57], [58], [59], [50], [66]

Aquilegia vulgaris L. *Columbine*

• hp 5 ↑

Woods and thickets and rarely in marshes. A quintessential cottage garden plant, self-seeding freely and found on all kinds of waste ground in towns and villages. All the Berkshire plants are garden escapes.

Silwood Park: occasional in the churchyard at Ashurst in the shadier parts (both pink and dark purple flowers), and self-sown in the herbaceous borders by the Horticultural Greenhouses. In the roadside at Sunninghill crossroads and throughout Cheapside Village. A few plants in the 2-year old post-fallow community in Silwood Bottom in May 2003.

Ascot: locally frequent on graves in Sunningdale churchyard.

East Berks: Bisham Wood, Finchampstead, Wargrave, Bulmarsh, Long Moor. Widespread as a garden escape. Common on the verge of the M4 Motorway at Reading in 2002. 42% (1km²). Atlas 2000: all squares

West Berks: first recorded in 1916 from between Tilehurst and Sulham (**RDG**) [67]. Tubney Wood [40] was once thought to be a possible native site, along with Park Wood, Hampstead Norreys [57] but it is unlikely to have escaped attention if it really was native in these well-recorded places. Masses of dark-purple-flowered plants in the east-bound verge of the M4 motorway where it passes through the deep cutting at [5773] in May 2004. By the Hampshire border at Aldern Bridge [46]. Widespread as a garden escape. Atlas 2000: all squares

¶ **Aquilegia** *A. alpina*, *A. atrata*, *A. barnebyi*, *A. bertolonii*, *A. caerulea*, *A. canadensis*, *A. chrysantha*, *A.* ‘Dragonfly’, *A. flabellata*, *A. formosa*, *A. fragrans*, *A.* ‘Hensol Harebell’, *A. longissima*, *A.* ‘McKana’, *A. viridiflora*, *A. vulgaris* ‘Adelaide Addison’, *A. vulgaris* ‘Nivea’, *A. vulgaris* var. *stellata* ‘Nora Barlow’, *A. vulgaris* Vervaeana group, *A. vulgaris* ‘William Guinness’

Thalictrum aquilegifolium L. *French Meadow-rue*

• h 6

A tall perennial border plant, occasionally naturalised in long grass.

Silwood Park: formerly long established (pre-1970) by the Holm Oak on Rookery Slope, between the Ashurst Road and the Ashurst Path. Last seen in 1989. The tussocky *Dactylis* grassland in which it grew has long since been grazed flat by rabbits and replaced by *Agrostis/Festuca* grassland. One plant on the cinder path by the Tennis Court in August 1986, a self-sown escape from the nearby herbaceous border. The plants in the perennial bed at The Greenhouses were much reduced in July 2007 after 20 years of neglect.

East Berks: locally common in Sonning [7575] in 2002 and in Frogmore [9776] in 2003. 1% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: Kingston Bagpuize [4098] in July 2003. Atlas 2000: [36]

Thalictrum flavum L. *Common Meadow-rue*

h 7

Sides of ditches, brooks and rivers, wet meadows and damp woodland. Locally common. Also grown as an herbaceous border plant in gardens, and occasionally escaping. In leaf, it might be mistaken for a robust umbellifer with its large, dark green pinnate leaves, and rounded, three lobed leaflets.

NVC: M 22,27; MG 4; W 5

East Berks: in meadows all along the Thames from Reading, Sonning, Wargrave and Cookham. Park Place, Hurley, Wargrave, Windsor, Old Windsor, near the Loddon at Hall Farm, Arborfield, and the Blackwater below Finchampstead. 3% (1km²). Atlas 2000: all except [96]

West Berks: occasional along the Thames all the way from Lechlade [29] to Reading [67] and the Kennet from Hungerford [36] to Reading [67]. Early specimens from Sulham (RDG) in 1913 and Tilehurst (LAN) [67] in 1957. Atlas 2000: all except [37], [38], [47], [48]

Thalictrum minus L. *Lesser Meadow-rue*

• h 6

A much smaller plant, told from *T. flavum* by its pendent (not stiffly erect) stamens, achenes with 8-10 (not 6) ribs, and by its rather square leaflets (not, or only a little longer than wide).

Silwood Park: very local, but long persistent (1984-2004), dominating four adjacent graves in the lower part of the central section of St Michael's churchyard at Ashurst [9406 6860], centred on the grave of Leonard Higgs Heydon, *d.* 1932.

Ascot: no other records.

East Berks: not in Druce. Casual colonist of garden origin, Wellington College (1960), Bray churchyard (1969), garden wall in Reading in 1970 (RNG). Garden escapes recorded recently from Three Mile Cross, Whitley, Earley, Arborfield Garrison, South Twyford, Eastheath, Chapel Green, North Crowthorne, College Town, North Hanworth, Shottesbrooke, Littlewick Green, Bisham, Pinkneys Green, Dial Close, Maidenhead, Winter Hill, Cookham, Bray Court, Old Windsor. On a wall at Winter Hill in 2000. 2% (1km²).

West Berks: casual on Newbury rubbish tip [46] in 1961.

¶ **Thalictrum** *T. aquilegifolium*, *T. aquilegifolium* var. *album*, *T. aquilegifolium* 'Thundercloud', *T. delavayi*, *T. flavum* subsp. *glaucum*, *T. kiusianum*, *T. rochebruneanum*

BERBERIDACEAE

Epimedium pinnatum subsp. **colchicum** Boiss. *Barren-wort*

• hr 4

A common garden plant used for ground cover in partial shade, occasionally found as an outcast. Its flowering stem is leafless (cf. *E. alpinum* which has a stem-leaf) and the inflorescence has few if any glandular hairs.

Silwood Park: well naturalized in two places on the Science Park; the inflorescence is eglandular, and the leaves turn vivid red in winter.

East Berks: Whiteknights Park [7371] in a plantation (1985). The Holt [8078] in 1999, Stubbings [8481] in 2000 and Hurley [8284] in 2003.

West Berks: in the graveyard on the western edge of Blewbury [5285] in 2002.

¶ **Epimedium** *E. acuminatum*, *E. alpinum*, *E. x cantabrigiense*, *E. grandiflorum*, *E. grandiflorum* ‘Lilafee’, *E. grandiflorum* ‘Rose Queen’, *E. x perralchicum* ‘Frohnleiten’, *E. pinnatum* subsp. *colchicum*, *E. perralderianum*, *E. x rubrum*, *E. x versicolor* ‘Sulphureum’, *E. x warleyense*, *E. x youngianum* ‘Niveum’, *E. x youngianum* ‘Roseum’

¶ **Vancouveria** *V. chrysantha*, *V. hexandra*

Berberis vulgaris L. *Barberry*

• n 5 ↓

Hedges and old walls in low-lying districts; local and rare. Discovered in the nineteenth century to be a host plant for the black rust fungus of wheat, so many barberry hedges were grubbed out and replaced by hawthorn and blackthorn.

Ascot: no records. Not in Silwood Park.

East Berks: planted at Frogmore. Mostly found as single bushes; Twyford Mill, Remenham, Finchampstead Ridges, Ashley Hill, White Waltham. Quite widespread, but very uncommon. Atlas 2000: [77], [78], [86], [87], [88], [97]

West Berks: Watchfield (**RNG**) in 1935 [29], Standen [36], between the Hideaway and Carswell Home Farm, Buckland [39], Hamstead Park [46], Harwell and Lockinge [48], Kingston Bagpuize and Dry Sandford Pit (where it was also planted in the 1990s) [49], in a hedge in the vineyard at Cumnor, on the ruined walls of Godstow Nunnery, Youlbury and Wytham [40], Bagley Wood and South Hinksey [50], Beenham [56], Compton [57], Aston Tirrold [58], Barton Court [59], Pangbourne [67], grounds of Wallingford castle [68]. Post-2000 records from Buscot [2298], an ancient hedge near Ashampstead Common [572750] and Dry Sandford Pit [4699]. Atlas 2000: [29], [36], [46], [49], [40], [57], [58], [59], [50], [67], [68], [69]

Berberis thunbergii DC. *Thunberg’s Barberry*

• n 5

A deciduous bush with glabrous twigs and simple spines (not 3-partite) often grown in purple-leaved forms (the ‘Atropurpurea group’). Very widely planted in gardens and landscaping schemes. Conspicuous in autumn when the foliage turns vivid colours.

Silwood Park: in front of the Manor House, and on the Science Park. Self-sown in a few places.

East Berks: common in Maidenhead and other large towns, occasionally self-sown. 1% (1km²).

West Berks: on waste ground in Abingdon [4997] in July 2002.

Berberis glaucocarpa Stapf *Great Barberry* ● n 5

A large, semi-evergreen shrub notable for its profusion of blue-black berries heavily covered with a white bloom. Flowers in racemes with a common peduncle, the flowers are yellow (not orange) and the leaves are larger (2.5-8cm) which distinguish the plant from the much common *B. darwinii*.

West Berks: on waste ground in Newbury in 2000.

Berberis wilsoniae Hemsl. *Mrs Wilson's Barberry* ● n 5

A deciduous bush with minutely pubescent stems and 3-partite spines.

Silwood Park: planted on the Science Park in 1987 and at Ashurst in 1990. No sign of regeneration.

West Berks: in chalk scrub at Aston Tirrold [58] in 1965.

Berberis aggregata C.K. Schneid. *Clustered Barberry* ● n 5

A dense, deciduous bush with toothed leaves (not entire; cf. *B. wilsoniae* and *B. thunbergii*) typically less than 1.5m tall.

Silwood Park: self-sown on the Science Park in 2001 from material planted in 1987.

Berberis gagnepainii C.K. Schneid. *Gagnepain's Barberry* ● n 5 ↑

A big, thorny plant, told from *B. julianae* by its round twigs, lacking raised ridges and its fruit with a sessile stigma. Narrow, undulate leaves with 3 or more spines on each edge.

Silwood Park: planted on the Science Park and producing seedlings from bird dispersed seeds.

East Berks: planted as vandal-proof hedging by security conscious developers on industrial estates and business parks in Bracknell [86], Reading, Maidenhead [88], etc. 1% (1km²).

Berberis julianae C.K. Schneid. *Chinese Barberry* ● n 5

A tall (to 3m) big-leaved evergreen species (leaves > 3cm, with 3 or more spiny teeth on each edge) with massive spines, told from *B. gagnepainii* by the fruit, which has a distinct style (not a sessile stigma) and by the ridged (not round) twigs. Commonly planted in landscaping schemes to deter incomers.

Silwood Park: bird-sown in the shrubbery opposite South Lodge next to the Tractor Sheds; 1979-2004. In the hedge between Ashurst Lodge and St Michael's Church where it is 3m tall. Planted on the Science Park but not yet naturalised there.

East Berks: common in the larger towns like Reading and Maidenhead in landscaping schemes on modern industrial estates, and occasionally self-sown, as at Loddon Mouth [7778].

West Berks: waste ground in Abingdon [4997] in July 2002.

Berberis buxifolia Lam. *Box-leaved Barberry* ● n 4

The small dark green leaves are obovate, with flat (not revolute) margins.

East Berks: rare on waste ground near Reading Station in 1998.

Berberis darwinii Hook. *Darwin's Barberry* ● n 3 ↑

Dark, glossy, neat, 3-toothed evergreen leaves 1-3cm, and very early, bright orange flowers. The spines (< 1cm) are shorter than in *B. glaucocarpa* (1-3cm). Seeding freely in walls, paving cracks and on waste ground in towns and villages. Produces huge quantities of bird-dispersed fruits.

Silwood Park: bird-sown in stonework on the rim of the Lily Pond. The same plant has survived since 1979, despite repeated attempts at removal. Self-sown (only 2m from the parent bush) on compacted sandy ground on the base of the Cocoa Greenhouse in June 2000 following demolition in 1997. Self-sown on the rockery at South Lodge in 2001. Abundant in the shrubbery at Virginia Water Lodge in 2004.

Ascot: a single seedling on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: on the ancient flint walls of Reading Abbey. Common on the railway banks at West Reading Station, and by the R. Thames in Maidenhead. In and near towns and villages; 6% (1km²). Atlas 2000: all except [78]

West Berks: Great Shefford [37], North Heath [47], Frilford Heath [49]. On the dank stone steps of the cellar of Wantage church [3987] in 2004. Atlas 2000: [28], [29], [37], [49], [67]

Berberis x stenophylla Lindl. *Hedge Barberry* ● n 4 ↑

One of the most popular garden shrubs whose long, arching branches are wreathed in yellow flowers in April. Dark green, narrow, needle-like leaves with revolute margins, and flowers in bundles without a common peduncle.

Silwood Park: probably the most frequent of the garden barberries, all round the Manor House and the Science Park. Self-sowing, but less frequently than *B. darwinii*.

East Berks: mass-planted on industrial estates in Windsor, Maidenhead, Bracknell, Wokingham and Reading in 1995-2000. Self-sown in Swallowfield [7264], West Reading [7073], Whitley [7270], Bracknell Town Football Club car park [8769], Cookham Dean [8785], Harvest Hill [8879], Holyport [8977] and Maidenhead [9081] in 2002. 2% (1km²).

West Berks: landscaping schemes in Newbury [4767], Botley [4806], Aldermaston [6163] and Mortimer [6764].

¶ **Berberis** *B. aggregata*, *B. buxifolia* ‘Pygmaea’, *B. calliantha*, *B. dictyophylla*, *B. x frikartii* ‘Amstelveen’, *B. gagnepainii* var. *lanceifolia*, *B. glaucocarpa*, *B.* ‘Goldilocks’, *B. x interposita* ‘Wallich’s Purple’, *B. jamesiana*, *B. julianae*, *B. linearifolia* ‘Orange King’, *B. x lologensis* ‘Apricot Queen’, *B. x lologensis* ‘Mystery Fire’, *B. x media* ‘Parkjuweel’, *B. x media* ‘Red Jewel’, *B. x ottawensis* ‘Superba’, *B. x stenophylla*, *B. x stenophylla* ‘Corallina Compacta’, *B. x stenophylla* ‘Irwinii’, *B. temolaica*, *B. temolaica*, *B. thunbergii*, *B. thunbergii* f. *atropurpurea*, *B. thunbergii* ‘Atropurpurea Nana’, *B. thunbergii* ‘Aurea’, *B. thunbergii* ‘Bagatelle’, *B. thunbergii* ‘Dart’s Red Lady’, *B. thunbergii* ‘Golden Ring’, *B. thunbergii* ‘Green Carpet’, *B. thunbergii* ‘Harlequin’, *B. thunbergii* ‘Helmond Pillar’, *B. thunbergii* ‘Kelleriis’, *B. thunbergii* ‘Kobold’, *B. thunbergii* ‘Red Chief’, *B. thunbergii* ‘Rose Glow’, *B. verruculosa*, *B. wilsoniae*

Mahonia aquifolium (Pursh) Nutt. *Oregon-grape*

• n 1 ↑

Berberis aquifolium Pursh

A common garden plant found in hedge-bottoms and on waste ground in towns and villages throughout. Planted on many of the larger estates as pheasant cover, and thoroughly naturalized in plantation woodlands and shrubberies. Bowen has it as “in small quantity, persistent”.

Silwood Park: scattered throughout, very locally dominant as in partial shade at Drive Cedars (1979-87); this population was destroyed when the lawn was extended after the big cedar was felled in 1987. There is a single, long-lived individual in a remote site in acid grassland at Gravel Pit (13 April 2008) close to the electricity pole.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	8

Ascot: in a hedge-bottom on the Broomhall lands in Sunningdale in 2003.

East Berks: not in Druce. Plantations and hedges, in small quantity. Now locally frequent and widely distributed in all the towns, and most villages. In the churchyard at Binfield. 26% (1km²). Atlas 2000: all squares

West Berks: first record from Padworth (LAN) in 1956 [6166]. Common on path-sides around Buscot Lock [29]. Atlas 2000: all squares

The National Collection of *Mahonia* is held in Valley Gardens and Savill Gardens at Virginia Water and comprises 27 species and 51 cultivars.

¶ **Mahonia** *M. aquifolium* ‘Apollo’, *M. aquifolium* ‘Atropurpurea’, *M. aquifolium* ‘Smaragd’, *M. japonica*, *M. japonica* ‘Bealei’, *M. lomariifolia*, *M. x media* ‘Buckland’, *M. x media* ‘Charity’, *M. x media* ‘Lionel Fortescue’, *M. x media* ‘Winter Sun’, *M. x wagneri* ‘Undulata’

¶ **Nandina** *N. domestica*, *N. domestica* ‘Fire Power’, *N. domestica* ‘Harbor Dwarf’, *N. domestica* var. *leucocarpa*, *N. domestica* ‘Nana Purpurea’, *N. domestica* ‘Pygmaea’, *N. domestica* ‘Richmond’

¶ **Podophyllum** *P. hexandrum*, *P. peltatum*

LARDIZABALACEAE

¶ **Akebia** *A. quinnata*

¶ **Decaisnea** *D. fargesii* *D.* Black Knight group, *D.* Galahad group, *D. grandiflorum* ‘Blue Butterfly’, *D.* Guinevere group, *D.* King Arthur group, *D. nudicaule*, *D. requienii*, *D.* Summer Skies group, *D. tatsienense*

¶ **Holboellia** *H. coriacea*, *H. latifolia*

¶ **Stauntonia** *S. hexaphylla*

PAPAVERACEAE

Papaver pseudoorientale (Fedde) Medw. *Oriental Poppy* ● hr 6
Papaver bracteatum Lindley var. *pseudoorientale* Fedde
Papaver orientale auct., non L.

The common perennial poppy of cottage gardens and herbaceous borders. Often out-growing its place in the garden and occasionally found as an outcast on waste ground in towns and villages.

East Berks: first recorded in Reading in 1979. Riseley, Earley, Eversley Bridge, Fleet Copse, Finchampstead, West Reading, Warren Lodge, Woodley, Winnersh, Sonning, Bisham, Ruscombe, Twyford, Wescott, College Town, Savernake Park, West End, Littlewick Green, Binfield Park, Shottesbrooke, Altmore, Little Foxley, Holyport, Maidenhead, Bracknell, Foliejon Park, Hall Place, Hurley, Bray, Bray Wick, West Dedworth, Windsor. 8% (1km²). Atlas 2000: all except [78].

West Berks: in villages throughout, but always in small quantity. First recorded in Lambourn [37] in 1962. Atlas 2000: [28], [29], [36], [37], [38], [46], [48], [49], [56], [57], [58], [67], [68]

Papaver atlanticum (Ball) Coss. *Atlas Poppy* ● hr 6 ↓
Papaver rupifragum Boiss. & Reuter var. *atlanticum* Ball
Papaver lateritium sensu R.W. Robb., non Koch

East Berks: a single record from the east of Whiteknights Park [7371] in 1970.

West Berks: waste ground in Abingdon [49] in 1962, Hermitage [57] in 1965. Over-recorded in the past for *P. pseudoorientale*.

Papaver somniferum L. *Opium Poppy* ○ th 7 ↑
Papaver somniferum subsp. **somniferum**
Papaver somniferum L. subsp. *hortense* (Hussenot) Syme

One of the commonest cottage garden plants. Widespread as a self-sown escape in towns and villages throughout on waste ground, in pavement cracks and as a garden weed. A wide range of petal colours (from white and pink to red and dark purple), spotting (from plain to distinctly black-blotched), degrees of petal dissection (entire to deeply ragged) and petal doubleness (single to fully double pom-poms) are found. In Druce’s time, the white flowered form was the commonest, but now the rather wan, mauve form is the most abundant.

Silwood Park: a very common seed bank species, popping up following soil disturbance (e.g. tree-felling), but abundant only close to buildings. Not an arable weed, and only once recorded in crops (in wheat in the north-east corner of Silwood Bottom; 11 July 1980). Abundant in the early years following construction of the Science Park (1987-90); frequently imported with topsoil. Several plants in flower in the gravel strip beside the CABI Quarantine Greenhouse on 4 June 2007. From the seed bank at Silwood Lodge in July 2009 following removal of the *Thuja occidentalis* 'Rheingold' hedge in December 2008. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	9

Ascot: frequent on the topsoil pile at the junction of Coronation Road and South Ascot during construction of the two new houses at Ravens Corner in May 2004. Very abundant, with frilled purple petals, on pavements in the vicinity of 66 Upper Village Road in Sunninghill on 28 May 2004.

East Berks: rather rare in Druce's time: Wargrave, Reading, Farley Hill, Twyford, Maidenhead, Ascot. Now common throughout, especially where garden soil has been used in roadside landscaping, as at Braywoodside roundabout in 2002. Frequent and locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008 in a range of colour forms and petal dissections. 40% (1km²). Atlas 2000: all squares

West Berks: first recorded from East Ilsley [4981] in 1844 and Ashridge Wood [4978] in 1897, but not recorded from Pangbourne [6277] until 1972. On the ruins of the Prince of Wales pub at Challow Station [3590], and a common weed of wheat in fields along The Fair Mile leading up to the Ridgeway [5582] in July 2002. An amazing spectrum of different-coloured cultivars on tipped topsoil in the Chilton railway cutting [4985] in June 2004. Atlas 2000: all squares

Papaver somniferum subsp. **setigerum** (DC.) Arcang.
Papaver setigerum DC.

• th 7

This has bristly (not smooth) stems, leaves and sepals, and should be looked for on tips, etc.

East Berks: Reading tip.

Papaver rhoeas L. *Common Poppy*

○ th 6

Cornfields and waste places, dry arable land, set-aside and disturbed ground; commonest on chalk and clay. In Druce's time, the cornfields on the shoulders of some of the hills overlooking the Thames valley between Goring and Reading presented a beautiful sight from the profusion of growth of the red poppy. Much less common than formerly as a result of effective herbicide use. Some modern farmers encourage it as a food source for game birds by leaving an unsprayed margin round their cornfields. Told from *P. dubium* by its almost square (not elongated) capsules, and by its greater number of stigma rays (8-12 rather than 7-9).

NVC: MG 1; OV 3,7-9,13-16,18,19,21,24,25

Silwood Park: an uncommon and ephemeral ruderal (our common poppy is *P. dubium*). In wheat in Silwood Bottom and Ashurst Four Acre Field in 1980 (and still rare in both places in 2005). One plant on waste ground by the Header House in July 1994. Recent records from Oak Mead,

Churchyard, Cheapside, roadside opposite the Cannon. In the fallow at Pound Hill in 2001 it was outnumbered about 10 to 1 by *P. dubium* in a good poppy year; rare in July 2005. In July 2004, from imported topsoil used to landscape the lysimeters at Ashurst in late 2003. It was one of the 60 species sown in the high diversity plots of the Tilman Experiment. Along with *Centaurea cyanus* it was one of the most abundant species in the first year (June 1992). It subsequently declined with increasing competition from grasses (gone from Blocks H and J by 2000), but it was still present on two plots in Block G in July 2004 and in Block G (right) on 28 July 2007. Locally frequent as the only poppy at Pound Hill on 16 June 2008. The only poppy in Ashurst Four Acre Field in July 2011. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: locally common in South Ascot on dumped soil on the edge of the freshly levelled playing fields: 10 July 2001. Very common in a gravelled front-garden on Victoria Road, South Ascot in June 2004.

East Berks: less common than *P. dubium* except in the arable districts on the clay. Frequent on field margins at Shottesbrooke. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 35% (1km²). Atlas 2000: all squares

West Berks: on the ruins of the Prince of Wales pub at Challow Station [3590] in July 2002. Fallow at Faringdon [29] in 2004 (Plate 1). Atlas 2000: all squares

Papaver x hungaricum Borbas = **P. rhoeas x P. dubium**

West Berks: Kintbury (OXF) [36] in 1892, and Cothill pit and Fyfield [49] in 1972.

Papaver dubium subsp. **dubium** L. *Long-headed Poppy* ○ th 6

Cornfields, dry arable land, disturbed waste ground, cinder tracks and wall-tops; generally distributed but commonest on acid sandy soils. Told from *P. rhoeas* by its elongated capsules and fewer stigma rays (7-9 not 8-12).

NVC: MG 1; OV 3,9,17

Silwood Park: frequent and widespread in arable and fallow on acid sandy soils. Occasional in the seed bank beneath grassland, appearing after soil disturbance. Much commoner on the October-cultivated plots at Pound Hill Disturbance Experiment than on spring cultivated plots (early April or late May cultivated). May-June 2007 was a very poor poppy season on the cultivation timing experiment (as elsewhere) after a very dry spring. Very abundant in the nearby Pound Hill Fallow in June 2002. Particularly abundant in Silwood Bottom on 8 May 2004 after cultivation of that part of the field had been missed for 18 months. Uncommon on imported topsoil at Ashurst lysimeters in May 2004. Rare, from the seedbank beneath old grassland in the broom plot on Nash's Slope in May 2004. The very dry April meant that 2007 was a very poor poppy year on all the cultivated plots at Pound Hill. Common in the seed bank beneath the fenced cultivated plot in Block E in Nash's Field on 28 July 2007. Very abundant seed set, but over a protracted season with no mass-flowering, on the October-cultivated plots at Pound Hill in 2009. Rare as rosettes on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. Very rare from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
------------------	-------------------	--------------------	---------------------	-----------------------

0	0	1	16	11
---	---	---	----	----

Ascot: this is the common poppy of the district.

East Berks: about half as frequent as *P. rhoeas* overall. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 13% (1km²). Atlas 2000: all squares

West Berks: widespread; least common in the Kennet valley and Lambourn Downs. Atlas 2000: all squares

Papaver dubium subsp. **lecoqii** (Lamotte) Syme *Yellow-juiced Poppy* ○ th 6
Papaver lecoqii Lamotte

Dry arable land, gardens and disturbed soil on the chalk and oolitic limestone. Rare. Told from subsp. *dubium* by the yellow (turning orange) latex that exudes from the broken flower stem, and by its yellow (not blackish) anthers.

East Berks: no records other than one from Reading [7073] in 1962 (LAN). Atlas 2000: [88]

West Berks: a distinctive distribution, centred on the limestone in northern loop of the Thames from Wytham to Abingdon. Specimens from Frilford [49] in 1923 (OXF) and Dry Sandford [40] in 1930 (OXF). Also at Longcot churchyard [29] and on chalk at Shaw [46], East Hendred down [48], West Hanney, Tubney and Marcham [49], Upper Seeds at Wytham, Dry Sandford and Cumnor [40], Moulsoford [58], Hinksey [50], Padworth [66], Pangbourne and Theale [67]. Atlas 2000: [28], [29], [38], [39], [48], [49], [40], [58], [59], [50], [66], [67]

Papaver hybridum L. *Rough Poppy* ○ th 6 ↓

Local and rare in dry, mostly calcareous arable fields. Flowers darker red than the other poppies (crimson rather than scarlet). Like *P. argemone* with prickly capsules, told from it by its squarish (not elongated, 1.5-2 times as long as wide) fruits.

Ascot: no records from the acid soils of south-east Berkshire

East Berks: Remenham sand pit with 3 other poppy spp., Sonning Cutting, Hurley. Rather rare and infrequent. Bowen considered the plant to be extinct in East Berks. Atlas 2000: [77], [78], [88]

West Berks: Kintbury and Elcot [36], Kingston Lisle [38], East Ilsley and Woolley [48], Frilford, Abingdon, Cothill pit, Marcham, Kingston Bagpuize and West Hanney [49], verge near Dry Sandford [40], Beenham [56], Compton [57], former railway at Hagbourne, Blewbury, Sreatley (LAN), Moulsoford, Aston Upthorpe reservoir and Aston Tirrold [58], Pumney Farm [59], Mortimer and Padworth [66], Tilehurst [67]. Atlas 2000: [36], [39], [47], [48], [49], [40], [57], [58], [59], [66], [67]

Papaver argemone L. *Prickly Poppy* ○ th 6
Roemeria argemone (L.) C. Morales, L. Mend. & Romero Garcia

Dry arable field margins and disturbed ground on poor sandy or chalky soils. Often with *P. rhoeas* and sometimes with *P. dubium* or *P. hybridum*. More unusual associates include *Anthemis cotula*, *Legousia hybrida*, *Petroselinum crispum*. Susceptible to most herbicides and to competition from vigorous, well-fertilised crops; hence its restriction to odd field corners. Uncommon on set-aside land.

NVC: OV 3

Silwood Park: local and rare; arable ground at Pound Hill Fallow where it was a weed in broad beans in 1987 and wheat in 1990; still present in the fallow in June 2001 in a good poppy year. Just a single individual on 10 July 2005 in a very poor poppy year, after the very dry winter of 2004-05 following late spring cultivation in 2005. Also with imported topsoil on the Science Park in May 1990, but not seen since. Very rare in Pound Hill Cultivation Timing Block C, with a single individual on 17 May 2006 on the October-cultivated plot. One plant in October-cultivated ground in Silwood Bottom on Sunday 7 June 2009, when the Berkshire Flora Group visited Silwood for an Arable Weeds Day; the plant was about 15m to the right (north) of the central grass track, roughly in the middle of the field.

East Berks: Marlow, Park Place, Earley, Hurst, Coleman's Moor, Wargrave, Maidenhead, Twyford, Shinfield, Jouldern's Ford, Farley Court and Sheeplands. < 1% (1km²). Atlas 2000: [76], [77], [86], [88], [96]

West Berks: Newbury [46], East Ilsley [48], Frilford Heath and Kingston Bagpuize [49], Pickets Heath and Wytham, [40], Hermitage [57], Radley [59], Sulham Hill [67]. On set-aside near Abingdon [468979] in 2001. In an unsown fallow margin of a wheat field at Hinton Waldrist [372978] in July 2004. Atlas 2000: all except [28], [68], [69]

¶ **Papaver** *P. commutatum*, *P.* 'Fireball', *P. miyabeianum*, *P. nudicaule* Gartenzweg group, *P. orientale* 'Allegro', *P. orientale* (Goliath group) 'Beauty of Livermere', *P. orientale* 'Black and White', *P. orientale* 'Cedric Morris', *P. orientale* 'Curlilocks', *P. orientale* Goliath group, *P. orientale* 'Helen Elisabeth', *P. orientale* 'Karine', *P. orientale* 'Mrs Perry', *P. orientale* 'Patty's Plum', *P. orientale* 'Perry's White', *P. orientale* 'Picotée', *P. orientale* 'Prinzessin Victoria Louise', *P. orientale* 'Turkish Delight', *P. rupifragum*, *P. spicatum*

Meconopsis cambrica (L.) Vig. *Welsh Poppy*
Papaver cambricum L.

• h 6 ↑

A common garden plant, self-seeding in rockeries and on walls. Often escaping and found on brickwork in alleyways in towns, cracks in paving, bases of walls in towns and villages throughout. Uncommon in woodland.

Silwood Park: much less common than in other parts of Ascot. One plant on the edge of the beech clearing in South Lodge Wood on 18 August 1982. Occasionally self-sown on the rockery in the Japanese Garden and by the South Lodge entrance. Not seen since 1989. A single plant with garden outcasts in shade in Farm Wood close to the orchard lawn of The Farm on 5 June 2005. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006.

Ascot: commonly self-sown in damp alleyways in Ascot and Sunninghill 1979-2004. Abundant under *Robinia* on the drive of Index House, off St George's Lane in Ascot in 2003. Rare on ruins during construction of the new grandstand at Ascot Racecourse in August 2005.

East Berks: not in Druce. First records from shady places near gardens, Bisham Wood [88] in 1966 (still there in 2004), Whiteknights [77] in 1974. Now common and widespread. Orange-flowered plants in woods at Simon's Lane, Wokingham, in May 2002. 14% (1km²). Atlas 2000: all squares

West Berks: early records include Youlbury [40] in 1964, and Boxford chalk pit [47] in 1986. In the grounds of the Old Rectory at Burghfield [6668] in 1980. Common as a garden escape in villages throughout. Atlas 2000: all except [37], [39], [49], [58], [69]

¶ **Meconopsis** *M. betonicifolia*, *M. betonicifolia* var. *alba*, *M. chelidoniifolia*, *M. grandis*, *M. napaulensis*, *M. quintuplinervia*, *M. x sheldonii*

¶ **Sanguinaria** *S. canadensis*, *S. canadensis* 'Plena'

¶ **Stylophorum** *S. diphyllum*, *S. lasiocarpum*

¶ **Argemone** *A. mexicana*

Glaucium corniculatum (L.) Rudolph *Red Horned-poppy* ● th 6

Its flowers are orange with 4 dark blotches (rather than red, as the name implies). An uncommon garden plant, not overwintering and seldom self-seeding with us.

West Berks: casual by the railway in Didcot [59] in 1897 (OXF).

Chelidonium majus L. *Greater Celandine* ○ hs 5 ↑

Hedge-banks, roadsides and waste places, usually in or near villages; rather common and generally distributed. Greatly increased in urban and suburban areas. Now a common weed of paths and damp shaded waste ground throughout.

Silwood Park: locally frequent. Commonest on the hard standings around the greenhouses where it has persisted continuously since 1979. Waste ground on Reactor Bank, 1 plant on 6 May 1986 and at Silwood Farm, 2 plants by the barn 10 May 1993; still there in 2002. Woodland, 1 plant in bluebells in Nash's Copse near Herons Brook, 5 May 1983. Imported topsoil on Garden Wood Bank in May 1989; still there and commoner in May 1995 but gone by May 2000. On the roadside verge opposite Heronsbrook in 2004. Locally frequent in tree-fall gaps in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006. The plants were even bigger after the dry spring of 2007, but by July 2008 they were becoming overgrown by nettle and bramble.

Ascot: particularly abundant in shady back alleys where the dustbins are kept in Sunninghill village (1971-2004). Beneath pruned shrubs on Ascot Heath in May 2003.

East Berks: alleyways and brickwork throughout. Along the Thames-side path from Old Windsor Lock down to Runnymede. Frequent on the ruined chalky rock garden on the slope below Windsor Castle. Rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 16% (1km²). Atlas 2000: all squares

West Berks: damp shady places near houses; locally abundant. Atlas 2000: all squares

Eschscholzia californica Cham. *Californian Poppy* ● th 7 ↑

Rubbish tips and waste places; casual. Not in Druce. Much increased in popularity as a garden plant, and now a frequent garden escape on pavements and at bases of walls in all the towns and villages.

Silwood Park: once the dominant plant in the beds around the Sirex Unit, persisting around the Header House for many years after the Sirex building was demolished. Site destroyed during the construction of the car park for CABI library. Still in west Cheapside and Ashurst Orchard. One plant with beautiful peach-coloured petals on 12 May 2004 growing in imported topsoil used to landscape the site at Ashurst where the lysimeters were demolished in summer 2003. On 28 May 2006 there were only two orange-flowered plants to be found here.

Ascot: persistent on Upper Village Road in Sunninghill from 1989-2001 when the site was destroyed to create a paved car parking space.

East Berks: first record Reading in 1964 (**RNG**), now frequent throughout. 15% (1km²). Atlas 2000: all squares. Uncommon in Albany Road Old Windsor [98322 74596] on 15 December 2012 in front of council houses.

West Berks: early records include Abingdon racecourse [49] in 1918, Radley [59] in 1963, and Kennington tip [50] in 1965. Conspicuous in Marcham in 2002. Atlas 2000: [28], [29], [36], [38], [46], [48], [40], [59], [50], [66], [68]

Macleaya x kewensis Turrill *Hybrid Plume-poppy* ● grh 6
 Macleaya x cordata auct., non (Willd.) R. Br.
 Bocconia x cordata sensu G.C. Brown ex Druce et auct., non Willd.

A tall herbaceous border plant, occasionally found as an outcast on tips or waste ground.

East Berks: on waste ground beneath a wall in Holyport [897777] and at Bisham [8585] in June 2002.

West Berks: Newbury railway yard [4766] in 1999. Kingston Bagpuize [4098] in 2003.

¶ **Macleaya** *M. cordata*, *M. cordata* 'Flamingo', *M. x kewensis*, *M. microcarpa*, *M. microcarpa* 'Kelway's Coral Plume'

FUMARIACEAE

Dicentra formosa (Haw.) Walp. *Bleeding-heart* ● grh 4
 Fumaria formosa Haw.

A popular cottage garden plant found occasionally as a persistent outcast.

East Berks: locally common in Windsor Great Park, and naturalised at Farley Court. Also on waste ground near the station in Reading and on Oxford Road in West Reading. Holyport [8977] and Fifield [9076] in 2002.

West Berks: waste ground in Shrivenham [2388] 1988-97.

¶ **Dicentra** *D.* 'Bacchanal', *D. cucullaria*, *D. formosa*, *D.* 'Langtrees', *D.* 'Luxuriant', *D.* 'Pearl Drops', *D. spectabilis*, *D. spectabilis* 'Alba', *D.* 'Stuart Boothman'

Corydalis solida (L.) Clairv. *Bird-in-a-bush* ● grt 4 ↓

Fumaria bulbosa L. var. *solida* L.
Capnoides solida (L.) Moench, nom. illegit.
Corydalis bulbosa (L.) DC., nom. illegit.

Plantations, very local and typically not long-persistent.

East Berks: Grown in the Berkshire part of Valley Gardens [96] at Virginia Water and quite wild-looking here.

West Berks: Buckland (**OXF**) [39] in 1861, Sunningwell (**OXF**) in 1892 and Bessels Leigh (**OXF**) in 1916 [both 40], Great Shefford [381753] in 1973, and Tuckmill meadows [238898] in 1987.

Corydalis cava (L.) Schweigg. & Körte *Hollowroot* ● grt 4 †
Fumaria bulbosa L. var. *cava* L.
Corydalis bulbosa auct., non (L.) DC., nom. illegit.

A garden escape or relic of former planting. Told from *C. solida* by its entire (not lobed) bracts, and by the lack of a large scale on the stem just below the lowest leaf.

East Berks: in a wood at Bracknell [86] in 1876 (**BM**). Not seen recently.

Pseudofumaria lutea (L.) Borkh. *Yellow Corydalis* ● hp 5 †
Fumaria lutea L.
Corydalis lutea (L.) DC.

A universal cottage garden rockery plant, found on walls in towns and villages. Druce considered the plant to be “in small quantity”, but it is now very greatly increased in abundance, and one of the commonest aliens on brickwork in towns. It has an interesting distribution as a garden escape.

Ascot: common on damp or sheltered brickwork in Sunninghill and Ascot, but unaccountably absent from Silwood Park. In all the other villages nearby. On fly-tipped garden rubbish in Swinley Park in 2003.

East Berks: widespread and locally abundant in all the towns; spectacularly abundant in Windsor, as on the brickwork of the railway arches. 23% (1km²). Atlas 2000: all squares

West Berks: in villages and towns throughout. Particularly common in Wantage [38], Ashampstead [57] and Wallingford [68]. On brickwork just above the water level at Buscot Weir [2298]. Atlas 2000: all squares

Pseudofumaria alba (Mill.) Lidén *Pale Corydalis* ● hp 5
Fumaria alba Miller
Corydalis ochroleuca Koch, nom. illegit.

An uncommon garden escape, but self sown in gardens. Rare on brickwork in towns and villages.

East Berks: first recorded in Twyford [77] in 1966. Recently at Lambs Lane, Riseley, and several locations in Maidenhead. Atlas 2000: [76], [88]

West Berks: Stanford-in-the-Vale [39] in 1965, Kennington [50] in 1953. On bare ground at the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [46], [50]

Ceratocapnos claviculata (L.) Lidén *Climbing Corydalis*

th 6

Fumaria claviculata L.

Corydalis claviculata (L.) DC.

Dry woods on acid soils, coppices and hedges, very local and rare. Restricted to the extreme south of the county.

NVC: W 10,16

Silwood Park: one of our great native rarities. A single patch in damp birch woodland in Great Mead, above Cascade Bridge, scrambling amongst bracken and brambles. Ray Davies knew of the patch in 1979 but I could not find it until 15 June 1990 despite searching each year. Still there in 2000, but fluctuating greatly in abundance from year to year. The path has moved because of the activities of the Blue Tit nest box people; in 2002 the path was much further away from the boundary than it used to be. The Corydalis was still present in low abundance in May 2002, on the edge of the boundary Rhododendrons, beneath a fallen Hazel tree, in a patch measuring just 4m x 3m, but was not seen in 2003 or subsequently, despite an annual pilgrimage to the site (up to 2010).

Ascot: one of the botanical delights of Sunningwell Bog south of Wells Lane [9368], where it is locally frequent on dry ground and steep ditch banks. This is probably the location of the first county record, made on a visit to Ascot by H. Wilkin in 1857. An excellent patch on open ground in 2002, forming a 3m wide halo around the trunk of the first (western-most) veteran oak tree just north of the railway [928681]. This patch was much reduced by 22 May 2007, having become overgrown by brambles as the canopy of the veteran oak died back and became extremely stag-headed. The other two veteran oaks to the east of this tree never had the plant. Common on sunny ditch banks by the St George's School playing fields [930684]. At the south-western corner of Wells Wood [931684]. Rare and scattered on the bare floor of Railway Wood beneath pine and beech [931682].

East Berks: local and uncommon, but spectacularly abundant in 1997 amongst bluebells over substantial areas of the forest floor in Swallowfield Great Wood [736657]. There is an excellent patch at Longmoor [782655] on dry ground beneath birch, measuring 15m x 8m in May 2002. Old records from Sunningdale Station, Farmer Bishop's Wood, Ambarrow, Wokingham by the Blackwater, Finchampstead (RDG), Crowthorne, Agates Meadow Wood, Emms Copse. Recently at North Court Farm [799640] and Emms Copse [744654]. 1% (1km²). Atlas 2000: [76], [86], [96]

West Berks: very local and uncommon. Cold Ash and Bucklebury Lower Common (RNG and RDG) from 1950 and 1960 respectively [56] and still at [545687], Clay Hill and Stamford Dingley [57]. Recently in Jennett's Hill Wood [582709] and Carbin's Wood [5668]. Atlas 2000: [56], [57]

Fumaria capreolata L. *White Ramping-fumitory*

th 5 ↓

Fumaria capreolata subsp. **capreolata**

Waste ground, very rare. Told by its large flowers (10-13mm), and its rigidly recurved fruiting pedicels.

East Berks: Wargrave (1871), Windsor (1878), Sandhurst (1895). No record in Bowen.

West Berks: Tilehurst [6674] in 1960-61. Atlas 2000: no records.

Fumaria muralis Sond. ex W.D.J. Koch *Common Ramping-fumitory*

th 5 ↓

Fumaria muralis subsp. **boraiei** (Jord.) Pugsley

Fumaria boraei Jordan

Waste ground and hedge-banks, rare and sporadic. Told by its spatulate lower petal, dentate sepals (at least at the base), and flowers 9-11mm.

NVC: OV 4,13

East Berks: Maidenhead [88] on the railway in 1895. Earley in 1918. By the Blackwater by New Bridge. More recent records from New Mill [76] in 1977. No records in Bowen.

West Berks: old nineteenth century records for Hinksey (**OXF**) [50], Culham (**OXF**) [59], Earley [77] and Chieveley [47] in 1972 and Frilford golf course [49] in 1977. Recently on waste ground used for storing topsoil at Tadley Common [606626] on 12 June 2001 (**K**), close by [601625] in 2002, and in the back garden of 17b Park Crescent, Abingdon [490974] in 2002.

Fumaria officinalis L. *Common Fumitory* ○ th 5
Fumaria officinalis subsp. **officinalis**

Cultivated fields, set-aside, garden ground; common and generally distributed. Frequent on calcareous soils, occasional elsewhere. Told by its medium-sized flowers (less than 9mm but more than 6mm), and its fruits which are broader than long, and rather flat-topped.

NVC: OV 9,10,14-16,18,24,33

Silwood Park: our only *Fumitory*. An uncommon and sporadic ruderal in arable fields at Silwood Bottom in 1980 and 2000, in the Ashurst Lysimeters in 1984, on the soil heap from the Wind Tunnel construction work in 1985, and in Oak Mead, on the lake side of Biodepth in the very dry, early spring 10 April 1997. Notable for its absence from most of the arable sites in most years, despite annual cultivation of the fallows. Rare, but flowering, on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990.

Ascot: frequent on the topsoil pile at the junction of Coronation Road and South Ascot during construction of the two new houses at Ravens Corner in May 2004.

East Berks: occasional throughout. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 11% (1km²). Atlas 2000: all squares

West Berks: common on the chalk in set-aside. Atlas 2000: all squares

Fumaria officinalis subsp. **wirtgenii** (W.D.J. Koch) Arcang. ○ th 5
Fumaria wirtgenii Koch

Told from subsp. *officinalis* by its fewer-flowered inflorescences (fewer than 20) and by its smaller sepals (less than 2mm x 1mm). Found in similar places, but its ecology is not well known.

East Berks: Atlas 2000: only recorded from [88], but doubtless quite frequent.

West Berks: under-recorded. Atlas 2000: [28], [38], [57], [58]. Recorded subsequently by D. Broughton at Eastbury Fields, Eastbury [3478], on 8 July 2009.

Fumaria densiflora DC. *Dense-flowered Fumitory* ○ th 6 ↓
Fumaria micrantha Lagasca

A local speciality. Calcareous arable land and cultivated fields, “not uncommon but rather local” in Druce’s time, while it was “local and sporadic” by Bowen’s time. Now centred on [58]. Not found recently in East Berkshire and apparently extinct in Kennet. Told from the next two species by its relatively larger flowers (at least 6mm) and sepals (at least 1.5mm), and told from the much commoner *F. officinalis* by its longer bracts (at least as long as the pedicels, often longer).

East Berks: only one record from Maidenhead (**HULL**) in 1923.

West Berks: Kintbury [36] in 1897, Crog Hill, Wantage Fair Mile (**LAN**) and Nutwood Down [38], between Beedon and East Ilsley [4879], Abingdon [49], Wootton [4701], Perborough Castle, Compton (**OXF**) [57], Aston Upthorpe, Blewbury, Aston Tirrold, Kingstanding Hill, Streatley (**RNG**) and Unhill Bottom [58], Upper Basildon [67]. Most recently from Aston Upthorpe [542832] in June 1988. Still at Weathercock Hill [297826], Britchcombe Farm, Hackpen Hill and by the Ridgeway [38], and at Streatley Warren [559808].

Fumaria parviflora Lam. *Fine-leaved Fumitory* ○ th 6 ↓

A local speciality. Cultivated fields on the lower chalk, very local and sporadic. A small-flowered Fumitory as the Latin name suggests, told from *F. vaillantii* by its lighter petals (white or pale pink rather than pink) and bracts at least as long as the fruiting pedicels (not shorter).

West Berks: Lowbury Hill, Fair Mile, Aston Upthorpe Reservoir and Streatley (LAN) [58] with a 1897 record from Hoe Benham [46]. Most recently, a single plant was found in chalky arable ground at Aston Upthorpe reservoir [5585] in June 1988, and another on Aston Upthorpe Down [544835] in June 1992.

Fumaria vaillantii Loisel. *Few-flowered Fumitory* ○ th 6 ↓

A local speciality of calcareous arable land, gardens and disturbed ground. Local and sporadic. Told from *F. parviflora* by its darker petals and shorter bracts (*see above*).

East Berks: Pepper Lane, Reading [7070] in 1956.

West Berks: Membury [37], Seven Barrows (OXF) and Wantage Fair Mile (LAN) [38], East Ilsley, Chilton and Harwell [48], Upper Seeds Wytham [40], between Lowbury Hill and Unwell Road, Fair Mile (OXF), Aston Tirrold and Aston Upthorpe [58], Tilehurst and between Streatley and Pangbourne [67]. Recently from Membury [311749], above Wantage [347847], Castle Hill Fort by The Ridgeway [381841], Aston Upthorpe [545835] and Fair Mile [553826], all since 1986.

PLATANACEAE

Platanus x hispanica Mill. ex Münchh. *London Plane* ● mm 5
Platanus x hybrida Brot.
Platanus x acerifolia (Aiton) Willd.

Planted in parks and plantations, typically as single trees; at maturity, it makes a superb specimen tree under Berkshire conditions. The common street tree of central London. Seldom regenerating from seed in Berkshire. The leaves are mined by the alien *Acalyptis platanii*.

Silwood Park: superb specimens at the end of the vista from the terrace of the Manor House, but these have produced no seedlings in more than 100 years (even inside the rabbit enclosures). Undamaged by the great storms of October 1987 or January 1990.

East Berks: not in Druce. Seeding freely by Reading Bridge [718739] in 1974. Planted individuals at Park Place, Shottesbrooke, Bray, Virginia Water, Cookham. In the centre of the big A308(M) roundabout in Bray Wick. By the R. Thames in Maidenhead [9081]. In Windsor Great Park this plant forms the two outer rows of the magnificent avenue on The Long Walk from the Castle to the Copper Horse on Snow Hill (the inner rows are Horse Chestnut, and the original avenue was elm; see p. 208).

West Berks: scattered throughout.

¶ **Platanus** *P. x hispanica*, *P. x hispanica* ‘Suttneri’, *P. orientalis*, *P. orientalis* f. *digitata*

TROCHODENDRACEAE

¶ **Trochodendron** *T. aralioides*

HAMAMELIDACEAE

An outstanding family of garden plants grown for their spectacular autumn colour and fragrant winter flowering, but nowhere naturalised in Berkshire.

¶ **Corylopsis** *C. pauciflora*, *C. sinensis* var. *sinensis*, *C. sinensis* var. *calvescens* f. *veitchiana*, *C. spicata*

¶ **Fothergilla** *F. gardenii*, *F. gardenii* ‘Blue Mist’, *F.* ‘Huntsman’, *F. major*, *F. major* Monticola group

¶ **Hamamelis** *H. x intermedia* ‘Arnold Promise’, *H. x intermedia* ‘Diane’, *H. x intermedia* ‘Jelena’, *H. x intermedia* ‘Orange Beauty’, *H. x intermedia* ‘Pallida’, *H. mollis*, *H. mollis* ‘Coombe Wood’, *H. vernalis* ‘Sandra’

Liquidambar orientalis Miller

East Berks: in Whiteknights Park [7371] noted by Alan Mitchell in 1962, but certainly planted.

¶ **Liquidambar** *L. formosana*, *L. styraciflua* ‘Lane Roberts’, *L. styraciflua* ‘Variegata’, *L. styraciflua* ‘Worplesdon’

¶ **Parrotia** *P. persica*

¶ **Sycopsis** *S. sinensis*

ULMACEAE

The Dutch Elm Disease epidemic was one of the greatest landscape disasters ever to hit the Berkshire countryside. Before 1965, elms were the most conspicuous hedgerow trees of the lowlands of the Thames valley, and gave a unique character to its farmland: “shadowy cliffs” with “pale corn waves rippling to a shore” (Betjeman). “Elmy” was one of Betjeman’s favourite adjectives when waxing lyrical about the beauties of the Vale of the White Horse. Wilkinson (1978) wrote: “Rich corners of rustic England are one year a little yellowed, the next as bare as battlefields. Those dusty summer lanes in the heart of England that were half black shadow, half tattered sleepy sunlight among cobwebs, nettles and leafy elm shoots will soon be exposed to an unnatural glare”. By 1975 all of the larger trees were dead, their gaunt skeletons haunting the landscape for many years afterwards. In some cases the rootstock is not killed by the disease, and thickets of suckers form where old stems have died back. The stems inevitably succumb to the disease as soon as they are large enough to be attacked by bark beetles.

Dutch Elm Disease is caused by a fungus *Ceratocystis novo-ulmi*, which is transmitted from tree to tree by scolytid bark beetles (*Scolytus* spp.) which breed beneath the bark of dying elms and then carry the spores to shoots of healthy elms where the adult beetles feed on the young bark. Symptoms

are the wilting and dying of individual branches in the outer crown. The fungus blocks the phloem vessels and the shoots then die from water stress; it grows very quickly and can kill a large tree within 2 months. There are several different genetic strains of the disease, and tree genotypes that are resistant to one strain may be susceptible to others. *Zelkova* is susceptible to *Ceratocystis* but the trees seldom suffer from the disease because *Zelkova* is not attractive to the bark beetles.

The correct identification of elms is notoriously difficult. You need to get leaves from the middle of short shoots (not from the elongated terminal shoots), and you need to gather them in high summer. Do not attempt to identify material that comes from lammas shoots or from epicormic sprouts. We have only 2 common elms: *U. glabra* has abundant rust coloured hairs on its buds and big, short-petioled leaves, while *U. procera* has rounder, smaller leaves (5-9cm rather than 8-16cm) with a longer petiole (5-8mm rather than <3mm).

Ulmus glabra Huds. *Wych Elm*

mm 2 ↓

Ulmus glabra subsp. **glabra**

A woodland rather than a hedgerow elm, often near dwellings. Occasional in damp woods but rare or absent on very acid soils in south and east Berkshire. Dominant or abundant in a few valleys on nutrient rich soils in west Berkshire. Decimated during the Dutch Elm Disease epidemic. This is a non suckering species, rarely found outside woodlands. It is the only elm in Berkshire commonly to reproduce by seed. Much less abundant than *U. procera*.

NVC: W 8,10,12,14,21

Silwood Park: rare and almost certainly planted. Ashurst Path, South Lodge.

Ascot: no other records. It does, however, occur sparingly just outside the area in ancient woodland in Windsor Great Park (e.g. at Flemish Farm).

East Berks: scattered throughout but commoner in the north-west than in the south-east. Commonest, and still healthy post Dutch Elm Disease, in the chalk woods at Bisham [8584] and [8685]. Also at Emmbrook, Earley, Childs Hall, Sindlesham Mill, Highfield Park, opposite Henley, Heath Pond, Shottesbrooke, Howlane Bridge, Warfield Park, Holloway, in the northern block of Maidenhead Thicket at Pinkneys Green, West Maidenhead, Dial Close, Guild House, Windsor Great Park. 4% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Ulmus x hollandica Mill. *Dutch Elm*

Ulmus x minor auct., non Miller

Ulmus x hollandica Miller var. *insularum* Richens

West Berks: pre-1918 records from Moulsoford [58], Kennington [50] and Wallingford [68]. Hailey Wood and Upper Wood [28] in 1955, Forest Copse Didcot [58] in 1980 (OXF), in a thicket at Didcot Power Station [59] in 1976 (OXF).

Ulmus x elegantissima Horw. = **U. glabra x U. plotii**

Recorded as present in Berks by Stace (1975) without further details (Druce has 3 records in *Additions to the Berkshire Flora* from 1918 at Kennington, Moulsoford and Wallingford).

West Berks: Foscot Copse Didcot (**OXF**) [5489] in 1980, and Didcot Power Station (**OXF**) [5190] in 1976 (both det. R. Melville).

Ulmus procera Salisb. *English Elm*

mm 5 ↓

Ulmus minor auct., non Miller

Ulmus minor Miller var. *vulgaris* (Aiton) Richens

Shady lanes, hedges, woods, fields and parks, especially in the clay vales. Abundant in some woods in West Berkshire. Frequent in plantations, parks and hedges on nutrient rich soils, but rare on very acid soils. Post Dutch Elm Disease, the English elm survives as dense thickets of regrowth shoots that spring up from the rootstocks of apparently dead parent plants. The disease persists at low levels on the few larger trees, infesting the younger shoots as soon as they become big enough to be susceptible to attack by the scolytid beetles that spread the fungus from infected to susceptible individuals, thereby maintaining the disease. Often associated with the grass *Elymus caninus*. The leaves are mined by *Stigmella ulmivora*. Elm was always associated with death and melancholy (the wood of elm was used for making coffins); as the ancient saying has it "Elm hateth Man and waiteth".

NVC: W 8,21

Silwood Park: this is our only native elm. It now forms dense thickets of regrowth stems on Elm Hill and in The Elms, but all the big trees are long dead. The massive skeleton in the centre of The Elms between Pond Field and Nash's Slope was hit by lightning and caught on fire on 22 June 1980, and smouldered for more than a week afterwards. Planted in The Hedgerow in 1980 along with *Acer campestre* and *Rosa rubiginosa*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	5	35

Ascot: Loudon believed that many of the elms at Windsor were *U. subserosa* the Dutch cork barked elm (Druce).

East Berks: still very common as suckers in hedgerows, as in the country to the south of Knowl Hill. 67% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Ulmus minor Mill.

mm 5 ↓

Ulmus minor subsp. **minor** *Small-leaved Elm*

Ulmus carpiniifolia Gled.

Ulmus stricta (Aiton) Lindley

Ulmus ? *diversifolia* Melville

Ulmus coritana Melville

Ulmus minor Miller var. *suberosa* (Moench) Dost 1

Colonist or planted in hedges in small quantity Rare. The amount of synonymy speaks volumes about the difficulty of identifying these plants.

NVC: W 8

East Berks: Bray Wick (1966), Dinton Pastures (1988). Rare in hedges on the gravel workings at Whistley Park [7873] in July 2002.

West Berks: pre-1918 records from Hanney [49], Appleton and Cumnor [40], Moulsoford [58], Radley [59], Kennington [50], Wallingford [68]. Ardington [48] in 1966. The most modern record is from Buscot Park [29] in 1996.

Elm cultivation is largely a matter of history since 1965, and few people risk planting elm trees these days. The following taxa have not yet succumbed to Dutch elm disease in Silwood Park:

¶ **Ulmus** *U. x hollandica* ‘Jacqueline Hillier’, *U. parvifolia*, *U. ‘Sarniensis’*, *U. wallichiana*

To date, our Zelkovas have not shown any signs of succumbing to Dutch Elm Disease.

¶ **Zelkova** *Z. carpinifolia*, *Z. serrata*, *Z. sinica*, *Z. x verscheckfeltii*

¶ **Celtis** *C. australis*, *C. occidentalis*

CANNABACEAE

Cannabis sativa L. *Hemp*

• th 6 ↑

Waste ground about towns, casual. “Not permanently established, but springing up from seed accidentally dropped, or from the cleanings of bird-cages” (Druce). Rare casual on rubbish tips (Bowen). Now grown on a modest scale as a fibre crop. Hippies who stumbled on a remote field of head-high cannabis plants thought Christmas had come early only to find that these modern fibre plants have had almost all of the alkaloids bred out of them.

East Berks: Twyford (1897), Maidenhead (1897), on rubbish at Windsor (1897). Reading (1960), Smallmead tip (1965-71). Grown as a crop at Crazies Hill in 1998.

West Berks: pre-1897 records from Newbury [46] and Didcot [59], Wallingford [68] in 1912, Wytham meadow, by the gate [40] in 1953, Didcot tip [59] in 1969, South Moreton [58] in 1977, Bradfield [57] in 1988.

Humulus lupulus L. *Hop*

hp 7

Damp hedges, fens, damp wood margins and thickets, common and generally distributed. Once cultivated widely, but by 1968 only near Southmoor. Not cultivated at all in Berkshire these days. Often climbing over chain-link boundary fences. Host to the aphid *Phorodon humuli* in summer. NVC: OV 26; W 5,6

Silwood Park: local and rare. A single vine amongst nettles in the north-eastern corner of Water Meadow. By the Buckhurst Road Entrance on a fence. In the hedge opposite Little Chef at the Cannon Crossroads. In swampy woodlands below Hilltop Close at Cheapside.

Ascot: local and uncommon. South Ascot, Ascot Station, Charters Road, Sunningdale, Blacknest Park, South Coworth, Sunninghill Park, Home Farm. By the Chinese take-away on Upper Village Road in Sunninghill. Grounds of Frognall. It grows luxuriantly in the swampy woodlands of Sunningwell Bog and Wells Wood.

East Berks: particularly common in hedges and woods by the Thames, as at Wargrave and Old Windsor. 30% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Humulus** *H. lupulus* 'Aureus'

MORACEAE

¶ **Morus** *M. alba*, *M. nigra*

Ficus carica L. *Fig*

• mm 6

On sunny brick walls of the vegetable gardens of most of the larger estates. Sometimes on waste ground away from gardens, but seldom self-sown and more usually a garden relic than an escape.

Silwood Park: very rare. One tree on the south facing side of the old brick wall surrounding the pot-stand at The Greenhouses (1971-2000).

Ascot: rare, Kings Beeches, South Coworth, Ascot Place.

East Berks: not in Druce. Warm, dry railway banks, Reading (1962). Recently at Farley Castle, Sonning, East Sonning, Loddon Mouth, Marsh Mills, Road Research Lab, Lily Hill Park, Maidenhead, Foliejon Park, Cookham, Bray, Clewer, Windsor. On the bank above flood defence channels in East Maidenhead. On abandoned allotments between Reading West Junction and Cow Lane [702742] on 11 October 2003. 2% (1km²). Atlas 2000: all except [87]

West Berks: on the railway at Didcot [59] in 1918. On the old Abbey walls in Abingdon [4997] in July 2002. Probably under-recorded. Atlas 2000: [36], [49]

¶ **Ficus** *F. carica* 'Brown Turkey'

URTICACEAE

Urtica dioica L. *Common Nettle*

hp 6

Woods on phosphate-rich soils, often the dominant ground-layer plant (e.g. in the lower parts of woods on steep slopes or under rookeries), and in meadows, mires, swamps, grasslands, near streams, farmyards, roadsides and waste ground. Especially common in woodlands where Pheasants are reared. Abundant throughout. It is host to the larvae of numerous attractive butterflies including Red Admiral *Vanessa atalanta* (black back and branched spines), Small Tortoiseshell *Aglais urticae* (back with 2 yellow stripes separated by a thin black line), Peacock Butterfly *Inachis io* (black with many small white dots) and Comma *Polygonia c-album* (orange with white hairs in the centre of its back towards the rear), and is galled by the nettle gnat *Dasyneura urticae*. The small yellowish aphid is *Aphis urticae*, while the large green species with long siphunculi is *Microlophium carnosum*. Few plant species are found in a greater number or variety of NVC communities than nettle.

NVC: CG 2,4; M 27; MG 1,9,10; OV 3,8-10,12,13,15,19,21,23,25-28,33,41,42; S 3-7, 12,14,15,23,25,26,28; U 1; W 5,6,8,10,12-14,21,22,24,25

Silwood Park: one of the most widespread plants at large spatial scales, but only the twenty-second most frequent plant species in small quadrats: almost all the hectare squares have at least one nettle in them, but only 10% of metre squares. Dominant in the understorey of the woodland between Drive Field and Rookery Slope and on discarded horticultural waste in The Tip by Hayes Wood and in Rookery Copse. Forming a monoculture in full sun in the damp strip of land below the Ha Ha in front of The Manor, despite repeated attempts at eradication by frequent mowing. Forming a dense tangle with *Galium aparine* and *Epilobium hirsutum* in the swampy part of Pond Field. On waste ground at the Header House. Patches in Nash's Field on grazed, limed plots receiving nitrogen and phosphorus. Dominant by year 3 after fencing in the Tennis Court Rhododendron Plantation on 4 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
10	26	35	59	94

East Berks: 98% (1km²). Only *Trifolium repens*, *Dactylis glomerata*, *Plantago lanceolata*, *Plantago major* and *Poa annua* are more widespread at this scale. Growing in a curious habitat with *Molinia* where it clogs the upper reaches of the Wish Stream in Wishmoor Bottom. Atlas 2000: all squares

West Berks: locally dominant in steep chalk woodlands like Rivar Copse [3562], replacing Dog's Mercury in patches up to about 10m across. Atlas 2000: all squares

Urtica dioica subsp. **galeopsifolia** (Wierzb. ex Opiz) Chrtek *Stingless Nettle* hp 6
Urtica galeopsifolia Wierzb. ex Opiz

Riversides and reedbeds. Stingless nettles with elongated drooping leaves and greyish pubescent stems. These plants occur in a number of places by the R. Thames from Wytham meads downstream to Windsor, by the R. Loddon and by the R. Kennet. Stace considers this taxon to be of very doubtful status, and at least sometimes it reverts to normal stinging form when transplanted and grown in dry soils (Hawkins, 1997, *BSBI News* 77, 35).

East Berks: banks of the R. Thames and adjacent backwaters. Less frequently by the R. Loddon, as at [761648]. Abundant in *Phragmites* swamps at Windsor with *Calystegia sepium*.

West Berks: locally frequent by the Thames from Wytham Meads Ditches [4609] to Sutton Courtenay. By the R. Kennet at Marsh Benham Lock [420671], Woolhampton [5766] and Thatcham reedbeds [510663].

Urtica urens L. *Small Nettle* o th 6

Waste ground and manure heaps, generally near villages. Dry arable fields, gardens and disturbed ground. Druce thought it had "the appearance of a colonist in Berkshire (like *Chenopodium urbicum*, *C. hybridum*, *C. murale*, *C. ficifolium*, *C. vulvaria*, *C. opulifolium*)". Rare or absent on the chalk. Much commoner now than these rare *Chenopodium* spp. Told from small *U. dioica* by inspection of the flowers: the plants are monoecious (separate male and female flowers on the same individual) and you will find a few male flowers (with anthers) amongst the more numerous female flowers (with stigmas) in each inflorescence. In *U. dioica* all of the flowers on one individual are of the same sex (these plants, like most animals species, are dioecious). These days, it is particularly associated with the bare ground beneath ornamental conifers like Cedars or Cypresses, where the rabbits have eaten everything else.

NVC: OV 7,8,10,13,14,18,19

Silwood Park: uncommon and sporadic. On waste ground by the Animal House, under *Mahonia* 18 April 1983. On waste ground by the Header house from soil tipped out of plant pots 12 June 1984. On compacted ground on the edge of The Tip, the bulk of which is dominated by *U. dioica*, in October 1994 and August 1996. Drive Field at the edge of Ashurst Road in dry shade 10 June 2000. A big population sprang up when the canopy of the larger of the two cedars on the Croquet Lawn facing the Lily Pond lost two of its biggest branches in a storm in summer 1999. The ground was dry, bare and much dug-over by rabbits and 4 clumps of plants were in flower on 5 February 2000. A rare arable weed at Pond Hill Field. On compacted ground at Ashurst. Locally frequent as a weed in the garden of East Lodge in July 2002. On dry bare ground beneath the line of Cypress trees in the new part of the graveyard at Ashurst in February 2004. In recovering grassland in April 2004, where the Portakabins had stood during the demolition of the Lysimeters in summer 2003. In dry shade under privet by the Ashurst road in June 2007. The cold late spring of 2010 was particularly good, with a large population on the edge of the Croquet Lawn beneath the canopy of the smaller Cedar of Lebanon.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	6

Ascot: local and rare. South Ascot, Ascot Station, Sunningdale Park, Sunningdale, Johnson's Pond. Very rare, five plants from imported topsoil used to landscape the edge of the tarmac road alongside the new Straight Mile between [92786 69087] and [93338 69226] on 31 August 2005, more frequent on the landscaped banks on both sides of Winkfield Road, north of the new underpass [925693].

East Berks: locally common on urban waste ground in Wokingham and Reading, and as a weed of market gardens at Swallowfield in 2002. Frequent on otherwise bare ground beneath Incense Cedars in Bearwood churchyard in February 2003. Local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 10% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames valley, occasional in the Kennet valley and rare or absent on the chalk. Locally abundant on allotments. The most abundant weed of asparagus beds at the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: all except [68], [69]

Urtica pilulifera L. *Roman Nettle*

• th 6 †

East Berks: a casual in an old garden in Reading in 1897 (OXF).

Parietaria judaica L. *Pellitory-of-the-wall*

hp 6

Parietaria diffusa Mert. & Koch

On the stonework at the foot of church walls, old limestone walls, canal banks, graveyards, pavement edges and alleyways in towns, hedge-banks and dry waste places. A very curious and complicated spatial distribution within Berkshire; sometimes the dominant plant, but absent from exactly the same habitat in the next-door village. Behaves more like an alien than a native species with us. The green aphid is *Aphis parietariella*.

NVC: OV 22,41

Silwood Park: a very rare recent arrival. A single plant by the new road to the renovated Silwood Farm on 29 August 2011. Probably imported with topsoil used for landscaping the banks close to the

gate onto Cheapside Road. Still there on 3 November 2013, as one small clump at the base of the wire mesh fence, behind the *Berberis* on the west side of the entrance of New Farm Road onto Cheapside.

Ascot: no other records. Nearby walls checked again in November 2013.

East Berks: uncommon in towns and villages in the Thames valley to the north of 70, but absent elsewhere. It still grows on the walls of Windsor Castle where it was first recorded in 1720. Swallowfield Church, on the old walls of Reading Abbey, Sonning, Wargrave, Ruscombe, the Berkshire side of Henley bridge, Remenham, Crazies Hill, Rosehill Wood, Popeswood, Hungerford Lane, Littlewick Green, Warfield, Hurley, Burchett's Green, Temple, Bisham Abbey, stonework by the R. Thames in Maidenhead, Maidenhead Court, North Town Moor, Cookham, The Goswells, Shaw Farm, Frogmore, Windsor Castle, Home Park, Old Windsor, Runnymede Island, The Priory. 9% (1km²). Atlas 2000: all except [96].

West Berks: scattered in villages to the north of 85 (e.g. Sutton Courtenay and Little Wittenham [59]), but absent or rare in most of the region outside the Thames valley. The most abundant species on the ruined walls of Godstow Nunnery [4809]. Very abundant on the banks of the Kennet and Avon canal where it passes through Newbury [4767], and frequent at the base of walls around Lambourn car park [3278]. Common on Betjeman's "old brick garden walls" in Wantage [3987] and Abingdon [4997]. Uncommon on the stonework of Bucklebury church [57] in 2002. Atlas 2000: all squares. It would need to be mapped at a much finer resolution (say 1km²) to show any informative spatial pattern.

Parietaria officinalis L. *Eastern Pellitory-of-the-wall* ● hp 6 †

Very local and rare. Told from the locally abundant *Pellitory-of-the-wall* by its bigger, more erect stature and larger leaves. In particular, the female perianth is 2.7-3mm in fruit (not 2-2.3mm) and the achenes are larger (1.5-1.8mm not 1-1.2mm).

West Berks: rare in dry waste places. Kingston Bagpuize [49] in 1913 (OXF).

Soleirolia soleirolii (Req.) Dandy *Mind-your-own-business* ● ch 5
Helxine soleirolii Req.

Damp bases of walls near houses, often on brickwork near water. Locally abundant in towns in damp, shady alleyways with brick or stone steps, forming a carpet of tiny green ground-hugging leaves on substrates where no other plants will grow. Also in damp lawns that are shaded by walls or trees, often in churchyards. One of the classic urban aliens. Has it increased or have its urban habitats simply been better recorded?

Silwood Park: thoroughly naturalized on damp stonework around the waterfall in the rockery above the pond in the Japanese Garden. Damp brickwork in basements at the Manor House.

Ascot: alleyways in Sunninghill, Charters Road, North Ascot, Ascot Place and Ascot High Street. Locally dominant on the banks of the stream [919708] that runs by the northern end of New Road opposite Ascot Place (1979-2007). Common on shady paving stones at the base of brick walls at 89a Upper Village Road from 2004 onwards, first recorded eight years after construction of the house. This population was eliminated on 9 March 2009 when the stone sets were cleaned, but was back in some abundance by October 2009.

East Berks: not in Druce, first recorded from Wellington College (1962), Reading (1964), Wargrave (1964) and Shottesbrooke (1966). Now at Three Mile Cross, The Leas, Barkham Ride, Reading, Earley, Twyford, Wargrave, Willow Lane, Upper Wargrave, Bisham, Marsh Mills, Wokingham, Wellington College, College Town, Ashridge Wood, Shottesbrooke, Touchen End, Warfield, Winkfield, Maidens Green, Holyport, Scotlands, Burchett's Green, Maidenhead, Cookham, Bray, Frogtown, Windsor Castle. 9% (1km²). Atlas 2000: all squares.

West Berks: first recorded from Little Coxwell [29] in 1961, Blewbury [58] in 1962, East Hanney [49] in 1963, Marcham [49] in 1966, Welford [47] in 1968, Abingdon [49] in 1975, Wantage [38] in 1977, Hinton Waldrist [39] in 1999, in the grounds of the Old Rectory at Burghfield [6668] in 2004. Probably still under-recorded. Atlas 2000: all except [36], [37], [48], [59], [50], [66], [69].

JUGLANDACEAE

Juglans regia L. *Walnut*

• mm 6

Hedges and railway banks, usually as single trees, mostly on calcareous or nutrient rich soils. None of the trees that I have seen look as if they were self-sown, and I suspect that most of the records for Atlas 2000 were of planted individuals. Host to what may be Britain's most beautiful aphid, *Callaphis jug Landis*, which is yellow, green, orange and brown.

Silwood Park: planted just downhill from the two fastigate hornbeams on the Ashurst Road at The Rookery, and further down the hill by the Walled Garden.

East Berks: not in Druce. Simons Lane Bearwood (1982), riverbank at Reading gasworks. Several trees on the allotments at Bulmershe in 2002. In the lane by Bray marina in 2003. Particularly common in and around Cookham Dean [8785]. Self-sown on the verge of the track down to Spade Oak Reach on Winter Hill [8786]. Rare, self-sown on sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 6 September 2008. 5% (1km²). Atlas 2000: all squares, but most frequent in [88] and least frequent in [96].

West Berks: Kingston Bagpuize [49] in 1988, Wytham [40] in 1987. On the ramparts of Segsbury Camp [3884] in 2004. Atlas 2000: all except [28], [37], [66]

Juglans nigra L. *Black Walnut*

• mm 6

This is a rare garden and estate tree. Always planted.

East Berks: the big old tree below the walls of Windsor Castle (143cm dbh) was host to 10 large Mistletoe plants in January 2002.

¶ **Juglans** *J. ailanthifolia*, *J. nigra* 'Laciniata', *J. regia*, *J. regia* 'Laciniata'

¶ **Carya** *C. cordiformis*, *C. glabra*, *C. illinoensis*, *C. laciniata*, *C. myristiciformis*, *C. ovata*, *C. pallida*, *C. texana*, *C. tomentosa*,

¶ **Pterocarya** *P. fraxinifolia*, *P. stenoptera*

MYRICACEAE

Myrica gale L. *Bog-myrtle*

n 4 ↓

One of our most charismatic bog plants, the scent of its leaves is instantly redolent of Scottish summer days. It grows on heathland, often with *Molinia* and *Erica tetralix*, in places where the drainage is impeded. Bog-myrtle represents a sad case of decline of a once-dominant component of one of our more interesting natural plant communities. Drainage and poor burning management threaten the few remaining sites. It is a victim of the philistine notion that heathland destruction constitutes “development of worthless land.”

NVC: M 13,16,21; S 25; W 4

Ascot: the plant was present on bogs near Ascot railway in Druce’s time, but sadly it is long extinct following drainage of Sunningwell Bog. In Swinley Forest, near the pond at [8897 6487], deeply embedded in woodland, where the plant has benefited from the removal of the dense birch canopy during conservation work (by John Ward-Smith, May 2007; and see Mill Pond, below).

East Berks: damp heaths and bogs, very local and decreasing. Bagshot Heath, Finchampstead Leas, Sandhurst, Poppy Hills, Ambarrow, Broadmoor Bottom, Owls Moor, Windsor Park in Druce’s time. Bowen knew the plant from Wellington College, Owlsmoor, Swinley Park and Ascot (1966). An excellent population survives around Mill Pond south-east of the Lookout in Bracknell Forest [8865], at Bush Fields [887646] and Cobblers Hole [895644], and in the bog on the western edge of the firing range at Poppy Hills [8663]. Also still found at Broadmoor Bottom [855630] and Rapley Lake [8964], but the biggest population is west of the Wish Brook between the bridges at [875624] and [877627]. It also grows at the point where the southern track crosses the Wishmoor Bottom bridge on the Berkshire side of the stream, but this site is drying out and is in serious danger of being overgrown by encroaching woodland. 1% (1km²). Atlas 2000: restricted to [86]

West Berks: Greenham Common [46], Crookham Common (RDG) [56] in 1935, and pre-1897 records from Aldermaston Decoy [66]. Atlas 2000: no records.

FAGACEAE

Fagus sylvatica L. *Beech*

mm 4

A dominant component of woods on the chalk plateau, and commonly planted and self-sown in plantations, hedges and parks elsewhere. The leaves support a variety of galls, including pin galls of *Eriophyes nervisequus* and hairy *Hartigiola annulipes*. The big solitary flask-shaped galls on the upper surface, tapered into a point, are made by the midge *Mikiola fagi*. The Beech Aphid is *Phyllaphis fagi* which in summer secretes wax in white cottony flocks. The commonest leaf miners are *Stigmella tityrella*, *S. hemargyrella*, *Lithocolletis faginella*, *Phyllonorycter maestingella*, *Nepticula basalella* and the beetle *Rhynchaenus fagi* (whose adults eat shotgun-like holes in the leaves). White wax on the underside of leaves hides the nymphs of the callaphidid *Phyllaphis fagi*. The trunks of older trees are sometimes pitted with white waxy spots of the scale insect *Cryptococcus fagisuga*. From 2005 onwards, the seed crop has often been destroyed by troops of Rose-ring Parakeets. There used to be a forest-based, beech-wood furniture industry in the Chilterns, just north of the Thames in High Wycombe.

NVC: W 4,8,10,12,14,15,16,21,24,25

Silwood Park: most of the finest beech trees in the woods around the Manor House were undoubtedly planted (probably c.1800 after the first house was built, and the land between the house and the Cannon crossroads was claimed from the common; see p. 218). The plant does regenerate from seed, and there are middle-aged self-sown trees in all of the woods on drier soils. There used to be a beautiful beech hanger on Wood Bank with trees up to 260cm bhg, but it was destroyed during the Great Storm of 16 October 1987, and Wood Bank is now little more than an extended bracken patch. There are still some good beech trees in South Lodge Wood, but the individuals that were earmarked for preservation in Garden Wood after site clearance for the new Science Park were all blown down in the great storms (most of them in October 1987, the remainder in January 1990). Because the Silwood beech trees are almost all of the same age, so they are all starting to go into decline at about the same time. Many of them are shedding large limbs, or their trunks are snapping off at about 15m above the ground. Beech wood decays very quickly once fallen to the ground, and most of the skeletons left after the October 1987 storm were in an advanced state of decomposition by autumn 2000, and have virtually disappeared by 2004 (e.g. the massive tree at The Farm that fell across the path up the hill to Astrophysics; its skeletal remains were finally bulldozed away in September 2009 during preparation work for the new drive to the rebuilt Silwood Farm). Young plants, grown in the clearing behind the Japanese Garden from 1980-87 were used to plant the landscaping on the Science Park in 1988 and have grown very well. Thinning began in winter 1999-2000 to allow full crown development on the surviving trees. Without doubt, Silwood's finest beech tree is the bundle-planted individual by the Lily Pond opposite the Conservatory. This had a girth of 6.49m in April 2004 around the base of its 6 roughly equal-sized trunks. The older beech trees suffered badly during the consecutive droughts of 1989-90 and 1995-96 but most of them recovered their canopy density during the subsequent wetter-than-average years. The fine young self-sown tree on the Cannon Path edge of the Croquet Lawn showed itself to be a very early-flushing individual in the very late spring of 2006: it had been in full leaf for over a week on 29 April 2006 when the other beech trees were still in tight bud; again, in the cool spring of 2008, it was in full leaf on 20 April 2008 when the other trees were still in bud.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	1	8	14	55

East Berks: "there are delightful beech woods at Sonning, Wargrave, Cookham, Park Place, and Quarry Woods near Marlow. Associated plants include *Neottia*, *Monotropa*, *Cephalanthera*, *Epipactis*, *Scilla*. When the wood becomes mixed with other trees then *Ajuga*, *Lamium galeobdolon*, *Milium*, *Elymus*, *Lysimachia nemorum* are amongst the first plants to put in an appearance" (Druce). Locally dominant on the chalk near Henley and Bisham. The woodland rides on Holliday Plain [9274] are lined by Copper Beech. There are two very fine specimens of *F. sylvatica* 'Pendula' in the Wokingham Road cemetery [734733] in Reading. 55% (1km²). Atlas 2000: all squares

West Berks: occasional throughout. Atlas 2000: all squares

¶ **Fagus** *F. crenata*, *F. engleriana*, *F. grandifolia*, *F. grandifolia* var. *carolinana*, *F. japonica*, *F. orientalis*, *F. sylvatica* 'Cochleata', *F. sylvatica* 'Cockleshell', *F. sylvatica* 'Cristata', *F. sylvatica* Cuprea, *F. sylvatica* 'Dawyck', *F. sylvatica* var. *heterophylla* 'Aspleniifolia', *F. sylvatica* 'Mercedes', *F. sylvatica* 'Pendula', *F. sylvatica* 'Prince George of Crete', *F. sylvatica* 'Purple Fountain', *F. sylvatica* 'Riversii', *F. sylvatica* 'Zlatia'

Nothofagus obliqua (Mirb.) Blume *Roble*
Fagus obliqua Mirbel

• mm 5

East Berks: much planted in parkland. There is a fine avenue leading down the riding track from Blacknest Gate to Johnson's Pond on the edge of Valley Gardens in Windsor Great Park. Self-seeding on dry banks close to the parents in the Crown Estates woodlands adjacent to Winkfield Road [9373] in 2002.

West Berks: Fence Wood sawmills (RNG) [519725] in 1972, Bagley Wood (RNG) [5002] in 1977 and Tubney Wood [4400] in 1978.

Nothofagus spp. grow very quickly in Silwood Park, and *N. dombeyi* has done particularly well.

¶ **Nothofagus** *N. alessandrii*, *N. alpina*, *N. antarctica*, *N. betuloides*, *N. cunninghamii*, *N. dombeyi*, *N. fusca*, *N. menziesii*, *N. moorei*, *N. obliqua*, *N. pumilio*, *N. solandri*, *N. solandri* var. *cliffortioides*, *N. truncata*

Castanea sativa Mill. *Sweet Chestnut* ○ mm 7 ↑

Plantations, woods, parks, etc. Frequent or locally dominant on acid soils in south-east Berkshire, occasional as single trees elsewhere. Absent from the chalk. Along with Turkey oak and sycamore, this is one of the most important invasive alien trees on acid sandy soils. Extensive groves of natural regeneration are interspersed amongst sweet chestnut coppice plantations throughout the Crown Estate woodlands in the east of the county. The leaves are mined by *Stigmella basigitella*, *S. ruficapitella* and *Ectoedemia albifasciella*. The nuts of sweet chestnut are much loved by grey squirrels, despite the spiny coat of the fruits.

Silwood Park: there are some wonderful specimens in the park, but without doubt the finest is the massive bundle-planted individual at Silwood Lodge, next to the Ashurst Road which is the largest tree in Silwood Park. This had a girth of 11.15m around the base of its 6 trunks in April 2004. The chains supporting the upper limbs were cut away in 1979 but it nevertheless survived both the October 1987 and January 1990 storms. Sadly, it has now begun to fall apart, and had to be severely pruned in 1998 after dropping several large limbs dangerously close to Professor Hassell's children. Very commonly self-sown in woodland and on waste ground. Seedlings even appear in arable fallow at Pound Hill and Silwood Bottom and were buried by Grey Squirrels in the raised beds at Ashurst. There are large individuals on Elm Slope (395cm bhg in 1979), Sunninghill Crossroads (369cm), Ashurst Path (356cm), Four Acre Field (311cm). The big double-trunked individual in the Rhododendron Exclosure behind the Tennis Court blew down on 16 January 2007, squashing tow of the prize Rhododendrons (this was 2 days before the great gale of 18 January 2007 when 12 people were killed by falling walls, tree branches and blown-over vehicles).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	1	0	5	40

East Berks: "Everywhere about Wellington College, Bisham Wood, Quarry Wood, Bowsey Hill, Sandhurst" in Druce's time. Especially common, and forming local monocultures, in parts of Windsor Great Park and the Crown Estate Woodlands between Bracknell and Bagshot. Dominant over large parts of Simon's Wood (NT) at Finchampstead, and on the southern parts of the firing range at the Royal Military Academy at Sandhurst. Very rare in chalk woodland as at Bisham [8585]. 38% (1km²). Atlas 2000: all squares

West Berks: occasional south of 80 and in the Northern Loop, but absent from the chalk. Atlas 2000: all except [69]

¶ **Castanea** *C. sativa* ‘Albomarginata’

¶ **Lithocarpus** *L. densiflorus*, *L. edulis*

Quercus cerris *L. Turkey Oak*

• mm 5 ↑

Woods and heaths, mainly on acid soils. Well established and locally frequent in south-east Berkshire, but absent from calcareous soils. Now regarded as a major pest in some woodland nature reserves and conservation areas. Not only do its saplings take up space that would be better occupied by saplings of native *Q. robur*, but the Knopper gall insects of *Andricus quercuscalicis* and the spiky galls of the recently arrived *A. meyeri* are both harboured overwinter in the male flower buds of *Q. cerris* and kill substantial numbers of acorns of the native tree in their agamic summer generation, further reducing recruitment of *Q. robur* (see p. 230). This is a wonderful example of indirect competition between two plant species. Active persecution of *Q. cerris* has been in operation on the Crown Estates since 1992. However, many of the largest Turkey oaks are important landscape features on private land and are most unlikely to be felled to promote the conservation of *Q. robur*. The Turkey oak also harbours the relatively innocuous sexual generations of three other species of alien gall wasps (*Andricus kollari*, *A. corruptrix* and *A. lignicola*) which then spend their agamic generations attacking the leaf buds of *Quercus robur*. Like most alien plants, Turkey Oak is attacked by very few native herbivores. Indeed, in most years the leaves are so clean that they look as if they have been sprayed with insecticide. Only one leaf miner is at all common; this is *Acrocercops brongniardella*, the species that mines out the upper leaf cells, leaving only the transparent upper epidermis (like a thin layer of skin), while leaving the lower cells intact, so that you can not see the mine from beneath.

Silwood Park: much planted in the boundary woodlands towards the end of the nineteenth century and the self-sown offspring of these large trees are abundant. The largest individuals (222cm bhg in 1979) are on Buckhurst Road behind Southwood Halls but there are substantial trees (157cm in 1979) on the Cannon Path, Farm Road and elsewhere. The trees on Guinness’s Hill and Observatory Ridge are all self-sown. On 1 June 2006 the male flowers of most trees were hung with heavy bunches of currant-like galls of *Andricus grossulariae* and there was a bumper acorn crop in autumn 2006 after several years of very low crops.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	14	31

Ascot: a weedy tree in the Crown Estate Woodland. Selective felling was started in the mid 1990s with the long term aim of eliminating the species. However, too many of the older trees are currently important landscape features to make any attempts at immediate clearance a realistic proposition. The dominant tree in many roadside plantings (e.g. on Charters Road opposite the school).

East Berks: not in Druce. First record, Bracknell (1918). Particularly common as big, mature trees on and around the Bearwood and Billingbear estates, and in Martin’s Heron. Self-sown in heathland at Poppy Hills [8663] in 2002 and in the bog at Wishmoor Bottom [8763] in 2004. 32% (1km²). Atlas 2000: all squares

West Berks: not in Druce. A southerly distribution, occasional in the Kennet valley, rarer in the Thames valley and absent from the interior (north of 80 and south of 95) but occasional in the Northern Loop and in the southern suburbs of Oxford. Atlas 2000: all except [28], [38], [48], [68]

Quercus ilex L. *Evergreen Oak*

● mm 5

Plantations, roadsides and hedges, commonly planted and occasionally self-sown, especially on the chalk. Told from cork oak, *Q. suber*, by its straight midrib (the vein is slightly kinked or sinuous in cork oak). The leaves are often mined on their under-surface by *Phyllonorycter messaniella*.

Silwood Park: always planted with us, and not regenerating from seed. In the middle of the grassland on Rookery Slope, abundant in the hedgerow facing the Ashurst Path, overhanging the London Road at Silwood House, Tractor Sheds, Silwood Lodge, Drive Lawns, by the Ha Ha.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	1	6

Ascot: rather rare to the west (e.g. Ascot Place), but common to the east in Windsor Great Park. On the corner between Ascot United and Ascot Heath golf course [927693].

East Berks: Sonning, Remenham, Binfield, Bear Grove, Bisham, Bray, Cookham. Swallowfield, Whiteknights Park. High Wood Bulmershe, Frogmore, White Place Farm. 6% (1km²). Atlas 2000: all squares

West Berks: Shrivenham [28], Coleshill [29], Letcombe Bassett and Kingston Lisle [38], Buckland [39], Benham Park, Mary Hare School for the Deaf in Greenham [46], by the church at Farnborough [48], Milton Wood and self-sown in Dry Sandford Pit [49], Foxcombe Hill, Boars Hill, Tubney Wood and Wytham [40], Wasing Park [56], Blewburton Hill [58], Radley and Sutton Courtenay [59], Bagley Wood [50], Mortimer and Burghfield [66], Purley, Old Deerpark Wood and Englefield Park [67]. Atlas 2000: all except [36], [37], [47], [69]

[Quercus canariensis Willd. *Algerian Oak*]

● mm 5

Produces good crops of sound acorns in Silwood Park. These have been grown on and planted out as saplings in 1997 (e.g. in the mid section of the Cannon Path and in the William Penney arboretum), but their male parentage is uncertain (e.g. they are likely to be hybrids with *Q. robur*). Natural recruitment from seed has not yet been observed.

[Quercus faginea Lam. *Portuguese Oak*]

● mm 5

Seeding freely in Silwood and planted from home-grown acorns, as for *Q. canariensis*. Clearly the most vigorous of all the semi-evergreen oaks planted during landscaping of the Science Park in 1987. Natural recruitment from seed has not yet been observed.

Quercus petraea (Matt.) Liebl. *Sessile Oak*

mm 4

Quercus robur L. var. *petraea* Mattuschka

Woods and plantations on acid soils, usually planted. Local and rare. Natural regeneration has not been observed despite the occasional production of massive acorn crops in mast years like 1995.

Silwood Park: we have only planted individuals. There are 3 trees on the slope above the Nuclear Reactor at the end of the Immunology Building, one in the extension between the Japanese Garden and London Road, and another 3 next to Unit E on the Science Park. The biggest population is in

Mann's Copse where they were planted in rows in 1986, to form the standard trees in a new coppice-with-standards woodland.

East Berks: uncommon as planted specimens throughout Windsor Great Park (32m x 5.3m in 1966) and rare in Bracknell Forest. Bearwood, Wellington College, Wishmoor Bottom, Clayhill Farm. Atlas 2000: all except [78], [88]

West Berks: rare in the Kennet valley and in the Northern Loop as at Wytham and Foxcombe Hill [40], Bagley [50], etc. Planted in many of the larger estates along the Kennet valley as at Hamstead Park [46]. Also on Snelsmore Common [47], Bucklebury [56], Lowerhill Farm [59] and Church End Copse [67]. Atlas 2000: [29], [36], [47], [40], [56], [57], [59], [50], [67]

Quercus x rosacea Bechst. = **Q. petraea x Q. robur**

There is a crude but useful scoring system for determining hybrid oaks. Score 2 points for pedunculate acorns, 1 point for sessile acorns; 2 points for simple hairs or no hairs in the axils of the leaf veins below, 1 point for stellate (star-shaped) hairs; 2 points for a lobed leaf base, 1 point for cuneate (wedge-shaped; score 1.5 if one side of the petiole has a lobe and the other side is cuneate !); 2 points for petiole less than 1cm long, 1 point for petiole more than 1cm. Add your 4 scores together, then:

8 points	pure <i>Q. robur</i> (the common hedgerow oak, dominant in woodlands on acid soil)
4 points	pure <i>Q. petraea</i> (rare in Berkshire, except as an occasional planted tree)
5-7 points	<i>Q. x rosacea</i> , the higher the score, the closer to <i>Q. robur</i> (occasional, both planted and self-seeded)

If you can not find any acorns, then the scores are out of 6, and the hybrids score 4 or 5.

Silwood Park: no records, all our naturally seeded trees are pure *Q. robur*.

East Berks: commonly planted in Windsor Great Park and the Crown Estates woodlands, some of the trees achieving great size.

West Berks: Bayworth [50] in 1963, Bucklebury [56] in 1980, Wytham [40] in 1987.

Quercus robur L. *Pedunculate Oak*

mm 4

Woods, hedges, coppices. Abundant to locally dominant in most woods and frequent in plantations hedges and parks. "Berkshire affordeth abundance of trees of all kinds, though her Oakes in Windsor Forest come only under commendation" (Fuller's *Worthies*, 1672). "The King Oak, is said to have been a favourite of William the Conqueror, who first made Windsor a Royal Forest. It stands near Cranbourne Enclosure and although quite hollow is still healthy. So long ago as 1829, Professor Burnet lunched in it, and says that ten or twelve people might sit down comfortably to dinner in it." The King Oak measured 15.2m x 11.2m. The timber was used in ship building, wine barrels and the construction of buildings, the acorns were an important seasonal source of food for domestic pigs ("pannage") and the bark was used in tanning. The acorns were an emergency source of food for humans in times of famine. Told from the much rarer (and usually planted) *Q. petraea* by its short petiole, stalked acorn cups, and lack of stellate hairs by the mid-vein on the leaf under-surface. Told from the common alien *Q. cerris* by the lack of "whiskers" on the winter buds and much deeper leaf-lobing. *Q. cerris* had very distinctive, sessile, spiny acorn cups that are borne on last year's twigs.

More species of herbivorous insects attack *Q. robur* than any other British plant (c.300 species). The most conspicuous of these are the gall-formers (with c.35 species). On acorns you will find the sticky, angular Knopper gall of *Andricus quercuscalicis* (first recorded in Britain in 1956) and the sticky, spiky galls of *A. mayri* (a recent arrival but on some trees already more abundant than the long-established Knopper gall). On twigs there are two spherical, woody galls; the larger, smoother species is *A. kollari* and the smaller, rougher one is *A. lignicola*. Single, big emergence holes in these galls show that the gall-maker survived; many smaller holes mean that it was attacked by parasitoids, and several of these emerged instead. All three of these gall species are aliens from south-east Europe and all are host-alternating species spending their winter, sexual generations on the Turkey Oak, *Q. cerris*. Big, soft galls on stems of *Q. robur* in early spring are made by the native *Biorhiza pallida*, a multi-celled gall. Spherical galls on the undersides of the leaves are *Cynips quercus-folii* or *C. longiventris*. The undersides of the leaves in autumn are often completely covered by myriad spangle galls. The commonest species (like spotted miniature flying saucers) is *Neuroterus quercusbaccarum* and the next most common (like shiny brown doughnuts) are the silk-button galls of *N. numismalis*. One of the gall formers turns buds into “artichokes”; this is *Andricus fecundator*. Another produces clusters of cotton wool; this is *A. quercus-ramuli*. The commonest defoliating caterpillars are Winter Moth *Operophtera brumata*, Green Tortrix *Tortrix viridana* and Mottled Umber *Erannis defoliaria*; which are capable of stripping an oak completely of its first (May) crop of leaves, but the tree will re-leaf in June after the insects have pupated. Such defoliations are occasionally observed in parts of Windsor Great Park, but have never occurred in Silwood Park in the period 1979-2004. The most common leaf miners are the blotch-mine *Eriocrania subpurpurella* which destroys the tips of the leaves, *Rynchaenus quercus* which makes a narrow serpentine mine, various *Phyllonorycter* spp. (these are oval mines on the underside of the leaf, covered in “tissue paper” with a long, central fold). Perhaps the most interesting leaf mine is created by *Acrocercops brongniardella* in which the larva eats only the upper epidermis, leaving the underside of the leaf undamaged and creating a flimsy transparent window on the upper surface. Early in spring, you will find adults of the conspicuous, red-and-black frog hopper *Cercopis vulneraria*. The huge brown aphids that feed on young twigs are *Lachnus roboris*, often attended by ants.

Unlike *Q. petraea*, which is a mast-fruiting species producing large acorn crops only every 4 to 10 years and few if any acorns in the intervening years, *Q. robur* produces big acorn crops every other year (this is known as alternate bearing; see p. 232); e.g. there was a big crop of acorns in 2004 but virtually nothing in 2005. The first flush of leaves in April-May is sometimes followed by a second burst of growth in early July, and occasionally by a third in August. The second growth produces what are called “Lammas shots” despite the fact that it is the third flush that actually happens at Lammas-tide (August 1). The Lammas shoots are often snowy white with the alien Oak Powdery Mildew *Microsphaera alphitoides*. Determining the causes of Oak Decline has proved to be a complex problem. Many factors appear to interact to weaken and eventually kill the trees, including attack by phloem-dwelling jewel beetles *Agrilus pannonicus*. The fungus responsible for Sudden Oak Death *Phytophthora ramorum*, a pathogen causing disease in trees along the west coast of America, has not been found on oak trees in Britain, and we profoundly hope that it stays that way.

NVC: W 1,4-6,8,10,12-16,21,24,25

Silwood Park: seedlings come up everywhere, except in dense shade. Oak is the most widespread vascular plant species in Silwood in the hectare plots, and the thirteenth most frequent even in the smallest quadrats. Very susceptible to late frosts when the leaves are just unfurling. The tree on the London Road edge of South Lodge Wood opposite Knight Frank is typically the first individual into leaf each year. On 19 April 1995 all but the latest flushing trees were completely defoliated, top to bottom. Bud burst was extremely late the following year, when even the early flushing individuals

had closed buds on 16 April 1996. Bud burst has got progressively earlier over the 20 years of the study, as winter temperatures have increased. There was mass-recruitment of oak woodland during the period immediately after the myxomatosis epidemic of the mid-1950s. Prior to that, large areas had been kept as grassland by rabbit grazing. The woodlands on Merten's Acres, Observatory Ridge, Elm Hill and Water Meadow all date from this period. These are a wonderful example of a woodland caused by a virus. The oaks started self-pruning their lower branches in about 1978, and self-thinning (death of whole trees) began in the early 1990s. Erection of rabbit fences underneath these young oak woodlands demonstrates that the bare leaf litter on the forest floor is attributable to rabbit grazing not to shade (see Plate 14). There was a curious episode of branch-shedding in September 2004 when 4 massive veterans dropped huge horizontal branches on windless nights within 10 days of one another; two of the trees were in The Rookery overhanging Ashurst Road, one was on the bank above The Reactor and one was in Garden Wood. All I can think is that the weight of the acorn crop was the final straw that broke the camel's back. The oaks behind the Reactor were pollarded in March 2002, but all of them died as a result. Several of the veteran oaks have bird-sown holly, *Ilex aquifolium*, growing epiphytically on their larger branches. The last surviving veteran oak of the Silwood Bottom Group blew down on Monday 9 January 2006 (Tree 1008 was felled pointing northwards in the Great Storm of 16 October 1987). It fell with its trunk pointing eastwards and was xxx m tall when it died. The trunk remained intact as the root-ball was ripped out of the ground. In the very late spring of 2006, most of the trees had only just started to show green between the bud scales on 22 April 2006. The acorn crop was unusually large in 2006 following a very late spring (e.g. the early-flushing Trees 1 and 2 had unfurling leaves and male flowers but were not yet at anthesis on 29 April 2006, while other trees were still in tight bud on this date). In the great storm of 18 January 2007 the veteran oak Tree 1018 lost one half of its canopy when the trunk on the Virginia Water side blew down (it damaged the canopy of neighbouring Tree 1019). The top of the tree in the corner of Ashurst and Rookery blew down and demolished the boundary fence below the graveyard. Other losses included a giant *Pinus sylvestris* behind The Heath on Cannon Path, but what we imagined to be the more vulnerable trees all survived (e.g. the big Beeches and the tallest of the Cedars were unaffected).

The spring of 2006 was exceptionally late (oak flushed at roughly the same time as the ash) but 2007 was unusually early (by 9 April 2007 Tree 1001 had unfurled leaves and male flowers (phenology stage 4), and the latest of the trees, Tree 1026, had reached stage 4 (on the verge of anthesis) by 27 April 2007). In contrast, 2008 was a late spring with a cool April (and snow on April 6) and delayed bud burst, but the highest levels of defoliation seen for many a year. The big oak-fall gap in Cascade Marsh [93858 68917] had a good population of *Carex ovalis* and *Stellaria uliginosa* on 15 June 2009. The spring of 2009 had the highest level of oak-defoliation by insects I have ever seen at Silwood, with many trees suffering 100% leaf loss (but others, needless to say, affected hardly at all).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
17	24	35	44	95

Ascot: the ancient oak woodlands in Windsor Great Park support more veteran trees per hectare than are found in any other part of Europe. They form part of the World Heritage Site, and support several *Red Data Book* insect species and many rare fungi that are associated with veteran oaks (see p. 1269).

East Berks: the dominant tree on clay, locally abundant on acid sands, but rare in chalk woodlands as at Bisham [9585] where it is scattered (and probably planted) amongst ash, beech, sycamore and wych elm. 96% (1km²), easily the most frequent of all our trees. Atlas 2000: all squares

West Berks: since the demise of the elms, oak is now the commonest hedgerow and farmland tree in the Thames Valley and the Vale of the White Horse. Atlas 2000: all squares

Quercus rubra L. *Red Oak*

● mm 5

Quercus borealis Michaux f. var. *maxima* (Marshall) Ashe

Silwood Park: widely planted, it produces plenty of sound acorns every 3-5 years, but these never produce seedlings. Silwood Lodge, at the end of the Ha Ha by the Machinery Centre, on the Science Park, and by William Penney.

Ascot: rarely self-sown, as at Virginia Water (1974-2004). Planted in wild-looking vegetation on the western edge of Ascot Racecourse.

East Berks: Warren Lodge, Ambarrow, Coppid Beech roundabout, Popeswood, West Hanworth, Ashley Hill, Chalkpit House, Harvest Hill, locally frequent in the Crown Estates woodlands in Windsor Great Park. 2% (1km²). Atlas 2000: [77], [86], [87], [88], [97]

West Berks: regenerating at Yattendon [57] in 1986 and Turners Green [56] in 1988. Trees at Moor Copse [67], Aldermaston Court [56] in 1970 but not regenerating. Atlas 2000: [56], [57], [59], [50], [67], [69]

[*Quercus frainetto* Ten. *Hungarian Oak*]

• mm 5

Told at one by its huge, deeply lobed leaves.

Silwood Park: much planted in the late 1980s. Mysterious sudden deaths of 2 well-grown, formerly vigorous individuals in 2000 (the plants never leafed-out in spring 2001). One, outside Unit A on the Science Park, and the other in the avenue between London Road and the Japanese Garden. No symptoms in the years before they died, but extensive beetle galleries evident once the bark fell off.

East Berks: planted incongruously on waste ground on the industrial estate by Easthampstead Road in Bracknell.

West Berks: no records.

¶ **Quercus** There is an almost comprehensive collection of hardy *Quercus* in the arboretum at Silwood Park. They were introduced originally in 1987 as part of an experiment to discover the host plant ranges of oak-galling cynipid wasps. Things then got out of hand, and the planting became seriously obsessive. By November 2004 there were 177 *Quercus* taxa growing in Silwood Park, and by October 2008 there were 198 taxa, and by October 2009 there were 212. There is still a long way to go, of course, since there were 531 species of *Quercus*, worldwide, at the last count.

A plant grown from an acorn at Letterewe in Wester Ross was planted out in winter 2008-9 in the narrow strip between the Hamilton Car Park and MScan. I have called it *Quercus* 'Letterewe Seedling' as it is not yet obvious whether it is *Q. robur* or *Q. x rosacea*. The 7 red oaks on North Gravel facing the BP Greenhouse were planted in December 2008.

Q. acherdophylla, *Q. acuta*, *Q. acutissima*, *Q. acutissima* subsp. *chenii*, *Q. affinis*, *Q. agrifolia*, *Q. alba*, *Q. alba* f. *elongata*, *Q. aliena*, *Q. alnifolia*, *Q. arizonica*, *Q. arkansana*, *Q. austrina*, *Q. baloot*, *Q. x beadlei*, *Q. x bebbiana*, *Q. berberidifolia*, *Q. bicolor*, *Q. x bimundorum*, *Q. breweri*, *Q. buckleyi*, *Q. x bushii*, *Q. canariensis*, *Q. canbyi*, *Q. castaneifolia*, *Q. castaneifolia* 'Green Spire', *Q. cerris* 'Argenteovariegata', *Q. cerris* 'Marmorata', *Q. cerris* 'Wodan', *Q. chapmanii*, *Q. chrysolepis*, *Q. coccifera*, *Q. coccinea*, *Q. coccinea* 'Splendens', *Q. 'Columna'*, *Q. comptoniae*, *Q. crassipes*, *Q. crispa*, *Q. cyrille*, *Q. dalechampii*, *Q. dentata*, *Q. dentata* 'Carl Ferris Miller', *Q. douglasii*, *Q. dumosa*, *Q. durata*, *Q. durifolia*, *Q. elliottii*, *Q. ellipsoidalis*, *Q. ellipsoidalis* 'Hemelrijk', *Q. emoryii*, *Q. engelmannii*, *Q. fabrei*, *Q. faginea*, *Q. falcata*, *Q. falcata* var. *pagodifolia*, *Q. x fernaldii*, *Q. frainetto*, *Q. fusiformis*, *Q. gambelii*, *Q. garryana*, *Q. garryana* x *turbinella*, *Q. geminata*, *Q. georgiana*, *Q. gilva*, *Q. glabrescens*, *Q. glandulifera*, *Q. glauca*, *Q. graciliformis*, *Q. gravesii*, *Q. hartwissiana*, *Q. x hastingii*, *Q. x hawkinsiae*, *Q. haylandii*, *Q. hemisphaerica*, *Q. x heterophylla*, *Q. x hickelii*, *Q. x hickelii* 'Gieselhorst', *Q. x hispanica* 'Wageningen', *Q. hypoleucoides*, *Q. ilex*, *Q. ilicifolia*, *Q. imbricaria*, *Q. incana*, *Q. infectoria*, *Q. infectoria* subsp. *veneris*, *Q. introgressa*, *Q. ithaburensis*, *Q. x jackiana*, *Q. kelloggii*, *Q. x kewensis*, *Q. laevis*, *Q. 'Langtry'*, *Q. laurifolia*, *Q. x leana*, *Q. leucotrichophora*, *Q. liaotungensis*, *Q. x libanerris*, *Q. x libanerris* 'Rotterdam', *Q. libani*, *Q. lobata*, *Q. longipes*, *Q. x lucombeana*, *Q. x lucombeana* 'Ambrozyana', *Q. x lucombeana* 'Diversifolia', *Q. x lucombeana* 'Suberosa', *Q. x lucombeana* 'Wageningen', *Q. x lucombeana* 'William Lucombe', *Q. x ludoviciana*, *Q. lyrata*, *Q. macedonica*, *Q. macranthera*, *Q. macrocarpa*, *Q. macrolepis*, *Q. marilandica*, *Q. mexicana*, *Q. michauxii*, *Q. mongolica*, *Q. mongolica* var. *grosseserrata*, *Q. montana*, *Q. muehlenbergii*, *Q. x mutabilis*, *Q. myrsinifolia*, *Q. nigra*, *Q. nuttallii*, *Q. obtusa*, *Q. oglethorpensis*, *Q. oxyodon*, *Q. palustris*, *Q. parvula*, *Q. petraea* 'Columna', *Q. petraea* 'Insecta', *Q. petraea* 'Mespilifolia', *Q. petraea* 'Purpurea', *Q. phellos*, *Q. phellos latifolia*, *Q. phillyreoides*, *Q. planipocula*, *Q. 'Pondaim'*, *Q. polymorpha*, *Q. pontica*, *Q. prinoides*, *Q. prinus*, *Q.*

pubescens, *Q. pungens*, *Q. pyrenaica*, *Q. rysophylla*, *Q. x riparia*, *Q. robur* ‘Atropurpurea’, *Q. robur* ‘Compacta’, *Q. robur* ‘Concordia’, *Q. robur* ‘Cucullata’, *Q. robur* ‘Dissecta’, *Q. robur* ‘Facrist’, *Q. robur* f. *fastigiata*, *Q. robur x lobata*, *Q. robur x macrocarpa*, *Q. robur x macrocarpa*, *Q. robur* ‘Pectinata’, *Q. robur* f. *pendula*, *Q. robur* ‘Purpurascens’, *Q. robur x turbinella*, *Q. robur* f. *variegata*, *Q. x rosacea* ‘Filicifolia’, *Q. rubra*, *Q. rubra* ‘Aurea’, *Q. rubra* ‘Sunshine’, *Q. rugosa*, *Q. x runcinata*, *Q. sadleriana*, *Q. sartorii*, *Q. x saulei*, *Q. x schochiana*, *Q. schottkyana*, *Q. x schuettei*, *Q. serrata*, *Q. shumardii*, *Q. stellata*, *Q. suber*, *Q. texana*, *Q. trojana*, *Q. turbinella*, *Q. x turneri*, *Q. undulata*, *Q. vacciniifolia*, *Q. variabilis*, *Q. velutina*, *Q. velutina* ‘Rubrifolia’, *Q. virginiana*, *Q. ‘Warburgii’*, *Q. wislizenii*

Sad, sudden loss of the well grown *Q. nuttallii* by the hornbeam opposite MScan; it was fine in the autumn of 2007 but never leafed out in spring 2008; it was cut down and is regenerating from the stump in June 2008. Many of the larger suckers fell off mysteriously in late summer 2009, but two shoots survived in October 2009. The small *Q. rugosa* in Drive Field may have survived (assumed dead but not pulled up), but the tiny *Q. dentata* in South Lodge Wood never leafed out in 2008. The small *Q. rugosa* in Drive Field was in good condition again by October 2009 having survived another setback when rabbits got inside its fence and felled all the shoots at ground level in winter 2008-09.

BETULACEAE

Betula pendula Roth *Silver Birch*

mm 4

Betula alba L., pro parte

Betula verrucosa Ehrh.

Woods and thickets on light soil. Loudon (1695) says that birch is supposed to have been once so plentiful in Berkshire as to have given the name to that county. Locally dominant on heaths and felled woods on acid soils. Occasional in most woods but rare on the chalk. A pestilential weed of heathland nature reserves, requiring regular mechanical removal or burning to control it. The tree has a rich herbivore fauna, with several conspicuous leaf miners (flies like *Agromyza alnibetulae*, and microlepis like blotch miner *Eriocrania sparmanella*, serpentine miners like *Stigmella* (6 spp.), *Ectoedemia occultella*, *Lyonetia clarkella* (which leaves a serpentine chain of frass in the mine), leaf-edge folders like *Paronix betulae*, and ‘mobile cigars’ like *Coleophora fuscadinella*). There is a cute leaf roller that wraps up the tip of the leaf into a barrel suspended from the base of the leaf by the midrib (roll gall weevil *Deporaus betulae*). Small birch trees are sometimes stripped of all their leaves in May or June by aggregations of adult weevils *Polydrusus sericeus* (conspicuous by their metallic sheen). Birch sawfly larvae feed in ranks along the edge of the leaves, and the caterpillars of dozens of species of moths may be collected by beating. The commonest aphids on birch leaves are *Euceraphis punctipennis* and *Betulaphis quadrituberculata*.

NVC: W 1,4,5,6,8,10,12,14,15,16,21

Silwood Park: dominant in monocultures on Hell Hill and locally in Nash’s Copse, and scattered through all the other woodlands, both wet and dry. Less common than *B. pubescens* only in the wettest, most acid sites. Benefited greatly from the Great Storm of 16 October 1987 with mass regeneration in canopy gaps created by tree falls. The third most frequent tree in small quadrats, after *Quercus robur* and *Acer pseudoplatanus*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
9	16	24	55	79

East Berks: much the commonest birch. Seedlings were common on compacted cleared ground destined for factory development at Green Park, Reading [7069] on 2 September 2007. 66% (1km²). Atlas 2000: all squares

West Berks: throughout, but rare on the chalk. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all squares

Betula pubescens Ehrh. *Downy Birch*

mm 4

Betula alba L., pro parte

Betula pubescens subsp. **pubescens**

Heathy woods on light soils. Local. Bulmarsh, Earley, Bearwood, Finchampstead, Bracknell, Ascot, Sunninghill. Locally frequent in woods and heaths on acid soil, usually with *B. pendula*. Told from the latter by leaves with relatively broad tips so that the leaf tip is much rounder (acute to subacute) than in *B. pendula* (which is acuminate at the apex). Note that, despite the name, the twigs and leaves of *B. pubescens* are sometimes glabrous.

NVC: M 16; OV 27; W 1,4,5,6,8,10,12,14,15,16,24

Silwood Park: commonest in the wetter woods like Cascade Marsh and Hell Wood East, but often growing intimately mixed in stands with *B. pendula*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	4	7	13	21

Ascot: wet acid woodlands at The Orangery, Englemere Pond, Swinley, Kingsride, South Ascot and Sunningwell Bog.

East Berks: common to the south of 75, but rare in the Thames valley to the north of this. Much more local than *B. pendula* and all but confined to wet acid soils. 7% (1km²). Atlas 2000: all except [78]

West Berks: occasional in the Northern Loop and on acid ground in the Kennet valley, but absent from the chalk and from the clays of the interior (north of 75 and south of 95). Atlas 2000: all except [38], [48], [58], [68], [69]

¶ **Betula** It is a great puzzle to me why ornamental birches are not common as garden escapes; they grow really well, mature early, and set copious seed that is widely dispersed by wind. Our native *B. pendula* is an invasive pest of heathland nature reserves. It is possible that alien birches are overlooked as natives when they are young, but this is surely not likely once they are older. It may be that their genes escape into hybrids with native birches, but we have no information on this. The collection of birches in the Silwood arboretum runs to 79 taxa at present, but not a single one of them has been recorded as self-sown so far (the *European Garden Flora* says “since self-sown seedlings are quickly established, many garden specimens are of unknown hybrid origin”).

Betula davurica was in leaf on March 9 2007 before any other deciduous trees, and before *Magnolia stellata* began to flower. This was a very odd year, with daffodils and baby rabbits on 1 January 2007 and a very warm wet February.

B. aetnensis, *B. albosinensis*, *B. albosinensis* var. *septentrionalis*, *B. alleghaniensis*, *B. alnoides*, *B. apotensis*, *B. austrosinensis*, *B. borealis*, *B. x caerulea*, *B. calcicola*, *B. chichibuensis*, *B. chinensis*, *B. cordifolia*, *B. costata*, *B. davurica*, *B. delavayi*, *B. delavayi*, *B. ermanii*, *B. ermanii* ‘Grayswood Hill’,

B. ermanii ‘Hakkoda Orange’, *B. ‘Fetisowii*’, *B. fontinalis*, *B. forrestii*, *B. glandulifera*, *B. glandulosa*, *B. globispica*, *B. grossa*, *B. ‘Hergest*’, *B. humilis*, *B. insignis*, *B. kamtschatica*, *B. kenaica*, *B. lenta*, *B. litvinovii*, *B. luminifera*, *B. mandshurica* var. *japonica*, *B. maximowicziana*, *B. medwedewii*, *B. megrelica*, *B. michauxii*, *B. nigra*, *B. ovalifolia*, *B. papyrifera*, *B. papyrifera* var. *commutata*, *B. papyrifera* subsp. *humilis*, *B. papyrifera* var. *kenaica*, *B. pendula* ‘Fastigiata’, *B. pendula* ‘Laciniata’, *B. pendula* ‘Tristis’, *B. pendula* ‘Youngii’, *B. platyphylla*, *B. platyphylla* var. *japonica*, *B. populifolia*, *B. potaninii*, *B. pubescens* subsp. *celtibérica*, *B. pumila*, *B. raddeana*, *B. resinifera*, *B. schmidtii*, *B. szechuanica*, *B. tianschanica*, *B. x utahensis*, *B. utilis*, *B. utilis* ‘BL&M 100’, *B. utilis* ‘F19505’, *B. utilis* ‘Gregory Birch’, *B. utilis* var. *jacquemontii*, *B. utilis* var. *jacquemontii* ‘Doorenbos’, *B. utilis* var. *jacquemontii* ‘Grayswood Ghost’, *B. utilis* var. *jacquemontii* ‘Inverleith’, *B. utilis* var. *jacquemontii* ‘Jermyns’, *B. utilis* var. *jacquemontii* var. ‘Sauwala White’, *B. utilis* var. *jacquemontii* ‘Silver Shadow’, *B. utilis* ‘Knightshayes’, *B. utilis* var. *occidentalis*, *B. utilis* var. *prattii*, *B. utilis* ‘Ramdang River’, *B. utilis* ‘Schilling’, *B. utilis* ‘Silver Queen’

Alnus glutinosa (L.) Gaertn. *Alder*
Betula alnus L. var. *glutinosa* L.

mm 2

River-sides and damp woods, frequent by the banks of all the major rivers. “The Loddon slow with verdant alders crowned” wrote Alexander Pope (see p. 187). Locally dominant in valley bottoms in south Berkshire. Occasional in damp woods, by rivers and streams elsewhere. Absent from much of the chalk. The leaves are often heavily pimpled by pin galls (*Eriophyes laevis* on the upper leaf surface, and hairy spots of *E. brevitaris* on the underside) and excavated by leaf miners (*Stigmella glutinosae*, *S. alnetella*, *Agromyza alnibetulae*, *Heteranthus vagans* (blotch) and *Phyllonorycter* spp.). The Alder Aphid is *Pterocallis alni*.
NVC: M 24,36; S 25; W 1,4-6,8,10

Silwood Park: the dominant plant on swampy ground all around The Lake, and on the banks of both inflow streams and the outflow stream through Water Meadow and Nash’s Copse. The alder woodland around the lake has expanded dramatically since 1950; when Imperial College bought the property, the grasslands of Rush Meadow and Nursery Field came right down to the lake’s edge, and there was an unimpeded view of Pound Hill from the Outflow Weir across the lake. Scattered in the drier parts of the woodlands. The alder carr of Cascade Marsh is one of Silwood’s finest natural habitats. Saplings common in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	4	5	8	19

East Berks: widespread; locally dominant along streams and on flat wet ground on acid soils, and along the Thames, Loddon and Blackwater. Dominant in ferruginous swamps as at Longmoor Bog. 36% (1km²). Atlas 2000: all squares

West Berks: occasional throughout, except on the chalk (absent or rare north of 75 and south of 90). Locally dominant in places along the ‘stripling Thames’ above Oxford. Atlas 2000: all except [48]

Alnus incana (L.) Moench *Grey Alder*
Betula alnus L. var. *incana* L.

● mm 2 ↑

Much planted in land reclamation schemes and on re-covered tips. Occasional in hedgerows in the countryside, a long way from houses. An increasingly popular tree, but always planted.

Ascot: no records.

East Berks: planted by the side of Westacott Way [8479], the new road down to Maidenhead office Park, by Coppid Beech roundabout [8368]. Atlas 2000: [76], [77], [86], [88]

West Berks: first recorded from Cothill (**OXF**) [49] in 1928 and 1978, Kennington pits (**RNG**) [50] in 1977, Baynes Copse [56] in 1982, Turf Pits Covert [39] in 1983, Padworth College [66] in 1987, Turner Green [56] in 1988. Atlas 2000: [28], [39], [47], [49], [56], [50], [66]

Alnus cordata (Loisel.) Duby *Italian Alder*
Betula cordata Lois.

● mm 3 ↑

Silwood Park: four self-sown seedlings in gaps in concrete between greenhouses 8A and 9A at the Header House, about 100m from the most likely parent tree by the Fire Tank. The plants were probably two years old on 8 November 2008.

Ascot: commonly planted but no records of self-sown plants until 2008 (above).

East Berks: planted at Dinton Pastures in 1986. Rare in the hedge by the Loddon-side path across Whistley Park [7873] in 2002. 1% (1km²).

West Berks: at Didcot [59] in 1987. A long 1-sided avenue, planted along the road at Cholsey Stables [68] in 2000 and on the Wasing Estate [585633] in 2003.

¶ **Alnus** *A. cordata*, *A. firma* var. *sieboldiana*, *A. glutinosa* 'Aurea', *A. glutinosa* 'Imperialis', *A. incana* 'Laciniata', *A. maximowiczii*, *A. nepalensis*, *A. rhombifolia*, *A. rubra*, *A. x spaethii*

Carpinus betulus L. *Hornbeam*

mm 4

Woods, plantations, hedges, coppices. From 2005 onwards, the seed crop has often been destroyed by troops of Rose-ring Parakeets.

NVC: W 8,10,12

Silwood Park: much more frequent in our woodlands than in similar woods nearby, and regenerating profusely: Sunninghill Crossroads, Ashurst Warren, Ashurst, by London Road off Four Acre Field (170cm bhg in December 1979), Old Orchard, Rookery Slope, Cricket Wicket, Tennis Court, Drive Lawns, West Observatory Ridge, Japanese Garden, South Lodge Wood, Reactor block, Merten's Acres, The Heath, Science Park, East Lodge. It is likely that it was extensively planted in the past, but it is now frequently self-sown. The target of severe ring-barking attack by grey squirrels, the animals sometimes kill large, mature trees. Seedlings were abundant in the rabbit enclosure beneath *Cornus nuttallii* in 2004. The leaves are mined by *Stigmella microtheriella*, *S. floslactella* and *Phyllonorycter quinnata*. The cultivar 'Fastigiata' keeps its leaves much later than the species, often until December, as with the paired specimens on Ashurst Road and between CABI and the Centre for Population Biology.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	2	17

East Berks: widespread but uncommon. Conspicuous in Scarlett's Wood at Hare Hatch [8177]. 28% (1km²). Atlas 2000: all squares

West Berks: scattered in the Thames valley and in the east of the area (east of 50) but absent or rare elsewhere. There are monoculture plantations in several parts of Bagley Wood [5102]. Atlas 2000: all except [36]

¶ **Carpinus** *C. betulus* 'Fastigiata', *C. caroliniana*, *C. coreana*, *C. japonica*, *C. laxiflora*, *C. orientalis*, *C. tschonoskii*, *C. turczaninowii*

¶ **Ostrya** *O. carpinifolia*, *O. japonica*, *O. virginiana*

CORYLACEAE

Corylus avellana L. *Hazel*

m 1

Woods, coppices, hedges, etc. Abundant in the lanes and woods of the chalk. Oak woods, locally abundant; frequent in hedges in wooded districts. Commonest on nutrient-rich soils. The hazel nuts are attacked by the weevil *Curculio nucum* while the leaves are mined by *Phyllonorycter coryli*, *Coleophora* spp, *Stigmella microtheriella* and *S. floslactella*, and the leaf edge is folded by *Paronix avellanella*. Buds are galled by the mite *Eriophyes avellanae*. The aphid *Myzocallis coryli* is sometimes abundant, told from *Corylobium avellanae* by the latter's long siphunculi.

NVC: W 1,4,6,8,10,12,14,16,21,22,24

Silwood Park: never very abundant, except in Mann's Copse, where Hazel coppice with standards of *Quercus petraea* was planted in the clearing in 1986. The first of these Hazels were thinned out in 1995. Otherwise, only a few scattered individuals in Nash's Copse, Cannon Wood, The Rookery, etc.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	2	8	16	33

East Berks: occasional throughout, but rare on the acid sands in the south-east. 71% (1km²). Atlas 2000: all squares

West Berks: frequent in the Kennet valley and in the Northern Loop, occasional elsewhere. Often the most abundant woody plant, as in Rivar Copse [3562]. Atlas 2000: all squares

¶ **Corylus** *C. avellana* 'Aurea', *C. avellana* 'Contorta', *C. avellana* 'Cosford Cob', *C. avellana* 'Fuscorubra', *C. colurna*, *C. maxima* 'Purpurea'

PHYTOLACCACEAE

Phytolacca acinosa Roxb. *Indian Pokeweed*

• h 6

Phytolacca americana auct., non L.

Phytolacca decandra auct., non L.

Ascot: local and rare in the grounds of Sunningdale Park 1971; still there in 2002. Never grown in Silwood Park, and never recorded as a casual.

East Berks: not in Druce; St Leonard's (1963), Reading (**RDG**) in 1965, 1975 and 1982. Recently at Farley Court, Reading, Ascot Place. Atlas 2000: [76], [77], [97]

West Berks: a yard in Newbury [46] in 1971. Self sown in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [59]

AIZOACEAE

Tetragonia tetragonioides (Pall.) Kuntze *New Zealand Spinach* ● h 7

East Berks: occasionally grown as a garden vegetable; found as a throw-out at Woodley tip [7774] in 1971.

Delosperma cooperi (Hook. f.) L. Bol. ● h 7

Silwood Park: cultivated in considerable quantity in the open CABI Polytunnel in 2004 as part of a biocontrol screening programme.

CHENOPODIACEAE

Spinacia oleracea L. *Spinach* ● h 7

Commonly grown in gardens and on allotments throughout Berkshire. Running quickly to seed in dry years it is frequently self-sown. Over-recorded and often mistaken for *Beta vulgaris*. Popeye must have known that the iron for which spinach is famous is water-soluble and hence the cooking water needs to be reduced (e.g. with butter) and added back to the cooked leaves to obtain any benefit.

Chenopodium species are often hard to tell apart without microscopic inspection of the surface of the ripe seeds. Even then, determination may be difficult. The variation within the species is so great that recognition of hybrids from morphology alone is often impossible. An additional problem is that the plants flower so late in the year that they are often frosted before they have ripened their seeds, which renders them unidentifiable.

Chenopodium ambrosioides L. *Mexican-tea* ● th 7
Chenopodium anthelminticum sensu H. Coste, non L.
Teloxys ambrosioides (L.) W.A. Weber

A garden oddity (a bit like Quinoa) grown in the past as a vermifuge, but now cultivated for its pink tangles of flower stems.

East Berks: garden outcast in Reading in 1999.

Chenopodium botrys L. *Sticky Goosefoot* ● th 7 †

East Berks: a casual wool alien found at Bray by A. Hutton in 1861.

Chenopodium capitatum (L.) Ambrosi *Strawberry-blite* ● th 7 †
Blitum capitatum L.

West Berks: on waste ground by the railway at Didcot [59] in 1895, and Dry Sandford [40] in 1927.

Chenopodium bonus-henricus L. *Good-King-Henry* ○ hs 5 ↓

Rather frequent by waysides and waste places, especially near villages in Druce's time. Usually in very small quantity by Bowen's time. This is an intriguing case where a weedy species has shown a substantial decline. Now something of a rarity, it is confined to middens and other nutrient rich, warm soils close to buildings. Probably a victim of general rural tidying up, coupled with a discontinuation of its direct cultivation as a vegetable.

Silwood Park: very rare. A single plant on the Student's Allotments 10 July 2000. Probably a stray from seed sown as a vegetable. Not seen in 2001 or since.

Ascot: no other records.

East Berks: occasional in the arable belt, but rare to the north of this and absent from the south (south of 75). Wargrave, Sonning, Shurlock Row, Haws Hill. Waltham St Lawrence, White Waltham, Maidenhead, Cookham Moor, Bray. Recently at Shottesbrooke, Pitlands Farm and Holyport. <1% (1km²). Atlas 2000: [87]

West Berks: occasional in the Northern Loop and in the centre of the region, but absent from the northern clays and from the south-east. Extinct at many of its old locations. "Exceptionally common in and near all the villages and hamlets about Beedon" [47] pre-1897. Tilehurst [67] in 1956 and Wittenham and Radley [59] in 1987. Recent records from Faringdon and Little Coxwell [29], Britchcombe Farm and West Challow [38], Baulking, Pucketty Farm, Stratford-in-the-Vale and Grove [39]. In the grounds of The Priory at RAF Welford [4175] in June 2002. Atlas 2000: [29], [37], [38], [39], [47], [40], [59], [50], [66], [67]

Chenopodium glaucum L. *Oak-leaved Goosefoot* ● th 6 †

East Berks: not in Druce. Found by J.E. Lousley in a gravel yard by Ascot Place [915715] in 1933, and on waste ground at Redhatch Copse [745708] in 1979.

Chenopodium rubrum L. *Red Goosefoot* th 6

Cultivated fields, manure heaps, rubbish tips, pond sides, rich waste ground. Rather frequent. This is joint second commonest goosefoot (with *C. polyspermum*), but less than a tenth as common as *C. album*. It is readily distinguished by its dark glossy green leaves with their conspicuous forward-bending teeth.

Silwood Park: uncommon and sporadic, but persisting in the seed bank. Waste ground at Ashurst Orchard on 24 August 1983, uncommon on arable fallow in Silwood Bottom on 14 September 1994, The Tip in most years, beds by the Croquet Lawn in 1992, Drive Field on a soil heap 13 August 1989, Garrison Ridge on the bonfire site 26 September 1981. Not seen in Silwood since 1995. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: locally abundant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. With other ruderals in the derelict garden of the ruined Sunninghill Lodge on New Mile

Road on 29 August 2004. Uncommon on soil piles and bare ground during construction of Ascot Racecourse in August 2005.

East Berks: abundant on a large midden at Swallowfield [724643] on 2 August 2002. 7% (1km²). Atlas 2000: all except [78]

West Berks: occasional throughout the Thames valley, but scattered in the Kennet valley and rare or absent from the interior (north of 70 and south of 85). Atlas 2000: all except [47], [68], [69]

Chenopodium polyspermum L. *Many-seeded Goosefoot* ○ th 7 ↑

Cultivated fields, woodland rides, waste ground, hedges, borders of fields and rubbish tips; ruderal and always impermanent. Local, but sometimes occurring plentifully over a limited area. Absent from calcareous soils. Apparently much commoner now than formerly (see *C. rubrum*).

Silwood Park: sporadic but quite common from the seed bank on disturbed waste ground, but uncommon as an arable weed. Ashurst Warren, Silwood Bottom, Tennis Court, East Lodge, Cannon Wood, Reactor Bank on 30 August 1987 on soil excavated for the foundations of the Engineering Store, Drive Field on topsoil from construction of the Pollution Pad on 6 August 1989, The Tip in 1994, and on rubble from the demolished Cocoa Greenhouse on 20 June 1996. Locally abundant on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at The Cedars in September 2002. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Rare in cracks between the concrete pavement slabs on the Pollution Pad in Drive Field in July 2007. Frequent on bare soil on the failed replanting scheme in the centre of the main car park in the Science Park on 26 August 2008 (the year that the Science Park was bought back by the College for 11.7 million pounds). Common from the seed bank in trenches and earthworks around Silwood Farm on 26 July 2009 during the construction of the new house. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: very common on piles of stripped soil and imported topsoil used to landscape the edge of the tarmac road alongside the new Straight Mile from [926691] to [935692], and all around the construction site for the new Grandstand [920689] on 31 August 2005. Huge, carpet-like plants up to 2.5m diameter, on the remaining soil pile by the New Mile Road on 16 September 2006 after most of the new Racecourse work was landscaped.

East Berks: widespread and common. Frequent on a large midden at Swallowfield [724643] on 2 August 2002. 8% (1km²). Atlas 2000: all except [78]

West Berks: frequent throughout the Kennet valley and occasional along the length of the Thames, but absent from the whole of the interior (north of 75 and south of 95). Atlas 2000: all except [68], [69]

Chenopodium vulvaria L. *Stinking Goosefoot* th 7 †

Rubbish heaps, garden ground on rich soil; rare and sporadic.

West Berks: abundant on rubbish on Abingdon [49] racecourse in 1890 and from the town (**RNG**) in 1914. At Didcot [59] in 1897. Kennington tip [50] in 1955. No recent records.

Chenopodium hybridum L. *Maple-leaved Goosefoot* ○ th 8 ↓

Waste and garden ground, rubbish heaps, rare.

Silwood Park: rare casual. A single plant amongst *Urtica urens* at The Tip on 4 September 1994.

East Berks: Rare and sporadic; near Bray (1897), Reading (1831 and 1968), Woodley (1969), Smallmead tip (1971). More or less restricted to larger towns in the Thames valley. Atlas 2000: only the Silwood plant [96]

West Berks: nineteenth century records from near Botley [40], plentiful near Grandpont [50] in 1889, Abingdon [49], East Ilsley [48]. Recent records from Tadpole Bridge [30], Marcham [49] in 1962, Cunnor [40] in 1944, Appleton [40] in 1965, Botley bypass [40] in 1968, Long Wittenham [59] in 1976, Southcote Manor (**RDG**) in 1919, Pangbourne [67] in 1963. Atlas 2000: [39], [49], [40], [59]

Chenopodium urbicum L. *Upright Goosefoot* ○ th 8 ↓

Rubbish-heaps and manured arable land, very rare. Told by the fact that the plant is neither hairy nor mealy, has entire tepals, horizontal black seeds, and triangular or diamond-shaped toothed leaves.

Ascot: rare to the east of Ascot Heath [926697] on 1 September 2002, where a post-maize fallow had been spread with horse manure and wood shavings. Recorded by Druce from Sunninghill in 1897.

East Berks: Hurst Green (1897). Not seen by Bowen.

West Berks: by the railway near the Oxford gas works [50] in 1886, ballast heaps at Kings Mead by the mouth of the R. Kennet [77] in 1895. One recent record from arable land near Bradfield [589722] in 1988 (**RNG**).

Chenopodium murale L. *Nettle-leaved Goosefoot* ○ th 7 ↓

Waste and cultivated ground, river-sides, gardens and rubbish-heaps. Rare and sporadic.

East Berks: Near Bray (1897). Rubbish tips, Crowthorne (1948), Coley Park (**LAN**) in 1957, Sandhurst (1964), Smallmead tip and Whiteknights Park (1965), Clewer (1969). Abundant on a large midden at Swallowfield [724643] on 2 August 2002.

West Berks: nineteenth century records, plentiful at Grandpont [50] in 1888, Marcham Village [49] in 1896. Recent records from Sutton Courtenay [4892] in 1978 and Didcot [59] in 1980.

Chenopodium desiccatum A. Nelson *Slimleaf Goosefoot* ● th 8

Chenopodium pratericola Rydb.

Chenopodium leptophyllum (Nutt. ex Moq.) S. Watson

Very rare casual. Easy to identify with its small, unlobed, rather fleshy, lanceolate leaves.

East Berks: not in Druce. Reading in 1911 (**OXF**), and Reading in 1921 (**RDG**). A large, 8-stemmed plant, on 5 October 2003, with other aliens on open waste ground by a recently completed housing development in Bracknell [882689], after an unusually hot dry summer.

West Berks: Abingdon [49] in 1918

Chenopodium ficifolium Sm. *Fig-leaved Goosefoot* ○ th 7 ↓

Waste and cultivated ground, rare. In 1892 it was a very common weed in the Botanic Garden at Oxford and by the railway near Maidenhead. Arable fields, waste ground and rubbish tips, local.

Silwood Park: very rare casual. Many plants on a soil heap at Ashurst outside the greenhouses on 24 August 1983. Not seen since.

East Berks: Manor Farm Reading (**RDG**) in 1921, Binfield, Sandhurst, Windsor Great Park. Recent records include Woodley tip (1975), Smallmead tip (1988), Trilakes car park (1977), Coppid Beech (1987), Swallowfield (1988) and Whiteknights (1989). By the M4/A33 Interchange [709702] in August 1999. Frequent on a large midden at Swallowfield [724643] on 2 August 2002. Atlas 2000: all except [78], [88]

West Berks: nineteenth century records, by the railway at Didcot [59], on waste ground near Folly Bridge and at Grandpont [50], garden ground at Tilehurst [67]. Recent records include Wasing pits [5863] in 1987, Didcot tip [5392] in 1969 and Pingewood pits [6969] in 1986. Atlas 2000: [29], [39], [56], [57], [66]

Chenopodium berlandieri Moq. *Pitseed Goosefoot* ● th 7
Chenopodium zschackei Murr

East Berks: plants of this species (or hybrids with *C. album*; see Stace, 1997) are in **OXF** and **LAN** from Reading tip in 1962.

West Berks: Abingdon [49] in 1924. There are field records of hybrids with *C. album* by M.F. Watson in 1987 from Kingston Lisle [3287] and Crowmarsh Gifford [6287].

Chenopodium hircinum Schrad. *Foetid Goosefoot* ● th 7 †

West Berks: introduced with hides at Abingdon [49] in 1917 (**OXF**).

Chenopodium opulifolium Schrad. ex W.D.J. Koch and Ziz *Grey Goosefoot* ● th 8 ↓

Waste places, local and sporadic.

East Berks: On the railway ballast at Reading. Introduced, Reading tip (**LAN**) [7070] in 1962, Smallmead tip [7169] in 1971 and near Reading gasworks [727732] in 1979. Atlas 2000: no records.

West Berks: no recent sightings, but nineteenth century records from waste ground in Abingdon [59], by the railway at Didcot [59], Grandpont (**LIVU**) [50]. Atlas 2000: [40]

Chenopodium album L. *Fat-hen* th 7

Waysides, cornfields, garden ground, manure heaps, and disturbed ground. Abundant and generally distributed. Much the commonest goosefoot on arable, garden and waste ground. Leaves attacked by the blotch mine of *Chrysoesthia sexguttella* and flower heads often have cases of the moth *Coleophora clypeiferella*. A spring-germinating weed, seldom overwintering as a seedling, and hence commonest on late-spring or summer-cultivated plots.

Silwood Park: common in the seed bank in arable fields (Silwood Bottom, Pound Hill, Ashurst Four Acre Field) and waste ground (Header House, Greenhouses). The quad between East and West Blocks of the new Biology Buildings was a monoculture of Fat Hen before the grass seeds were sown in September 1989. Much commoner in the March- and May-cultivated plots than in the October-cultivated plots of the Pound Hill disturbance timing experiment. Frequent on 3 August 2005 when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought. Rare on imported topsoil at Ashurst Lysimeters on 10 July 2004 following soil-spreading in autumn 2003. Dominant in August on the late-May cultivated deer enclosure in Silwood Bottom after the very dry springs of 2005 and 2006. Highly variable in cover on the May-cultivated plots at Pound Hill on 17 September 2006: Block A 25%, Block B 20%, Block C 10% and Block D 35%. There was almost total failure of the Fat-hen crop at Pound Hill in 2007 after the very dry April then the very wet June. Very common on the June-cultivated plots at Pound Hill on 9 July 2009 after the rains finally came. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Proximo Experiment in 1990.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	4	15

Ascot: dominant over large areas of disturbed soil and abundant on soil piles on the construction site of Ascot Racecourse [9268] in August 2005, and all along the edge of the new tarmac road parallel with the Straight Mile [9269] and [9369].

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 39% (1km²). Atlas 2000: all squares

West Berks: occasional on a large midden at Swallowfield [724643] on 2 August 2002. Atlas 2000: all squares

Chenopodium probstii Aellen *Probst's Goosefoot* ● th 7

A wool, grain and bird-seed alien.

East Berks: by the river bridge next to the M4/A33 Interchange [709702] in August 1999.

West Berks: found on arable land at Bradfield [589722] in 1988 (RNG).

Chenopodium quinoa Willd. *Quinoa* ● th 7

A trendy vegetable that is also grown in and around spinneys as cover and fodder for pheasants. This was a staple crop in South America at the time of the Spanish conquest of the Andes, where its grains were used for making bread or porridge.

East Berks: Reading tip (1999).

West Berks: grown as food for game birds on Sheepdrove organic farm north of Lambourn [3482] in 2002-04.

Bassia scoparia (L.) Voss *Summer-cypress* ● th 6
Chenopodium scoparia L.
Kochia scoparia (L.) Schrader

Commonly grown as a central feature plant in municipal bedding schemes of summer annuals in the larger towns; also known as *Burning Bush* for the red colour it turns in late summer. Increasing rapidly since 2000 as a motorway-side species.

East Berks: collected by Druce from Reading Station [77] in 1906 (**OXF**). Rarely found as a garden throw-out on tips as at Maidenhead [88] in 1999. By 2005 it was scattered along the M4 from Bray to Reading. At the M4 junction 8/9 with the A404(M) [887785] by Alan Showler in October 2006. Locally abundant in September 2007 on the A404(M) Maidenhead Bypass [8779] & [8680] but not yet on the adjacent A308(M).

West Berks: occasional by the M4 Motorway west of Reading in October 2004.

Atriplex tatarica L ● th 7

East Berks: a casual wool alien recorded from Maidenhead [88] (Druce, undated) (**LIVU**).

Atriplex hortensis L. *Garden Orache* ● th 7

Rubbish tips and waste places, casual. Seldom grown these days as a spinach substitute, although it is hardier and easier to grow than *Spinacia oleracea*. The commonest garden plant is 'Rubra' grown as an ornamental for its pinky-purple foliage.

East Berks: by the railway near Maidenhead pre-1897. Reading (**RNG**) in 1931, Wargrave (1960), Whiteknights Park (1980). By the M4/A33 Interchange [709702] in August 1999.

West Berks: occurred as a casual on rubbish-heaps at Abingdon Racecourse [49] (1897). Cothill pit [49] in 1953, Sutton Courtenay [59] in 1980, Kennington tip (**OXF**) [50] in 1953.

Atriplex prostrata Boucher ex DC. *Spear-leaved Orache* th 7

Atriplex hastata sensu L.(1754), non L.(1753)

Atriplex calotheca auct., non (Rafn) Fries

Atriplex patula L. var. *triangularis* (Willd.) Thorne and Welsh

Waste ground, rubbish-heaps, garden ground, arable land, river banks, roadsides and disturbed ground; common. (split by Druce into *A. hastata* and *A. deltoidea*). The second commonest orache after *A. patula*. The two are told apart on the morphology of the bracteoles: they are fused only at the base (lower quarter) in *A. prostrata* and fused for one third or more of their length in *A. patula*. The basal leaves are truncate in *A. prostrata* and cuneate in *A. patula*. Leaves attacked by the corridor mine of *Chromatomyia horticola*.

NVC: MG 13; OV 7-10,13,19,21,22,25,28,33; S 4,18,28

Silwood Park: Cheapside, Ashurst, Four Acre Field, Tractor Sheds, Silwood Bottom, South Lodge, Buckhurst Road, East Lodge, Residences.

Ascot: occasional on soil piles and bare ground during construction of Ascot Racecourse in August 2005.

East Berks: Sonning, Shinfield, Maidenhead, Bray, Windsor. Now widespread. Frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 32% (1km²).

Atlas 2000: all squares

West Berks: distinctly uncommon on the chalk, and frequent only in the Thames valley. Absent from large areas of the interior (west of 55 and south of 95). The contrast with East Berks is as marked as for any species. There is a recent record from Theale [66] in 1983. Formerly in the saline meadow at Marcham [4596] (see p. 116), where a form occurred in which the leaves were very succulent, more covered with mealy clothing, and more prostrate in habit. Atlas 2000: all except [48]

Atriplex littoralis L. *Grass-leaved Orache* th 8

One of the less common members of the roadside salt-advective community. It grows with *Puccinellia distans* and *Spergularia marina*.

West Berks: discovered by John Killick at the Marcham Road Interchange on the A34 [4796] when there were about 20 plants, and by Susan Erskine, 4km further north on the sliproad at Sunningwell [508004], both in 2004.

Atriplex patula L. *Common Orache* th 8

Cultivated ground and waste places, common and generally distributed. Locally frequent except on very acid soils. Much the commonest of our oraches (see *A. prostrata*, above), but found in a narrower range of habitats, and more restricted to open disturbed ground. Very late flowering. NVC: OV 7-9,12,13,15,19,20,22,28,33; S 18

Silwood Park: more of an arable weed than *A. prostrata*. Pound Hill, Four Acre Field, Churchyard, Church Field, Cheapside, North Heronsbrook Meadow, East Lodge. Also in rabbit scrapes in grassland on Gunness's Hill. At Ashurst Lysimeters in August 2004 on topsoil imported in August 2003. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Occasional on soil piles and bare ground during construction of Ascot Racecourse in August 2005. Locally frequent in the car park at Ascot Station on 28 October 2009.

East Berks: first recorded at Sunninghill by Sir Joseph Banks in 1774. 14% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Axyris amaranthoides L. *Russian Pigweed* • th 7 †

West Berks: a casual grain alien from Abingdon (OXF) [49] in 1924 and Tilehurst (OXF) [67] in 1923

Beta vulgaris L. *Beet*

Beta vulgaris subsp. **maritima** (L.) Arcang. *Sea Beet* • h 7
Beta *maritima* L.

Very local and rare, but thoroughly naturalised where it occurs.

Silwood Park: naturalized within an area of about 400 m² around the Header House, with more than 200 plants in summer 2000. These are the self-sown offspring of potted Sea Beet plants that were

used by Sue Brown in hybridisation experiments involving sugar beet in 1992. Plants maintain a tenacious hold over cracks between paving stones and at the bases of walls. They hold their own in competition with *Urtica dioica*, *Epilobium hirsutum* and *Oenothera cambrica* on disturbed waste ground between the greenhouses. They spread into grassland as a result of soil disturbance associated with the new Jiff Greenhouses in August 2000. By the spring of 2004, all of the larger individuals had died of old age, and only a few seedlings had escaped the herbicides of the greenhouse technicians. There was one young plant in the gravel behind the CABI building in June 2004 but there were 10 vigorous seedlings here in August 2006. There was no sign of any perennating plants in winter 2007-08. The population had essentially disappeared from January to June 2008 when there were no mature plants, but seedlings were seen by the Header House and in front of the greenhouses on 25 June 2008. The perennial individual at the base of the electricity pole was repeatedly grazed flat to the ground by rabbits in summer 2008, and grazing might have been the principal cause of the crash in the Header House population after 2006. There were no large plants at all to be found in Silwood on 26 August 2008, the last few survivors having been killed by heavy and repeated rabbit grazing.

The population recovered from apparent extinction when solitary seedlings were found on concrete in three places behind Hamilton by the Greenhouses in April 2009. The plants were still very small by mid-May 2009, and 5 seedlings were recorded in gaps in Concrete at the back of the Hamilton Building outside the Header House Greenhouses in June 2009, and these were still small seedlings at the start of August 2009. By 1 September 2009 there were vigorous small rosettes in virtually all of the original cracks in the concrete around the Header House Greenhouses, and a few along the rear of the gravel strip at the rear of Hamilton Building, although none flowered in this, their first year from germination. None of these plants was close to flowering, but the population had made an almost complete recovery after apparent local extinction. Despite heavy grazing by deer and rabbits, the population came through the protracted snow cover of December 2009 and January 2010 in reasonable condition, and by February 2010, there were about 20 plants by the Header House and Hamilton Buildings. The recovery was confirmed on 1 May 2010 when there were more than 20 vigorous rosettes in several locations scattered around the Header House and on the shady, northern face of the Hamilton Building. On 10 June 2010, the recovery was complete, and plants were found as follows: 2 by Greenhouse 3A, 1 by Greenhouse 2B, 5 by Greenhouse 1, 5 by Greenhouse 4A, 2 to the north of the Header House, and 4 by the southern door to the Header House. However, there were no sea beet on the steps of the Prosamo Greenhouse (6B) in 2010. The population was extremely vigorous in late summer 2011, following a very cold winter and a very dry spring. One plant had recolonized the steps below the Prosamo greenhouse.

A common-garden collection of 16 native sea beet genotypes from all around the British coastline was grown for 2 years in 1993-94 at Ashurst Warren in order to look for evidence of introgression with sugar beet in east coast populations. None of these plants survives today, having been buried beneath matting mulch prior to the construction of the Railway Sleeper beds in 1995.

Ascot: no other records.

West Berks: no records.

Beta vulgaris subsp. **vulgaris** *Root Beet*

• th 7

Arable crops of sugar beet are uncommon in Berkshire, and old fashioned crops like mangold are all but extinct with us. Garden beets are of three main kinds: beetroot, chard and perpetual spinach beet. There are numerous beetroot cultivars including plants with white flesh like 'Albinia Verecunda'. Chard *Beta vulgaris* subsp. *cicla* (L.) Arcang. *Foliage Beet* (also known as seakale beet) is most commonly grown as Swiss chard (var. *flavescens*), but there are some ornamental cultivars including

the crimson-stalked 'Rhubarb Chard'. Perpetual spinach beet has shorter stems and is much less prone to bolting than chard. All these are found occasionally as outcasts on tips, especially those close to allotments.

Ascot: very rare on ruins during construction of Ascot Racecourse [660689] in August 2005.

East Berks: not in Druce. Arable fields (as mangold and sugar beet) and waste places in towns (mainly as beetroot). Reading Smallmead tip [7070] in 1969 and 1988 and Woodley tip [7774] in 1975. Common in abandoned allotments at Bulmershe [7573]. A massive individual, more than 2m tall, by the new traffic lights at the horse crossing of the main road at Ranger's Gate in Windsor Great Park on May 20 2002. On waste ground near Oxford Road in West Reading [7073] in July 2002. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 3% (1km²).

West Berks: Didcot tip [59] in 1969, Caldecot [47] in 1976 and Pingewood tip [66] in 1986. Common on old allotments in towns, as at Grandpont [50] and Botley [40] in 2002. Three massive plants, growing with *Papaver somniferum* cultivars on dumped soil in Chilton railway cutting [4985] on 12 June 2004

Beta trigyna Waldst. & Kit. *Caucasian Beet* ● th 7 †

West Berks: several plants of this showy species were seen in a clover field and on the railway embankment near Hermitage (OXF) [57] in 1891, and others by the side of the railway at Newbury [46] in 1891. Found at Lambourn [37] in 1918, Newbury (K) [46] from 1968 to 1977 (RDG) and on an island in the canal at Newbury [46] in 1986. Not seen since.

Salsola kali L. ● th 7 †

Salsola kali subsp. **ruthenica** (Iljin) Soo *Spineless Saltwort*

Salsola ruthenica Iljin

Salsola tragus auct., non L.

Salsola australis R. Br.

Salsola pestifer Nelson

East Berks: not in Druce. Reading tip (1953), Ascot in 1929 (OXF).

AMARANTHACEAE

These plants are difficult to identify, and comparison with properly named herbarium specimens in OXF, RNG or BM is recommended. You will need *fruiting* perianths to make a determination, and you need to know the difference between a tepal and a bracteole. These species tend to be found whenever and wherever someone capable of identifying them looks for them at the tight time of year (late summer) in the right kinds of places (tips and disturbed waste ground in towns).

Amaranthus blitoides S. Watson *Prostrate Pigweed* ● th 7 †

East Berks: on Reading tip [77] in 1960.

Amaranthus graecizans L. *Short-tepalled Pigweed* ● th 7 †

East Berks: on Reading tip [77] in 1961 (RNG).

Amaranthus thunbergii Moq. *Thunberg's Pigweed* • th 7 †

West Berks: found by Druce in Abingdon [49] in 1917 (**OXF**).

Amaranthus caudatus L. *Love-lies-bleeding* • th 7

Popular bedding plants, also found mass-planted in municipal schemes; common as an outcast, more rarely from seed.

Silwood Park: stray plants are found from time to time around the Greenhouses and the Residences.

East Berks: on Smallmead tip [7069] in 1965. In disturbed ground where topsoil (presumably from an old garden) had been used in landscaping at Braywoodside in 1998.

West Berks: on waste ground in Botley [40] in 2002.

Amaranthus gangeticus L. *Chinese Spinach* • th 7
Amaranthus tricolor L.

An uncommon garden plant grown as a vegetable (to be eaten like Good King Henry) or as an ornamental ground cover. Grown on the student's allotments in Silwood Park in 1991 but not persisting.

Amaranthus retroflexus L. *Common Amaranth* • th 7

The 5 tepals are rounded (but mucronate) and the green vein ends before the tip.

Silwood Park: a single plant, 2m tall, On 1 September 2009, in the former orchard of Silwood Lodge, in ground that was cultivated in May 2009 following renovation of the house as student accommodation, growing with a dense, 2m-tall stand of *Datura stramonium*. Almost certainly from seed originating from Vicky Taylor's massive bird feeder that was situated here from 1995-2008. This plant was finally cut down by the snow in early January 2010.

Ascot: no other records

East Berks: rubbish tips, Clewer (1918), Reading (**LAN**) in 1962, Winnersh (1959), Smallmead (RNG) in 1969. By the M4/A33 Interchange [709702] in August 1999.

West Berks: waste ground by the railway at Didcot [59] in 1895. Rubbish tips at Abingdon (**OXF**) [49] in 1916, and Pangbourne [67] in 1959. Recent records from Kingston Bagpuize [49] in 1981 and Bradfield [57] in 1988. With other annuals on freshly spread topsoil on the new industrial developments close to the railway in Colthrop [5366] in October 2004. Footpath near Brightwell-cum-Sotwell [585924] in July 2004 (Janet Welsh, det. JL Mason).

Amaranthus hybridus L. *Green Amaranth* th 7
Amaranthus hypochondriacus L. •
Amaranthus patulus Bertol.
Amaranthus powellii S. Watson

The 5 tepals are tapered to an acute apex, with the vein extending into the tip.

East Berks: not in Druce. Cookham Dean (1959).

West Berks: Abingdon [49] in 1917 (**OXF**) and Eastbury [349770] in 1984 (**RNG**). Footpath near Brightwell-cum-Sotwell [585924] in July 2004 (Janet Welsh, det. JL Mason).

Amaranthus bouchonii Thell. *Indehiscent Amaranth* ● th 7
Amaranthus hybridus subsp. *bouchonii* (Thell.) O. Bolòs and Vigo

Like *A. hybridus* but it has indehiscent fruits.

West Berks: found as a weed of cabbages north of Didcot by the footpath from the B44016 to White Lees Farm [5491] in 1998 (**OXF**). Not seen since 1999 when a few plants survived, growing with *Setaria pumila*.

Amaranthus cruentus L. *Purple Amaranth* ● th 7
Amaranthus hybridus L. subsp. *cruentus* (L.) Thell.
Amaranthus hybridus L. subsp. *incurvatus* (Timeroy ex Gren. & Godron) Brenan

East Berks: on the tip at Woodley [777745] in 1969 (**RNG**). By the M4/A33 Interchange [709702] in August 1999. On abandoned allotments between Reading West Junction and Cow Lane [702742] on 11 October 2003.

Amaranthus albus L. *White Pigweed* ● th 7 †

East Berks: in a garden at Woodley [7773] in 1935 (**RDG**).

Amaranthus blitum L. *Guernsey Pigweed* ● th 7 †
Amaranthus ascendens Lois.
Amaranthus lividus L.

East Berks: not in Druce. Reading tip (1960).

Celosia cristata L. *Cockscomb* ● h 7
Celosia argentea var. *cristata* (L.) Kuntze
Celosia plumosa hort.
Celosia spicata ‘Flamingo Feather’

Dense spikes of everlasting white, red, gold or purplish-white flower spikes. An uncommon bedding plant, usually grown as an annual, flowering late into the summer until cut down by frost. Stace is very rude about *Celosia*, which he says “is probably the world’s ugliest plant”.

Silwood Park: two individuals, one bright-golden yellow, the other bright crimson, on waste ground between the back of the Header House and CABI Quarantine greenhouse on 26 July 2006, growing with other unusual aliens like *Agrostemma githago*, *Eruca vesicaria* and *Centaurea cyanus* beneath nettles. Origin unknown.

Ascot: on waste ground near the race course in September 1999.

¶ **Celosia** C. ‘Flamingo Feather’

PORTULACACEAE

Portulaca oleracea L. *Common Purslane* ● th 5

Rarely grown as a vegetable, and yet to be recorded as a garden escape.

Silwood Park: by the Greenhouse pot-standing in 1984.

Claytonia perfoliata Donn ex Willd. *Springbeauty* ● th 5 ↑
Montia perfoliata (Donn ex Willd.) Howell

Plantations and gardens on well drained soils, locally frequent. Thrives in dry shade (e.g. on the bare ground under conifers) where other plants can not grow. Appears to have expanded its range between about 1900 and 1950. Uncommon as a salad and vegetable crop under its alternative name of *Miner's Lettuce* (from its use by miners during the California gold rush of the 1850s as a fresh vegetable to stave off scurvy). Now thoroughly naturalised, locally common in hedge bottoms and on waste ground.

Silwood Park: a locally common weed in shady flowerbeds by Drive Lawns from 1981 onwards. Below the shrubs planted around the Squash Court in 1980, still surviving in 2002 below the cypresses flanking the path by Hut 7, but down to two individuals by April 2013. On imported topsoil in the central bed of the Science Park and on Garden Wood Bank on 13 May 1990 but gone by 1993. Under *Rosa rugosa* on the Science Park road in May 1996, but now gone. In the churchyard at Ashurst on bare ground under the central cypress windbreak; still common in May 2010. Beneath the Wellingtonia trees opposite April Place. Locally frequent on 18 April 2013 on brick paving by the rear (SW) entrance to Unit A on the Science Park.

Ascot: common on Platform 1 of Ascot Station, beneath the railings growing with *Erophila verna* and flowering on 9 March 2002. Frequent again here in April 2013, after a gap of many years. In gravel at the base of brick walls on modern estates in Sunninghill. By Charters Road, Sunningdale. Locally dominant in dry soil under Scots Pine trees in South Ascot churchyard.

East Berks: Wellington College (1918), Woodley (1935), Sunninghill Park (1944), Crowthorne (1947), Wokingham (1956), Reading (1956), Windsor (1966), Shinfield and Jealott's Hill (1973), Titness Park (1974), and in 1998 at Swallowfield Great Wood, Bearwood, Simon's Wood, Blackwater, Wellington College, Easthampstead, frequent in Bracknell, Foliejon, Forest Lodge, Royal Military Academy Sandhurst, Frogmore. At Finchampstead church under *Picea orientalis* (2002). 3% (1km²). Atlas 2000: all squares.

West Berks: Miss M. Niven found it outside a garden near Faringdon in 1896. Most frequent in the Northern Loop and in the south-east of the area: Little Coxwell [29], Buckland [39], Beedon Common [47] in 1978, frequent at Frilford [49] in 1949 and still abundant under pines on the golf course in 2004, Boars Hill [40] in 1926, Bessels Leigh [40] in 1961, Dry Sandford churchyard [40] in 1990, abundant in partial shade at Tubney Quarry [4400] in 2004, AWRE Aldermaston [56] in 1986, Cold Ash [56] in 1972, Bucklebury [57] in 1985, Tilehurst [67] in 1956. Now locally frequent throughout. Atlas 2000: all squares.

Claytonia sibirica L. *Pink Purslane* ● h 4
Claytonia alsinoides Sims

Montia sibirica (L.) Howell

Plantations and gardens on acid soils. Uncommon and very local. Perhaps the climate is too dry in Berkshire, because this species is much less thoroughly naturalised than it is in northern England, where it can be locally abundant in moist shade in woodlands and on stream banks.

East Berks: Not in Druce. First recorded from Reading (1952), Cookham (1971). Never recorded from the Ascot district. <1% (1km²). Atlas 2000: [77], [88]

West Berks: Longworth [39] from 1964 to 1978, Peasmore [47] in 2001, Wytham Wood [40] in 1980, Crookham Common [56] in 1966, Yattendon [57] in 1985, Burghfield [66] in 1980. Little Coxwell [29] in 2000. Occasional in the garden at Englefield [6271] in 2001, whence it has been taken to other Berkshire gardens. Abundantly naturalized in the grounds of the Old Rectory at Burghfield [6668] 1980-2004. Atlas 2000: [29], [39], [47], [40], [56], [57], [66]

Montia fontana L. *Blinks*

hel 4

Wet places on heathy ground, seasonally damp hollows, and damp lawns on acid sands. Locally common. Much scarcer in the north and central parts of the county. Common and generally distributed on the damper heathlands of the south and west. Damp flushes in oak and alder woods, and marshes on acid soils. Local but decreasing in south Berkshire, very local in north Berkshire.

The two subspecies are distinguished by their seeds; subsp. *chondrosperma* has jet black seeds with broad, rounded tubercles all over their faces as well as their margins, while subsp. *amporitana* has shiny seeds which are smooth near the centre of their faces. Both subspecies have the whole surface of the seed partitioned into polygons, so the smoothness of subsp. *amporitana* does *not* mean a lack of polygons in the centre of the face of the seed.

Montia fontana subsp. **chondrosperma** (Fenzl) Walters

M. fontana subsp. minor W.R. Hayw. nom. illeg.

This is the common subspecies in Berkshire.

Silwood Park: abundant in patches in the Croquet Lawn next to the larger of the two cedar trees from 1980 to 2000, flowering in April (it survived the destruction and remaking of the lawn in summer 1983). On gravel paths around the Manor House with *Poa annua* and *Erophila verna*. In the lawns facing the Lily Pond below Phase One on the BSBI visit of 13 May 1990. Frequent on damp pebbles at the base of the tiny beech tree outside CPB on 20 April 2004 with *Myosotis discolor*.

East Berks: absent from the arable land in the centre of the area, but frequent on the acid sands in the south with a scattering of older records along the Thames valley in the north. Park Place, Spencer's Wood Common, Long Moor, Stubbings Heath, Windsor Great Park, Bracknell, Easthampstead, Finchampstead, Bearwood, Earley, common in the extensive lawns and gravel paths at the Royal Military Academy Sandhurst, Warren Row. 3% (1km²).

West Berks: absent from most of the area, but occasional in the south-east, with a scattering of older records from the Northern Loop of the Thames. Inkpen [36], Wickham Heath [37], Greenham Common [46], Snelsmore Common [47], Frilford [49], Wytham [40], Tubney [40], Bucklebury Common, Cold Ash Common and Aldermaston [56], Hamstead Marshall, Hawkrigde and Frilsham [57], Bagley Wood [50], Mortimer [66], Bradfield [67]. Susan Erskine found the plant in ruts where clearing work had been done to create a country park at Folly Hill in Faringdon [294948] in 2004.

Montia fontana subsp. **amporitana** Sennen
M. fontana subsp. *intermedia* (Beeby) Walters

Druce regarded this as a larger plant (his var. *major*), and much rarer in Berkshire.

East Berks: Windsor Great Park, Silwood Park (I do not know this record, and I suspect an error).

West Berks: Greenham Common [46], Cold Ash [56], Bucklebury [57].

¶ **Lewisia** *L. cotyledon* Ashwood strain, *L. nevadensis*, *L. tweedyi*

CARYOPHYLLACEAE

Arenaria serpyllifolia L. th 4

Both subspecies *serpyllifolia* and *leptoclados* are recorded throughout our area. They are distinguished by their size (*serpyllifolia* is robust with a dense inflorescence, while *leptoclados* is slender with a diffuse inflorescence at fruiting time), by their seeds (> 0.5mm and < 0.5mm respectively) and by their capsules (> 3mm long or < 3mm, respectively).

Arenaria serpyllifolia subsp. **serpyllifolia** *Thyme-leaved Sandwort* th 4
Arenaria lloydii Jordan

A weed of dry arable fields, sandy heaths, bare places on chalk, walls and cinder tracks, occasional. Freed from competition, the plants can become enormous, as in set-aside land.
 NVC: OV 3,20,39,41,42

Silwood Park: bare ground on North Gravel in April 1984, but the site now built over. Open grassland in Nursery Field in 1999.

East Berks: 4% (1km²). Atlas 2000: [77], [88], [96], [97], [98]

West Berks: Atlas 2000: all squares

Arenaria serpyllifolia subsp. **leptoclados** (Rchb.) Nyman *Slender Sandwort* th 4
Arenaria leptoclados (Reichb.) Guss. subsp. *viscidula* (Rouy and Fouc.) Holub

Wall tops, railway ballast and other hard substrates, and on bare sand in sunny locations. Commoner on walls in towns and villages than in countryside or away from buildings.
 NVC: OV 3,16

Silwood Park: dry sandy arable fields at Pound Hill; commonest in the October-cultivated plot in the disturbance timing experiment. In dry sandy soil on a sunny bank above Farm Road in June 2000-04, and on wall tops in Cheapside Village in 1999-2007. On imported topsoil at Ashurst Lysimeters on 10 July 2004. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

East Berks: Shinfield (RNG), Hurst, on the old Bishop's Palace walls at Sonning, Ruscombe, Wokingham, Bisham, on sunny, compacted chalk in Bisham Wood, Cookham, Ascot, Finchampstead, and on the brickwork of the railway arches in Windsor. 2% (1km²). Atlas 2000: [77], [86], [87], [96], [97]

West Berks: scattered along the Thames Valley, frequent in the Northern Loop, with a few stations along the Kennet. Buscot and Faringdon [29], Hungerford and Kintbury [36], Shefford and Lambourn [37], Charney Bassett [39], old brick walls of Hamstead Park and Newbury [46], Beedon and RAF Welford [47], Marcham, Garford, Kingston Bagpuize, Frilford Heath, Gozzards Ford Fen, Hitchcopse pit [453997], Dry Sandford pit [465996], Tubney and on ancient walls in Abingdon [49], Wytham, Appleton, Wootton, on the ruined walls of Godstow Nunnery and Sunningwell [40], Aldermaston (RNG) [56], Yattendon, Hermitage, Hampstead Norreys and Frilsham [57], Aston Upthorpe [58], Didcot [59], Hinksey [50], on the Roman walls at Silchester, Mortimer and Sulhamstead [66], Tilehurst (LAN) and Pangbourne [67]. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003, where it was one of the commonest plant species. Atlas 2000: all except [46]

Arenaria balearica L. *Mossy Sandwort* ● chh 6

A naturalised garden plant found in damp places on paths and walls. Known from *A. serpyllifolia* by its procumbent habit and its petals longer than sepals.

West Berks: on an old wall in Aston Tirrold (OXF) [5586] from 1976-1980, and in a conifer plantation in Benham Park [4467] in 1987.

[**Arenaria montana** L. *Mountain Sandwort*] ● chh 6

A garden plant that may become naturalised (e.g. it grows amongst bracken on Guernsey).

Moehringia trinervia (L.) Clairv. *Three-nerved Sandwort* th 5
Arenaria trinervia L.

Dry woods and shady hedgerows, thickets, etc. Generally distributed, occasional or locally frequent. NVC: W 8,14,21,22

Silwood Park: occasional on dry bare soil in shady woods and thickets. Hell Wood, Gravel Pit Wood, Pound Hill Wood, Farm Wood, beneath nettles near The Farm, Ashurst Church, below the big sycamore tree on Elm Slope, beneath trees on the earthen dam of Silwood Lake, and in muddy bare ground in a shady part of Church Lane footpath below Hell Hill (it will be interesting to see if this population survives the path resurfacing work that was carried out in November 2001). Rare in the verge opposite the Old Vicarage (now Fairwinds) at Ashurst on 10 May 2002, and Sunninghill Crossroads roundabout on 30 May 2003. Beneath shrubberies in Cheapside. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	5

East Berks: widespread in woodland, but never common. 25% (1km²). Atlas 2000: all squares

West Berks: common in ancient woodland. Widespread except for a small area of open downland around Streatley and Aston Upthorpe. Atlas 2000: all squares

Minuartia hybrida (Vill.) Schischk. *Fine-leaved Sandwort*

th 5 ↓

Minuartia hybrida subsp. **tenuifolia** (L.) Kerguelen

Arenaria tenuifolia L.

Minuartia tenuifolia (L.) Hiern, non Nees ex C. Martius

Arenaria hybrida Villars

Dry sunny places in chalk grassland, on stony ground, open heathland, cinder tracks, and limestone wall tops; very local and sporadic. Easy to recognise with its 3 stigmas and the absence of non-flowering shoots.

East Berks: local and rare on walls near Ruscombe (pre-1897), Hurst (**RNG**) in 1900, Whiteknights Park in Reading (**RDG**) in 1933. Probably extinct, except perhaps still in Reading. Atlas 2000: no records.

West Berks: Buckland [39] and Pusey pit [3596], Cothill on the village walls [4699], the Dog House Inn at Frilford [448986], Hermitage [57], Churn, Fair Mile and Moulsoford [58], Radley Station [59], Basildon church [67]. Recently recorded from short heathy turf next to the southern runway on Greenham Common [506644] (1999-2004) and colonizing bare gravel where the former runway was removed [495647] in May 2004. Atlas 2000: [46], [57], [58]

Stellaria media (L.) Vill. *Common Chickweed*

th 1

Alsine media L.

Arable land and disturbed ground, on woodland rides, gaps in grassland swards, open heathland, wet grasslands, open swamps, etc. Frequent and abundant except on very acid soils. Druce thought that this species and *Poa annua* were our commonest plants, flowering all year. In fact, it is the sixty-ninth most frequent species in Silwood and *Poa annua* is our thirty-third. I suppose that he meant "most often seen in flower, year round". But it just shows how unreliable casual impressions can be as estimates of relative abundance.

NVC: M 28; MG 7; OV 1,3,4,7-10,13-16,18-24,28,29,33; S 23; U 1; W 6,10,14,21,22

Silwood Park: on waste and cultivated ground, paths, roofs, and flower beds but seldom abundant. On mole hills and in rabbit scrapes in otherwise dense grassland.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	3	8	16	40

Ascot: abundant over large areas of disturbed soil and abundant on soil piles on the construction site of Ascot Racecourse [9268] in August 2005, and all along the edge of the new tarmac road parallel with the Straight Mile [9269] and [9369].

East Berks: 71% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Stellaria pallida (Dumort.) Crép. *Lesser Chickweed*

th 3 ↓

Alsine pallida Dumort.

Stellaria apetala auct., non *Ucria* ex Roemer

Stellaria boraeana Jordan

Bare, sandy disturbed ground, and on dry stone walls. “A small apetalous form which usually has much yellower foliage than *S. media* occurs at Sonning, Earley and Cookham” (Druce, as *S. media* var *boraeana*). All the old records in Druce were considered doubtful by Bowen. Told from *S. media* by stamens 1-3 (not 3-8) and sepals < 3mm. Petals are usually absent and the seeds are less than 0.8mm. You need to search for this plant in March or April to stand any chance of being able to identify it.

Silwood Park: tiny plants, compressed by trampling in gaps in the concrete, outside the Jiff Greenhouses on 16 June 2009. The sepals were less than 3mm but all the plants had petals (about 1.5mm) and 2 anthers.

East Berks: Woodley sewage tip [7570] in 1960 and Coleman’s Moor [777731] in 1963. Near Reading Station on 14 April 2010 where Fred Rumsey found the plant growing on an open grassy bank with *Poa infirma* at the junction of Kings Meadow Road and Napier Road, opposite the BMW dealership.

West Berks: there are no herbarium specimens to confirm Druce’s nineteenth century records from Shrivenham [28], Hungerford [36], Abingdon [49], Wytham [40], Blewbury and Streatley [58]. Collected by Tony Mundell and Pete Selby at AWRE Aldermaston [5963] on 2 May 2003 (herb. A.R.G. Mundell). Susan Erskine and Frances Watkins found 10 plants on the practice ground at Frilford Heath Golf Club [447986] and one plant at Bothy Vineyard (Frilford Heath) [451988] on 12 April 2006 (det. Peter Benoit).

Stellaria neglecta Weihe *Greater Chickweed*

h 4 ↓

Stellaria umbrosa auct., non Opiz and Rupr., nom. nud.

Alsine neglecta (Weihe) Á. Love and D. Löve

Shady hedge-banks on sandy soil, damp wood margins, river banks on sandy soil, in small quantity. Local and decreasing. Told from *S. media* (which also has hairs in 2 lines down each internode) by the larger sepals (5-6.5mm, not 2.7-5.2mm) and more numerous stamens (8 or more, not 3-5 or rarely up to 8).

NVC: MG 13

East Berks: very local, in a 10km strip between the R. Loddon and the R. Blackwater (east of 70 and west of 80) centred on Arborfield (**OXF**) [7567]. Leighton Park (1962), Emmbrook (1967), Jouldern’s Ford [7463] (1918), Sandhurst (1899), Cookham (1918), Shinfield (1965 and 1974), in a copse near Loddon Bridge (**OXF**) in 1918, and by the Loddon at Woodley [766713] in 1984. By the R. Blackwater below Farley Hill [7463] in 2001.

West Berks: only 3 records from a shady hedge-bank near Aldermaston [56] pre-1897, a damp open wood at Aldermaston Mill (**LAN**) [5966] in 1961, and Turf Pits Covert [39] in 1979. In the Enborne Valley below Greenham Common [4862] and below Hyde End [5563], and by the Foundry Brook below Stratfield Mortimer [6663] in 2002.

Stellaria holostea L. *Greater Stitchwort*

chh 4

Dry oak woods and dry hedge-banks, wood borders, spinneys, copses and roadsides; common and generally distributed. “A great adornment of our hedgerows in spring” (Druce).

NVC: MG 1; W 8,10,21,24,25

Silwood Park: locally frequent at the edge of Nash's Copse beneath birch, on the eastern edge of the Outflow Stream through Water Meadow beneath alder, beside Church Lane footpath adjacent to Nash's Field, at the Kissing Gate, by grassy paths on drier ground near Cascade Bridge, Cheapside Village, Gunness's Thicket, Hill Field, in open grass on the northern edge of Heronsbrook Meadow.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	5	8

East Berks: a plant with lacinate petals was noticed between Finchampstead and Arborfield. 51% (1km²). Atlas 2000: all squares

West Berks: especially common on the margins of woods on the chalk. Locally frequent, but absent from the northern clays in a 15km band between 85 and 00 (The Vale of the White Horse). Atlas 2000: all except [68], [69]

Stellaria palustris Retz. *Marsh Stitchwort*

hel 5 ↓

Stellaria dilleniana Moench, non Leers

Stellaria glauca With.

A local speciality of bogs, marshes, wet ditches and meadows, "preferring the company of other herbage" (Druce). Fens and damp, nutrient-rich pastures; frequent by the Thames. Now a distinct rarity as a result of agricultural "improvements" of water meadows. Like *S. graminea* but lacking that species ciliate bracts and outer sepals. The field jizz is easy, because *S. palustris* is a pale, greyish plant rather than a bright, lime-green one.

NVC: M 24; S 24

East Berks: moist meadows by Eton (1805, but probably in Buckinghamshire, v.c.24), ditches by the Thames at Bisham, Medmenham and Cookham, near Wellington College, meadows about Wargrave, Sonning, Coleman's Moor, Finchampstead (**RNG**) in 1922, Great Lea Pond (**RNG**) [7168] in 1957. Near Loddon Bridge, Whitley (**LAN**) in 1956, New Bridge on the Blackwater, near Ruscombe. Eversley [760631] in 1968, Sonning [765767] in 1995, Arborfield, Remenham, Cock Marsh [881867] in 1992, with *Oenanthe fistulosa*, just to the west of Pond 1 at Cock Marsh [880868] in 2000-04.

West Berks: Cothill fen [49], Newbridge, Swinford Bridge and Wytham meadows [40], Thrupp Farm and Radley [59], Abingdon [49], Sandford Lock and Iffley [50], Cholsey and Moulsoford [58], Kintbury [36], Newbury [46], Thatcham [56], Basildon and Burghfield [67]. Extinct in Kennet valley [36] to [56] according to Bowen.

Stellaria graminea L. *Lesser Stitchwort*

h 5

Pastures, heaths on sandy or gravelly soil. Woodland rides, hedge-banks and grassland on well drained soils. One of the commonest wildflowers of open places on acid soils. It is attacked by the same *Microbotryum violaceum* anther smut fungus as *Silene latifolia*.

NVC: M 23,27; MG 1; U 1; W 21

Silwood Park: the commonest herb of rabbit-grazed grassland; no other herb species occurs with greater frequency in 1m² quadrats (although *Senecio jacobaea* comes close). In the wet summer of 2002 it continued to flower abundantly right through September. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
29	36	52	44	68

Ascot: locally frequent in the sunny parts of Sunningwell Bog below St George's School [929684].

East Berks: 46% (1km²). Atlas 2000: all squares

West Berks: widespread north of 90 and south of 85, but rare or absent on the northern clays in the Vale of the White Horse. Atlas 2000: all except [68] and [69] but probably there for the finding.

Stellaria uliginosa Murray *Bog Stitchwort*

hel 5

Stellaria alsine Grimm, nom. inval.

Wet places, especially on peaty soil. Found in moister and shadier places than *S. graminea*. Damp woodland rides, marshes and damp pastures. Another host to anther smut, *Microbotryum violaceum*.

NVC: M 27; MG 10,13; OV 30; S 7,15,23

Silwood Park: very local, but common where it occurs in wet grassland and wet woodland. In the wet woodland below Mann's Copse. Guinness's Thicket (especially inside the rabbit fences in June 1995 that were erected following forest clearance in February 1995), on the margins of The Lake, in the wetter parts of Rush Meadow, especially inside the rabbit fences, on wet mud in shade on Church Lane footpath. In the damp grass between The Farm and The Lake in April 2003, in deep water-filled ruts made when the tractor got stuck during an attempt to cut the grass in 2001. From the seed bank on the rubble pile by the Kissing Gate in June 2002. By the ferruginous flush at the bottom of Farm Wood in 2007. Locally common in the damp back lawn at Silwood Farm on 16 May 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	4

East Berks: recent records from Farley Court, Dinton Pastures, Moor Green, Sandhurst, Wishmoor Bottom, Bracknell forests, Lily Hill, Rapley Lakes, Swinley, Martins Heron, Great Hazes, Fernygrove Copse, Englemere, Coronation Road, Johnson's Pond, Breakheart Hill, Brookside, Holliday Plain, Sunninghill, Cranbourne, Leiper Hill, Hiltons Covert, Stag Meadow, Spring Hill, all of which are wet places to be cherished. 8% (1km²). Atlas 2000: all squares

West Berks: widespread in the Kennet valley (south of 75) but rare to the north of this, and absent from the chalk and the northern clays. Frilford [49], Wytham and Appleton [40], Bagley Wood [50]. Atlas 2000: all except [39], [48], [68], [69]

Cerastium arvense L. *Field Mouse-ear*

chh 5

Short grassland, dry exposed sunny places, sandy and calcareous fields, banks, heaths, railway banks and roadsides; local on both acid and basic soils.

NVC: U 1

Silwood Park: one of our great rarities as a native plant. Gravel Pit, in the south-west corner. Benefited indirectly from the great drought of 1995 by competitor release in the spring of 1996 while the perennial grasses were still depleted. The site is now protected by rabbit fencing (erected 1997) and mowed every 1 or 2 years to prevent encroachment by gorse and broom. Flower numbers fluctuate substantially from year to year (e.g. from a high of 99 in 1993 to only 6 flowering stems in May 2002 by fence post number 5, and just 5 stems in 2003). Very early into flower in 2004 (five plants by fence post 5 on 20 April). A new patch of 30 flowering stems discovered on the opposite (eastern) side of the rabbit enclosure on 26 May 2004. After the deer fence was erected in May 2006 there was 1 plant by post 5 and just 9 on the eastern side following a very dry winter. On 15 May 2008 there were no plants in the original location (build up of thatch and bryophytes probably responsible), but there were 7 flowering plants in the newer patch between posts 4 and 5 on the eastern side. On 19 May 2009 there were 5 flowering stems in the new patch (now about 1m in diameter) and just one flowering stem on the original site.

East Berks: Wellington College (RNG), Finchampstead, Wargrave, Bracknell. Reading, Wargrave chalkpit, Broadmoor (RNG) in 1920, Englemere Pond. <1% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: commonest on chalk downland. Farncombe Down [27], Kingston Down [28], Faringdon [29], Inkpen [36], Cleeve Hill [37], Crog Hill and Hackpen Hill [38], Buckland [39], north of Greenham Common [46], Beedon [47], Chilton [48], Marcham and locally abundant at Frilford Heath golf course [49], Appleton and Hurst Hill [40], Thatcham [56], Aldworth Downs, Grims Dyke and Hermitage [57], Aston Upthorpe Downs, Compton Downs, Blewbury and Unhill Bottom [58], Radley and Barrow Hills [59], by the railway at Pangbourne [67]. Atlas 2000: all except [46], [50], [66], [68], [69]

Cerastium tomentosum L. *Snow-in-summer*

● chh 5 ↑

Cerastium columnae Ten.

Cerastium biebersteinii auct., non DC.

A widespread plant of rockeries and garden walls, often escaping and frequently persisting for long periods as a garden outcast on roadsides, hedge bottoms, waste ground and limestone walls. Rampant, and often thrown out. Capable of persisting for several years, even in competition with grasses (unlike many other rockery plants such as *Aubrietia* or *Alyssum*).

Silwood Park: locally abundant on rocks and in grass at Ashurst, Japanese Garden, Manor House.

East Berks: not in Druce. Widespread in villages and towns throughout. 40% (1km²). Atlas 2000: all squares

West Berks: common in the Thames valley centred on Abingdon, but absent or rare in the Kennet valley. Atlas 2000: all except [69]

Cerastium fontanum Baumg. *Common Mouse-ear*

chh 4

Cerastium vulgatum sensu L.(1759), non L.(1755)

Cerastium holosteoides Fries

Grasslands, meadows, river-banks, pastures, waste ground, stone walls, grassy chalk downs, woodland rides, and heaths. Common and generally distributed from the banks of the Thames to the highest ground.

NVC: CG 2-5; M 22,24; MG 1,4-7,9,10; OV 4,6,9,10,12,15,19,21-28,41,42; U 1; W 23,34

Silwood Park: frequent in grassland, arable and waste ground. Rare in shade. One of our commonest herbs, and the tenth most frequent species in 1m² quadrats.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
12	20	33	53	74

East Berks: 87% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

The distributions of the 2 subspecies within Berkshire has not yet been worked out.

Cerastium fontanum* subsp. *vulgare (Hartm.) Greuter and Burdet

Cerastium vulgare Hartman

Cerastium fontanum Baumg. subsp. *triviale* (Spencer) Jalas

A plant of drier places. The lower stem internodes are hairy all round (rather than hairless or with hairs in 2 lines as in subsp. *holosteoides*). This is the common subspecies with us.

Silwood Park: on the old parade ground of South Gravel in 1981. In all kinds of dry grasslands and disturbed places.

East Berks: frequent throughout.

West Berks: frequent throughout.

Cerastium fontanum* subsp. *holosteoides (Fr.) Salman, Ommerring and de Voogd

Cerastium holosteoides Fries

Cerastium fontanum Baumg. var. *holosteoides* (Fries) Jalas

Cerastium holosteoides Fries var. *glabrescens* (G. Meyer) N. Hylander

Cerastium fontanum Baumg. subsp. *glabrescens* (G. Meyer) Salman, van Ommerring and de Voogd

A plant of wet places. The lower stem internodes are hairless or with hairs in 2 lines (rather than hairy all round as in subsp. *vulgare*). A local and uncommon plant in Berkshire.

Silwood Park: no records.

East Berks: meadows by the Blackwater River.

West Berks: sparingly in the Kennett valley.

Cerastium glomeratum Thuill. *Sticky Mouse-ear*

Cerastium viscosum L.

Dry, open grassland, arable fields, gardens, disturbed ground, walls, waste places, fields, heaths, and grassy places in woods. Common and generally distributed, but rare on the chalk.

NVC: MG 7; OV 4,22,23

Silwood Park: one of our commonest ruderal species in disturbed places in sun. Abundantly self-sown on the gravel beds at Ashurst Warren. Planted as one of the 7 species in the Ashurst raised beds experiment, sown in September 2002. On Royal Wedding Day 29 April 2011 the plant was locally abundant on the autumn-cultivated part of Ashurst Four Acre Field, in a year when the *Raphanus* was almost absent following a very dry March.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	29	29

East Berks: common throughout 78% (1km²). var *apetalum* occurs at Ascot and Windsor Great Park. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: frequent in the north, occasional in the south, but absent or rare on the central chalk. Atlas 2000: all squares

Cerastium diffusum Pers. *Sea Mouse-ear*

th 5

Cerastium tetrandrum Curtis, nom. illegit.

Cerastium atrovirens Bab.

Cerastium subtetrandrum sensu Druce, non (Lange) Murb.

Told by its completely herbaceous bracts (lacking scarious tips) and 4 (not 5) petals and stamens.

East Berks: a rare colonist, on railway tracks at Bracknell in 1895 (OXF).

West Berks: at Didcot Station [5290] near the eastern end of Platform 5 from 1993-95. On compacted ground at AWRE Aldermaston [5963] in May 2003 (herb. A.R.G. Mundell).

Cerastium pumilum Curtis *Dwarf Mouse-ear*

th 4 ↓

A local, early-flowering speciality of sunny, bare places in calcareous grassland. Very local and rare. Druce had no records of this plant. Told from *C. semidecandrum* by its relatively long petals (about as long as the sepals rather than distinctly shorter than them), and by the upper bracts which have much less “tissue-paper” about them (scarious for the apical quarter or less, rather than for the apical third or more).

NVC: CG 2

East Berks: no records.

West Berks: very local and rare; all but one of the records confined to [58]. On bare calcareous ground at Wytham pit [40] in 1967, between Streatley and Lowbury [58] in 1935, Blewbury Downs (OXF) [58] in 1883, Ilsley Downs (OXF) [58] in 1920 and Churn [58] in 1930. Atlas 2000: [40]

Cerastium semidecandrum L. *Little Mouse-ear*

th 4

Walls, heaths, dry grassland on acid or calcareous soils, dry arable fields and disturbed ground. Absent from clay soils. Local, but under-recorded. The key feature relates to the uppermost bracts, the upper third (or more) of which is membranous. The plant has 5 (not 4) stamens, and 10 (not 8) capsule teeth.

NVC: OV 42

Silwood Park: Pound Hill Field, on disturbed soil next to the Atmospheric Physics building below the Met Tower; discovered on the BSBI visit of 13 May 1990. Manor House, in lawn-edges and on cinder path sides. Especially common on 21 April 1996 after the drought of 1995. Farm Road, occasional on an open, sunny, sandy bank 10 April 1994. Compacted ground behind the kerbstone at M-Scan; 23 April 1999 and 29 April 2012. Also beneath the *Cornus nuttallii* in bare patches on the CPB lawn 5 May 2012.

Ascot: bare ground on the edge of the rough on Ascot Racecourse in May 2002.

East Berks: scattered throughout but absent from the chalk in the north. Windsor Great Park, Wellington College, Wokingham, Stubbing's Heath, Farley Hill, Twyford, Sonning, Finchampstead, Bracknell, Ascot, Sandhurst, Binfield. Recent records from Farley Court, Bearwood, Ascot Heath, Charters Road, Hiltons Covert, Windsor Great Park, Old Windsor, Ham Island. 2% (1km²). Atlas 2000: all except [77], [78], [88]

West Berks: absent from the chalk and scattered elsewhere (perhaps under-recorded). Wickham Heath [37], Carswell and Pusey [39], Greenham Common [46], Hitchcopse South Pit [451995], Marcham, Tubney, Cothill and Frilford Heath [49], Wytham and Boars Hill [40], Cold Ash Common, Lower Bucklebury, Brimpton pit and Crookham Common [56], Bucklebury and Oare Common [57], Blewbury Downs and on railway cinder at Didcot [59], Bagley [50], Mortimer Common and Ufton [66]. Local on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all except [37], [38], [59], [68], [69]

Myosoton aquaticum (L.) Moench *Water Chickweed*

h 7

Cerastium aquaticum L.

Stellaria aquatica (L.) Scop.

Ditches, river-banks, wet places, damp spinneys, etc., often on dredged mud. Locally common in partial shade. Absent from the chalk and rare in south-west Berkshire.

Ascot: no records. Not in Silwood Park.

East Berks: Old Windsor, Marlow, Henley, Blackwater, Sonning, Coleman's Moor, Sindlesham, Bray, Cookham, Ascot, Wargrave, Aston, Swallowfield. Occasional except in the south-east (east of 90). 2% (1km²). Atlas 2000: all except [96]

West Berks: frequent in the Thames valley, less common in the Kennet valley and absent from the intervening country. Shrivenham [28], Lechlade, Tuckmill meadow and Buscot [29], Kintbury [36], Letcombe Bassett [38], Turf Pits Covert [39], Chilton and Harwell [48], Marcham and Abingdon [49], Wytham and Appleton Lower Common [40], Brimpton, Beenham and Aldermaston [56], Cholsey and Moulsoford [58], Wittenham, Thrupp House Wood and Radley [59], Kennington [50], Padworth and Mortimer [66], Bradfield, Tidmarsh, Pangbourne, Theale and Southcote [67]. Atlas 2000: all squares

Moenchia erecta (L.) P. Gaertn., B. Mey. & Scherb. *Upright Chickweed*
Sagina erecta L.

th 5 ↓

An early-flowering annual, confined to heathy commons, and dry banks on acid, nutrient-poor soils; very local and decreasing. This is a scarce species in Britain, found on open, shallow soil in dry grasslands that are seasonally parched; often with *Ornithopus perpusillus*. Declining through cessation of grazing and incursion of rank species. An annual with 4 of everything: 4 sepals, 4 entire petals, 4 stamens and 4 styles. Rather like a miniature greyish *Stellaria holostea* with flat leaves (rather than the wiry leaves of *Minuartia hybrida* or *Sagina* spp). The fat, silvery sepals give the plant a really obvious jizz, despite it being so tiny.

Ascot: known to Druce from Ascot Racecourse (1897), but not seen since.

East Berks: Green Park in Windsor Great Park (**BM**) in 1847, near the railway between Bracknell and Ascot (also on the Surrey banks of Virginia Water). Wellington College, Finchampstead Ridges (1960). Woodley (**RNG**) in 1934, College Farm Reading (**RNG**) in 1916. Bowen believed it to be extinct in all its eastern sites (east of 90), and to survive only at Finchampstead Ridges. Atlas 2000: no records.

West Berks: restricted entirely to the heaths of the Kennet valley. Greenham Common and Wickham Heath [46], Snelsmore Common [47], Bucklebury Common, Mortimer and Thatcham [56], Burghfield Common (**RNG**) and Pond Green, Padworth [66]. The best place to see the plant these days is on Greenham Common, in short (closely mowed) heath south-east of the former runway [505643]. Atlas 2000: [46], [47], [56], [57], [66]

Sagina nodosa (L.) Fenzl *Knotted Pearlwort*
Spergula nodosa L.

h 7 ↓

Short, damp grassland in fens and water meadows, and more rarely in chalk grassland. Bowen thought the plant extinct in both East and West Berkshire. Told from other *Sagina* spp. by its long petals (2 times as long as the sepals) and by the fact that the leaves at the uppermost whorls are very short (less than one third) compared to the leaves at lower whorls (in the other species, the topmost leaves are more than half the length of the lower leaves).

East Berks: very local at Winter Hill and Cookham Down in 1897. Considered extinct, but rediscovered above the water meadow at Cock Marsh [8985] in 1968. In chalk grassland above the marsh in 1992 at [879866] (I suspect this is the same site as the 1968 record despite the latter's grid reference). Still there in July 2002, on a bare track through dry chalk grassland about 5m away from the edge of the marshy ground. Found by Tony Mundell on a grassy ride near Deer Rock Hill on the Berkshire side of Wishmoor Cross [8810 6363] on 19 September 2004. Atlas 2000: [88]

West Berks: extinct in both its former epicentres on the peat pits at Kintbury [36] and Bagnor Marsh [46] in the Kennet valley and in the Thames meadows around Abingdon [59]. Found in a new station in Hungerford Meads [3368] in 1969, and rediscovered in 1972 and 1988. Atlas 2000: [36]

Sagina subulata (Sw.) C. Presl *Heath Pearlwort*
Spergula subulata Sw.

chh 6 ↓

Sagina pilifera auct., non (DC.) Fenzl

Sagina glabra sensu Lousley et auct., non (Willd.) Fenzl

Heaths, very local on sand or gravel paths and bare places. "In profuse flower in May, it is a noticeable feature of the bare roadsides in the heathy districts" (Druce). Not these days, sadly. Told from *S. procumbens* by its possession of 5 sepals and usually 10 stamens (*S. procumbens* usually has 4 sepals and 4 stamens).

NVC: OV 20

East Berks: near Bray, Sandhurst (**OXF**) in 1897, Bagshot Heath, Wellington College, Ambarrow, Bracknell, Whitmoor Bog by the side of the railway, Long Moor, abundant in Windsor Great Park gravel-pits, and by the road from Sandhurst to Swinley, by the railway from Bracknell to Ascot. Local, rare and decreasing, not found in any of Druce's locations by Bowen. One recent record from wet sand in Broadmoor Bottom [8763] in 1987. Atlas 2000: [76], [86]

West Berks. only 3 records: Hamstead Marshall [46] in 1959, Boars Hill [40] in 1918 (probably extinct), Three Firs Burghfield (**RDG** and **RNG**) in 1919 – 1929 and Ufton Park in 1961 [66]. Atlas 2000: no records.

Sagina procumbens L. *Procumbent Pearlwort*

h 5

Moist places, fields, paths, walls, heaths, waste ground, pavements, tarmac, woodland rides, etc. Much the commonest Pearlwort; generally distributed but probably absent from a considerable area of meadow land, chalk downland and from portions of the arable land. Common as a lawn-weed in towns.

NVC: OV 20-23; U 1

Silwood Park: widespread on compacted ground and in open turf, but commoner close to buildings than in natural habitats.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	16	25

East Berks: 35% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, with populations most sparse on the chalk. Atlas 2000: all squares

Sagina apetala Ard. *Annual Pearlwort*

th 5

S. apetala subsp. *apetala* (as *S. ciliata* in Druce and Bowen) is distinguished from *S. apetala* subsp. *erecta* by upright sepals with pointed tips appressed to the ripe fruit, and more abundant glandular hairs on the flower stalk. The seeds of subspecies *apetala* are larger (more than 0.33mm) than those of subsp. *erecta* (less than 0.33mm)

Sagina apetala subsp. *apetala*

th 5

Sagina ciliata Fries
Sagina filicaulis Jordan
Sagina reuteri Boiss.

Walls and dry sunny places on heaths, sand or gravel paths; local and absent from the chalk. The most glandular hairy plants were formerly named *Sagina filicaulis* Jordan or var. *filicaulis* (Jord.) Corbière.

NVC: U 1

Silwood Park: rare at the Satellite Pad in 1999.

East Berks: uncommon and scattered, showing no obvious pattern. Twyford, Maidenhead, rides at Tower Hill, Farley Hill. 2% (1km²). Atlas 2000: [76], [86], [88], [96]

West Berks: apparently absent from large areas, and found commonly only around two epicentres in the Northern Loop [49] and on the heaths of the Kennet valley [46] to [57]: Shrivenham [28], Boxford Common [47], Frilford Heath [49], Snelsmore Common [47], Harwell churchyard [48], Steventon Station [49], Hen Wood and Youlbury [40], Didcot churchyard [59], Marlston [57], Woolhampton [56], Bucklebury [57], Baughurst [56], Didcot Station [59], Wallingford Station [68]. Atlas 2000: [28], [29], [38], [47], [48], [49], [40], [56], [57], [58], [59], [67], [68]

Sagina apetala subsp. **erecta** F. Herm.

th 5

Sagina apetala auct., non Ard.

Sagina micropetala Rauschert

Walls and dry sunny places, like cinder and gravel paths, and bare cultivated ground. As in neighbouring Oxfordshire there are about 10 records of subspecies *erecta* for every 1 record of subspecies *apetala*. The sepals are spreading (not erect) with rounded (not pointed) tips and the seeds are mostly smaller than 0.33mm. The pedicel may have a few glandular hairs.

Silwood Park: common on compacted gravel paths and cinder tracks around the Manor House, on exposed lawn edges, and bare ground behind kerb stones. Also in open turf with *Vulpia bromoides* in Drive Field. In July 2004, from imported topsoil used to landscape the lysimeter at Ashurst in late 2003. Very abundant on the unsown gravel plots at Ashurst in summer 2004 where they had escaped the attentions of weeders in 2003; because all the bigger species were ruthlessly weeded-out, this little plant was able to prosper mightily. Very common in gaps between the brick pavements around the Centre for Population Biology on 25 April 2007 (seeds almost exactly 1/3 mm !).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	10

East Berks: widespread but uncommon to the east of 85. 4% (1km²). Atlas 2000: all squares

West Berks: scattered throughout, including a few records from the chalk. Atlas 2000: all squares

Scleranthus annuus L. *Annual Knawel*

th 6 ↓

Dry sandy cornfields, dry woodland rides, and disturbed ground and heathy ground on acid sandy soils. Druce considered the plant to be "locally abundant although absent from large areas of the clays and chalk". Now much decreased, probably as a result of eutrophication (e.g. atmospheric inputs of nitrogen, fertilizer drift, etc.) and herbicides; now a very rare weed of arable fields on acid sandy soils and of acid heaths like Greenham Common.

NVC: OV 1

Ascot: the plant was known to Druce from Sunninghill in 1897, but there are no 20th century records from the district. Not in Silwood Park.

East Berks: Druce considered the locations to be too numerous to mention. Known to Bowen from Finchampstead, Sandhurst, Wokingham, Wellington College, Ashley Hill, Maidenhead, Cookham,

Farley Hill, Leighton Park, Whiteknights Park, Jouldern's Ford, Arborfield, Woodley, Twyford. Occasional in the south-east, centred on Barkham [7867], with outliers on the northern loop of the Thames from Twyford [7875] to Bray [9079]. Atlas 2000: [77], [87]

West Berks: a curious distribution, occasional throughout the Northern Loop but absent everywhere else, save for a few outliers around Boxford [47]. Buckland and Longworth pit [39], Kintbury [36], Greenham Common [46], Boxford and Hemley Copse [47], Frilford and Tubney Wood [49], Foxcombe Hill and Youlbury [40], Didcot and Radley [59], Bagley Wood [50], Englefield [67]. The population in the Buckland Warren arable conservation plot [333962] was last seen in 1998. At least 12 plants on the Practice Ground at Frilford Heath Golf Club [447986] on 26 June 2006 (Susan Erskine). Five plants on open peat amongst short heather in the central section of Greenham Common [502646] on 23 June 2007 found by Bill Helyar on the occasion of the BSBI visit. Atlas 2000: [36], [39], [46], [49], [40], [56], [57], [58], [59], [50], [66], [67]

¶ **Scleranthus** *S. biflorus*

Illecebrum verticillatum L. *Coral-necklace*

th 9 ↓

A late-flowering local speciality. "Found in 1891 by A.W.S. Fisher on the borders of pools and on damp sandy ground in heathy districts at the western end of Nine Mile Ride near Wellington College on Mr J. Walter's estate of Bearwood, growing with *Radiola linoides*, *Hydrocotyle*, *Ranunculus flammula*, *Drosera rotundifolia*, *Veronica scutellata* and *Juncus bulbosus* with pines and rhododendrons nearby; the occurrence of this Cornish and New Forest plant in Berkshire is of singular interest" (Druce). Acidic woodland rides and margins of acid ponds; very local and rare. This is a scarce plant in Britain, found on seasonally wet, sandy or gravelly tracks and heathy lawns on acid soils, often growing with *Gnaphalium uliginosum*.

East Berks: a wood in Finchampstead (RNG) [7563] in 1927, Wellington College pond (OXF and RNG) [8363] in 1891, 1910, 1914 and 1956, Crowthorne (OXF and RDG) [8463] in 1958, Kingsmere (RNG) [8164] in 1915 and 1948, Queens Mere (OXF) in 1929, California-in-England (RNG) [8065] in 1936, Easthampstead Park (RNG) [8467] in 1944 and [8667] in 1951, Heath Lake [828652] in 1961, Bracknell [8765] in 1952, lower slopes of Finchampstead Ridges [8063] in 1967. Still at Heath Lake and perhaps on the inaccessible private land at Kingsmere or Queens Mere.

West Berks: no records.

Spergula arvensis L. *Corn Spurrey*

o th 6

A weed of dry arable fields and allotments on acid sandy soils, locally abundant, but absent from calcareous and damp clay soils.

NVC: OV 1,3,4,10,13,19,22,23,33

Silwood Park: one of the commonest arable weeds, and an abundant component of the seed bank. Suffered badly in the spring drought of 2003. Also on gravel paths, and in gaps created in the turf of dry grassland. Commoner in the fallow at Silwood Bottom than at Ashurst or Pound Hill, especially after later spring cultivation (e.g. particularly abundant in May 2003 when it was rare or absent in other Silwood fallows). Occasional on 3 August 2005 at Pound Hill when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought. On imported topsoil at the Ashurst lysimeter site in May 2004. Locally dominant on 20 May 2007 in the top left corner of Silwood Bottom, and up-slope from the central shed, on ground that had been cultivated in October 2006. Common in the seed bank beneath the fenced cultivated plot in Block E in

Nash's Field on 28 July 2007. Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	7	9

East Berks: Druce recorded var. *maxima* from Sunningdale. 4% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames and Kennet valleys but absent from the chalk and northern clays. Atlas 2000: all except [28], [38], [58], [68], [69]

[Spergularia media (L.) C. Presl *Greater Sea-spurrey*] th 5

Arenaria media L.

Spergularia marginata Kittel, nom. illegit.

Spergularia maritima (All.) Chiov.

Not known from Berkshire, but worth looking for on salted roadsides. Told from *S. marina* by its bigger flowers (>8mm across), sepals (> 4mm) and capsules (>5mm), and from *S. rupicola* by the fact that it is not woody below.

Spergularia marina (L.) Griseb. *Lesser Sea-spurrey* th 6 † & • th 6 ↑

Buda marina Dumort

Arenaria rubra L. var. *marina* L.

Spergularia salina J.S. Presl and C. Presl

A local speciality, first record by Druce in 1890 from the famous saline meadow to the south of Marcham [49] (see p. 116); there were still 10 plants from a saline ditch in Marcham [454959] in 1964. Sadly, the site is now destroyed. Now confined to roadside salt adventive communities as an alien. Told from *S. rubra* by its bigger seeds (> 0.6mm) and by the fact that its stipules are fused for more than one third of their length (look at young shoots).

East Berks: now an occasional but locally abundant component of the road-salting community established along motorways and dual carriageways throughout the county. There were no roadside records from Berkshire before Atlas 2000 recording, but to judge from its current abundance it has obviously been overlooked for quite some time. Very abundant where the A33 crosses the M4 south of Reading [7168] in 1997-2004. Common in Bray Wick on the edge of the A308 [8979] and frequent on the Thames crossing at Windsor [9577] 1998-2004. <1% (1km²). Atlas 2000: [76], [87]

West Berks: on the roundabout at the junction of the A420 and the A417 [300952] in 2004. Atlas 2000: [37], [47], [49] but probably all along the M4 and the dual carriageway of the A34.

Spergularia rubra (L.) J. Presl and C. Presl *Sand Spurrey* th 5

Arenaria rubra L.

Sandy heaths and cultivated fields, lawns, paths and bare places on dry acid soils in small quantity. Absent from the Chalk and the clays.

NVC: U 1

Silwood Park: locally frequent on compacted cinder paths by the Manor House above the Lily Pond and on the cinder pot-standing at the Greenhouses, 1979-2004, fluctuating in numbers with the

intensity of path-care. Also in arable land, but less commonly, as at Pound Hill and Silwood Bottom. On the concrete bases of old Nissen huts on North Gravel, but the site was destroyed by soil dumping during the construction of Southwood Halls in 1981. Locally frequent in compacted ground on the track from Nash's Field to the Kissing Gate on 5 June 2007.

Ascot: in short, heathy lawns (often with *Ornithopus perpusillus*) on many of the nearby Crown Estate properties, and on Smith's Lawn. Occasional on ruins [929689] during construction of the new Ascot Racecourse in August 2005. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: widespread, but seldom common; rarest on the chalk in the north. 2% (1km²). Atlas 2000: all squares except [78]

West Berks: occasional in the Kennet valley and in the Northern Loop of the Thames but rare or absent elsewhere. Atlas 2000: [36], [38], [46], [40], [56], [57], [59], [66]

Lychnis coronaria (L.) Murray *Rose Campion*
Agrostemma coronaria L., *Silene coronaria* (L.) Clairv.

• th 5 ↑

A ubiquitous cottage garden plant, freely seeding and widely naturalised close to buildings. One of the commonest garden escapes in Berkshire, capable of forming self replacing populations even in competition with grasses. Waste places and rubbish tips, rare and sporadic in Druce's time, now much increased, and locally frequent. White flowered plants are rare except in gardens.

Silwood Park: commonly naturalised, even in dense grass and mown lawns; Sunninghill Cross Roads, Ashurst Church, Cheapside Village, Tractor Sheds, Tennis Court, Drive Lawns, Science Park, East Lodge, The Heath. A single plant in the 2-year old post-fallow community in Silwood Bottom in May 2003.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	13

Ascot: Whitmore Lane in Sunningdale, South Ascot, etc. Self sown on ruined walls at Froggnall [940681] in September 2005.

East Berks: one of the most commonly naturalised of all the garden escapes. First recorded from the railway at Earley (1914), Reading tip (1952), 50 plants near the old army camp at Kingsride (1965). Much increased (or perhaps better recorded) since Bowen. In shade with other garden outcasts where Simon's Wood backs on to suburbia [8163]. Now in sites too numerous to mention; 39% (1km²). Atlas 2000: all squares

West Berks: first recorded from South Hinksey [50] and Aldermaston Wharf [66] in 1965. Now common and widespread in all of the towns and most of the villages. Atlas 2000: [28], [29], [36], [39], [46], [47], [49], [40], [57], [59], [50], [66], [67], [68]

Lychnis flos-cuculi L. *Ragged-Robin*
Silene flos-cuculi (L.) Clairv.

hp 5 ↓

Wet meadows, damp woodland rides, alder woods, osier holts and marshes. Common and generally distributed. "Some of the Thames meadows are a beautiful sight from the profusion of its blossoms.

The banks of the railway between Bracknell and Wokingham show it in great beauty” (Druce). Occasional but absent from the chalk. Much reduced because of drainage and pasture “improvement” (fertilizing, herbiciding and re-seeding).

Silwood Park: uncommon in Rush Meadow, confined to the area east of the path, occasional by the lakeside in Guinness’s Thicket and scattered throughout Cascade Marsh in 1980 but not seen there since (the water level is higher and the shade is deeper now). Sown in the Nash’s Field seed mix in 1991, but it never grew. Sown in the Oak Mead Experiment in 1996; recruitment restricted to the low competition plots (cultivated and treated with methyl bromide), but still present in a few places in the fenced parts of Blocks C and D in 2001 and the fenced part of Block E in May 2003 that had been methyl bromide treated at the seedling stage.

Ascot: occasional in the damp grassland of the northern triangle on Ascot Racecourse (1970-2006). Occasional throughout the sown grasslands created during landscaping work for the new Race Course in May 2006 and 2007, as at [925695].

East Berks: wet meadows by the Thames at Wargrave. In ditches at Waltham St Lawrence. Very local, in only 4% of 1km². Atlas 2000: all squares

West Berks: common in the water meadows of both the Thames and Kennet valleys and in gravel workings as at Radley [49]. Absent only from the chalk. Frequent at Jarn Mound [4802]. A common weed of plant-pots in the garden of Sutton Courtenay Manor [59] in May 2001. White flowered forms are recorded from Wytham [40], Bagley [50], Moulsoford [58] and Tidmarsh [67]. Atlas 2000: all squares

Lychnis chalcedonica L. *Maltese-Cross*

• hp 5

A popular herbaceous border plant with very striking bright scarlet flowers. An occasional outcast, but quite persistent where it occurs.

Silwood Park: long persistent in bare soil by the Greenhouses.

East Berks: on bulldozed gravel near Reading Bridge [718739] in 1974.

West Berks: Atlas 2000: [46]

¶ **Lychnis** *L. alpina*, *L. x arkwrightii* ‘Vesuvius’, *L. chalcedonica*, *L. chalcedonica* var. *albiflora*, *L. chalcedonica* ‘Flore Pleno’, *L. chalcedonica* ‘Rosea’, *L. coronaria* ‘Alba’, *L. coronaria* ‘Angel’s Blush’, *L. coronaria* Oculata group, *L. flos-cuculi* var. *albiflora*, *L. flos-jovis* ‘Hort’s Variety’, *L. viscaria alba*, *L. viscaria* ‘Splendens Plena’, *L. yunnanensis*

Agrostemma githago L. *Corncockle*

○ th 6 † and • th 6 ↑

Lychnis githago (L.) Scop.

Formerly a cornfield weed chiefly on light soils, but now an occasional garden escape and an increasing member of the seed bank community. Often moved around in topsoil and occurring the year after topsoil has been dumped or spread during landscaping works. Likely to appear following soil disturbance wherever it was formerly grown, most likely to be seen close to buildings but could occur almost anywhere, even on arable land if and when it escapes herbicide application. It is so widespread as an alien that identification of putative native sites is impossible.

Silwood Park: very local and rare on waste ground at the Header House, origin unknown, where there were 2 plants behind the CPB greenhouses, and 2 more in pavement cracks below the wall of the Header House on 17 May 1993. Not seen since. Buckhurst Road Entrance, 1 plant in July 1999. On the student's allotments in Silwood Bottom in June 2003, apparently sown with other cornfield weeds like *Anthemis arvensis* and *Chrysanthemum segetum*. An excellent population of 20 flowering plants in the nettle bed between the Header House and CABI Quarantine Greenhouse on 17 June 2006, growing with *Papaver somniferum* and *Eruca sativa* (origin unknown). Common on the sand bench in Greenhouse 9C on 25 January 2007 (with *Centaurea cyanus*).

East Berks: common opposite Bisham woods, Wellington College, Reading (**RDG**), Remenham, Sonning, Virginia Water, Jouldern's Ford, Farley Hill, Clewer, Maidenhead, Hurley, Wargrave, Shinfield (**RDG**). Formerly a frequent weed on arable land along the Surrey border and by the Thames (e.g. Cookham in 1954), but rare and sporadic these days. Now a frequent casual and garden escape: Bulmershe, Crazies Hill, Edgebarrow Hill, Wellington College, Braywoodside, North Town Moor. 1% (1km²). Atlas 2000: [77], [78], [86], [87], [88], [96]

West Berks: formerly on arable land in the Northern Loop of the Thames valley. The old records were strongly clustered in the south-east around [57] and [67], with no records at all from the chalk. Recorded from the Royal Military College of Science at Shrivenham [28] in 1952. Kintbury [36], Shefford [37], Pusey, Carswell and Buckland [39], Newbury and Benham Park [46], Tubney, Marcham, Frilford and Abingdon [49], Wytham [40], Hermitage and Bucklebury [57], Moulsoford, Streatley and Blewbury [58], Kennington [50], Mortimer (**RNG**) and Padworth [66]. Basildon, Tilehurst, Bradfield, Tidmarsh and Theale [67]. Common by the new bypass at Kingston Bagpuize [4098] from 1990-92 until succession took its course. There was a roadside display of rare arable weeds, presumably planted, at Upper Lambourn [3180] in July 2003. Atlas 2000: [29], [39], [49], [58], [59], [66], [67]

Silene nutans L. *Nottingham Catchfly*
Silene dubia auct., non Herbich ex Rohrb.

hs 5 †

Dry grassland, and open, disturbed ground; always very rare, now extinct
 NVC: CG 2; MG 1; OV 39,41

East Berks: Wellington College (**OXF**) last reported in 1927.

West Berks: a single record from Frilford Golf Course [49] by Dr Smith in 1929.

Silene vulgaris (Moench) Garcke *Bladder Campion*
Behen vulgaris Moench

hp 6 ↓

Silene vulgaris subsp. **vulgaris**
Silene cucubalus Wibel, nom. illegit.
Silene angustifolia auct., non (DC.) Guss.
 Oberna behen (L.) Ikonn.

Waysides, cultivated and fallow fields and disturbed ground by roadsides. Occasional on calcareous soils, rare elsewhere.
 NVC: OV 16,23,25

Silwood Park: in long grass in Upper Pond Field on the boundary of Nash's Slope on 26 June 1980. Not seen for many years, but rediscovered at the same spot on 21 June 1991. Probably grazed to invisibility by rabbits in most years. A single plant in unmown grass at the northern end of M-Scan

next to *Prunus* 'Tai Haku' on 30 August 1996. Two plants in Oak Mead in one of the cultivated plots of the Biodepth II experiment on 10 July 2000; no sign of them in 2001 or 2002, but a thriving clump on 18 June 2003.

East Berks: common near Marlow and in the fields about Hurley, Wargrave, Loddon Mouth and near Maidenhead. Also by the Blackwater at Jouldern's Ford and the Thames at Bray. Uncommon except in the Thames valley, absent from most of the interior and the south. 3% (1km²). Atlas 2000: all squares

West Berks: widespread; least common on the northern clays. Very common on sunny lane banks in the Downs, as on Ball Pit Road from Stanmore to East Ilsley [4780], and by the footpath between Aston Upthorpe and Blewbury [5485]. Locally frequent on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all but [69]

Silene armeria L. *Sweet-William Catchfly* ● th 6

East Berks: Sonning (1800) but this may be only a garden specimen. Reading rubbish tip (1965).

West Berks: found by Bill Helyar in the carpark of Shalford Lakes [5665]; many plants in 2003, but down to one plant in 2004.

Silene muscipula L. ● th 6 †

A grain and bird-seed casual. Told from *S. armeria* by the leaves which taper to a narrow base (not clasping), acute (not obtuse) calyx teeth, and by the pubescent carpophore.

West Berks: in a crevice in pavement at AERE Harwell [48] in 1971 (RNG).

Silene noctiflora L. *Night-flowering Catchfly* ○ th 7 ↓
Melandrium noctiflorum (L.) Fries

Dry cornfields, especially on sandy calcareous soils; local in the Thames Valley. Much declined as a result of herbicide and fertilizer application. Commoner in spring- than in autumn-sown cereals.
 NVC: OV 16

East Berks: formerly abundant about Wargrave, Remenham, Twyford, Maidenhead, Hurley, Sandhurst, Sunninghill. "The flowers, which are yellow on the outside and rose-coloured on the inside, offer a ready means of distinguishing it at a glance from the much commoner *S. vulgaris*" (Druce). Bowen thought the plant extinct in this district. Once common on the Thames valley chalk from Twyford, through Wargrave, Remenham, Hurley and Maidenhead, but few post-1985 records. Atlas 2000: [77]

West Berks: scattered records from the Thames valley all the way from Lechlade [29] to Pangbourne [67] and an area south-west of Reading centred on Theale [67]. Recent records include Kingston Lisle [38] in 1990, Frilford Heath golf course [447987] in 1981, Lower Seeds at Wytham [40] in 1971 and 1987, Thatcham Marsh [56] in 1974, Aston Upthorpe Down [58] in 1982, Riddle Hill [58] in 1977, Appleford [59] in 1977. Atlas 2000: [39], [40], [58], [59], [50], [67]

Silene latifolia Poir. *White Campion* ○ hp 5
Silene latifolia subsp. *alba* (Mill.) Greuter and Burdet
Lychnis alba Miller

Silene pratensis (Rafn) Godron and Gren.
Melandrium album (Miller) Garcke
Silene alba (Miller) E.H. Krause, non Muhlenb. ex Britton

Hedges, cultivated fields, commons, rough grassland, lawns, roadsides and waste places. Occasional but seldom in quantity, and rare on acid soils. Host to the anther smut fungus *Microbotryum violaceum* (= *Ustilago violacea*). The shiny dark brown-black aphid is *Brachycaudus lychnidis*.
 NVC: OV 3,15,16,18,19,22,24

Silwood Park: the commonest champion with us, but rather sporadic and never abundant. Oak Mead, Church Field, Gunness's Hill, Hill Field, on the ridge between Nash's Field and Nash's Slope (5 plants in May 2004), Ha Ha, Reactor Bank, Science Park, M-Scan. On the herb-sown plots of the Tilman Experiment (sown in October 1991) in Nash's Field (still there on 11 of the 18 sown plots in May 2004), and in the Oak Mead Experiment (sown in 1996 and still there in 2004). A weed of plant pots on the pot standing at The Greenhouses on 26 May 2004. By July 2007 the plant was restricted to Blocks G (both) and H (top) amongst *Tanacetum vulgare* in the Tilman Plots in Nash's Field. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	7

Ascot: scattered individuals on Ascot Heath, Kings Beeches, South Ascot, Blacknest Park, South Coworth, Johnson's Pond, and Frostfarm Plantation. Occasional throughout the sown grasslands created during landscaping work for the new Race Course in May 2006 and 2007 as at [925984].

East Berks: common between Charvil and Sonning, and around the reservoirs at Bray. 34% (1km²). Atlas 2000: all squares

West Berks: on the ruins of the Prince of Wales pub at Challow Station [3590], common by the footpath between Aston Upthorpe and Blewbury [5485] in 2002, growing with *Silene vulgaris*. Atlas 2000: all squares

Silene x hampeana Meusel and K. Werner = ***S. latifolia* x *S. dioica***
Silene x dubia (Hampe) Guin. & R. Vilm., non Herbich ex Rohrb. nec E.H. Krause
Silene x intermedia (Schur) Philp, non (Lange) Bocq.

This is a common and highly fertile hybrid, with pale pink petals, that is intermediate in all its characters. Sometimes found in the absence of either parent.

Silwood Park: rare in Nash's Field, close to the Tilman Experiment (1992-2004). In rough grass on the Reactor Bank following scrub clearance in May 2002. Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003. A single plant amongst *Tanacetum vulgare* in the centre of Tilman Plot Bock J (left) on 27 July 2007.

East Berks: Whiteknights Park (1982). In 2002 the hybrid is the second commonest taxon, much rarer than *S. latifolia*, but much commoner than *S. dioica*.

West Berks: scattered records form the whole region, with recent records from Buckland Warren [39] and Frilford Heath [49].

Silene dioica (L.) Clairv. *Red Campion*
 Lychnis dioica L.
 Melandrium dioicum (L.) Cosson and Germ.

hp 5 ↓

Roadsides, woods, hedges, sunken lanes, railway-banks, shady places, disturbed ground etc.; locally plentiful, but rare or absent from acid soils. Often less abundant than the pink flowered hybrid (above).

NVC: MG 1; OV 25,27; S 26; W 6,8,10,12,21-25

Silwood Park: a rare introduced species with us, transient and short lived. Sown in the seed mix in the Nash's Field experiment in Blocks G, H and J in 1991. The first flowers were seen in September 1994. Still there, but rare in 2000 and 2003. The Greenhouses: a dense stand 3m x 3m in the Tennis Court corner of the Pot-standing on 4 June 1995. Probably introduced unintentionally with woodland plants from Kent in 1979 and kept inconspicuous by mowing until 1995 when mowing was unnecessary because of the intensity of the drought (gone by 1998, but returned in May 2003). In shade at the edge of the driveway at the Church at Ashurst; 5 May 1999. Growing on the edge of the *Miscanthus sinensis* plot in Silwood Bottom on 31 May 2003. Below the wall in the Herbaceous Border in May 2004, where it had seeded from the Pot Standing population. One of the plants grown as hosts for herbivorous insects to attract parasitoids within deer/rabbit fences all over Silwood Park from 2006 onwards: in full flower on 20 April 2007 on the Cricket Wicket. Established as a weed of plant pots by the greenhouses in April 2007, whence seeds had spread from the population of potted plants kept between the greenhouses for use in pollination experiments in Silwood Bottom (2004-2006). A single individual in concrete at the lip of the standing in front of Greenhouse 5C by the pot shed on 5 May 2009.

Ascot: local and rare. In the grassy lane behind the terraced houses on Upper Village Road (1979-2004).

East Berks: all but restricted to the Thames valley; Windsor, Shurlock Row, Finchampstead, Finchampstead Church, Sandhurst, Arborfield, Wellington College, Crowthorne, Sonning, Ashley Hill, by the upper lake at Park Place. An odd distribution; most of our pinkish plants are the hybrid *S. x hampeana*. 12% (1km²). Atlas 2000: all squares

West Berks: widespread, but curiously uncommon in a 10km wide strip running north-west to south-east from the Thames at Buckland [30] to Yattendon [57]. Particularly common in the far west, as at Ashbury [28] and Inkpen [36], and in the north as at Bagley Wood [508025]. Atlas 2000: all squares

Silene pendula L. *Nodding Catchfly*

● th 5

A showy annual with bright pink flowers.

Silwood Park: discovered on 9 April 2009 in full flower on gravel at the western end of the CABI Polytunnel. It is likely that the plant was self-sown from plants that had been grown in pots in an experiment with sewage sludge carried out in 2008.

Silene gallica L. *Small-flowered Catchfly*
 Silene anglica L.
 Silene quinquevulnera L.

○ th 6 ↓

A local speciality of sandy cornfields and gravelly waysides; very rare or extinct as a result of heavy use of herbicide and fertiliser. A scarce plant in Britain, growing as a winter-annual weed of

cultivated or disturbed ground on sandy soils. Occasionally found as a casual from imported clover seed. Known from other annual champions by its hairy leaves and stems, and its short (< 12mm) calyx with long, spreading hairs. Extinct at most if not all of its former sites.

East Berks: local and rather rare. Wellington College, Wokingham (**OXF**), Remenham, Ambarrow, Finchampstead, abundant in fields near Bracknell all pre-1897. Rare and decreasing. Wokingham (1890), Finchampstead (1966), Binfield (1953). Atlas 2000: no records.

West Berks: absent from the centre of the region, with scattered records from the north-western part of the Thames valley and from the south-eastern parts of the Kennet valley. Becket Park [28] in 1982, Buckland Warren [39] in 1966, Crockham Heath [46] in 1965, Tubney [49] in 1833, Cothill [49] in 1908, Boars Hill (**OXF**) [40] in 1890, Midgham (**OXF**) [56] in 1890, Tutts Clump [57] in 1963, Mortimer [66] in 1897, Tilehurst (**RDG**) [67] in 1913. Atlas 2000: no records.

Silene dichotoma Ehrh. *Forked Catchfly* ● th 6 !

Waste ground, clover fields, thought to be increasing in frequency in Druce's time, but not seen since 1910.

East Berks: in a field near Maidenhead in 1897 where rubbish had been placed. Not seen by Bowen. Formerly occurred frequently as a casual but now rare. It has horizontal whitish flowers with calyx 8-15mm.

West Berks: Pusey [39], in a chicken run at Cothill [49] in 1909 (**OXF**), Cumnor [40], Didcot [59], Basildon [67]; all but the Cothill record pre-1897.

Silene conica L. *Sand Catchfly* th 5
Pleconax conica (L.) Sourk.

A local speciality of bare places in nutrient-poor sandy grassland. Very rare and sporadic. Druce thought that it "has no claim to be considered native in Berkshire". Bowen, however, considered it to be native at Frilford where Druce had found it (**OXF**), and it is accepted as native in Atlas 2000.

NVC: U 1

Silwood Park: sown as an unintended component of a wildflower seed mixture on North Gravel, opposite the (then) brand new Southwood Halls in May 1983. First flowers seen in June 1984 in good numbers along the edge of the grass track past Immunology, when there were 5 patches, each of 10 or so plants. Thorough, repeated searches in 1985 failed to reveal any plants, and not seen since. The site was subsequently destroyed during the construction of Flowers Halls.

East Berks: no other records.

West Berks: the celebrated, allegedly native, site on Frilford Heath has many records spanning the decades following its discovery by Druce in 1913 (**RNG**, **RDG** and **OXF**). The plant fluctuates greatly in abundance from year to year (e.g. 10 in 1974, 3 in 1975 and 1 in 1981), but there are two extant patches, each a few metres square at [442974] and [448987] in 2002. Also at Hitchcose pit [453997], Dry Sandford pit [465996], and in set-aside land nearby [447981] in 2001-04. With other aliens at Newbury [46] on garden ground near the railway in 1858. Atlas 2000: [49]

Silene conoidea L. ● th 6 †

A rare casual from southern Europe, told from *S. conica* by its larger calyx (more than 15mm) and bigger seeds (more than 1mm diameter) and by its generally lower degree of hairiness.

West Berks: on waste ground at Grandpont by the rubbish tip in 1891, but the site was built over before 1897.

¶ **Silene** *S. fimbriata*, *S. schafta*, *S. uniflora* ‘Robin Whitebreast’ (d), *S. uniflora* ‘Rosea’

Saponaria officinalis L. *Soapwort* ○ hp 6

Sandy fields, roadsides, railway banks, gravel pits and waste ground. In small colonies. Hedges and waste places, generally near houses. Rare.

Silwood Park: one patch of double-flowered plants among *Mahonia aquifolium* below the *Cedrus atlantica* by Drive Lawns. The patch had been established since before 1970, but was eradicated when Brynmore took the bush hog to the *Mahonia* in 1991; the area is now part of the lawn.

East Berks: Old Windsor, Ray Mill near Maidenhead, Cookham. Waltham St Lawrence, Wellington College, Woodley, Quarry Wood, Bray. Recent records from Shinfield, West Reading, Reading Station, Cannon Court Farm, March House, Cookham. Common on railway ground at Kings Meadows Reading in September 2007 and 2008. 2% (1km²). Atlas 2000: all squares

West Berks: occasional throughout the Thames valley, with scattered records elsewhere. Beckett Park and Shrivensham [28], Coxwell pits, Badbury, Inglesham and Faringdon pits [29], south of Wantage [38], Cherbury Camp [39], Boxford and Snelsmore (the double flowered form) [47], Abingdon, Frilford and Kingston Bagpuize Hall [49], Wasing and Brimpton [56], South Moreton, Blewbury and by The Bull Inn at Streatley [58], Radley [59], Grandpont [50], Pangbourne and Bradfield [67]. Atlas 2000: [28], [29], [36], [38], [39], [46], [40], [56], [50], [66], [67]

Saponaria ocymoides L. ● hp 6

A popular rockery and wall plant, rarely escaping.

East Berks: on walls in Sonning in June 2002.

¶ **Saponaria** *S.* ‘Bressingham’, *S. ocymoides*, *S. officinalis*, *S. officinalis* ‘Alba Plena’, *S. officinalis* ‘Dazzler’, *S. officinalis* ‘Rosea Plena’, *S. x olivana*

Vaccaria hispanica (Mill.) Rauschert *Cowherb* ● th 6 †

Saponaria hispanica Miller

Saponaria vaccaria L.

Vaccaria pyramidata Medikus

Waste places, cultivated fields, railway ballast.

East Berks: a casual on the railway embankment at Maidenhead in 1897. Casual alien of waste ground and rubbish tips, Reading (1962).

West Berks: there are nineteenth century records from the railway at Newbury [46], Didcot [49] and Grandpont [50]. The most recent records include Bradley Farm Cumnor [45] in 1939, arable land at Bradfield [57] in 1988, Didcot [59] in 1965, Sandford [50] in 1918, Tilehurst [67] in 1918

Petrorhagia prolifera (L.) P.W. Ball and Heywood *Proliferous Pink* th 7 †
Dianthus prolifer L,
Tunica prolifera (L.) Scop.,
Kohlruschia prolifera (L.) Kunth

A rare casual of sandy places. Hard to tell from *P. nanteuillii* since identification requires microscopic inspection of the seeds. The seeds are reticulate on the surface (rather than tuberculate in *P. nanteuillii*).

East Berks: very local and rare near Windsor (1897). Extinct casual. No specimen seen.

West Berks: collected by Druce at Boars Hill [40] in 1894. Long extinct.

¶ **Petrorhagia** *P. saxifraga*

Dianthus gratianopolitanus Vill. *Cheddar Pink* ● ch 7 †

This well known, rare British native is confined to Carboniferous limestone cliffs in the Cheddar Gorge in North Somerset.

West Berks: recorded by A. Evans in 1933 as having been planted on Jarn Mound [4802] in the British plants collection. Not there now.

Dianthus caryophyllus L. *Clove Pink* ● ch 6 ↓

Common garden plants, but very rare as outcasts or escapes.

Ascot: naturalized on a grave in South Ascot churchyard since before 1979; still there in June 2004.

East Berks: in the abandoned nursery of Sutton's seeds in Reading [7473] in 1979. Gone now, the site having been developed as a Business Park, and landscaped to tidy (but floristically dull) lawns, in the modern fashion.

Dianthus deltoides L. *Maiden Pink* ch 6 ↓

One of our local specialities. Old walls, sandy places, etc. "The Pink which grows by the highway sides of the sandy hill you descend going from Nottingham to Lenton, I find to be the same which grows ... in many places in Berkshire" (Ray, 1670). "Mr Tufnail tells me it is well established at Messrs. Sutton's farm in the grassy borders, probably introduced with foreign seeds" (Druce). Known by its single (not clustered) flowers and its shortly-hairy (not glabrous) lower stems. The flowers are scentless.

Silwood Park: a rare garden escape, on the stone base of the Wishing Well in July 1983. Not seen since. Both pink and white flowered forms were locally frequent on the edge of the cinder pot-standing at The Greenhouses in June 2002.

East Berks: dry grassland on acid soils. Very local in Suttons grounds (the celebrated seed merchants) at Reading (RDG) in 1897, 1919 and 1979 [733737], and at Wellington College (1907) but Bowen failed to see it at either of these sites. On the fifth fairway of Sonning golf course (1965), Bearwood (K) [7768] in 1945. Atlas 2000: [76], [77], [86]

West Berks: Greenham golf course [46], Honey Bottom (**OXF**) and Bussock Hill House [47], Frilford Heath Golf Course on the edge of the rough [49] from 1930 to 1990, and 30 flowering shoots north of the 8th tee on the Green Course on 20 June 2008 (Alison Muldal) [4474 9888], planted at Jarn Mound [40], Brimpton [56], Bucklebury [5570], Bagley Wood [5102]. Garden escapes on waste ground near the canal in Newbury [4767] in July 2002. The principal surviving populations are on Frilford Heath [443975], [447989] and [446985]. Atlas 2000: [47], [49]

Dianthus barbatus L. *Sweet-William*

• hp 7

The quintessential cottage garden plant, also used for bedding in more formal gardens. An occasional garden escape in towns and villages throughout.

Silwood Park: rare, on the cinder pot-standing at The Greenhouses. By paths on the Science Park. The plants in the perennial bed at The Greenhouses were still common in July 2007 despite 20 years of neglect.

East Berks: not in Druce. Smallmead rubbish tip in Reading (1965). Recently at Bulmershe, Hurst, Gravelly Bridge, West Whitley, The Throat, West End, Old Malt House, Shottesbrooke, White Waltham, Cookham, Fernbank Road. 5% (1km²).

West Berks: Bessels Leigh [40] in 1899 and a gravel pit at Caldecot [49] in 1980.

Dianthus armeria L. *Deptford Pink*

th 7 ↓

Sandy fields and hedge-banks, on gravelly soil in sunny exposures. A scarce plant as a native in Britain. An annual or biennial of dry pastures, field borders and hedgerows where the grass is kept short by grazing or management. Not uncommon as a garden escape. Told by its compact cluster of multiple (not single) flowers with hairy calyces, lacking sterile shoots at flowering time (unlike the perennial *D. barbatus*).

Silwood Park: a single self-sown individual in gravel at the base of the wall of the CABI Quarantine Greenhouse on 8 July 2006. The offspring of this plant had increased to dominate the entire length and breadth of this strip by 26 June 2010. The plant had flowering regrowth shoots on 28 September 2010 growing on the soil pile by the CABI Potting Shed with *Polygonatum verticillatum* and *Cyperus involucratus*. There were 20 or so plants in full flower in gravel by the door to the CABI Greenhouse on 16 June 2012.

Ascot: no other records. Not recorded from Silwood Park until 2006.

East Berks: a local speciality, but probably extinct in its native sites as a result of habitat destruction during the inexorable eastwards sprawl of suburban Reading. Recorded first by Merrett in 1666 from Earley Heath and then by a succession of botanists for over 260 years at the same site: this is amazing site tenacity for such a rare annual. Druce (**OXF**) saw it in 1896 (the site was then called Loddon Bridge), and J. Auger was the last to see it in 1935 (when the site was called Woodley). At Arborfield (**K**) in 1831. There are also records from Windsor (by H. Sibthorp in 1780), Maidenhead, Winter Hill, Cookham (**OXF**) in 1932, in a waste, disused portion of the brickfields at Crazey Hill (1897), near Wellington College (1897), Aston Lane (1890), Clewer (1897). At Crazies Hill (again) in 1999 but by this time as a garden escape. Not seen as a native in East Berkshire since 1935. A single plant in landscaping of roadworks at the new roundabout where the Drift Road crosses the A330

south of Braywoodside [873750] in 1997. Gone by 1999 having succumbed to competition from sown grasses. Probably imported as seed in topsoil. Atlas 2000: garden escapes at [77], [88]

West Berks: Carswell [39], Clay Hill, Bucklebury [57], Kennington [50], Pangbourne (OXF) in 1844, Great Bear (RDG) in 1915, Bradfield College, Englefield in 1833 and Tilehurst (RNG) in 1952 [67]. Atlas 2000: a garden escape in [67]

¶ **Dianthus** *D.* ‘Allspice’, *D. alpinus*, *D. alpinus* ‘Joan’s Blood’, *D. x arvernensis*, *D.* ‘Betty Norton’, *D.* ‘Bovey Belle’, *D.* ‘Brympton Red’, *D.* ‘Chastity’, *D.* ‘Claret Joy’, *D.* ‘Cranmere Pool’, *D.* ‘Dainty Dame’, *D. deltoides* ‘Albus’, *D. deltoides* ‘Leuchtfunk’, *D.* ‘Dewdrop’, *D.* ‘Diane’, *D.* ‘Doris’, *D. erinaceus*, *D.* ‘Fusilier’, *D.* ‘Gran’s Favourite’, *D. gratianopolitanus*, *D.* ‘Haytor White’, *D.* ‘Inchmery’, *D.* ‘Inshriach Dazzler’, *D.* ‘La Bourboule’, *D.* ‘Little Jock’, *D.* ‘Mrs Sinkins’, *D.* ‘Musgrave’s Pink’, *D.* ‘Nyewoods Cream’, *D.* ‘Pike’s Pink’, *D.* ‘Rose de Mai’, *D.* ‘Sops-in-wine’, *D.* ‘Valda Wyatt’, *D.* ‘Waithman Beauty’, *D.* ‘Whatfield Can-can’, *D.* ‘Whatfield Gem’, *D.* ‘Whatfield Magenta’

Gypsophila paniculata L. *Baby’s-breath* ● ch 5

A common perennial garden plant forming a mound of stiff, thin stems, but rarely escaping.

East Berks: Cox Green, Maidenhead Cemetery: Atlas 2000: [87], [88]

Gypsophila muralis L. *Annual Gypsophila* ● th 5

A cushion-forming dwarf annual with masses of tiny white flowers on hair-like stalks.

East Berks: by the M4/A33 Interchange [709702] in October 1999.

¶ **Gypsophila** *G. paniculata* ‘Bristol Fairy’, *G. repens* ‘Dorothy Teacher’, *G.* ‘Rosenschleier’, *G. tenuifolia*

POLYGONACEAE

Persicaria campanulata (Hook.f.) Ronse Decr. *Lesser Knotweed* ● h 6 ↑
Polygonum campanulatum J.D. Hook.

This is one of the forgivable garden knotweeds, told by its branched panicle with big (>2.5mm) pink tepals that are fused at the base for one quarter to half of their length.

Ascot : planted at a lakeside, east of Ascot Station [9268] in 1975. Still there and spreading in 2000.

East Berks: commonest in railway cuttings, in damp ground close to the trackbed. Bracknell, Reading, etc. Atlas 2000: [77], [86], [96]

West Berks: Atlas 2000: no records.

Persicaria wallichii Greuter and Burdet *Himalayan Knotweed* ● h 6
Polygonum polystachyum Wallich ex Meissner
Persicaria polystachya (Wallich ex Meissner) Gross, non Opiz

Aconogonon polystachyum (Wallich ex Meissner) M. Kr 1
Rubrivena polystachya (Wallich ex Meissner) M. Kr 1
Pleuropterypyrum polystachyum (Wallich ex Meissner) Javeid and Munshi

Occasional on railway banks and roadsides from garden outcasts. Another reasonable garden knotweed, told from *P. campanulata* by its free (not basally fused) white tepals, and from *P. alpina* by its longer styles (> 0.5mm) and truncate or cordate (not cuneate) leaf base.

East Berks: not in Druce. Introduced on waste ground, rare. Bearwood (1966), South Ascot (1968-75). Locally common by the railway east of Sunningdale station (1971-2008), just over the border in v.c.17. Atlas 2000: [77], [96]

West Berks: Calcot (LAN) [67] in 1958, Southcote [67] in 1961, Youlbury [40] in 1964, Midgham Green [56] in 1985 Turners Green [56] in 1988. Atlas 2000: [40], [56], [67].

Persicaria bistorta (L.) Samp. *Common Bistort* hs 6
Polygonum bistorta L.
Bistorta major Gray

Damp meadows and pastures, and in patches in damp woodland rides; very local but often in considerable quantity; absent from the chalk ridge and rare in East Berkshire. Most of the plants look as if they are garden escapes or garden relics.

NVC: S 8

Ascot: in damp grass at Sunningdale Park in 1998.

East Berks: Blackwater meadows at Camberley, Arborfield, Whistley Mill. Park Place, Sandhurst (1965). Recently at Park Place, Wellington College, Scotlands. <1% (1km²). Atlas 2000: all except [76], [87]

West Berks: Hungerford and Kirby House [36], Stanford-in-the-Vale [39], Benham Lock and Hamstead Marshall [46], Welford [47], Lockinge [48], Appleton Upper Common and Abingdon [49], Wytham [40], Crookham Common, Thatcham and Woolhampton [56], Stanford Dingley and Yattendon [57], West Hagbourne [58], Thrupp [59], Wallingford [68]. Atlas 2000: [28], [36], [38], [39], [40], [56], [57], [58]

Persicaria amplexicaulis (D. Don) Ronse Decr. *Red Bistort* ● h 6 ↑
Polygonum amplexicaule D. Don
Bistorta amplexicaulis (D. Don) E. Greene

A common cottage garden plant seen occasionally as a persistent garden outcast on rough ground in villages, quarries, railway embankments and such like. Seldom seen outside of gardens in towns.

Silwood Park: scattered remnants of cultivation marking the ghosts of former herbaceous borders. The Greenhouses, Silwood Lodge, Ashurst, The Cedars, Virginia Water Lodge. The plants in the perennial bed at The Greenhouses were still locally dominant in July 2007 despite 20 years of neglect.

Ascot: by the lake east of Ascot Station (1975), Ascot Place (1998) and on Locks Ride (1999).

East Berks: not in Druce. Trackside at Bowsey Hill 1961-83, Twyford tip (1963), Leighton Park (1968), Lily Hill Park Bracknell (OXF) in 1977, Smallmead tip (1988). Recently at Beech Hill

Coverts, Three Mile Cross, Shinfield, suburban Reading, Twyford, The Holt, Bowsey Hill, Shurlock Row, Binfield Park, Larks Hill, Newell Green, Hawthorne Hill, Braywoodside, Thimble Farm, Prospect Hill, Burchett's Green, Maidenhead, Cookham, Foliejon Park, Kimbers Farm. 4% (1km²). Atlas 2000: all except [78], [86]

West Berks: rare, Burghfield Common [66] in 1974. Atlas 2000: [36], [46], [66]

Persicaria amphibia (L.) Delarbre *Amphibious Bistort*
Polygonum amphibium L.

hyd 7

A terrestrial as well as an aquatic plant. The floating leaves are common in ponds, rivers and ditches. The terrestrial plant is locally frequent in damp arable fields and on stream sides and waste ground. Uncommon on the chalk but frequent in a wide variety of damp and wetland habitats elsewhere. The floating leaves could be mistaken for the much rarer *Potamogeton natans*.
NVC: A 3,8,10-12,15,17,19,20; M 22,27; OV 30,31; S 5,6,10,12-15,19,23

Silwood Park: very local and uncommon. The Willows and The Rookery, both in damp shade. The floating form has never been seen in The Lake.

Ascot: locally abundant in full sun on unusually dry soil in The Triangle at the northern tip of Ascot Racecourse, and in ditches on The Heath. Frequent on damp ground at the edge of the track immediately in front of the new grandstand during construction work in August 2005. Also at Blacknest Park, Sunningdale Village and South Coworth. The floating form is locally abundant on the northern shore of Virginia Water. Local on the western edge of Frognall Pond [941682] in the Marist Convent (1971-2008) with both floating and terrestrial forms (but never recorded from Silwood Park, just downstream across London Road).

East Berks: on the banks of the R. Thames at Windsor Racecourse and in ditches on the clay. The floating form is abundant in the R. Thames at Wargrave, Cookham and elsewhere, on Billingbear lakes and Sandhurst lakes. Occasional to the north of 70, but rare to the south of this line. Common as a terrestrial plant in Swallowfield. Common on railway ground at Kings Meadows Reading in September 2007. 13% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys, but rare or absent in the interior (north of 70 and south of 85). Atlas 2000: all squares

Persicaria capitata (Buch.-Ham. ex D. Don) H. Gross *Red Bistort*
Polygonum capitatum Buch.-Ham. ex D. Don

• h 6 ↑

An occasional hanging basket plant found increasingly on pavements and waste ground in towns. Leaves marked with a conspicuous V-shaped purple band. Can be grown as ground cover in milder areas, but not fully hardy with us. An invasive alien in subtropical parts of the world, often dominating track-side banks.

Silwood Park: grown in CABI's open Polytunnel in 2004, presumably as a screening species in the campaign to find a biocontrol agent for *Fallopia japonica*. A single patch, 65cm long, in the pavement to the right of the Refectory door, obviously escaped from last year's hanging basket, on 26 September 2006, along with *Erigeron karvinskianus*. Still there in small quantity on 20 October 2009. There was no trace of the plant here on 15 July 2012, but the *Erigeron karvinskianus* was thriving.

East Berks: on a derelict site off the main shopping street in downtown Reading [7173] in September 2002.

West Berks: a window-box escape in Wantage [3988] in 1999, growing in paving cracks outside the Blue Boar where the bench seat protects it from trampling.

Persicaria maculosa Gray *Redshank*

th 6

Polygonum persicaria L.

Persicaria maculata (Raf.) Fourr., non Gray

Wet places, ditches, cultivated ground, marshes, waste places, found abundantly in all the districts. First record Sunninghill (Sir Joseph Banks, 1773). Least common on the chalk and on very acid soils. Attacked by larvae of the beetle *Chaetocnema concinna*.
NVC: OV 4,8,9,10,12,13,14,19,21,22; S 12,14,15,19,23

Silwood Park: a common component of the arable seed bank on our acid, sandy soil. Pound Hill, Oak Mead, Silwood Bottom, Ashurst Four Acre Field. Also in the seed bank under long-term grassland in Nash's Field, Rush Meadow, Church Field etc. Frequent on disturbed waste ground, especially during construction of the Science Park (when seeds were imported with topsoil) and around the Greenhouses and Header House. Locally abundant at the foot of the graveyard at Ashurst following soil disturbance associated with the erection of the rabbit fence in 2002. Common in damp grassland amongst rushes in Pond Field, flowering on 2 September 2007 after the rushes had been cut down twice in 2007. Occasional from the seed bank at Ashurst Lysimeters on 29 July 2009, following herbicide treatment in spring 2009 and cultivation in mid June. Common from the seed bank in trenches and earthworks around Silwood Farm on 26 July 2009 during the construction of the new house. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	0	25

East Berks: disturbed ground throughout. 40% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Persicaria x condensata (F.W. Schultz) Soják = **P. maculosa** x **P. mitis**

West Berks: records (without specimens) from Wytham Meads [40] in 1941, and South Hinksey [50] in 1897.

Persicaria lapathifolia (L.) Delarbre *Pale Persicaria*

th 6

Polygonum lapathifolium L.

Polygonum nodosum Pers.

A weed in cultivated ground, damp waste places, manure-heaps, and disturbed ground. "Especially abundant in turnip and mangold crops and by river-banks on dredged mud" (Druce). Common and widely distributed, but absent from the chalk. Told critically from *P. maculosa* by the shape of the

fruits; they are biconcave or planoconcave in *P. lapathifolia* (biconvex in *P. maculosa*). The pale yellow flower is not a reliable diagnostic character, but the sessile yellow glands give the upper stem a distinctive feel.

NVC: OV 4,7,13,21,26,29,31-33

Silwood Park: uncommon in the arable fallows at Ashurst, Pound Hill and Silwood Bottom, but locally frequent in July 2003 and September 2005 following late spring cultivation inside the new deer fence in Silwood Bottom (it appears to thrive better on late spring cultivation than does *P. maculosa*).

Ascot: abundant and locally dominant on soil piles and bare ground during construction of Ascot Racecourse in August 2005. Still there, but much less common in September 2006.

East Berks: first record Sunninghill (Sir Joseph Banks, 1773). Much less frequent than *P. maculosa*. Growing in a fallow set-aside field dominated by *Sinapis alba* by Easthampstead Road [837667] in June 2003. Abundant amongst vegetable crops in the market garden at West End in Warfield on 30 August 2003. 6% (1km²). Atlas 2000: all squares

West Berks: frequent in the Kennet valley, occasional in the Northern Loop, absent or rare everywhere else (absent north of 70 and south of 95). Atlas 2000: all except [48], [68], [69]

Persicaria hydropiper (L.) Delarbre *Water-pepper*

th 7

Polygonum hydropiper L.

Wet places, ditches, stream-sides, damp hollows, and ruts in woods. Rather common, especially in the heathy districts, and in Windsor Great Park, marking the damper places of the rides by its profuse growth. Possessed of a long-lived seed bank. First record Sunninghill (Sir Joseph Banks, 1773). Frequent in the damp woods of the Loddon. Generally distributed but absent from most of the chalk. Attacked by larvae of the weevil *Apion difforme*.

NVC: A 17; M 23,27; MG 10,13; OV 21,28-32,35; S 6,7,10,23

Silwood Park: dominant on damp, rutted woodland rides behind the Japanese Garden. Common in wet woodland at Great Mead. Grassy tracks through The Willows, Rush Meadow, Kissing Gate, Water Meadow. In the water at the shallow end of the Japanese Garden pond growing with *Sparganium erectum* under the *Taxodium distichum*. In June 2002 by the Kissing Gate, on the rubble dumped during the improvements to Church Lane footpath in winter 2001-02. Abundant in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005, especially on the damp tractor track. Dominant in damp ruts at the edge of the broken tamac beneath Paddy's Oak behind the Refectory on 4 September 2007 and 20 September 2009. A single plant in the grassy triangle between The Farm and The Lake on 29 August 2011. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	3	1	6

Ascot: damp shady tracks around Englemere Pond, Johnson's Pond, Frostfarm Plantation.

East Berks: locally frequent, but absent from large areas. 9% (1km²). Atlas 2000: all squares

West Berks: frequent in the south, occasional in the Thames valley but absent or rare in the interior (north of 75 and south of 95). The dominant plant in rutted tracks through Fence Wood [5171]. Atlas 2000: all except [48], [58], [68], [69]

Persicaria mitis (Schrank) Assenov *Tasteless Water-pepper* th 6 ↓

Polygonum mite Schrank

Polygonum laxiflorum Weihe

Persicaria laxiflora (Weihe) Opiz

Polygonum hydropiper L. subsp. *mite* (Schrank) Munshi and Javeid

A local speciality of ditch sides, streams, ponds, cattle-poached wet grassland and damp arable fields in low-lying situations; local. Scarce on wet mud or peat, exposed in summer as the water level falls in ditches, wet hollows and cattle trampled patches, always in full sun. Much confused in the past with both *P. hydropiper* and *P. minor*, but distinguished as follows: (1) lacks the sharp taste of *P. hydropiper*; (2) bristles at the tips of stipules > 3mm; (3) brownish or yellowish glands lacking or very sparse on the perianth and peduncle; (4) leaves less than 5 times as long as wide; (5) large achene 2.5-3.5mm (*P. minor* has achenes 2-2.5mm); (6) erect (not drooping) inflorescence.

East Berks: Swinfield, Bulmarsh, Bray, Wargrave, Aston, Riseley, Whitley Green. Ruscombe Lake (1959), Warfield (1963), Queens Eyot [912784] (1988), Cock Marsh (2000-04). Rare in the Thames valley, absent to the south of 70. <1% (1km²). Atlas 2000: [88], [97]

West Berks: rare in the Northern Loop, extinct at many of its southern sites, and absent from all of the interior. Sandleford [46], Cothill [49], Newbridge, Harts Weir, Northmoor Loch, Swinford and Wytham [40], Thrupp and Barton Court [59], South Hinksey [50]. Atlas 2000: [40], [50]

Persicaria x wilmsii (Beck) Soják = **P. mitis** x **P. minor**

West Berks: collected by Druce at Wytham [40] in 1892 (OXF) and from Abingdon [59] in 1897.

Persicaria minor (Huds.) Opiz *Small Water-pepper* th 8 ↓

Polygonum minus Hudson

Wet meadows and marshy ground, margins of ponds and ditches; local and rare. Bowen considered the species to be extinct in Berkshire but it has been re-found at Cock Marsh. It often grows with both *P. hydropiper*, *P. maculata* and *P. mitis* (see above) along with *Bidens cernua* and *B. tripartita*. Slightly more acidic and higher nitrogen preferences. Declined with the loss of farm ponds and greater reduction of summer water levels. Told from *P. mitis* by its longer (more than 5 times as long as wide) and narrower leaves (2-15mm wide) and by its smaller achenes (2-2.5mm).

Ascot: first record Sunninghill (BM) by Sir Joseph Banks in 1773.

East Berks: Riseley (1897), Coleman's Moor (1897), Hurst (1918), Whitley Green, Loddon Bridge (1897). Cock Marsh [880867] (1982-2004), so still worth looking for. <1% (1km²). Atlas 2000: [88]

West Berks: extinct. Formerly at South Hinksey [50] in 1860, Wytham meads [40] in 1897, Abingdon [59] in 1918 and 1943. Atlas 2000: no records.

¶ **Persicaria** *P. affinis* 'Darjeeling Red', *P. affinis* 'Donald Lowndes', *P. affinis* 'Superba', *P. amplexicaulis*, *P. amplexicaulis* 'Atrosanguinea', *P. amplexicaulis* 'Firetail', *P. bistorta* 'Superba', *P. campanulata*, *P. tenuicaulis*, *P. vacciniifolia*, *P. virginiana* 'Painter's Palette', *P. weyrichii*

Fagopyrum esculentum Moench *Buckwheat*
Fagopyrum sagittatum Gilib., nom. inval.

● th 7 ↓

Waste places and open places in woods, especially where game birds are fed. Rarely sown, often casual in arable fields, waste ground and tips. Used as hamster food and bird-seed.

Silwood Park: first record 30 September 2007; a single plant in paving at the base of the wall to the east of the entrance to the Nuclear Reactor Building. It is surprising that it has taken so long for this common casual species to appear in Silwood (it was photographed in habitat and in close up).

East Berks: Arborfield, Reading, Twyford, the railway at Maidenhead, Sunninghill, Windsor. Reading, Owlsmoor, Cookham, Woodley tip (1969), at 8, Glebe Road Reading, as a bird-seed alien (1984). <1% (1km²). Atlas 2000: [88]

West Berks: Inkpen [36], Inholmes and Shefford Woodlands [37], Newbury [46], Catmore [48], Abingdon [49], Lowbury [58], Didcot, Long Wittenham and Little Wittenham Wood [59]. Atlas 2000: [48], [49], [40], [59]

[Polygonum arenarium Waldst. & Kit. *Lesser Red-knotgrass*]
Polygonum arenarium subsp. **pulchellum** (Loisel.) Thell.

● th 7

Uppermost bracts partly scarious and not exceeding the flowers. Told from *P. patulum* by smaller (2mm) dull achenes, and tepals divergent and completely pink at the apex.

A grain and wool alien on tips and waste places. No Berkshire records, but worth looking for.

Polygonum patulum M. Bieb. *Red-knotgrass*

● th 7

A grain and wool alien on tips and waste places. Told from *P. arenarium* by its large (3mm) shiny achene (not small (2mm) and dull) and the tepals erect and green to the apex along the midrib.

East Berks: Smallmead tip (1971). Atlas 2000: no records.

West Berks: Abingdon [49] in 1918, on arable land at North Hinksey [40] in 1942, South Hinksey tip [50] in 1955-57. Atlas 2000: [40]

Polygonum arenastrum Boreau *Equal-leaved Knotgrass*

○ th 7

Polygonum calcatum Lindman

Polygonum aequale Lindman, nom. illegit.

Polygonum aviculare L. subsp. *aequale* Asch. & Graebner

Paths and disturbed waste ground, and arable fields; frequent, with a preference for compacted sandy soil. This is the small, completely prostrate Knotgrass that has neat, evenly sized leaves resembling the teeth of a double-sided comb. In *P. aviculare* the leaves decline in size to the tip of the shoot, and the plants are often upright.

NVC: OV 9,10,18,19,21-23

Silwood Park: a few patches on compact ground of the car park of St Michael's Church at Ashurst on 27 July 2007 (the first record for Silwood). It is possible that seeds were introduced here on vehicle types from the Ascot Racecourse site (see below). Still occasional and locally frequent here, on

compacted hardcore in the Church car park at Ashurst on 27 July 2010. Very rare by William Penney Hall on 2 September 2007, a single plant on compacted bare soil in the track from Silwood Bottom to the Machinery Centre.

Ascot: surprisingly rare, given the sandy soils of the area. Compact ground in roadsides in South Ascot in 2003. Until 2007 there were no records from Silwood Park, but it was growing nearby on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003 (the site was built-over in 2004). Abundant on the sandy construction site on Dry Arch Road on 2 August 2004. Very common on soil piles and disturbed soil during the construction of Ascot Racecourse in August 2005.

East Berks: Swallowfield, Worton Grange, Riseley, Shinfield, Sandpit Lane, Newlands Farm, West Whitley, Alder Moor, Langley Common, Culham House, Sonning, Wokingham, Lock's House, Sandhurst, Brookers Row, Pebblestone Copse, Knowl Hill, Larks Hill Green, Cox Green, Warfield Park, Old Beams, throughout Maidenhead, Bracknell, Culham Court, Shepherds Lane, Hurley, Cookham, March house, Thames Lock, Kimbersfarm, Old Windsor Lock, on the Thames-side path to Runnymede Island. 7% (1km²). Atlas 2000: all squares

West Berks: common on dry waste ground in Faringdon [2895] and New Hinksey [5204] in 2002. By recent roadworks, as on the A34 Newbury bypass [46] in 2001. Compacted gravel on the churchyard path at Peasemore [4577] in 2004. On the old airfield at Greenham Common [501653] in 1988 (RNG). Atlas 2000: all except [47], [48], [49], [57], [69]

Polygonum aviculare L. *Knotgrass*

th 7

Polygonum littorale sensu Gren. & Godron et auct., non Link ex Pers.

Polygonum heterophyllum Lindman, nom. illegit.

Polygonum aviculare L. var. *heterophyllum* Munshi and Javeid

Cultivated and waste ground, road-sides, gardens, heaths, about field-paths, etc. Abundant and universally distributed. Often a large, sprawling upright plant with unequal-sized leaves (cf. the prostrate *P. arenastrum*). Very common at the very edge of the kerb on busy roadsides, tolerant of both spray and constant buffeting.

NVC: OV 3,4,7-10,12-16,18-21,28,29,31,33; S 7,15,23

Silwood Park: common on disturbed ground near buildings and in arable fallows at Silwood Bottom, Ashurst Four Acre Field and Pound Hill. Long persistent in the seed bank. Almost never found in undisturbed vegetation. Occasional in Ashurst Lysimeters on 3 September 2008 after herbicide treatment rather than cultivation in autumn 2007. I find it odd that this is classed as a native, while *P. arenastrum* is classed as an archaeophyte.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	5	16	29

Ascot: locally dominant on soil piles and disturbed soil during the construction of Ascot Racecourse in August 2005.

East Berks: 63% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Polygonum rurivagum Jord. ex Boreau *Cornfield Knotgrass*
Polygonum aviculare L. subsp. *rurivagum* (Jordan ex Boreau) Berher

○ th 7 ↓

Arable fields on chalk and on disturbed road verges. Flowering later than most *Polygonum* spp. (late July or August), and continuing to flower through November. Much confused with *P. aviculare* from which it is distinguished by leaves less than 4mm wide (more than 5mm in *aviculare*) and by tepals gaping near the apex to reveal the achene. In Berkshire it typically grows with *Kickxia spuria* and *Arenaria serpyllifolia* subsp. *leptocladus*.

Silwood Park: first recorded on 20 September 2010 at Ashurst Lysimeters, following a no-cultivation and no-herbicide year in 2009-10. There was a dense mat of prostrate plants in flower and fruit in a patch about 5m long roughly 4m inside the fence parallel with the road at the Silwood end of the plot. Probably imported with topsoil following decontamination of the Lysimeters in summer 2003, which would mean that the seeds were at least 8 years old at germination. The fruits were clearly visible between the open tips of the relatively narrow tepals, and the widest leaves were just 3mm across the middle.

Ascot: no other records

East Berks: “This rather pretty form is found in dry sandy soil as at Sonning, Shinfield, Hurley, Ambarrow, Sandhurst, Bracknell, Binfield, Bray; rather frequent in this district” (Druce). Bowen, on the contrary, considered this plant to be a rare colonist of waste ground, and had no records from this area. On the grounds of Sutton’s seeds by the A4 in eastern Reading [733737] from 1913-79 (RDG); the site is now a modern industrial park with tidy, mown lawns of absolutely no botanic interest. Atlas 2000: [76], [77]

West Berks: Stanford-in-the-Vale, Bowling Green and Buckland Warren [39], Broadis Cottage [40], Didcot Station [59], Cholsey [6086]. In a sandy field margin north of Buckland Warren [338965] in August 2006 (Kevin Walker). Atlas 2000: [28], [29], [36], [40], [59]

Fallopia japonica (Houtt.) Ronse Decr. *Japanese Knotweed*
Reynoutria japonica Houtt.
Polygonum cuspidatum Siebold and Zucc.
Polygonum compactum J.D. Hook.

● h 7 ↑

One of the most serious problem plants in Britain (see also *Rhododendron ponticum*). Druce knew the plant and would have recorded it if it had been naturalised by 1897. First recorded in Abingdon in 1918. By Bowen’s time it was on river banks, roadsides and waste ground “seldom in quantity but spreading rapidly ... well established only in damp spots” (Bowen). Now it is widespread on waste ground, roadsides, railway land and waste ground in towns, forming more or less extensive jungle-like thickets to the complete exclusion of all other vegetation. The plant was originally introduced as a garden ornament, and was hugely popular in Victorian times “outside in the pleasure ground or plantation, or by the waterside where there is enough soil, they may be very handsome indeed” (Robinson, 1870). No one has planted it on purpose since its invasiveness was recognised.

It is a great mercy that the plant does not set seed in Britain, otherwise its spread might have been even more rapid and more extensive. British plants are almost all octoploid females and there are no males at all, so what little seed you find, tends to be of hybrid origin. Recent genetic studies indicate that all the tested clones are identical which means that the entire British population might consist of a single genetic individual, propagated vegetatively. All of the individuals you see have been moved to

where they grow by people. Fragments of rootstock are moved about on diggers and other construction equipment, while cut-up sections of stem, washed downstream after misguided attempts at weed clearance, can root in damp places.

It is targeted for weed control by a number of local councils, but their eradication attempts are neither sufficiently concerted nor sufficiently exhaustive to be effective. The plant may soon be the target of biological control attempts, and research is currently underway at CABI, Silwood Park, to look for biocontrol agents (both pathogens and insects) in Japan.

Silwood Park: fortunately local and uncommon. Silwood Lodge, especially in the northern part of the garden, around the edges of the Science Park car park adjacent to East Lodge, at the eastern edge of Nash's Copse, below the cedar trees on Drive Lawns since 1971 (still there in 2004). The large patch by the Storage Garages on South Gravel had been there since before 1971 but was destroyed in 1987 during the construction of the Science Park. By the pond at Heronsbrook. A single stem in nettles beneath the Ha Ha in May 2003. Still present in the garden of East Lodge on 26 August 2007 and rarely on the opposite side of the fence in the car park of the Science Park.

Ascot: rather local as at Tittenhurst Park by Whitmore Lane, Englemere, Ascot Station, Coronation Road, Kings Beeches, Sunninghill, on the edge of Sunningwell Bog by the playing fields in South Ascot and in the centre of the wood by the stream, Charters Road, Sunningdale, Blacknest Park, New Road, North Ascot, Ascot Place. The most extensive population is in the woodland remnant in South Ascot on the road to the southern entrance of Ascot Station by the Citroën Garage on Lyndhurst Road. This population has been attacked repeatedly by weed control operatives, but all to no avail. It just springs right back the next year, while they are working (probably just as fruitlessly) somewhere else.

East Berks: the railway-side plants between Ascot and Reading were spot-treated with herbicide in June 2004. 19% (1km²). Atlas 2000: all squares

West Berks: first record at Tilehurst (LAN) [6874] in 1956. Scattered in towns and villages. Atlas 2000: all squares

Fallopia x bohémica (Chrték & Chrtková) J.P. Bailey = **Fallopia japonica x F. sachalinensis**

Intermediate in leaf size and leaf shape. Very uncommon, but possibly under-recorded.

East Berks: on waste ground by the railway station carpark at Wokingham [806687] on 18 September 2004. This plant had leaves 20cm long, shallowly cordate or truncate, and short inflorescences of male flowers (both parents are typically female in Britain).

Fallopia sachalinensis (F. Schmidt ex Maxim.) Ronse Decr. *Giant Knotweed* • h 7
Polygonum sachalinense F. Schmidt ex Maxim.
Reynoutria sachalinensis (F. Schmidt ex Maxim.) Nakai
Reynoutria vivax J. Schmitz and Strank

A statuesque plant of roadsides and waste ground, much less common than *F. japonica* and not naturalised in Berkshire to the extent that it is in north-west Britain, occurring as scattered clumps rather than extensive, dense thickets. The leaves have heart-shaped (cordate not truncate) bases and are up to 40cm long (not less than 15cm).

Silwood Park: extinct. A large patch grew through the eastern boundary fence at Sandyride (1971-80), but this was destroyed during the construction of Princess Gate.

Ascot: the small patch growing entangled in the wire mesh fence of the Racecourse car park opposite Ascot Fire Station has remained in exactly the same spot, and stayed exactly the same size, for more than 30 years (1968-2004). Also a large, dense stand below the pond in the magnificent abandoned garden at King's Beeches [934668] (1979-2004): long may it escape the property developers.

East Berks: not in Druce, and first record from near the Old University in Reading in 1960, Knowl Hill in 1963, Bearwood in 1966 (still there in 2004). Recently at Newlands, Rivermead, Lines Road, Hurst. The best thicket is on the west side of the B3030 road opposite Whistely Green [792741]. 1% (1km²). Atlas 2000: [76], [77], [87], [96]

West Berks: Wick Hall [59] in 1963, Abingdon tip [59] in 1963, Marcham [49] in 1966, Crookham Common [56] in 1966, Turners Green [56] in 1987. Atlas 2000: [29], [49], [56], [59]

Fallopia baldschuanica (Regel) Holub *Russian-vine*

• m 8 ↑

Polygonum baldschuanicum Regel

Polygonum aubertii L. Henry

Bilderdykia aubertii (L. Henry) Mold.

Reynoutria baldschuanica (Regel) Mold.

Reynoutria aubertii (L. Henry) Mold.

Bilderdykia baldschuanica (Regel) D. Webb

Fallopia aubertii (L. Henry) Holub

Hedges, railways and waste ground near gardens and rubbish tips. Rare in Bowen's time, now common and widespread in towns and villages. It is always planted, even in relatively remote kinds of places, being much used as "Mile-a-minute-vine" to grow over and bury unsightly buildings, storage tanks or boundary fences. Produces foaming white masses of flowers in early autumn, especially on fences adjacent to railway lines.

Silwood Park: widely planted on the Science Park to hide unsightly objects like the garden shed in East Lodge. Planted in 1988, the building was effectively buried by 1992. Also planted on the fence at the Playground in Cheapside. The plants growing on the fence between the Science Park Car Park and East Lodge were cut down in August 2007, leaving only a few surviving stems in the dead Cherry Tree in the garden of South Lodge; these plants had threatened to swamp the *Quercus variabilis*, *Q. suber* and *Sorbus* on the edge of the car park. Growing abundantly through the temporary builders' fencing on 28 August 2008 during construction work at East Lodge before the new fence to the Science Park was built on 2 September 2008.

Ascot: South Ascot, Ascot Station, Sunninghill, Charters Road, Sunningdale, in the hedge behind South Ascot church. Self sown on ruined walls at Froggnall [940681] in September 2005.

East Berks: not in Druce. West Reading, Whiteknights, Whitley, Earley, Earley Station, Winnersh Triangle, Bulmershe, Wokingham, Sonning, Bisham, Knowl Hill, Hurst, Holyport, Binfield, Ryeish Green, Cookham, Maidenhead, etc. Common on railway ground at Kings Meadows Reading in September 2007. 16% (1km²). Atlas 2000: all squares

West Berks: first records Cothill [49] in 1953 and Knowl Hill [87] in 1963. Locally abundant on old walls in Wytham [4708] in 2002. In a hedge by the railway at Radley Station in 2002. On walls around the car park in Lambourn [3378] in 2004. Locally dominant on banks at Newbury Station car

park [4666] in September 2006. In the roadside hedge at Brimpton [557647] on 29 September 2009. Atlas 2000: all except [47], [57], [58], [69]

Fallopia convolvulus (L.) Á. Love *Black-bindweed* ○ th 7

Polygonum convolvulus L.

Bilderdykia convolvulus (L.) Dumort.

Reynoutria convolvulus (L.) Shinn.

Weed of cornfields, garden ground, hedge-banks, etc. Generally distributed over the cultivated portion of the county. Frequent except on the very acid soils. Climbs in a clockwise spiral.

NVC: OV 1,3,4,7-10,12,14,15,16,18,19,24,33; S 23; U 1

Silwood Park: an arable weed at Pound Hill, Ashurst Four Acre Field, Silwood Bottom and on compact waste ground at the Met Tower and East Lodge. In the seed bank below long-established grassland at Oak Mead when the field was cultivated in 1996; also in the adjacent Church Field. Frequent at the foot of Ashurst churchyard in August 2002 in soil disturbed during the erection of the new rabbit fence in spring 2002. In the Pound Hill disturbance timing experiment, it is commonest on April-cultivated land. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	13

Ascot: abundant and locally dominant on soil piles and bare ground during construction of Ascot Racecourse in August 2005.

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 10% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Fallopia dumetorum (L.) Holub *Copse-bindweed* th 7 †

Polygonum dumetorum L.

Bilderdykia dumetorum (L.) Dumort.

Reynoutria scandens (L.) Shinn. var. *dumetorum* (L.) Shinn.

A self-pollinated annual with a long-lived seed bank, found on woodland margins, open woodland, coppice and hedgerows on well drained soils. Probably extinct, but still surviving in Oxfordshire.

East Berks: Druce recorded the plant from “near Sandhurst on the fence of a garden but I think native” (OXF) in 1895. Extinct by Bowen’s time. Atlas 2000: no records.

West Berks: rare and declining, Boars Wood (OXF) [4802] in 1895, Appleton (OXF) [4401] in 1891, Tilehurst (OXF) [6874] in 1896, Tubney Wood [40] in 1968 (RNG), White Hart Wood [40] in 1965. In a chicken run at Winterbrook [6088] in 1963. Atlas 2000: no records.

Muehlenbeckia complexa (A. Cunn.) Meisn. *Wireplant* ● m 6

Polygonum complexum Cunn.

A rampant scrambler with tough, wire-like stems, burying everything in its path.

Silwood Park: originally planted as part of an Australian theme-bed and almost instantly regretted. Fortunately not spreading beyond where it was planted. In the beds outside CABI and on the south-facing front of North Block it forms an impenetrable tangle, well over 2m deep.

Rheum x hybridum Murray *Rhubarb*

• hs 5

Rheum x rhabarbarum auct., non L.

Rheum x rhapsodicum auct., non L.

Rheum x cultorum Thorsrud and Reis., nom. nud.

Frequent on old allotments and occasional as an outcast on roadsides and in ditches.

Silwood Park: in the north-west corner of Drive Field, a remnant of the kitchen garden that once fed the whole Silwood community. Ashurst Four Acre Field, several plants in May 1996, persisting after the student allotments had moved from here to Silwood Bottom.

East Berks: not in Druce or Bowen. Occasional as a garden or allotment relic, and in shady corners of waste ground in villages. West Whitley, Bulmershe, Woodley, Sheeplands Farm, Twyford, Upper Wargrave, Wokingham, Gardener's Green, Westcott, Great Hollands, Altmere, Prospect Hill, Holloway, Bray, Guild House. 3% (1km²). Atlas 2000: all except [76], [78]

West Berks: on roadsides at Ashdown Park [28] in 1963, East Hanney [49] in 1980, Botley [40] and Grandpont [50] in 2002. In abandoned allotments by the railway at South Moreton [59] in 2002 and Steventon [49] in 2003. Atlas 2000: [28], [36], [46], [49], [40], [50]

Rheum 'Ace of Hearts' *Ornamental Rhubarb*

• hs 5

The leaves are purple-red beneath. Planted for foliage effect in bog gardens.

Ascot: by the Outflow Stream in the newly-completed grounds of Heronsbrook in 2004.

¶ **Rheum** *R.* 'Ace of Hearts', *R. australe*, *R. x hybridum* 'Timperley Early', *R. palmatum*, *R. palmatum* 'Atrosanguineum', *R. palmatum* var. *tanguticum*

Rumex acetosella L. *Sheep's Sorrel*

hs 5

Acid grasslands, dry fields, heaths, parks, waysides, locally abundant on nutrient-poor, sandy or gravelly soils. "I once saw a sheet of this plant in the portion of Windsor Great Park near Virginia Water which, when lighted up by the setting sun, shone with a glorious orange red tint, quite unlike that of any other British plant" (Druce). Tolerant of rabbit grazing, often increasing in abundance when grazing pressure is high, and forming a close-knit carpet with *Galium saxatile* over considerable areas of acid heathland. It declines in years when rabbit grazing is reduced and the grasses grow taller. Leaves are galled by the weevil *Apion frumentarium* = *A. haematodes*, and mined by *Stigmella acetosae*.

NVC: H 2; OV 1,4,9,20; U 1,2,4,20; W 16,23

Silwood Park: the seventh most frequent herb in Silwood Park. An abundant component of the turf in acid grasslands that are close grazed by rabbits, as at Gravel Pit, Ashurst graveyard and on Guinness's Slope. Slightly less abundant in more nutrient rich acid grasslands like Nash's Field, where it is

rapidly eliminated by the addition of nitrogen and phosphorus fertilisers (replaced by *R. acetosa*). Responded vigorously to the erection of a rabbit fence on The Heath in 2000, it was locally dominant by July 2002. An abundant weed of the fallow at Pound Hill; particularly abundant in May 2003 following the severe spring drought. *R. acetosella* var. *tenuifolius* is the only Silwood species capable of growing on pure sand: locally common on the sand pile behind the BP Greenhouses in May 2003-04. The plants did not appear until several years after the sand was delivered, so it is unlikely that the seeds were imported with the sand. Abundant in the seed bank beneath the fenced cultivated plot in Block E in Nash's Field on 28 July 2007. I watched a baby rabbit eating several flowering shoots and their associated leaves in Nash's Field on 15 May 2008 (so much for 'avoidance'!). On 15 June 2009, there were many plants on a soil pile created in spring 2009 by the construction firm carrying out the building work at Silwood Farm stripping the topsoil from part of the ground inside the security fence at the Met Tower. On Royal Wedding Day 29 April 2011 the plant was common on the autumn-cultivated part of Ashurst Four Acre Field, in a year when *Arabidopsis* was dominant. The most frequent herb recruited from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
19	24	47	44	75

Ascot: dominant on a construction site on Dry Arch Road where the topsoil had been removed to expose bare sand (2 August 2004).

East Berks: confined to acid soils. 38% (1km²). Atlas 2000: all squares

West Berks: frequent in the south and in the Thames valley, but rare or absent in the interior (north of 80 and south of 95). Atlas 2000: all except [28], [68], [69]

The distributions of the two subspecies have not been worked out in Berkshire, but subspecies *pyrenaicus* is clearly rare if it is present at all. You need to rub the ripe fruits in the palm of your hand. If the tepals come off, the plant is subspecies *acetosella*. If the tepals are tightly stuck to the achene, so that they do not rub off, the plant is subspecies *pyrenaicus*. The amount of synonymy indicates the extent of confusion that has existed in the past.

Rumex acetosella subsp. **acetosella**

hs 5

Rumex acetosella L. var. *tenuifolius* Wallr.

Rumex tenuifolius (Wallr.) Á. Love

Rumex acetosella L. subsp. *tenuifolius* (Wallr.) O. Schwarz

Acetosella multifida (L.) Á. Love

Silwood Park: common in acid grasslands and occasional in fallow arable land. Particularly abundant following October cultivation of the north-west corner of Silwood Bottom (north of the wooded 1977 succession plot) in July 2005.

East Berks: widespread and locally abundant throughout.

[Rumex acetosella subsp. **pyrenaicus** (Pourr.) Akeroyd]

hs 5

Rumex pyrenaicus Pourret

Rumex angiocarpus auct., non Murb.

Rumex acetosella L. subsp. *angiocarpus* auct., non (Murb.) Murb.

Acetosella vulgaris (Koch) Fourr. subsp. *pyrenaica* (Pourret) Á. Love

East Berks: no records, despite repeated search.

Rumex scutatus L.

• hs 6

Silwood Park: grown in CABI's open Polytunnel in 2004, presumably as a screening species in the campaign to find a biocontrol agent for *Fallopia japonica*.

Rumex acetosa L.

hs 5

Rumex acetosa subsp. **acetosa** *Common Sorrel*

Pastures, meadows, wet grasslands and woods. Very frequent and generally distributed in an extraordinary range of habitats. "The meadows of the Thames Valley often exhibit this species in considerable abundance" (Druce). In the Park Grass experiment at Rothamsted this species shows itself to be an extremely good competitor for phosphorus, peaking in abundance on plots to which nitrogen and potassium have been added for more than 140 years (e.g. Plot 10). The leaves are often scarred by conspicuous blotch mines of *Pegomyia nigritarsus*. The commonest aphid is *Aphis acetosae*. It is the host plant of the Small Copper butterfly, *Lycaena phlaeas*.

NVC: CG 2-5; M 22,24,27; MG 1,4-7,9,10; OV 10,19,26,41; S 1,3,11,15; U 1,2,4,20; W 1,4,10,22,23,25

Silwood Park: grassy places throughout. In small quadrats, this is even more frequent than *R. acetosella*, and is Silwood Park's joint fourth most frequent species of herb along with *Veronica chamaedrys* (only *Stellaria graminea*, *Senecio jacobaea* and *Rubus fruticosus* agg. are more frequent in randomly located 1m² quadrats). Note, however, that it is rather *infrequent* at the largest scale. Particularly common in the churchyard at Ashurst. On 15 June 2009, there were many plants on a soil pile created in spring 2009 by the construction firm carrying out the building work at Silwood Farm stripping the topsoil from part of the ground inside the security fence at the Met Tower.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
22	30	40	40	66

Ascot: locally frequent in the sunny parts of Sunningwell Bog below St George's School [929684].

East Berks: 82% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Rumex acetosa subsp. **ambiguus** (Gren.) Á. Love *Garden Sorrel*

• hs 5

Rumex ambiguus Gren.

Rumex rugosus Campder

An uncommon garden plant, grown for enlivening salads. Long persistent in grass on old allotments.

East Berks: Reading, Windsor, Maidenhead.

West Berks: Kintbury & Hungerford [36], Lambourn [37], Newbury [46], Osney [40].

Rumex salicifolius T. Lestib. *Willow-leaved Dock*

• hp 7 †

Rumex salicifolius Lestib. f. subsp. *triangulivalvis* Danser

Rumex triangulivalvis (Danser) K.H. Rech.

Rumex salicifolius Lestib.f. var. *triangulivalvis* (Danser) J.C. Hickman

East Berks: not in Druce. A rare casual; Twyford Mill (1925) (**OXF**).

West Berks: Didcot [59] in 1927 (**OXF**)

Rumex pseudoalpinus Höfft *Monk's Rhubarb*

• hp 7

A rare relic of former cultivation, typically found near ancient buildings.

West Berks: recorded from Buckland Warren [39] by Ms. J Buchanan in 1981, but without a specimen.

Rumex hydrolapathum Huds. *Water Dock*

hel 7

Sides of rivers, streams, canals and ditches on nutrient rich mud. A prominent feature of the Thames-side vegetation. Occasional but absent from the chalk and from acid sands.

NVC: OV 26,32; S 3,-6,12,13,15,18,26; W 5

Ascot: no records.

East Berks: occasional by the Thames and Loddon, but absent or rare in the interior. Gravelly Bridge, Hartley Court, Barkham, Reading Station, Rivermead, St Patrick's Bridge, Wargrave, Keephatch, Bisham Abbey, on the riverbank wall at Bisham Church, Cock Marsh, Thames Lock, Maidenhead, in the pond at Paley Street, Widbrook Common, Cookham, The Bounty, Frogmore, Boulter's Lock. Abundant in the water of the only surviving open pond at Cock Marsh [882868] on 17 June 2008. 4% (1km²). Atlas 2000: all squares

West Berks: occasional in the Kennet valley, rarer in the Thames valley but absent from the interior (north of 75 and south of 90) except from places like Wantage old canal [38]. On the margins of the lake at Benham Park [4367] and by the R. Kennet nearby [4266]. Particularly fine on the edge of the R. Thames at Cholsey Marsh [5886]. Atlas 2000: all squares

Rumex x lingulatus Jungner = **R. hydrolapathum x R. obtusifolius**

East Berks: Sandford Mill [77] in 1938 (**RNG**).

West Berks: St Neots Mead Abingdon [59] in 1892 (**OXF**), Midgham [56] in 1892 (**OXF**), Shefford [37] in 1927 (**OXF**).

Rumex cristatus DC. *Greek Dock*

• hs 6 ↑

Rumex patientia auct., non L.

Roadsides and waste places, much increased in recent years. This statuesque, early-flowering dock is a conspicuous feature of roadsides and motorway verges throughout the county, thriving best where the grass is cut just once a year, in mid- or late summer. Its local distribution suggests that the seeds were introduced by roadworks contractors, perhaps in the seed mix they used to landscape the finished work; the plants are frequent on the new part of the verge, but absent from immediately adjacent older verge.

Ascot: the first records were from the Peanut Roundabout and the verges opposite Cranbourne Court in 1990. It is still there, but has not increased much in abundance over 10 years (about 10 plants in 2000). By June 2008, the plant was rare at Cranbourne Court, reduced to a single clump at the southern edge of the new verge. Sunningdale Cemetery, in the verge below the Civil Service College in 1999. There were 6 plants in the verge at King's Corner by the back entrance to Charters on 1 May 2004.

East Berks: not in Druce, the early records were all centred on Reading. First seen there in 1948, then on Reading tip (LAN) in 1962, Smallmead tip (1969), Basingstoke Road (A33) in 1982, and by the R. Kennet in Waterloo Meadow (1985). Recently from the M4/A33 Interchange, Shinfield Court, Lower Earley, Newlands, Carter's Hill, Bearwood, Reading Station, by the M4 east of the A329M interchange, Fobney, Rivermead, Rose Kiln Lane, Kennet Mouth, Thames Valley Park, on the Berkshire bank opposite Henley, Gardener's Green, Beenham's Heath pumping station, Howlane Bridge roundabout, Braywoodside roundabout, Holyport, Maidenhead, by the R. Thames at Maidenhead Court, Lee Lane, Nobbscreek Farm, Kingsmead. It is frequent in both verges of all four approaches to the new Howe Lane/Drift Road roundabout [860752], marking out precisely the extent of the roadworks involved, and suggesting that the plant was introduced in the seed mix used to landscape the works when the roundabout was built in 1997. A clump of 3 plants in the eastern verge of the A329 above Beale Park, just south of the new railway bridge [617779] on 21 June 2008. On 7 June 2009 there was a good clump of plants in the north-western verge of the Peanut Roundabout at Cranbourne Court [936719], but the population further north towards the Squirrel Roundabout was much reduced. 4% (1km²). Atlas 2000: all squares

West Berks: much less common than in East Berkshire. On the verge near the Duck Decoy at Aldermaston [6063] in 2000. Roadside verges in Wantage [3987] in 2002 and [415884] in 2004. Roadside verge near Paices Wood [5842 6272] in 2003. Roadside by the Kennet bridge in Hungerford [341690] in June 2004. Atlas 2000: [37], [47], [66]

Rumex x dimidiatus Hausskn. = **R. cristatus x R. crispus**

East Berks: on Reading tip [77] in 1962 (det. J.E. Lousley) (LAN). By the M4/A33 interchange in Reading [6970] in 2000. By the new football stadium [706701] in 2001.

Rumex x lousleyi D.H. Kent = **R. cristatus x R. obtusifolius**

East Berks: by the M4/A33 interchange in Reading [6970] in 2000.

Rumex crispus L. *Curled Dock*

hs 6

Rumex crispus subsp. **crispus**

Cultivated ground, wet and dry grasslands, pastures, road-sides, waste ground, railways, river-sides. Abundant and generally distributed in a very wide range of disturbed habitats. Host plant of the metallic green beetle *Gastrophysa viridula*.

NVC: M 27; MG 1,7,9,10,13; OV 3,4,8-10,13,18-23,26,29,31,33; S 4-7,12,14,18,22,23,25,26; W 6,8

Silwood Park: Pound Hill, Ashurst, Rush Meadow, Cheapside, Silwood Bottom, verges of London Road, etc. Much less abundant than *R. obtusifolius* and *R. sanguineus*. Commonest in the second year fallow after soil disturbance, as in Silwood Bottom. Particularly abundant on North Gravel in May 2003 and on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. On 25 May 2004 the population of plants on the Pot Standing at The Greenhouses had the most

spectacular aphid infestation I have ever seen; all of their stems were solid black with crowded *Aphis fabae* from top to bottom. Occasional on March-cultivated strips in the Pound Hill Cultivation Timing Experiment on 15 July 2008. Inside the new fences of the NutNet Experiment in Heronsbrook Meadow just 3 months after fence erection on 14 July 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	20	32

East Berks: 87% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Rumex x sagorskii Hausskn. = **R. crispus x R. sanguineus**

Fairly common where the parents grow together.

East Berks: by the M4/A33 interchange in Reading [7070] in 2000.

West Berks: Swinford Bridge [40] in 1943 (RNG) (det J.E. Lousley).

Rumex x pratensis Mert. & W.D.J. Koch = **R. crispus x R. obtusifolius**

Rumex x acutus auct., non L.

By far the commonest hybrid in the genus, told by its intermediate leaves and low fertility. Likely to be found wherever the parents grow together.

East Berks: Sonning (1897), Shinfield Green (1897), Riseley (1897), Sunninghill (1897), Twyford (RNG) in 1932. By the M4/A33 interchange in Reading [7070] in 2000.

West Berks: Enborne and Greenham Common [46], Beedon and Winterbourne [47], Frilford Heath [49], Swinford Bridge, Boars Hill and between Cumnor and Wytham [40], Hermitage [57], Stratfield Saye and Silchester [66].

Rumex conglomeratus Murray *Clustered Dock*

hs 5

Ditches, sides of streams, damp waste ground, disturbed grassland, roadsides, etc. Occasional but locally frequent in all the districts, except the upper chalk downs and in the heathy ground of the south. All 3 tepals bear a well-developed oblong tubercle (whereas there is only 1 well developed tubercle in the otherwise similar, and much commoner *R. sanguineus*).

NVC: M 22; MG 7,9,10,13; OV 24,26

Silwood Park: not found until 28 August 2004 at Ashurst Lysimeters, on topsoil imported in August 2003.

Ascot: uncommon in Blacknest Park in June 2001.

East Berks: all along the banks of the R. Thames from Reading to Old Windsor. On the stonework at the edge of the R. Thames in Bisham churchyard. Cock Marsh, Nuptown, Coppid Beech roundabout, Hurley, Aston, Remenham, Wargrave, Cookham. Common, with 3 of its hybrids, on disturbed ground near the M4/A33 interchange in Reading in 2000 (*see below*). In the dry streambed of the flood-

control channel in East Maidenhead in August 2002. Uncommon on the massive soil pile at Silver Springs Farm south of the Drift Road [887749] on 17 June 2008. 24% (1km²). Atlas 2000: all squares

West Berks: occasional, but local, throughout. Atlas 2000: all except [68], [69]

Rumex x abortivus Ruhmer = **R. conglomeratus x R. obtusifolius**

Reported from Berkshire by Stace (1975) without further details. Occurs frequently where the parents grow together.

East Berks: by the M4 in Reading [7070] (2000).

Rumex x schulzei Hausskn. = **R. conglomeratus x R. crispus**

East Berks: by the M4 in Reading [7070] (2000).

Rumex x knafii Celak. = **R. conglomeratus x R. maritimus**

Reported from Berkshire by Stace (1975) without further details. Occurs occasionally where the parents grow together, but this coincidence is rather rare in Berkshire.

East Berks: by the M4 in Reading [7070] (2000).

Rumex sanguineus L. *Blood-veined Dock*

hs 6

Rumex condylodes M. Bieb.

Damp oak and alder woods, swamps, hedges, roadsides and waste ground. Locally frequent, but rare on the chalk. In virtually every spinney, hedge-bank and shady lane.

NVC: M 22,27; MG 9; OV 26,27; W 1,5,6,8,10,12,21,24

Silwood Park: woods and woodland margins throughout: Great Mead, The Willows, Ashurst, Farm Wood, Water Meadow, Nash's Copse, Cascade Marsh, etc. Damp waste ground at Tractor Sheds and South Lodge, and shady roadsides on Buckhurst Road. Frequent in the ferruginous flush at the bottom of Farm Wood in 2007. Common in most of the swamp communities at the bottom of Wood Bank in June 2007. Occasional on 13 July 2007 in quite dry ground inside the Rhododendron Enclosure, close to the double gates; still restricted to this spot in July 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	2	7	10	28

East Berks: 77% (1km²). Atlas 2000: all squares

West Berks: widespread in the Kennet valley (south of 75) and in the Thames valley, but scattered and rare in the interior on the chalk and the clay. Atlas 2000: all except [69].

Rumex pulcher L. *Fiddle Dock*

hs 6 ↓

Roadsides, churchyards, disturbed dry grassland and waste ground near houses. Rare and sporadic, decreasing.

East Berks: Remenham Farm near the river and at Shurlock Row; extinct at its two stations since the turn of the century.

West Berks: scattered through the Thames valley but extinct at about half of its former sites. Compton Beauchamp [28], Faringdon churchyard, Hungerford and Kintbury [36], Buckland [39], East Ilsley [48], Frilford, Cothill, Abingdon and Drayton [49], Cholsey and Streatley [58], Sutton Courtenay, Didcot and Barrow Hills [59], Burghfield [66], Wallingford [68]. Most of the modern records are from churchyards, as at Marcham [49], Aston Tirrold and Cholsey [58] and Long Wittenham [59] all in 1990. Particularly common at Drayton [479945] in 1996. Atlas 2000: [29], [48], [49], [58], [59], [66], [67], [68]

Rumex obtusifolius L. *Broad-leaved Dock*

hs 6

Horse pastures, disturbed grassland, waysides, waste places, water meadows, orchards, etc. Very common and widely distributed. Highly unpalatable to horses, and a conspicuous increaser under horse grazing. Its abundance in an otherwise close-cropped pasture is a sure sign of overgrazing by horses. Host plant of the bright red weevil *Apion minutum*. The leaves are often scarred by the large blotch mines of *Pegomya bicolor*. The commonest aphid on Dock is *Aphis rumicis*.

NVC: MG 1,6,7,9,10; OV 9,10,13,14,18-23,26,27,29,31-33; S 5,23; W 6

Silwood Park: much the commonest of Silwood's docks, found in all sorts of wet and grassy places in sun. Replaced in shaded habitats by *R. sanguineus*. The densest population is on damp ground at the northern end of the Walled Garden, where the plant was the subject of experimental work on leaf-surface populations of *Bacillus thuringiensis* (*Bt*) in 2002-03. Also abundant in the grassy triangle between Silwood Farm and The Lake. Locally dominant in the north-east corner of Silwood Bottom in July 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	4	10	23	48

East Berks: 98% (1km²) only *Trifolium repens*, *Dactylis glomerata*, *Plantago lanceolata*, *Plantago major* and *Poa annua* are more frequent at this scale. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Rumex x dufftii Hauskkn. = **R. sanguineus x R. obtusifolius**

East Berks: by the M4/A33 interchange in Reading [6970] in 2000.

Rumex palustris Sm. *Marsh Dock*

hs 6

A casual with us, most commonly found on freshly landscaped topsoil, presumably from a long-lived seed bank. The native habitat is wet nutrient rich mud at the edge of ponds and in marshes. It is curious that so much apparently suitable habitat in Berkshire should be unexploited.

Silwood Park: on bare ground on the Reactor Bank, presumably from dormant seed dug up when the foundations of the wind tunnel were excavated. Lasted for one year in 1982, then never seen again, despite attempts to bring it back by soil disturbance.

East Berks: not in Druce. A rare casual on rubbish tips. Reading tip in 1963 and on an old tip at [712710] in 1988. Atlas 2000: [96]

West Berks: a casual at Tilehurst [67] in 1963. Atlas 2000: [67]

Rumex maritimus L. *Golden Dock*

hs 6

Marshy places, margins of rivers and ponds and waste places that are waterlogged in winter.

Silwood Park: grown in CABI's open Polytunnel in 2004, presumably as a screening species in the campaign to find a biocontrol agent for *Fallopia japonica*.

East Berks: by the Garthing Lane bridge at Ruscombe Lake [813763] in 1959. Six plants near Field Farm on the southern shore of Theale Lakes [66979 70314] found by Bill Helyar on 20 August 2005. Atlas 2000: [77]

West Berks: Sandford Lasher [50] in 1890, Pangbourne [67] in 1952, Sulhamstead [66] in 1970, gravel pits at Theale [6369] and [6569] in 1981, 1982 and 1983 (about 10,000 plants). Atlas 2000: [67]

Rumex x callianthemus Danser = **R. obtusifolius x R. maritimus**

A rare hybrid in Berkshire, because of the scarcity of *R. maritimus*.

East Berks: found by Paul Stanley (det. Eric Clement) on disturbed ground with both parents and many other dock hybrids opposite the Greyhound Stadium near the M4/A33 Interchange [710704] during the roadworks associated with construction of the new roads around Madejski Stadium in August 1999 (see p. 156).

PLUMBAGINACEAE

¶ **Limonium** *L. bellidifolium*, *L. platyphyllum*, *L. platyphyllum* 'Violetta'

Armeria maritima Willd. *Thrift*
Statice maritima Miller

• ch 4

Occasionally grown as a rockery plant or on garden walls, and sometimes found as a garden escape or self-sown into paving cracks. Although a British native, all of our records are introduced plants.

Ascot: no records. Not in Silwood Park.

East Berks: Spencer's Wood, Three Mile Cross, Mill House, Shinfield Court, Lower Earley, Wheatlands, Barkham, Coppid Hill, Furze Covert, Heath Ride, Westcott, Popeswood, Great Hollands, Carter's Hill, Pitlands Farm, Binfield Park, Woodlands Park, Little Foxley, West Dedworth. 4% (1km²). Atlas 2000: all except [78], [96]

West Berks: occasional in towns and villages throughout. Rampant on a wall top above the R. Thames beneath Little Wittenham bridge [567934] in February 2004. Atlas 2000: [28], [36], [38], [59], [68]

¶ **Ceratostigma** *C. griffithii*, *C. griffithii* ‘Album’, *C. plumbaginoides*, *C. willmottianum*, *C. willmottianum* ‘Forest Blue’

¶ **Plumbago** *P. auriculata*

PAEONIACEAE

The key distinction in identifying peonies is between the tree peonies derived from *P. suffruticosa* and *P. delavayi*, and the herbaceous perennials derived from *P. officinalis* and *P. lactiflora*. All of them produce viable seeds, but plants take 4 or 5 years to reach flowering size, during which time they are likely to succumb to frosts or to slugs. They resent disturbance, and do not transplant well as root-stocks.

[Paeonia mascula (L.) Mill. *Peony* ● h 4
Paeonia officinalis L. var. *mascula* L.
Paeonia corallina Retz.

The old peony records are unreliable, because plants tended all to be recorded as *P. mascula* whatever their true identity. There are no convincing records from Berkshire.

Paeonia officinalis L. *Garden Peony* ● h 4

Common and persistent as garden throw-outs (living up to 50 years) on rough ground in towns and villages.

Silwood Park: two plants beneath *Fothergilla* shrubs in the ‘autumn bed’ by Block F; mode of introduction unknown, perhaps imported with topsoil but certainly not intentionally planted. May 2002. Not seen again.

East Berks: first record from a pit in Bisham Wood (1968). Common in towns and villages throughout. 9% (1km²). Atlas 2000: all squares

West Berks: waste ground on Faringdon industrial estate [2895] and at Newbury [4767]. Atlas 2000: [28], [36], [38], [68]

Paeonia suffruticosa Andrews *Tree Peony* ● n 4

More frost sensitive and wind-prone than *P. officinalis*, tree peonies are found much less frequently as garden escapes or throw-outs.

East Berks: occasionally self-sown in gardens in Reading, Hazelwood House and Frogmore. On waste ground at Broadmoor [8463] and in Cookham Dean [8785] in June 2003. Atlas 2000: [77], [87], [97]

¶ **Paeonia** *P. cambessedesii*, *P. delavayi*, *P. delavayi* var. *ludlowii*, *P. lactiflora* ‘Bowl of Beauty’, *P. lactiflora* ‘Duchesse de Nemours’, *P. lactiflora* ‘Festiva Maxima’, *P. lactiflora* ‘Karl Rosenfield’, *P. lactiflora* ‘Sarah Bernhardt’, *P. mlokosewitschii*, *P. officinalis* ‘Alba Plena’, *P. officinalis* ‘Rosea Plena’, *P. officinalis* ‘Rubra Plena’, *P. suffruticosa*, *P. veitchii* var. *woodwardii*

ELATINACEAE

Superficially like Portulacaceae, the two waterworts are distinguished by the pedicel 0 or very short in *E. hydropiper* and stamens 8 (not 6 as in *E. hexandra*). Submerged, non-flowering plants can not be distinguished with confidence. Told from *Callitriche* spp. by the possession of stipules in *Elatine* spp.

Elatine hexandra (Lapierre) DC. *Six-stamened Waterwort* hel 7 ↓
Tillaea hexandra Lapierre

A local speciality of pond margins in very shallow nutrient-poor water, local and very rare. Scarce: an ephemeral on exposed wet mud or a full aquatic looking like *Callitriche* in the vegetative state. Grows with *Juncus bulbosus* on peaty sites and with *Littorella uniflora* on sandy sites. An annual, fluctuating widely in abundance. It can flower even when submerged.

NVC: A 22

East Berks: "Occurs in Virginia Water, near The Cascade, but this portion of the Lake is in Surrey; so far (1897) I have been unable to find it in the Berkshire part" (Druce). C.P. Petch found the plant on the Berkshire side of Virginia Water in 1946. It also occurs in Lower Lake in Sandhurst (OXF) in both sides of the Surrey / Berkshire border. It was in another pond, but nearly choked with *Littorella*, near Wellington College (OXF). Bowen considered the plant extinct at these 3 stations, but it was still present in the Surrey part of the pond in the Staff College Grounds in Camberley in 1952 (Lousley, 1976) and in 2002. Recent records include Heath Lake, Crowthorne [828652] in 1979 and 1987, and from gravel pits close to the Hampshire border by Yateley Bridge [828613] in 1977 (OXF) and [811623] in 1991. Common across the Hampshire border in lakes all over Bramshill Common [7560] and [7562]. Widespread in flooded gravel pits in the Blackwater Valley at Moor Green Lakes in 2000-03, especially in open habitats around the north and east margins of Grove Lake [8062]. Atlas 2000: [86]

West Berks: no records.

Elatine hydropiper L. *Eight-stamened Waterwort* hyd 7 †

A former local speciality, found on the sandy margins of two ponds. Bowen considered the plant extinct at both these stations. I, too, have looked for it and not found it.

East Berks: "excessively rare", found very sparingly in a pond near Sandhurst by Druce in 1896 (OXF).

West Berks: found in a pond at Mortimer [66] by E.C. Crutwell in 1917.

CLUSIACEAE

Hypericum calycinum L. *Rose-of-Sharon* ● chw 7

Hedges, shrubberies, plantations. One of the commonest ground cover plants for banks and hedge-bottoms; completely rabbit proof. Widespread in gardens in towns and villages throughout the county and commonly found in ditches, roadsides and waste ground. Long persistent in old abandoned gardens. Mostly planted, and much less frequently self-sown than *H. androsaemum* (it seldom sets viable seed).

Silwood Park: commonly planted as ground cover on the Science Park and dominant on the rockery in the Japanese Garden, but not naturalised (cf. *H. androsaemum*).

Ascot: garden relics are found in Sunninghill, Sunningdale and South Ascot.

East Berks: First record near Reading (1840), evidently introduced in 1676 by Sir G. Wheeler from Eastern Europe. Very abundant in Park Place where the rabbits do not touch it. Windsor Great Park. Park Place (1965), New Lodge (1966). Frogmore, South Ascot, Fleet Copse [7862]. 36% (1km²). Atlas 2000: all squares

West Berks: Buckland [39] in 1860, Newbury [46], Winterbourne Holt [47], Lockinge [48], Jarn Mound and Youlbury [40], Yattendon [57], Aston Tirrold [58], Padworth and Aldermaston Wharf [66], Sulham [67], Wallingford [68]. Atlas 2000: all squares

The two big shrubby hypericums with single, showy flowers are told apart as follows:

- | | |
|--|---------------------|
| 1. Flowers 6cm dia., anthers orange, styles longer than ovary | H. 'Hidcote' |
| 1. Flowers 5cm dia, anthers yellowish white, styles shorter than ovary | H. forrestii |

Hypericum 'Hidcote' = probably **H. cyathiflorum 'Gold Cup' x H. calycinum** • n 7

This is the common shrubby *Hypericum* of gardens. It has large golden flowers and pointed, neatly ranked narrow leaves. Its sterility means that it does not regenerate from seed, so all the plants found outside gardens must be outcasts or relics of cultivation. Not uncommon in towns, but never far from buildings. The flowers are 6cm across and the anthers are orange (not whitish yellow; see below).

Silwood Park: the dominant shrub in the post-1980 landscaping around the wartime buildings that now comprise the Refectory Block (the Refectory, Summer Room, Table Tennis Room and Bar). Growing (incongruously, some might say) with *Hebe 'Midsummer Beauty'* and Rosemary in a planting laid out by Head Gardener Colin Merryman in 1995. Dominant under the *Quercus faginea* on the Science Park. Around the base of the Outdoor Insectary. In the shrubbery at MScan.

Ascot: waste ground and abandoned gardens in Sunningdale, Sunninghill and South Ascot.

East Berks: commonly planted in Bracknell and Maidenhead, but rare as an outcast away from obvious sites of introduction on business parks and industrial estates. On stonework by the R. Thames in Maidenhead [9081] and on waste ground in Swallowfield [7264], Whitley [7270], Broadmoor [8463], Cookham Dean [8785] and Whitley Park [7873] in 2002. 3% (1km²).

West Berks: on waste ground near the canal in central Newbury [4767] in July 2002.

Hypericum forrestii (Chitt.) N. Robson *Forrest's Tutsan* • n 6

An uncommon garden plant, occasionally persistent in old gardens and rarely self sown outside. The plant has 5 styles (like *H. calycinum* but unlike *H. androsaemum* which has 3 styles) and the stem has no ridges (*H. calycinum* has 4-lined stems). The sepals have rounded rather than pointed tips and the plant is not rhizomatous (in contrast to *H. calycinum*). The stamens are whitish yellow (not orange as in *H. 'Hidcote'*).

Silwood Park: three individuals, self sown in pavement cracks outside the Stables at Silwood Farm on 27 August 2005 [941692]. Our plants had petals 30mm long and 22mm wide with sepals 8mm and anther filaments 12mm. The leaves were widest in the lower third, 60mm long and 30mm wide at their broadest point. The population had increased to more than 10 plants on the edge of the tarmac and below walls by 28 June 2007.

East Berks: first recorded from Silwood Park [9469] on 27 August 2005. No other records.

West Berks: no records

Hypericum androsaemum L. *Tutsan*

• n 6 ↑

Woods and hedges, damp waste ground, local and uncommon. Probably not native in Berkshire, but an occasional garden plant. Less often planted outside gardens than *H. calycinum* and then usually as *H. x inodorum* (see below).

East Berks: At the top of Bisham Woods, Park Place, Rose Hill, Billingbear Park, Bowsey Hill. Margins of woods and hedges, in small quantity and sporadic. On waste ground in West Reading, Hurley, Windsor. Wargrave Church, Martins Heron, Remenham Wood, High Knowl Wood, South Ascot. 9% (1km²). Atlas 2000: all except [86]

West Berks: notably aggregated, centred on Cold Ash and Hermitage; [56] and [57]. Rare or absent to the west of 45 and to the north of 85. Inkpen [36], Pusey House [39], Ilsley [48], Hockett Wood, Wasing, Brimpton Wood, Aldermaston Court churchyard, Harbourhill Copse and Beenham [56], Frilsham, Hampstead Norreys and Burnt Hill [57], Streatley Hill [58], Kennington [50], Mortimer West End and Burghfield [66], Bradfield, Pangbourne and Tilehurst [67]. Atlas 2000: [28], [29], [36], [46], [40], [56], [58], [59], [50], [66], [67]

Hypericum x inodorum Mill. *Tall Tutsan*

• hp 6

Hypericum x elatum Aiton

An occasional throw-out from gardens, and sometimes naturalized in damp shade or full sun. Like *H. androsaemum* but with bigger petals (7mm wide) and sepals (4mm wide) and stamens slightly longer than the petals. The commonest cultivar is 'Elstead' which has fleshy red fruits. Mass-planted in landscaping schemes, and commonly bird sown, often some distance from the planted individuals.

Silwood Park: abundantly naturalized on damp bare waste ground in partial shade on the north-west side of the Manor House. Commonly naturalized in the abandoned cold frames at the Horticultural Greenhouses. Seedlings also appear around the terrace of the Refectory. Never far from buildings. Sunninghill Crossroads, Drive Lawns, Croquet Lawns, Technology Transfer Centre, Flowers Halls. Uncommon in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a widely scattered plants on 27 May 2006; occasional here on 4 June 2007, close to the double gates and elsewhere. Locally dominant in a strip along the woodland edge behind Colditz (John Smith Hall) on 26 August 2007. Growing through the slats of the wooden seat by the east door to the Munro Building in June 2012, close to the *Sassafras* tree.

Ascot: commonly self-sown in Ascot, Sunningdale, Sunninghill and South Ascot.

East Berks: Smallmead tip [7069] from 1965 to 1988. Waste ground in Swallowfield [7264]. Naturalised on stonework by the R. Thames just west of the footbridge to the lock at Hurley [825842] in July 2002. Landscaping around industrial parks in Maidenhead, Windsor and Reading.

West Berks: Cothill pit and Kingston Bagpuize House [49], Jarn Mound [40] all post-1985. Occasional in hedges in the village of Kingston Bagpuize in July 2003.

Hypericum hircinum L. *Stinking Tutsan*

• n 5 †

Hypericum hircinum subsp. **majus** (Aiton) N. Robson

Hypericum hircinum L. var. *majus* Aiton

West Berks: collected by Druce at Southcote House [67] in 1893 (OXF).

Hypericum perforatum L. *Perforate St John's-wort*

hp 6

Grassland, waste places, open woods, woodland rides, hedges, bushy places on heaths, waysides; preferring sunny situations. Very common and generally distributed, though less common on clay soils. Replacing *Senecio jacobaea* as the dominant herb of heavily rabbit-grazed turf in Silwood and on Chobham Common. A seriously invasive pest of pastures where it has been introduced to temperate climates overseas. The target of successful biological control, using the chrysomelid beetles *Chrysolina quadrigemina* and *C. hyperici*, both of which can be found on the plant in Berkshire. The leaves are mined by *Fomoria septembrella*.

NVC: MG 1,9; W 8

Silwood Park: common in all the open, sunny places in grassland and waste ground, but present in less than 20% of the hectare squares. A serious weed in the north-east corner of Silwood Bottom with *Rumex obtusifolius* in July 2004. Locally abundant on the surviving fragment of North Gravel between the Greenhouses and the Student Residences. Common on the derelict pot standing at the greenhouses on 29 July 2007. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	10	18

East Berks: widespread and locally abundant, but with a curiously patchy distribution. Dominant on sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] (with *Glechoma* and *Fragaria*). Much the commonest of the St John's-worts. 45% (1km²). Atlas 2000: all squares

West Berks: common throughout. Atlas 2000: all squares

Hypericum x desetangsii Lamotte = **H. perforatum** x **H. maculatum** *Des Etangs' St John's-wort*

Told from *H. perforatum* by the sepals which are toothed (not entire) towards the apex and not drawn out into a long point, and from *H. maculatum* by the leaves which are hairless beneath and the stem with 2 raised lines (not 4).

West Berks: found in Padworth gully [6065] in 1963. Still there in 1978 (RNG).

Hypericum maculatum Crantz *Imperforate St John's-wort*

hp 6 ↓

Hypericum quadrangulum sensu L.(1754), non L.(1753)

Hypericum maculatum subsp. **obtusiusculum** (Tourlet) Hayek

Hypericum quadrangulum L. subsp. *obtusiusculum* Tourlet

Hypericum dubium Leers

Wet ditches, brook-sides, wood margins, very local and in small quantity. Told by its long petals (more than twice the length of the obtuse sepals), and its 4-ridged but unwinged stems.

East Berks: Wellington College (RNG) 1894-1918, Bulmarsh, Crazy Hill (1897), Colman's Moor (1897), R. Blackwater (1918). Not recorded by Bowen. Rare, but recent records from California Country Park, Dinton Pastures, Crazies Hill, Chawridge Bank, Brook Farm, Windsor Great Park. 1% (1km²). Atlas 2000: [76], [77], [78], [86], [87], [97]

West Berks: rare and declining, mainly along the upper reaches of the Thames from Lechlade [29] to Wytham [40]. Farncombe Down [27], Faringdon [29], Buckland Warren [39], Frilford (OXF) [49], Appleton Lower Common, Tubney Wood, Stroud Copse and Wytham [40], Greenham (OXF) [46], AWE Aldermaston and Crookham Common airfield [56], Hermitage pits [57], Upton Station [58], in a railway siding at Fulscot Bridge, Didcot [59], Aldermaston Soke [66]. Atlas 2000: [38], [39], [46], [48], [49], [40], [56]

Hypericum tetrapterum Fr. *Square-stalked St John's-wort* hp 6
Hypericum quadrangulum L.

Marshes, wet grasslands, river-banks, lake margins and brook-sides (as *H. acutum*); common and generally distributed, but absent from the chalk and the very acid soils. Attacked by the beetle *Chrysolina brunsvicensis*.

NVC: M 13,22,24; OV 26; W 5

Silwood Park: locally frequent; in wet grass by the Farm Road, in the damp grass between The Farm and The Lake, in Ashurst Four Acre Field, especially on the New Chalk Plots, locally common amongst brambles in Buckhurst Road Woods, and in Rush Meadow.

Ascot: frequent in the grassy triangle at the northern end of Ascot Race Course. By the lake in Blacknest Park. In Sunningwell Bog to the west of St George's Lane.

East Berks: damp grass by the R. Thames, and by the ponds at Billingbear. 6% (1km²). Atlas 2000: all squares

West Berks: widespread, but absent from a broad central band of the chalk (north of 75 and south of 85). Atlas 2000: all except [68], [69]

Hypericum humifusum L. *Trailing St John's-wort* chh 6

Heaths, forest rides, dry pastures on gravelly soil, sandy fields, and close-mown lawns on acid soils. Common and generally distributed in the heathy districts but absent from the chalk and the northern clays. Paths and disturbed ground in heaths and woods on acid soils. Usually prostrate. Told from a small *H. pulchrum* by its unequal sepals (2 shorter and narrower than the other 3) and shorter petals (less than twice as long as the sepals).

Silwood Park: lawns, paths and damp waste ground. Widespread but seldom abundant: Pound Hill, Nursery Field, Ashurst, Gravel Pit, Rookery Slope, South Lodge, Drive Lawns, Observatory Ridge, Manor House, Herons Brook, Science Park. Rare as a weed of cereal crops as at Pound Hill Field in June 1983. Survived demolition and reconstruction of the Croquet Lawn in 1985. Frequent in short, heathy grass between Buckhurst Road and the back of Science Park Units C-F. Locally abundant on the cinder path around the Plane Tree Lawn, dominating large areas of the path in June 2002 and still

locally abundant in 2006. Frequent on Farm Road Bank opposite Nursery Field on 1 June 2006. A rediscovery from short acid grassland on Rookery Slope on 27 July 2011 in Block A of the NutNet Experiment on the plot receiving P and K.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	14

Ascot: Rapley Lakes, Thornhill, Tower Hill, Swinley, Englemere, Woodland Ride, Heatherwood, Coronation Road, King's Beeches, Sunninghill, Charters Road, Sunningdale, Windsor Great Park. Locally frequent in heathy ground by the hockey pitch in Frognall [939677] in September 2005.

East Berks: widespread but never abundant. 7% (1km²). Atlas 2000: all except [77], [78]

West Berks: very local, and absent from most of the area. Redhill Wood [46], Tubney Wood [49], Wytham and the Northern Loop [40] and [50], Hockett Wood and AWRE Aldermaston [56], Ashampstead [57], Burghfield Common [66]. Atlas 2000: all except [38], [47], [48], [58], [59], [68], [69]

Hypericum pulchrum L. *Slender St John's-wort*

hp 6

Heaths, ditch banks and dry places in woods on acid soils. Usually upright. Told from the usually prostrate *H. humifusum* by its longer petals (more than 2 times as long as the sepals) and equal sepals (not sepals of 2 distinct sizes).

NVC: H 3; M 13; W 14

Ascot: Sunninghill, Coronation Road, Whitmoor Bog, Swinley, Kingsride, Dukeshill Allotment, Blaine's Allotment. Buttersteep, The Orangery, Ascot Heath, Kings Beeches. Not in Silwood Park

East Berks: Sonning, Earley Common, Wellington College, Marlow, Park Place, Farley Hill, Ambarrow, Bagshot Heath, Sandhurst, Sunningdale, Wishmoor Bottom, Bracknell, Riseley, Finchampstead, Twyford, Bearwood, Stubbing's Heath, Holliday Plain, on dry heathy banks throughout the Crown Estate Woodlands and Windsor Great Park. 8% (1km²). Atlas 2000: all squares

West Berks: found only in Kennet valley (south and east of a line from Hungerford [3070] to Goring [6080]) and in the Northern Loop of the Thames in [39], [49], [40] and [50]. Absent from the chalk and the northern clays, but occurring locally on higher ground where the chalk is overlain by acid soils, as at Bowden [616767] to the west of Pangbourne. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [28], [29], [38], [59], [68], [69]

Hypericum hirsutum L. *Hairy St John's-wort*

hp 7

Woods, copses, hedgerows and chalk grassland. Widely distributed and abundant on the chalk and the clay. Woodland rides, wood margins and hedge-banks on calcareous soils. Told from *H. maculatum* by the latter's hairless stems.

NVC: CG 4; W 8,12

Silwood Park: established below the brick wall of the cinder pot-standing at the Greenhouses; unintentionally introduced with plant material from a chalk woodland in Kent. First recorded in 1995, still there in 2004.

East Berks: first record Sonning (1800). Uncommon or absent south of 75. Common only on the chalk in the north. Locally abundant in the chalk woods at Bisham. Roadsides at Beenham's Heath [8475] in 2003. 5% (1km²). Atlas 2000: [77], [78], [86], [87], [88], [96], [97]

West Berks: widespread, but least common in the interior. Atlas 2000: all except [66], [68], [69]

Hypericum montanum L. *Pale St John's-wort*

hp 6 ↓

A local speciality, almost confined to the woods on the chalk. "In ye pits about the middle of Earley field and in ye land on ye right hand side of Loddon Bridge 3 miles from Reding" (Ray, 1680). A nationally scarce plant of warm, well drained soils on chalk on roadside banks, scrub, open ash woodlands, or in coarse grassland dominated by *Festuca ovina* and *Helictotrichon pratense*. Distinguished from *H. hirsutum* (which also has stalked black glands on the sepals) by the lack of conspicuous pubescence on its stems.

NVC: CG 2

East Berks: local and rare, mostly in dry beech woods on calcareous soil in the Thames valley, with an outlier at Finchampstead (1897). Remenham (1999), Ashley Hill (1966), Knowl Hill (1897), Bisham Woods (1961), Temple Golf Course (1984) Cookham Dean (1999). Bisham Wood, Wargrave, Finchampstead, Remenham, still found in the grounds of Park Place, Culham Court, Hurley, between Stubbings Heath and Ashley Hill. Bowen confirmed most of Druce's locations. Now extinct at 3 of its 7 former sites. Now restricted entirely to the northern loop of the Thames from Park Place [7781] and Remenham [7783], Quarry Wood [8685] to Winter Hill and Cock Marsh [8887]. <1% (1km²). Atlas 2000: [78], [88]

West Berks: very local, absent from the entire area, save for a wooded enclave of c.10km radius, centred on Upper Basildon. Ilsley [48], Upper Basildon, Streatley (RDG) and Ashampstead Common [57], Blewbury [58], Bagley Wood [50], Bradfield, Lower Basildon, Tilehurst, Great Bear Wood (RDG) and Sulham Wood [67]. On the railway embankment at Purley [657764] in September 2002. Atlas 2000: [48], [58], [50], [67]

Hypericum elodes L. *Marsh St John's-wort*

hel 6 ↓

Wet places on heaths, marshy margins of pools in heathy situations. Acid ponds and small pools in *Sphagnum* bogs; locally dominant but rare and decreasing. It forms a floating mat at the edge of a pond, where the *Molinia* tussocks give way to open water.

Ascot: locally abundant in shallow water on the southern edge of Englemere Pond, forming extensive rafts of foliage, and less frequently on the northern edge (1979-2004). By Sole's Pond to the east of Ascot Station in 1975. At the edge of Rapley Lake 1966-86. Tower Hill. Still at all of these sites in 2004.

East Berks: first record Bulmarsh Heath, two miles from Reading (1652). Sunninghill (1773), Windsor Great Park, Ascot, Bagshot Heath, Wellington College Lake, Sandhurst College Lake, Ambarrow, Caesar's Camp, Broadmoor, Owlsmoor, Long Moor, Bulmershe, Kings Mere, Heath Lake, White Moor. Confined to the south, but lost from many of its former sites as a result of urbanisation and pond filling. 1% (1km²).

West Berks: confined to the south, and centred on the commons from Newbury [46] to Burghfield [66]. Greenham Common [46], Sole Common and Snelsmore Common [47], Crookham Common,

Bucklebury Common and Cold Ash Common [56], Padworth Common, Mortimer, Burghfield, Aldermaston decoy pond [66]

Two large woody *Hypericum* spp. with 5 styles are to be found. The commonly planted *H.* 'Hidcote' has larger flowers but is sterile and so does not spread by seed. The rarer *H. forrestii* has showy but slightly smaller flowers but is fertile and so spreads by seed. They are told apart as follows:

Flowers larger (6 cm across), anthers orange, styles than the ovary *H.* 'Hidcote'

Flowers smaller (5 cm across), anthers yellow, styles than the ovary *H. forrestii*

¶ **Hypericum** *H. aegypticum*, *H. androsaemum* 'Albury Purple', *H. balearicum*, *H. coris*, *H. elodes*, *H. forrestii*, *H.* 'Hidcote', *H. x inodorum* 'Elstead', *H. kouytchense*, *H. x moserianum*, *H. x moserianum* 'Tricolor', *H. olympicum*, *H. olympicum* f. *uniflorum* 'Citrinum', *H.* 'Rowallane', *H. trichocaulon*

THEACEAE

¶ **Camellia** *C.* 'Cornish Snow', *C.* 'Cornish Spring', *C.* 'Doctor Clifford Parks', *C.* 'Freedom Bell', *C.* 'Inspiration', *C. japonica* 'Adolphe Audusson', *C. japonica* 'Akashigata', *C. japonica* 'Apple Blossom', *C. japonica* 'Ballet Dancer', *C. japonica* 'C.M. Wilson', *C. japonica* 'Doctor Tinsley', *C. japonica* 'Elegans', *C. japonica* 'Gloire de Nantes', *C. japonica* 'Grand Prix', *C. japonica* 'Hagoromo', *C. japonica* 'Jupiter', *C. japonica* 'Konronkoku', *C. japonica* 'Mars', *C. japonica* 'Masayoshi', *C. japonica* 'Mathotiana Alba', *C. japonica* 'Mercury', *C. japonica* 'Mrs D.W. Davis', *C. japonica* 'Nuccio's Gem', *C. japonica* 'Nuccio's Jewel', *C. japonica* 'Rubescens Major', *C. japonica* 'Scentsation', *C. japonica* 'Souvenir de Bahuaud-Litou', *C. japonica* 'Tricolor', *C.* 'Lasca Beauty', *C.* 'Leonard Messel', *C. reticulata* 'Arch of Triumph', *C. reticulata* 'Captain Rawes', *C. sasanqua* 'Crimson King', *C. sasanqua* 'Narumigata', *C.* 'Satan's Robe', *C.* 'Spring Festival', *C. x williamsii* 'Anticipation', *C. x williamsii* 'Brigadoon', *C. x williamsii* 'China Clay', *C. x williamsii* 'Daintiness', *C. x williamsii* 'Debbie', *C. x williamsii* 'Donation', *C. x williamsii* 'Elsie Jury', *C. x williamsii* 'Hiraethlyn', *C. x williamsii* 'J.C. Williams', *C. x williamsii* 'Jenefer Carlyon', *C. x williamsii* 'Joan Trehane', *C. x williamsii* 'Julia Hamiter', *C. x williamsii* 'Mary Christian', *C. x williamsii* 'Rose Parade', *C. x williamsii* 'Saint Ewe', *C. x williamsii* 'Water Lily'

¶ **Stewartia** *S. pseudocamellia*, *S. sinensis*

TILIACEAE

Tilia platyphyllos Scop. *Large-leaved Lime*

• mm 6

An alien planted tree in parks, shrubberies, etc. Occasionally self-sown. Told from the other two Limes by its leaves which are softly pubescent beneath.

NVC: W 8

Silwood Park: locally frequent as self-sown individuals in The Rookery, facing the edge of the Cricket Wicket, amongst myxomatosis woodland with *Quercus robur* and a few *Tilia x europaea*; these plants appear to date from the late 1960s. Vigorous young planted trees in the clearing behind the Japanese Garden.

Ascot: rare as a planted tree, yet occasionally self-sown.

East Berks: hedges and plantations in very small numbers. Swallowfield, Bearwood, Ascot, Windsor South Forest. Hurley, Temple Park, Dungrove Hill, Hiltons Covert. Locally dominant and self-sown in Bisham Wood [859854] in 1988. Quentin Groom found the plant by the Kennet and Avon canal on 15 August 2008 [636698]. 1% (1km²). Atlas 2000: [76], [88], [97]

West Berks: Buscot and Faringdon [29], Stanford-in-the-Vale [39], Chilton Down, Lockinge Park, East Ilsley and AERE Harwell [48], in an alder wood at Fyfield [49], Midgham Park [56], Little Wittenham and Sutton Courtenay [59], Bagley Wood [50]. Atlas 2000: [28], [29], [39], [48], [49], [56], [57], [50], [66]

Tilia x europaea L. *Lime*

● mm 6

Tilia x vulgaris Hayne

Principal host for mistletoe *Viscum album* in our area; very striking when leafless in winter, some trees appear laden down with the parasite. Occurs as a planted tree throughout the county. Known at once from the other two limes by the possession of abundant epicormic shoots (burs) on its lower trunk. The red pin galls that are often so abundant on the upper surface of the leaf are made by gall-forming mites called *Eriophyes tiliae*. Lime trees are a problem close to car parks because of the copious honeydew produced by the aphid *Eucallipterus tiliae* which causes the leaves to become blackened by sooty mould. Other galls include globose galls *Eriophyes tetratrichus*, brown spots *E. liosoma*, petiole gall of midge *Contarinia tiliarum*, and edge roll gall of *Dasyneura* spp.

Silwood Park: The seedlings are commonly found in grassland, but they seldom become trees, presumably because they are grazed off by voles, rabbits or deer. A few self-sown trees in the woodland flanking the western edge of the Cricket Wicket. The pair of tall trees by the Stable Yard entrance to the Manor House were the first Silwood Limes to support Mistletoe, but the parasites were cut down in the early 1980s by Ray “Chain Saw” Davies. Fortunately, they have subsequently recolonised, and in 2004 there are Mistletoe’d Lime trees in four places: Ashurst Four Acre Field, Graveyard Boundary Drive Field and Manor House.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	1	1	5	32

East Berks: common in almost every village (1839); fine trees in Windsor Great Park and in Park Place. Good avenues in Broadmoor [8463]. 34% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Tilia cordata Mill. *Small-leaved Lime*

mm 7

There may be some natives, but most individuals are planted trees in scattered localities, rarely as plantations (e.g. Enborne Copse [433660]). Told from *T. x europaea* by the way it holds its flowers obliquely erect above the foliage (not pendant amongst the foliage).

NVC: W 8,10

Silwood Park: very local and rare. A massive ring-coppiced individual (basal diameter c.1.5m) with 8 roughly equal trunks regrowing from the rim, amongst bluebells in the western part of Nash’s Copse [9424 6923] in 2005.

Ascot: planted in wild-looking vegetation on the western edge of Ascot Racecourse. Not self-sown in Silwood Park.

East Berks: hedges and parks in very small numbers. Easthampstead Park, White Waltham, Bracknell, Windsor Great Park, Frogmore. 1% (1km²). Atlas 2000: [76], [86], [87], [88], [96], [97]

West Berks: Shrivenham [28], Watchfield [29], Kingston Lisle [38], Redhill Wood [4264] and Oaken Copse, Enborne [46], Foxcombe [40], Bucklebury Common [56], Yattendon [57], Streatley [58], Little Wittenham [59], Bagley Wood [50], Rush Court [69]. Atlas 2000: [28], [29], [38], [46], [40], [56], [57], [58], [59], [50], [66], [67], [69]

¶ **Tilia** *T. americana*, *T. amurensis*, *T. cordata* ‘DeGroot’, *T. cordata* ‘Erecta’, *T. cordata* ‘Greenspire’, *T. cordata* ‘Handsworth’, *T. cordata* ‘Winter Orange’, *T. x euchlora*, *T. x europaea* ‘Wratislaviensis’, *T. henryana*, *T. heterophylla* ‘Continental Appeal’, *T. insularis*, *T. intonsa*, *T. japonica*, *T. kiusiana*, *T. koreana*, *T. laetevirens*, *T. ledebourii*, *T. mandshurica*, *T. maximowicziana*, *T. mongolica*, *T. oliveri*, *T. ‘Petiolaris’*, *T. platyphyllos* ‘Rubra’, *T. tarquetii*, *T. tomentosa* ‘Brabant’

STERCULIACEAE

¶ **Fremontodendron** ‘California Glory’ is the hardy hybrid between *F. californicum* and *F. mexicanum*.

MALVACEAE

Malope malacoides L. ● th-h 6 †

An uncommon garden plant of Mediterranean origin, seldom escaping.

East Berks: found by J.G. Everett at Clewer [9576] in 1902; det. C.C. Townsend (OXF).

Hibiscus trionum L. *Bladder Ketmia* ● th 6

Alien casual from bird-seeds. Petals pale yellow with violet basal patch.

East Berks: Reading tip [77] in 1962

West Berks: Kennington [50] in 1963

¶ **Hibiscus** *H. syriacus* ‘Hamabo’, *H. syriacus* ‘Meehanii’, *H. syriacus* ‘Oiseau Bleu’, *H. syriacus* ‘Pink Giant’, *H. syriacus* ‘Red Heart’, *H. syriacus* ‘Woodbridge’

¶ **Sphaeralcea** *S. fendleri*, *S. munroana*

Malva moschata L. *Musk-mallow* h 7

Field borders, waysides, dry or sandy pastures, woodland rides, old grassland, roadsides, motorway verges and waste places in small quantity, but locally frequent. Long-lived and persistent at its sites.

Absent from the northern clays and from very acid soils. A great adornment to summer, and one of our most attractive native wildflowers.

NVC: MG 1

Silwood Park: avoided by rabbits and hence particularly conspicuous when in bloom in closely grazed turf. Locally frequent in Nursery Field, Rush Meadow, Pound Hill, Church Field, Rookery Slope, Oak Mead, Kissing Gate, Nash's Field (the big plant in the grazed part of Block K has its fruits grazed off by roe deer each year), and on the mown bank below the Ha Ha. The clump of plants on North Gravel in 1980 survived the construction of Southwood Halls and now prospers in clearings in the woodland that was planted as part of the landscaping in 1982. Also common where sown, as in the New Chalk Plots, and the cultivation experiment in Oak Mead; it is unusual in being one of the few sown species to recruit outside the rabbit fences. In June 2007 it was present on 11 out of 60 rabbit-grazed plots. Ruderal in pavement cracks around the Header House on 10 July 1985 but the site was destroyed by the construction of the BP Greenhouse. The plants growing next to Ashurst Road near the *Carpinus betulus* 'Fastigiata' were particularly fine in July 2002 when the group contained 12 large individuals (there was only one plant here in July 2007). There were only 5 survivors in the New Chalk Plots by June 2003 and just one was seen on 7 June 2007. There was a minor recovery in the following year with 6 plants seen on 3 September 2008. White-flowered plants locally frequent on the dry stone wall at South Lodge (1980-2007, but the site was destroyed during building works in summer 2008), and on the dry bank of Drive Lawn nearby in July 2005. The Nursery Field population was 8 plants on 23 June 2006. A large plant on the edge of the gravel within the Seed Bank Enclosure in Nursery Field on 28 June 2007. Occasional in the New Chalk Plots at Ashurst in August 2010. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: Tower Hill, Coronation Road, Woodlands Ride, Sunningdale, Windsor Great Park. A massive plant in the new landscaping at the corner of New Mile Road on 29 June 2007 after the follow-up work on the new race course was completed. On Ascot Station car park on 28 October 2009.

East Berks: scattered and uncommon. In the verges of the A329(M) motorway between Bracknell and Reading. Nuptown. Waste ground at Cain Road Bracknell in 2005 and 2007. The white-flowered form is locally frequent at Billingbear and Bulmershe. 12% (1km²). Atlas 2000: all squares

West Berks: common in the Kennet valley and throughout the south, but confined to the Northern Loop in the north (e.g. Dry Sandford pit [4699]) and absent from Lambourn Downs and the Vale of the White Horse, but on building works at Watchfield [2590] in September 2004. On the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [3672]. Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all except [38], [68], [69]

Malva alcea L. *Greater Musk-mallow*

• th 6 †

East Berks: not in Druce; on the railway at Reading in 1918. No specimen, and not seen by Bowen.

Malva sylvestris L. *Common Mallow*

○ h 6

Waysides and open waste ground. Most frequently near villages and particularly fond of growing at the base of a sunny wall. Common and generally distributed, but rare on acid soils. Especially common and luxurious on motorway verges and in the central reservation. The leaves are often pin-holed by the weevil *Apion aeneum*.

NVC: OV 16,18,22,23,24,25

Silwood Park: rare and sporadic. Sunninghill Crossroads, Ashurst Warren, Gravel Pit, Cheapside, Silwood Road, Science Park, Cannon Crossroads. Common on imported topsoil during construction of the new Biology Buildings in 1987, but not seen since then. Not found in natural habitats; continental botanists refer to such plants as 'archaeophytes' rather than natives or aliens because of their long association with human habitation. Grown as one of the test plants in rabbit/deer enclosures scattered all over Silwood Park from 2006; particularly good in Gravel Pit on 10 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	9

East Berks: particularly common on the Thames-side paths. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008 54% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Malva nicaeensis All. *French Mallow* ● th 6 †

West Berks: collected by Druce from Abingdon [49] in 1897 and Didcot [59] in 1931 (OXF).

Malva parviflora L. *Least Mallow* ● th 6 †

East Berks: a casual bird-seed alien found on Reading tip [77] in 1962 (LAN).

Malva pusilla Sm. *Small Mallow* ● th 6 †
Malva rotundifolia L.

A rare casual of waste places.

East Berks: on rubbish at Wellington College Station (OXF and RNG) in 1895 and 1917.

West Berks: Abingdon [49] in 1895 (OXF), Wytham Mill [40] in 1900 (OXF), Didcot tip [69] in 1965

Malva neglecta Wallr. *Dwarf Mallow* ○ th 6 †
Malva rotundifolia sensu L.(1754) et auct., non L.(1753)

Dry waste places, gateways, roadsides, near farms, and on rubbish tips in small quantity; often under walls in villages. Widely distributed, but absent from very acid soils. Increased in recent years, but still much less frequent than *M. sylvestris*.

Silwood Park: on waste ground by the Header House and on topsoil imported for Garden Wood Bank in 1987. It is still common in 1999 on the bare strip of ground where the edge of the lawn meets the paving of the road to the Science Park. Oak Mead: a single plant in the 1998-cultivated fallow, growing without competitors on the methyl bromided plot below Biodepth. In gravel at the edge of the church car park at Ashurst on 18 June 2002 and still there in July 2005 and August 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	6

Ascot: sunny waste ground at Ascot Station, Sunningdale, Cranbourne. Rare on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003; on imported topsoil on top of the new gabion wall at the western boundary on 30 October 2004, after the other plants had been destroyed during building work.

East Berks: first recorded from Marlow (1843). Occasional throughout in built-up areas like Wokingham, Reading, Windsor and Maidenhead. Common around Windsor Castle in Shaw Farm and Frogmore. 11% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley but rare in Kennet valley, and absent or rare over most of the interior (south of 90 and west of 45). In verges in East Hagbourne [5388] in May 2002. Atlas 2000: all squares

Malva setigera Schimp. & Spenn. *Rough Marsh-mallow* ● th 6
Althaea hirsuta L.

An introduced plant of field margins and woodland edges. Unlike most mallows, the epicalyx has 6 to 10 (not 3) segments.

East Berks: in a sown grass ley at Remenham [768834] in 1985.

West Berks: found in a chicken run at Cothill [49] in 1909 (OXF). On the *Filago pyramidata* site at Buckland Warren [334964] in 1994, but not seen since, despite repeated search. Re-discovered in 2012 by Susan Erskine, when 3 fruiting plants were found.

¶ **Malva** *M. alcea* var. *fastigiata*, *M. moschata* f. *alba*, *M. sylvestris* ‘Primley Blue’

¶ **Malvastrum** *M. lateritium*

Lavatera trimestris L. *Royal Mallow* ● th 6 †

West Berks: a bird-seed alien found on Battle Farm tip [6974] in 1969.

Lavatera punctata All. *Spotted-stalked Tree-mallow* ● th 6 †

West Berks: a grain alien found at Kennington [50] in 1963 (OXF).

Lavatera arborea L. *Tree-mallow* ● h 7 †

East Berks: found as a seedling in 1969 on the tip at Woodley [7773] by Bowen, and subsequently grown up to flowering size in his garden (it flowered in 1971). A model of what to do with an unidentifiable alien seedling growing on a tip, but now, of course, illegal under the Wildlife and Countryside Act. Not recommended as a technique for identifying seedlings of native plants. Buy the seed from a reputable dealer, germinate them, and train yourself to identify the species from its seedlings.

West Berks: no records of this seaside species.

Lavatera x clementii Cheek = **L. thuringiaca x L. olbia**
Garden Tree-mallow or *Tree Lavatera* • m 6

A very popular garden shrub, found increasingly as an outcast on roadsides and waste ground where garden waste has been fly-tipped. Grown as many cultivars, with flowers varying from deep pink to pure white, but it is the pink forms that are found as outcasts and escapes.

Ascot: a rare garden outcast in Sunningdale in 2003.

East Berks: first record Whiteknights (**RNG**) in 1983. Recently from Riseley, Ryeish Green, West Reading, West Whitley, Whitley, Bulmershe, Lower Earley, Earley, Woodley, Winnersh, Whistley Green, Charvil, Twyford, Wokingham, Broadmoor, Lock's House, Downshire, Amen Corner, College Town, Hanworth, Binfield, Arlington Square in Bracknell, Linderhill Wood, Wiltshire Farm, West End, Touchen End, Holyport, Warfield Park, Culham Court, Warren Row, Westacott Way, Shepherds Lane, Ashley Hill, Halfway House, Cookham, Maidenhead, East Maidenhead, Old Windsor. Atlas 2000: [76], [77], [86], [87], [88],

West Berks: on a roadside at Appleford [59] in 1960. On dumped soil by Fair Mile (**RNG**) [5683] in 1975. Waste ground in Faringdon [2895] in July 2002. Atlas 2000: [46], [58], [59]

¶ **Lavatera** *L.* 'Barnsley', *L.* 'Bredon Springs', *L.* 'Burgundy Wine', *L.* 'Candy Floss', *L.* 'Kew Rose', *L. maritima*, *L.* 'Pink Frills', *L.* 'Rosea', *L. thuringiaca* 'Ice Cool'

Alcea rosea *L. Hollyhock* • h 7 ↑
Althaea rosea (L.) Cav.

In every cottage garden, and one of the commonest garden escapes. Seedlings found in every village at pathsides, below walls and on disturbed waste ground. Not in Druce, and still a rare casual on rubbish tips and near buildings in Bowen's time. Much increased, but never found far from buildings.

Ascot: on pavements on Upper Village Road in Sunninghill. Not in Silwood Park.

East Berks: first records from Reading tip (1961), Smallmead tip (1969-74) and Woodley tip (1975). Recently at Lambs Lane, Three Mile Cross, Riseley, Rowes Farm, Arborfield, Newland Farm, Langley Common, Fleet Copse, Wheatlands, Finchampstead, Doles Hill, Limmerhill, West Whitley, Reading, The Mount, Earley, Childs Hall, Bulmershe, Hurst, Woodley, Sonning, Winnersh, Ruscombe, Wargrave, Cockpole Green, Kiln Ride, Wokingham, Binfield, Ravensworth, Sandhurst, Edgebarrow, College Town, Owlsmoor, Great Hollands, North Hanworth, Wildridings, Savernake Park, The Tip, Hungerford Lane, Shurlock Row, Old Malt House, Waltham St Lawrence, Littlewick Green, Binfield Park, Shottesbrooke, Altmore, Woodlands, Larks Hill, Cox Green, Warfield Park, Little Foxley, Stud Green, Warren Row, Shepherds Lane, Burchett's Green, Holloway, Bisham Woods, Maidenhead, Furze Platt, North Town, Halfway House, Cookham Rise, Cookham, Summerleaze Lakes, Cookham Moor, The Bounty, Fernbank Road, Johnson's Pond, Locks Ride, Holyport, Fyfield, Bray Court, Guild House, West Dedworth, Sutherland Grange, Clewer Green, Dedworth, Clewer, Old Windsor. 20% (1km²). Atlas 2000: all squares

West Berks: first records Abingdon [49] in 1918, Chilton [48] in 1957 and Didcot [59] in 1965. Coleshill [29] (Plate 1). Frequent and widespread in almost every village. Atlas 2000: all squares

¶ **Sidalcea** *S. candida*, *S. candida* ‘Bianca’, *S.* ‘Croftway Red’, *S.* ‘Elsie Heugh’, *S.* ‘Party Girl’, *S.* ‘Rose Queen’, *S.* ‘William Smith’

Abutilon theophrasti Medik. *Velvetleaf* ● th 7 †
Abutilon avicennae Gaertner, nom. illegit.

East Berks: a bird-seed alien from St George’s Road Reading in 1936 (**RDG**) and Smallmead tip in 1969.

¶ **Hoheria** *H. glabrata*, *H.* ‘Glory of Amlwch’, *H. lyallii*, *H. sexstylosa*, *H. sexstylosa* ‘Stardust’

ELAEOCARPACEAE

Crinodendron patagua Molina ● m 8

A delightful evergreen shrub or small tree with single, long-stalked fragrant white flowers in late summer and autumn.

Silwood Park: planted (a gift from John Bond at Crown Estates) in 1981 in the shady corner of the west face of the Manor House behind the Reactor Block in the bed outside the window of the office in which I wrote *Herbivory* (1980-82) and from which I observed the planting by Ray Davies. Now (2006) a fine shade-tolerant tree.

SARRACENIACEAE

[**Sarracenia purpurea** L. *Pitcherplant*]

Not in Watsonian Berkshire v.c.22 (either Druce or Bowen), but nearby in Sunningdale (in modern Berkshire, formerly Surrey) on Chobham Common. Lousley (1976) reports “on *Sphagnum*. Presumably deliberately planted but the habitat was chosen with considerable skill. First found in 1968 by A.C. Withers spread over about 1 square metre with offspring but somewhat decreased by 1974”. Still there from 1979-2004 (MJC).

DROSERACEAE

Drosera rotundifolia L. *Round-leaved Sundew* hr 6 ↓

Bogs and wet heathy ground on acid peats.

Ascot: “wherever there is an acid bog” in Druce’s time; Sunningwell Bog, Swinley, Buttersteep, Whitmoor Bog. Englemere (1970), Tower Hill (1974), Kingsride (2004). Not in Silwood Park

East Berks: occasional in bogs on the acid sands, south of 70. Bulmarsh (1883), Wellington College. Common in all the bogs of the district. Bogs, wet heaths and old peat pits; locally frequent but decreasing. Triangle Pond, Finchampstead, Owlsmoor, Lower Star Post, Rapley’s Farm, Long Moor (1983), Wishmoor Bottom (1983 and 2004), Road Research Lab Crowthorne (1983), Broadmoor Bottom and Owlsmoor (1984 and 2004), east of Caesars Camp (1987). Following birch, pine and

rhododendron scrub clearance at Gormoor Valley [872658] in 2004. 2% (1km²). Atlas 2000: [76], [86], [96]

West Berks: rare in the Kennet valley, very rare on Frilford Heaths, extinct or absent elsewhere. Inkpen Common [36], Wickham [37], Cothill bog [49], Frilford Heath [49], in a bog in the Chilswell Hills [40], Snelsmore Common and Sole Common [47], Greenham Common [46], Crookham Common [56], Aldermaston [56], Bishops Green [56], Cold Ash Common [56], Fence Wood [57], Bagley Wood [50], Mortimer [66], Silchester [66]. Atlas 2000: [46], [49], [40], [57], [67]

Drosera intermedia Hayne *Oblong-leaved Sundew* hr 6 ↓
Drosera longifolia auct., non L.

Bogs and wet heathy places. Locally common but with a much more restricted distribution than *D. rotundifolia*.

Ascot: recorded from Sunninghill (1966), but I have no further details. There is no suitable habitat nowadays.

East Berks: Bagshot, Windsor Great Park, Earley Heath, Bulmarsh Heath, Kingsmere, Crowthorne, Wellington College (1897), Sandhurst (1897), Riseley Common, South Park, Wildmoor Bottom, Broadmoor, Sandhurst. Bogs; rare and decreasing. Kings Mere (1950), Owlsmoor (1967), Englemere Pond (1970). Commonest on Chobham Common National Nature Reserve across the border in v.c.17 Surrey. Extinct at many of its former sites, but still at Owlsmoor [8562] in 2003. Atlas 2000: [86]

West Berks: thought to be extinct in all its former stations in the Kennet valley: Snelsmore Common [47], Greenham Common (**RDG**) [4864] in 1940, Cold Ash Common [56], Burghfield (**RNG**) [66] (all pre-1897); Padworth Common [66] in 1918. Refound in a valley bog on Silchester Common [6162] in 1983 but not seen since. Atlas 2000: no records.

FLACOURTIACEAE

¶ **Azara** *A. dentata*, *A. lanceolata*, *A. microphylla*, *A. serrata*

¶ **Berberidopsis** *B. corallina*

¶ **Idesia** *I. polycarpa*

¶ **Scopolia** *S. carniolica*, *S. carniolica* subsp. *hladnikiana*

CISTACEAE

Cistus salviifolius L. *Sage-leaved Cistus* ● m 5

This is the white-flowered plant with 5 sepals, sessile stigma, and rugose, petioled leaves.

East Berks: very rare on a grave in Bisham churchyard 1998-2004.

Cistus ladanifer L. *Gum Cistus* ● m 5

Silwood Park: self-sown in the central bed of the Science Park below birches, close to the parent. June 2000.

Cistus x laxus Ainton f.

• m 5

Silwood Park: there is a record in Clement and Foster (1994): “Introduced, or a persistent garden escape, among native vegetation in Silwood Park, Reading (Berkshire)” but I do not know anything about this record (nor do I know how Silwood moved to Reading !). This plant has not been grown in Silwood Park in my memory (see below).

¶ **Cistus** *C. x aguilarii*, *C. x aguilarii* ‘Maculatus’, *C.* ‘Ann Baker’, *C.* ‘Anne Palmer’, *C. clusii*, *C. creticus*, *C. x crispatus* ‘Warley Rose’, *C. x cyprius*, *C. x dansereauii* ‘Decumbens’, *C.* ‘Elma’, *C.* ‘Grayswood Pink’, *C. x hybridus*, *C. laurifolius*, *C. libanotis*, *C.* ‘Peggy Sammons’, *C. populifolius*, *C. x pulverulentus*, *C. x purpureus*, *C. x purpureus* ‘Alan Fradd’, *C. salviifolius* ‘Prostratus’, *C.* ‘Silver Pink’, *C. x skanbergii*

¶ **X Halimocistus** *X H.* ‘Ingwersenii’, *X H. sahucii*, *X H. wintonensis*, *X H. wintonensis* ‘Merrist Wood Cream’

Helianthemum nummularium (L.) Mill. *Common Rock-rose*

chw 6

Cistus nummularius L.

Helianthemum chamaecistus Miller

Helianthemum vulgare Gaertner, nom. illegit.

Short, south-facing calcareous grassland, dry, hilly pastures, roadsides, chalk downs. A common plant of both the oolite and the chalk, but almost wholly absent from the clays and peaty sands. It delights in sunny pastures or grassy downs and is found with *Anthyllis vulneraria*, *Sanguisorba minor*, *Hippocrepis comosa*, *Bromopsis erecta*, *Festuca ovina* and *Scabiosa columbaria*. Principal host plant of the Brown Argus butterfly.

Ascot: no records. Not in Silwood Park, even in the sown chalk plots.

East Berks: on the chalk escarpment opposite Marlow. Frequent about Park Place, Hurley, Bisham, Wargrave, Quarry Wood, Culham, Hurley chalk pit, above Cock Marsh and on Winter Hill. 1% (1km²). Atlas 2000: confined to [78] and [88]

West Berks: an interesting contrast with the distribution of *Polygala calcarea* (see p. 15) which was confined to the chalk and not found on the oolite. Ashbury and Idstone [28], Faringdon and Buscot [29], Combe Gibbet, Walbury Camp, West Woodhay Down and Inkpen [36], Lambourn Downs and Ridgeway [37], particularly common even amongst tall *Brachypodium pinnatum* at Seven Barrows [3282], Letcombe Downs and Whitehorse Hill [38], Cherbury Camp [39], Newbury [46], Ashridge Wood [47], West Ilsley, East Ilsley and Lockinge [48], Cothill [49], Wytham and Cumnor [40], Compton and Hampstead Norreys [57], Kingstanding Hill, Blewburton Hill, Lowbury Hill, Streatley, Moulsoford and Blewbury [58], Wittenham Clumps [59], South Hinksey [50], Basildon, Pangbourne, Sulham, Bradfield and Englefield [67]. Atlas 2000: all except [56], [66], [68], [69]

¶ **Helianthemum** *H.* ‘Amy Baring’, *H.* ‘Beech Park Red’, *H.* ‘Ben Fhada’, *H.* ‘Ben Ledi’, *H.* ‘Ben More’, *H.* ‘Boughton Double Primrose’, *H.* ‘Cerise Queen’, *H.* ‘Chocolate Blotch’, *H.* ‘Fire Dragon’, *H.* ‘Georgeham’, *H.* ‘Henfield Brilliant’, *H.* ‘Jubilee’, *H.* ‘Mrs C.W. Earle’, *H.* ‘Raspberry Ripple’, *H.* ‘Rhodanthe Carneum’, *H.* ‘Rose of Leeswood’, *H.* ‘The Bride’, *H.* ‘Wisley Primrose’

STACHYURACEAE

¶ **Stachyurus** *S. chinensis*, *S. praecox*

VIOLACEAE

Viola odorata L. *Sweet Violet*

hr 2

Woodland plantations on nutrient-rich soils, hedgerows, wood borders, open coppices and churchyards. Early flowering, sometimes repeat flowering in autumn. Flower colour varies from blue, purple, lilac and peach to pure white. Many of the populations are garden escapes or relics of planting.

NVC: W 8

Silwood Park: long established on a soil heap on a shady roadside close to Silwood Farm; present from 1979 to 2004. Very common beneath *Rosa rugosa* on the entrance road to the Science Park in a variety of colours, probably from topsoil imported in 1988 for landscaping. Much declined by 2001, over-run by *Ranunculus ficaria*; two colour forms are present: (a) deep purple flowers; common throughout the shrubbery; (b) a beautiful, peachy-cream flower.

East Berks: frequent about Park Place, Wargrave, Cookham, Shottesbrooke, Windsor Racecourse, Windsor Great Park, Frogmore, Earley, Farley, Maidenhead, Winkfield church, Warfield church, white flowers common at Sonning and Twyford. 19% (1km²). Atlas 2000: all squares

West Berks: common on banks in villages and in churchyards throughout. Longcot, Faringdon and Great Coxwell [29], Avington [36], Welford [47], West Ilsley [48], Kingston Bagpuize [49], Aldermaston [56], Bucklebury [57], Stratfield Mortimer and Burghfield [66]. Atlas 2000: all squares

Viola x scabra F. Braun = **V. odorata** x **V. hirta**

West Berks: Basildon [67] in 1893 (OXF), Cumnor [40] in 1895 (OXF), Inkpen Hill [36] in 1933 (RNG), Sulham Wood [67] in 1936.

Viola hirta L. *Hairy Violet*

hr 3

Viola calcarea (Bab.) Gregory

Calcareous grassland, hedge-banks, wood-borders, grassy places, chalk downs, open beech woods. Absent from acid soils. The early flowering violet of chalk grassland, in bloom in March long before the grass starts to grow. “Especially abundant on the oolitic limestone and the chalk. A grassy bank under the shelter of a beech wood when covered with this plant is a lovely sight in spring-time as it is one of the most freely flowering species in the genus. The colour of the flowers varies considerably” (Druce, 1897).

NVC: CG 2-5

Ascot: no records.

East Berks: locally abundant on the chalk in the far north, but absent elsewhere. Wargrave, common about Park Place, Hurley, Culham, Quarry Woods, Cookham, Ashley Hill, Stubbing's Heath, Maidenhead Thicket, slopes of Windsor Castle, near the grotto in Frogmore. 2% (1km²). Atlas 2000: [77], [78], [87], [88]

West Berks: rare in the north and the south-east, but widespread in the central chalk. White flowered forms occur at Wytham [40] and Hampstead Norreys [57]. Atlas 2000: all except [66]

Viola riviniana Rchb. *Common Dog-violet*

hs 4

Woods, hedges, acid grasslands and heathy places. Common and generally distributed except on grassy chalk downs or in country under corn crops. Very variable. The plant recorded as the purple-leaved alien garden escape *Viola labradorica* often turns out to be *V. riviniana* Purpurea group. Host to caterpillars of the Pearl-bordered Fritillary *Boloria euphrosyne*; the leaves have pale hairy galls of the midge *Dasyneura affinis*.

NVC: CG 2; U 20; W 8,10,14,21-25

Silwood Park: locally frequent in the woodlands and occasional in acid grasslands. Nash's Copse, Gunness's Bridge, Rookery Copse, etc. Particularly common on the earthen dam of Silwood Lake and in the woodland immediately behind the dam; spectacular mass-flowering on 16 April 2005. Locally frequent beneath *Arrhenatherum elatius* in the older (southern) part of the graveyard at Ashurst. Very local in acid grassland in Nash's Field between the grazed part of Block L and the fence of Block P in June 2005. The dark-spurred plants on Gunness's Bridge are this species (not *V. reichenbachiana*) and possess the typical 1.5mm sepal appendages.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	0	3	2	17

Ascot: very common in acid grassland in the graveyard of South Ascot church. The purple leaved form as a garden escape on waste ground on Bridge Road, Sunninghill in July 2003.

East Berks: locally frequent in some of the ancient woodlands as at Billingbear and Great Wood. Particularly abundant in woods on the western banks of The Cut near the M4 Motorway at Beenham's Heath [8575]. 32% (1km²). Atlas 2000: all squares

West Berks: absent from chalk grassland and chalky arable land, but widespread in the north, south and east. Atlas 2000: all squares

Viola x bavarica Schrank = **V. riviniana x V. reichenbachiana**

West Berks: recorded by J.E. Lousley from Hampstead Norreys [5276] in 1937 (RNG).

Viola riviniana x lactea

West Berks: field record by Bowen from Inkpen Common [383641] in 1983.

Viola reichenbachiana Jord. ex Boreau *Early Dog-violet*

hs 3

Woods, thickets and shady hedge-banks (as *V. silvestris*). Much scarcer than *V. riviniana*. A difficult distribution to understand. It is very rare on the chalk (which is odd, given its British distribution), but also rare on the acid sands. It does not like clay either, so it is not at all clear what it *does* like. Told by its smaller sepal appendages (less than 1.5mm) and spurs darker than petals.

Silwood Park: first recorded on 20 April 2010 in two nearby sites. In the doorway of Greenhouse 9A and on the side of Greenhouse 8B by the Header House. Evidently introduced, but there is no record of these species having been grown experimentally in these greenhouses.

Ascot: very local and rare. Just outside Silwood Park on the flat verge above the ditch outside Harewood, opposite the main entrance to Buckhurst park [949692] on 18 May 2002.

East Berks: Bisham Woods, rare in Windsor Great Park, Bracknell, Jealott's Hill. Abundant on paths and in short grass in Binfield churchyard, and on shaded graves in Finchampstead Church. In woods at Beech Hill Coverts [7064] in May 2002. 2% (1km²). Atlas 2000: all except the acid [86].

West Berks: there are three hot spots: woodlands on the north-facing slopes of the Kennet [46] and the wooded hills of Cold Ash [57] in the south, and the woods around Wytham [40] in the Northern Loop of the Thames. Scattered records elsewhere, with no obvious pattern other than a slight preference for north-facing slopes. Little Coxwell [29], Kintbury [36], Uffington [38], Irish Wood, Long Copse, Hamstead Marshall and Enborne [46], Snelsmore [47], Farnborough [48], Appleton, Cumnor, Sunningwell and Wytham [40], Inwood Copse [56], Frilsham, Hampstead Norreys, Hermitage and Stanford Dingley [57], Streatley [58], Bagley Wood [50], Basildon, Moor Copse and Sulham [67]. Atlas 2000: all except [48], [66], [68]

Viola canina L. *Heath Dog-violet*

hp 4 ↓

Viola canina subsp. ***canina***

A local speciality of sandy, heathy ground (avoiding the clay); very rare and spaced in the 4 corners of the county. Fens, damp grassland both acid and basic, and dry heaths. Known from *V. lactea* by clear blue (rather than cream to greyish violet) petals, leaves ovate (rather than lanceolate) with cordate or truncate (rather than rounded or cuneate) bases. Druce writes "although local in the north and the east of the county, this species is frequent in the Kennet and Loddon districts. It appears to be eminently an arenaceous [sand loving] species, and consequently avoids the Oxford and Kimmeridge Clay and the Gault formations. In the Wytham meadows it occurred on a stratum of gravel".

East Berks: heaths between Ascot and Bagshot, Bracknell, Park Place, Windsor Great Park, Loddon Bridge (**OXF**) in 1891, Stubbing's Heath, Wellington College, Finchampstead, Wokingham, Sandhurst, Cookham Dene, Swinley. Very local; near Wokingham (1965). Now gone from all of its East Berks locations. Atlas 2000: no records.

West Berks: Inkpen Hill [36], Cothill and Frilford Heath golf course [49], Wytham Meads (**OXF**) [40] where it has long been extinct in what Druce called "an unexpected locality", Burghfield Common (**RDG**) [66] in 1917, Pangbourne Meads (**LAN**) [67] in 1963. Brimpton Common [5763] Silchester Common [6262]. Removal of the old runway at Greenham Common produced a perfect habitat on compacted open gravel; there were more than 300 plants in flower at the western end [4864] on 20 April 2002. About 20 plants in grass near the Laser Tunnel at AWRE Aldermaston [5963] in 2003. Atlas 2000: [36], [49]

Viola lactea Sm. *Pale Dog-violet*

hp 5 ↓

Open spots on lowland heaths, often amongst gorse, prospering after soil disturbance. A local speciality, but much reduced in abundance. Its distribution is centred on the New Forest and it is extinct at most of its Berkshire sites.

NVC: H 3

Ascot: first record “From a disused brickfield on a heath-covered waste, by the left side of the road from Bagshot to Ascot Station” (**OXF**) (Watson 1869); he must mean the Swinley site. Druce knew the plant from “one or two places on Bagshot Heath”. I have never found it.

East Berks: near Loddon Bridge (1897). Bowen did not find the plant in any of Druce’s locations in our area. Nor have I. We must sadly conclude that it is extinct in East Berkshire.

West Berks: still present on Inkpen Common in 4 heathy spots [3864], but probably gone from Thatcham (**RDG**) in 1936 and from Aldermaston [56], Mortimer Common (**OXF**) [66] and Three Firs on Burghfield Common (**RNG**) [6566] in 1926. The Inkpen population has responded well to scrub clearance and the introduction of grazing horses; on 8 May 2005 there was a 10m x 12m patch of plants just north of Arthur’s Seat, growing with *Pedicularis sylvatica* and *Polygala serpyllifolia*.

Viola palustris L. *Marsh Violet*

hr 4 ↓

Marshes, bogs, alder swamps, wet portions of heaths, preferring peaty soils; locally common, but very rare in the northern part of the county. Still declining in abundance as a result of drainage and habitat destruction.

NVC: M 24,27; S 1,3; W 4,5

East Berks: Druce considered the plant to be “common only on the acid sands along the southern boundary of the county”, from Virginia Water in the north-east to Long Moor bog in the south-west. Absent from all the ground north of 70. “An abundant plant on the Bagshot Sands in the Loddon district. Swampy gullies in alder woods”, Grebe Pond between Crowthorne and Wokingham (**RNG**), Virginia Water, Windsor Great Park, Long Moor bog, east of Ascot Station [9268], Wishmoor Bottom [8763], Wellington College (**RNG**). It is now very local and uncommon; one of the best surviving stations is on Wishmoor Bottom at the Royal Military Academy just north of the second bridge [877627]. Atlas 2000: [86], [97]

West Berks: except for outlying stations in the Northern Loop of the Thames at Cothill [49], Chilswell Copse and Hen Wood [40], the plant is confined to the Kennet valley from Inkpen and Kintbury [36], Snelsmore Common and Upper Ashpiece Woods [47], Greenham Common [46], Crookham Common, Wasing Place, Bishops Green and Aldermaston [56], Aldermaston Soke, Round Oak Woods and Ufton Nervet to Burghfield (**LAN**), Silchester and Mortimer Commons (**RNG**) [66]. Recently recorded from Tadley Common [6062] (**RNG**). Atlas 2000: [46], [47], [40], [56], [66]

Viola x wittrockiana Gams ex Kappert *Garden Pansy*

• th 1 ↑

Viola x hortensis auct., non Schur

Casual specimens of the cultivated var *hortensis* are sometimes seen about houses and railway stations, as at Wellington College Station, Shrivenham, Twyford etc. Petal size is rapidly reduced when these plants are allowed to run wild, as Druce observed at Shrivenham [28], Grandpont [50] etc. Casual on rubbish tips; Reading. Records for garden escapes of pansy start about 1963 and are entirely restricted to tips (i.e. there are no records to self-sown individuals on waste ground from Bowen’s era). Common in almost every garden, often self-seeding and frequently escaping. Either

there has been a massive increase in recent years, or botanical recording in towns and villages is more systematic than in the past (I suspect the latter).

Silwood Park: uncommon and ephemeral; cinder pot stand at the Greenhouses, Cheapside, Ashurst churchyard, Garden Wood Bank on imported topsoil.

East Berks: widespread but never abundant. 12% (1km²). Atlas 2000: all squares.

West Berks: Atlas 2000: [28], [29], [36], [38], [39], [46], [49], [40], [66], [68]

Viola tricolor L. *Wild Pansy*

th 4 ↑

Viola tricolor subsp. **tricolor**

Viola lepida sensu E.G. Baker et auct., non Jordan

Cultivated ground, common in light sandy soils and in flinty arable fields on the chalk. Druce lumped *V. tricolor* and *V. arvensis* together and recorded 5 varieties: *bicolor*, *bella*, *segetalis*, *pubescens* and *mentita*. Bowen has *V. tricolor* as local, sporadic and seldom in quantity in arable fields and gardens. Nowadays, it is occasional on disturbed waste ground in towns and villages, sometimes appearing as a lawn weed where the turf has become thin.

NVC: OV 1,27; U 1

Silwood Park: in paths and lawns around the Greenhouses, especially common in May 1996 after the drought of 1995 had opened up the sward. Header House in compacted ground by the Portakabins in July 1993 and 1994. Nash's Field in the seed mix on the Tilman Plots G, H and J; first flowers in May 1993. Drive lawns in 1999. An infrequent garden weed in Cheapside. Uncommon on imported topsoil at Ashurst lysimeters in May 2004. On the cinder pot standing at the Greenhouses in May 2004. In the older part of the graveyard at Ashurst on 27 May 2006 after a very dry winter. Rare in Ashurst Lysimeters on 1 September 2009 following herbicide treatment and late cultivation in June 2009. Rare on 3 September 2009 in cultivated ground on the edge of the drive at Silwood Lodge following conversion of the house to student use in spring 2009. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

East Berks: there is a specimen from Ambarrow (**RNG**) in 1916. Now quite frequent and widespread. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 10% (1km²). Atlas 2000: all squares

West Berks: Shrivenham [28], Little Coxwell [29], Buckland Warren [39], Besselsleigh, Upper Seeds Wytham and north of Cothill [40], Peasemore [47], Heath End and Hyde End Mills [56], Cow Lane in Kennington [50], Pingewood pits [66], Tilehurst (**LAN**) and Theale [67]. Absent or rare on the chalk and the northern clays. Atlas 2000: all except [37], [48], [69]

Viola x contempta Jord. = **V. tricolor** x **V. arvensis**

Sandy arable ground on Burghfield Common [66], collected by J.E. Lousley in 1927 (**RNG**), and from a building site in Tilehurst [67] by Mrs E. Hodgson in 1960 (**LAN**).

Viola arvensis Murray *Field Pansy*

o th 4

Viola obtusifolia sensu Drabble et auct., non Jordan

Viola arvatica sensu Drabble et auct., non Jordan

Dry arable fields, set-aside, disturbed ground and rubbish tips throughout.

NVC: OV 1,3,4,7,9,10,12,21,33

Silwood Park: occasional in all the arable fallows like Silwood Bottom, Ashurst Four Acre Field and Pound Hill Field. In the cultivation-timing experiment at Pound Hill, it is commonest on the May-cultivated plots, flowering in September and again in May just before cultivation. Uncommon on waste ground. Rare in the seed bank beneath old grassland as in Oak Mead and Church Field, where it shows itself following soil disturbance. Particularly abundant in Silwood Bottom on 8 May 2004 after cultivation of that part of the field had been missed for 18 months. Uncommon on imported topsoil at Ashurst lysimeters in May 2004. Very abundant in the October-cultivated plot in Block A on 28 July 2007 following the driest April on record then the wettest May, June and July (much less abundant on the other three, less shaded Blocks). Rare in Ashurst Lysimeters on 1 September 2009, following herbicide treatment and cultivation in late spring 2009. Common on 22 September 2009 on the autumn-cultivated part of Silwood Bottom.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	7	7

East Berks: 14% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Viola** *V.* 'Ardross Gem', *V.* 'Beshlie', *V.* 'Bowles' Black', *V.* 'Buttercup', *V.* 'Columbine', *V. cornuta*, *V. cornuta* Alba group, *V.* 'Eastgrove Blue Scented', *V. elatior*, *V.* 'Fiona', *V.* 'Foxbrook Cream', *V. hederacea*, *V.* 'Huntercombe Purple', *V.* 'Irish Molly', *V.* 'Jackanapes', *V.* 'Maggie Mott', *V.* 'Martin', *V.* 'Molly Sanderson', *V.* 'Moonlight', *V.* 'Myfawunny', *V. odorata* 'Alba', *V.* 'Rebecca', *V. riviniana* Purpurea group, *V. sororia* 'Freckles', *V.* 'Vita'

TAMARICACEAE

Tamarix gallica L. *Tamarisk*

• m 7

Tamarix anglica Webb

Occasional as a garden shrub, most often in boundary hedges. Rarely surviving as an outcast. Apparently not self-sown in Berkshire.

Silwood Park: in the shrubbery at Southwood Halls, planted in 1983.

East Berks: Childs Hall in Reading, Whitley, Ryeish Green, Earley, College Town, Maidenhead, Kimbersfarm at Fifield. On waste ground by the landfill site on Whitley Park [7873] in 2002. 4% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [97]

West Berks: in a hedge at Rush Court [69] in 1966. Wild in the roadside at Letcombe Bassett [3785] in 2004. Atlas 2000: [36], [49]

¶ **Tamarix** *T. gallica*, *T. ramosissima* 'Rubra', *T. tetrandra*

PASSIFLORACEAE

Passiflora caerulea L. *Passion-flower*

● m 7

Popular garden climber, sometimes grown for its fruit. The seeds are occasionally bird dispersed to waste ground some distance from the parent plant.

Silwood Park: a huge woody vine, covered in fruits, discovered when the dense shrubbery at the southern end of Flowers Halls was thinned out in October 2005. Perhaps originally planted, but I don't recollect planting it, and it is in an unlikely site, away from any walls or trellis; probably bird-sown.

Ascot: self sown on ruined walls at Frognall [940681] in September 2005. On the fence of the Water Board behind the shops on Sunninghill High Street south of the railway [934675] on 4 December 2006 and 20 December 2007.

East Berks: self-sown in Whiteknights Park (1981). On a tall fence on waste ground in Bulmershe [7573] in July 2002, at Broadmoor [8463] in June 2003 and at Cookham [8985] in September 2004. Coming up through tarmac on a pavement in Wokingham [8068] in 2004.

West Berks: local and rare on a fence in the centre of Abingdon [4997] in July 2002. On waste ground in Shrivenham [2388] in September 2004. Abundant and fruiting profusely on chain link fences in two places in central Wantage [3987] in October 2004.

¶ **Passiflora** *P. 'Amethyst'*, *P. antioquiensis*, *P. caerulea*, *P. caerulea* 'Constance Elliot', *P. citrina*, *P. x exoniensis*, *P. racemosa*, *P. x violacea*

CUCURBITACEAE

Cucumis melo L. *Melon*

● th 7

Seedlings from discarded melon pips are common on compost heaps, but the plants never make it to maturity. Occasionally found growing with tomatoes on sewage beds.

West Berks: on waste ground at Abingdon [4896] in 1995.

Cucumis sativus L. *Cucumber*

● th 7

Mostly grown under glass, and not frost hardy, so never seen naturalised in Berkshire. An occasional throw-out on tips in autumn. Large numbers of named F1 hybrids are sold through seed catalogues (e.g. there are 80 different F1 cucumbers listed in the twelfth edition of *The Seed Search* (Platt, 1977)).

East Berks: Woodley tip [7774] in 1975.

West Berks: on abandoned allotment at Cow Mead, Grandpont [5104] in October 2002.

Cucurbita maxima Duchesne ex Lam. *Pumpkin*

● th 7

A vigorous trailing annual grown in gardens as winter pumpkin, autumn squash, winter squash or gourd. They have highly decorated fruits and are often grown for ornament rather than for eating.

East Berks: rare casual on warm rubbish tips; Reading (1961).

West Berks: on abandoned allotments in Botley [4906] in September 2002.

Cucurbita moschata (Duch. ex Lam.) Duch. ex Poir *Butternut* ● th 7

Also known as winter squash and pumpkins, these are occasionally grown on allotments. They include the curious, hook-shaped pumpkins.

Cucurbita pepo L. *Marrow* ● th 7

A wide variety of vegetable marrows, zucchini (courgette), autumn pumpkins, vegetable spaghetti, summer squash and ornamental gourds are grown in gardens and can be found as outcasts on tips in autumn. The ornamental cultivar 'Turks Turban' produces deep reddish-orange pumpkins with white and green striped markings.

Silwood Park: locally dominant growing through the deer fence surrounding the student allotments in Silwood Bottom in September 2002.

East Berks: Reading tip [77] in 1961, South Hinksey tip [50] in 1965, Smallmead and Woodley tips [77] in 1971. On waste ground north of Oxford Road in West Reading [7073] in July 2002.

West Berks: Frilford golf course [49] in 1977.

Citrullus lanatus (Thunb.) Matsum. & Nakai *Water Melon* ● th 7

Occasionally found growing with tomatoes and melons as seedlings in sewage beds. The pips are often thrown out and seedlings can be found on compost heaps in gardens, but they do not last the winter.

East Berks: Reading tip, 1995.

Bryonia dioica Jacq. *White Bryony* g 5
Bryonia cretica L. subsp. **dioica** (Jacq.) Tutin

Hedges, wood-borders, thickets on rich, well-drained soil. Generally distributed but more frequent on the chalk; very local and rather rare in the heathy districts. First record Sonning (1800). A charismatic but rather sinister-looking species with its rapid growth and long, wavy tendrils. The details of its ecological relationship with the other common climbers (*Tamus*, *Lonicera*, *Clematis*, and *Humulus*) have not been worked out, but the species seldom grow close together, even though all of them might be listed as occurring in the same piece of woodland (e.g. Bisham Wood). Because it is unpalatable to rabbits, it is often abundant on and around rabbit warrens.

Silwood Park: common in bramble thickets, on mesh fences and hedges, and on bare ground under evergreens. Growing right over the roadside deer fence at the Pound Hill fallow experiment in June 2002 and still there in June 2008. Frequent on the rabbit warren under the line of Cypress trees in the graveyard at Ashurst. On the bonfire site at the Walled Garden in 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
------------------	-------------------	--------------------	---------------------	-----------------------

0	0	0	4	25
---	---	---	---	----

Ascot: scattered, isolated individuals at Ascot Place, Sunninghill, Ascot Station, Charters Road, Sunningdale, Blacknest Park, Johnson's Pond, Frostfarm Plantation, Winkfield Lodge, Great Meadow Pond, Windsor Great Park. On the last soil pile by New Mile Road after most of the racecourse construction work was complete in September 2006.

East Berks: a curiously patchy distribution (see web-site map). Common on railway ground at Kings Meadows Reading in September 2007. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 36% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

SALICACEAE

Species in the family Salicaceae are dioecious, which means that males and females are separate genetic individuals. They also tend to produce their flowers long before their leaves are mature. But to be sure of identification, you need both male and female flowers, plus mature leaves. In order to get male and female material, you need to collect from two different plants. To get flowers and mature leaves, you need to revisit exactly the same individual on two different occasions. This means that unless you are very careful, you run the risk of collecting male and female specimens, and flower and leaf material from different species. No wonder then that willow and poplar taxonomy has been so confused for such a long time. If you want to identify willows or poplars, then R.D. Meikle's book *Willows and Poplars of Great Britain and Ireland* (1984, BSBI) is essential.

Populus balsamifera L. *Eastern Balsam-poplar* ● mm 2

Narrow in outline and often highly suckered, both sexes are present. Told from *P. trichocarpa* by its unridged (not conspicuously angled) young branchlets and leaves that are widest well above the insertion of the petiole (not widest at the base). Occasionally planted in towns: Reading, Windsor, Maidenhead, Newbury.

Populus 'Balsam Spire' *Hybrid Balsam-poplar* = **P. trichocarpa** x **P. balsamifera**

One of the most commonly planted poplars as a shelterbelt and for screening ugly buildings. This is a female clone with a narrow canopy (subfastigiata) with the lowest branches originating at 45° and no pendant twigs (cf. *P. trichocarpa* and *P. balsamifera*). Occasionally planted in towns: Reading, Windsor, Bracknell, Wokingham, Newbury.

Populus alba L. *White Poplar* ● mm 3

Woods, hedges, plantations and damp hedges in small quantity. Much planted, especially in damp places by roads, and suckering extensively to form substantial thickets. The male tree is very rare in Britain. Leaves are mined by *Phyllocnistis xenia*.

Ascot: local and rare. Heatherwood Hospital, Sunningdale Park. Not in Silwood, where the white-leaved poplar is *P. x canescens*.

East Berks: by the lake in Park Place, Ruscombe, Nuptown Lane, Harvest Hill, Bracknell, Windsor, Sandhurst. Scattered throughout, but commonest in the Thames valley. Suckering freely at the rear of 3M on Cain Road Bracknell on 2 September 2007. 7% (1km²). Atlas 2000: all except [78]

West Berks: scattered in the Thames valley, absent or rare elsewhere. Buckland [39], Buscot [29], Cumnor [40], Wytham [40], Boar's Hill [40], Uffington [38], Abingdon [49], Sulham [67], Bucklebury and Stanford Dingley [57], Mortimer [66], Aldermaston Decoy [66]. Atlas 2000: all squares

Populus x canescens (Aiton) Sm. *Grey Poplar* = **P. alba x P. tremula** ● mm 3
 Populus alba L. var. canescens Aiton
 Populus x hybrida M. Bieb.

Damp oak and alder woods in small quantity; absent from the chalk. Told from *P. alba* by the fact that the leaves on the long terminal shoots are toothed (not distinctly palmately 3- or 5-lobed) and the bracts are tattered (not entire or toothed). Although the parent species are both reasonably common in Britain, it appears that most British material of Grey Poplar is vegetatively propagated from introduced plants. In Berkshire, almost all of the plants are male, so recruitment from seed probably never occurs.

NVC: W 5

Silwood Park: a conspicuous stand in the woodland behind William Penney (up to 62cm bhg in 1979); sends out suckers many metres into adjacent beds and grassland. Rare amongst the naturally regenerated oak and birch in Merten's Acres. The largest (85cm bhg in 1979) of the two trees near The Tip blew down in the Great Storm of 16 October 1987. These trees are host to a species of *Boletus* new to science, which I hope will be named *B. silwoodii* by Alan Hills in due course. Large plants survive in 2003 in the damp clearing where the Ashurst Path used to cross through Rookery Copse. In the hedge behind the telephone kiosk near Knight Frank on London Road.

Ascot: rare in wet woodlands at South Ascot

East Berks: Ruscombe, Twyford, Wargrave, Bowsey Hill, Harvest Hill, Home Park and Windsor Great Park. 7% (1km²). Atlas 2000: all squares

West Berks: Shrivenham and Beckett Park [28], Buscot [29], Great Park Wood [37], Buckland and Buckland Warren [39], Greenham and Bagnor [46], Marcham, Buckland and Abingdon [49], Boars Hill, Eynsham, Cumnor and Wytham [40], Aldermaston and Carbins Wood [56], Hampstead Norreys [57], Blewbury [58], Appleford [59], Didcot [59], Wittenham [59], Padworth [66], Tidmarsh [67]. Atlas 2000: all except [68], [69]

Populus tremula L. *Aspen* mm 2

Woods, hedges, and heaths, often suckering to form extensive thickets. Locally abundant in south Berkshire, but absent from the chalk and northern clays. The commonest leaf miners are *Stigmella assimilella* and *Ectoedemia argyropeza*, galls are by *Harmandia globuli* on midrib, *Syndiplosis petioli* on petioles, and you may find adults of the brilliant, golden-green beetle *Chalcoides fulvicornis*.

NVC: W 5,6,8,10,16

Silwood Park: there is a dense thicket on the north side of the Ashurst Path that invades the grassland on Rookery Slope and has to be ruthlessly bush-hogged every 2 years or so to keep it in check. Cheapside, Ashurst, Silwood Farm, Water Meadow, Reactor Block. In the London Road hedge next

to the telephone kiosk by Knight Frank, and opposite the back gate to Silwood Farm by the Cheapside path. The natural regeneration scored in July 2007 in the 1996-cultivated ground at Oak Mead was restricted to the rabbit-fenced, methyl bromide treated plots, where it was heavily browsed by roe deer.

Ascot: frequent in damp acid woods at Sole's Pond, Swinley, Englemere, Kingsride, South Ascot, Coronation Road, Ascot Station, Ascot Heath, Kings Beeches, Charters Road, Blacknest Road, North Ascot, Ascot Place. In scrub between the fairways on Ascot Heath golf course, and locally dominant in the northern triangle of Ascot Racecourse.

East Berks: occasional throughout in damp oak woods, mostly on rather acid soils. Wellington, Sandhurst, Wishmoor Bottom, Ambarrow, Finchampstead, Bearwood, Earley, Wokingham, Bracknell, Windsor Great Park, Ashley Hill. 23% (1km²). Atlas 2000: all squares

West Berks: occasional to the south of 75 and in the Northern Loop but absent or rare elsewhere. Shrivensham and Beckett Park [28], Buscot [29], Great Park Wood [37], Buckland [39], Greenham [46], RAF Welford [47], Marcham and Abingdon [49], Boars Hill [40], Eynsham [40], Cumnor [40], Wytham [40], Aldermaston [56], Hampstead Norreys [57], Blewbury [58], Appleford, Didcot and Wittenham [59], Padworth [66], Tidmarsh [67]. Atlas 2000: all except [48], [68], [69]

Populus nigra L. *Black-poplar*

mm 4

Populus nigra subsp. **betulifolia** (Pursh) Dippel

Populus betulifolia Pursh

A charismatic native tree of riversides, fens and damp hedges, local and in small quantity; absent from the chalk and from east Berkshire. "In all our river valleys and a conspicuous feature in the scenery of the Thames Valley" (Druce) is perhaps an exaggeration. From a distance, it is told by its heavy, down-curving branches with upturned tips, broad rounded canopy and heavily burred trunk. Close up, the leaves are longer than they are broad, and have serrate margins with straight (not hooked) teeth. Host to several kinds of galls: midrib aphid *Pemphigus filaginis*, twisted petiole *P. spirothecae*, purse gall petiole *P. bursarius*, leaf *Eriophyes varius* and swollen glands *E. diversipunctatus*. The leaves are mined by *Stigmella trimaculella*, *Aulagromyza populi* and *Phyllocnistis suffusella*.

NVC: W 5

Silwood Park: young trees planted on the bank above the stream by the Walled Garden in January 2004 were all eaten by deer. One plant, better protected from deer, was planted in the same location on 17 April 2009.

Ascot: no records.

East Berks: very rare, and extinct at several of its former stations. Shinfield, Loddon Bridge, Easthampstead Park (RNG) in 1914. All but restricted to the Loddon valley, absent or extinct elsewhere. Atlas 2000: [77], [87]

West Berks: commonest in the Thames valley, rare in Kennet valley and absent elsewhere. By Acorn Bridge on the floodplain of the R. Cole [215881], Buscot [29], Stanford-in-the-Vale, Buckland and Pusey Common Wood [39], Bagnor [46], Steventon [49], south side of Greenham Common [505634], Thatcham [56], Frilsham [57], Blewbury (RNG), Streatley (RNG), South Moreton (OXF), Bradford's Brook Wallingford and East Hagbourne [58], Appleford (OXF) [59], Sulham and Pangbourne [67], Rush Court [69]. Atlas 2000: all except [36], [47], [40], [50], [66]

Populus nigra 'Italica' *Lombardy Poplar*

● mm 4

Planted and often a conspicuous feature of the landscape, often in long avenues as at Foliejon Park [9075]. Common around playing fields in towns and on industrial estates. Narrowly fastigiate with glabrous shoots. This is a male clone, propagated vegetatively and hence not naturalized.

Silwood Park: locally frequent. A line of tall trees separates the conifer plantation of Hayes Wood from the naturally regenerated oak woodland (formerly turnip and barley field) of Merten's Acres.

Ascot: no other records; not a feature of the Ascot landscape.

East Berks: Atlas 2000: all squares

West Berks: Atlas 2000: [28], [29], [38], [39], [46], [47], [48], [49], [40], [56], [58], [50], [67]

Populus x canadensis Moench *Hybrid Black-poplar* = **P. nigra x P. deltoides**

● mm 3

Populus x deltoides auct., non Marshall

Populus x serotina Hartig

Populus x canadensis Moench var. *serotina* (Hartig) Rehder

Populus x euroamericana (Dode) Guinier ex Piccarolo, nom. illegit.

Plantations and hedges on damp soils in small quantity; absent from the chalk. Upswept lower branches (not twigs) and leaves with sessile glands near junction with petiole. Stace lists 8 named cultivars ('Gelrica', 'Serotina', 'Regenerata', 'Marilandica', 'Heidemij', 'Eugerei', 'Robusta' and '178') but the distribution of these clones within Berkshire remains to be worked out. Second only to *Tilia x europaea* as a host for Mistletoe, *Viscum album*, as in Silwood, Windsor, Holyport and at Thatcham church. The leaves are mined by *Stigmella trimaculella*.

Silwood Park: planted by the Met Tower, in the churchyard at Ashurst, by the Ashurst Path, where there are several *Viscum album*.

East Berks: not in Druce, but planted throughout. 14% (1km²). Atlas 2000: all squares

West Berks: throughout, but rarest on the chalk. Atlas 2000: all except [36], [69]

Populus trichocarpa Torr. & A. Gray ex Hook. *Western Balsam-poplar*

● mm 3

Populus balsamifera L. subsp. *trichocarpa* (Torrey and A. Gray ex Hook.) Brayshaw

Few or no suckers, these are mostly male plants with rather straight sided leaves (triangular rather than rounded). Often planted in small, even-aged plantations. Told from *P. balsamifera* by its conspicuously angled young branchlets.

West Berks: by a pond at Chapel Row [5669] in 1988.

Populus x jackii Sarg. *Balm-of-Gilead* = **P. deltoides x P. balsamifera**

● mm 3

Populus x tacamahacca auct., non Miller

Populus x candicans auct., non Aiton

Populus x gileadensis Roul.

Plantations and hedges on damp soils in small quantities. Young branches rounded, conspicuously pubescent, all female; mature trees suckering freely. Leaves serrate (not crenate) and buds balsam-scented. Includes the variegated *P. x candicans* 'Aurora'.

Silwood Park: there is an exceptionally vigorous individual of 'Aurora' in the grass strip separating the two car parks of CABI and M-Scan. Planted at the same time as the *Quercus mexicana* and *Acer rubrum* 'October Glory' that flank it, and completely dwarfing them. This tree was felled in January 2004, having out-grown its location.

East Berks: not in Druce. Bracknell (1964), Trilakes (1977), Virginia Water (1987). The cultivar 'Aurora' was suckering underneath the pavement and breaking up the tarmac in White Waltham [8577] in 2003.

West Berks: not in Druce. Appleton Lower Common, Swinford Farm and Youlbury [40], Brimpton [56], Stanford Dingley [57], Moulsoford Downs (RNG) [58], Radley in 1918 and Sutton Courtenay [59], Bagley Wood [50], Englefield (OXF) in 1903 and Pangbourne in 1918 [67].

Populus x generosa A. Henry = **P. deltoides x P. trichocarpa** ● mm 3

West Berks: in gravel pits at Sutton Courtenay [5094] in 1988

¶ **Populus** *P.* 'Balsam Spire', *P. x canadensis* 'Aurea', *P. x canadensis* 'Eugenei', *P. x canadensis* 'Robusta', *P. x canadensis* 'Serotina', *P. x candicans* 'Aurora', *P. grandidentata*, *P. lasiocarpa*, *P. tremula* 'Pendula', *P. trichocarpa*, *P. wilsonii*, *P. yunnanensis*

Salix pentandra L. *Bay Willow* ● m 5

Wet ground by ponds and streams; not native in Southern England, and always planted in Berkshire. Only males are found. The leaves are glabrous and only 2-4 times as long as wide. There are 4 or more stamens.

NVC: W 4

East Berks: no records.

West Berks: not in Druce. Two bushes by the Old Mill at Aldermaston [56] in 1961, and planted on the bank of the R. Kennet at Avington [36] in 1977 and at Sutton Courtenay Manor [59] in 1982.

Salix euxina I.V. Belyaeva (*S. fragilis* auct. non L.) vice *S. fragilis* L.

Salix x fragilis L. *Crack-willow* ○ mm 4

Salix x fragilis L. vice *S. x rubens* Schrank

Salix x fragilis nothovar. *basfordiana* (Scaling ex Salter) Stace*

vice *Salix x rubens* nothovar. *basfordiana* (Scaling ex Salter) Meikle

River-sides, locally abundant, but uncommon in wet woodland. Rare on the chalk and on very acid soils. Mostly planted, but the plants of var. *fragilis* have sparsely hairy young leaves with even serration and are found as both males and females. The var. *furcata* has oddly forked catkins and broad leaves (up to 3cm or more) and is probably a vegetatively propagated sport, the whole population representing a single clone. Another male is var. *decipiens* but its catkins are unforked and

it has shiny, very pale coloured twigs. Much the commonest is var. *russelliana* (Sm.) W.D.J. Koch *Bedford Willow* which is female and has long narrow leaves with uneven teeth. The distribution of the varieties in Berkshire has not been worked out. The leaves are attacked by the conspicuous cherry-red, bean galls of the sawflies *Pontania viminalis* (spherical), *P. pedunculi* (hairy), *P. vesicator* (kidney shaped), *P. proxima* (bean gall), the curious Camellia gall (or rosette gall) of the gnat *Rhoabdophaga rosaria*, and the small white hairy pin galls of *Eriophyes tetanothrix*, branch galls of *Euura amerina* (rough brown) and *Rhoabdophaga salicis* (smooth green). The leaves are mined by *Stigmella obliquella* and *Ectoedemia intimella*. The tree is host to one of the biggest of all aphids, *Tuberolachnus salignis*.

This species has an interesting history as an alien invader in countries where it was taken by European settlers in the nineteenth century. In New Zealand, for instance, it is a great nuisance because its fragile shoots break off so easily and root so readily, that vegetative offspring of one plant can rapidly choke an entire watercourse. Almost all the New Zealand trees are male, and may well be from a single clone.

NVC: OV 30; W 5,6

Silwood Park: uncommon in wet woodlands and swamps at The Willows, Cascade Marsh, The Marsh, Wood Bank, Rookery Slope. The tallest colonist of the "95 Islands" at the western inflow to The Lake. During the severe drought of 1995, the twin banks of mud flanking the inflow channel were exposed for the whole growing season. These were densely colonised by willow seedlings (mostly *S. atrocinerea*) with the result that they instantly became terrestrial habitats. Only later were the islands colonised by more traditional "early successional" aquatic plants like *Typha latifolia*. The succession was effectively short-circuited by the drought. Ten seedlings uprooted from the gravel beds at Ashurst on 18 September 2008.

East Berks: Wargrave, Sonning, Cookham, Bray, Loddon, Ruscombe, Blackwater, Bisham. Dominant along stretches of the R. Thames and its tributaries, as at Windsor Racecourse. 44% (1km²). Atlas 2000: all squares

West Berks: all the records are of planted individuals. Atlas 2000: all squares

Salix x rubens Schrank *Hybrid Crack-willow* = **S. alba x S. fragilis**

A wide range of phenotypes are planted in wet places and by streams and rivers. The plants with yellowish-orange twigs, that glow so conspicuously in winter sunshine, are nothovar. *basfordiana* (Scaling ex S.J.A. Salter) Meikle.

West Berks: Bablockhythe and Appleton [40], Radley pit [59] (OXF), Burghfield [67] (LAN det. R.D. Meikle).

Salix x pendulina Wender. *Weeping Crack-willow* = **S. fragilis x S. babylonica**

Salix x babylonica auct., non L.

Salix x blanda Andersson

East Berks: at Strand Mere [8580] in 1958 (det. at Kew).

Salix alba L.

o mm 4

This is the classic Thames-side willow. Sides of rivers and pools, damp hedges etc. Locally common and often pollarded. Mr G.D. Leslie painted his picture of *Willow, willow* from the banks of the

Loddon. Absent from the chalk and the very acid soils of south-east Berkshire. So widely planted that its self-sown distribution within Berkshire is impossible to fathom. Much less abundant than *Salix fragilis* but locally dominant by the larger rivers.

Silwood Park: very local and rare. Three trees in wet woodland in The Marsh, bordering Cemetery Field. Seedlings amongst head-high nettles in the horticultural dump in Rookery Copse in August 2011.

Ascot: no records other than the Silwood plants.

East Berks: common by the Loddon and Thames in [76] and [77] but much more local elsewhere. Remenham, Moor Green, Cabbage Hill, North Bracknell, Shepherds Lane, Hurley Meads, Temple, Thames Lock, Summerleaze Lakes, Foliejon Park, Oakley Green, Oakley Court, Leiper Hill, Great Meadow Pond, Cumberland Lodge, Old Windsor, The Priory, Ham Island. Occasional to the north of 70, rare or absent to the south. 9% (1km²). Atlas 2000: all squares

West Berks: occasional throughout the Thames and Kennet valleys, especially at the waterside, but absent or rare in the interior (i.e. north of 75 and south of 85). By the canal in central Newbury [4767]. Dominant by the Thames at Donnington Bridge [5204]. Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all squares

Salix alba var. **vitellina** (L.) Stokes *Golden Willow* mm 4

These willows are grown for the winter interest of their brightly coloured shoots. They are told from the coloured twig cultivars of *Cornus* at once by the buds: willows have alternate buds, and dogwoods have their buds in opposite pairs. Much used in landscaping schemes in towns and planted widely on motorways and dual carriageways.

The classic yellow-twigged willow is var *vitellina*; the shoots need to be cut down to a stump every year or two to ensure the best colour; var *britzensis* has bright orange red twigs and var. *chermesina* has carmine red twigs.

Salix x sepulcralis Simonk. *Weeping Willow* = **S. alba** var. **vitellina** x **S. babylonica**

Salix x babylonica auct., non L.

Salix x sepulcralis Simonkai nothovar. *chrysocoma* (Dode) Meikle

Salix x pendulina Wender. var. *elegantissima* (Koch) Meikle

Much confused in the past. A key to the 6 different Weeping Willows is on p.59 in Meikle (1984). The key features you need to note are these: whether the catkins are sessile or pedunculate, whether the leaves are finely or coarsely serrate, whether the twigs are golden and very pendulous or olive and not very pendulous, whether or not the ovary has short hairs at the base, and whether the ovary is subsessile or distinctly pedicellate. I hope you have got all that.

Silwood Park: a large planted tree at the entrance to Silwood Farm.

East Berks: Boulter's Lock, Maidenhead.

West Berks: at Tubney Pond [4398] in 1954 (det. R.D. Meikle)

Salix triandra L. *Almond Willow* o m 3

Salix triandra L. var. *hoffmaniana* (Smith) H. Watson

By rivers, ditches, ponds and gravel pits in small quantity. Absent from the chalk and rare on acid soils. Locally common as a small tree or shrub. Known from *S. alba* and *S. fragilis* by stipules large and persistent to maturity and by smooth, flaking bark. The twigs are glabrous and have strong ridges or angles.

Ascot: no records.

East Berks: Jouldern's Ford, Hurley, Bray, Bisham, Sonning, Twyford, Wargrave, Cookham, Ruscombe. All but confined to the Thames from Sonning to Remenham. Common at the Loddon Lily site [767837] close to the Upper Thames Boat Club at Remenham in 2002. Atlas 2000: [78]

West Berks: occasional along the Thames and Kennet valleys but absent from the interior. Lechlade [29], Milton Pond, Steventon, Cothill Fen and Dry Sandford Pit [49], Appleton [40], Aldermaston [56], Lowerhill Farm Wood, Radley and Sutton Courtenay [59], Kennington [50], Burghfield (LAN) and Theale [66], Pangbourne [67]. Atlas 2000: [29], [49], [40], [56], [59], [50], [66], [67]

Salix x mollissima Hoffm. ex Elwert *Sharp-stipuled Willow* = **S. triandra x S. viminalis**

West Berks: Wytham [40] in 1893 (OXF), Radley [59] in 1897 and Kennington [50] in 1892 (OXF).

Salix purpurea L. *Purple Willow*

m 3

Salix purpurea L. subsp. *lambertiana* (Smith) Macreight

Fens and by rivers, canals and ditches, ponds and gravel pits local and in small quantity. Absent from the chalk and rare on acid soils.

NVC: W 1

East Berks: common by the Thames from Henley to Marlow. Windsor, Bray, Hurley, Cookham, Wargrave, Wokingham, Loddon Bridge, Barkham, etc. Cock Marsh (1982), planted at Whiteknights Park (1975). Now rare on the Thames and Loddon. Atlas 2000: [77], [78], [88]

West Berks: occasional in the Northern Loop and along the Kennet valley. Absent or rare elsewhere. By the R. Thames east of Lechlade [29], Newbury [46], Great Wood [5165], Sutton Courtenay Manor and Didcot [59], Theale (LAN) [67]. Atlas 2000: [29], [38], [39], [46], [49], [40], [56], [59], [50], [67], [68]

Salix x rubra Huds. *Green-leaved Willow* = **S. purpurea x S. viminalis**

This hybrid is usually planted, but it can occur spontaneously when the parents grow together. Sometimes indicates the presence of former osier beds, as it was once a popular willow with basket makers. Told from the parents by the green under-leaves (*S. viminalis* is sericeous beneath) and the pubescence of young stems and leaves (*S. purpurea* is glabrous). It has bright red anthers.

Silwood Park: local and rare in the swampy part of Farm Wood on the bend in Farm Road. First recorded on 10 March 1980 and still there (but struggling in dense shade) in 1999.

East Berks: on the south-east corner of Heath Lake [8265] and planted in Whiteknights Park [7371].

West Berks: Faringdon [29], Newbury [46], Farmoor [40], Tilehurst [67] in 1895 (OXF).

Salix x forbyana Sm. *Fine Osier* = **S. purpurea x S. viminalis x S. cinerea**

West Berks: Eynsham Lock [40] (**OXF**) (det. EFW), Wytham [40], North Farm [5892].

Salix daphnoides Vill. *European Violet-willow* ● mm 2

Known by its dark purple stems with a plum-like bloom that is easily rubbed off, and by the leaves being relatively short (less than 5 times as long as wide). The branchlets are not pendant.

East Berks: planted at Dinton Pastures [77] and Broadmoor Bottom [86].

West Berks: Caldecott Road, Abingdon [4996] (**OXF**) (det. R.D. Meikle).

Salix viminalis L. *Osier*

Pond-sides, marshes, meadows, osier holts. Common and generally distributed. By streams, ditches, ponds and gravel pits. Occasional, but absent from the chalk and the very acid soils in south-east Berkshire.

NVC: W 1,5,6

Ascot: no records.

East Berks: occasional north of 70 and in the Blackwater valley; absent or rare elsewhere. Atlas 2000: all squares

West Berks: scattered throughout but commonest in the Kennet valley and rarest on the chalk. Atlas 2000: all squares

Salix x sericans Tausch ex A. Kern. *Broad-leaved Osier* = **S. caprea x S. viminalis**

Salix x laurina auct., non Smith

Salix x smithiana auct., non Willd.

East Berks: Coleman's Moor (**RNG**), Pinkneys Green (1984) (det. R.D. Meikle).

West Berks: on a clay bank in Gypsy Lane, Tilehurst pits [67] (**LAN**) and Dry Sandford Pit [49] (both det. R.D. Meikle), Tuckmill Meadow [2488], Wootton and Tubney Manor Farm [40], south of Theale [66].

Salix x calodendron Wimm. *Holme Willow* = **S. viminalis x S. caprea x S. cinerea**

Salix x dasyclados auct., non Wimmer

West Berks: North Farm, north of Brightwell-cum-Sotwell [59] in 1987.

Salix x smithiana Willd. *Silky-leaved Osier* = **S. viminalis x S. cinerea**

West Berks: on the old railway at Didcot [59], by the old canal at Steventon [49], Didcot Power Station [59] and Dry Sandford Pit [49] in 1990 (det. R.D. Meikle).

Salix x fruticosa Doll *Shrubby Osier* = **S. aurita x S. viminalis**

West Berks: Abingdon [49] in 1918 (OXF) with earlier, unsupported records from Didcot and Radley [59] and Ruscombe [77].

Salix caprea L. *Goat Willow*

m 3

Salix caprea subsp. **caprea**

Oak woods, hedges, river-sides and damp waste ground in towns and on railway embankments; common and generally distributed. Commoner than *S. cinerea* in woods on the chalk. The leaves are large and oval (5-12cm x 2.5-8cm) and densely hairy on the under-side. Tends to be over-recorded for *S. x reichardtii* from which it is told by the hybrid's smaller and narrower catkins, and slender puberulous dark reddish brown twigs which speak of the presence of *S. cinerea*. The leaves have red bean galls of the sawfly *Pontania capreae*.

NVC: W 4,6,8,14

Silwood Park: much less common than *S. cinerea* or *S. x reichardtii*. Met Tower, Oak Mead, Guinness's Thicket, Cheapside Playing Field, Old Orchard, Guinness's Bridge, Weir Wood, Nash's Copse, South Lodge, waste ground at Tractor Sheds and Nuclear Reactor. In the hedge of London Road to the east of Knight Frank. A single individual on 13 July 2007 in quite dry ground inside the Rhododendron Enclosure, close to the double gates. There were 3 individuals here in July 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	7	9	14

Ascot: locally abundant on the trackbed of the abandoned Platform 4 at Ascot Station, growing with other early successional trees in 1999-2004.

East Berks: 43% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Salix x reichardtii A. Kern. = **S. caprea x S. cinerea**

Very common and widespread. A highly variable and puzzling series of phenotypes linking both parents. Often more common than *S. caprea* at any given site.

Silwood Park: very commonly regenerated from seed on bare ground near the wetlands where both parents are found. In Oak Mead and Biodepth II the hybrid is commoner than *S. cinerea* (and *S. caprea* is absent) on ground that was cultivated then treated with methyl bromide in 1996. The seedlings flourished in the absence of competition. The bushes were over 2m tall by June 2003. Frequent on gravel beds inside the deer fence, following abandonment of weeding of the Ashurst Experiment in 2002; these are over 3m tall in 2012. A huge individual filling the space between the Refectory and the Gents and extending well over 5m tall was removed by contractors, and the root system dug out on 23 November 2012.

Ascot: on the western edge of Ascot Racecourse. Frequent with both parents in South Ascot Bog and Sunningwell Bog. Near the Broomhall Stream in Sunningdale and by the gasometer on Bridge Road in Sunninghill. With both parents in the car park at Ascot Station on 28 October 2009.

East Berks: Cookham [88] (det. R.D. Meikle). Frequent in the old chalk quarry at Cookham Dean [870856] in 2003. Waste ground in Whitley [7270] in 2003.

West Berks: Tilehurst pits [67] (**LAN**), Wootton [40] (**OXF**), Dry Sandford Pit [49] (all det. R.D. Meikle). On the top of Holies Down above Streatley [589802] in 2002. On cinder in railway sidings at Didcot Parkway Station [5290] in 2003.

Salix cinerea L. *Sallow*

m 3

Salix cinerea subsp. **oleifolia** Macreight *Rusty Sallow*

Salix atrocinerea Brot.

Salix oleifolia Smith, non Villars

Salix cinerea L. subsp. *atrocinerea* (Brot.) Piraj↔ and Sobrinho

Damp wood margins, fens, swamps, hedges, ditches, streams, ponds, gravel pits, railway banks and waste ground in towns; locally frequent in a very wide range of habitats. The leaves are narrow with some to many stiff, rust coloured hairs underneath, and often very strongly wavy (undulate or crispate) margins. The stipules are most confusing; they may be large or small, persistent or caducous (falling off early). Much the commonest willow. Host plant of the Purple Emperor butterfly *Apatura iris* and the Poplar Hawk-moth *Laothose populi*. The leaves are mined by *Stigmella salicis*, *Phyllonorycter* spp. & *Ectoedemia intimella*, and skeletonized by *Lochmaea caprae*, and many other species of Chrysomelids like *Melasoma aenea*, *M. populi*, *Phytodecta viminalis*, etc. Caterpillars of sawfly often defoliate whole plants, especially by water.

NVC: M 22,24,25,29; OV 26,30,35; S 1,4,15,25; W 1,4,5,6,8,21

Silwood Park: very common in damp shady places. Locally dominant around the margin of The Lake and by The Farm. A weed (along with the hybrid) in arable land at Oak Mead following cultivation and methyl bromide treatment (seed blown from the lakeside; no evidence for a seed bank). The main colonist of the “95 Islands” at the inflow to Silwood Lake, but overtopped by *S. fragilis* by 2002 (see p. 220, Plate 11). Self thinning of the stems recruited in summer 1995 was just beginning in May 2007, when stem densities were still higher than 10 m⁻². A plant overhanging the garden fence of Virginia Water Lodge in September 2005 had very large, persistent stipules and very pronounced wavy leaf margins. The natural regeneration scored in July 2007 in the 1996-cultivated ground at Oak Mead was restricted to the rabbit-fenced, methyl bromide treated plots, where it was heavily browsed by roe deer. Very common as an immigrant on the Raised Beds at Ashurst, especially on 28 August 2007 after abandonment of weeding. Hundreds of 1-year old seedlings uprooted from the gravel beds on 18 September 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
3	0	3	20	34

Ascot: dominant at the edges of the Marist Convent pond at Froggnall [941682] and at Englemere Pond [905686] in September 2005

East Berks: common throughout. 70% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

[**Salix cinerea** subsp. **cinerea** *Grey Willow*]

m 3

No records from Berkshire, but worth checking for in base rich fens. The twigs are persistently pubescent and the leaves are dull and pubescent on the upperside (they lack the rusty hairs below of

subsp. *oleifolia*). Told from the hybrid *S. aurita* x *S. cinerea* subsp. *oleifolia* by the latter's more slender, darker coloured, less ashy twigs, leaves with twisted tips and smaller catkins.

Salix x multinervis Doll = **S. cinerea x S. aurita**

Ascot: in the heather patch by the Cricket Pavilion on Ascot Heath in 2004.

East Berks: Owlsmoor [8462] in 1987 (det R.S.R. Fitter).

West Berks: Barrow Hill [69] (**OXF**) and Tilehurst [67] (**LAN**) (both 1963, det. R.D. Meikle).

Salix aurita L. *Eared Willow*

n 4

Hedges, thickets, damp woods and heaths. Not uncommon; Wet heaths, margins of ponds on acid mud, rarely in fen carr and absent from calcareous soils. Local and decreasing.

NVC: W 4,5

Silwood Park: very local and rare. One small bush on the bank of Garrison Ridge on the Reactor Track 1979-97. Gone by 1998, having been run over by a lorry delivering to the Engineering Store.

East Berks: Windsor Great Park, Bagshot, Finchampstead, Long Moor, Easthampstead, Wokingham, Swallowfield, Ascot, Sandhurst, Riseley, Stubbing's Heath, Ruscombe. Owlsmoor, Wishmoor Bottom, Ascot, Wellington College. Occasional in the heathy areas south of 70, rare in the Thames valley and absent elsewhere. 2% (1km²). Atlas 2000: [86], [88], [96], [97], [98]

West Berks: occasional in the heathy parts of the Kennet valley and the Northern Loop, but absent elsewhere. Inkpen [36], Greenham Common [46], Snelsmore Common [47], Frilford, Cothill Fen and Barrow Farm fen [49], Turners Green [56], Fence Wood [57], old railway at Hagbourne [58], Kennington Pool [50], Padworth Common pits and Ufton Park [66]. Atlas 2000: [29], [36], [37], [38], [46], [47], [49], [56], [57], [58], [50], [66]

[Salix x ambigua Ehrh. = **S. aurita x S. repens]**

There are no Berkshire records, but this hybrid should be sought on acid heathy ground, in places like Snelsmore Common [47] where both parents grow together.

Salix repens L. *Creeping Willow*

n 4

Salix arenaria L.

Salix repens L. subsp. *argentea* (Smith) Camus and A. Camus

Damp heaths, forest rides and margins of acid ponds; local and decreasing on acid soils in south Berkshire. Absent from the chalk.

NVC: M 16,24

Silwood Park: planted in The Hedgerow on 2 October 1980 with material rescued from the destruction of Crown Estate forest on the eastern edge of Bracknell, when site clearance began for the development of Martins Heron. The plants did not survive the ordeal, having been much eaten by rabbits over the winter of 1980-81.

Ascot: locally frequent in the fen-meadow north or the railway, west of St George's Lane 1970-2004. Also in damp rides in the Crown Estates woodlands. In Druce's time, the plant was found on moist

heathy ground at Englemere Pond, Sunninghill, Ascot, South Ascot, Sunningdale, Red Lodge Swinley, Martins Heron. Still at Swinley, Whitmoor Bog, Kingsride, Buttersteep Hill and Englemere now, much reduced through habitats loss, mainly as a result of housing developments like Martins Heron.

East Berks: only in the south, on the Bagshot Sands. Bearwood, Bagshot Heath, Earley, Broadmoor, Riseley, Jouldern's Ford, Finchampstead, Sandhurst, Ambarrow, Haines Hill. Easthampstead Plain, Coleman's Moor, Owlsmoor, Dukeshill golf course [907650] etc. 2% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: restricted entirely to acid heaths on the southern slopes of the Kennet valley. Snelsmore Common [47], Bishops Green [56], Gibbet Piece, Padworth Common, Silchester Common, Ufton Park and Wokefield Park [66]. Atlas 2000: [46], [47], [49], [66]

Salix elaeagnos Scop. *Olive Willow*

• m 4

This is the very narrow leaved, grey-foliaged bush beloved of landscapers. It has strongly revolute leaf margins and the stamen filaments are fused from the base to half way up. It is told from *S. viminalis* by the fact that the underleaf hairs are matted (not appressed) and the catkin scales are yellowish (not reddish brown).

Silwood Park: planted in several places, most conspicuously by the cycle sheds opposite Flowers Halls. This plant was dying in September 2007 and dead by spring 2008 when it was cut down.

East Berks: Whitley, Alder Moors, Savernake Park, Grange Farm, Broad Common, North Town Moor, Bracknell [8569], Bray, Winkfield Road, Windsor Castle. Planted by the side of Westacott Way [8479], the new road down to Maidenhead Office Park, and at Legoland [9474]. Locally dominant at the Drift Road end of the old road at Cranbourne Roundabout [929730] in August 2003. By September 2007 the plant was huge and over-growing the Windsor/Winkfield road-sign facing down the Drift Road. Atlas 2000: [77], [86], [87], [88], [97]

West Berks: on tipped soil [237876] by the Great Western Railway at what was Shrivenham Station (now *The Fat Dog*) on 23 September 2006.

¶ **Salix** *S. alba* subsp. *vitellina* 'Britzensis', *S. babylonica* var. *pekinensis* 'Tortuosa', *S. elaeagnos*, *S. exigua*, *S. fargesii*, *S. gracilistyla* 'Melanostachys', *S. hastata* 'Wehrhahnii', *S. helvetica*, *S. integra* 'Hakuro-nishiki', *S. x sepulchralis* var. *chrysocoma*, *S. udensis* 'Sekka'

CAPPARACEAE

Cleome sesquiorrygalis Naudin ex C. Huber *Spiderflower*

• th 7

A spectacularly tall garden escape, with very long, prominent stamens.

Silwood Park: rare, open compacted ground at Southwood Halls. One plant in the newly made gravel track behind the halls, apparently unaffected by recent herbicide spraying; 1 October 1983. Also self-sown at East Lodge in 1985. Not seen since.

East Berks: rare garden escape in Reading in 1998-2004.

West Berks: no records

¶ **Cleome** C. 'Violet Queen', C. 'White Spider'

BRASSICACEAE

Sisymbrium irio L. *London-rocket* ● th 6 †

Waste ground and rubbish tips. Never more than a very rare casual, now extinct. The plant is so called because it is said to have sprung up so abundantly over London after the Great Fire of 1666.

East Berks: roadsides near Eton (1805, but this record was probably in Buckinghamshire, v.c.24).

West Berks: rare on rubbish tips at Grandpont [50] in 1890, but this ground was built over by 1897. Self-sown each year in the Oxford Botanic Garden, just north of the river in v.c.23. Wytham Mill (OXF) [40] in 1893 and Newbury [46] in 1918.

Sisymbrium loeselii L. *False London-rocket* ● th 6 †
Sisymbrium irio auct., non L.

A rare casual of waste places, long extinct.

East Berks: Ascot in 1929 (OXF).

West Berks: Didcot [59] in 1892 (OXF).

Sisymbrium altissimum L. *Tall Rocket* ● th 6 ↓

Dry waste ground and rubbish tips. Rare and casual, declining.

Silwood Park: very rare on bare waste ground behind M-Scan, on ground where a Portakabin had stood for many years, killing all the perennial vegetation. Five plants on 28 June 1998 during the first growing season after the cabin was taken away. Site destroyed by the construction of the new greenhouses in summer 2000. Whether the seed had lain dormant for years, or was carried into Silwood when the Portakabin was delivered, we shall never know.

East Berks: not found by Druce. Crowthorne (RNG) in 1917, Reading (1960). <1% (1km²). Atlas 2000: [77], [87], [96]

West Berks: Enborne in 1896 [46], Frilford Heath in 1964 (OXF) [49], Downe House in 1966 [57], Moulsoford in 1918 (OXF) [58], Radley and Didcot Station [59], Tidmarsh Mill in 1911 (RDG) [67]. Atlas 2000: [49], [57], [59]

Sisymbrium orientale L. *Eastern Rocket* ● th 6 ↓
Sisymbrium irio auct., non L.

Cracks in paving, cinder tracks, railway ballast, soil heaps, rubbish tips and waste places. All but restricted to urban habitats.

Silwood Park: very rare and sporadic: a few plants on imported topsoil on Garden Wood Bank on 10 May 1989. Not seen since. The site is now a lawn.

Ascot: a rare casual on tipped topsoil on the edge of South Ascot playing fields during levelling operations; 29 June 2001. Four plants by the recycling skips in the Car Park on Ascot High Street on 6 June 2003.

East Berks: not found by Druce in our area. Shinfield (**RNG**) in 1944, Loddon Mill (**OXF**) in 1954, Woodley sewage farm (1946-60), cinder path in Reading (**LAN**) in 1956, Maidenhead and Bray (1958), Reading tip (1960), Twyford (1962), Smallmead tip (1965), in pavement cracks by the dual carriageway through Windsor (1999). Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008 where it was more abundant than *S. officinale*. 1% (1km²). Atlas 2000: [76], [77], [87], [96], [97]

West Berks: Faringdon tip [29], Pyle Hill Newbury [46], Harwell in a chicken run [48], Cothill (**OXF**) [49], Woolhampton by the station [56], on the railway between Cholsey and Mouldsford [58], Didcot (**OXF**) [59], South Hinksey [50], Theale [67]. About 30 plants in the tip at Roger's Quarry [287941] on 13 June 2006 (Susan Erskine). Atlas 2000: [29], [39], [48], [49], [56], [58], [59], [50], [67], [68]

Sisymbrium officinale (L.) Scop. *Hedge Mustard*

o th 6 ↑

Erysimum officinale L.

Roadsides, dry arable fields, disturbed hedge-banks and waste places. "Common and generally distributed; found by our dustiest and most sunny roadsides" (Druce). Widespread but scarce on the chalk. One of the commonest plants of urban waste ground. It is increasing in abundance because of the massive switch to Oilseed Rape cultivation by Berkshire farmers since 1980. Naturally, Hedge Mustard survives the herbicide regime laid down for its close relative, and so it has become a common and occasionally abundant weed of Rape crops. Host plant of the common greyish black weevil *Ceuthorrhynchus assimilis*, and *C. pyrrhorhynchus* which is brown with a red rostrum. NVC: OV 3,7-9,13,16,18,19,22-25

Silwood Park: one of the commonest ruderals in cultivated and waste ground, and in hedgerows. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk. On imported topsoil at the Ashurst lysimeter site in May 2004. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. On the Pound Hill Cultivation Timing Experiment it was rare on Block B of the May-2006-cultivated plot on 28 April 2007 and rare on Block D of the March-cultivated plot on 1 August 2007. A frequent weed of barley in Silwood Bottom in June 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	15

Ascot: local and uncommon on soil piles and bare ground during construction of Ascot Racecourse in August 2005. A few plants left on 22 May 2007, especially where grassing-over had failed, as on the corner of New Mile Road.

East Berks: common and widespread 65% (1km²). Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: absent only from the heart of the chalk Downs. On the roman walls at Calleva Atrebatum [6462] in 2004. Atlas 2000: all squares

¶ **Smelowskia** *S. calycina*

Descurainia sophia (L.) Webb ex Prantl *Flixweed* ○ th 6 ↓
Sisymbrium sophia L.

Waysides, sandy fields, rubbish tips and bare waste ground; local, rare and sporadic. First recorded in Lyle's *Herball* (1660) "upon old walls about Oxford everywhere".

NVC: OV 3,17,19

East Berks: not found by Druce in our area. Maidenhead (1960), Cookham (1961), Reading (1918). On the earthen mound of the new flood defences in Stag Meadow at Windsor in 1997; not seen since, despite repeated visits. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. <1% (1km²). Atlas 2000: [77], [88], [97]

West Berks: recent records are virtually confined to the Northern Loop of the Thames: Cothill, Marcham, Frilford Heath and Fyfield [49], Wytham Mill, Botley, Dry Sandford and Tubney Manor Farm [40], Didcot [59] and Bagley Wood [50], with records of casual plants from Newbury Station [46] in 1897 and Thatcham [56] in 1918 to the south. Atlas 2000: [49], [40], [59]

Alliaria petiolata (M. Bieb.) Cavara and Grande *Garlic Mustard* hp 4
Sisymbrium alliaria Scop.
Arabis petiolata M. Bieb.

Woods, hedge-banks and waysides on nutrient rich soils, copses, river-banks, roadside verges, ditch banks and waste places. Common and widely distributed. Host to caterpillars of the Orange Tip butterfly *Anthocharis cardamines* (look for their bright orange eggs attached to the flower stalks), and Green-veined White butterfly *Pieris napi*. This plant is an aggressive alien invader in the deciduous woodlands of the north-east United States; it has been the target of repeated, failed attempts at biocontrol.

NVC: OV 10,26; W 8,12,24

Silwood Park: commonest in boundary hedges, as on Buckhurst Road and in Ashurst Four Acre Field opposite the Marist Convent. Also on old bonfire sites (e.g. Gravel Pit in May 1995, gone by 1998). In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	14

East Berks: common throughout, 82% (1km²). Atlas 2000: all squares

West Berks: especially common in the past in elm woods. Atlas 2000: all squares

Arabis thaliana (L.) Heynh. *Thale Cress* th 4
Arabis thaliana L.
Sisymbrium thalianum (L.) Gay

Waste ground, pavements, brickwork, sandy fields, flowerbeds, heaths, walls, gutters on buildings, dry open grassland, dry arable fields and cinder tracks. Although common on the dry sandy fields of the south of our area, it is rare on the clay and all but absent from the chalk. Palatable to rabbits and much commoner inside rabbit fences than outside.

NVC: OV 3,39,41; U 1

Silwood Park: one of commonest spring-flowering crucifers in open ground of all sorts. In brick paving all around the new buildings from 1989-2004. In the arable fallows at Pound Hill, Silwood Bottom and Ashurst Four Acre Field after autumn cultivation. At the base of old walls of Beech Grove near Sunninghill Crossroads. Extraordinarily abundant in May 1996 following the great drought of 1995 which reduced the competitiveness of most of the perennial plant species. Also abundant 1 May 1999 in the graveyard at Ashurst in rabbit-grazed and disturbed turf. On the cinder pot-standing at The Greenhouses, particularly common on 5 May 2003 after the pot-standing had been treated with glyphosate herbicide in summer 2002. Very common in May 2003 after the triangle at Mill Lane had been dug up in winter 2002-03 for pipe-laying, and still frequent in April 2004. More abundant on October-cultivated plots at Pound Hill than on the early- or late-spring-cultivated plots. Planted as one of the 7 species in the Ashurst raised beds experiment, first sown in September 2002. Very locally common in the seedbank beneath old grassland at Heronsbrook Meadow in April 2004 following cultivation in 2003 (where both *Cardamine hirsuta* and *Capsella bursa-pastoris* were equally clumped in their small-scale distributions). In the seed bank below old grassland in Nash's Field, but absent from Block B, rare in Blocks A and F, and frequent only in Blocks C and E; very heterogeneous in its spatial distribution (see p. 49). Common on imported topsoil at Ashurst lysimeters in May 2004 and 2008. Abundant on 27 May 2006 in the cultivated parts of Ashurst Four Acre Field after a very dry winter. Abundant on 23 May 2007 in the top corner of Silwood Bottom following autumn cultivation in 2006. Very abundant in the autumn-cultivated fallow at Silwood Bottom on 7 May 2008. The plant was particularly abundant in the late spring of 2009, both on the autumn-cultivated fallows in Silwood Bottom, in the Nash's Field Cultivation Experiment (e.g. Block C) and on bare ground by Unit B on the Science Park and concrete around the Header House on 1 May 2009. On Royal Wedding Day 29 April 2011 the plant was dominant over the entire autumn-cultivated part of Ashurst Four Acre Field, in a year when the *Raphanus* was almost absent. The exceptionally wet April of 2012 led to massive populations in the cultivated parts of Nash's Field (especially Blocks C, D and E), Silwood Bottom and Ashurst Four Acre Field. Frequent to locally abundant in October-cultivated ground in Silwood Bottom on 30 April 2013 after a very late spring.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	20	18

East Berks: least common on the central clays. Common on churchyard paths as at Hurley. 24% (1km²). Atlas 2000: all squares

West Berks: surprisingly uncommon, yet widespread in the north, south and east, but absent from the chalk, and only local in the Northern Loop. Atlas 2000: all squares

Isatis tinctoria L. *Woad*

• h 7

A rare casual of waste and cultivated ground, formerly grown locally as a crop. Still grown occasionally in gardens as a curiosity for its attractive, pear-shaped glossy black seeds.

East Berks: not found by Druce. Sutton's seeds in Reading pre-1897, last recorded from Reading Abbey (RDG) in 1931. Atlas 2000: no records.

West Berks: "It was formerly grown around Wantage, but though found very productive it seems is discontinued" (Mavor, 1813). Templeton [36] in 1918, Whitehorse Hill (**OXF**) [38] in 1866, Wantage [38] in 1866. On waste ground at Kingston Bagpuize [4098] in July 2003. Atlas 2000: no records.

Bunias orientalis L. *Warty-cabbage* ● h 5 ↓

Alien by the sides of roads and railways; rare. Sometimes established briefly in grassland and by roadsides, especially on calcareous soils. In Britain, it is best known as a rare but persistent alien in Cambridgeshire, where it grows on the Devil's Dyke on the edge of the fens. In recent years, this species has increased dramatically in abundance in Central Europe, so that it is now the commonest yellow crucifer by roadsides in many parts of Germany. It will be interesting to see whether it invades southern England in due course. It is an attractive plant with neatly triangular leaf segments, the upper leaves with almost hastate bases.

Ascot: the first recent record for East Berkshire was from South Ascot on 12 July 2005, on the edge of leveled topsoil, growing with *Galega officinalis* and *Daucus carota*, on the eastern side of the new playing field between Liddell Way and the railway line [92045 67728]. A single large plant, but with very low rates of fruit production (less than 1 peduncle in 100 bore the characteristic bladder-shaped fruit). The same individual was flowering on 28 May 2006 but again not setting seed. Still there in 2007, but overgrown by brambles. A strong single individual on 24 May 2008 when the encroaching *Rubus*, *Quercus* and *Hippophae* were pruned hard back

East Berks: Maidenhead (1881), Wargrave (1893), Knowl Hill. Very rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: no records.

West Berks: Watchfield [29], Letcombe Bowers [38], AERE Harwell [48] in 1980, Garford and Grove [49], Botley [40], Moulsoford, Aston Tirrold and Lollingdon Hill [58], Didcot and Radley [59], Basildon and Tilehurst (**RNG**) [67]. The most recent sightings are from a lane-side north of Westmill Farm [235910] and the edge of a footpath near Aston Upthorpe Down [549841]. Atlas 2000: [29], [48], [58], [59], [50]

Bunias erucago L. *Southern Warty-cabbage* ● th 5 ↓

Formerly an occasional casual, now rare or extinct. Very distinctive fruits with four wings.

West Berks: recorded by Druce from Didcot [59] in 1897 and Cothill [46] in 1918.

Euclidium syriacum (L.) R. Br. ● h 5 ↓

West Berks: Grain alien. Casual in a chicken run at Cothill [59] in 1908 (**OXF**).

Enarthocarpus lyratus DC ● h 5 ↓

East Berks: a casual recorded from Windsor and adjacent Thames side habitats in 1870.

Erysimum x marshallii (Henfr.) Bois *Siberian Wallflower* ● ch 4
Erysimum x allionii = **E. decumbens x E. perofskianum**

This is the wallflower with bright orange flowers. Told from orange flowered *E. cheiri* by its bilobed (not divergent-lobed) stigma, and fruits that are square in cross section (not flattened).

Ascot: on a grave in South Ascot churchyard on 25 May 2004.

East Berks: rubbish tips in Whiteknights Park [7371] in 1974 and another old tip in Reading in 1986.

West Berks: Kennington [50] in 1929 (**OXF**).

Erysimum repandum L. *Spreading Treacle-mustard* ● th 6 ↓

West Berks: a grain alien of waste places as at Grandpont [50] and on ballast heaps by the railway at Didcot [59] in 1892. Also at Wytham Mill [40] in 1893 (**OXF**) and Cothill [49] in 1918.

Erysimum cheiranthoides L. *Treacle-mustard* ○ th 6 ↑

Arable land, garden ground, waste places and disturbed ground on acid soils. Locally frequent in south Berkshire, absent from the chalk and northern clays. Very plastic in size: less than 5cm tall on the poorest soils, to more than 100cm on the most fertile sites. Possessed of a very long-lived seed bank, and so moved about with topsoil, springing up wherever imported topsoil is used for landscaping.

Silwood Park: first recorded on excavated soil from the foundations of the Wind Tunnel 26 June 1985. Increased since a massive influx of seeds in topsoil for landscaping of the Science Park in 1987 but declined again subsequently. Common in flower beds and on sunny waste ground in 1990, especially around the Greenhouses (but gone by 2003). First seen in arable fallow at Pound Hill following spring cultivation in June 1997 and again in August 2000; now well established there with more than 10 plants on 3 August 2005. Occasional in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation.

Ascot: waste ground in Sunninghill, behind Ascot High Street. Very rare on a topsoil pile during construction of the new grandstand at Ascot Racecourse on 13 September 2005. Rare on the last surviving soil pile at the racecourse by New Mile Road on 15 September 2006.

East Berks: Wellington College, Wargrave, Paley Street, Coppid Beech roundabout, Maidenhead, Remenham, etc. 4% (1km²). Atlas 2000: all squares

West Berks: uncommon everywhere except in the Thames valley from Lechlade [29] to Abingdon [49]. A few scattered records elsewhere as from Inkpen [36], Wantage old canal [48] and Newbury [46], Colthrop [56] and the country to the south of Reading [66] and [67]. Locally frequent on Tadley Common [6062] in 2002. Clearly much increased in range if not in abundance. Atlas 2000: all except [37], [47], [58], [50], [68], [69]

Erysimum cheiri (L.) Crantz *Wallflower* ○ ch 4
Cheiranthus cheiri L.

On old stone walls, especially of limestone or brick-and-flint. Known from other Wallflowers by its distinctly flattened fruits and its stigma with two diverging lobes.

NVC: OV 22,39

Ascot: on waste ground in South Ascot (1979-2004). Not self-sown in Silwood Park.

East Berks: Sonning, Cookham, Windsor Castle, Shottesbrooke. Old limestone walls in the north. Flint walls of Reading Abbey (1892-2004). 16 % (1km²), but recently most often seen as a garden escape, rather than established on old walls. Very locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: frequent only in the Thames valley, and absent from large areas of the chalk and the Kennet. Shrivenham [28], Little Coxwell [29], Fernham and Faringdon [29], Hungerford and Kintbury [36], Uffington [38], Longworth [39], Cothill, Hanney, Kingston Bagpuize, Drayton, Marcham, Abingdon and Garford [49], Dry Sandford, Cumnor, Sunningwell, Wytham and Eaton [40], Bucklebury [57], Streatley [58], splendid on old limestone walls in Sutton Courtenay, also in Didcot, Long Wittenham and Radley [59], Kennington [50], Mortimer [66], Pangbourne [67], on old brick-and-flint walls in Wallingford [68]. Atlas 2000: all except [36], [37], [47], [48], [58], [69]

¶ **Erysimum** *E.* ‘Bowles’ Mauve’, *E.* ‘Bredon’, *E.* ‘Butterscotch’, *E. cheiri* ‘Harpur Crewe’, *E.* ‘Constant Cheer’, *E.* ‘John Codrington’, *E. linifolium* ‘Variegatum’, *E. x marshallii*, *E.* ‘Moonlight’, *E.* ‘Wenlock Beauty’

Hesperis matronalis L. *Dame's-violet*

• h 5

A common cottage garden plant, occasionally long-established as an escape. River-sides, road-sides, ditches, woods and waste ground, rare and sporadic. Increased, but possibly not much recorded before 1970.

Silwood Park: by the inflow stream at Cascade Bridge in 1972; still 2 large plants on the southern bank 16 June 1980. The bank became overgrown and the plants have not been seen since, despite scrub clearance in February 1995.

Ascot: long-established on the woodland edge by the spread topsoil at the *Navarettia* site at Manor Hill in Windsor Great Park [956696] on 24 May 2006.

East Berks: not found by Druce. Roadsides and waste ground throughout. Smallmead tip, Bulmershe, Hare Hatch, Bisham, Katesgrove in Reading [7172] (RNG). Locally abundant on waste ground near the cottage in Park Wood Bisham [852842] in May 2003, and by Tesco's superstore north of the railway at Reading [7274] in 2004. 6% (1km²). Atlas 2000: all squares

West Berks: Beckett Park [28], Furze Hills [29], Inkpen and Hungerford [36], M4 interchange J14 [37], by the lake in Benham Park [46], by the R. Enborne at Aldern Bridge [4963], Harwell [48], Wytham Abbey [40] in 1886, Eaton [4403] in 2004, Wasing pits and Crookham Common [56], river bank near Streatley [58], South Moreton [59], Burghfield, Silchester Common and Aldermaston (LAN) [66], frequent all the way from the Pangbourne railway bridge [6277] up the valley to the west in Northridge Bottom, wood near Tilehurst [67]. Atlas 2000: all except [37], [47], [69]

¶ **Hesperis** *H. matronalis* var. *albiflora*, *H. matronalis* var. *albiflora* ‘Alba Plena’, *H. matronalis* ‘Lilacina Flore Pleno’

Malcolmia maritima (L.) W.T. Aiton *Virginia Stock*

• th 5

Wilckia maritima R. Br.

Cheiranthus maritimus L.

A rare alien outcast of gardens, uncommon on waste ground.

Silwood Park: a single plant on the concrete steps of the Ecology Greenhouse by the Header House on 3 May 2002.

East Berks: not found by Druce. Rubbish tips, rare and casual. Cookham (1958), Smallmead tip (1969). River bank by the M4/A33 Interchange [709702] in 1999. Locally frequent on a pavement in Earley [7571] in August 2002.

West Berks: Newbury [46], Grandpont [50] and Pangbourne [67] pre-1897. Kennington [50] in 1929 as part of the Botanical Exchange Club, Didcot [59] in 1965. Susan Erskine found the plant at [299952] near a new roundabout where A420 meets A417 in 2003.

¶ **Malcolmia** *M. maritima*

Matthiola longipetala (Vent.) DC *Night-scented Stock* • th 5

Told from the other *Matthiola* spp. by its cylindrical (not compressed) fruits. A common garden plant, but seldom found as an escape.

East Berks: subsp. *bicornis* on waste ground in Bulmershe [7573] in June 2002.

¶ **Matthiola** *M. incana*, *M. scapifera*, *M. fruticulosa* subsp. *perennis*

Barbarea vulgaris W.T. Aiton *Winter-cress* h 5
Barbarea arcuata (Opiz ex J.S. Presl and C. Presl) Reichb.

Banks of rivers, ditches, moist places, waste ground, roadsides and soil piles, not all of them damp. Druce recognised 3 varieties which he dug up assiduously, and sent around the Botanical Exchange Club in 1892 and 1893. Occasional and conspicuous in clumps by roadsides, railways and canals, locally abundant, but absent from the chalk ridge.

NVC: OV 24

Silwood Park: very rare and ephemeral. Walled Garden; a single plant amongst material moved here from Kent in 1981. Gone by 1982. Garden Wood, at the edge of the road beyond the Incinerator beneath rhododendrons opposite the Zoology Greenhouses in May 1986 and 1987. Extinct following site clearance when Garden Wood was felled to make way for the new Biology Buildings in autumn 1987. One plant in the verge of Ascot Road, opposite the Main Drive Entrance on 7 May 1997. One plant in the central bed of the Science Park car park in a clearing between the birch and the *Cistus* on 13 May 2000, and one plant in the East Lodge bed on 17 May 2000. About 200 plants in the grassy triangle at the Cheapside end of Mill Lane on 13 May 2001, after pipe-laying work had churned up the ground; down to about 25 in April 2002, just 5 in May 2003, 8 in 2004 and just 5 (all in the northern corner) in May 2007. There were just 3 plants in the northern corner of the Mill Lane triangle on 18 May 2008. Two plants in the grassy triangle where Cheapside Road meets Buckhurst Road on 26 February 2003 and 2 again in May 2004. Three plants in the eastern of the two planting boxes flanking the main entrance to North Block on 20 May 2006. Still frequent in the western planter on 23 June 2010, with *Allium vineale*.

Ascot: a single individual on its own, right in the centre of the wet meadow in Sunningwell Bog, west of St George's Lane in May 2003. Just two individuals on the soil pile next to the re-seeded grassland between Liddel Way and the railway in South Ascot [919677]] on 24 May 2008.

East Berks: occasional throughout, but particularly common by the Blackwater River. Occasional on banks around the car park for the hospital at the Royal Military Academy Sandhurst on 15 May 2008. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 30% (1km²). Atlas 2000: all squares

West Berks: a noticeable feature of the Kennet river and canal banks. Occasional patches scattered all along the verges of the M4 motorway. On the ruins of the Prince of Wales pub at Challow Station [3590]. Atlas 2000: all squares

Barbarea intermedia Boreau *Medium-flowered Winter-cress* ● hs 5

Sown grassland, waste ground and rubbish tips; rare and sporadic. Told from *B. vulgaris* by its pinnate (not entire) upper stem leaves.

East Berks: no records in Druce. Jouldern's Ford (1966), Sonning (1958), railway by Wellington College (1962). 2% (1km²). Atlas 2000: [76], [86], [87], [88]

West Berks: first records from Challow (**OXF**) [38] in 1890, a clover field near Newbury [46] in 1892, Wickham (**BM**) [37] in 1919, near Bucklebury [57] pre-1897, Wash Common (**BM**) [46] in 1939, Theale tip (**LAN**) [67] in 1961. More recent records come from the railway at Newbury [4866] in 1972 and Benham Lock [4267] in 1978, and from a hedgerow near Newbury [4766] in 1980. Atlas 2000: [37], [46], [56], [67]

Barbarea verna (Mill.) Asch. *American Winter-cress* ● hs 4
Erysimum vernum Miller
Barbarea praecox

A rare alien of waste ground and railways. Told from *B. intermedia* by its bigger fruits (more than 4cm) and longer petals (more than 5.6mm).

Silwood Park: local and rare on an abandoned student allotment in Silwood Bottom in April 2001; perhaps introduced as a vegetable crop. Gone by 2002.

East Berks: waste ground, rare and casual. Wargrave in 2 places, Reading, Sonning, Wellington College Station (**RNG**) in 1915, the railway at Twyford and Maidenhead (1897). Leighton Park. Broadmoor (**LAN**) in 1961. <1% (1km²). Atlas 2000: [77], [87]

West Berks: first recorded from Newbury (**BM**) [46] in 1897, by the railway at Uffington [38], Denchworth [39], Speen [46], commonly naturalised at Newbury Station [4766], Upper Seeds at Wytham [40], Radley College and Didcot [59], waste ground at Grandpont [50], Theale [67]. Atlas 2000: [29], [40], [59], [66], [67]

Rorippa nasturtium-aquaticum (L.) Hayek *Water-cress* hel 5
Sisymbrium nasturtium-aquaticum L.
Nasturtium officinale W.T. Aiton

Margins of rivers, streams and ditches, in wet places on nutrient-rich mud (as *R. nasturtium*); Druce recognised 3 varieties, of which one was *R. microphylla*, below. Absent from the chalk ridge and uncommon on the acid soils but otherwise widespread. The seeds are in 2 rows under each valve of the siliqua. Probably somewhat over-recorded in the past for *R. microphylla*.

NVC: A 1,3,5,17,20; OV 26,32; S 5,6,12,14,22,23,28

Ascot: very uncommon. In the ditch next to Charters Road in Sunningdale. It becomes frequent only after crossing onto the clay at New Lodge. Not in Silwood Park.

East Berks: rare on the acid sands in the south-east, but common in ditches and shallow streams elsewhere, as at Nuptown and Braywoodside. 12% (1km²). Atlas 2000: all squares

West Berks: in Druce's time at the end of the nineteenth century, watercress was extensively grown in springs thrown out at the base of the chalk escarpment, as at Ashbury and Kingston [28], Uffington and Letcombe Bassett [38] and Hagbourne [58], as well as in the stream near Bradfield [67] and Stanford Dingley [57]. Atlas 2000: all squares.

Rorippa x sterilis Airy Shaw *Hybrid Water-cress* = **R. nasturtium-aquaticum x R. microphylla**
Nasturtium x sterile (Airy Shaw) Oefel.

East Berks: in Whiteknights Park Lake [77] in 1966.

West Berks: ditch near Kingston Lisle [38] in 1966, and from Dry Sandford Pit [467996] in 1990.

Rorippa microphylla (Boenn.) Hyl. ex Á. Love and D. Löve *Narrow-fruited Water-cress* thel 5
Nasturtium officinale W.T. Aiton var. microphyllum Boenn.
Nasturtium microphyllum (Boenn.) Reichb.
Nasturtium uniseriatum H. Howard and Manton
Rorippa nasturtium-aquaticum (L.) Hayek subsp. microphylla (Boenn.) O. Bolòs and Vigo

Margins of ponds and ditches and about springs in woods. By streams and ditches on nutrient rich mud; more shade tolerant than *R. nasturtium-aquaticum*; less common, but certainly under-recorded. Told by the seeds in 1 row (not 2) under each valve of the fruit.

Ascot: first recorded from Sunninghill in 1773. Not in Silwood Park.

East Berks: Reading (**LAN**) in 1960, Swallowfield, Woodley [7773], ditches and ponds at Billingbear, etc. Absent to the east of 80, except for single records from Cock Marsh [8886] and Windsor Great Park. 4% (1km²). Atlas 2000: [76], [77], [87], [88], [97]

West Berks: uncommon except in the Thames Valley, with a scattering of records from the Kennet Valley. Absent from the chalk and the northern clays. R. Cole at [204976], Boxford [47], Kingston Bagpuize, Black Horse field and Cothill [49], Wytham [40], Stanford Wood [57], Radley [59], South Hinksey [50]. Atlas 2000: [36], [39], [47], [49], [40], [57], [58], [59], [50], [66], [67]

Rorippa islandica (Oeder ex Gunnerus) Borbás *Northern Yellow-cress* th 6
Sisymbrium islandicum Oeder ex Gunnerus
Rorippa palustris auct., non (L.) Besser

Margins of rivers and streams; local, mostly in the Thames Valley. There may have been some confusion in the historic records in this section of the genus (there are no herbarium specimens). The fruit is several times as long as the pedicel (2-3 times), but much shorter (0.8-2 times) in *R. palustris* (which is the common yellow-cress of gardens and damp, compacted waste ground in towns).

NVC: OV 20,32,35; S 10,23

Ascot: no records until 2006. Very rare on damp soil by the Straight Mile at the racecourse end of New Mile Road on 12 September 2006. The plant had fruit 11mm, pedicel 2mm, sepals 1.1mm and petals 0.7mm.

East Berks: formerly occasional in the Thames Valley, and rare in the vicinity of Reading, but absent from large areas. Atlas 2000: no records.

West Berks: occasional all along the Thames, rarer in the Kennet: Hungerford [36] in 1975, Turner's Green and Brimpton pit [56] in 1986-7, east of Aldermaston [66] in 1982. Atlas 2000: no records.

Rorippa palustris (L.) Besser *Marsh Yellow-cress* th-hel 6
Sisymbrium amphibium L. var. palustre L.

Damp compacted waste ground and brick pavements, damp gardens, bonfire sites, banks of rivers, ditches, meadows, pond-sides, roadsides and other muddy places. Widespread and locally common. Told from *R. sylvestris* by its shorter petals (as long as or shorter than the sepals, rather than 1.5 times as long) and by its non-rooting stems.

NVC: OV 29,31

Silwood Park: locally frequent on damp compacted ground and in waste places in partial shade. Paths around the Manor House and The Farm, frequent by The Tip on bare soil, on a soil heap at the Header House in August 1989, on the tractor track by the Kissing Gate in Nash's Field, at the pond-side in the Japanese Garden, Cannon Path, a weed in the new shrub bed below *Acer* 'Red Pygmy' in July 1994 (now shaded out). Common around the bonfire site by the Walled Garden, in The Rookery Tip, and beneath the security fence of the Nuclear Reactor; this site was destroyed during work to erect the new high security fence in August 2010. Very abundant in July 2003 on the soil heap below the Engineering Store, following bulldozing in late spring of that year. In the Rhododendron Enclosure in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005; increased by May 2006, but shaded out by 2010. Locally dominant in cracks between the concrete pavement slabs on the Pollution Pad in Drive Field in July 2007. Particularly common on disturbed ground in late June 2009. Frequent to locally abundant on 3 September 2009 in cultivated ground on the edge of the drive at Silwood Lodge following conversion of the house to student use in spring 2009. Between brick pavements at the entrance to Munro Building on 28 August 2010.

East Berks: not in Bowen. Braywoodside roundabout, Sonning, Henley, Windsor, Wargrave, Coleman's Moor, Shottesbrooke, Bray, Blackwater, Wellington College, Windsor Home Park, Cock Marsh. 7% (1km²). Atlas 2000: all squares

West Berks: occasional throughout. Atlas 2000: [29], [36], [39], [46], [47], [49], [40], [56], [58], [59], [50], [66], [67], [68], [69]

Rorippa x erythrocaulis Borbás *Thames Yellow-cress* = **R. palustris** x **R. amphibia**

East Berks: by the Black Water River at Finchampstead [7962] in 1921 (BM) and from Reading [77] in 1990 (LAN).

Rorippa sylvestris (L.) Besser *Creeping Yellow-cress* hel 6
Sisymbrium sylvestre L.

Wet meadows, margins of rivers and ponds. Also a weed of arable land and damp waste ground. Local, mostly in Thames Valley. Care is needed with plants growing on paths, gardens and waste ground: *R. sylvestris* has longer petals (> 1.5 times the sepals, roughly equal lengths in *R. palustris*), and the fruit is longer (8-18mm rather than 4-7mm excluding the pedicel).

NVC: OV 28,32; S 23

East Berks: common on the banks of Thames by Windsor in 1805 (Gotobed). Reading, Wargrave, Sonning, Aston, Coleman's Moor, Loddon Bridge, Braywoodside roundabout, Bray, Old Windsor. 1% (1km²). Atlas 2000: [78], [88], [98]

West Berks: occasional throughout the Thames valley from Buckland [39] down to Reading [67]. Scattered records from Kennet valley. Absent from the chalk and the northern clays. Chieveley [47], Kingston Bagpuize House, Marcham and Abingdon [49], Wytham and Eynsham Lock [40], Hermitage and Yattendon [57], Moulsoford and Streatley [58], Radley [59], South Hinksey [50], Burghfield [66], Basildon (RDG), Pangbourne and Theale [67]. Recently recorded by Susan Erskine from Buscot Pick-Your-Own fruit farm [238970] on 7 July 2005. Atlas 2000: [47], [59], [50]

Rorippa amphibia (L.) Besser *Great Yellow-cress*
Sisymbrium amphibium L.

hel 6

Banks of rivers, ditches, and watery places; widely distributed. Locally frequent by the Rivers Thames, Kennet and Loddon, but rare or absent elsewhere. The NVC classification has not yet been worked out, perhaps because the plant so often grows on its own, rather than in an obvious community of species.

Ascot: no records.

East Berks: all the way along the R. Thames from Reading to Old Windsor, also on the R. Loddon. Sonning, Henley, Blackwater, Bisham, Medmenham, Dinton Pastures, Hurst, Wargrave, Twyford, Arborfield, Coleman's Moor, Jouldern's Ford, Ruscombe, Shottesbrooke, Maidenhead, Holyport, Whistly Mill, Cookham, Old Windsor, Cockpole Green, Bray, Queen's Eyot, Windsor Racecourse, Windsor, Virginia Water. Moor Green Lakes nature reserve [8062] in 2001. Rare to the east of 80 and south of 75. 5% (1km²). Atlas 2000: all except [96]

West Berks: by the R. Thames from Lechlade [29] down to Reading [67], by the R. Cole [29], and by the R. Kennet from Hungerford [36] to Reading [67]. Rare or absent elsewhere. Atlas 2000: [28], [29], [36], [39], [46], [49], [40], [56], [57], [58], [59], [50], [66], [67], [68], [69]

Rorippa x anceps (Wahlenb.) Reichenb. = **R. amphibia x R. sylvestris**

It has petals much longer than the sepals (so not *R. palustris*), pinnate leaves (so not *R. amphibia*), non-clasping leaf bases, and a relatively long terminal leaf lobe (so not *R. sylvestris*). The slender fruits stand out at almost 90 degrees to the stem (patent) and are shorter (4mm) than the pedicels (7mm).

East Berks: a large plant on the verge of the roundabout at Braywoodside [8775] in July 2003 growing near *R. sylvestris*.

West Berks: in a water meadow near Streatley [596810] in 1963 (RNG). Near the Thames in the Goring Gap [599797] in 1999.

Rorippa austriaca (Crantz) Besser *Austrian Yellow-cress*
Nasturtium austriacum Crantz

• h 6 †

A very rare alien with only one confirmed record. It has unlobed, toothed leaves, and squat, rather globose fruits (less than 1.5 times as long as wide, excluding the style) on long pedicels.

East Berks: not in Druce. Introduced on waste ground in Reading (LAN) [7273] in 1959 but site destroyed in 1960. Bowen thought the site was on the north or the river at Caversham in Oxfordshire (v.c.23) but the cited grid square is in v.c.22. Atlas 2000: no records.

West Berks: Winterbrook Lodge, at Cholsey [5886] in 1937, from the records of the Botanical Exchange Club. Atlas 2000: no records.

Armoracia rusticana P. Gaertn., B. Mey. & Scherb. *Horse-radish*
Cochlearia armoracia L.
Armoracia lapathifolia Gilib., nom. inval.

○ h 5

Roadsides, river-sides, abandoned allotments, waste places; rarely in quantity. One of the most persistent of garden outcasts with a deep, long-lived tap root. Common in towns and villages, but often seen a long way from houses, typically on roadside verges where garden rubbish was fly-tipped in the past. First Berkshire record in 1809.

Ascot: local and uncommon. Not in Silwood Park, but nearby in the verge opposite The Wells (2001-04) with *Hirschfeldia incana*. Ascot Station, South Ascot, verge where Ascot United football and Ascot Heath golf course access roads diverge [926694] where it survived the construction work associated with the new racecourse in 2005, Sunningdale, South Coworth and on Ascot Heath. Other populations in 2002 were close to New Lodge at the junction of the Drift Road and Fifield Lane [907752] and at Braywoodside roundabout [873750]. In the wet field adjacent to Sole's Pond east of Ascot Station in 2006.

East Berks: Swallowfield, West Reading, Sonning, Woodley Green, Whistley Park, Wargrave, Aston Ferry, Bisham, Bray, Paley Street, Holyport, East Maidenhead, west Bracknell, Wellington College, Blackwater, by the Thames at Old Windsor Lock. Plants with deeply pinnatisect leaves with very narrow lobes were abundant on waste ground by the carpark at Wokingham Station in September 2004. 15% (1km²). Atlas 2000: all squares

West Berks: frequent on roadsides throughout. On the ruins of the Prince of Wales pub at Challow Station [3590], and particularly abundant on the county boundary, south of Hungerford [36]. Atlas 2000: all squares

Cardamine bulbifera (L.) Crantz *Coralroot*
Dentaria bulbifera L.

• g 4 †

Although it has no claim to be a native Berks plant, it does have a remarkable native distribution in Britain with two centres: one on the Buckinghamshire Chilterns and another on the Weald (see Showler and Rich, 1993, *Watsonia* 19, 231-45). The Scarce Plant Atlas shows records in [88] and [98], but these refer to the Buckinghamshire parts of these squares in Marlow Woods and Burnham Beeches respectively. Coralroot is found in beech woods on dry slopes over chalk, often close to tracks, growing in patches 1-2m in diameter in areas free of other vegetation, but often close to *Rubus fruticosus* and *Mercurialis perennis*. Plants have axillary bulbils which are the common means of

reproduction, seed seldom being set. It is not at all clear why the plant does not occur as a native on our chalk beechwoods, just a stone's throw south across the river.

East Berks: not recorded by Druce. Bowen has it as a doubtful native or extinct. Recorded from Bisham Wood in 1879 without a specimen (possibly planted), and still there in 1944 "visible from the road (A308) on the left at the top of Bisham Hill" (A.J.M. Bailey, 1968). This site is presumably in Park Wood [851840]. Naturalised in Savill Gardens just over the Surrey boundary by Virginia Water in Windsor Great Park. More recent records as garden escapes or deliberate introductions. Found in a lawn at 1 Walnut Tree Close in Ruscombe [795767] in 1995 where it was introduced with imported turf. A good candidate for introduction to the magnificent woods owned by the Woodlands Trust at Bisham.

West Berks: a damp river bank in Newbury in 1966 (RNG, but note that the grid reference is wrong; the figure given is in Whiteknights Park).

Cardamine amara L. *Large Bitter-cress* hs 4

Alder woods, osier holts, woodland springs and stream-sides and river banks on nutrient-rich soil. Local and seldom abundant. Told from *C. flexuosa* (also found by springs in alder woods) by its larger petals (5.5mm or more) and its blackish violet anthers. The best place to see the plant is at bluebell time on the banks of the R. Pang where it flows through Moor Copse Nature Reserve [6374]. NVC: M 36; S 7; W 5

Ascot: there are no records to the east of 90.

East Berks: by the R. Loddon at Hall Farm, Thames banks at Windsor, Cookham, Henley, Wargrave, near Blackwater Ford, marsh near Sindlesham Mill, Hurst, Coleman's Moor, Bray, Bisham, Arborfield. Twyford, Sonning, Park Place, Hurley, Sandhurst, Odney Common, Bear Wood, Stanford End, Sindlesham (LAN), Remenham, Dinton Pastures, Coalpit Copse. 1% (1km²). Atlas 2000: [76], [77], [78], [86], [88]

West Berks: now rare and infrequent; absent from large areas including the chalk, the northern clays and the acid sands. Kingston Lisle [38], Wytham Ditches at Northfield Farm and Seacourt Stream at Wytham [40], Greenham Common and Sydmonton [46], Crookham Common, Bucklebury Common, Wasing Wood and Cold Ash [56], Streatley [58], opposite Nuneham Courtenay, Barton Court and Shillingford [59], just south of Iffley meadows [50], Padworth Gully, Aldermaston Soke, Mortimer and Burghfield [66], Pangbourne, Moore Copse, Bradfield, Sulham, Tilehurst and Purley [67], Rush Court [69]. Common only in the Kennet valley from Newbury [46] to Reading, with scattered records from the Thames valley from Wytham down to Pangbourne. Not found west of 45 or east of 80. Particularly common in the wet woods on the northern slopes of Greenham Common [5064]. Atlas 2000: [46], [40], [56], [58], [59], [50], [66], [67], [69]

Cardamine pratensis L. *Cuckooflower* hs 4

Damp meadows, grassy fields, chalk downs, thickets, damp woods, marshes, etc. Common and generally distributed, but absent from the chalk ridge. Host plant to the Orange Tip butterfly *Anthocharis cardamines* which lays its conspicuous orange eggs on the flower stalks. The hatching caterpillars eat the young fruits before pupating away from the plant. The plant can regenerate vegetatively by rooting of leaf fragments. The double flowered ('Flore Pleno') form is common in gardens and occasionally escapes.

NVC: M 13,22,24,27; MG 4-7,9,10; OV 26,35; S 1,3,4,6,18,19; W 5

Silwood Park: very local (in only 5% of the 1 hectare squares). Once common in Pond Field and Heronsbrook Meadow (e.g. during Annette Duggan's PhD studies 1980-83), but greatly reduced as the fields have dried out. The weather was briefly cold enough in January 2002 to freeze the ground and allow the tractor onto Pond Field to cut back the rushes, but this was not enough to encourage any flowering of Cuckooflower in April 2002. Increased in Herons Brook Meadow for a brief period after a rabbit fence was erected 1988-90, when the interior of the enclosure was a mass of flowers. Now (2004) restricted to a few small rushy patches within the otherwise grassy Heronsbrook Meadow. Around the margin of the pond in the Japanese Garden. Nash's Field; in the boggy patch by the Kissing Gate but much declined by 2000. Locally dominant in the damp shady parts of the lawn at The Farm (1979-2008) and common in the swampy grassland between The Farm and The Lake. Also at The Willows, southern end of the Walled Garden, Ashurst churchyard, and Farm Road. Frequent on the derelict site below Sunninghill Crossroads. Common in the newly erected rabbit fences (20 April 2008) on the eastern side of Heronsbrook Meadow on 18 May 2008, much commoner on the unfertilized than on the N and P fertilized plots.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	7	5

Ascot: locally abundant in the wet meadow below Ribblesdale behind the Wellingtonias, Sunningwell Bog, South Ascot Bog and in the damp grassy triangle at the northern end of Ascot Racecourse.

East Berks: particularly common in damp parts of churchyards. 21% (1km²). Atlas 2000: all squares

West Berks: Druce has nineteenth century records of double flowered plants from Wantage [38], Pusey [39], Abingdon, Fyfield and Sunningwell [49], Bagley Wood [50]. Atlas 2000: all squares

Cardamine x fringsii F. Wirtg. = **C. pratensis x C. flexuosa**

East Berks: collected from a meadow near Ascot Station by A.J. Wilmott (**BM**) 12 July 1932 (probably Sunningwell Bog [926683]), then again by J.E. Lousley on 8 July 1933 (**RNG**). Lousley was such a fanatical collector that he could not stand to have any one possess a British specimen that he did not have in his collection.

Cardamine flexuosa With. *Wavy Bitter-cress*

th 4

Wet woodlands (oak, beech and alder), damp shady places, brook-sides, bare soil on woodland rides, garden beds and waste ground. Occasional in south and east Berks, but rare or absent on the chalk and in north Berkshire. *C. flexuosa* (6 stamens) also occurs as a weed in built-up areas, where it can be mistaken for *C. hirsuta* (4 stamens). [Also, look out for the alien *Cardamine corymbosa* Hook. f. *New Zealand Bitter-cress* which also has 6 stamens, but which differs from *C. flexuosa* in having fewer than 4 leaves on the stem, 3-7 (not 5-17) leaflets, and larger petals (2-2.8mm wide rather than 1-2mm).]

NVC: M 27,36; OV 26,29; W 1,6,8,22

Silwood Park: frequent on exposed mud at the Lake, and throughout the swampy woodlands of Cascade Marsh, Farm Wood, Weir Wood, Water Meadow, The Rookery, Nash's Copse and Gunness's Thicket, often growing with *Impatiens capensis* and *I. parviflora*. Lining the banks of the Clear Brook where it flows past the Walled Garden. Common in the swampy grassland between The Farm and The Lake. At the margins of the pond in the Japanese Garden. Present with, but much less

common than, *C. hirsuta* as a weed of damp shady flowerbeds around the Manor House. Very common in summer 2002 from the seed bank in the spoil stripped from the Church Lane footpath when it was resurfaced in 2001 and piled by the Kissing Gate. Occasional in cracks in concrete around the base of the Header House greenhouses on 1 April 2009 and 22 April 2010. Common in Great Mead with *Ranunculus flammula* on 15 June 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	11	18

East Berks: probably under-recorded; 33% (1km²). Atlas 2000: all squares

West Berks: common in the Kennet valley but rare or absent north of 75, with a few scattered records from the Thames valley from Lechlade [29] down to Pangbourne [67]. Atlas 2000: all squares

Cardamine x zahlbruckneriana O.E. Schulz = **C. flexuosa x C. hirsuta**

West Berks: collected by Druce from Bradfield [67] pre-1897.

Cardamine hirsuta L. *Hairy Bitter-cress*

th 4

Open sandy or gravelly ground, walls, ditch banks, railway ballast, damp paths, waste ground, and gardens. This is our common weedy Bitter-cress. Locally abundant on acid, gravelly soil and widely distributed, but absent from the chalk ridge. Not known from closed vegetation (cf. *C. flexuosa*).

NVC: OV 20-22

Silwood Park: often the most abundant weed on shaded flower beds around the Manor House. An aggressive competitor in the Ashurst Warren raised sleeper beds. Very common on the cinder pot stand at the Greenhouses and on gravel paths round the Lily Pond. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk. Very locally common in the seedbank beneath old grassland at Heronsbrook Meadow in April 2004 following cultivation in 2003 (where both *Arabidopsis thaliana* and *Capsella bursa-pastoris* were equally clumped in their small-scale distributions). A curious plant with blackish-purple foliage appeared on gravel behind the CABI building in May 2002 and increased to 2004, growing amongst purple-leaved *Oxalis corniculata*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	8	12

East Berks: probably under-recorded; 40% (1km²). Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Cardamine** *C. heptaphylla*, *C. pentaphyllos*, *C. raphanifolia*, *C. trifolia*

Turritis glabra L. *Tower Mustard*

h 5 ↓

Arabis perfoliata,

Arabis glabra (L.) Bernh.

A very rare native of hedge-banks and sandy waysides in sunny situations. Petals pale yellow, seeds in 2 rows in valves that are more than 3 times as long as wide.

East Berks: Maidenhead, extremely plentiful at the top of Cookham Down in Druce's time, lane between Loddon Bridge and Twyford. There is a specimen (labeled *Arabis turrita*) collected by R B Ullman on 25 May 1931 from sandy Lane loddon Bridge in the South London Botanical Institute. Sandford Lane (**RNG**) [7672] in 1962, between Cookham and Bourne End [8885] in 1958, Maidenhead [8580] in 1897, Woodley (**LAN**) [7773] in 1957, and Coleman's Moor in 1921, 1931 and 1949 (all in **RNG**) [7672] now swallowed up by the suburban sprawl of south-eastern Reading, but still providing one recent record from a dry bank [776727] in 1984. Colin Grayer found a single plant by the path behind houses at Redwood Avenue Woodley [774724] in June 2006. It is not clear whether this is the same site as the 1984 record. Atlas 2000: only in [77]

West Berks: near Hermitage and Frilsham [57] in 1942, Bradfield [67] in 1918. Atlas 2000: no records.

Arabis caucasica Willd. ex Schltl. *Garden Arabis*
Arabis albida Steven ex M. Bieb.

• ch 3

Widespread rockery plant, occasionally found as an outcast on waste ground, and rarely self-sown in pavement cracks in towns and villages. It is reasonably clear that the tendency to record these common garden plants can be dated to the early 1960s in Berkshire, but we have no way of knowing what criteria were used to decide which plants to record and which to ignore.

Ascot: no records. Not self-sown in Silwood Park.

East Berks: Reading (1831). 2% (1km²). 2000: [76], [77], [87], [88], [97]

West Berks: on old limestone walls in north-west Berkshire; rare but locally established. Shrivenham [28] in 1963, Coleshill in 1963 and Great Coxwell [29], Steventon Mill [49] in 1962, Farmoor Bayworth and Cumnor [all 40] in 1964. Particularly common in Watchfield and Shrivenham [28] in 2001. Atlas 2000: [28], [29], [40], [50], [66]

Arabis hirsuta (L.) Scop. *Hairy Rock-cress*
Turritis hirsuta L.
Arabis brownii Jordan

hs 6 †

Walls, dry banks, bare places in chalk grassland, etc.; never more than local and rare, now extinct. It declined with the increasing use of fertiliser on grassland. Petals white, seeds in 1 row.

East Berks: Sonning railway cutting (1897), Reading (undated), Frogmore gardens (1952). Atlas 2000: no records.

West Berks: Walbury Camp [36] in 1955, Hamstead Marshall [46] in 1955, Snelsmore Common [47], East Ilsley [48], Compton [57] in 1918, Streatley Downs [58], Purley [67] in 1962. Not recorded from the Coralline Oolite in Berkshire (cf. Oxfordshire where there are 35 recent records). Atlas 2000: no records.

Arabis ferdinandi-coburgi J. Kellerer & Sünd. *Variiegated Arabis*

• ch 4

This is the common variegated *Arabis* sold in garden centres and planted on walls and rockeries. Seldom seen outside gardens. Like *A. procurrens* but the basal leaves are long petiolate (not sessile) and hairy on both surfaces (not glabrous above).

Ascot: on waste ground in Upper Village Road, Sunninghill in 1999-2010.

East Berks: very local and rare in Albany Road Old Windsor [98322 74596] on 15 December 2012 in front of council houses.

West Berks: on waste ground in Cumnor [40] in 1998.

Arabis procurrens Waldst. & Kit. *Prostrate Arabis* ● ch 4

A stoloniferous, white-flowered perennial with non-clasping leaf bases and dark green glossy leaves with hairy margins.

West Berks: very local and rare. Dominating an entire grave in the churchyard at Sunningwell [4900] on 2 May 2002.

¶ **Arabis** *A. caucasica*, *A. ferdinandi-coburgi*, *A. procurrens* 'Variegata'

Aubrieta deltoidea (L.) DC. *Aubretia* ● ch 4
Alyssum deltoideum L.

A ubiquitous rockery plant, commonly planted on garden walls and at the edge of perennial borders. Occasional as a garden escape or throw-out in towns and villages everywhere. Sometimes self-sown in pavements and cracks in paving stones in towns.

Silwood Park: in paving cracks on the patio outside the Refectory and around the Greenhouses.

East Berks: not in Druce. Planted and persistent, especially on old limestone walls as at Reading, Sonning, Shottesbrooke, Maidenhead, Hurley churchyard, Cookham. Locally frequent throughout. 28% (1km²). Atlas 2000: all squares

West Berks: commonest in the far north, where old limestone walls are more frequent. Bourton [28], Coleshill and Great Coxwell [29], Buckland and Longworth [39], Kingston Bagpuize [49], Farmoor, Cumnor and Wytham [40], Hamstead Norris [57], Sutton Courtenay and Didcot [59], New Hinksey [50]. Most of the records are post-1970. Atlas 2000: all except [58], [66], [69]

¶ **Aubrieta** *A. deltoidea*

Lunaria annua L. *Honesty* ● th-h 4 ↑

Hedge-banks and waste places near gardens; frequent. An essential member of the cottage garden community, sowing itself abundantly and escaping onto waste ground, hedge-banks, pavements and waysides in every town and village. The white flowered form, var. *albiflora*, occurs at a rate of about 1 in a 1000 outside cultivation, and there are variegated cultivars. Much increased since Bowen's time.

Silwood Park: relatively constant in its few stations at Ashurst, Silwood Farm, Cheapside and by the Croquet Lawn. On imported topsoil on Garden Wood Bank in May 1990. Beneath the holly hedge on

the Ascot Road opposite Knight Frank. Common in flowerbeds at the Greenhouses. Local beneath the Bird Cherry on North Gravel in April 2003. White flowered plants under *Viburnum tinus* 'Bush B' opposite the Reactor Block appeared every year since 1979, particularly abundant in April 2002 and 2004, but there were none in 2003.

Ascot: locally frequent behind the shops on Ascot High Street and on Whitmore Lane by Blacknest Park. Common in Sunninghill, South Ascot and Sunningdale. The white-flowered form grows on School Road in Sunninghill, and by the lane behind Sunningdale Bowling Club off Whitmore Lane on 20 April 2002. A single plant, close to the *Pyrola* patch at Englemere Pond on 29 April 2007.

East Berks: early records from Finchampstead (still there), Hurst, Thatcher's Ford, Bracknell, Earley, Coppid Beech Roundabout, Bray Gravel Pits. Now common throughout. The white flowered plant was common on Monkey Island Lane [9178] in April 2003. 27% (1km²). Atlas 2000: all squares

West Berks: first recorded from the railway cutting at Pangbourne pre-1897, and still very common around Pangbourne Station [6376] in 2004. Coleshill, Eaton Hastings and Buscot [29], Inkpen Common [36], Cothill and Kingston Bagpuize [49], Appleton Lower Common [40], Cold Ash [56], Hampstead Norreys [57], Didcot and Brightwell [59], roadside near Radley Large Wood [50], Silchester Common, Burghfield and Mortimer [66]. Frequent by the railway at Hungerford [36] and Newbury [46] in 2001. Both var. *albiflora* and cultivar 'Alba Variegata' grow as escapes in Appleton [4401] in April 2003. Atlas 2000: all squares

¶ **Lunaria** *L. annua* var. *albiflora*, *L. rediviva*

Alyssum alyssoides (L.) L. *Small Alison*
Clypeola alyssoides L.

• th 5 †

An extinct local speciality of cornfields and waste places. Like so many small plants, it proved incapable of survival in a world polluted by agricultural fertilisers. A rare annual of grassy fields and arable land that was recorded widely in Britain before 1930, mostly as a casual alien. It persists from year to year in the Breckland of Suffolk and Sandlings of Norfolk. It was included in the first and second editions of the *Red Data Book* (1977 and 1983), but was excluded from the third edition (Wiggington, 1999) on the grounds that it was not native.

East Berks: rather plentiful in some cornfields between Culham Court and Great Marlow in 1891, and in a field near Maidenhead. Arable fields, Hurley (OXF) [88] in 1893, Reading and Sonning [77] in 1918, now extinct.

West Berks: on the Ridgeway at Letcombe (OXF) [38] in 1882, Abingdon [49], and Bessels Leigh (OXF) [40] in 1920. Now extinct.

Alyssum saxatile L. *Golden Alison*
Aurinina saxatilis (L.) Desv.

• h 4

A widespread rockery plant, commonly planted on garden walls. One of the gardener's famous trilogy of crucifers, "The three A's" - *Arabis*, *Alyssum* and *Aubrieta* - which brighten rockeries and walls in spring with their white, yellow and purple flowers respectively. Occasional as an ephemeral garden escape or throw-out on pavements and open waste ground.

Silwood Park: very local and rare. Naturalised on old stone walls at Ashurst. Site destroyed by the construction of the new building in 1988. Three long-persistent remnants of cultivation by the Greenhouses in April 2002.

Ascot: waste ground in South Ascot (1979-2004).

East Berks: not in Druce or Bowen. Probably not increased, just more likely to be recorded. Towns and villages throughout. 10% (1km²). Atlas 2000: all except [78]

West Berks: first record Garford [49] in 1927 (**OXF**). Atlas 2000: [28], [29], [48], [40], [68]

¶ **Alyssum** *A. montanum*, *A. saxatile*, *A. spinosum* 'Roseum'

Berteroa incana (L.) DC. *Hoary Alison*

• th 6 †

Alyssum incanum L.

Waste places, rare and impermanent by railways. Presumed extinct.

East Berks: first record in a field by Wellington College (1874), by the railway at Maidenhead (1897), Sonning Cutting (1899). Pronounced extinct by Bowen.

West Berks: plentiful about Didcot Station (**OXF**) [59] in 1891, Sheepstead House (**OXF**) [49] in 1895, and on rubbish heaps at Grandpont [50] in 1891. By the railway at Newbury [46] in 1897. Atlas 2000: no records.

Lobularia maritima (L.) Desv. *Sweet Alison*

• th 6 ↑

Clypeola maritima L.

Alyssum maritimum (L.) Lam.

Widespread cottage garden, rockery and edging plant. Commonly found self-sown in paving in towns and villages, and very common as a garden outcast on tips. Also common on disturbed waste ground. Much increased (or perhaps just much more frequently noticed) since Bowen. Seldom seen far from houses. Flowering through the winter in most years (even into February during the mild winter of 2000-01).

Silwood Park: one of the commonest self-sown garden crucifers on bare soil and stony waste ground. Around the Manor house and the Refectory. Frequently naturalised in Cheapside Village.

Ascot: particularly common and long persistent on Upper Village Road opposite Sunninghill School, where it occupied all of a front garden, and spilled out onto the pavements from 1985-2001, when the garden was paved over to make a parking space. Common in cracks on pavements and in alleyways between the High Street and the Racecourse in Ascot. Locally frequent on pavement edges on the eastern limb of Victoria Road, South Ascot, in June 2004.

East Berks: not in Druce. Casual on rubbish tips. First record: Shinfield [76] in 1958 (**RNG**). Reading tip, Cookham, Woodside. Now common and widespread. 24% (1km²). Atlas 2000: all squares

West Berks: first record Didcot tip [59] in 1969. Common everywhere. Atlas 2000: all squares.

¶ **Lobularia** *L. maritima*

Draba muralis L. *Wall Whitlowgrass*

• th 4

Dry sandy banks in north-west Berkshire, very local. A very rare casual elsewhere.

Silwood Park: a brief but spectacular outbreak on open ground on the cinder pot-standing at the Greenhouses. Several hundred plants appeared in fruit on 13 May 2000, but none at all were seen in May 2001 or 2002. Origin unknown, but people from Silwood did visit Phil Grime's field site in the Derbyshire Dales in 1998, and may have picked up seeds there. Rediscovered on 5 May 2003 after the pot-standing had been treated with glyphosate herbicide in summer 2002; there were about 50 plants in an area of *c.* 1 m² on the left of the central path, 7m from the door in the garden wall, growing amongst, and almost concealed by, a dense crop of *Valerianella locusta* which had also benefited greatly from the herbicide treatment. Not seen in 2004. There were 3 plants in the cold, late spring of May 2005, but none in 2006 or 2007.

East Berks: no other records. Not in Druce or Bowen.

West Berks: Buckland [39], Wytham (OXF) [40] in 1910, Boars Hill (RNG) [4803] in 1953, Youlbury [480026] from 1949 to 1999. Atlas 2000: [40]

Erophila verna (L.) DC. *Common Whitlowgrass*

th 3

Draba verna L.

Erophila praecox (Steven) DC.

Erophila vulgaris

Erophila conferta Wilm.

Erophila spathulata Láng

Erophila verna (L.) DC subsp. *spathulata* (Láng) Vollm.

Cinder paths, open grassland, dry arable land, walls, dry banks, sandy and gravelly fields; generally distributed. This is the common species in Berkshire. Druce lumped the two forms (long and short podded), stating that the long-podded form was commonest in our area. He was able to identify at least 7 microspecies in the county. The modern treatment (Stace, 1997) has 3 British species, and plays down the pod characters beloved of the Victorian splitters (they do not correlate at all well with more reliable cytological characteristics and breeding systems). Petioles 50-100% of leaf lamina length; petals bifid to half to three quarters of way to base (includes both *E. spathulata* and *E. praecox* of Bowen). It disperses its seeds at the same time as *Cardamine hirsuta*, well before those of *Arabisopsis thaliana*.

NVC: OV 10; U 1

Silwood Park: much rarer than elsewhere in south-east Berkshire. On the cinder pot-standing at The Greenhouses, particularly common on 5 May 2003 after the pot-standing had been treated with glyphosate herbicide in summer 2002. Manor House, compacted ground at the edge of cinder path outside the conservatory; May 1987. Not seen since then, until rediscovered in abundance in May 1991 in the path and on the steep edges of the lawns. Common all along the paths 15 April 1994 because no herbicide had been used, and there was little hoeing. Common up to 2001 when herbiciding the paths was reinstated. An important component of the Ashurst Warren experiment in the raised sleeper beds; first grown in 1996-97. Flowering as early as 27 February 1998. Occasional in the seed bank of the cultivated Block C in former grassland in Nash's Field. Outstandingly abundant in spring 1996 following the 1995 drought. One of the 7 planted species in the new experiment in the Sleeper Beds at Ashurst from 2002; most seeds are shed before the beginning of May. Very large plants (22cm tall), occasional inside the rabbit fence on April 28 2004, on imported topsoil used to landscape the site from which the Lysimeters had been removed in summer 2003. Common in bare

patches on the lawn on the Buckhurst Road side of the car park behind Unit A on the Science Park on 18 April 2013 (the latest spring for many years, after the coldest March in memory). Frequent between brick paving all around the Centre for Population Biology in April 2013. Occasional in October-cultivated ground in Silwood Bottom on 30 April 2013 after a very late spring, amongst abundant *Arabidopsis thaliana*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	4

Ascot: very common beneath the railings at the back of the platforms on both Ascot and Sunningdale Stations. Much seed was collected here in April 2002 for the new Ashurst Experiment. Also frequent at the base of the sunny side of garden walls at the edge of pavements in Sunninghill and South Ascot. In bare, stony ground on the heath by the railway at Englemere. In crazy paving near The Carpenter's Arms on Upper Village Road in Sunninghill (1971-2013). On old brick walls at Charters in April 2004. Very abundant in thin turf on the edge of the pavement in Francis Chichester Close in South Ascot, conspicuous with its silvery fruits like miniature Honesty, having shed all its seed on 8 May 2004. Thousands of plants, the first of them just coming into flower, on 31 January 2013 on compact ground in the field gate by the zebra crossing on Ascot High Street.

East Berks: very abundant on trampled ground by the Thames path between Remenham and Henley on 10 April 2004. 10% (1km²). Atlas 2000: all squares

West Berks: frequent throughout the Thames valley but rare or absent on the chalk, in the Kennet valley and east of 85. Atlas 2000: all except [68], [69]

Erophila majuscula Jord. *Hairy Whitlowgrass*
Erophila simplex Winge

th 3

Scattered sparsely throughout England, especially on calcareous soils: limestone rocks and thin limestone turf, chalk downland (where it may grow on ant hills), sandy ground inland, walls, railway lines and gravel paths. Leaves and lower stems densely grey pubescent. There are hairs on the flowering stem and on the lowest pedicel (pedicels hairless in *E. verna*). Petals bifid to less than half way to base. Petioles 20-50% of leaf lamina length (see below). The seeds are tiny (0.3-0.5mm dia.). Its distribution within Berkshire is not yet worked out in detail.

Ascot: searched for without success. Not in Silwood Park.

East Berks: Reading [77]; no further details.

West Berks: Druce knew the plant from sandy arable fields at Inkpen [36] and near Lechlade [29] before 1897. Unlocalized post-1897 records from [49], [58], [50].

Erophila glabrescens Jord. *Glabrous Whitlowgrass*
Erophila quadriplex Winge
Erophila verna (L.) DC. var. *glabrescens* (Jordan) Diklic

th 3

Petioles 1.5 to 2.5 times the length of the laminas, subglabrous but with hairy edges, petals bifid to no more than half way to base. The upper stem and pedicels are completely hairless. Much less common than *E. verna*, but in similar habitats; worth looking for in early April.

West Berks: on chalky spoil on a construction site north of the former railway station at Compton [523800] on 24 April 2004. This is the first record for v.c.22.

Cochlearia danica L. *Danish Scurvygrass*

th 2 ↑

The most conspicuous member of the 'salt adventive' community; seaside plants that have found a niche inland, on the verges of salted motorways and trunk roads since the late 1980s. No one is quite sure how the seeds first got transported inland (e.g. they may have been contaminants of beach sand used for gritting), but once established, the plants spread rapidly along the road network, stuck to tyres and carried along by the wind. Now widespread on motorways, dual carriageways and trunk roads throughout the country, and on bare ground next to salted roads in towns. Locally dominant in a 30cm-wide strip between the kerb and the start of the grass, where the salt has reduced the competitive ability of the resident native plants to the point at which *C. danica* can establish from seed. Conspicuous in early spring as a grey-white, prostrate ribbon of flower in an otherwise flowerless verge. Also on gravel in the central reservation. One of the reasons that it is restricted to high speed roads is that it is highly intolerant of trampling. In towns, where pedestrian pressure is high, its niche is filled by the prostrate, trample-tolerant *Plantago coronopus*. It is also highly tolerant of exposure to the constant buffeting inflicted by high speed traffic, and where plants are sheltered, they grow much taller (e.g. roadside plants were 7cm tall, but plants growing on topsoil moved during road works into the shelter of nearby rhododendron bushes were 25cm tall [895655] on 7 May 2002).
NVC: OV 23

Silwood Park: first recorded on 17 April 2007 from the northern verge of London Road close to South Lodge. To the west of South Lodge, as far as the manicured lawn of Silwood House, the plant was scattered but locally frequent above the kerb-stone, with the longest strip of c. 3m just west of Silwood's main gate. To the east, there was just one solitary plant in the verge between South Lodge and the Cannon Crossroads. There were no plants on the southern verge of London Road and none on the grassy triangle at the end of Silwood Road (contrast with *Plantago coronopus*). On 17 April 2008 the plant was reduced to two patches: the biggest was at the kerb about 8m west of the South Lodge entrance, and the second was to the east of the eastern entrance to Silwood House, in the shade of *Quercus ilex*. There were no plants on the southern side of London Road from Silwood Road down to Princess Gate, but there is a 10m strip of plants in the shade of over-hanging trees to the east of the entrance to the Marist Convent. There was a slight increase in population up to 2014 but the plant was still confined to the northern verge of the road. On 18 January 2014 rosettes spread 50m west of the London Road entrance, almost to the first drive of Silwood House. To the east of South Lodge the plant was scattered all the way past Knight Frank to the Cannon Crossroads but at much lower density than to the west, confined to the extreme edge of the verge, and in this bare microhabitat it was much less abundant than *Cardamine hirsuta*.

Ascot: local and rare. The first Berkshire records were from the verge and central reservation of the dual carriageway of the A322 at [895655] between Bracknell and Bagshot in 1987 (RNG). On the central island of the Peanut Roundabout at Woodside [936717] since 1995. On the roadside of the B3022 opposite the Winkfield Racecourse at the northern boundary of Ascot Place [916716] in 1998. At Virginia Water in the verge of the A30 between Leptis Magna and Coworth Park in 1999, but commonest on the Surrey (v.c.17) part of the road. The bare verge of the A329 outside Silwood Park looks like ideal habitat, but the plant has not been found there despite annual searches. In the verge of the A330 opposite the Berystede Hotel [933673] on 8 April 2006. On Sunninghill High Street, around the base of the telephone box by the school, at the junction of the brick wall and the tarmac of the pavement on 1 May 2008.

East Berks: not in Druce or Bowen. The second Berkshire record was in 1994 from the verge of the A4 near Sonning [7574], and the third from Woodley Road [7674] in Reading in 1995. 7% (1km²). In suburban Maidenhead, it is particularly common on both approaches to the M4, the A423(M) and the A404 from Burchett's Green to Marlow. Abundant throughout Bracknell on both verges and the central reservation of all the dual carriageways since 1999. It grows all along the A329(M) from Bracknell to Reading, and on the M4 from Bray to Pingewood. It is common in Windsor, especially by the dual carriageway leading up to the Thames crossing. It is common and locally dominant in the central reservation of the A33 all the way from Riseley on the Hampshire border up to Reading, but it is less common in the verges of this road than on other local roads. 9% (1km²). Atlas 2000: all except [78]

West Berks: common in the verges of the M4 motorway from the heights of Membury (220m) to the low ground at Reading (40m), and along the dual carriageway of the A34 from Newbury to Oxford. It had yet to colonise the recently upgraded A420 Swindon to Oxford road, but it was growing on the slip road at Cumnor [463034] in March 2002, and reached Faringdon by 2004. Atlas 2000: [27], [37], [46], [47], [49], [40], [57], [50], [66], [67]

Camelina microcarpa Andr. ex DC. *Lesser Gold-of-pleasure* ● th 6 †
Camelina sativa ssp *microcarpa* (Andr. ex DC.) Thell.

Style more than one third as long as rest of fruit. Similar places to *C. sativa* but much less common.

East Berks: Not in Druce or Bowen. Worth keeping an eye out for.

West Berks: in a clover field near Cothill (BM) [49] in 1912.

Camelina aylssum (Mill.) Thell. *Gold-of-pleasure* ● th 6 †
Camelina sativa ssp. *aylssum* (Mill.) Hegi and Em. Schmid
Camelina macrocarpa Wierzb. ex Rchb.

West Berks: in a flax field at Pusey [3595] in 1943.

Camelina sativa (L.) Crantz *Gold-of-pleasure* ● th 6 †
Myagrum sativum L.

Cornfields, waste places, railway banks. A rare casual of sown fields and rubbish tips. Style less than one third as long as rest of fruit.

East Berks: Wokingham (1869), near Virginia Water. Reading tip (1960). No recent records.

West Berks: Newbury [46] in 1897, Cothill [49] in 1912, Wytham Mill [40] in 1897, Streatley [58] in 1914, Didcot [59] in 1969, Grandpont and South Hinksey [50] in 1965, most recently at Pingewood tip (RNG) [66] in 1986, Shooters Hill [67] in 1897.

Myagrum perfoliatum L. *Mitre Cress* ● th 6 ↓

West Berks: a grain alien recorded by T.G. Parry from Abingdon [49] in 1918 (OXF).

Neslia paniculata (L.) Desv. *Ball Mustard* ● th 6 ↓
Vogelia sagittata Medick.

A casual, once common now rare.

East Berks: Druce knew the plant (as *Vogelia sagittata*) from Wellington College [86] in 1918.

West Berks: from the railway near Didcot [59] in 1897. Last seen, associated with grain, in chicken runs at Harwell [48] in 1958.

Capsella bursa-pastoris (L.) Medik. *Shepherd's-purse* o th 1
Thlaspi bursa-pastoris L.
Bursa pastoris Wigg.

One of the commonest crucifers of dry arable fields, gardens, paths, gateways, wall tops and disturbed ground. Druce recognised 11 different varieties; Stace (1997) reckons that about 25 segregates have been named in the British Isles. Conspicuous when not in flower with its bright green rosettes of sagittate toothed, dandelion-like leaves. Absent from closed vegetation, and from deep shade.
 NVC: MG 1,7; OV 3,4,7-10,14,16,18-23,25,33

Silwood Park: common in the seed bank of arable fallow at Silwood Bottom and Ashurst. It is commonest in the May cultivated plots of the Pound Hill disturbance timing experiment, and rarest in the October cultivated plots. Particularly abundant on 3 August 2005 when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought, when it was commoner on Blocks C and D than on A or B. Note that it is far from widespread, even at the scale of hectares. Very locally common in the seedbank beneath old grassland at Heronsbrook Meadow in April 2004 following cultivation in 2003 (where both *Arabidopsis thaliana* and *Cardamine hirsuta* were equally clumped in their small-scale distributions). Common on imported topsoil at the Ashurst lysimeter site in May 2004. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	14

Ascot: on soil piles and bare ground during construction of Ascot Racecourse in August 2005; uncommon around the new grandstand, but frequent on the landscaped banks on both sides of Winkfield Road, north of the new underpass.

East Berks: recorded from only 58% of 1km². Abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: by no means ubiquitous at small scales. Atlas 2000: all squares

Teesdalia nudicaulis (L.) W.T. Aiton *Shepherd's Cress* th 4 ↓
Iberis nudicaulis L.

Bare spots and dry sandy banks on heaths, wall tops, and open patches on sand or gravel, on grass heaths and disused railways, in ground disturbed by rabbits or natural erosion. Found with *Ornithopus perpusillus*, *Aira caryophyllea*, etc. Often overlooked in flower in spring, it is more conspicuous in fruit. Declines under scrub encroachment and cessation of grazing.

NVC: U 1

East Berks: John Ray recorded it from Coleman's Moor in 1680, but it was local and rather rare even in Druce's time: "Ambarrow, Longdown Lodge Brickfield, Wokingham, abundant on a common near Bracknell, Sandhurst, near the railway from Bracknell to Wokingham, by the lodge near Wellington College Station". Eversley Common (**BM**) in 1890. Near Bagshot in 1897. By Bowen's time it was "Decreasing and very local. Dry banks on acid soil in south-east Berkshire. By the railway at Sandhurst (**RNG**) in 1947, and between Wokingham and Bracknell in 1965". Not seen recently, and presumed extinct in East Berkshire.

West Berks: a local speciality of open, sandy ground. Pickets Heath, Youlbury [486031], about 300 plants in a fallow in 1981, Frilford Heath golf course (10 plants in 1981 and 1996, 8 in 2004) and Tubney [49], Great Oakley, Chawley Hurst and Boar's Hill [40], Burghfield Common (**RDG**) [66] in 1913. In Dry Sandford pit in 1980 and Hitchcopsie pit in 1981 [49]. Camilla Lambrick reported "many hundreds" of plants near Chilswell Priory [486031] in 2004. Perhaps the easiest place to see the plant these days is on the wall at English Nature's headquarters at Foxhold on the southern edge of Crookham Common [5163]. Susan Erskine found 6 plants on Frilford Heath golf course, in the rough between the 5th and 7th fairways of the Green Course [447988] on 13 April 2005. Atlas 2000: [49], [40], [56], [57]

Thlaspi arvense L. *Field Penny-cress*

o th 5

Cultivated and disturbed waste ground. Most abundant in cornfields on gravel or clay; not uncommon, but absent from considerable areas on the chalk ridge and on acid soils in south-east Berkshire.

NVC: OV 7,13,18

Silwood Park: very local and rare. A single record from the fenced arable fallow at Pound Hill, opposite Nursery Field in June 1999. Still there, and still very rare on 19 July 2005. In the Pound Hill Disturbance Experiment, forming a single patch about 4m across, in July 2003 on the May-cultivated plot in Block A; still restricted to this same patch in July 2005, but less abundant after the very dry spring and early summer. Occasional in the same spot in May-cultivated Block A on 15 July 2008, when there were a few very small plants after a cool spring. A second record: very rare inside the rabbit fence on April 28 2004, on imported topsoil used to landscape the site from which the Lysimeters had been removed in summer 2003; not seen from 2005-2008. A single plant, presumably from the seed bank, in the newly-created bed at the rear of Virginia Water Lodge on 15 June 2009, after the garden had been created in November 2008. There was one plant in the Ashurst Lysimeters on 29 September 2009 following herbicide treatment and spring cultivation.

Ascot: very local and rare; conspicuous by its absence from most sites. A small patch of c.10 plants on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: abundantly in fields opposite Bisham Woods, Wargrave, Wellington College, Wokingham, Hurst, Maidenhead, Twyford, Earley, Waltham, Bray. Patchily distributed, but locally frequent, as in the allotments at Bulmershe in 2002. A single plant in the middle of the roundabout at Braywoodside on 10 May 2003. Very local in the market garden at West End, Warfield in August 2003. 3% (1km²). Atlas 2000: all except [96]

West Berks: by the railway south of Shrivenham [28], Badbury [29], Junction 14 of the M4 [37], Wantage [38], Charney Basset, Buckland and Pusey [39], Shaw and Newbury [46], Harwell [48], Drayton gravel pits, Marcham, Frilford, Dry Sandford Pit and Abingdon [49], Cumnor, Cothill and Wytham [40], Colthrop and Paices Wood [56], Bucklebury [57], by the Ridgeway [58], Sutton

Courtenay, Didcot and Wittenham [59], Burghfield and Silchester [66], Pangbourne [67]. Atlas 2000: all except [68], [69]

Thlaspi alliaceum L. *Garlic Penny-cress* ● th

A rare alien, smelling of garlic when crushed, told from *T. perfoliatum* by the presence of stem hairs and acute (not rounded) auricles on the stem leaves.

East Berks: on arable ground south of Ludgrove School Wokingham [8068] in 1978, and on dumped soil marking the boundary of a new car park, just west of Sandford Mill [778730] in 1989 (RNG). <1% (1km²). Atlas 2000: [77]

Thlaspi perfoliatum L. *Perfoliate Penny-cress* th 4 †
Microthlaspi perfoliatum (L.) F.K. Meyer

A British native *Red Data Book* species of bare stony ground on calcareous substrates like limestone quarries and railway banks, probably never more than a casual in Berkshire and long extinct. Told from *T. arvense* by its smaller fruits (< 10mm) with their narrower wings (< 1mm at the midpoint) and from *T. alliaceum* by the lack of garlic smell when crushed. Grows with *Erophila verna* and, like it, requires constant disturbance to persist in the face of competition from perennial plants. It increased dramatically in its native sites in Gloucestershire and Oxfordshire following the great drought of 1995 (Wiggington, 1999).

West Berks: collected by H. Boswell on Cumnor Hill [4500] in 1861 and by Rev W.O. Wait at Denchworth [3590] in 1896 (OXF).

Iberis umbellata L. *Garden Candytuft* ● th 7

Casual on rubbish tips and waste ground. A common bedding annual with toothed, linear leaves. Cultivars of the 'Fairy Series' have pink, lilac-purple or red-pink flowers, but whites are the most commonly seen escapes. Told from the rare native annual *I. amara* by its larger fruits (7-10mm rather than 3-6mm).

East Berks: railway banks near Reading, Twyford and Wellington College. Not seen by Bowen. Smallmead tip in 1969 and 1972. Purple-flowered plants on waste ground north of Oxford Road in West Reading [7073] in July 2002. 1% (1km²). Atlas 2000: [76], [86], [87]

West Berks: Cumnor Hill [40], Greenham Common [56] in 1970, Didcot Power Station [59] in 1968, Padworth and Pingewood pits [66] in 1986. Waste ground near the canal in Newbury [4767] in 2002. Atlas 2000: [40], [66]

Iberis sempervirens L. *Perennial Candytuft* ● h 5

This is the common candytuft of garden rockeries with woody stems and evergreen leaves. An occasional garden escape on walls and pavements. The annual garden Candytufts often have non-white flowers (see *I. umbellata*, above).

Silwood Park: formerly naturalised on walls at Ashurst and on the rockery in the Japanese Garden. Now gone.

East Berks: not in Druce. Walls in Reading (1960 onwards). Recently at Earley, Sonning, Pinkneys Green, Hurst. Completely covering one of the graves in the cemetery, uphill from Remenham church, in February 2002. 6% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: not in Druce or Bowen. Shrivenham, Kintbury, Kennington. Atlas 2000: [28], [36], [50]

Iberis amara L. *Wild Candytuft*

th 7 ↓

A scarce annual plant of bare ground in chalk grassland (e.g. rabbit scrapes), especially on south- and south-west facing slopes, chalk pits and canopy gaps in storm-damaged woodland. An early successional species, rapidly replaced by more vigorous species in the absence of repeated disturbance, but possessing a long-lived seed bank. Suffered under the conversion of downland to arable farming under the CAP and from scrub encroachment following myxomatosis. Very rare as a garden escape (the common garden escape is the perennial *I. sempervirens*). A local speciality, told from *I. umbellata* by its smaller fruits (3-6mm rather than 7-10mm) and its inflorescence which is elongated (not corymbose) in fruit.

NVC: CG 2

East Berks: chalky fields, locally common in Druce's time "near Henley, Hurley, and about Marlow, chalk pit between Henley and Wargrave, frequent near Park Place, fields near Culham almost white with blossoms". Bowen knew it only from arable fields and disturbed chalk grassland at Hurley [818822] in 1961. Careful management has allowed it to prosper in Hurley chalk pit, where it was frequent on scraped areas of the floor of the quarry in June 2002 and 2004. <1% (1km²). Atlas 2000: [88]

West Berks: on chalk downs. Knighton Down and Compton Beauchamp [28], Whitehorse Hill [38], East Ilsley Down [48], Upper Basildon [5976], Lowbury Hill, Moulsoford, Fair Mile (**RNG**), Aston Upthorpe Downs, Streatley (**LAN**) and Cholsey (**BM**) [all 58], Hinksey [50], Pangbourne chalky railway cutting (**RNG** and **HULL**) in 1872 [67]. The most recent sightings were on Aston Upthorpe Downs [544835] in May 2002 and [545839] in June 2000, but other spots worth searching are near Streatley [5880] and Blewbury [534820] and [534825] where the plant was last seen in 1971. Atlas 2000: [28], [38], [48], [58], [68]

¶ **Iberis** *I. sempervirens* 'Schneeflocke', *I. sempervirens* 'Weisser Zwerg', *I. umbellata* 'Fairy Series'

Lepidium perfoliatum L. *Perfoliate Pepperwort*

• th 5 ↓

Known by its yellow (not white) petals, and its upper perfoliate leaves (contrasting with its lower 2-3 pinnate leaves).

West Berks: collected by Druce at Greenham [46] in 1899 (**OXF**), and by J.S. Huxley at Wallingford [68] in 1918, but not seen since.

Lepidium bonariense L. *Argentine Pepperwort*

• h 5 ↓

Known by its middle and upper stem leaves which are deeply pinnately lobed (not entire or dentate).

East Berks: collected by Druce at Ascot [9065] in 1930 (**OXF**).

Lepidium sativum L. *Garden Cress*

• th 6 ↓

This is the Cress of “Mustard and Cress”, usually cut down and eaten long before any true leaves form. Commercial Mustard and Cress seed often contains only Mustard (*Sinapis alba*) because this germinates more rapidly, and more uniformly. Outcasts sometimes reach maturity in waste places, or on heaps of garden refuse. Not permanent. The pepperworts are distinguished on the degree of division of the middle and lower stem leaves and the nature of the covering of the fruit. This species has large fruits (> 4.5mm) and non-clasping, pinnate stem leaves.

Silwood Park: locally abundant on one of the student allotments in Silwood Bottom, obviously sown but now gone to seed on 28 August 2006.

East Berks: near Wellington College, Twyford, rubbish heaps at Reading (1897). Casual on rubbish tips in Reading (1962). Trial grounds of Messrs. Sutton at Reading in the form of var *crispum*. Woodley tip. Atlas 2000: no records.

West Berks: Pucketty Farm [39], Newbury [46], Wytham [40], Bradfield [57], Didcot [59], Grandpont and South Hinksey [50], Pangbourne [67]. There is a record from arable land at Bradfield [589722] in 1988. Atlas 2000: [57], [50], [67]

Lepidium campestre (L.) W.T. Aiton *Field Pepperwort* o th 5 ↓
Thlaspi campestre L.

Dry banks, cornfields, sunny waysides, open places in woods, waste ground and wall-tops. In small quantity, local, and absent from the chalk and wetter districts. Told by its clasping, undivided stem leaves which are shortly dentate, short style (not conspicuously longer than the sinus in which it sits), and by the distinctive covering of the fruit (hemispherical, scale-like vesicles).

Ascot: no records.

East Berks: Sonning Cutting, bridle path near Finchampstead, Wellington College, abundant by the railway at Maidenhead, Wargrave, Bracknell, Braywoodside, Knowl Hill, Twyford, Jouldern’s Ford, Haws Hill, Windsor, Woodley, Shinfield. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 1% (1km²). Atlas 2000: all except [96]

West Berks: in the Northern Loop of the Thames from to Appleton [40] to Abingdon [49]. Other scattered records from Aldermaston [56], Greathouse Wood [57], Theale [66]. Atlas 2000: all except [37], [39], [46], [47], [67], [68]

Lepidium heterophyllum Benth. *Smith’s Pepperwort* h 5
Lepidium smithii Hook.

Hedge-banks, commons, roadsides, railway embankments, waste ground; local and rare. It shares its very distinctive stem leaves (entire, with acute clasping auricles) with *L. campestre*, from which it is told by its long style (exceeding the apical notch of the fruit), and by the absence of scale-like vesicles on the fruit.

Ascot: known from dry banks in Sunningdale and Sunninghill in Druce’s time, but not seen there since the nineteenth century. The nearest extant site is on the clay at Chawridge Bank reserve (below).

East Berks: local and rare; Sonning Cutting, Burghfield Meadows, Cookham, just off the path to Foliejon Park at the top of the slope leading down to Chawridge Bank nature reserve [893740], Woodley, the railway bank at Queens Mere. 1% (1km²). Atlas 2000: [76], [77], [87]

West Berks: absent from the chalk, and from the Thames Valley. Denchworth [39], Greenham Common [46], Grove [49], Bucklebury [56], Aldermaston, Theale and Burghfield [66], Bradfield [67]. Atlas 2000: [38], [46], [49], [66]

Lepidium virginicum L. *Least Pepperwort*

● th 5 †

Lepidium densiflorum Schrader

Lepidium neglectum Thell.

An infrequent casual of wool and bird-seed introduced from North America, long extinct. Known by its small (2.3-4mm wide) but not tiny fruits (*L. ruderale* has smaller fruits 1.5-2.7mm), and by its relatively deep apical notch (more than 2mm deep, about one tenth of the length of the fruit).

Ascot: collected by Druce at Ascot [96] in 1929 and reported in the notes of the Botanical Exchange Club.

East Berks: no other records

West Berks: Druce collected plants at Moulsoford [58] and Didcot [59] in 1928 (**OXF**).

Lepidium ruderale L. *Narrow-leaved Pepperwort*

○ th 5 ↓

Waste ground, gardens, cinder beds, bare soil, rubbish tips and walls. Local and sporadic. Known at once by its tiny fruits (1.4-2.3mm wide) and by its entire (not dentate), non-clasping stem leaves with their rounded (not acute) tips.

Ascot: under Lime trees by the western end of the new Stand during reconstruction of the Racecourse [919689] on 30 August 2005.

East Berks: Prospect Park Reading (**RDG**) in 1912, Woodley in 1960, Emmbrook in 1965, Smallmead in 1965, Windsor in 1918. By the bridge where the Ascot Road crosses the M4 [894787] to the north of Holyport in June 2002. By the end of the Drift Road near The Squirrels [9373] in July 2002; still there in 2005. 1% (1km²). Atlas 2000: [76], [86], [77], [87]

West Berks: scattered, but absent from the north and west; Hungerford (**OXF**) [36], Shefford (**OXF**) [37], Newbury (**OXF**) [46], Abingdon (**OXF**) [49], Aldermaston (**RDG**) [56], Frilsham [57], Didcot [59], Pingewood pits [690693] in 1986, Tilehurst (**LAN**) in 1956 [67]. Atlas 2000: [67]

Lepidium latifolium L. *Dittander*

● h 6

A statuesque plant (to 1.5m) of damp waste ground. It has undivided leaves, sessile above and long petiolate below. Druce doubted that the plant would be found this far inland, and it was not recorded by Bowen. A recent arrival in Berkshire.

East Berks: the first twentieth century record was from the water treatment works at Fobney [7071] in 1982, then 10 plants were found nearby, in a lane side at Reading old tip [712710] in 1986 (this site was destroyed by the construction of the new main road at Rose Kiln Lane). There were 3 small colonies at Smallmead tip [705707] in 1988. The plant has survived the massive upheaval of all the

recent site clearance work (development of the Majewski stadium, road construction, and the building of the new water treatment works) and still grows in the ditch by the bridge into the new Reading Sewage Works [707707] off Island Road; 16 September 2001. A strong population, 10m in length, on the edge of the drive into Bray Cricket Club [899797] in June 2002-04. <1% (1km²). Atlas 2000: [77], [78], [87]

West Berks: in old peat pits at Newbury [46] in 1809, but long extinct at that site. A single recent record from the Thames riverbank north of Sandford Lock, Kennington [531017] in 1991. Atlas 2000: [50]

Lepidium draba L. *Hoary Cress*
Cardaria draba (L.) Desv.

• h 5 ↑

Lepidium draba subsp. *draba*

Waste places, railway banks and dry roadsides, forming dense monocultures. It is a rhizomatous, patch-forming perennial, and this can make it a pernicious and persistent weed. Possession of rhizomes is a highly unusual growth-form for a crucifer, most of which have tap-roots. According to botanical legend, its alternative English name, *Thanet Cress*, derives from its introduction to Britain in mattress-stuffing brought back by fever-stricken troops returning from the ill-fated expedition to the island of Walcheren in 1809 (106 men died in action fighting the French, but 4,000 died from disease). The troops landed at Ramsgate in Kent and their mattresses were subsequently sold to a farmer on the Isle of Thanet, who ploughed in their contents for manure. Needless to say, there is no evidence to support this story, and the truth is likely to be more prosaic. The plant appears to have been introduced at several docks in England and Wales in the early years of the nineteenth century. The first record was from Swansea docks in 1802, 7 years before the Walcheren invasion.

Silwood Park: long-established in the Greyhound Kennels behind the Walled Garden (pre-1970). The Kennels were sold in 1995, but development of the proposed housing estate was scotched when the residents of Silwood House had tree preservation orders placed on the 2 old oak trees. The present (absurdly pretentious) house was built in 1998 and the Hoary Cress site was destroyed during construction of the new tennis court. The plant was briefly common in the large bed next to Unit B on the Science Park, after rhizomes had been brought in with topsoil in 1987; these flowered on 13 May 1990. There were only 4 non-flowering shoots left by April 1994, and the plants were gone by 1996, shaded out by the planted birch trees. Now extinct.

Ascot: no other records (the closest extant site is at Winkfield). A single small patch in the verge by the car park entrance [959741] on the road through Windsor Great Park on 6 May 2009.

East Berks: first recorded from Maidenhead (1886), Windsor, Old Windsor. Reading (**RDG**) in 1912, Shinfield (1973), Farley Hill (1976). At the roadside of the A308 between Windsor and Bray in 2000. Locally dominant in patches on the edge of the M4 motorway, conspicuous when flowering in early spring. Recent records from Reading Station, Earley, Rivermead, Wykery Copse, Shottesbrooke, south-east Bracknell, Pitlands Farm, Cold Harbour [833787], Cannon Court Farm, and Winkfield. Abundant on disturbed ground around Majewski Stadium during the building of Green Park (1999-2004). Common in Reading on the banks of the A3290 [743728] and by the A404 at Temple [842829] in 2002. Locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 5% (1km²). Atlas 2000: all except [78]

West Berks: Beckett Park [28] in 1981 and by the railway at Stainswick Copse [245875] in 2003, Lambourn [37], by the Portway at Childrey [38], on the ruins of the Prince of Wales pub at Challow Station [3590] in 2002, Shaw [46], by dumped hardcore at Chapel Farm [448759] in June 2004,

locally abundant on embankments of the M4 Motorway at the Chieveley Interchange with the A34 [47], on the edge of Abingdon airfield [4797] in 2004, Four Points, south of Aldworth [554788] in 2003, Blewbury churchyard [58] in 1990, abundant at Didcot [59] pre-1897 and still there in 2003, on newly worked roadsides at Brightwell-cum-Sotwell [59] in 2000, by the railway in Kennington [5201] in 2004, Southcote (RDG) [67] in 1912. Atlas 2000: all except [68], [69].

Coronopus squamatus (Forssk.) Asch. *Swine-cress* o th 6
Coronopus procumbens Gilib.
Lepidium squamatum Forssk.

An occasional weed of oilseed rape and broad bean crops. Muddy, trampled ground by gates and ponds. Waysides, muddy margins of ponds, or on ground from which the turf has been removed by cattle. Occasionally on mud-topped walls. "Although a widely distributed plant in our area it only occurs in patches, chiefly in clayey or muddy ground, so that it is absent from a considerable part of the county. Where geese are kept it is almost sure to be found" (Druce). Absent from very acid soils. Nowadays much less common than *C. didymus*.

NVC: OV 7,8,10,13,18,19,21

Silwood Park: very rare and only recently arrived. Two plants in disturbed ground above the kerb on the CABI side of the road opposite M-Scan in summer 2000, where the fibre optic cables were laid for the new computer network. Still 3 plants there in June 2001, but not seen since.

Ascot: rare, known only from a soil heap at Broomhall Farm in 1998, but frequent as soon as one crosses onto the clay at Foliejon.

East Berks: more or less confined to the central clay. A weed of oilseed rape at Swallowfield, Ryeish Green, Kenney's Farm, Park Place, Crazy Hill, Knowl Hill, Sonning Meadows, Littlewick Green, Maidenhead, Hurst, Wargrave, Hawshill, Bray, Queens Eyot, bean crops in Windsor Great Park, Shaw Farm, Frogmore, Winkfield, with an outlier at Arborfield Garrison. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 13% (1km²). Atlas 2000: all squares

West Berks: scattered throughout, but least common in the Kennet and Pang valleys; Shrivenham [28], Lechlade [29], Newbury and Greenham [46], Beedon [47], Abingdon [49], Appleton, Eaton Stibble, Godstow nunnery and Cumnor [40], Aldermaston [56], Chapel Row [57], Blewbury [58], Burghfield and Mortimer [66], Tilehurst and Bradfield [67]. In an unsown fallow margin of a wheat field at Hinton Waldrist [372978] in July 2004. Atlas 2000: [29], [38], [39], [46], [48], [49], [40], [56], [57], [59], [66], [67], [69]

Coronopus didymus (L.) Sm. *Lesser Swine-cress* ● th 7 ↑
Lepidium didymum L.

Dry arable fields, gardens and disturbed ground, especially common on bare, compacted ground in towns and by roads. For Druce, this was a "semi-maritime species which occurs in Hampshire and is an introduced plant in Wiltshire and Surrey, where in Kew Gardens it is a common weed. Not yet recorded from Berkshire". Now, it is much more widespread and abundant than the native *C. squamatus*. Possessed of a long-lived seed bank, it thrives briefly following mechanical disturbance of the soil, or when protracted summer drought has set back the perennial vegetation. Freed from competition (e.g. by misguided weeding in gardens) it can reach 60cm in diameter.

NVC: OV 4,18,19,22

Silwood Park: a very common ruderal wherever the sandy soil is disturbed. The newly-made lawns outside the north front of Biology North Block suffered greatly from successive droughts in their first 2 years (1989 and 1990), and *Coronopus didymus* was completely dominant at the end of 1990 after the drought had killed the young lawn grasses. The lawns were re-sown in autumn 1990 and there was little sign of *Coronopus* in 1991. Water Tank: the dominant plant for several years in what should have been a lawn, but the grass seed failed in the drought of 1995; common here again in 2000 following trenching for the new fibre optic cables, but gone by 2001. On the Satellite Pad at Pound Hill, Ashurst Orchard, The Farm, Ashurst Path, Cricket Wicket, William Penney, Heronsbrook, TTC, M-Scan, Buckhurst Road and East Lodge. Very common in the seed bank of the spoil stripped from the Church Lane footpath in 2001 and piled by the Kissing Gate in summer 2002. Common at the foot of the graveyard at Ashurst in August 2002 following installation of the rabbit fence that spring. Very common in May 2003 after the grassy triangle at Mill Lane had been dug up for pipe works in winter 2002-03. Uncommon in the autumn-cultivated part of the cultivation timing experiment at Pound Hill in July 2003. Very common in the seedbank beneath old grassland between the Lysimeters and the Concrete Bunker, reaching 40% ground cover within the rabbit-and-deer fence in April 2004 following cultivation in 2003. Common on imported topsoil at Ashurst lysimeters in May 2004, declined in 2005 and uncommon by 2006. Completely dominant in July 2006 in the numerous small circular patches where the experimental compost bins had stood 2003-05, leaving bare ground after their removal. Common from the seed bank in trenches and earthworks around Silwood Farm on 26 July 2009 during the construction of the new house.

Ascot: common on a topsoil pile at Ravens Corner in May 2004 on the corner of Coronation Road and South Ascot. Locally abundant on many of the soil piles and bare ground during construction of Ascot Racecourse in August 2005. Abundant in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006. Occasional on 24 May 2007 amongst *Cynosurus cristatus* where the grass-sowing part of the landscaping work failed, as on the corner of New Mile Road.

East Berks: first recorded at Clewer [9576] in 1918 (**RNG**), then at Sandhurst (1923), Shinfield (1930), Coleman's Moor (1950), Windsor Great Park (1956), Maidenhead (1960), Sonning (1963), Bracknell (1965), Bray (1966). Now very common throughout. Abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 24% (1km²). Atlas 2000: all squares

West Berks: first record 1904 in Aldermaston. Increasing, but less frequent than in East Berkshire, and least common on the chalk. At Kingston Bagpuize [4098] in 2003. Atlas 2000: [29], [38], [39], [46], [48], [49], [40], [56], [57], [59], [66], [67], [69]

Conringia orientalis (L.) Dumort. *Hare's-ear Mustard*

• th 6 ↓

A rare casual of waste places, usually near hen-houses. Can be overlooked as *Brassica rapa* but the latter has beaked fruits.

East Berks: on a ballast heap in Sunningdale (**K**) in 1887, Reading (1918), Sandhurst (**RNG**) in 1927.

West Berks: by the railway near Oxford and at Didcot. Harwell (**OXF**) [48] in 1960, Abingdon racecourse [49] in 1897, Didcot [59] in 1897, Hinksey (**OXF**) [50] in 1895, Padworth [66] in 1918, Theale (**RDG**) [67] in 1922.

Conringia austriaca (Jacq.) Sweet *Thorow-wax*

• th 6 ↓

West Berks: an east European species found on waste ground at Grandpont [50] before 1897; distinguished by its 8-angled fruits (3 prominent veins per valve) and its darker yellow flowers.

Diplotaxis tenuifolia (L.) DC. *Perennial Wall-rocket*
Sisymbrium tenuifolium L.

○ h 5

Old walls, very local. Distinguished by the possession of a distinct stalk (0.5-6.5mm) between the top of the pedicel and the bottom of the valves of the fruit. The flowers are big, bright and chrome-yellow. Poorly developed fruits show only one row of seeds, and so might key out as *Sisymbrium*.
 NVC: OV 19

Silwood Park: locally dominant on one of the student allotments in Silwood Bottom, as if sown as a crop, on 28 August 2006. The petals were 10mm long and the fruit stalk was 1-1.5mm. By the Header House, a single, massive plant at the edge of the concrete path outside the door to Greenhouse 9A on 26 July 2007. The plant had fruits 32mm with a beak 2mm, a gap between the bottom of the valves and the top of the sepal scars 0.7mm, and pedicel 14mm, growing with other aliens like *Conyza bonariensis* and *Senecio inaequidens*. The plant was trampled almost to death in May 2008, but was recovering (but still not flowering) at the end of June 2008.

Ascot: no records. Not recorded from Silwood Park until 2006. Found on Ascot Station on 28 October 2009 in the gravel strip between Platform 1 and the wall at the edge of the Car Park; about 20 large plants in fruit (and a few still in flower), growing with *D. muralis* (see below).

East Berks: first recorded from the walls of Windsor Castle in 1770. Walls of Reading Abbey (1843). Atlas 2000: recent records from Reading [77] in 1994 and Windsor [97] in 1998. <1% (1km²). Atlas 2000: [77], [97]

West Berks: not in Druce or Bowen. Local and rare. Recent records of single plants from waste ground in Grandpont [5104] and an allotment in Botley [4906] in September 2002. Susan Erskine found the plant by a new roundabout of A420 and A417 [299952] in 2003. Atlas 2000: no records.

Diplotaxis muralis (L.) DC. *Annual Wall-rocket*
Sisymbrium murale L.

● th 6

Waste ground, gardens and rubbish heaps but chiefly on railway ballast on which it has become established throughout the county. The bright chrome-yellow petals are smaller (4-8mm not 8-15mm) than in *D. tenuifolia*, and the fruit lacks a distinct stalk between the top of the pedicel and the bottom of the valves (but beware, because there *is* a gap of 1mm or so).
 NVC: OV 7

Silwood Park: rare and ephemeral. On the cinder pot-standing by the southernmost cold frames at The Greenhouses. Still in flower on 18 October 2000. Not seen since. A single plant on the May-cultivated Plot 12 at Pound Hill on 29 August 2004.

Ascot: common in and around Ascot Station car park, but rare elsewhere. Its best piece of habitat was buried under tarmac in spring 2001 during tidying up operations. A single individual survived on 29 June 2001, yet the population had bounced back to more than a dozen big individuals by October 2002. Still quite frequent on the back of Platform 1 in 2007, and survived to July 2008 despite extensive earthworks associated with cable laying in spring 2008. Common in the gravel strip by the road up the side of the Comrades Club off Sunninghill High Street on 12 May 2008. In the paved, but exquisitely weedy, front garden of Fern Place at 23 High Street in Sunninghill on 25 July 2009.

East Berks: cinder tracks, gardens and disturbed ground near houses; local and uncommon. Wood at Wargrave (1871), Wellington College Station (1918). Recently at Maidenhead, Sonning, Twyford, Wellington College, Wokingham, Binfield, Cookham, Maidenhead. 1% (1km²). Atlas 2000: all except [78], [97]

West Berks: occasional in the Thames valley from Oxford down to Reading and in the Kennet valley from Newbury to Reading, but rare or absent elsewhere. Stanford-in-the-Vale [39], Newbury, waste ground behind Argos in the central car park 29 September 2001 [46], Dry Sandford Pit, Hitchcopses pit, Abingdon racecourse and Abingdon cemetery [49], Wytham and Botley [40], Midgham [56], Moulsoford [58], Radley and Didcot [59], Grandpont [50], Mortimer and Grazeley [66], Tilehurst and Theale [67]. Recent records from Lynch Farm, Wytham, Cumnor churchyard and Lower Wootton [all 40]. Atlas 2000: [28], [46], [49], [40], [56], [50], [66], [67]

Brassica oleracea L.

• ch 5

Easily told by its large pale lemon flowers, erect (not spreading) sepals, and the long cylindrical inflorescence with the top third consisting of unopened flower buds. A great variety of different genotypes are grown as vegetable crops:

var **capitata** (L.) Alef *Cabbage* including Spring, Summer and Autumn cabbages, Winter white, Savoy cabbage, Savoy hybrids, January King and Red cabbage. Cow cabbages, grown as winter fodder crops are not seen nowadays.

var **gemmifera** DC *Brussels Sprouts* including Bedford Fillbasket, Early Half Tall, Mallard, Noisette, Peer Gynt, Widgeon, Montgomery, Rubine and many other named F1 hybrids.

var **acephala** DC *Kale* or *Collards* including Scotch and Siberian kales, collards, tree cabbage (also known as walking stick cabbage), Palm tree cabbage, and multi-coloured ornamental kales like the pink-petioled 'Coral Queen' and the thistle-leaved 'Russian Red' used in winter bedding schemes with pansies and wallflowers.

var **alboglabra** (Bailey) Sun *Chinese Broccoli*

var **italica** Plenk *Calabrese* or *Broccoli* including Purple Sprouting, White Sprouting and many named F1 hybrids

var **botrytis** L. *Cauliflower* including Garant, Markanta and Purple Cape

var **gongyloides** L. *Kohlrabi* with its short swollen stem forming an edible corm

Any of these varieties is liable to be found on allotment rubbish tips, or on waste ground near gardens. They seldom persist for long and very rarely regenerate from seed amongst established vegetation. Hosts to caterpillars of Large White Butterfly *Pieris brassicae*, Small White Butterfly *P. rapae*, and Cabbage Moth *Mamestra brassicae*.

Silwood Park: casual as a relic of cultivation. Brussels sprouts and turnips are grown each year in a 4-year rotation in Silwood Bottom (and formerly Pound Hill Field) as part of a long-term study of Cabbage Root Fly *Delia brassicae* and of Cabbage Aphid *Brevicoryne brassicae* and its parasitoids. The plants are much attacked as seedlings by pigeons and jackdaws. Sometimes long persistent on The Tip where dug-up plants are thrown out; e.g. Brussels in full flower 14 May 1983. A single individual on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at

The Cedars in September 2002 (along with *B. napus*, below). Brussels Sprouts are frequent on Rookery Tip where potted plants from greenhouses and controlled temperature rooms are thrown out once they have outlived their usefulness as hosts for cultures of Cabbage Aphid.

East Berks: not found in our area by Druce. An occasional casual in arable fields and on rubbish tips. <1% (1km²). Atlas 2000: [76], [77], [87], [88], [96]

West Berks: more than 100 plants in a sand pit south of Greathouse Wood [57] in 1988. By a manure heap in a field corner on the edge of Wasing Wood [5763] in 2000. Atlas 2000: [36], [38], [46], [47], [57], [59], [50]

Brassica napus L.

● th 4

Roadside verges, sides of fields and waste places. A taxonomically complicated group of plants, some planted, some wild. Individuals appear in a sporadic manner, and the species is not permanent in its localities. Told from *B. rapa* on the morphology of the inflorescence: in *B. napus* the buds overtop the uppermost petals (in *B. rapa* the top of the inflorescence is dish-shaped (depressed), so that the uppermost petals overtop the buds). Petal size and petal colour are also reasonably distinctive: *B. napus* has larger petals (more than 11mm) that are pale (not deep) yellow. Host plant of colourful chrysomelid beetles like *Phaedon cochleariae* (bright blue) and *P. armoraciae* (dark blue); the leaves are mined by *Chromatomyia horticola*; stems and fruits are attacked by Cabbage Aphid *Brevicoryne brassicae*.

Brassica napus subsp. **oleifera** (DC.) Metzg. *Oil-seed Rape*
Brassica napus L. var. *oleifera* DC.

● th 4 ↑

Oilseed rape is currently one of the most profitable break crops following winter wheat, and the countryside glows yellow in April and May from the patchwork of EC-subsidised rape fields. Many people find the smell of the flowers unpleasantly sickly, and oilseed rape pollen can taint honey crops. Seeds are capable of protracted persistence in the soil seed bank, and oilseed rape plants (known as volunteers) are often seen amongst succeeding crops and on set-aside land. Seeds are often transported when arable topsoil is used for landscaping; masses of oilseed rape flowers appear for the first couple of years after the contaminated topsoil is spread. Seed spilled from lorries in transit from the farm to the oilseed processing factory at Erith in Kent are a major contributing factor to the populations of oilseed rape seen along roadsides in April; we know this because there are many more oilseed rape plants on the side of the road heading towards Erith where the lorries have a full load of seed, than in the verge coming back where the lorries are empty. Although the seed can survive for decades in the soil seed bank, above ground populations of oilseed rape seldom persist for more than about 3 or 4 years, before succumbing to competition from grasses. Semipermanent populations require constant soil disturbance to open up recruitment opportunities. The root is slender (not swollen). Told from *B. rapa* by the shape of the top of the inflorescence, in which unopened buds clearly over-top the youngest open flowers (in *B. rapa* the top of the inflorescence is dish-shaped, with the buds in the centre of the dish over-topped (and often hidden) by open flowers on the rim of the dish). It is irritating that Rape is not called *Brassica rapa*, but there you have it.
 NVC: OV 13,42

Silwood Park: transgenic (herbicide tolerant GM) plants were grown in the PROSAMO experiment, sown in 1990, 1991 and 1992. None of the GM plants persisted in any of the 4 habitats: Pound Hill Field (arable), Rush Meadow (wet grassland), Guinness's Hill (bracken) or Merten's Acres (woodland), and the GM plants never out-performed their conventional counterparts. Often grown as a crop in Silwood Bottom and Ashurst Four Acre Field, and appearing as volunteers in succeeding

years. Strays on roadsides (as at The Cannon in 1996, Mill Lane 1997 and 2000, Ascot Road in 1992 and 1998, etc.) but never lasting for more than 2 years in any one place. Strays also seen at Tractor Sheds and South Lodge. There were no Rape plants at all in Silwood in 2002. In April 2003 there was a single huge plant against the new fence of The Cedars, where topsoil had been banked up in 2002 when the rabbit proofing was installed.

Ascot: uncommon in the central reservation of the A322 between Bracknell and Bagshot in 2002. Behind the shops in South Ascot in May 2004.

East Berks: widespread on roadsides, but impermanent and seldom abundant except on motorway sliproads, and on waste ground close to farms where large amounts of seed are spilled. 32% (1km²). Atlas 2000: all squares.

West Berks: roadsides throughout, and in landscaping schemes where topsoil from arable fields has been used. In chalky set-aside land on Lambourn Downs [28]. Atlas 2000: all squares

Brassica napus subsp. **rapifera** Metzg. *Swede* ● th 4
Brassica napus L. subsp. **napobrassica** (L.) O. Schwarz

Uncommon as a crop these days, and not seen recently. Neither Druce nor Bowen bothered to record the subspecies or varieties. This is a rape with its root swollen into a yellow-fleshed tuber. You have probably been bored by the argument about whether the proper name for the vegetable is “turnip” or “swede”. The real answer is “it depends upon whether you are eating Turnip or Swede”! They are not synonyms. Swedes originated from Sweden in about 1775 (hence the name) and are traditionally eaten in midwinter in Scotland as an accompaniment to haggis when (even more confusingly) they are called “neeps”. Turnips are round and white- (not yellow-) fleshed, with a more watery consistency. Swedes and Turnips are critically distinguished only on the morphology of the inflorescence (see below).

Ascot: a rare casual in the verge of St George’s Lane in May 1982.

Brassica rapa L. *Wild Turnip* ch 5 and ○ th 5

Told from *B. napus* by the dish-shaped top to the inflorescence, in which the uppermost petals overtop the unopened flower buds in the centre. The petals are smaller (< 12mm) and deeper golden yellow in colour. There are two distinctive subspecies in Berkshire (below): the species as a whole is distributed as follows:

NVC: OV 4,19

East Berks: 8% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [28], [38], [46]

Brassica rapa subsp. **campestris** (L.) A.R. Clapham *Bargeman’s Cabbage* ch 5
Brassica campestris L.
Brassica rapa L. subsp. *sylvestris* (Lam.) Janchen

A local speciality of riverbanks and brook-sides; this native perennial species is locally common and much more permanent than Oilseed Rape. Bargeman’s Cabbage is occasional but conspicuous along the margins of the Thames all the way from Lechlade [29] down to Runnymede [97], but is much less common on the southern rivers of the county, and absent from most of the interior. This is a flood-

responsive species; Michael Wilkinson and his colleagues at Reading University have shown that the plant is much more abundant by rivers than by canals, and that on the River Thames, the plant is significantly more abundant immediately below locks than immediately above them. The most spectacular display is just over the county boundary [TQ 0272], where the M25 motorway crosses the R. Thames at Hythe End (v.c.21) and at nearby Runnymede [TQ0171] (v.c.17). Here, both banks of the motorway are dominated by dense stands of Bargeman's Cabbage, which is much more abundant on this part of the motorway than is Oilseed Rape. Bargeman's Cabbage flowers later, and is still flowering after the Oilseed Rape has gone over. Told from *B. rapa* subsp. *rapa* by its slender (not swollen) root, and from *B. rapa* subsp. *oleifera* by smaller (< 1.6mm dia.), grey or blackish seeds (not red brown, more than 1.6mm dia.). Skeletal plants by the riverside in late summer can be told from Oilseed Rape, *B. napus* subsp. *oleifera* by the seeds, which are small (c. 1mm) and grey, not big (c. 2mm or more) and black.

Ascot: no records. Not in Silwood Park.

East Berks: near Sandford Mill on the Loddon and plentifully by the Thames from Sonning to Maidenhead. Common on the Thames banks at Old Windsor Lock and on Windsor Racecourse. Large patches dominate the lane sides by Bray Marina. Frequent along the bank by the Thames Path from Henley via Remenham to Aston. Frequent on the islands at Hurley Lock. Uncommon on the stretch from Maidenhead to Cookham. Locally abundant on the Thames bank between Sonning and Sonning Lock, where a concerned local resident was fretting about the "terrible Oilseed Rape problem"; he was somewhat crestfallen to learn that he was referring to a cherished native plant rather than a rampant trifid. Sporadic and rare in waste places elsewhere, away from the river.

West Berks: occasional by the Thames from Lechlade to Streatley. Often growing with *Brassica nigra* downstream as far as Wallingford. Common at Cholsey Marsh [5886] in the Thames-side nature reserve. Uncommon by the Thames-side path through Oxford as at Donnington Bridge [5204]. By the Kennet and Avon Canal in the centre of Hungerford [337687] in 2002.

***Brassica rapa* subsp. *rapa* Turnip**

• th 5

A frequent escape from cultivation in Druce's time, but now uncommon. Formerly grown as a fodder crop, and found on lane sides and in ditches where turnips had fallen off farm trailers in transit. Vincent (1906) recounts the story of a Scots 'shooting type' going after partridge referring disparagingly to the paltry size of the turnips in fields near Long Wittenham: "he had never been asked to shoot in a field of radishes before".

Silwood Park: very local and rare. A single plant grew from the seed bank on North Gravel after the Leyland Cypress trees were felled; flowering 4 April 2001. One plant in gravel outside North Block in April 2003. Grown as a crop every year in Silwood Bottom until 1998 as part of a study of cabbage root fly, but these plants never persisted or sowed themselves.

East Berks: rare in the arable districts. Jealott's Hill, White Waltham, Fifield.

West Berks: on the northern verge of the M4 Motorway east of Chieveley on 6 May 2001. On a pavement in central Abingdon [4997] in July 2002.

***Brassica rapa* subsp. *oleifera* (DC.) Metzg. Turnip-rape**
Brassica rapa L. var. *oleifera* DC.

• th 5

This is a rare bird-seed alien with us; it is sometimes grown as an oilseed crop, but much less frequently than *B. napus* subsp *oleifera*.

West Berks: on the tip at Grandpont [40].

The following Chinese leaves are becoming popular as garden crops and are found occasionally on tips and waste ground: *Brassica rapa* subsp. *pekinensis* (Lour.) *Celery Cabbage* or *Pe Tsai*, *Brassica rapa* subsp. *chinensis* *Pak Choi*, and *Brassica rapa* subsp. *nipposinica* var. *laciniata* *Mizuna*.

Brassica juncea (L.) Czern. *Chinese Mustard* ● th 6 ↓
Sinapis juncea L.

Told from Turnip and Rape by the fact that the stem leaves do *not* clasp the stem. Told from *B. carinata* by the long beak (5-9mm rather than 2.5-6mm) on the fruit, and the lower leaves with 1-3 lobes (not 0-1).

Silwood Park: very rare casual. An enormous plant of unknown origin, growing in the competition-free and herbivore-free conditions afforded by the 1998-cultivated, fenced (but not methyl bromide treated) plot at Oak Mead on 12 September 1998, in company with *Sisymbrium officinale*. Not seen since.

East Berks: not in Druce. A rare casual on rubbish tips. Reading tip (1953), Loddon Mill (OXF) in 1954. <1% (1km²). Atlas 2000: [77], [96]

West Berks: Bradfield (RNG) [57] in 1988, Didcot (OXF) [59] in 1927, Kennington (OXF) [50] in 1963. Atlas 2000: [67]

Brassica elongata Ehrh. *Long-stalked Rape* ● hs 6 ↓

Roadsides and waste ground; very local and rare. A conspicuous, bright green species, with large unlobed basal leaves (22cm x 9cm in our plant) with large marginal teeth (7mm x 6mm), and entire lanceolate upper leaves (14.5cm x 2.5cm). The fruits are borne on a stipe separating the valves from the pedicel (only *Diplotaxis tenuifolia* is similar in this respect).

Ascot: very rare. In the verge opposite the Nursery Entrance to the Civil Service College by Sunningdale cemetery. One plant survived cutting in 1999 and 2000 to flower and set seed in July 2001.

East Berks: no other records.

West Berks: Wytham Mill [40] and Didcot [59] in 1893 and 1892 (OXF).

Brassica nigra (L.) W.D.J. Koch *Black Mustard* th 5
Brassica sinapioides Roth.
Sinapis nigra L.

River-banks, waysides, arable fields, and margins of streams and ditches. Told from other crucifers with appressed fruits as follows: *Sinapis arvensis* has entire (not pinnate) upper stem leaves, *Sisymbrium officinale* has hairy sepals, while *Hirschfeldia incana* has grey rather than green leaves, and a single seed in the beak of its fruit (not seedless as in *Brassica* and *Sisymbrium*).

Ascot: no records. Not in Silwood Park.

East Berks: uncommon by the Thames near Bisham Wood, Waltham, Coleman's Moor, Maidenhead, Twyford, Old Windsor, etc., but rare or absent elsewhere. 3% (1km²). Atlas 2000: [88], [97]

West Berks: common by the Thames from Lechlade [29] down to Wallingford [58] but much rarer elsewhere. Seldom found south of 85 in West Berkshire; exceptions are North Heath [47], Aldermaston [56] and Theale gravel pits [66]. Like *B. rapa* subsp. *campestris*, very uncommon on the southern rivers like Kennet and Loddon. Atlas 2000: all except [37], [47]

Sinapis arvensis L. *Charlock* ○ th 5

Brassica arvensis (L.) Rabenh., non L.

Brassica sinapistrum Boiss.

Brassica sinapis Vis., nom. illegit.

Brassica kabera (DC.) Wheeler

The only yellow crucifer that is a common weed of arable fields (although oilseed rape often produces volunteers; see above); also on disturbed ground in towns. Generally distributed, but commoner in the west on calcareous soils than in the east on acid soils. Told from *S. alba* by the beak of its fruit which is short (7-16mm) and conical (the beak of *S. alba* is larger (10-24mm) and flattened into the shape of a scythe).

NVC: OV 1,8,10,13,16,18,19,33

Silwood Park: common on imported topsoil during the construction of the Science Park 1987-89 but not seen since. An uncommon arable weed (e.g. in field beans in Four Acre Field in June 1984, and potato in Silwood Bottom in July 1980). Rare ruderal at Merten's Acres and Ashurst Oaks in 1999. Locally abundant in north-western corner of Ashurst Four Acre Field in summer 2001 after the 6-year-old grass plots were ploughed in October 2000; still confined to this corner in May 2004. Consistently one of the least common annuals in the fallow at Pound Hill Field (1979-2004). On imported topsoil at the Ashurst lysimeter site in May 2004 and in the same spot in May 2005 and 2006. After herbicide treatment of the Lysimeters in spring 2009, followed by cultivation in mid-June, abundant plants came up from the seed bank in a patch in exactly the same place as before on 9 July 2009, when the first flowers were just starting to appear. Three plants under the evergreen *Quercus x turneri* outside North Block on 23 June 2006.

Ascot: scattered and uncommon on the earthworks and landscaping associated with the new Race Course (2005-07).

East Berks: "at Marlow it occurs sparingly, being replaced by *S. alba*" (Mill, 1843). Much more frequent than *S. alba* at Bisham and Remenham these days. 24% (1km²). Atlas 2000: all squares

West Berks: the commonest yellow-flowered cruciferous weed. Atlas 2000: all squares

Sinapis alba L. *White Mustard* ○ th 6 ↓

Brassica hirta Moench

Brassica alba (L.) Rabenh.

Sinapis alba subsp. **alba**

Cultivated fields, in Druce's time "sometimes very abundant on the chalk where it replaces *S. arvensis*". Formerly much planted as an agricultural crop. Much less common nowadays, and seldom used these days as a break crop or a green manure for ploughing in. This is the mustard of "Mustard

and Cress" (the cress is *Lepidium sativum*). Naturalised or casual on waste ground, roadsides and tips, especially on calcareous soils. On the margins of chalky arable fields. Very local, but often abundant where it occurs.

Silwood Park: first recorded as 8 plants on 25 August 2008 growing with *Phacelia* on a student allotment in Silwood Bottom on an abandoned plot where, presumably, it had been sown deliberately in a previous year.

Ascot: no other records.

East Berks: rare, and restricted to chalk soils in the north. Very abundant in several fallow set-aside fields north of Sutton Court Farm [837667] in June 2003. <1% (1km²). Atlas 2000: [77], [87], [97]

West Berks: common in the margins of arable fields on the chalk, between Ashbury [28] and Streatley [58], but scattered throughout. Buscot [29], Drayton and Courtfield House [49], Wasing pits [56], Pingewood pits [66]. Atlas 2000: all except [68], [69]

Sinapis alba* subsp. *dissecta (Lag.) Bonnier

A rare casual of waste ground. No recent records. Told by its 2-pinnate leaves with the terminal lobe not much longer than the adjacent laterals, and glabrous (not hispid) fruits.

Eruca vesicaria* subsp. *sativa (Mill.) Thell. *Garden Rocket*

• th 5

Eruca sativa Mill.

A rare casual of gardens and rubbish tips. An increasingly common salad vegetable amongst the trendy middle classes; likely to become more common as a garden escape.

Silwood Park: rare casual, 3 plants on outcast soil by the Header House, 17 May 1993. Possibly introduced from Israel by Bill Kunin. Not seen since. Frequently grown on the student's allotments in Silwood Bottom; there were occasional stragglers in June 2003. Two plants in the nettle bed between the Header House and the CABI Greenhouse on 20 July 2006 growing with *Agrostemma githago* and *Papaver somniferum*. It is not clear whether these represent a new introduction or are from the same stock as the earlier record.

East Berks: Reading in 1897. Atlas 2000: [96]

West Berks: Newbury Station [46] in 1896, and Cholsey [58], Didcot [59]. Calcot Row [67] in 1960. Atlas 2000: [67]

Erucastrum gallicum (Willd.) O.E. Schulz *Hairy Rocket*

• th 5 †

Sisymbrium gallicum Willd.

Brassica ochroleuca Beck

Waste ground, a rare casual. Not seen recently.

NVC: OV 7

West Berks: on waste ground at Grandpont [50], Farmoor reservoir [40] in 1964, and by the railway at Didcot [59] in 1897.

Coincya monensis* subsp. *cheiranthos (Vill.) Aedo, Leadlay & Muñoz Garm. *Wallflower Cabbage*

Rhynchosinapis cheiranthos (Vill.) Dandy

• th 5

A rare casual of sandy ground and waste places.

West Berks: known to Druce from the railway at Didcot Station from before 1897. One hundred years later, the same population of plants was known to Richard Palmer from brickwork and embankments near the coaling stage at the Great Western Centre at Didcot Station [5290] from 1986-2001. It had thrived on neglect, neither spreading nor going extinct, but it has suffered recently from over-zealous tidying-up operations. Atlas 2000: [59]

Hirschfeldia incana (L.) Lagr.-Foss. *Hoary Mustard*

• th 6 ↑

Sinapis incana L.

Brassica incana (L.) Meigen, non Ten.

Locally abundant on railway lines and disturbed ground near motorways. It has shown a massive increase in abundance in recent years. Now one of the commonest yellow-flowered crucifers of urban bare ground. Typically dies out within 2 to 5 years of establishment, unless the ground is kept open by repeated soil disturbance. Told by its appressed fruits, and distinguished from *Brassica nigra* by the fact that the beak of the fruit contains a single seed. The Latin name, *incana*, refers to the grey-green foliage, which is highly distinctive once you get your eye in for it.

Silwood Park: very local and rare; a recent arrival. 4 plants in the fallow in Silwood Bottom on 25 May 2000, but never seen again here. Met Tower, 1 plant by the new mobile phone mast on 6 June 2001; Header House, 3 plants next to the BP Greenhouse access road, and 1 plant between CABI and M-Scan, on 10 June 2001. None of these populations persisted for more than 1 year, but the BP Greenhouse population reappeared after a gap of 1 year, with a single plant on the opposite side of the road (by Southwood Halls) on 31 May 2003 and 13 June 2004; there were 3 plants in June 2005. There were two closely grazed plants in turf of North Gravel behind the BP Greenhouse on 4 June 2007. The single plant on 10 May 2002 below the Silwood Park sign at Sunninghill Crossroads (following work to erect the mobile phone mast in autumn 2001), and a single individual on the cinder pot-standing at the Greenhouses were the only 2 plants in the area in 2002; neither site was occupied in 2003 or 2004, but there were 2 plants at Sunninghill Crossroads beneath the new mast on 1 July 2005 (but none since then). There were 2 individuals on recently disturbed ground at Mill Lane Triangle on 13 July 2004. A single plant near the Met Tower on 23 June 2006 between the oak tree and the laboratory, and another single plant nearby on 1 June 2007. A single plant on North Gravel between the BP Greenhouse and Flowers Halls in June 2006 was repeatedly browsed by deer but repeatedly produced flowering regrowth shoots. It was seen again in 2007 but not in 2008 or 2009. There was one plant, much browsed by deer, outside the BP greenhouse on 12 June 2010; the regrowth stems flowered in July, but may not have ripened any seed. A single plant in the grassy triangle between The Farm and The Lake on 29 August 2011.

Ascot: the plant was first seen on 10 October 1996, growing on piles of crushed sea shells used for surfacing the paths on Sunningdale golf course (in the Surrey part of [96], v.c.17). The first record from the Berkshire part of Ascot was in June 1997 when it was locally frequent in the verge opposite The Wells public house on London Road between Ascot and Sunninghill. There were 27 plants in 1997 but the population was gone by 1999, having succumbed to competition from grass. One plant reappeared in July 2003 but did not last, and there were 2 plants in June 2005 but none in 2006. There was a single plant in flower here on 20 September 2007 and one plant at the eastern end of the grassy part of the verge and one close to the original site on the corner of Cheapside Road on 10 June 2009. Rare on dumped topsoil on the edge of South Ascot playing fields on 29 June 2001, but increased substantially by August 2007. One enormous multi-stemmed plant by the entrance to the new Science

Park on Kingsride on 15 July 2001. On 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Rare on ruins during construction of the new grandstand at Ascot Racecourse [92451 69000] in August 2005. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006. Abundant on 18 May 2007 with large plants thriving in holes dug for tree planting where piped irrigation water is provided, in newly sown (fenced) grassland on the eastern side of the junction of Winkfield Road and the Ascot United entrance [925695]. Very local in the verge of the Peanut Roundabout, at the southern end of the Peanut, on the interior (island) verge facing the Sunninghill (A332) entrance [935716] flowering on 2 September 2007.

East Berks: not in Druce. It was a rare alien on Reading tip in 1961, and Bowen had not seen it. It has become widespread since 1990, but is still uncommon away from larger towns. Locally dominant on disturbed ground at motorway junctions (e.g. where the A33 crosses the M4 at Reading [716686] in 1998, gone by 2001, but back again in abundance in May 2002 and gone again by 2004). Maidenhead sewage works and Bray Wick in 2001. Locally dominant by the A404(M) Maidenhead bypass in June 2002. Very common on waste ground between Tesco's superstore and the railway at Kings Meadow in Reading [725737] where it is still much the commonest yellow crucifer (September 2008), and on waste ground on Wargrave Marsh [7780] and Holyport [8978] in 2002-04. By the Northern Relief Road at Quelm Park [8770] in Bracknell and at Binfield [8370] in July 2002. On stonework by the R. Thames in Maidenhead [9081] and at Old Windsor Lock [9974] in August 2002. Locally frequent by Harvest Hill Road [8879] and on a building site in Cookham Dean [8785] in June 2003. In unkempt lawns in Wokingham town centre [8068] and at Amen Corner in Bracknell [8469] in September 2004. At the rear of 3M on Cain Road Bracknell on 2 September 2007. Dominant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008, clearly visible from aeroplanes approaching Heathrow from the west. 9% (1km²). Atlas 2000: all squares.

West Berks: a recent arrival, still rare. First recorded from Didcot Station [5290] in 1985; still there and locally frequent in July 2003, but it has not spread far west along the railway. Common on the verges of the A4 between Aldermaston Wharf and Ufton Nervet in June 2002-05, and by the M4 in [66]. Still no records from the west of the area by 2004. Atlas 2000: [56], [59], [66], [67]

Rapistrum rugosum (L.) Bergeret *Bastard Cabbage*

• th 5 ↓

Myagrum rugosum L.

Rapistrum rugosum subsp. **linnaeanum** (Coss.) Rouy and Foucaud

Rapistrum rugosum (L.) J. Bergeret var. *linnaeanum* Cosson

A rare casual of waste ground, roadsides, sewage works and arable land. It appears to be declining in distribution and abundance in Berkshire, in contrast to the trend exhibited in other parts of southern England (Stace records the plant as frequent and increasing, invasive of open grassland), and also contrary to the prediction made by Bowen (see below).

Silwood Park: rare casual. Six plants on the soil heap resulting from excavation of the foundations of the wind tunnel, 16 August 1985. Never seen again.

East Berks: not in Druce. Arable fields, allotments and rubbish tips. Local, but increasing according to Bowen. Reading tip (**LAN**) in 1960, Finchampstead, Maidenhead (1952), Barkham Ride (1963), Woodley tip (1975). Locally frequent at Maidenhead sewage works [8980] in September 2001. <1% (1km²). Atlas 2000: [77], [96]

West Berks: Cothill (**OXF**) [4699] in 1908, Lower Whitley Farm [40] in 1964, Abingdon (**OXF**) in 1918 and allotments [4997] in 1963. Theale [67] in 1959. Riddle Hill (**OXF**) [5484] in 1978. Locally

frequent on the margins of chalky arable fields between Blewbury and Aston Upthorpe [547860] in June 2002, and on waste ground in urban Faringdon [2895] in July 2002.

Raphanus sativus L. *Garden Radish*

• th 5

A rare casual of rubbish tips. Radishes were included in the rations given to the workers building the Great Pyramid in Egypt in BC2780. Modern cultivated radishes come in 4 groups: white (or red), black, Mougri and oil-seed radish. In Europe, the crisp and crunchy white radishes are eaten fresh after as little as 25 days growth. In China and Japan, radishes are eaten cooked and sliced (often in soups), and take much longer to grow (even overwintering in some cases). The record weight for the cultivar called Sakurajima is 45 kg. These cold hardy forms may well naturalise in due course.

East Berks: on a tip in Woodley in 1996.

Raphanus raphanistrum L.

○ th 5

Raphanus raphanistrum subsp. **raphanistrum** *Wild Radish*

Common in cornfields on light sandy soils, and on disturbed waste ground. Generally distributed in both its white- and yellow-petalled forms. The leaves are mined by *Phyllotreta nemorum*.

Silwood Park: one of the most abundant components of the weed seed bank in arable ground. In Silwood Bottom it forms solid white sheets of flower in June, following autumn cultivation, or July following spring cultivation. The yellow-flowered individuals are variable in frequency, but average about 1 in 100. Scarce at Pound Hill in May 2003 following the severe spring drought of that year. Completely dominant in Ashurst Four Acre Field following autumn cultivation, with yellow-flowered individuals at about 1 in 1,000. Also in Pound Hill Field, Ashurst Orchard, Observatory Ridge, Merten's Acres. It is local in Silwood as a whole, being found in fewer than 10% of the 1 hectare plots, and never in closed vegetation. Uncommon on imported topsoil at Ashurst lysimeters and rare in the seedbank in the new deer-and-rabbit-exclosure in May 2004. Local and rare in the fenced part of the broom experiment in Nash's Field in May 2004. In the late-cultivated deer exclosure in Silwood Bottom, normally dominated by *Sonchus arvensis*, it was flowering on 30 September 2007 after a particularly late cultivation that year (mid June). Dominant flowering plant on 26 July 2009 in Silwood Bottom after the very late cultivation in June 2009 (using contractors, because the Silwood tractor can no longer plough). Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation. On Royal Wedding Day 29 April 2011 the plant was uncommon on the autumn-cultivated part of Ashurst Four Acre Field, in a year when *Arabidopsis* was dominant following a very dry March. On 2 June 2011 following the drieset March, April and May in memory it was still very uncommon, but there was a bumper crop of *Matricaria recutita*, particularly on the ground adjoining the New Chalk Plots. Scarce also on this date on Silwood Bottom.

East Berks: common in disturbed ground by the R. Thames, as at Maidenhead Court [9083]. Relatively infrequent at the kilometre scale: 11% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Raphanus raphanistrum subsp. **landra** (Moretti ex DC) Bonnier and Layens *Mediterranean Radish*
Raphanus landra Moretti ex DC

A rare casual of waste places, mainly from grain. The leaves have rather distant lateral lobes, and the petals are small (8-15mm not 15-22mm). No recent records.

RESEDACEAE

Reseda odorata L. *Garden Mignonette*

• th 6

A relatively uncommon garden annual of herbaceous borders grown for its sweet-scented flowers. Only as an outcast on rubbish heaps etc. & not naturalised.

West Berks: at Abingdon racecourse [49], Didcot [59], Grandpont [50], Southcote [67] pre-1897. Kennington [50] in 1951 (**OXF**).

Reseda luteola L. *Weld*

○ hs 6 ↑

Waysides, quarries, fields, walls, dry banks and disturbed ground, especially on acid soils. Commoner now than in Druce's or Bowen's time. Unpalatable to rabbits and hence conspicuous in otherwise closely grazed turf. Very common on waste ground in towns, especially on former railway yards. Told from *R. lutea* by its leaves: entire in *R. luteola*, pinnate in *R. lutea*.

Silwood Park: introduced accidentally with chalk from Maidenhead Thicket during construction of the Chalk Plots, and flowering at the end of the first year; 10 September 1983. Not seen here since. In topsoil imported during the construction of the Science Park; September 1989 but not seen since. Sown in the herb rich plots in Oak Mead, and succeeded in both grazed and ungrazed plots in July 1996 and subsequently. Bowen considered the plant to be rare or absent from acid soils, but it was very common in Silwood Park throughout the 1990s. Unusually abundant in the dry summer of 1990 on the patch of waste ground between M-Scan and the CIBC quarantine greenhouses. Nursery Field, a dozen rosettes in heavily grazed horse pasture on 4 December 1991, but not seen since (the site is now overgrown with *Carex muricata* subsp. *lamprocarpa*). Very common on the grassy banks around the Water Tank in summer 2000 (when, after all those years of staying mysteriously full to the brim with water, the tank finally sprang a leak and emptied). A single plant on North Gravel by the BP Greenhouse in June 2002. One plant in gravel by the CABI transformer in July 2002. One plant in a pavement crack at the M-Scan corner of the CABI building in April 2004. Very common in the seedbank beneath old grassland at Nursery Field in April 2004 following cultivation in 2003. Rare on imported topsoil at Ashurst lysimeters in June 2004. Frequent at the base of walls all around the CABI building in 2006 and 2007. Large plants in the strip of bare ground between the Jiff Greenhouse and MScan on 28 June 2008. There were 30 plants in a line along the base of the wall on the sunny side of Unit B on the Science Park on 17 April 2009. One massive plant in flower in the Lysimeters at Ashurst on 20 September 2009 following herbicide treatment and late-summer cultivation. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	7

Ascot: locally common on soil piles and bare ground during construction of Ascot Racecourse in August 2005; the only *Reseda* species found on the site. Still hanging on, but uncommon, in new grass-sowing work on the corner of New Mile Road on 23 May 2007, where the original planting failed because the ground was too wet.

East Berks: locally frequent, commonest on the clay. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 20% (1km²). Atlas 2000: all squares

West Berks: uncommon on the chalk, but common in the Thames and Kennet valleys and to the south and west of Reading. On the ruins of the Prince of Wales pub at Challow Station [3590] in 2001. In chalky set-aside on top of Weathercock Hill [2882] in May 2002. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all squares.

Reseda alba L. *White Mignonette* ● th-h 6 †

A rare casual on waste ground. Told from the pinnate-leaved *R. lutea* by its 4 (not 3) carpels, persistent filaments and tuberculate (not smooth) seeds.

East Berks: by the old University buildings in Reading from 1967-73.

West Berks: near the station at Didcot [59] with other foreign plants in 1897.

Reseda lutea L. *Wild Mignonette* h 6

Fields, waysides, arable land, disturbed ground and cinder tracks; locally frequent on the chalk, occasional on other calcareous soils but rare on acid soils and practically absent from clay soils. Much less common than *R. luteola*, from which it is told by its divided (pinnate not entire) leaves.

Silwood Park: rare and ephemeral. North Gravel: one plant on a soil heap from the construction of Southwood Halls; 28 June 1981. Chalk Plots: sown in the original seed mixture in 1983. First flowers on the chalkiest plots at the end of the first year; 10 September 1983. Just 3 plants in Plot 8; 17 July 1986. Not seen since. Oak Mead: frequent in the first summer after sowing 31 July 1996 and still there on the fenced plots in 2000. On 19 May 2007 it was restricted to one of the plots within fenced Block E. In Plot H of the Tilman Experiment in Nash's Field since 1995, rare but persistent (still there in May 2003).

Ascot: local and rare. A single plant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: rare in the north, absent on the interior and the south. Henley, Windsor Home Park, Sonning Cutting, Hurley, Hurley chalk pit, Maidenhead, Wargrave, Cookham, Twyford. Frequent on waste ground between Tesco and the railway in Reading [725737] and by the A404 at Temple [842829] in 2002-08. 3% (1km²). Atlas 2000: all squares

West Berks: common on the chalk, locally frequent in the Northern Loop, but rare or absent in the Kennet valley. In rank chalk grassland at Seven Barrows [3282]. On dumped soil in Chilton railway cutting [4985] on 12 June 2004. Common on the coralline oolite exposures in Dry Sandford Pit [4699] 1980-2004. By the ancient trackway up Cholsey Downs [5685], on the Ridgeway through [38], [48] and [58], and along the Fair Mile [5583]. Common by the footpath between Aston Upthorpe and Blewbury [5485] in 2002. Locally frequent on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all except [67], [68]

¶ **Reseda** *R. odorata*

CLETHRACEAE

¶ **Clethra** *C. alnifolia*, *C. barbinervis*

EMPETRACEAE

Empetrum nigrum L.

• chw 5

Empetrum nigrum subsp. **nigrum** *Crowberry*

West Berks: planted at Jarn Mound, which was built by Sir Arthur Evans (1851-1941) as a wild garden in which he planned to grow a complete set of British native plant species. The nearest native sites for Crowberry are on Exmoor, Dartmoor, South Wales and the Southern Pennines.

EPACRIDACEAE

Pentachondra pumila (Forst. & Forst. F.) R. Br.

• n 6

This is a procumbent, closely branched dwarf shrub to 15cm with ascending branches, with sessile white flowers to 6mm and red fruits to 12mm in diameter (not in Stace).

Silwood Park: grown in The Heather in summer 1995 in a screening trial by IIBC for a proposed heather beetle introduction to New Zealand as a biocontrol agent against *Calluna*. Six potted plants sunk in a small enclosure and batches of *Lochmaea* adults and eggs were added throughout the summer. The plants survived up to 1999, but left no offspring.

ERICACEAE

¶ **Ledum** *L. palustre*, *L.* subsp. *groenlandicum*

Rhododendron ponticum L. *Rhododendron*

• m 5 ↑

An invasive alien of plantations, woods and heaths on acid soils. Locally frequent and dominant in some parts of south Berkshire. Absent from calcareous soils. It is not entirely clear when, exactly, rhododendron invasion began to be perceived as a problem. Druce made no mention of the plant, and the first Berkshire record was not until 1918. Salmon makes no mention of it in his 1931 *Flora of Surrey*, but in 1976, Lousley was writing "Grows freely from seed and seedlings are abundant. Its dense evergreen shade eliminates all species of the herb layer. Control is difficult and expensive". It was first recorded from Hampshire in 1924, but not until 1965 from Oxfordshire.

It forms completely impenetrable thickets in Scots pine plantations on the Bagshot sands, and can quickly over-run abandoned gardens. It is a serious pest in certain of the Crown Estates woodlands around Bracknell. The most conspicuous damage to rhododendrons is Bud Blast *Pycnostysanus azaleae* which kills the buds in summer, then produces tiny black pin shaped structures (coremia) in the following spring. The disease is transmitted by a very attractive green-and-red leaf hopper called *Graphocephala fennahi*, which is common on the foliage in summer. Whitefly (*Dialeurodes*

chittendeni) are found occasionally on the undersides of leaves, but the commonest leaf damage consists of semicircular chunks eaten out of the edge by the nocturnal adults of Vine Weevil (*Otiiorhynchus sulcatus*); the larvae are subterranean root-feeders, and the species consists almost entirely of females which reproduce parthenogenetically. Post-2000, *R. ponticum* die-back has become locally prevalent, perhaps caused by introduced strains of fungal pathogen *Phytophthora* sp. NVC: W 10,15,16

Silwood Park: planted, self-sown and relic of former ornamental plantings. Choice cultivars of rhododendrons used to be grafted on *R. ponticum* rootstocks and the choice cuttings tended to get out-competed by sprouts from the base, and hence to form thickets of the weedy plant. Spreads by layering wherever there is a cover of moist leaf litter. Locally dominant in several of the older woodland habitats, but particularly abundant in parts of Nash's Copse, just below the Church Lane footpath. On the dam of Silwood Lake. Not found in the naturally regenerated woodlands like Merten's Acres, Elm Slope or Water Meadow. The rhododendrons suffered terribly in the protracted drought of 1995 and many of the thickets in full sun were cut back right to ground level. Some rootstocks died, while others resprouted from the base in 1996 (another dry year). Recovery proper did not begin until 1997. The thicket on either side of the Cannon Path beyond the Croquet Lawn was particularly badly hit, and was extremely unsightly for the next 4 years or so, as the plants recovered and grew back to their former density. Occasionally flowering in early autumn, as on 30 September 2005 in the thicket by the Refectory, after a dry spring and a wet early August.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	3	5	8	35

Ascot: completely dominant in the woodlands of Frognall [942678] beneath *Pinus sylvestris* and *Betula pendula*, shaing out all potentially interesting flora. Much more dominant than anywhere in Silwood Park, next door.

East Berks: not in Druce. Forming particularly dense and impenetrable thickets in the woodlands to the west of Wokingham [7868]. There is a particular stretch of road between Barkham and Sindlesham, past Bear Wood Golf Club, where there are high walls of rhododendrons on both sides and no footpath. Locally abundant in old woods at Billingbear [8272]. 33% (1km²). Atlas 2000: all squares

West Berks: first recorded for Berkshire in 1918 from Aldermaston. Occasional in the Kennet valley, south of 75, and in the Northern Loop. Absent elsewhere except for a single record from the Esso Reserve Plantation at Milton Hill [4790]. Atlas 2000: all except [27], [37], [38], [48], [58], [59], [68], [69]

Rhododendron luteum Sweet *Yellow Azalea*

• m 4

Plantations on acid soil; very local but established and increasing according to Bowen (I do not see much evidence of this). The flowers are delightfully fragrant.

Silwood Park: very commonly planted in the woodlands around the Manor House. Self-sown at a single site (5 plants in the beech clearing on the Cannon Path from 1998-2008), and absent from all of the naturally regenerated woodlands. On the Crown Estates side of Cheapside Road opposite Pound Hill Field in May 2002.

Ascot: two self-sown plants at Englemere next to the *Pyrola* patch opposite Whitmore Bog Cottages (1985-2006), also at Coronation Road, Kings Beeches. Very commonly naturalised in the Crown Estate woodlands at Buttersteep in 2002.

East Berks: not in Druce. Heath Lake (1961), Arborfield Grange (1965), Whiteknights wilderness (1965), Bearwood (1966), Wellington College (1963), Rapley Lake [9064] and [8964] (1966-99), St Leonard's (1969), Dukes Hill golf course (1986). Recently at Bearwood College and in other woodlands west of Wokingham, Longmoor, Wellington College, North Crowthorne, Park Wood, Windsor Great Park, Frogmore. 2% (1km²). Atlas 2000: all except [78], [87]

West Berks: just one record from Bagley Wood [50]. Atlas 2000: [50]

¶ **Rhododendron** *R. aberconwayi*, *R.* 'Accomplishment', *R.* 'Addy Wery', *R.* 'Albatross Townhill Pink', *R.* 'Albatross Townhill White', *R. albrechtii*, *R.* 'Alice', *R.* 'Amoenum Coccineum', *R.* 'Annabella', *R. anwheiese*, *R.* 'Apricot Lady Chamberlain', *R. arboreum* 'Blood Red', *R. arboreum* 'Pink Form', *R. arboreum* subsp. *cinnamomeum* var. *roseum* 'Tony Schilling', *R.* 'Argosy', *R. argyrophyllum* subsp. *nankingense* 'Chinese Silver', *R.* 'Arthur Stevens', *R. auriculatum*, *R. austrinum*, *R.* 'Baden-Baden', *R.* 'Bagshot Ruby', *R.* 'Bashful', *R.* 'Beatrice Keir', *R.* 'Beauty of Littleworth', *R.* 'Beethoven', *R.* 'Betty', *R.* 'Betty Wormald', *R.* 'Blue Peter', *R.* 'Blue Tit', *R.* 'Bow Bells', *R.* 'Britannia', *R.* 'Brocade', *R. bureauii*, *R. bureavii*, *R. calophytum*, *R. calophytum* var. *openshawianum*, *R. campanulatum* 'Knap Hill', *R.* 'Carita Golden Dream', *R.* 'Carita Inchmery', *R.* 'Carmen', *R.* 'Catawbiense Grandiflorum', *R.* 'Cecile', *R.* 'Charlotte de Rothschild', *R.* 'Chelsea Seventy', *R.* 'Chevalier Félix de Sauvage', *R.* 'Christmas Cheer', *R. ciliatum*, *R. cinnabarinum* subsp. *xanthocodon*, *R.* 'Coccineum Speciosum', *R. concinnum* Pseudoyanthinum group, *R.* 'Corneille', *R.* 'Countess of Haddington', *R.* 'Creeping Jenny', *R.* 'Crest', *R.* 'Cunningham's White', *R.* 'Curlew', *R.* 'Cynthia', *R. dauricum* 'Midwinter', *R.* 'David', *R. davidsonianum*, *R.* 'Daviesii', *R.* 'Delicatissimum', *R. decorum*, *R. dichroanthum*, *R.* 'Doctor M. Oosthoek', *R.* 'Dopey', *R. edgeworthii*, *R.* 'Egret', *R.* 'Elisabeth Hobbie', *R.* Elizabeth group, *R.* 'Elsie Straver', *R.* Fairy Light group, *R. falconeri*, *R. falconeri* subsp. *eximium*, *R. fastigiatum*, *R.* 'Fastuosum Flore Pleno', *R.* 'Fedora', *R. formosum*, *R. forrestii* subsp. *forrestii* 'Repens', *R. fortunei* subsp. *discolor*, *R. fortunei* subsp. *discolor* 'John Elcock', *R.* 'Fragrantissimum', *R.* 'Frank Baum', *R. fulvum*, *R.* 'Furnivall's Daughter', *R.* 'Fusilier', *R.* 'George Johnstone', *R.* 'Golden Oriole', *R.* 'Golden Torch', *R.* 'Gomer Waterer', *R.* 'Grayswood Pink', *R.* 'Grumpy', *R. hemsleyanum* x Polar Bear group, *R.* 'Hino-crimson', *R.* 'Hinode-giri', *R.* 'Hinomayo', *R. hodgsonii*, *R.* 'Hotspur Red', *R.* 'Hydon Dawn', *R.* 'Hydon Hunter', *R.* 'Ima-shojo', *R.* 'Irene Koster', *R.* 'Irohayama', *R.* 'James Burchett', *R.* 'John Cairns', *R.* 'Joyful', *R. kaempferi*, *R.* 'Kirin', *R.* 'Klondyke', *R.* 'Kluis Sensation', *R.* 'Knap Hill Apricot', *R.* 'Lady Alice Fitzwilliam', *R.* 'Lady Clementine Mitford', *R.* 'Lee's Dark Purple', *R.* 'Lem's Cameo', *R. lindleyi*, *R.* 'Lodauric Iceberg', *R.* 'Loderi Game Chick', *R.* 'Loderi King George', *R.* 'Loderi Pink Diamond', *R.* 'Loderi Venus', *R.* 'Loderi White Diamond', *R.* 'Loder's White', *R.* 'Lovely William', *R. lutescens* 'Bagshot Sands', *R. luteum*, *R. macabeanum*, *R.* 'Marinus Koster', *R.* 'Markeeta's Prize', *R.* 'Michael Waterer', *R.* 'Minterne Cinnkeys', *R.* 'Moerheim', *R.* Moonstone group, *R.* 'Morgenrot', *R. morii*, *R.* 'Morning Cloud', *R.* 'Mother's Day', *R. moupinense*, *R.* 'Mrs A.T. de la Mare', *R.* 'Mrs Furnivall', *R.* 'Mrs G.W. Leak', *R.* 'Mrs Lionel de Rothschild', *R. mucronulatum* 'Cornell Pink', *R. mucronulatum* 'Winter Brightness', *R.* 'Nancy Waterer', *R.* 'Narcissiflorum', *R.* 'Niagara', *R. niveum*, *R.* 'Norma', *R. nuttallii*, *R.* 'Orange Beauty', *R. oreodoxa* var. *fargesii*, *R.* 'Oxydol', *R.* 'Palestrina', *R.* 'Percy Wiseman', *R.* 'Persil', *R.* 'Pippa', *R.* 'Praecox', *R.* 'Princess Alice', *R.* 'Professor Hugo de Vries', *R.* 'Purple Splendour', *R. quinquefolium*, *R.* 'Razorbill', *R.* 'Red Carpet', *R. reticulatum*, *R. rex* subsp. *fictolacteum*, *R. rex* subsp. *rex* 'Quartz', *R.* 'Rosebud', *R. roxieanum*, *R.* 'Roza Stevenson', *R.* 'Saint Tudy', *R.* 'Sapphire', *R.* 'Sappho', *R. sargentianum*, *R.* 'Scarlet Wonder', *R.* 'Seven Stars', *R.* 'Silver Sixpence', *R.* 'Sir Charles Lemon', *R.* 'Sleepy', *R.* 'Snipe', *R.* 'Snow Lady', *R.* 'Songbird', *R.* 'Souvenir of Anthony Waterer', *R.* 'Spek's

Orange', *R.* 'Spring Magic', *R.* 'Strawberry Ice', *R.* 'Streatley', *R.* 'Summer Fragrance', *R.* 'Surrey Heath', *R.* 'Susan', *R. sutchuenense*, *R.* 'Swamp Beauty', *R.* 'Sweet Simplicity', *R.* 'Taurus', *R.* 'Temple Belle', *R.* 'Tessa Roza', *R.* 'The Hon. Jean Marie de Montague', *R.* 'The Master', *R. thomsoni*, *R.* 'Titian Beauty', *R.* 'Trewithen Orange', *R.* 'Unique', *R.* 'Vanessa Pastel', *R. veitchianum*, *R.* 'Veryan Bay', *R. viscosum*, *R.* 'Vulcan', *R.* 'Vuyk's Rosyred', *R.* 'Vuyk's Scarlet', *R.* 'White Swan', *R. williamsianum*, *R.* 'Windlesham Scarlet', *R.* 'Wishmoor', *R. yakushmanum* 'Koichiro Wada', *R.* 'Yellow Hammer', *R. yunnanense* 'Openwood'

The National Collection of *Rhododendron* (632 species) is held in Valley Gardens and Saville Gardens at Virginia Water, and *Azaleodendron* (9 cultivars) is held at Milford Lake House at Burghclere near Newbury

Kalmia polifolia Wangenh. *Bog-laurel* ● m 4

East Berks: not in Druce or Bowen. In 3 sites in and around Dukeshill golf course (1984-86) [900640], [902652] and [912652]. Outside our area, but close by, in a wet bog on Chobham Common (96D2, Lousley, 1976); in a "dangerous bog" away from tracks and screened by tallows and birches (1910). Probably escaped by bird dispersal from one of the many nurseries on the A30 nearby.

West Berks: no records.

[*Kalmia angustifolia* L. *Sheep-laurel*] ● m 4

Not in Druce or Bowen. Outside our area, but close by, at the end of Sunningdale golf course [9462], in a neo-bog (Lousley 1976) with *Calluna* and *Erica tetralix*. Perhaps bird dispersed from nearby nurseries. Found in 1968 and originally confused with the 1910 record of *K. polifolia*, but they are some distance apart. Told by its longer petioles (4-8mm compared with 0-3mm in *K. polifolia*).

West Berks: no records.

¶ ***Kalmia*** *K. angustifolia* f. *rubra*, *K. latifolia*, *K. latifolia* 'Ostbo Red', *K. polifolia*

¶ ***Enkianthus*** *E. campanulatus*, *E. campanulatus* 'Red Bells', *E. cernuus* f. *rubens*, *E. chinensis*

¶ ***Oxydendrum*** *O. arboreum*

¶ ***Zenobia*** *Z. pulverulenta* (also at Tower Hill in 1965).

¶ ***Phyllodoce*** *P. aleutica*, *P. caerulea*, *P. empetriformis*, *P. x intermedia* 'Fred Stoker', *P. nipponica*

Daboecia cantabrica (Huds.) K. Koch *St Dabeoc's Heath* ● chw 7
Vaccinium cantabricum Hudson

Told from *Erica* by its much bigger individual flowers and by its alternate (not whorled) leaves.

Silwood Park: occasional in heathy grass on the western side of the Cannon Path leading to the Sundial. These plants have persisted in heavily rabbit-grazed turf since 1979, but it is not clear if they are self-sown here, or survivors of a planted heather bed that has subsequently disappeared.

Ascot: very local and rare. Long established with *Erica vagans* on a grave in Sunningdale churchyard (1979-2004).

East Berks: no other records.

West Berks: Hen Wood [40] in 1920, Bagley Wood (RNG) [50] in 1951, Jarn Mound [40] in 1961, Youlbury [40] in 1964.

¶ **Daboecia** *D. cantabrica* f. *alba*, *D. cantabrica* 'Atropurpurea', *D. cantabrica* 'Bicolor', *D. cantabrica* 'David Moss', *D. cantabrica* 'Praegerae', *D. cantabrica* subsp. *scotica* 'William Buchanan'

The National Collection of *Pieris* (9 species and 93 cultivars) is held in Valley Gardens at Virginia Water.

¶ **Pieris** *P.* 'Flaming Silver', *P.* 'Flamingo', *P.* 'Forest Flame', *P. formosa* var. *forrestii* 'Wakehurst', *P. japonica*, *P. japonica* 'Debutante', *P. japonica* 'Dorothy Wyckoff', *P. japonica* 'Firecrest', *P. japonica* 'Little Heath Green', *P. japonica* 'Little Heath', *P. japonica* 'Minor', *P. japonica* 'Mountain Fire', *P. japonica* 'Pink Delight', *P. japonica* 'Prelude', *P. japonica* 'Purity', *P. japonica* Taiwanensis group, *P. japonica* 'Valley Valentine', *P. japonica* 'Variegata', *P. japonica* 'White Pearl'

Gaultheria shallon Pursh *Shallon*
Gaultheria procumbens auct., non L.

● n 5 ↑

Pine woods on acid soils. Lousley (1976) describes this species as locally abundant in heathy places and open woods, and appearing "quite wild" in adjacent parts of Surrey. His records indicated that the rapid spread occurred over a period of about 40 years from 1935-1975, so that the plant is "now common over a large area of the Lower Greensand" (recorded from seventeen 10km squares in Surrey; Leslie, 1987).

Silwood Park: very local. Naturalised in the shady shrubbery between the front door of the Manor House and the back of the Reactor Block. Rare on the Science Park, by Garden Wood Bank.

Ascot: locally dominant, approaching pest status under the Scots pines at Englemere and Whitmoor Bog. There are several patches, each more than 20m across, but they have not grown appreciably in size over the period 1980-2000. Extensive mechanical clearance of the Shallon patches close to the car park at Englemere was attempted in May 2002. Also on all of the nearby heathy golf courses. Lane west of Englemere Pond (1970), Swinley (1970). Recently at Tower Hill, Coronation Road, Buttersteep, Swinley, Blane's Allotment, Royal Berkshire golf course (now stripped of its "Royal" and just plain "Berkshire"), Sunningdale Park, North Ascot.

East Berks: not in Druce. Bearwood (RNG) in 1965, Caesars Camp (1972). Recently at Bearwood College, Martins Heron. 1% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: Youlbury [40] in 1964. Atlas 2000: [46], [40], [66]

Gaultheria mucronata (L.f.) Hook. & Arn. *Prickly Heath*
Arbutus mucronata L.f.
Pernettya mucronata (L.f.) Gaudich. ex Sprengel

● n 5

Woodland on acid soil; usually planted or outcast, occasionally self-sown, sometimes locally dominant.

Ascot: not in Druce. Tower Hill (1966), Silwood Park (1980), common on woodland rides at Buttersteep in 2002.

East Berks: St Sebastian's churchyard at Crowthorne (1987). Increasing and believed to be bird-sown. Atlas 2000: [86]

West Berks: no records.

The National Collection of *Pernettya* (12 species and 28 cultivars) is held in the Heather Garden on the edge of Smiths Lawn next to the Valley Gardens above Virginia Water.

¶ **Gaultheria** *G. cuneata*, *G. mucronata* 'Bell's Seedling', *G. mucronata* 'Crimsonia', *G. mucronata* 'Lilian', *G. mucronata* 'Signaal', *G. mucronata* 'Sneeuwwitje', *G. procumbens*, *G. x wisleyensis* 'Pink Pixie', *G. x wisleyensis* 'Wisley Pearl'

¶ **Leucothoe** *L. keiskei* 'Royal Ruby', *L. walteri* 'Rainbow', *L.* 'Zeblid'

Arbutus unedo *L.* *Strawberry-tree*

• m 10

Silwood Park: this tree grows extremely well at Silwood, and the individual next to the Drive opposite Silwood Lodge is one of the largest Strawberry-trees in the area. A few of the recent plantings suffered a mystery canopy dieback in 1999. No signs of natural regeneration.

East Berks: in a plantation at Foxhill (1974), North Ascot (1974), Northcourt [7963] (1979). Atlas 2000: no records.

West Berks: planted at Jarn Mound [40] in 1933. Atlas 2000: no records.

¶ **Arbutus** *A. x andrachnoides*, *A. menziesii*, *A. unedo*, *A. unedo* f. *rubra*,

Calluna vulgaris (L.) Hull *Heather*

n 7

Calluna erica

Erica vulgaris L.

Locally dominant on acid heaths and under pines, on commons, and in dry sandy places, locally common and generally distributed on acid soils, but absent from calcareous soils. From time to time, patches of heather may be stripped bare by larvae and adults of the Heather Beetle *Lochmaea suturalis*. The massive hairy caterpillars of Oak Eggar *Lasiocampa quercus* (black bands and white marks along the sides), and Fox Moth *Macrothyacia rubi* (all black with thin golden rings) will often be found, along with the conspicuous cocoons of the Emperor Moth *Pavonia pavoina*, which overwinters in its tough, ginger-coloured pupal cases, high up on the heather stems.

NVC: H 2,3; M 13,16,21,24; MG 5; OV 27; U 1,2,20; W 4,15,16,23

Silwood Park: formerly much more abundant than it is now. Within Ted Green's memory, for example, the bracken community that dominates all of Guinness's Ridge was covered by heather. In my own recollection (post-1971) The Heath to the west of the Cannon Path has changed from heather, first to a *Deschampsia flexuosa* monoculture (beautiful in flower in mid-summer with its wine-red stems), and then to birch scrub. The patches of heathland on Observatory Ridge and Elm Slope have all but disappeared. The only good surviving heather patch lies between the Croquet Lawn and East Block; the are the last remnants of the once-extensive "Waste" of Beggar's Bush. The cause of the

decline is unknown, but eutrophication from atmospheric nitrogen input, coupled with intense rabbit grazing, may be involved. Small patches of prostrate plants, dwarfed by regular mowing, dot the heathy lawns around the Lily Pond and the Croquet Lawn. Also in The Marsh, South Lodge, Drive Lawns, Merten's Acres, Science Park. The restoration of The Heath began with the erection of a rabbit fence in 2000; by July 2002 the first few Heather plants had appeared (presumably from the seed bank) and were growing vigorously, but the site was still dominated by *Holcus mollis* (see *Deschampsia flexuosa*). Heathers thrived in 2003, but in September 2004 there was mass dieback of the young heather plants, perhaps as a result of Heather Beetle attack. Particularly fine in flower in late August 2007 after the wettest summer on record (after the driest April).

There is an interesting population of *Calluna* on the Chalk Plots. These were laid out with chalk imported from Maidenhead Thicket with various dilutions of Silwood soil: none, 25%, 50%, etc. As the amount of chalk was reduced, the amount of peat incorporated was increased. On the 3 plots that received substantial amounts of peat, and only very small amounts of chalk, the heather seeds that were unintentionally introduced with the peat germinated and eventually formed tall monocultures on Plots 2 and 3 (plot 1 was an uncultivated control which received no peat and showed no heather regeneration). First plant seen in 1984. Dominant on Plot 2 by 1990 and frequent on plot 3. Spread to Plot 4 by 1994. The plants on Plots 2 and 3 were beginning to senesce in May 2004 and were starting to be invaded by grasses. Heather seeds were sown in the Nash's Field experiment, in Blocks G, H and J in October 1991, but never grew.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	3	7

Ascot: locally abundant in the centre of the Racecourse south of the Cricket Wicket, in the Crown Estate woodlands and in the fen-meadow to the east of Ascot Station. Dominant on the steep sloping banks of the raised reservoir on Truss Hill Road in Sunninghill [935676] growing with *Anthoxanthum*, *Rumex acetosella*, *Pilosella officinarum* and *Plantago lanceolata*.

East Berks: widespread and locally abundant on Sandhurst, Bracknell and Bagshot Heaths along the Surrey border, but absent or rare to the north of this. However, the best expanses of heather are just south of our area on Chobham Common National Nature Reserve [96] in Surrey. 16% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [96], [97]

West Berks: frequent in the heathy parts of the south-east (east of 45 and south of 70), but absent from most of the area, save for a few records from the Northern Loop (e.g. there is a tiny clump on the closely grazed hill top at Hurst Hill [4704], Youlbury Woods [40], Hitch Copse and Frilford Heath golf course [49]). Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [66]

¶ **Calluna** *C. vulgaris* 'Alba Plena', 'Allegro', 'Annemarie', 'Beoley Gold', 'Blazeaway', 'Boskoop', 'County Wicklow', 'Cuprea', 'Dark Beauty', 'Dark Star', 'Darkness', 'Firefly', 'Flamingo', 'Fred J. Chapple', 'Gold Haze', 'Golden Carpet', 'H.E. Beale', 'Hammondii Aureifolia', 'J.H. Hamilton', 'Joy Vanstone', 'Kinlochruel', 'Multicolor', 'My Dream', 'Oiseval', 'Peter Sparkes', 'Red Haze', 'Robert Chapman', 'Schurig's Sensation', 'Silver Knight', 'Silver Queen', 'Sir John Charrington', 'Sister Anne', 'Spring Cream', 'Spring Torch', 'Sunset', 'Tib', 'Wickwar Flame', 'Winter Chocolate'

Erica ciliaris L. *Dorset Heath*

• n 7

West Berks: introduced and long established at Jarn Mound [4802] in 1933.

Erica tetralix L. *Cross-leaved Heath*

n 7 ↓

Restricted to the wetter parts of acid heathland, mires and boggy birch woods. Declining through drainage, housing development and eutrophication from atmospheric inputs of nitrogen. These trends will be exacerbated by climate warming, especially by drier summers. White flowered plants occur occasionally, as in the bog at Poppy Hills, north of Sandhurst.

NVC: H 2,3; M 13,16,21,24; W 4

Ascot: The Orangery, Tower Hill, Swinley Brick Pits, Swinley Golf course, Kingsride, Coronation Road, in the short, heathy rough of the golf course on Ascot Heath, but absent from Silwood Park.

East Berks: “common in Bagshot, Sunninghill, Bulmarsh, Wokingham, Ambarrow, Windsor Great Park, abundant near Sandhurst and covers considerable areas of country in this district. White flowered forms at Broadmoor and Sandhurst” (Druce). It is certainly not “common” anywhere now. Caesar’s Camp, Virginia Water. More restricted in its distribution than *Erica cinerea*, the undrained heaths being much less extensive than the dry sandy heaths. Only at all frequent along the Surrey and Hampshire borders from Virginia Water round to Finchampstead. Recently at Simons Wood, Heath Lake, Edgebarrow Hill, Wellington College Bog, Pine Hill, Brookers Row, Road Research Lab, Wildmoor Heath, Owlsmoor, Broadmoor, Wishmoor Bottom, Poppy Hills, Devil’s Highway, Mill Pond (with an excellent stand of *Myrica gale*), Rapley Lake, Blane’s Allotment, Swinley Park, Martins Heron. 6% (1km²). Atlas 2000: all except [78], [88]

West Berks: native only on the southern heaths of the Kennet valley, probably introduced elsewhere. At its best in the mires on Snelsmore Common. With *Narthecium ossifragum*, *Genista anglica* and *Cirsium dissectum* in the fine fragment of bog on Inkpen Common [38215 63997]. Atlas 2000: [36], [46], [47], [40], [56], [57], [66]

Erica terminalis Salisb. *Corsican Heath*

● n 7

West Berks: in the old garden at Youlbury [4803] in 1964 (OXF).

Erica cinerea L. *Bell Heather*

n 7

Heathy places; very common in the south of our area. White flowered forms occur at Wellington College and on Bagshot Heath. Dry heaths, locally frequent in south Berkshire. Absent from calcareous soils.

NVC: H 2,3; OV 27; U 20; W 16

Silwood Park: local and rare, much declined in recent years. Elm Slope, Heather Patch, The Marsh, Tennis Court Lawns. The population in The Heath on the Cannon Path was killed by rabbit grazing before 1990. This area was fenced against rabbits in 2000 in an attempt to restore the heathland flora, and *E. cinerea* had reappeared by 2004 but was still rare in 2012. The population on Elm Slope is managed to encourage the Bell Heather, but encroachment by birch and bracken are a constant threat, over and above the heavy grazing by rabbits. Still locally abundant between Munro Building and the Croquet Lawn in 2012, and occasional with more *Calluna* between the Croquet Lawn and the Japanese Garden.

Ascot: heathy roadsides at The Orangery, woodland rides at Tower Hill, Englemere, Swinley Brick Pits, Swinley Golf course, Kingsride, Coronation Road, in the short rough of Ascot Heath golf course, Kings Beeches, Sunninghill, Sunningdale, in close-cut, heathy lawns in Charters Road, waysides in

North Ascot. Locally abundant in short turf with *Pilosella officinarum* and on old graves in South Ascot churchyard. Locally frequent in heathy ground by the hockey pitch in Frognall [939677] in September 2005.

East Berks: frequent in [86] and [97], but rare, absent or extinct elsewhere. Outside of [86] there are recent records from Farley Court, Longmoor Bog, Wheatlands, West Emmbrook, South Forest, on dry banks and heathy rides throughout Windsor Great Park and the Crown Estates woodlands. 13% (1km²). Atlas 2000: all except [78], [88]

West Berks: all but restricted to the heaths of the south-east in [46], [47], [56], [57], [66]. Two outlying stations in the Thames valley at Buckland Warren [344956] and Boars Hill [40]. Atlas 2000: [36], [46], [47], [40], [56], [57], [66]

Erica erigena R. Ross *Irish Heath*

• m 5

Erica herbacea auct., non L.

Erica mediterranea L. var. *hibernica* Hook. & Arn.

This is a tall erect plant (1.2-2m) with hairy young stems and the projections (flanges) down the stems from the base of the petioles to less than half way to the next node. The corolla is more urceolate (4mm) than in *E. carnea*.

West Berks: planted at Jarn Mound on Boars Hill [4802] in 1933.

Erica vagans L. *Cornish Heath*

• n 6

Planted in graveyards. This plant has very long pedicels, and anthers that project well beyond the mouth of the corolla.

Silwood Park: on a grave in Sunninghill churchyard (1988).

Ascot: very local, dominating a single grave in Sunningdale churchyard (2001) with *Daboecia cantabrica*.

East Berks: not in Druce. Planted but very rare on acid soils; Bulmershe Park (1883), Bagshot (1931), at Heath Lake on Nine Mile Ride (**RNG**) by J.E. Lousley in 1961, Easthampstead Park by Bowen (1965), then again under pines at Heath Lake Crowthorne (**OXF**) by R.C. Palmer in 1970. Now more commonly planted on graves than in Bowen's time. <1% (1km²). Atlas 2000: [76], [96]

West Berks: Jarn Mound [4802] in 1961 (still frequent in 2001), Youlbury [4803] in 1964 (**OXF**), Greenham Common [503655] in 1970. Completely dominating a single grave in the churchyard at Woodland St Mary [3474], but not spread beyond where it was planted; March 2001. On a grave in Bucklebury churchyard [5570] in 2002. Atlas 2000: no records.

Erica carnea L. *Winter Heath*

• n 12

Erica herbacea L.

Very popular winter-flowering garden plants with short pedicels and protruding anthers that lack appendages. The stems are prostrate and hairless with short (6-8mm) leaves. White flowered forms (like *E.* 'Springwood White') and purple flowered forms (like *E.* 'Ann Sparkes') are often planted on graves in church yards.

Silwood Park: on several graves at Ashurst.

East Berks: common in Warfield graveyard (2000).

Erica x darleyensis Bean. = **E. erigena x E. carnea**

There are several popular horticultural forms of this hybrid, often with cream to reddish tints to the foliage on very young shoots. It is more bushy and multi-stemmed than *E. carnea* with longer leaves (to 13mm). Told from *E. erigena* by its much shorter stature (to 60cm) and stem flanges running all the way (or at least more than half way) to the next lowest node. *E. 'Arthur Johnson'* has lilac pink flowers and *E. 'White Perfection'* has white flowers.

East Berks: Winkfield and Warfield churchyards, Windsor, Reading.

¶ **Erica** *E. arborea*, *E. arborea* 'Albert's Gold', *E. arborea* var. *alpina*, *E. arborea* 'Estrella Gold', *E. australis*, *E. australis* 'Riverslea', *E. carnea* 'Adrienne Duncan', *E. carnea* 'Ann Sparkes', *E. carnea* 'Aurea', *E. carnea* 'Challenger', *E. carnea* 'December Red', *E. carnea* 'Foxhollow', *E. carnea* 'Golden Starlet', *E. carnea* 'King George', *E. carnea* 'Loughrigg', *E. carnea* 'March Seedling', *E. carnea* 'Myretoun Ruby', *E. carnea* 'Pink Spangles', *E. carnea* 'Praecox Rubra', *E. carnea* 'Springwood Pink', *E. carnea* 'Springwood White', *E. carnea* 'Vivellii', *E. carnea* 'Westwood Yellow', *E. cinerea* 'Alba Minor', *E. cinerea* 'Hookstone White', *E. cinerea* 'Pink Ice', *E. cinerea* 'Stephen Davis', *E. cinerea* 'Velvet Night', *E. x darleyensis* 'Ada S. Collings', *E. x darleyensis* 'Arthur Johnson', *E. x darleyensis* 'Darley Dale', *E. x darleyensis* 'Furzey', *E. x darleyensis* 'Ghost Hills', *E. x darleyensis* 'Jack H. Brummage', *E. x darleyensis* 'Kramer's Rote', *E. x darleyensis* 'Silberschmelze', *E. x darleyensis* 'White Perfection', *E. erigena* 'Brightness', *E. erigena* 'Golden Lady', *E. erigena* 'Irish Dusk', *E. erigena* 'W.T. Rackliff', *E. x stuartii* 'Irish Lemon', *E. terminalis*, *E. tetralix* 'Alba Mollis', *E. tetralix* 'Con Underwood', *E. vagans* 'Lyonesse', *E. vagans* 'Mrs D.F. Maxwell', *E. vagans* 'Saint Keverne', *E. vagans* 'Valerie Proudley', *E. x veitchii* 'Gold Tips'

¶ **Cassiope** *C. 'Edinburgh'*, *C. lycopodioides* 'Beatrice Lilley', *C. 'Muirhead'*, *C. 'Randle Cooke'*

Vaccinium vitis-idaea L. *Cowberry*
Rhodococcum vitis-idaea (L.) Avrorin

n 6

East Berks: this is an extraordinary record, many miles away from its nearest native site. Very rare. Confined to a single patch of heathland opposite Broadmoor Hospital for the Criminally Insane, close to road works [860645] where the Devil's Highway passes under the new road from Bracknell to Camberley. Possibly introduced with landscaping plants that were used on the embankments of the road, which opened in 1992. First record 1998. Atlas 2000: [86]

Vaccinium myrtillus L. *Bilberry*

n 4

Woods and heaths on the acid sands, locally dominant in the ground layer of some kinds of oak and pine woodland. Absent from the chalk and clay.

NVC: H 2; U 2,20; W 4,10,15,16

Ascot: very local and rare. Kingsride, Buttersteep, Blane's Allotment, Swinley, Tower Hill. Not in Silwood Park.

East Berks: locally common in [86] but rare or absent elsewhere; Sandhurst, Broadmoor, Long Moor, Caesar's Camp, Easthampstead, Sunningdale, Virginia Water, Windsor Great Park, Whortleberry Hill, Rapley's Farm, Ascot, Wellington College. Recently at Edgebarrow Hill, Wellington College, Pine Hill, Brookers Row, Broadmoor, Hut Hill, Devil's Highway, Caesar's Camp, Wishmoor Bottom, Bracknell Forest, Swinley Park, Windsor Great Park. 4% (1km²). Atlas 2000: [86], [96], [97]

West Berks: restricted to the Kennet heaths in the south-east: Greenham Common [46], Snelmore Common [47], Cold Ash, Crookham Common, Holly Wood, Bucklebury Upper and Lower Commons and Wasing Wood [56], Frilsham Common and Fence Wood [57], Benyon's Inclosure [66]. Planted at Jarn Mound [4802] but long extinct there. Atlas 2000: [46], [47], [56], [57], [66],

¶ **Vaccinium** *V. corymbosum*, *V. delavayi*, *V. floribundum*, *V. glaucoalbum*, *V. macrocarpon*, *V. nummularia*, *V. ovatum*, *V. padifolium*

PYROLACEAE

Pyrola minor L. *Common Wintergreen*

chh 6

Woods and plantations on acid soils, often under pines; very local and rare.

Ascot: a local speciality. The first record: "Without flowers in a coppice of oak and birch scrub, a short half mile across the bog, eastwards from Ascot Station" (Watson, 1871). In a boggy wood west of the main road at Ascot Station in 1975 (**OXF**) [9168]. I can not find either of these two sites (although both may be errors for Englemere; west not "eastwards" in the first case, and an easting of 90 not 91 in the second case). Tower Hill (1966). There is still a small patch at Whitmoor Bog close to the security gates to the gas depot [892685] (1987-2004). Very local and rare under pines at Englemere [902684], close to the stile by the railway bridge opposite Whitmoor Bog Cottages. I have pulled up the overgrowing bracken fronds and cut back the brambles each year in May since 1980, and the patch is thriving but spreading only slowly, measuring 5m x 3m in spring 1999, 6m x 3m in 2002 and 8m x 3m in 2004 and dominating 9m of the path-side with outlying plants up to 12.5m away by 28 May 2006. Still along 9m of path side in the original patch on 27 April 2007, but the second patch, closer to the cottages, occupied 2m of the path side beyond the yellow azalea. When the bracken was pulled on 17 May 2008, the patch was 10m long, with a 2m gap and then a 3m patch towards the cottages. The larger patch was dying out in the middle with a 3m long semi-circular gap containing *Epipactis* seedlings.

East Berks: "plentiful on Finchampstead Ridges, near the Spout Pond" (Druce, 1897). Wellington College (**RNG**) [8363] in 1928 and 1961, Honeyhill [823664] in 1965, pine wood at Broadmoor Bottom [856628] in 1970, in damp alder wood at Long Moor [7865] in 1983, Royal Military Academy Sandhurst in a pine-wood on Windsor Ride [865619] in 1983, on the north side of Heath Ride on Barkham Ride [817639] in 1986, south-west of Heath Pond [811639] in 1986. There is a good population on the trackside in the pine woods at Upper Star Post adjacent to the reservoir [873646], consisting of two patches (4m long and 2.5m) in June 2002, planted by Ted Green in the 1970s. The best population at the moment is in the birch woodland to the north-west of Heath Pond in Simon's Wood [813642]; the largest of the patches stretched along 32m of the pathside in May 2002, and there was a smaller patch 100m to the south. Simon Weeks reported c. 2000 plants from a patch in Simons Wood (NT), Finchampstead, at [8096 6400] in 2013.

West Berks: no records.

Pyrola rotundifolia L. *Round-leaved Wintergreen*
Pyrola rotundifolia subsp. **rotundifolia**

• hr 7 †

The style is distinctly bent (it is straight in *P. minor*).

West Berks: collected by P.J. Greenway in Bagley Wood [50] in 1928 (**OXF**). Surely planted?

MONOTROPACEAE

Monotropa hypopitys L. *Yellow Bird's-nest*

grh 6 ↓

Monotropa hypopitys subsp. **hypophegea** (Wallr.) Holmboe

Monotropa hypophegea Wallr.

Monotropa hypopitys L. var. *glabra* Roth

In woods of beech on chalky soils, very local and rather rare; typically grows in deep leaf litter. Almost restricted to the Thames valley.

Ascot: found by Ted Green under pines at Swinley [9068] in 1968. Not seen since.

East Berks: in the woods of Park Place (**OXF**) in 1871, near the path on the upper side of Bisham Wood coming up even in the path (**HULL**) in 1863, between Henley and Marlow, Quarry Wood, Wellington College (1966). Hurley (1966), Bisham Woods (1961), Ambarrow Hill (1981). Atlas 2000: [78], [88]

West Berks: all but confined to the Thames valley from Wytham down to Reading with outlying stations at Wescot Down, above Sparsholt Down and Kingston Warren [38] and Buckland (**OXF**) [39]. Wytham [40], AWRE Aldermaston [56], Ashampstead Common [57], Cholsey (**BM**) in 1839 and Streatley in 1872 (**OXF**, **BM** and **RNG**) [58], Sulham Woods (**RDG**) and Basildon (**OXF** and **LAN**) [67]. It grows on the southern edge of the road by Bridges Farm [652654] near Five Oaken. Atlas 2000: [40], [58], [66], [67]

STYRACACEAE

¶ **Halesia** *H. carolina*, *H. monticola*, *H. monticola* var. *vestita*

¶ **Pterostyrax** *P. hispida*

¶ **Styrax** *S. hemsleyanus*, *S. japonicus*, *S. obassia*

PRIMULACEAE

Primula vulgaris Huds. *Primrose*

hr 2 ↓

Primula veris L. var. *acaulis* L.

Primula acaulis (L.) Hill

Oak woods, especially after coppicing, thickets and hedge-banks; generally distributed but least abundant on the acid sands. Lousley (1976) writes "almost all accessible primrose roots have been

removed to gardens - usually to die. During the last 50 years I have seen [the zone cleared of primroses around London] pushed steadily farther and farther out, until now the plant only survives on railway banks and in woods from which the public is excluded". Sometimes recorded in error for single-flowered forms of the hybrid *Polyanthus*, especially in towns and near houses. The true primrose has larger, darker green leaves, held more upright and with pink to blood-red petioles.
NVC: W 8,10,12,22,25

Silwood Park: local and rare. One plant on the upturned rootball of a fallen tree in The Swamp on 12 August 1982. One clump in Nash's Copse (after painstaking search) on 15 April 1980, probably picked to near-extinction here by dog-walkers from Cheapside. South Lodge, one plant in the southern verge of the busy London Road on 16 April 2000. Rare on the cinder pot-standing at the Greenhouses on 15 April 2002. One plant in the third year after the fence was erected at the Rhododendron Collection behind the Tennis Court on 22 February 2008. A single plant on the Silwood Verge of the mini-roundabout at Ashurst on 4 April 2008.

Ascot: a superb display of many hundreds of plants on banks in the triangle of land where the Reading and Guildford railway tracks diverge just west of the station; this is a place where trespassers never go; 20 March 2000. This population survived the intense railway work of 2003, and Primrose was still common in April 2004. Shaded stream banks in Sunningwell Bog, above the *Hottonia* pond. Blacknest Park, Heatherwood Hospital, Coronation Road, Charters Road, Sunningdale, but especially in places like Ascot Place and Sunninghill Park where security is tighter and there is little trespass.

East Berks: occasional throughout, but uncommon on the acid soils in the south-east. Locally frequent in the ancient woodlands bordering the M4 motorway in [87], as at Billingbear and Great Wood, and in the Crown Estates woodlands at Holliday Plain [9274]. 26% (1km²). On railway banks at Winnersh in 2004. Atlas 2000: all squares

West Berks: excellent displays on banks on the southern verge of the M4 Motorway just west of Junction 13 (Newbury and Wantage) at Snelsmore, and on the northern bank just east of J14 at Shefford Woodlands, protected by the fact that people can not stop their cars to pick them. Very local and rare elsewhere, even in the best woodlands like Rivar Copse [350623] and Woodlands St Mary [3575]. Atlas 2000: all except [68]

Primula x polyantha Mill. = **P. vulgaris x P. veris** *False Oxlip* and *Polyanthus*

Primula x variabilis Goupil, non Touss. Bast.

Primula x tommasinii Gren. & Godron

Abundant in churchyards, occasional in wood margins, thickets and hedge-banks. Not found in ancient woodland. *Polyanthus* are often planted or escaped from gardens. The 'Primrose Group' have single flowers on short or long stalks, while the 'Polyanthus Group' have several flowers in branched umbels on long stalks. In many places it is much commoner than *P. vulgaris* and is often mistaken for it. Flower colour is highly variable, from primrose yellow, through white and orange to purple or mauve.

Told from *P. vulgaris* only by careful attention to leaf shape and pubescence. The leaves are abruptly contracted to the petiole at the base in *P. veris*, gradually tapered to the base in *P. vulgaris*, and intermediate in the hybrid (and see above). The plant is covered in short straight hairs in *P. veris*, long shaggy hairs in *P. vulgaris*, and is intermediate in the hybrid. Note that although the flowers are usually borne singly on short pedicels in *P. vulgaris*, they may sometimes form an umbel on a scape, so the presence of a flower scape is not a good character for separating the hybrid. Thus, a plant with

primrose rather than cowslip flowers, but short straight hairs rather than long-shaggy hairs is *Polyanthus*.

Silwood Park: occasional in the churchyard at Ashurst, naturalised in grass from individuals originally planted on graves. Plants with blue, orange, white and red flowers occur along with primrose yellows; they flower throughout the winter, but are at their best in February. A single yellow *veris*-flowered individual in long grass in Water Meadow West [9425 6933] a long way from gardens on 8 May 2005.

Ascot: in Sunningdale, in the churchyard and on waste ground. Common in South Ascot and Ascot churchyards.

East Berks: Hurst Grove, in meadows, Whitley, Arborfield, Windsor Forest. Swallowfield Park, Park Place, Hurley. Particularly common in the grassy triangle around the pond in Shurlock Row [834747]. 9% (1km²). Atlas 2000: all squares

West Berks: Ashdown Park [28], Sanham Green [36], Inholmes [37], East Garston [37], More Wood [46], Welford Park [47], Parsonage Moor, Cothill [49], Appleton Lower Common [40], Wytham [40], Ashridge Wood and Bucklebury Common [57], Ashampstead [57], Moulsoford Downs and Streatley (LAN) [58], Bere Court, Pangbourne and Sulham [67]. Atlas 2000: all except [50], [69]

Primula veris L. *Cowslip*

hr 4 ↓

Pastures, hedge-banks, borders of woods, chalk downs, railway banks. "Locally abundant and widely distributed but evincing a partiality for calcareous pastures but not restricted to them. One of our best-known plants and a great adornment of the drier pastures and chalk downs, forming a charming contrast to *Orchis morio* which often accompanies it" (Druce). Commonest on the chalk, but decreasing because of grazing and ploughing, often dug up from the wild and removed to gardens. This is essentially a grassland species whereas *P. vulgaris* is a woodland plant. Host plant of the Duke of Burgundy Fritillary *Hamearis lucina*.
NVC: CG 2-5; MG 1,4,5,9

Silwood Park: probably always introduced, but evidently seed-limited in Silwood. Rare at the edge of the lawn at the eastern end of the Church at Ashurst on 5 May 1999. In Oak Mead the plant proved to be seed limited in both grazed and fenced plots in all the Blocks A-E, but only on plots where competition was reduced (i.e. there was no recruitment on intact grassland plots). There were about 5 plants in each of the 4 m² plots in Block D on 1 May 2000 growing amongst dense perennial grasses. In 2001, 6 out of 7 sightings were on grazed (rather than fenced) plots, but all of these plots had been cultivated at the time of recruitment. These were gone by 2002, but one plant had appeared inside the fenced part of Block B, and there were flowers on 4 of the 8 cultivated plots (1, 2, 3 and 5 stems, respectively) within the fence of Block E. In April 2003 there were 6 plants in the fenced part of Block E and 1 plant in the grazed part of Block D. In June 2007 it was present on 2 of the 12 grazed plots in Block E, 3 in Block D, 2 in Block C, but none in Blocks A or B. Sown in the Chalk Plots in May 1983 and well established in all of the plots that contain substantial amounts of chalk (i.e. plots 4, 5, 6, 7 and 8). Peak flowering occurred in 1994, but still growing well in 2000. A superb display in May 2001 following raking-off of the dense moss cover from all the plots in winter 2000-01. It was in full flower in mid-April in the early spring of 2002, when there were more than 100 flowering stems on plots 5-8, with 30 on plot 3 and 50 on plot 5 (none on control plot 1 or on heather plot 2). The plots were raked free of a deep thatch of moss on 15 February 2008: on 18 April 2008 the plots had the following numbers of flowering stems (from 1 to 8): 0, 1, 5, 16, 38, 54, 103 and a splendid 195. Sown in the Nash's Field experiments in October 1991; seedlings were produced on all the plots, but

they never established. Plants of unknown origin flowered by the Croquet Lawn in spring 1999. There were 2 plants at the shady end of the pot-standing by the Greenhouses in April 2002. Occasional in the New Chalk Plots in Ashurst Four Acre Field in May 2002, and evidently seed-limited; by April 2003 there were only 1-4 stems in 4 of the 16 sown plots. Self-seeding into the lawn at the back of the Manor House in 2003 (it was planted in the nearby shady bed beneath the *Pittosporum* in 1999).

Ascot: common in the untended lawns of Tower Court in 2002, but absent from most of the area.

East Berks: occasional on the chalk, but absent or rare on the acid sands along the Surrey and Hampshire borders. In meadows by the R. Thames at Cookham. In the churchyard at Waltham St Lawrence. Local and uncommon in small patches on railway banks, as at Winnersh. Frequent on newly-sown verges of the northern relief road at Quelm Park, Bracknell (1999-2004). 10% (1km²). Atlas 2000: all squares.

West Berks: locally frequent in fragments of ancient chalk grassland all along the Ridgeway and the Hampshire Downs, but much reduced in abundance by modern farming practices. Scattered in mown roadside verges in the north-west, often close to buildings as at Taylor's Hill, Buscot [249971], Strattenborough Castle Farm [237922] and Snowswick Farm [224960]. Uncommon in small patches on railway banks as at Appleford [5293] and Radley [5297]. Atlas 2000: all except [68], [69].

Primula denticulata Sm. *Drumstick Primula* ● hr 5

A popular bedding plant with dense globose heads of pale purple (occasionally white) flowers. Self-seeding and sometimes escaping.

Silwood Park: in shrubbery around the Refectory.

East Berks: Windsor and Maidenhead, 1995-2004.

Primula pulverulenta Duthie ● hr 5

Ascot: by the Outflow Stream through the newly completed grounds at Heronsbrook in May 2004.

West Berks: a garden escape established in a pit in a plantation near Pusey House [358967] in 1966-71.

Primula florindae Kingdon-Ward *Giant Cowslip* ● hr 5

This is the yellow candelabra primula beloved of bog gardeners.

East Berks: by the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003.

¶ **Primula** *P. allionii*, *P. allionii* 'Anna Griffith', *P. allionii* 'Avalanche', *P. allionii* 'Crowsley Variety', *P. allionii* 'Snowflake', *P. alpicola*, *P. alpicola* var. *alba*, *P. alpicola* var. *violacea*, *P. auricula* 'Camelot', *P. auricula* 'Chorister', *P. auricula* 'Doublet', *P. auricula* 'Lovebird', *P. auricula* 'Matthew Yates', *P. auricula* 'Neat and Tidy', *P. auricula* 'Old Yellow Dusty Miller', *P. auricula* 'Remus', *P. auricula* 'Rolts', *P. auricula* 'Sandwood Bay', *P. auricula* 'Trouble', *P. 'Beatrice Wooster'*, *P. beesiana*, *P. 'Blue Riband'*, *P. 'Blue Sapphire'*, *P. bulleyana*, *P. burmanica*, *P. capitata*, *P. capitata* subsp. *mooreana*, *P. chionantha*, *P. chionantha* subsp. *sinopurpurea*, *P. cockburniana*, *P. concholata*, *P. 'Dawn Ansell'*, *P. denticulata*, *P. denticulata* var. *alba*, *P. elatior*, *P. 'Ethel Barker'*, *P. flaccida*, *P. florindae*, *P. x forsteri*, *P. frondosa*, *P. Gold-laced group*, *P.*

'Groeneken's Glory', *P.* 'Guinevere', *P. halleri*, *P. involucrata* subsp. *yargongensis*, *P. japonica*, *P. japonica* 'Miller's Crimson', *P. japonica* 'Postford White', *P. juliae*, *P.* 'Ken Dearman', *P.* 'Kinlough Beauty', *P.* 'Lady Greer', *P. marginata*, *P. marginata alba*, *P. marginata* 'Beatrice Lascaris', *P. marginata* 'Kesselring's Variety', *P. marginata* 'Linda Pope', *P. marginata* 'Prichard's Variety', *P.* 'Marie Crousse', *P.* 'Miss Indigo', *P. petiolaris*, *P.* 'Pink Ice', *P. poissonii*, *P. polyneura*, *P. prolifera*, *P. x pubescens*, *P. x pubescens* 'Boothman's Variety', *P. x pubescens* 'Faldonside', *P. x pubescens* 'Freedom', *P. pulverulenta*, *P. reidii* var. *williamsii*, *P. rosea*, *P. secundiflora*, *P. sieboldii*, *P. sikkimensis*, *P.* 'Sunshine Susie', *P.* 'Val Horncastle', *P. vialii*, *P.* 'Wanda'

Hottonia palustris L. *Water-violet*

hyd 5 ↓

A local speciality of ditches and ponds with nutrient rich water, mostly near the Thames.

Ascot: very local and rare; a small but thriving population in permanent standing water beneath *Salix cinerea* and *Iris pseudacorus*, growing with big tussocks of *Carex curta* in the swamp at the western end of Sunningwell Bog [925682]. The pond is just east of the point where the road past Ascot Station turns sharply right to go under the railway bridge. The population was in fine condition on 26 May 2002 with several hundred flowering spikes, and still in good order in June 2006. First recorded from the nearby acid pool of Lower Sole's Pond east of Ascot Station in 1975 (OXF), where they were thought to be planted. In fact, these plants are an outlier of the main population, which is 50m to the south-east, through the boundary fence below the railway embankment. There was still a small patch close to the north-east shore of Sole's Pond [925683] in June 2006.

East Berks: all but confined to the Thames meadows: Maidenhead, Windsor (E) in 1848, New Lock, ponds at the foot of Cookham Down, Sandford Mill, Sandhurst, plentiful in Sonning Meadows, Coleman's Moor, Blackwater, Twyford, Hurst, Stanlake, near Loddon Bridge. Ruscombe (1954) Waltham St Lawrence (1955), ditches between Marlow and Remenham. Decreasing fast. Whitley Wood [7168] (1956) (LAN). More than 500 plants in Great Lea Pond at Three Mile Cross [709687] in 1988. Much reduced and still declining. Now rare in the western reaches of the Thames from Sonning to Cookham but extinct or planted elsewhere. Formerly on the R. Blackwater at Sandhurst. Still at Cock Marsh, Great Lee Pond and Crazies Hill. <1% (1km²). Atlas 2000: [76], [77], [78], [87], [88], [96]

West Berks: "In all the ditches about Oxford" in 1666 (Merrett). Scattered records from the length of the Thames from Carswell down to Reading, rare or extinct in the Kennet valley, absent elsewhere. Buckland and Carswell [39], Hemp Hole near Newbury [46] in 1809, Abingdon [49], Bablock Hythe ferry and Wytham [40], Aldermaston [56] in 1987, Cholsey and Mouldsford [58], Radley [59], South Hinksey and Kennington [50], Tilehurst and Theale [67]. Atlas 2000: [39], [46], [49], [40], [56], [58], [66], [67]

¶ **Hottonia** *H. palustris*

Cyclamen hederifolium Aiton *Cyclamen* or *Sowbread*

• h 8

Much planted in churchyards and in plantations on the larger estates. Long persistent and occasionally naturalising. Seldom as a garden throw-out. The early-spring-flowering plant is *C. coum*.

Silwood Park: long established in deep shade below Cherry Laurel in South Lodge Wood (1971-2004), on the edge of the garden of South Lodge, obviously an outcast (1982). Ashurst churchyard rarely naturalised in grass; 1 March 1999.

Ascot: in the churchyard at Sunningdale. Rare in the verge of Truss Hill Road opposite Upper Village Road on 1 November 2009, where the *Crocus tommasinianus* grows.

East Berks: Woodley Green, Binfield Park, Cookham, St Luke's Maidenhead, Warfield church, Shottesbrooke churchyard, Wokingham, Bray Court. There were extensive patches at Odney Club in Cookham [8985] in 2001. 1% (1km²). Atlas 2000: all except [76], [78]

West Berks: common in Great Coxwell churchyard [29] in 2001, in Radley Park [59] but only as planted specimens (1897). Blewbury cemetery [58] in 1968 and 2004, North Hinksey Church [49] in 1979, near the Chalet in Wytham wood in 1979 and Cumnor churchyard in 2000 [40], Bucklebury Church [57] in 1984 and 2002, Midgham Park [56] in 1987, Sulham Church [67] in 1987, Ashbury churchyard [28] in 1988, in an old garden at Kingston Bagpuize House [49] in 1988. Very fine under the Cherry Tree in Kintbury churchyard [3866] on 3 September 2004. Atlas 2000: all except [47], [48], [50], [66], [69]

Cyclamen coum Mill. *Eastern Cyclamen* ● h 2

Ascot: planted in Sunninghill churchyard (1988). By the roadside on Fireball Hill in Sunningdale (2001).

East Berks: no other records.

West Berks: in a shrubbery planted in 1923 at Welford Park [47] in 1982. Recently at Bourton Church [2387], Ashbury Church [2685], Stanford-in-the-Vale Church [3493], Bucklebury [5570]. Superb in the grounds of Kingston Bagpuize House [4097].

Cyclamen repandum Sibth. & Sm. *Spring Cyclamen* ● h 3

West Berks: in a shrubbery planted in 1923 at Welford Park [47] in 1982.

¶ **Cyclamen** *C. cilicium*, *C. cilicium* f. *album*, *C. coum* subsp. *coum* f. *pallidum* 'Album', *C. cyprium*, *C. hederifolium* var. *hederifolium* f. *albiflorum*, *C. intaminatum*, *C. libanoticum*, *C. mirabile*, *C. pseudibericum*, *C. purpurascens*, *C. repandum*

Lysimachia nemorum L. *Yellow Pimpernel* chh 5

Damp woods and thickets, local and not very common, but absent from much of the chalk ridge. Told from *L. nummularia* by the pointed sepals (subulate not ovate) and by the lack of glandular dots on the leaves. The leaf tips are pointed rather than rounded.

NVC: W 6,8,10

Silwood Park: at the point where the outflow stream from The Lake crosses the Cheapside Path on 16 May 1983. In wet woodland upstream of Cascade Bridge near the boundary fence on 6 August 1989, and on a dry spit just downstream in May 2003. Under sycamore and holly in the north-west corner of Cascade Marsh on 6 June 1984. Recently at Mann's Copse, Guinness's Thicket, Guinness's Bridge, Water Meadow East, and several places in Nash's Copse (especially near the Outflow Stream). With *Ajuga* and *Cardamine flexuosa* in swampy shade on the northern side of The Lake, and on the Gas Pipeline where it crosses the outflow stream in Water Meadow in 2002. On the northern bank of the Outflow Stream in Water Meadow West and Gas Pipeline [9426 6932] on 8 May 2005. Frequent, in full flower on 19 May 2007 in soggy ground on the boundary of Mann's Copse and Great Mead. Frequent with *Ranunculus repens* and *Ajuga reptans* on 15 June 2009 in Great Mead.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	5	5

Ascot: Coronation Road, Sunninghill Village, North Ascot, Sunninghill Park, Peanut Roundabout.

East Berks: Bisham Wood abundant, Bowsey Hill, Warren Row, Ashley Hill, Finchampstead, Coleman's Moor, Windsor Great Park, Cookham, Bear Place. Rather local in damp or fairly dry places in oak, beech and alder woods, often close to streams as in Simon's Lane, Wokingham. 8% (1km²). Atlas 2000: all squares

West Berks: occasional in the Kennet valley (south of 80) and in the Northern Loop, but absent or rare elsewhere. In ancient ash woods on RAF Welford [4175]. Atlas 2000: all except [38], [68], [69].

Lysimachia nummularia L. *Creeping-Jenny* chh 6

Damp woodland rides, stream-sides, marshes and damp grassland; absent from the chalk ridge and from very acid soils. First record; Sunninghill (Sir Joseph Banks, 1774). Quite common as a relic of planting, as on graves in churchyards. The leaf tips and sepals have rounded (not pointed) tips, and the leaves are dotted with black glands. The golden-leaved cultivar 'Aurea' is a very common garden plant, occasionally found as an outcast.

NVC: W 8,10

Silwood Park: locally naturalised in the abandoned garden at South Lodge; 18 September 2000.

Ascot: uncommon in Sunninghill Village, Berkshire Polo Club, Winkfield Lodge, Leiper Hill, Great Meadow Pond, Windsor Great Park.

East Berks: locally frequent in towns (as in Bulmershe and Whitley) and villages (as in Holyport) as a garden escape. Much less common as a wild plant, as in the *Eleocharis palustris* wetland at Cock Marsh [881868]. 17% (1km²). Atlas 2000: all squares

West Berks: more widespread in the interior than *L. nemorum*, but few records away from the Thames in the chalky strip north of 80 and south of 85. Locally frequent on grassy rides through Fence Wood [5171], and very common in Aldermaston churchyard [596649] in 2002. Atlas 2000: all squares

Lysimachia vulgaris L. *Yellow Loosestrife* hel 7

River banks, lake-sides, clearings in wet woodlands, marshy ditches, fens, and old gravel pits, in a wide range of wetland habitats but absent from the chalk. The leaves are holed by the chrysomelid beetle *Lythraia salicariae*.

NVC: M 22,27; OV 26; S 13,26; W 5,6

Silwood Park: one of the most characteristic plants of the wetlands surrounding The Lake. It grew particularly well following the clearance of the alder trees from the dam, and when the oaks and hawthorns were removed from Gunness's Thicket. In wet woodland at Great Mead, Mann's Copse, The Willows, Farm Road, Gunness's Bridge, Weir Wood, Nash's Copse. Locally dominant along the Clear Brook through The Marsh on the inflow to The Lake. Also in wet grassland at Rush Meadow and Water Meadow.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	14

Ascot: abundant and locally dominant on the southern shore of Virginia Water, growing with *Acorus calamus* and *Carex paniculata*. Sunninghill (1773, Sir Joseph Banks), Ascot Station, Kings Beeches, Sunningdale Park, Sunningdale, Blacknest Park, Johnson's Pond, Frostfarm Plantation, Breakheart Hill, Windsor Great Park. Frequent at the edges of the Marist Convent pond at Frognall [941682] in September 2005.

East Berks: banks of R. Thames near Windsor, Henley and Aston. Banks of the Loddon and Blackwater, scattered throughout by lakes (as at Virginia Water, Heath Lake and Sandhurst), but rare over large areas of the interior. On the banks of The Cut where it flows next to the M4 Motorway at Beenhams Heath [8575]. 9% (1km²). Atlas 2000: all squares

West Berks: occasional along the R. Kennet (as at Woolhampton [56]), and rare along the R. Thames (as at Wytham [40] and Pangbourne [67]), but absent from the whole of the interior. Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all except [36], [37], [38], [48]

Lysimachia clethroides Duby. *Gooseneck Loosestrife* ● hp 7

A tall herbaceous perennial with opposite leaves and an elongated, curved spike of tiny white flowers (not in Stace).

Silwood Park: long-persistent by the *Osmunda* at the edge of the pond in the Japanese Garden, but there is no record of its having been planted there intentionally. It was grown for many years in the herbaceous borders, about 200m away.

Lysimachia punctata L. *Dotted Loosestrife* ● hp 7
Lysimachia ciliata auct., non L.

In every cottage garden and most herbaceous borders. One of the commonest and most vigorous garden plants, soon outgrowing its welcome and often thrown out as being surplus to requirements. Long persistent in ditches and on waste ground in villages and towns. Common and widespread as an outcast.

Silwood Park: Ashurst Warren, Cheapside Village, Playground, Tennis Courts, Drive Lawns.

Ascot: Fernbank Road, Englemere, Heatherwood Hospital, Coronation Road, South Ascot, Kings Beeches, Ascot Station, Sunningdale Park, Sunningdale, Charters Road, Blacknest Park.

East Berks: not in Druce, first recorded as a garden escape at Arborfield Church [76] in 1966. Now frequent throughout. 27% (1km²). Atlas 2000: all except [78]

West Berks: widespread, first recorded as a garden escape at Tilehurst [67] in 1962. Atlas 2000: all except [28], [37], [39], [48], [69]

¶ **Lysimachia** *L. ciliata* 'Firecracker', *L. clethroides*, *L. ephemerum*, *L. minoricensis*, *L. nummularia* 'Aurea', *L. punctata* 'Alexander', *L. thyrsoiflora*

Anagallis tenella (L.) L. *Bog Pimpernel*
Lysimachia tenella L.

chh 6 ↓

Peaty bogs, marshes, fens and woodland tracks with short turf; local, rare and decreasing.
 NVC: M 13,24

Ascot: this species was recorded from Englemere Pond in 1961 but has not been seen recently. It was still at Whitmoor Bog in 1999.

East Berks: first recorded from Bulmershe Heath (1800) and still there in 1897, but long since buried beneath the suburban sprawl of eastern Reading. Windsor Great Park, Heath Pool, Sandhurst, Bagshot, Sunninghill, Virginia Water, Long Moor (pre-1897). Coleman's Moor (1962), Wellington College (1961), Woodley (LAN) in 1958. Heath Lake (1987). Bowen believed the plant to be extinct at Windsor Park and Virginia Water, and I have not found it there. Recently at Heath Lake, Edgebarrow and Wellington College Bog. <1% (1km²). Atlas 2000: [76], [86]

West Berks: rare (with several extinct stations) in the Northern Loop, and rare along the heathy parts of the Kennet valley. Absent from the interior. Specimens from Three Firs (RNG) [66] in 1891, and Greenham Common (RDG) in 1941. Inkpen Common [36], Greenham Common and Enborne Row [46], Snelmore Common [47], Appleton Upper Common, Frilford Heath golf course [444991] and Cothill fen [49], Bishops Green [56], Fence Wood [57], Radley meads [59], Silchester Common [66]. Atlas 2000: [46], [47], [49], [56], [57], [59], [66]

Anagallis arvensis L.

th 6

Anagallis arvensis subsp. **arvensis** *Scarlet Pimpernel*
Anagallis phoenicia Scop., nom. illegit.

Cultivated fields; common and generally distributed. Arable fields, gardens and disturbed ground. Frequent in north and west Berkshire, occasional in south-east Berkshire.
 NVC: OV 1,3,4,7,9,10,12,15,16,18,19,21,28,33

Silwood Park: in all of the arable fallows at Pound Hill, Ashurst Four Acre Field and Silwood Bottom, in the seed bank beneath old grassland in Nash's Field blocks A and B in 1993, and Oak Mead following cultivation in spring 1996, and on waste ground around Manor House, Science Park, Greenhouses, CABI, Reactor Bank and Header House. Also in the seed bank below dense bracken on Guinness's Hill where it showed itself after cultivation of the PROSAMO Plots in July 1990, more than 40 years since the last cultivation. Coming up from the seed bank when grassland was disturbed at the bottom of Ashurst graveyard in 2002 for installation of the new rabbit fence. Particularly common in June 2009 on gravel around buildings and on autumn-cultivated fallows. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. Occasional on bare ash at the bonfire site by the Walled Garden on 12 September 2011, growing with *Sonchus asper*, *Senecio inaequidens*, *Solanum nigrum* and *Stellaria media*. Dominant in the gaps between the paving slabs that form the Pollution Pad in Drive Field on 8 June 2012.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	1	13	22

West Berks: rare, and restricted entirely to the Northern Loop. Extinct at its southern stations in the Kennet valley (Burghfield [66] and Basildon [67], both 1918). Buckland Warren, Pusey Wood and Rushy Lock [39], Cothill Fen and Marcham Mill [49], in a pond at Wytham and at the base of Cunnor Hill [40], gravel pits by the railway between Radley and Abingdon [5296]. Still by the stream south of Bushy Farm [367956] and in the wetland at Manor Farm, Marcham [453960] in September 2001. Atlas 2000: [29], [39], [49], [49], [59]

EUCRYPHIACEAE

¶ **Eucryphia** *E. cordifolia*, *E. cordifolia* × *lucida*, *E. glutinosa*, *E. x hillieri* ‘Winton’, *E. x intermedia*, *E. x intermedia* ‘Rostrevor’, *E. lucida* ‘Ballerina’, *E. lucida* ‘Gilt Edge’, *E. lucida* ‘Leatherwood Cream’, *E. lucida* ‘Pink Cloud’, *E. milliganii*, *E. moorei*, *E. x nymansensis* ‘Nymansay’, *E.* ‘Penwith’

PITTOSPORACEAE

¶ **Pittosporum** *P. anomalum*, *P.* ‘Arundel Green’, *P. bicolor*, *P. crassifolium*, *P. eugenioides* ‘Variegatum’, *P.* ‘Garnettii’, *P.* ‘Saundersii’, *P. tenuifolium*, *P. tenuifolium* ‘Abbotsbury Gold’, *P. tenuifolium* ‘Irene Paterson’, *P. tenuifolium* ‘Purpureum’, *P. tenuifolium* ‘Silver Queen’, *P. tenuifolium* ‘Tom Thumb’, *P. tenuifolium* ‘Warnham Gold’, *P. tenuifolium* ‘Wendle Channon’, *P. tobira*, *P. tobira* ‘Variegatum’, *P. undulatum*

¶ **Sollya** *S. heterophylla*

HYDRANGEACEAE

Philadelphus coronarius L. *Mock-orange*

• n 6

A long persistent garden outcast on waste ground and in hedgerows.

Silwood Park: Sunninghill Crossroads, Silwood Farm, Silwood Lodge.

Ascot: in wild-looking parts of the grounds of Heatherwood Hospital in 1998. In a hedge on the Broomhall lands in Sunningdale in 2003.

East Berks: Whiteknights Wilderness, Sonning, Bear Grove, Shottesbrooke, Bisham Wood, Hurst, Dinton Pastures, Cookham Dean, Formosa Court, by the Thames on Windsor Racecourse. 7% (1km²). Atlas 2000: all squares

West Berks: Shrivenham [28], Longcot [29], Chilton Foliat [37], Kingston Lisle [38], Benham Park [46], Foxcombe Hill [40], Blewbury [58], Padworth College [65], Moore Copse and Pangbourne [67], Wallingford [68]. Atlas 2000: [28], [29], [36], [37], [38], [40], [58], [66], [67], [69]

¶ **Philadelphus** *P.* ‘Beauclerk’, *P.* ‘Belle Etoile’, *P. coronarius* ‘Aureus’, *P. coronarius* ‘Variegatus’, *P.* ‘Innocence’, *P. x lemoini*, *P.* ‘Manteau d’Hermine’, *P.* ‘Sybille’, *P.* ‘Virginal’

¶ **Kirengeshoma** *K. palmata*

Deutzia scabra Thunb. *Deutzia*

• n 6

West Berks: planted in chalk grassland at Aston Tirrold [59] and recorded in 1965.

¶ **Deutzia** *D. crenata* var. *nakaiana* 'Nikko', *D. x elegantissima* 'Rosealind', *D. gracilis*, *D. x hybrida* 'Magicien', *D. x hybrida* 'Mont Rose', *D. x kalmiiiflora*, *D. x magnifica*, *D. pulchra*, *D. x rosea* 'Carminea', *D.* 'Strawberry Fields'

¶ **Hydrangea** *H. anomala* subsp. *petiolaris*, *H. arborescens* 'Annabelle', *H. arborescens* 'Grandiflora', *H. aspera* 'Macrophylla', *H. aspera* subsp. *sargentiana*, *H. aspera* Villosa group, *H. heteromalla* Bretschneideri group, *H. involucrata* 'Hortensis', *H. macrophylla* 'Altona', *H. macrophylla* 'Ami Pasquier', *H. macrophylla* 'Ayesha', *H. macrophylla* 'Blue Bird', *H. macrophylla* 'Europa', *H. macrophylla* 'Générale Vicomtesse de Vibraye', *H. macrophylla* 'Lanarth White', *H. macrophylla* 'Mariesii Perfecta', *H. macrophylla* 'Mariesii Variegata' (L), *H. macrophylla* 'Parzifal', *H. macrophylla* 'Tricolor', *H. macrophylla* 'Veitchii', *H. macrophylla* 'White Wave', *H. macrophylla* 'Yodogawa', *H. paniculata* 'Floribunda', *H. paniculata* 'Grandiflora', *H. paniculata* 'Greenspire', *H. paniculata* 'Praecox', *H. quercifolia*, *H. serrata* 'Bluebird', *H. serrata* 'Grayswood', *H. serrata* 'Rosalba'

¶ **Schizophragma** *S. hydrangeoides*, *S. integrifolium*

¶ **Pileostegia** *P. viburnoides*

¶ **Carpenteria** *C. californica*

ESCALLONIACEAE

Escallonia macrantha Hook. & Arn. *Escallonia*

• n 6

Escallonia sanguinea hort.

Escallonia rubra (Ruiz and Pav.) Pers. var. *macrantha* (Hook. & Arn.) Reiche

A common garden plant, occasionally used as a hedge, but seldom found as an outcast or self-sown. White-flowered plants are likely to be the cultivar *E.* 'Iveyi'.

Silwood Park: used as a hedge on the edges of the car park separating the Science Park from East Lodge. Old Orchard, Silwood Lodge, Reactor Block, Heronsbrook, M-Scan.

Ascot: self sown on ruined walls at Froggnall [940681] in September 2005.

East Berks: hedgerows in Holyport in 1965, still there in 2004. In Whitley, Bulmershe, Ryeish Green, Sonning, Binfield, White Waltham, Maidenhead, Cookham Dean and Paley Street in 2002. Atlas 2000: [76], [77], [86], [87], [88], [96], [98]

West Berks: Faringdon [29], Newbury [46], Abingdon [49]. Atlas 2000: [29], [38], [46], [49]

¶ **Escallonia** *E.* 'Apple Blossom', *E.* 'CF Ball', *E.* 'Donard Radiance', *E.* 'Donard Seedling', *E.* 'Donard Star', *E.* 'Edinensis', *E.* 'Iveyi', *E. laevis* 'Gold Brian', *E. laevis* 'Gold Ellen', *E.* 'Langleyensis', *E.* 'Peach Blossom', *E.* 'Pride of Donard', *E.* 'Red Dream', *E.* 'Red Elf', *E. rubra* 'Crimson Spire', *E. rubra* var. *macrantha*, *E.* 'Silver Anniversary'

GROSSULARIACEAE

Ribes rubrum L. *Red Currant*

n 4

Ribes sylvestre (Lam.) Mert. & Koch

Locally dominant in moist woodlands, thickets, borders of shady streams on nutrient-rich soils, rarely epiphytic on pollarded willows. This is our common woodland currant; its leaves are *not* fragrant when crushed. Many of the plants are garden escapes, commonly bird-sown. Red blister galls on the leaves are caused by the aphid *Cryptomyzus ribis*.

Silwood Park: scattered and uncommon in the wetter parts of the woods: Cascade Marsh, Nash's Copse, Great Mead, The Willows, Ashurst Orchard, Gunness's Thicket, Silwood Farm, Water Meadow, Kissing Gate, South Lodge.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	5	4	9

Ascot: in the damp birch woodlands at South Ascot, in wet woods by the western end of Englemere Pond (with *R. nigrum*). Damp woods at Blacknest Park.

East Berks: by the Loddon near Sandford Mill, near Hurley. In damp ancient woodlands at Englemere Pond, Bearwood, Billingbear, etc. Now widespread. 13% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys but rare or absent in the interior. Very common in *Mercurialis perennis* vegetation in woodlands on the chalk, as at Taylor's Hill Buscot and Grove Wood Faringdon [29], Lynch Wood Lambourn [37], Appleton Lower Common [40]. Specimens from Tilehurst (LAN) in 1956 and Padworth Gully (LAN) in 1961. Ginge Brook, Ashes Pen and Black Bushes Wood [48]. Locally dominant over substantial areas of Moor Copse [67]. Atlas 2000: all except [36]

Ribes nigrum L. *Black Currant*

• n 4 ↓

Damp woods on nutrient-rich soils, hedges, stream-sides and thickets in moist shady situations; local and in small quantity. Foliage smells strongly of currants when crushed (unlike the scentless *R. rubrum*). Naturalized and bird-sown from gardens. Host plant of the Magpie Moth *Abraxas grossulariata*, and subject to 'big bud gall' caused by the mite *Eriophyes ribis*.

Silwood Park: very rare. One bush, growing inter-twined with *R. rubrum* in swampy woodland on the north-western bank of the inflow, 100m downstream from Cascade Bridge in June 2001 (K). Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006.

Ascot: wet, shady woodland. North Ascot, in a shady ditch by Kings Ride, Sunningdale, South Ascot, in wet woods by the western end of Englemere Pond. Locally frequent in Sunningwell Bog in wet ground beneath *Salix cinerea*.

East Berks: scattered and rare; much less common than *R. rubrum*. Blackwater, banks of Thames at Henley, Ascot, by the Loddon between Twyford and Loddon Bridge, near Hurley. Big Wood

[844687]. Recently at Farley Court, Eversley Bridge, in the alder carr at Longmoor Bog, Barkham, Warren Lodge, by the Thames in Reading, North Crowthorne, Bracknell, Prospect Hill, Winkfield, Kingsmead. Most records are from south of 70. 3% (1km²). Atlas 2000: all except [87], [88]

West Berks: occasional in the Thames valley, rare in the eastern Kennet valley and absent elsewhere. Shrivenham and Tuckmill meadow [28], Coleshill [29], Hamstead Marshall, Enborne and Greenham Common [46], Snelsmore [47], Frilford [49], Appleton Lower Common and Wytham [40], Aldermaston [56], Frilsham [57], East Hagbourne and Blewbury [58], Little Wittenham Wood [59], Roundwood Copse [66], islets in the Thames near Tilehurst, rare in Moor Copse, Pangbourne, Basildon, Tidmarsh and Bradfield [67]. Atlas 2000: all except [36], [38], [48], [68], [69]

Ribes sanguineum Pursh *Flowering Currant*

• n 4

A very common plant of shrubberies; its pinky red flowers are a common sight in early spring in villages, towns, and on waste ground.

Silwood Park: bird-sown from planted shrubberies; Ashurst Old Orchard, South Lodge, Technology Transfer Centre, The Farm, Drive Lawns.

East Berks: not in Druce or Bowen from our area. Whiteknights Park (1986). Recently at Hurst, Three Mile Cross, Lower Earley, Bearwood College, Coppid Hill, Doles Hill, Twyford, Westcott, Easthampstead, Great Hollands, Kiln Green, White Waltham, Scotlands, Halfway House, Coronation Road, Bray, West Dedworth, Forest Park, Maidenhead. 4% (1km²). Atlas 2000: all except [78]

West Berks: a damp wood in Welford (LAN) [47] in 1961, Youlbury [40] from 1966-74, Sutton Courtenay [59] in 1969. In the roadside verge opposite the ornamental pond at West Woodhay House [386633] in 2002. Atlas 2000: [28], [29], [39], [46], [49], [40]

Ribes uva-crispa L. *Gooseberry*

• n 3

Ribes grossularia L.

Grossularia uva-crispa (L.) Miller subsp. *reclinata* (L.) Dostál

Hedges, thickets and woods; sparingly scattered through the county. Ancient woodland plants are often indistinguishable from bird-sown garden escapes. Long persistent on waste ground and in hedgerows as a garden outcast. Host plant of Magpie Moth *Abraxas grossulariata*. Dense colonies of aphids on the shoot tips in spring are of *Aphis grossulariae*.

Silwood Park: rare in woodland at South Lodge Wood, Rookery Slope, Heronsbrook and Nash's Copse; all apparently bird-sown. Virginia Water Lodge, but perhaps planted here.

Ascot: locally abundant in the verge of Wells Lane.

East Berks: Park Place, Ashley Hill, Wargrave, Ruscombe, Sandhurst (with glandular-haired fruits at Park Place, Wargrave, Ruscombe, Sandhurst, Shinfield and Wokingham, and with smooth fruits at Sonning, Waltham, Maidenhead and Cookham). 7% (1km²). Atlas 2000: all squares

West Berks: scattered throughout but always uncommon. A good colony in the woodland at Dry Sandford Pit [4600] in 2001, in the woods on Ashampstead Common [57] and in RAF Welford [4175] and Moor Copse [6374] in 2002. Garden escapes with sweet, black fruits in Reading's Lake District [6969] in July 2002. Atlas 2000: all except [37]

¶ **Ribes** *R. alpinum*, *R. alpinum* 'Aureum', *R. divaricatum* 'Worcesterberry', *R. x gordonianum*, *R. laurifolium*, *R. nigrum* 'Ben Sarek', *R. odoratum*, *R. rubrum* 'Laxton Number One', *R. rubrum* 'Red Lake', *R. sanguineum* 'Brocklebankii', *R. sanguineum* 'King Edward VII', *R. sanguineum* 'Pulborough Scarlet', *R. sanguineum* 'Tydeman's White', *R. sanguineum* 'Ubric White Icicle', *R. speciosum*, *R. uva-crispa* var. *reclinatum* 'Careless', *R. uva-crispa* var. *reclinatum* 'Invicta', *R. uva-crispa* var. *reclinatum* 'Whinham's Industry'

¶ **Itea** *I. ilicifolia*, *I. virginica*, *I. virginica* 'Henry's Garnet'

CRASSULACEAE

Crassula tillaea Lest.-Garl. *Mossy Stonecrop* th 6 †
Tillaea muscosa L.

A tiny plant with leaves 1-2mm long, found in open sandy places. The records from [96] and [97] from Virginia Water in 1952 (BM) were from v.c.17 Surrey, and have not been seen since. The plant was a weed of sandy and gravelly ground in Waterer's nursery at Bagshot, just south of the Berkshire border, for 10 or more years in the 1920s and 30s.

NVC: U 1

East Berks: close by, but no records. Worth searching for in U1 communities on the Bagshot sands from Sandhurst to Virginia Water.

West Berks: there is a literature record (probably on the authority of J. Bicheno) from Frilsham [5373] in 1813 in Mavor's *Agricultural Survey of Berkshire*.

[**Crassula aquatica** (L.) Schonland *Pigmyweed*]
Tillaea aquatica L.

Recorded from Dinton Pastures [777720] in 1992 without a specimen. Obviously an error for *C. helmsii*. The flowers are sessile (not on stalks more than 2mm long as in *C. helmsii*).

Crassula helmsii (Kirk) Cockayne *New Zealand Pigmyweed* • h 6
Tillaea helmsii Kirk
Tillaea recurva (J.D. Hook.) J.D. Hook.
Crassula recurva (J.D. Hook.) Ostenf., non N.E. Br.

A pest of ponds, reservoirs and ditches, since the early 1980s; locally dominant on the water surface or on exposed mud at the water's edge. It forms a raised, light green ring around the margin of a pond, while the dense under-water mat is brownish green in colour. Well naturalized in southern England and spreading rapidly according to Stace (1997), but it has not increased much in Berkshire over the last 20 years, and is still very local.

Silwood Park: the first Berkshire record was from Silwood Park in 1980, but I can not trace the details (it was a Bowen field record, on a visit with Ted Green). It is certainly not there now (1979-2009), either in the lake or in any of the ornamental ponds.

Ascot: in the ornamental water features at Sunningdale Park, 1997-2009 (it is possible that this is where Bowen saw the plant in 1980; see above). In the lake at Blacknest Park in 2001 before the

housing development work began; the lake was excavated and deepened at the start of construction work in September 2004 (still no building work on 1 November 2009). Not in Sole's Pond below Ascot Station (1979-2009).

East Berks: no records in Druce or Bowen. Common at Dinton Pastures [782719] by 1988, and still there in 2004. Recently at East Sonning, Sandhurst lakes in both v.c.22 and 17, Queens Mere and Kings Mere, Thimble Farm, clogging the abandoned swimming pool at Foliejon Park in 1998, Leiper Hill. A problem in several parts of Moor Green Lakes nature reserve [8062], especially around Colesbrook North Lake; control attempts were begun in 2001. 2% (1km²). Atlas 2000: all except [78], [88]

West Berks: first recorded from Upper Bucklebury (**RNG**) [56] in 1983, Mortimer Common (**RNG**) [66] in 1985, Kennet and Avon canal [67] in 1986, Milton Park [4892] in 1986 and Foxcombe Wood [4901] in 1990. Drayton Millennium Pond [4894] in 2001. Abundant with *Menyanthes trifoliata* and *Hippuris vulgaris* in the pond at Jarn Mound [486022] in September 2002. Atlas 2000: [29], [38], [48], [49], [40], [56], [59], [66], [67]

Umbilicus rupestris (Salisb.) Dandy *Navelwort*

hs 6 ↓

Cotyledon rupestris Salisb.

Umbilicus pendulinus DC., nom. illegit.

A local speciality of old limestone walls, in and about villages. It is at the extreme eastern edge of its range in Berkshire (see Fig. 2.3 and Plate 15). It is at its happiest in the far west of Britain, in the damp, coastal conditions of Cornwall or West Wales, and finds most of Berkshire intolerably dry.

NVC: OV 41

East Berks: there is a record from Reading in 1843 but nothing since. There is an unlocalized record in the *Flora of Hampshire* from tetrad [8260] by the R. Blackwater. Atlas 2000: no records.

West Berks: confined almost exclusively to the Golden Ridge, with one southern record from the Roman ruins at Silchester [6262] in 1984 (but this may be on the Hampshire v.c.12 side of the border). On old limestone walls at Buscot, on the church roof at Little Coxwell [29], Littleworth, Longworth Manor, Longworth Church and on the top of the garden wall of Hinton Waldrist Grange [39], Donnington [46], Marcham, Tubney and Abingdon [49], Dry Sandford churchyard and Wytham Abbey [40], Sutton Courtenay and Culham churchyard [59], South Hinksey [50], on the Roman walls at *Calleva Atrebatum* [66]. Common only at Longworth and Hinton Waldrist [39] in 2002-04. Atlas 2000: [29], [39], [40], [59], [66]

Sempervivum tectorum L. *House-leek*

● chh 6

Old walls, cottage roofs. Scattered through the county in nearly every village, but commonest in The Vale and on the Golden Ridge. Traditionally grown on cottage roofs as a protection against lightning strikes. There are no data on its efficacy. Also used for the treatment of bee-stings. Possessed of one of the most bizarre of all English plant names; in Norfolk, apparently, it is known as "Welcome home husband, however drunk ye be".

Ascot: no records.

East Berks: in villages, especially on the chalk, in small quantity; local and rare at Sonning, Earley, Ruscombe, Wargrave, Swallowfield, Riseley, Spencer's Wood, Old Windsor. 4% (1km²). Atlas 2000: [77], [86], [87], [88], [97]

West Berks: scattered throughout, but rare to the south of 75. Coleshill and Longcot [29], East Garston [37], Stanford-in-the-Vale, Charney Bassett, Southmoor and Buckland [39], Newbury [46], Beedon [47], East Ilsley and Harwell [48], Drayton, Grove, Steventon, Kingston Bagpuize, on ancient walls in Abingdon and Frilford [49], Dry Sandford, Sunningwell and Wytham [40], Hermitage and Quicks Green [57], on walls in Radley [59], Wallingford [68]. Atlas 2000: all except [28], [36], [56], [58], [66], [69]

I suspect that all of the garden escape and throw-out House-leeks have been recorded as *S. tectorum*, whatever they really were. 19 different taxa have been grown in Silwood in the last 20 years (below) and it seems unlikely that all of the escapes and outcasts would belong to the same taxon.

¶ **Sempervivum** *S. arachnoideum*, *S. arachnoideum* subsp. *tomentosum*, *S. x barbulatum* 'Hookeri', *S.* 'Blood Tip', *S. calcareum* 'Mrs Giuseppi', *S. ciliosum* var. *borisii*, *S.* 'Commander Hay', *S. x funkii*, *S. giuseppii*, *S. grandiflorum*, *S.* 'Hester', *S.* 'Jubilee', *S.* 'King George', *S.* 'Kramers Spinrad', *S. marmoreum* 'Brunneifolium', *S.* 'Othello', *S.* 'Reinhard', *S.* 'Rosie', *S.* 'Rubin'

¶ **Echeveria** *E. elegans*

Sedum rosea (L.) Scop. *Roseroot*

• hp 5

Rhodiola rosea L.

Sedum rhodiola DC., nom. illegit.

East Berks: this Scottish mountain plant is an uncommon garden subject in Berkshire, and a rare garden outcast. By a cottage at Gravelly Bridge [7067] in 1999.

Sedum spectabile Boreau *Butterfly Stonecrop*

• hp 8

Hylotelephium spectabile (Boreau) H. Ohba

One of the commonest late-flowering cottage garden plants, and a magnet for butterflies. In every village; often outcast, but rarely self-sown.

Silwood Park: Four Acre Field, below the churchyard wall at Ashurst, on waste ground in various places in Cheapside Village, and by Drive Lawns. Planted in the renovated garden of South Lodge in December 2008.

Ascot: local and rare, on the grotto at Ascot Place (1998). Course Road, Ascot. Waste ground in South Ascot. A single plant in the fence separating Bridge Road from the railway line in Sunninghill [936676] in November 2005. Thriving in an extraordinary habitat, in a *Molinia* swamp, near the cricket pavilion on Ascot Heath in 2003.

East Berks: in towns and villages throughout. By the railway at Wokingham. 22% (1km²). Atlas 2000: all squares

West Berks: occasional throughout, but under-recorded. Atlas 2000: all except [37], [39], [47], [57], [66]

Sedum telephium L. *Orpine*

hp 7 ↓

Dry ancient woodland, hedge-banks, railway-banks, and roadsides; chiefly on sandy soil; local and uncommon. Absent from the chalk.

East Berks: Park Place, Remenham, Loddon Bridge, Twyford, Sonning, Hurst. Rare in the Thames valley, with outlying stations at Arborfield, in the Blackwater valley near Riseley, and at the western end of Nine Mile Ride (1944). Whiteknights Park, Cookham, Remenham. Confined to the west of the area. <1% (1km²). Atlas 2000: [76], [77], [78], [86], [88]

West Berks: occasional in Kennet, rare in Thames valley, absent elsewhere. Inkpen and Kintbury [36], Greenham [46], Curridge and Ashridge Wood [47], Tubney Wood, Appleton Lower Common and Wytham [40], Beenham, Bucklebury Common, Brimpton and Wasing pits [56], Hermitage, Frilsham, Yattendon and Burnt Hill [57], Blewbury [58], Radley Large Wood [50], Great Park Copse, Mortimer West end and Ufton Nervet [66], Bradfield and Tilehurst [67]. Atlas 2000: [29], [36], [37], [46], [47], [49], [40], [56], [57], [50], [66], [67]

Sedum spurium M. Bieb. *Caucasian-stonecrop*

● chh 7

Sedum stoloniferum auct., non S. Gmelin

Asterosedum spurium (M. Bieb.) Grulich

Walls and damp, shady waste ground; rare in Druce's time, commoner these days (but probably better recorded too). Now an occasional escape, planted on walls in most of our villages.

Silwood Park: a long-persistent relic on the overgrown rockery at South Lodge, and on waste ground in the churchyard at Ashurst.

Ascot: local and rare: on the grotto at Ascot Place in 1998. On tarmac at Sunninghill Gasometers in August 2002.

East Berks: not in Druce. Maidenhead, Windsor Park grotto. Recently from Three Mile Cross, Riseley, Swallowfield, Shinfield, Earley, Arborfield, Emmbrook, Woodley, Sonning, Twyford, Hurst, Ruscombe, Heath Pond, College Town, North Hanworth, Shottesbrooke, Cox Green, Warfield Park, Shepherds Lane, Maidenhead, Cookham, Bray Court, Kimbers Farm, West Dedworth. 10% (1km²). Atlas 2000: all except [78], [96]

West Berks: Faringdon [29], Stanford-in-the-Vale [39], Newbury [46], Farnborough and East Ilsley [48], Abingdon, Steventon Causeway, Marcham and Garford [49], Cumnor and Botley [40], Sutton Courtenay [59], Iffley Lock and Kennington [50], Tilehurst [67]. Atlas 2000: [28], [29], [38], [46], [48], [49], [56], [50], [66], [67], [68]

Sedum rupestre L. *Reflexed Stonecrop*

● chh 6

Sedum reflexum L.

Petrosedum rupestre (L.) Velayos

Petrosedum rupestre (L.) Velayos subsp. reflexum (L.) Velayos

The commonest alien stonecrop of old walls, asbestos roofs, graves, dry banks and dry waste ground. Bowen considered the plant "very local", but it is frequent and widespread now.

Silwood Park: very local on a few of the graves in the churchyard at Ashurst (1971-2004).

Ascot: Fernbank Road, Heatherwood Hospital, Sunninghill Village, abundant on asbestos roofs at Halfpenny's Garage and behind the Telephone Exchange on Upper Village Road, Sunningdale churchyard.

East Berks: very common on gravel-topped graves in churchyards, and our most frequent alien stonecrop on walls; Wellington College near the Wokingham Road quite naturalized, Shurlock Row, Sonning, Winnersh Station, on the railway bank at Ascot and Maidenhead. 18% (1km²). Atlas 2000: all squares

West Berks: occasional to the north of 90, but absent or rare elsewhere: Woolstone [29], Hamstead Marshall [46], Frilford, Marcham, Cothill and Abingdon [49], Wytham, Dry Sandford, Cumnor and Appleton [40], Yattendon [57], Streatley [58], Kennington and South Hinksey [50], Beech Hill and Mortimer [66], Bradfield [67]. Atlas 2000: all except [36], [37], [58], [68], [69]

Sedum cepaea L. *Pink Stonecrop*

● th 7

West Berks: a casual garden escape at Bradfield [67] in 1900 (OXF)

Sedum acre L. *Biting Stonecrop*

chh 6

Dry heathy places, waste ground, wall tops, dry calcareous or sandy soil, gravel grave-tops in churchyards, and cinder tracks by railways, etc. Locally common but absent from large tracts of the county.

NVC: CG 2; OV 27,39,41,42; U 1

Silwood Park: on the concrete standing at the Met Tower 1980-89 when the shed was demolished during construction of the Satellite Dish (much rarer than *S. album* which is locally dominant here). Severely damaged during building work when the mobile phone antennas were installed on the Met Tower in 2000. In the kerb of the lawn opposite M-Scan on bare ground on the CABI side of the road, August 1991-93; now overgrown by grass, and not seen since. Still locally common on paths and gravel-topped graves in the older part of the churchyard at Ashurst in 2002. In gravel at the base of the churchyard wall, facing the church car park at Ashurst on 6 June 2007.

Ascot: on mossy tarmac at Heatherwood Hospital, Ascot Station, Kings Beeches, Ascot Place.

East Berks: occasional to the north of 70, but rare to the south of this. Coleman's Moor, Bearwood, Coppid beech roundabout, Cookham, Windsor Great Park, Bracknell, Wellington College, Sandhurst, Swinley, Easthampstead, Ham Island. On top of the old brick walls at Beenham's Farm [8375]. Carpeting the birch woodland on abandoned railway sidings to the north-east of Earley Station on 13 June 2004. 14% (1km²). Atlas 2000: all squares

West Berks: occasional to the north of 80, but rare to the south of this, as at Yattendon and Bucklebury [57], and the old airfield at Membury [37]. Locally dominant on long stretches of the railway between Cholsey and Didcot [58] and Didcot and Appleford [59] in 2004. Very common on abandoned tarmac opposite the Merry Miller pub in Cothill [4699] and on the Roman walls at Silchester [6462]. Atlas 2000: all except [69]

Sedum album L. *White Stonecrop*

o chh 6 ↑

Sedum micranthum Touss. Bast.

Old walls in villages, dry waste ground and concrete standings; rather rare in Druce's time, but much commoner now. More frequent in towns than in villages.

NVC: U 1

Silwood Park: sometimes much commoner than *S. acre*, as on concrete paving, walls and dry waste ground. Locally dominant on concrete at the Met Tower, but severely damaged during telephone installation work 2000 (see above). The whole load of concrete fence posts for the 2km re-fencing of both sides of the Church Lane footpath were dumped on top of these plants in June 2008 and left for the duration of the work. Less abundant than *S. acre* on gravel-topped graves in the churchyard at Ashurst, on the rockery in the Japanese Garden, and by the Buckhurst Road Entrance in 1999. One plant on gravel in the Met Tower Exclusion fence on 20 June 2008.

Ascot: the commonest stonecrop on waste ground around Ascot Station. Pavements in South Ascot. Fernbank Road, Heatherwood Hospital, Coworth Park. Common on graves in Sunningdale Church and the eastern part of South Ascot churchyard.

East Berks: Three Mile Cross, Spencer's Wood Common, Sonning. Recently at Riseley, growing on old tile roofs in Swallowfield, Shinfield, Lower Earley, Barkham Manor, Limmerhill, common

throughout Reading, Sonning, South Charvil, Twyford, Remenham, Crazies Hill, Kiln Ride, The Throat, Edgebarrow Hill, College Town, Binfield, north Hanworth, Shurlock Row, Woodlands Park, Newell Green, Fifield, Bray Court, Hurley, Paley Street, Maidenhead, Furze Platt, Halfway House, Cookham. 10% (1km²). Atlas 2000: all squares

West Berks: locally frequent in the Thames Valley but much less common in the Kennet Valley. Faringdon and Buscot [29], on the ruins of the Prince of Wales pub at Challow Station [3590], Longworth and Buckland [39], Donnington [46], Kingston Bagpuize, Marcham, Dry Sandford and Abingdon [49], abundant on graves in Cold Ash churchyard [56], Streatley [58], Bradfield [67], Pangbourne [67]. Atlas 2000: all except [36], [67], [69].

Sedum dasyphyllum L. *Thick-leaved Stonecrop* ● chh 6

Old limestone walls in and about villages; “especially abundant on the coralline oolite to which it is practically restricted and in which it is widely distributed and locally common” (Druce). Rare elsewhere. Often associated with *Ceterach officinarum*.

Ascot: no records.

East Berks: the only record is from the Grotto in Frogmore, Windsor Home Park. Atlas 2000: [97]

West Berks: an entirely northern distribution, virtually confined to the Golden Ridge (north of 90). Stanford-in-the-Vale pits, Buckland, Charney Bassett and Pusey [39], Frilford, Gozzards Ford Fen, Drayton, Cothill (LAN) and Marcham [49], Appleton, Dry Sandford, Bessels Leigh and Cumnor [40], South Hinksey [50]. Recently from damp stonework by the mill race below the mill at East Hanney [4192]. Atlas 2000: [29], [39], [49], [40], [59], [50], [68]

Sedum hispanicum L. *Spanish Stonecrop* ● hp 6 †
Sedum lydium auct., non Boiss.

West Berks: on old walls in Garford [425960] and near Noah’s Ark [437961], both in 1957.

Sedum stellatum L. ● th 6 †

On walls as a garden escape.

East Berks: on the grotto in Windsor Great Park [97] pre-1897. Not there now.

West Berks: Marcham [49], Frilsham [57], (all pre-1897; no specimens).

Sedum kamtschaticum Mast. *Kamchatka Stonecrop* ● chh 6 ↑

Increasingly found as a garden escape on walls and paving in towns and villages. Rare in graveyards. Yellow-flowered. The hairless, flat, fleshy leaves are 35mm x 15mm and are toothed towards the blunt apex.

Silwood Park: commonly naturalised on the patio outside Silwood Lodge; still there in 2000 despite repeated attempts at eradication by gardeners. Gone by June 2008 when the house was being used as the Site Office during the conversion of the three Silwood Lodges to private residences, but still common in the overgrown rose bed between the drive and the lawn at Silwood Lodge on 1 October 2009.

East Berks: not in Druce or Bowen. On waste ground north of Oxford Road in West Reading [7073] in July 2002. West Whitley, by the Thames in Maidenhead [9081], Swallowfield, Kiln Ride, Woodlands Park, Warfield Park, Halfway House, Summerleaze Lakes. 1% (1km²). Atlas 2000: [77], [86], [87], [88], [96]

West Berks: a single individual on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Dominant on a single grave in Cold Ash churchyard [5071] in July 2004.

Sedum spathulifolium Hook. *Colorado Stonecrop* ● chh 6 ↑

Increasingly found as a garden escape on walls and paving in towns and villages.

East Berks: not in Druce or Bowen. East Earley, Bray. Atlas 2000: [77], [86], [87], [97]

West Berks: not in Druce or Bowen. Atlas 2000: [28], [38], [68]

¶ **Sedum** *S. acre* 'Aureum', *S. aizoon* 'Euphorbioides', *S. alboroseum* 'Mediovariegatum', *S. anacampseros*, *S.* 'Bertram Anderson', *S. cauticola*, *S. cauticola* 'Lidakense', *S. dasyphyllum*, *S. ewersii*, *S.* 'Herbstfreude', *S. kamschaticum* var. *floriferum* 'Weihenstephaner Gold', *S. kamschaticum* var. *kamschaticum* 'Variegatum', *S. lydium*, *S. middendorffianum*, *S. oreganum*, *S. pachyclados*, *S.* 'Ruby Glow', *S. sediforme*, *S. sexangulare*, *S. sieboldii* 'Mediovariegatum', *S. spathulifolium* 'Cape Blanco', *S. spathulifolium* 'Purpureum', *S. spectabile* 'Brilliant', *S. spectabile* 'Iceberg', *S. spurium* 'Schorbuser Blut', *S. spurium* 'Variegatum', *S. telephium* 'Arthur Branch', *S. telephium* subsp. *maximum* 'Atropurpureum', *S. telephium* subsp. *ruprechtii*, *S.* 'Vera Jameson'

SAXIFRAGACEAE

Astilbe japonica (C. Morren and Decne.) A. Gray *False-buck's-beard* ● hp 6

A rare escape from gardens. See *Aruncus dioicus* (Rosaceae) for identification.

Ascot: by the Outflow Stream at Heronsbrook.

East Berks: rare on waste ground in Warren Row [8180] in June 2002.

¶ **Astilbe** *A. x arendsii* 'Bressingham Beauty', *A. x arendsii* 'Fanal', *A. x arendsii* 'Snowdrift', *A.* 'Bronce Elegans', *A. chinensis* var. *pumila*, *A. chinensis* var. *taquetii* 'Superba', *A. x crispa* 'Perkeo', *A.* 'Deutschland', *A. x rosea* 'Peach Blossom', *A.* 'Sprite', *A.* 'Willie Buchanan'

Bergenia crassifolia (L.) Fritsch *Elephant-ears* ● hp 2
Saxifraga crassifolia L.

Commoner than *B. cordifolia*, but much less frequent than the hybrid (below).

Bergenia x schmidtii = **B. crassifolia** x **B. ciliata** (L.) Fritsch *Elephant-ears* ● hp 2
Saxifraga crassifolia L.

The commonest of the garden escapes; sometimes long persistent. Rarely planted on graves in churchyards. It has oval (not round) leaves and tapered (cuneate not cordate) leaf bases. The leaf margins are ciliate.

Silwood Park: a garden outcast in Cheapside, Silwood Lodge, by M-Scan.

East Berks: Spencer's Wood, Three Mile Cross, Riseley, Mill House, West Reading, Rows Farm, by the M4 [7369], Upperwood Farm, Hall Farm, The Leas, Wheatlands, Coppid Hill, Finchampstead, Warren Lodge, Limmerhill, Central Reading, West Whitley, The Mount, Earley, Bulmershe, Woodley, Winnersh, Twyford, in the churchyard at Waltham St Lawrence, The Throat, East Heath, Heath Pond, Chapel Green, Westcott, North Crowthorne, Brookers Row, Popeswood, College Town, Great Hollands, Arlington Square, Grange Farm, The Holt, Carters Hill, Old Malt House, Binfield Lodge, Shottesbrooke, Jealott's Hill, Woodlands Park, Touchen End, Little Foxley, Warren Row, Furze Platt, Maidenhead, Cookham Dean, Sheephouse Farm, Bray Court, Bray, West Dedworth, Dedworth. 11% (1km²). Atlas 2000: all except [78]

West Berks: on waste ground by a stream at Lockinge [48] in 1962. Waste ground in Faringdon [2895], Newbury [4767] and New Hinksey [5204] in 2002. Atlas 2000: [28], [29], [36], [38], [46], [49], [40], [50], [68]

Bergenia cordifolia (Haw.) Sternb. *Heart-leaved Bergenia* • hp 3

A casual garden escape. Much less commonly seen than *B. crassifolia*. Told by its more or less orbicular leaves with cordate (not cuneate) leaf bases. The petal limb is orbicular (not ovate).

East Berks: in rough ground at the Royal Military Academy at Sandhurst in April 2002. <1% (1km²). Atlas 2000: [77], [86], [96], [97]

West Berks: on the tip at Burghfield Common [66] in 1974. Planted in the churchyard at Greenham [46] in 2002. Wallingford churchyard [68] in 2004. Atlas 2000: no records.

¶ **Bergenia** *B.* 'Abendglocken', *B.* 'Abendglut', *B.* 'Baby Doll', *B.* 'Ballawley', *B.* 'Bressingham Ruby', *B.* 'Bressingham Salmon', *B.* 'Bressingham White', *B. ciliata*, *B. cordifolia* 'Purpurea', *B.* 'Silberlicht', *B.* 'Sunningdale', *B.* 'Wintermärchen'

Darmera peltata (Torr. ex Benth.) Voss ex Post and Kuntze *Indian-rhubarb* • hp 7

Saxifraga peltata Torrey ex Benth.

Peltiphyllum peltatum (Torrey ex Benth.) Engl., nom. illegit.

Not in Druce. Long-persistent garden relic in damp woodland and by streams and lakes.

East Berks: introduced by ornamental lakes; Sunninghill Park (1964), Frogmore (1967). <1% (1km²). Atlas 2000: [96], [97]

West Berks: Stanford Dingley [57] in 1961, Lockinge [48] in 1964. Atlas 2000: [46], [48], [57]

¶ **Darmera** *D. peltata*

Saxifraga x urbium D.A. Webb *London Pride* • hr 6

A very common rockery plant in gardens, also used for edging paths and borders in dry shade. Occasionally thrown out, and found on moist shady waste ground in towns and villages. Long persistent in the shady parts of abandoned gardens.

Silwood Park: a garden relic on rocks at South Lodge and Virginia Water Lodge 1970-2004.

Ascot: local and uncommon, Sunninghill Village.

East Berks: Three Mile Cross, Farley Court, Arborfield, Bearwood, Barkham, Finchampstead, West Reading, Central Reading, Earley, Bulmershe, Woodley, Sonning, Ruscombe, Wargrave, East Heath, Heath Pond, Blackwater, Crowthorne, Hanworth, The Hilt, Binfield Park, Scotlands, Burchett's Green, several sites in Maidenhead, Sheephouse Farm, Chawridge, West Dedworth, Hog Common. 9% (1km²). Atlas 2000: all except [78]

West Berks: waste ground on Silchester Common [66] in 1983. In shady places in villages throughout, as at Inkpen and Kintbury [36], Marcham [49] and Burghfield [66]. Atlas 2000: [28], [36], [38], [49], [66]

Saxifraga stolonifera Curtis *Strawberry Saxifrage*
Saxifraga sarmentosa L.f.

• hp 6

West Berks: a hothouse weed at Wyld Court [57] in 1986

Saxifraga granulata L. *Meadow Saxifrage*

hs 4

Churchyards, water meadows, chalk downs, wood margins and railway-banks, on calcareous soils, locally common especially on gravelly soil and "it is a great ornament to some of our gravelly meadows and pastures. The flowers are fragrant" (Druce). A useful indicator of unimproved grassland.

Ascot: no records.

East Berks: rare and restricted to the western parts of the Thames valley from Wargrave [7878] to Hurley [8283]. First record from Reading (**RNG**) in 1831. Remenham, Sonning meadows, near Bisham and Cookham. Formerly in a brickyard at Wellington College, and abundant about Earley and Wokingham. Maidenhead (**HULL**) in 1924. Recently at Bulmershe, Woodley, Earley church, Crazies Hill, Cock Marsh, Widbrook Common, Hurley meadows. *Flore Plena* in Sandhurst churchyard, Cock Marsh. 1% (1km²). Atlas 2000: [77], [78], [88].

West Berks: scattered in the south-west of the region (south of 85 and west of 60) and in the Thames valley. Great Coxwell [29], Hungerford and Kintbury [36], Chilton Foliat [37], Hatford, Cherbury, Charney Bassett, Longworth and Stanford-in-the-Vale churchyard nature reserve [39], in the churchyard at Enborne and at Newbury (**LAN**) [46], Otney Pasture, Frilford Heath, Abingdon cemetery and Cothill [49], Appleton, Cumnor and Wytham [40], Crookham Common, Cold Ash, Aldermaston, Brimpton and in the churchyard nature reserve at Thatcham [56], Aston Upthorpe Downs, Unhill Downs [58], Little Wittenham meadow and Sutton Courtenay [59], Kennington [50], Grazeley Court [66], Wallingford [68]. Atlas 2000: [28], [36], [37], [39], [46], [47], [48], [49], [56], [57], [58], [67]

Saxifraga hypnoides L. *Mossy Saxifrage*
Saxifraga angustifolia Haw.

• chh 5 ↑

Saxifraga platypetala Smith

A common edging plant in gardens, occasionally found as a throw-out on tips and waste ground and rarely found self-sown in paving.

Silwood Park: in the bed below the eastern wall of the Greenhouses; naturalised over an area of about 2m; 25 May 1996. Still there in 2004.

Ascot: a rare escape in Sunninghill Village and North Ascot.

East Berks: Three Mile Cross, Shinfield Court, Sonning, Finchampstead, West Reading, Central Reading, Bulmershe, Woodley, Winnersh, Wargrave, Twyford, Kiln Ride, Heath Pond, Blackwater, Westcott, Edgebarrow, Crowthorne, Brookers Row, The Holt, Binfield Park, Cox Green, Burchett's Green, Lee Lane, Furze Platt, Cookham, Cookham Dean, Bray Court, Guild House. 7% (1km²). Atlas 2000: all except [78]

West Berks: old rock garden at Jarn Mound [40] in 1982, garden outcast at Nunhide Farm [67] in 1986. Locally abundant in Ashbury [28] and New Hinksey [50] in 2002. Atlas 2000: [28], [36], [38], [40], [50], [68]

Saxifraga tridactylites L. *Rue-leaved Saxifrage*

th 4

On old walls, roofs and dry sandy or gravelly ground in full sun. Widely distributed and locally common in Druce's time, but greatly reduced by Bowen's. Occasional in limestone regions, rare or absent on acid substrates.

NVC: OV 39,42

Silwood Park: it found its own way into the raised gravel beds experiment in Ashurst Warren in 1998 and by May 2000 had spread to more than 40 of the 250 plots, sharing the gravel substrate with *Erophila*, *Arabidopsis*, *Ornithopus*, etc. Still present on c.20 plots in April 2004, but greatly reduced in abundance as a result of the concerted weeding effort.

Ascot: the source of the seed for the natural invasion of Silwood (above) is unclear, because there are no populations of the plant nearby. It is possible that the seed was in the imported gravel used to make the raised beds in 1996, and the seed lay dormant until 1998.

East Berks: uncommon, and restricted to the chalk in the western parts of the Thames valley from Wargrave [7878] to Hurley [8283]. Hurley, Home Park, Sonning, Cookham, Ruscombe, wall tops by the church at Wargrave, Hurst. Outlying stations at Bracknell, Wokingham, Bray, Arborfield, Barkham. Windsor, Wellington College. Recent additions at Rivermead in Reading and Beenham's Heath. <1% (1km²). Atlas 2000: [76], [77], [87], [88], [96], [97]

West Berks: locally frequent in the Northern Loop and in the Thames Valley north of 90, with a few outliers in Kennet valley. Uffington Castle at 261m, and on old walls in Shrivenham [28], Coleshill, Buscot and Faringdon [29], Kintbury [36], Chilton Foliat, Shefford and Lambourn [37], Sparsholt and Letcombe [38], Pusey, Shellingford, Denchworth and Longworth [39], old brick walls of Hamstead Park, Greenham Mill [46], Welford [47], Lockinge [48], Tubney, Cothill, Hanney, Drayton, Abingdon and Frilford [49], Appleton, Cumnor, Dry Sandford (pit and churchyard) and Wytham [40], AWRE Aldermaston, Wasing and Brimpton [56], Hampstead Norreys, Compton, Bucklebury and Aldworth [57], South Moreton, Streatley, and on the roofs of thatched houses near Blewbury Hill [58], Didcot and Sutton Courtenay [59], Kennington and Hinksey [50], Padworth [66], on the ruined

walls of the Roman town of Calleva Atrebatum at Silchester [6462], Southcote Manor (**RDG**) in 1914, Pangbourne and Tidmarsh [67]. Removal of the old runway on Greenham Common produced the perfect habitat for this plant; there were countless thousands in bloom on 20 April 2002 on the open, compacted gravel; still abundant in 2004. Atlas 2000: all except [69]

¶ **Saxifraga** *S.* ‘Alba’, *S.* ‘Aureopunctata’, *S. callosa*, *S. x canis-dalmatica*, *S.* ‘Cloth of Gold’, *S.* ‘Cranbourne’, *S.* ‘Esther’, *S.* ‘Flore Pleno’, *S.* ‘Gregor Mendel’, *S.* ‘Haagii’, *S.* ‘Hi-Ace’, *S.* ‘Jenkinsiae’, *S. juniperifolia*, *S.* ‘Lutea’, *S.* ‘Minor’, *S. paniculata* var. *baldensis*, *S.* ‘Penelope’, *S.* ‘Peter Pan’, *S.* ‘Pixie’, *S.* ‘Rosea’, *S.* ‘Rubrifolia’, *S.* ‘Southside Seedling’, *S. stolonifera*, *S.* ‘Sulphurea’, *S.* ‘Variegata’, *S.* ‘Wada’, *S.* ‘Whitehill’, *S.* ‘Winifred Bevington’, *S.* ‘Wisley’

¶ **Lithophragma** *L. parviflorum*

Heuchera sanguinea Engelm. *Coralbells*

• hp 4

A very common garden plant, used for edging and in the front of herbaceous borders. Occasionally self-seeding, but more commonly seen as an outcast on waste ground where garden refuse has been dumped.

Silwood Park: in Cheapside Village, and on bare ground behind the Manor House.

Ascot: very rarely self-sown. One seedling in a drain at 86a Upper Village Road on 13 May 2009, seeded from a nearby hanging-basket.

East Berks: first record from Tilehurst (**RNG**) [6874] in 1962. Arborfield Cross, Arborfield, Earley, Finchampstead, Warren Lodge, Barkham Ride, Emmbrook, West Reading, Reading, West Whitley, Bulmershe, Woodley, Woodley Green, Twyford, Ruscombe, Chapel Green, Westcott, Crowthorne, College Town, Owlsmoor, North Hanworth, Arlington Square, Grange Farm, The Holt, Haines Hill, Binfield Park, Bracknell, Touchen End, Cox Green, Harvest Hill [8879], Burchett’s Green, Dial Close, North Town, Cookham, Maidenhead, Sheephouse Farm, Foliejon Park, Fifield, Bray, West Dedworth, Clewer, Dedworth, Hog Common, Old Windsor. 10% (1km²). Atlas 2000: all except [78]

West Berks: a persistent garden escape. In a ditch at Tilehurst [67] in 1962. Waste ground in Faringdon [2895], central Newbury [4767] and Abingdon [4997] in July 2002. Atlas 2000: [29], [36], [38], [49], [50], [68]

¶ **Heuchera** *H.* ‘Bressingham hybrids’, *H.* ‘Cascade Dawn’, *H.* ‘Chocolate Ruffles’, *H. cylindrica* ‘Greenfinch’, *H.* ‘Green Ivory’, *H.* ‘Helen Dillon’, *H.* ‘Leuchtkäfer’, *H. micrantha* var. *diversifolia* ‘Palace Purple’, *H.* ‘Persian Carpet’, *H.* ‘Pewter Moon’, *H.* ‘Rachel’, *H. sanguinea* ‘Taff’s Joy’, *H.* ‘Scintillation’, *H.* ‘Stormy Seas’, *H.* ‘Strawberry Swirl’

¶ **X Heucherella** *X H. alba* ‘Bridget Bloom’, *X H. alba* ‘Rosalie’, *X H. tiarelloides*

The “Three Ts” of gardening, **Tellima**, **Tolmiea** and **Tiarella**, are told apart as follows:

Tellima has its petals fringed with long narrow lobes and has 2x as many stamens as sepals

Tolmiea has brown filiform petals and 5 stamens and 5 unequal sepals

Tiarella has many tiny white flowers (panicle not a spike), 10 stamens, alternately long and short

Tolmiea menziesii (Pursh) Torr. & A. Gray *Pick-a-back-plant*

• h 5

Tiarella menziesii Pursh

Shady old gardens and woodland near houses. Reproduced by bulbils on the leaves.

Ascot: no records.

East Berks: local and uncommon. Shady bog by Queens Mere [816651] in 1964. Recently at Heath Pond, Scotlands, St Leonard's Hill. <1% (1km²). Atlas 2000: [76], [86], [88], [97]

West Berks: very local and rare. Atlas 2000: [67].

¶ **Tolmiea** *T. menziesii*, *T. menziesii* 'Taff's Gold'

Tellima grandiflora (Pursh) Douglas ex Lindl. *Fringecups* ● h 5
Mitella grandiflora Pursh

Ascot: naturalised in Sunningdale Park. Rare in the churchyard at South Ascot. Not in Silwood Park.

East Berks: not in Druce. Introduced into plantations; Bearwood (1981 and still there in 2004), St Lawrence Church Reading (1983), Big Wood, Wokingham [8382 6803] (RNG) in 1988 and 2003. Recent additions at Farley Court, Sonning, Emmbrook, Sindlesham, Sonning, Twyford, Wargrave, East Heath, Heath Pond. 2% (1km²). Atlas 2000: [76], [77], [86], [87], [96]

West Berks: Louds Copse, Bagley [50] in 1956 (OXF), Tilehurst [67] in 1962, Buckland Park Place [39] and Greenham Common [46] in 1963. Common garden escape in Ashbury [28] in 2002, and in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [28], [36], [46], [50], [66], [67]

¶ **Tellima** *T. grandiflora* Odorata group, *T. grandiflora* Rubra group

Tiarella cordifolia L. *Foamflower* ● h 5

A ground cover plant for damp shade, but it is stoloniferous and can become invasive.

Silwood Park: on bare shady ground between the Manor house and the Reactor Block.

East Berks: a long established garden escape, spreading in damp shade by Virginia Water (RNG) 1984-2004. <1% (1km²). Atlas 2000: [76], [96]

West Berks: no records.

¶ **Tiarella** *T. cordifolia*, *T. polyphylla*, *T. wherryi*, *T. wherryi* 'Bronze Beauty'

Mitella caulescens Nutt. ex Torrey and A. Gray *Star-shaped Mitrewort* ● h 5

West Berks: reported without a specimen from Bagley Wood [50] in 1937 (det. P. Aellen).

¶ **Mitella** *M. breweri*

¶ **Rodgersia** *R. aesculifolia*, *R. pinnata*, *R. pinnata* 'Elegans', *R. pinnata* 'Superba', *R. podophylla*, *R. sambucifolia*

Chrysosplenium oppositifolium L. *Opposite-leaved Golden-saxifrage* chh 4

By streams and springs in alder woods and oak woods, and in shady ditches. Very local and absent from considerable areas of the chalky and heathy districts.

NVC: M 36; W 5,6,8

Ascot: very local and rare: on a shady streamside below Sunninghill Park [940697].

East Berks: rare and scattered south of 75. Wellington College, Coleman's Moor, Woodley Green. Wokingham, Maiden Erleigh, Queens Mere. Recently at Maiden Erleigh, Alder Moors, Asherbury Park, Heath Pond, Windsor Great Park. 1% (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: very local and all but restricted to the Kennet valley [36]-[66]. Inkpen and Forbury [36], Kitemore Copse [39], Holtwood, More Wood, Greenham Common and Newbury golf course [46], Snelsmore Common [47], Overford Farm, Wytham [40], Goldfinch Bottom, Cold Ash, Wasing Wood, Carbins Wood, Scotland and Beenham [56], Padworth Gully (LAN) and Fence Wood [57], Benyon's Enclosure, Gibbet Piece, Mortimer and Burghfield [66], Sulham Wood and Tilehurst [67]. Atlas 2000: [28], [29], [36], [39], [46], [47], [40], [56], [57], [66], [67]

Chrysosplenium alternifolium L. *Alternate-leaved Golden-saxifrage* hs 4

A local speciality of sheltered streambanks in oak and alder woods. Very local and rare in the southern part of West Berkshire, best seen on the slopes of Greenham Common. Usually growing with *C. oppositifolium* and much less common than it, but the big, Pennywort-sized, basal leaves of *C. alternifolium* are distinctive, and the edges of the inflorescence are greener (less uniformly golden coloured). The basal leaves are told from *Glechoma hederacea* by the small bristles (rather than dense hairs) on the upper leaf surface, and the indistinct veins on the underside of the leaf. The jizz of the crenate leaf margins is also distinctive (indented rather than convex).

NVC: M 36

East Berks: no records.

West Berks: in Rivar Copse on Inkpen Hill [350621] in 1955, but I can find no ground remotely wet enough to support the species at this location in 2002. Recently in alder gullies on the north-facing slopes of Greenham Common [46], Crookham Common [56] and Great Wood (north of The Round House) [5165]. The most accessible site is in Aldernbridge Gully at [491640], in streamside mud just 150m north of the A339 road which runs along the southern edge of Greenham Common. Atlas 2000: [46], [56]

PARNASSIACEAE

Parnassia palustris L. *Grass-of-Parnassus* hs 7 ↓

Marshy places and bogs. One of Berkshire's great rarities, restricted to the Ock district. Fens, especially in old peat cuttings, with *Molinia* and *Schoenus*.

NVC: M 13

East Berks: no records.

West Berks: restricted to fens on the interior of the Northern Loop. In a bog between Tubney and Oakley House in great abundance in 1833. On Abingdon racecourse in a marshy spot, rather plentiful (pre-1897). Now found in only 4 sites: Frilford Heath golf course [442986], Cothill fen [49], Barrow Farm fen [49] and near Wootton [40]. Planted on Jarn Mound [4802] in Sir Arthur Evan's British Flora Garden in 1933 (see p. 123). There were 34 flowering plants on 7 September 2008 on Frilford Heath in the fen between the Red and Green courses at [4416 9849] and 631 flowering on the same day at Parsonage Moor (Judy Webb) [460998]. Atlas 2000: [49]

ROSACEAE

Sorbaria sorbifolia (L.) A. Braun *Sorbaria* ● n 6
Spiraea sorbifolia L.

This has a dense panicle and pubescent follicles on erect stalks. A suckering species of waste ground and railway embankments.

East Berks: Atlas 2000: [76], [86], [88]

West Berks: in an old garden at Benham Park [4467] in 1986

Sorbaria tomentosa (Lindl.) Rehder *Himalayan Sorbaria* ● n 6
Schizonotus tomentosus Lindley
Sorbaria aitchisonii (Hemsley) Hemsley ex Rehder
Sorbaria tomentosa (Lindley) Rehder var. *angustifolia* (Wenzig) Rahn

The styles arise from the apex of the carpel, and the longest stamens are about the same length as the petals.

East Berks: on railway embankments and waste ground. Atlas 2000: [77], [86], [87], [88]

West Berks: Atlas 2000: [38], [49], [50]

Sorbaria kirilowii (Regel) Maxim. *Chinese Sorbaria* ● n 6
Spiraea kirilowii Regel
Sorbaria assurgens A. Vilm. & Bois
Sorbaria arborea C. Schneider

The styles arise well below the apex of the carpel, and the longest stamens are about twice the length of the petals. Suckering freely to form extensive dense thickets.

Silwood Park: forming thickets on the Science Park in 2002, following planting in 1988.

East Berks: Atlas 2000: [76], [86], [87]

West Berks: in the grounds of Longworth Manor [3999] in 2002.

¶ **Sorbaria** *S. kirilowii*, *S. kirilowii* 'Glaucua', *S. sorbifolia*, *S. tomentosa*, *S. tomentosa* var. *angustifolia*

¶ **Exochorda** *E. giraldii* var. *wilsonii*, *E. x macrantha* 'The Bride'

¶ **Heteromeles** *H. arbutifolia*

¶ **Stephanandra** *S. incisa*, *S. incisa* ‘Crispa’, *S. tanakae*

Physocarpus opulifolius (L.) Maxim. *Ninebark* • n 5

A popular garden shrub, often planted as yellow-leaved cultivars in cheap landscaping schemes. Occasionally self seeding close to the parents.

Silwood Park: seedlings are mostly green leaved, from golden-leaved parents planted nearby. In the shrubbery in front of North Block and on the Science Park. The biggest self-sown plants are in the ruined cold frames at The Greenhouses, flowering freely in May 2007.

East Berks: Maidenhead, Windsor

West Berks: Newbury

¶ **Physocarpus** *P. opulifolius*

¶ **Rhaphiolepis** *R. x delacourii* ‘Coates’ Crimson’, *R. umbellata*

¶ **Rhodotypos** *R. scandens*

Spiraea

There has been a good deal of confusion in the past about the identity of garden escapes and garden relics of *Spiraea*. Most of the old records lumped them all together under the name *S. salicifolia*. Then there was a backlash, and they all got recorded as *S. douglasii*. Now that Stace has provided a decent key, there is no excuse for not doing them properly.

The difficult ones are the taxa with long pink inflorescences (*S. douglasii*, *S. tomentosa*, *S. salicifolia*, *S. x pseudosalicifolia*, *S. rosalba*, *S. alba*, *S. x billardii* and *S. x brachybotrys*). The species with flat-topped inflorescences are relatively straightforward (*S. chamaedryfolia*, *S. x vanhouttei*, *S. canescens* and the pink-flowered *S. japonica*). The key features are petal length relative to stigma length, hairiness of the panicle branches and inflorescence axis, and the nature of the hairiness of the underside of the leaves. Nothing too difficult, just painstaking.

Spiraea salicifolia L. *Bridewort* • n 6

Mature leaves glabrous beneath when mature, margins toothed for their entire length, panicle branches pubescent, and petals bright (rather than pale) pink. Roadsides and waste places on acid soil.

Ascot: no records.

East Berks: not in Druce. It is not clear how many of the Bowen records are errors for *S. douglasii* or the hybrid. Few recent records, most of our plants being *S. x pseudosalicifolia*; Nine Mile Ride, Twyford, Wellington College, Emmbrook brickyard, Bearwood, Bracknell, Old Windsor. 1% (1km²).

West Berks: Inkpen Common [36], Hamstead Marshall [46], Bishops Green and Wasing [56], Bucklebury [57], Mortimer West End [66], Tilehurst (LAN) [67] in 1959.

Spiraea x pseudosalicifolia Silverside *Confused Bridewort*

• n 6

Spiraea x billardii auct., non Hérincq

Spiraea x eximia K. Koch, non Regel

Leaves pubescent beneath with the green surface showing through the hairs, panicles terminal only (no lateral panicles), and the panicles sub-cylindrical (rather than narrowly conical). The margins are toothed for more than half their length back from the tip. Plenty of modern records, but probably overlooked in West Berkshire.

Silwood Park: in the thicket opposite Virginia Water Lodge in the corner of Heronsbrook Meadow since before 1971. In the eastern end of Nash's Copse and by the Playground at Cheapside.

Ascot: two large, widely separated clumps on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: Swallowfield, and in a hedgerow near Touchen End [883763] in May 2002. Whitley [7270] on waste ground in July 2003. 3% (1km²).

West Berks: no records.

Spiraea douglasii Hook. *Steeple-bush*

• n 6

Spiraea fulvescens auct., non Dippel

Spiraea douglasii subsp. **douglasii**

The leaves are pale tomentose beneath when mature, so that the undersurface of the leaf is obscured by hairs, and the leaves are entire in the proximal half of the margin (i.e. toothed towards the leaf tip but un-toothed in the bottom half towards the petiole). Less common with us than *S. x pseudosalicifolia*.

Silwood Park: rare in the hedge next to the Rabbit Enclosure at Ashurst Warren.

Ascot: in rough ground at Ascot Place. Next to the public footpath by the allotments at South Ascot [928677] from 1984-2004.

East Berks: not in Druce. Plantations and roadsides on acid soils in south-east Berkshire; rare but increasing. Whiteknights Park (1965), Wellington College (1963), Wokingham (1965), Sandhurst (1963), South Ascot (1965) Trilakes [8261] (1977), north of Blackwater (1987), and recently at Riseley, Great Copse, Farley Castle, Arborfield, Reading, Whitley, Earley, Bulmershe, Twyford, Crowthorne, Hanworth, Grange Farm, Wiltshire Farm, Woodlands Park, Newell Green, Cox Green, Hillgrove Wood, and Whistely Green (2002). 6% (1km²).

West Berks: Tilehurst [6874] in 1963.

Spiraea japonica L.f. *Japanese Spiraea*

• n 6

This is the common pink flowered, flat-topped garden shrub, usually as 'Anthony Waterer'.

Silwood Park: a garden outcast in several places close to houses: Ashurst, Cheapside, Silwood Farm, Silwood Lodge, Reactor Block, Student Residences, Buckhurst Road.

East Berks: in a long defunct garden (var. *bumalda*), north of R. Blackwater [8560] in 1987 (**RNG**). By Oxford Road in West Reading [7073], Whistley Park [7873], Cookham Dean [8785] and by the R. Thames in Maidenhead [9081] in July 2002. 2% (1km²).

West Berks: on waste ground in Faringdon [2895], Kingston Bagpuize [4098] and Newbury [4767] in July 2002.

Spiraea chamaedryfolia L. *Elm-leaved Spiraea*

West Berks: at South Hinksey [50] in 1830 (**OXF**).

Spiraea x arguta Zab. *Garland Spiraea*

East Berks: extensively planted with other ornamental shrubs in landscaping on the banks of the underpass beneath the A432 at Stubbings [851816].

¶ **Spiraea** *S. 'Arguta', S. betulifolia* var. *aemiliana*, *S. japonica* 'Anthony Waterer', *S. japonica* 'Bullata', *S. japonica* 'Candle Light', *S. japonica* 'Gold Mound', *S. japonica* 'Goldflame', *S. japonica* 'Shirobana', *S. nipponica* 'Snowmound', *S. thunbergii*, *S. thunbergii* 'Mount Fuji', *S. x vanhouttei*, *S. x vanhouttei* 'Pink Ice'

Aruncus dioicus (Walker) Fernald *Buck's-beard*

• hp 6

A rare but conspicuous garden outcast. Long persistent but not self-seeding. Told from *Astilbe* (which is in the Saxifragaceae) by its 3 carpels (not 2), and its more numerous stamens (more than 10, not 10).

East Berks: Bulmershe [7573], and roadside in Warren Row [8180] in June 2002.

West Berks: Kingston Bagpuize [4098] in July 2003.

¶ **Aruncus** *A. aethusifolius*, *A. dioicus* 'Glasnevin', *A. dioicus* 'Kneiffii'

Holodiscus discolor (Pursh) Maxim. *Oceanspray*

• m 7

Spiraea discolor Pursh

In Scotland, this species is commonly naturalised on railways and waste ground, but not in Berkshire where it is a rare garden relic. The Silwood plants do not self-sow.

East Berks: in an old shrubbery at Heathlands, St Sebastian's (**RNG**) [8265] in 1987. Roadside in Warren Row [8180] in June 2002. <1% (1km²).

¶ **Holodiscus** *H. discolor*

Filipendula vulgaris Moench *Dropwort*

hs 5 ↓

Spiraea filipendula L.,

Filipendula hexapetala Gilib., nom. inval.

Dry pastures, chalk downs and railway banks in full sun. A drought tolerant plant with interesting root tubers. Elsewhere, an uncommon garden escape. The leaves are mined by *Stigmella splendidissima*.

NVC: CG 2-5

Silwood Park: very local as a garden escape: Ashurst Walled Garden bonfire site, locally abundant with *Gnaphalium uliginosum* and *Rorippa palustris* (1997-2000) but gone by 2003, presumably buried. Locally abundant in the grass path beyond the magnolias behind the Mess-room at The Greenhouses in July 2007 (but none in flower). Seeds were sown in Nash's Field but plants never appeared. Also in The Rookery and Drive Lawns, rare but long persistent. Seeds were sown in 1996 in the Oak Mead Experiment: very rare, and by June 2007 there were survivors only in the unfenced parts of Block A (plot Ic) and Block C (plot IIc). Great excitement, therefore, on 23 June 2013 when 3 flowering stems appeared on overgrown gravel at the back of the CABI Greenhouse between the Large and Small Polytunnels; they were not sown here intentionally, and came up just a metre or so from where the Pyramidal Orchid had been seen in June 2007.

Ascot: very local and rare at Ascot Place in 1999. Six plants in long grass in a derelict garden in South Ascot at Coronation Road in June 2003.

East Berks: rare and scattered on the Thames Valley chalk, absent over most of the area. Riverside meadow between Bisham Wood and Marlow, Park Place, Hurley, Quarry Wood. Recently at Sandhurst, Burchett's Green, Maidenhead, Cock Marsh. 1% (1km²). Atlas 2000: [76], [86], [88], [96]

West Berks: occasional on the chalk to the north of 75, but rare or absent to the south of this. Uffington [28], Fernham meadows [2990], Gibbet Hill [36], Lambourn [37], frequent in tall chalk grassland at Seven Barrows [3282], Sheepdown Farm [38], Buckland Warren and Cherbury Camp [39], on the chalk scarp from Whitehorse Hill, Letcombe and Lowbury Hill [58] to Wantage [38], Farnborough [48], Frilford [49], between Didcot [59] and Steventon [49], Blewbury Downs, Streatley, Ilsley Downs and Moulsoford Downs [58]. A garden escape in Faringdon [2895] in 2002. Atlas 2000: all except [46], [47], [56], [50], [66], [68], [69]

Filipendula ulmaria (L.) Maxim. *Meadowsweet*
Spiraea ulmaria L.

hs 6

Moist meadows, mires, ponds, ditches, riverbanks, lake-sides and open moist places in woods. Generally distributed, but less frequent in chalky areas and rare in the drier heathy tracts. The leaves are often dotted with pin galls of the midge *Dasyneura ulmariae* and mined by *Stigmella ulmariae* and *S. filipendulae*. The commonest aphid is *Macrosiphum cholodkovski*.

NVC: M 13,22,24,27; MG 1,4,5,9,10; OV 26; S 3-8,14,18,23,25,26,28; W 1,4-6,8,22,24

Silwood Park: very rare. Unaccountably absent from the wet meadows and lakeside. The only record is from grass near the Buckhurst Road Entrance.

Ascot: local and uncommon on Ascot Heath, Charters Road, Breakheart Farm, Frostfarm Plantation.

East Berks: a curiously patchy distribution, frequent only in the river valleys. Rare in the south-east, and uncommon to the north of 75, except by the R. Thames. Damp industrial waste ground in Bracknell. 24% (1km²). Atlas 2000: all squares

West Berks: frequent in the Pang, Kennet and Thames valleys (to the north of 85 and to the south of 75), but absent from the chalk ridge. Atlas 2000: all squares.

¶ **Filipendula** *F. rubra* 'Venusta', *F. vulgaris* 'Multiplex'

Kerria japonica (L.) DC. *Kerria*
Rubus japonicus L.

● n 4

A popular garden plant, forming long-lived thickets, and hence rather commonly thrown out. Also escapes from gardens by creeping under the fence, especially along railway lines. The double flowered cultivar 'Pleniflora' is much more often seen than the elegant, single flowered form 'Simplex'.

Silwood Park: local and rare by the gate of the footpath at Cheapside.

Ascot: locally dominant as a garden outcast on waste ground in Sunninghill (1997). Long persistent in the birch woodland on South Ascot Bog, west of the road.

East Berks: not in Druce. Plantations, rare; Whiteknights Wilderness (1965), Hurst. Now commonly planted in roadside landscaping schemes, as on the Maidenhead bypass at Stubbings. Growing underneath fences at Arborfield Garrison, West Reading, Whitley, Whistley Green, Cookham, Ryeish Green, Maidenhead and Maidenhead Court. By the railway at Sunningdale, Wokingham and Winnersh in April 2004. 9% (1km²). Atlas 2000: all squares

West Berks: Frilford golf course [49] in 1965. Waste ground in Faringdon [2895] and New Hinksey [5204] in 2002. By the railway at South Hinksey in 2004.

¶ **Kerria** *K. japonica* 'Golden Guinea', *K. japonica* 'Picta', *K. japonica* 'Pleniflora'

Rubus tricolor Focke *Chinese Bramble*
Rubus polytrichus Franchet, non Progel

● n 6

Silwood Park: very common as planted ground cover on the Science Park; 1987-2004. Not naturalised.

East Berks: waste ground at Whitley, Lower Earley, Barkham Ride, Hall Place, South Charvil, Savernake Park, Warfield Park, Forest Lodge. Atlas 2000: [76], [77], [86], [87], [88], [97]

West Berks: locally dominant on business parks in Newbury [4767]. Atlas 2000: [37], [46], [49], [56]

Rubus odoratus L. *Purple-flowered Raspberry*

● n 6

This is a purple-flowered, thicket-forming garden plant with broad, five-toothed leaves.

East Berks: at Savernake Park. Atlas 2000: [86]

West Berks: thickets by the Clock House at Coleshill Park in June 2004 [2393].

Rubus idaeus L. *Raspberry*

n 6

Woods, hedges, heaths and waste ground, in small colonies. Occasional. Host to the aphid *Aphis idaei* which curls the leaves in spring.

Silwood Park: local and uncommon. St Michael's Church, Ashurst Warren, Nash's Copse, Ashurst Path, South Lodge, Heronsbrook, Virginia Water Lodge. Greatly reduced in recent years, but its decline is not understood; formerly in tussock grassland on Rookery Slope, on North Gravel and in

wet woodland at Cascade Marsh. Still locally frequent amongst brambles by the stile in Churchyard Field in 2003. Abundant in an abandoned corner of the students' allotments in Silwood Bottom in July 2004. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Very local by London Road inside the fenced Rhododendron Plantation behind the Tennis Court in May 2006 and June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	6

Ascot: locally frequent in damp grassland in the northern triangle of Ascot racecourse. On waste ground near the gates to the gasometer at the end of Bridge Road in Sunninghill.

East Berks: uncommon, and possibly declining; Newlands Farm, Rivermead, Earley, Earley Station, Winnersh, Wargrave, Remenham, Temple Coombe, Rosehill Wood, Finchampstead, Pine Wood, Downshire, Easthampstead, Popeswood, Hut Hill, West Hanworth, Bracknell, Martins Heron, Hare Hatch, Altmore, Lillibrooke Manor, Ockwells Manor, Warfield, Winkfield, Warren Row, Ashley Hill, Burchett's Green, Dungrovehill, Maidenhead, South Ascot, Breakheart Hill, Sunninghill, Stag Meadow, Copper Horse, Windsor Great Park. 12% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames valley especially in the north-west and around Buscot and Shrivenham, occasional in the Kennet valley but scarce and scattered in the interior. Atlas 2000: all except [69]

Rubus idaeus x fruticosus

West Berks: in Hungerford Park [3567] in 1930 (det. W.C.R. Watson).

Rubus cockburnianus Hemsl. *White-stemmed Bramble*

• n 6

Rubus thibetianus auct., non Franchet

A common white-stemmed garden plant, occasionally found as an outcast on waste ground where it can be long-persistent.

Silwood Park: long-persistent in the shrubbery on the bank below Immunology near The Reactor. Planted on the Science Park, but not naturalised.

East Berks: Reading, Maidenhead, Windsor.

Rubus fruticosus agg. *Brambles*

n 5

The small number of people who are expert at naming brambles are called "batologists". Several eminent batologists have worked on the brambles of Berkshire. Many of them were based in Oxford, so it is not surprising that some of the best worked areas are in the Northern Loop (e.g. Boar's Hill [4802] home of the rare *R. sulcatus*). Druce's brambles were named by Dr Focke of Bremen and by his friend the Rev W.M. Rogers. They were revised in Bowen's time by B.A. Miles. The modern names are due to the work of E.S. Eedes and A. Newton in their monumental *Brambles of the British Isles* (1988) following on from W.C.R. Watson's *Handbook of the Rubi of Great Britain and Ireland* (1958). The problem with bramble taxonomy is that the plants are apomictic; that is to say, they produce seeds without sex. Each seed carries a carbon copy of the genotype of its mother. This means that when any non-lethal mutants arise, they can persist, often in a geographically very limited area,

for a long time. In principle, therefore, each genetically distinct bramble clone might aspire, one day, to have its own name. At present, there are about 400 named taxa in the British Isles. The leaves are often mined by *Stigmella aurella* which makes a silvery, serpentine mine, by *S. auromarginella*, and *Ectoedemia* (2 spp); the conspicuous blotch-mine is made by the sawfly *Metallus pumillus*. The conspicuously twisted stem galls are made by the gall wasp *Diastrophus rubi*. The commonest dark green aphid is *Aphis ruborum*.

Silwood Park: as an aggregate, one of the commonest Silwood plants (joint sixth most frequent in small quadrats; only *Holcus mollis*, *H. lanatus*, *Agrostis capillaris*, *Stellaria graminea* and *Senecio jacobaea* are more frequent.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
24	43	63	68	95

No critical work has been carried out on the brambles of Silwood Park, but there are clearly dozens of different genotypes differing in leaflet number, shape, sepal reflexing, degree of glandular hairiness, spine morphology, density, and so on. Abundant and ubiquitous in bramble thickets, wet and dry woodland, scrub, grassland, waste ground and around buildings. Regenerating freely in sun (Nash's Slope) and in shade (Merten's Acres, Farm Wood) once rabbit fences are erected, and completely dominant (and 1.5m deep) within 4 years or so inside such fences.

To do brambles properly you really need Edees and Newton's book *Brambles of the British Isles*. Then you need to take small steps. My advice is to start by getting your eye in for the 3 Sections.

The nested keys to Section (here) and Subsection (below) may help locate the plant:

1. Leaflets not imbricate (separated), basal leaflets stalked, stipules filiform A. *Rubus*
1. Leaflets imbricate (overlapping), basal leaflets sessile, stipules not filiform 2
2. Leaflets 5, fruit not pruinose B. *Coryfolii*
2. Leaflets 3, fruit pruinose C. *Caesii*

Then, when you have cracked the identification of the Sections, move on to the keys to the Subsections. Only when you can tell a *Rubus* from a *Hiemales* should you graduate to attempting to separate the Series within *Hiemales*. This is as far as most people would want to go in a lifetime. If you want to be a proper batologist, however, you will use the keys to the species within the different Series of *Hiemales*. You might find it easier to compare the detailed descriptions of the Berkshire representatives that are listed here. Remember, beginners tend to find the widespread, abundant taxa (except, of course, when the collection is being carried out for the purpose of testing Murphy's Law, when they immediately discover a bramble new to science).

Where no specific locations are given in the species accounts, there is an unlocalized v.c.22 record in Edees and Newton (1988), or in the BSBI *Vice County Census Catalogue*.

Section A. *Rubus*

Key to subsections within A. *Rubus*

1. Stems erect and not rooting at the tips, suckers often produced from the root, leaves deciduous in winter *Rubus*

1. Stems rooting at the tips in autumn, suckers not produced from the root,
leaves persistent in winter *Hiemales*

Subsection *Rubus*

Rubus bertramii G. Braun n 6
Rubus opacus Bertram, non Focke

Damp woods and heath margins.

West Berks: Boars Hill [5002] in 1895.

Rubus divaricatus P.J. Mueller n 6

Heaths and peaty moors.

Rubus fissus Lindl. n 6

Rubus fastigiatus sensu Lindley, non Weihe and Nees

Rubus rogersii E.F. Linton

Heaths, moors and peaty woods.

West Berks: Boars Hill [4802], Bagley Wood [5002] Greenham Common [4864] (**OXF**), Silchester [6262].

Rubus nessensis Hall n 6

Oak and birch woods, an indicator of ancient woodland.

East Berks: Ambarrow [8262] (**OXF**).

Rubus plicatus Weihe and Nees

Dry sandy soils; one of the commonest heathland brambles.

East Berks: Long Moor [7865], Sandhurst [8361] in 1896 (**OXF**), Broadmoor Bottom [8562] (**Cantab**).

West Berks: Cothill [4699].

Rubus scissus W.C.R. Watson n 6

Birch woods and heaths.

West Berks: Bagley Wood [5002] in 1918.

Rubus sulcatus Vest n 6

Damp woods and heath margins.

West Berks: Boars Hill [4802] (OXF).

Subsection *Hiemales*

Key to Series within Subsection *Hiemales*

- | | |
|--|------------------------|
| 1. Stalked glands absent from the primocane (or rare and inconspicuous) | 2 |
| 1. Stalked glands present on the primocane | 4 |
| 2. Leaflets glabrous or hairy beneath but not felted | 1. <i>Sylvatici</i> |
| 2. Leaflets felted beneath | 3 |
| 3. Felt greyish white beneath, a few stalked glands may be present | 2. <i>Rhamnifolii</i> |
| 3. Chalky white felt beneath, no glandular hairs | 4. <i>Discolores</i> |
| 4. Stalked glands few, stamens shorter than styles | 3. <i>Sprengeliana</i> |
| 4. Stalked glands many, stamens equal to or shorter than styles | 5 |
| 5. Prickles confined to the angles of the stems, not grading into pricklets | 6 |
| 5. Prickles all around the stem and grading into pricklets | 9 |
| 6. Stems with hairs more conspicuous than the stalked glands | 5. <i>Vestiti</i> |
| 6. Hairs, if present, less conspicuous than the stalked glands | 7 |
| 7. Terminal leaflet broad, obovate, with a short cuspidate apex and serrulate margin | 6. <i>Mucronati</i> |
| 7. Not like this | 8 |
| 8. Stems rough with short subequal stalked glands and acicles | 9. <i>Radulae</i> |
| 8. Stalked glands and acicles unequal in length | 7. <i>Micantes</i> |
| 9. Prickles strong, pricklets more numerous than glands | 10. <i>Hytrices</i> |
| 9. Prickles and stalked glands present in very variable quantity on same bush | 8. <i>Anisacanthi</i> |

Series 1. Sylvatici

Rubus albionis W.C.R. Watson n 6
 Rubus schlechtendalii Weihe ex Link var. anglicus Sudre

Thickets on the edge of heathland.

West Berks: Mortimer Common [6564] in 1894 (LIV), behind the Post Office at Boars Hill [4802] in 1961 and 1979 (Cantab), Greenham [4765] in 1931.

Rubus macrophyllus Weihe and Nees var. boulayi Sudre n 6

Hedges and wood margins.

East Berks: Sandhurst [8361].

West Berks: Brimpton [5664], Silchester [6262] (OXF).

Rubus calvatus Lees ex A. Bloxam n 6

Margins of heaths and woodland.

East Berks: Sandhurst [8361] in 1898.

Rubus confertiflorus W.C.R. Watson n 6

Heaths and birch woods.

Rubus gratus Focke n 6

Heaths.

East Berks: Finchampstead [4505] (OXF).

Rubus laciniatus Willd.

A common garden escape, known at once by its dissected leaflets (lacinate).

Ascot: long-persistent in the eastern verge of Swinley Road, opposite Englemere, 1980-2004. Woodland Ride in South Ascot.

East Berks: Tilehurst [6874] in 1962, Wellington College [8363], Owlsmoor [8562], Englemere Pond [9068]. Recently at Woodley, Simons Wood, North Crowthorne, Wishmoor Bottom, Harvest Hill, West Maidenhead, Maidenhead, Windsor Great Park. In open ground at Lower Star Post surrounded by Pine forest. Atlas 2000: [77], [86], [87], [88], [96], [97]

West Berks: commonly grown in allotments (as at Hungerford and Newbury), but rarely recorded as an escape. Atlas 2000: [38]

Rubus lentiginosus Lees n 6

Margins of heaths and woods.

Rubus lindleianus Lees

Frequent in hedges on acid soils, conspicuous with its masses of white flowers in late summer. One of the most frequent brambles. Shining stems with numerous pale prickles, white petals and reflexed sepals and small fruits.

Ascot: the common hedgerow bramble.

West Berks: Mortimer [6764] in 1894.

Rubus macrophyllus Weihe and Nees n 6

Woodland, thickets and the margins of heaths. The stem is thinly hairy and the prickles are short and the large leaves are green on both sides.

Rubus platyacanthus P.J. Müller and Lefèvre or Lefèvre n 7

Margins of heaths and woodland edge. The leaves are digitate and the petals are white.

Rubus poliodes W.C.R. Watson

Margins of heaths and woodland edge.

East Berks: Earley Heath [7472] (**OXF**).

West Berks: Boars Hill [4802].

Rubus pyramidalis Kaltenb.

n 7

Heaths and birch woods.

West Berks: "golf course half a mile east of Tubney near Frilford" [4398] (**Cantab**).

Rubus sciocharis (Sudre) W.C.R. Watson

Wood borders and hedge-banks. The stems are green and thinly hairy; told from *R. gratus* by the cordate terminal leaflets, short prickles and white petals.

Rubus silvaticus Weihe and Nees

n 7

Woodland and wood margins. The rachis is markedly flexuose and the anthers are hairy.

West Berks: Ufton Wood [6170], Mortimer [6764].

Series 2. Rhamnifolii

Rubus amplificatus Lees

n 7

Hedgerows and locally abundant on heaths.

East Berks: Bearwood [7768], Ambarrow [8262] (**OXF**).

West Berks: Bagley Wood [5002].

Rubus cardiophyllus Lef. and P.J. Muell.

n 7

Frequent on margins of woodlands and heaths.

Silwood Park: dominant in the rabbit exclosures on Pound Hill.

East Berks: Bracknell [8769] in 1931.

West Berks: Hurst Hill [4704].

Rubus cissburiensis W.C. Barton and Riddelsd.

n 7

Locally very common in hedge-banks, heaths and wood borders, especially in the neighbourhood of London.

Rubus milfordensis Edees n 7

Rubus villicaulis sensu Rogers, non Köhler ex Weihe and Nees

Rubus broensis auct., non W.C.R. Watson

Rubus holerythros sensu W.C.R. Watson, non Focke

Margins of heaths and woodland edge.

Rubus nemoralis P.J. Muell. n 7

Rubus selmeri Lindeb.

Frequent on acid soils; heaths and birch woods. This is the common heathland bramble.

West Berks: Snelsmore Common [4671] 1933 (OXF).

Rubus polyanthemus Lindeb. n 7

Rubus pulcherrimus Neuman, non Hook.

Hedgerows. After *R. ulmifolius* this is the second commonest of the brambles. The prickles are subulate with their red bases often contrasting with the duller coloured stem. The terminal leaflet is often divided, so that 6-foliolate or 7-foliolate leaves occur on most bushes. The broad petals are bright pink.

East Berks: Bagshot [8763], Sunningdale [9567], Caesars Camp [8665].

Boars Hill [4802], Greenham [4765].

Rubus rhombifolius Weihe ex Boenn. n 7

Rubus incurvatus Bab. var. *subcarpinifolius* (Rogers) Riddelsd.

Margins of heaths and woods.

West Berks: Boars Hill [4802] in 1925, Brimpton [5664] in 1920, Shalbourne [3163] Bucklebury [5570] (OXF).

Rubus rubritinctus W.C.R. Watson n 7

Rubus cryptadenes Sudre, non Dumort.

Margins of heaths and woods.

West Berks: Tilehurst [6874] in 1892 (OXF).

Rubus subinermoides Druce n 7

Rubus pubescens Weihe, non Raf. var. *subinermis* Rogers

Woodland.

East Berks: Ambarrow [8262] (OXF).

Series 3. Sprengleiani

Rubus sprengelii Weihe n 7

Heaths.

East Berks: Wokingham Road, Crowthorne [8463] (**Cantab**).

Series 4. Discolores

Rubus anglocandicans A. Newton n 7
 Rubus falcatus auct., non Kaltenb.

Heaths.

West Berks: Frilford Heath [4497] in 1895 (**LIV** and **Cantab**).

Rubus armeniacus Focke • n 6
 Rubus procerus auct. brit., non P.J. Müller ex Boulay

This is the commonest large bramble on waste land in towns. Railway embankments, ditches, rubbish tips and hedges. The fruit is perhaps the tastiest of all the brambles. Known by its leaves which are dark green above but chalky white-felted beneath, with large (> 10cm) terminal leaflets. It has been cultivated as Himalayan Giant for more than 100 years, but there is no good evidence that the plant originates from the Himalaya. It is close to a German plant called 'Theodore Reimers' which Edees and Newton speculate was exported to the United States, where it was widely propagated and given the name Himalayan Giant for no particularly good reason, then exported back to European nurseries under this name. Much planted on allotments during the 1939-45 World War, and escaping frequently from them, via birds and urchins, onto waste ground nearby.

Silwood Park: a massive plant dominates the periphery of the Water Tank.

East Berks: common in all the towns, on waste ground and near allotments. Swallowfield, Reading, Windsor, Maidenhead, Binfield, Bracknell in 2002. Local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008.

West Berks: Hungerford [3368] in 1891, Frilford [4497] in 1963. Newbury [46] in 1999. Drayton [4694]. On abandoned allotments at Botley [40] and Grandpont [50] in 2002.

Rubus armipotens W.C. Barton ex A. Newton n 7
 Rubus pseudobifrons sensu W.C.R. Watson, non Sudre ex Bouvet

Margins of heaths and woodland.

West Berks: Aldworth [5579] in 1890, Boars Hill [4802] and Hurst Hill [4704] in 1965.

Rubus hylophilus Ripart ex Genev. n 7
 Rubus brittonii W.C. Barton and Riddelsd.

Margins of heaths and woodland.

Rubus ulmifolius Schott

n 8

Rubus inermis sensu A. Beek et auct., non Pourret

Grows in full sun; this is the commonest bramble of open grassland, waste ground and hedgerows. It even grows on clay and chalk. The plant has red stems and the leaves are white-felted beneath. The terminal leaf lobe is smaller (less than 10cm) than in *R. armeniacus*. Very late-flowering.

This is an unusual bramble in that it is not apomictic; it produces seeds by normal sexual reproduction involving reduction division (meiosis) and fertilisation. This means that unlike most apomictic brambles, the parents and offspring are not identical, and so the species is actually rather variable (there are 20 named subspecies and 92 named varieties). However, because of the breeding system, these represent diploid recombinations and are hence without any taxonomic justification.

Silwood Park: Silwood Bottom growing amongst the *Rosa rugosa* thicket, on sunny waste ground at Tractor Sheds, and growing through the steel mesh fence at the Reactor. This is the dominant bramble inside the rabbit enclosures in Nash's Field and Pound Hill. The relationship between this plant and the rabbits is interesting. The plant is highly palatable when small (despite the prickles) and so rabbit grazing prevents the invasion of grassland by brambles. However, once a bramble thicket is formed, the rabbits use it as harbourage and shelter. So on the one hand the rabbits destroy it, but on the other hand they use it.

East Berks: records from [7065], [6870], [8570] and [9080].

West Berks: frequent in hedges and scrub (but not shade tolerant) on calcareous soils in North Berkshire; rare elsewhere.

Rubus ulmifolius x vestitus

West Berks: Bagley Wood [5002], in 1929, Hen Wood [4803], Boars Hill [4802], Tilehurst [6874], Hurst Hill [4704].

Rubus winteri P.J. Müller ex Focke

n 7

Hedge-banks and thickets. Well spaced prickles are long and strong, and the panicle is lax with showy pink flowers.

Series 5. Vestiti

Rubus criniger (E.F. Linton) W.M. Rogers

n 7

Rubus gelertii Friderichsen var. *criniger* E.F. Linton

Hedge-banks and wood borders.

West Berks: Wytham [4708] in Bean Wood in 1950 (**Cantab**).

Rubus leucostachys Schleich. ex Sm.

n 7

Woods and heaths. The petals filaments and styles are all bright pink.

West Berks: Boars Hill [4802] in 1933 (**OXF**).

Rubus longus (W.M. Rogers and Ley) A. Newton n 7
Rubus lasiocladus Focke var. *longus* Rogers and Ley

Wood borders, hedge-banks are the margins of heaths.

Rubus surrejanus W.C. Barton and Ridd. n 7
Rubus hirtior W.C.R. Watson

Hedge-banks and woodland borders. Often introduced with forestry operations.

Rubus vestitus Weihe n 7

Common, often abundant in woodlands on calcareous soils. This is one of our most frequent woodland brambles. The dull purple stem is densely hairy and the prickles are long, straight and slender. The leaves are hairy on both surfaces (softly and densely so beneath) and the terminal leaflet is almost round.

West Berks: frequent in north and west Berkshire; Wytham [4708] in 1946 (**OXF**).

Series 6. Mucronati

Rubus egregius Focke n 7

Heaths and birch woods.

West Berks: Boars Hill [4802] in 1933 and Frilford Heath [4497] in 1964 (**Cantab**).

Rubus mucronatiformis (Sudre) W.C.R. Watson n 7
Rubus hypomalacus Focke subsp. *mucronatiformis* Sudre

Woods and hedge-banks.

West Berks: frequent on acid soils; Boars Hill [4802] in 1934.

Series 7. Micantes

Rubus decussatus W.C. Barton ex Newton n 7

Margins of woods and heaths.

Rubus glareosus W.M. Rogers n 7

Woods.

Rubus leightonii Lees ex F.M. Leight. n 7
Rubus radula Weihe ex Boenn. var. *anglicanus* Rogers

Margins of heaths and woods.

West Berks: Hermitage [5173] (**OXF**).

Rubus moylei W.C. Barton and Ridd. n 7

Woods.

West Berks: Mortimer Common [6564] in 1894 (**LIV**).

Rubus raduloides (W.M. Rogers) Sudre n 7

Rubus anglosaxonicus Gelert var. *raduloides* Rogers

Woods.

West Berks: Boars Hill [4802] (**OXF**) and in 1965, Greenham [4765] (**OXF**), Hen Wood [4803].

Rubus trichodes W.C.R. Watson n 7

Rubus foliosus sensu W.C.R. Watson, non Weihe

Woods and wood margins.

West Berks: frequent; Hungerford [3368] in 1891 and Bagley Wood [5002] in 1932 (**OXF**).

Series 8. Anisacanthi

Rubus adamsii Sudre n 7

Hedgerows.

West Berks: Mortimer Common [6564] in 1883 (**LIV**).

Rubus ahenifolius W.C.R. Watson n 7

Heaths.

West Berks: Silchester Common [6262] in 1990, D.E. Allen.

Rubus cinerosus W.M. Rogers n 7

Common and widespread on the margins of heaths and woods. The stems are rough with numerous short pricklets and fewer stalked glands, and the strong prickles are distinct from the pricklets.

West Berks: Frilford [4497] in 1891, Silchester [6262], Tilehurst [6874], Mortimer Common [6564] (**OXF**).

Rubus infestus Weihe ex Boenn. n 7

Rubus taeniarum Lindeb.

Woods and the margins of heaths.

East Berks: Bagshot [8763], Blackwater [8559] (**OXF**).

West Berks: Boars Hill [4802] in 1895.

Rubus leyanus W.M. Rogers n 7

Woods, hedge-banks and heathland margins.

Series 9. Radulae

Rubus echinatoides (W.M. Rogers) Dallman n 7

Rubus radula Weihe ex Boenn. var. *echinatoides* Rogers

Margins of heaths and woods.

West Berks: Bagley Wood [5002] in 1894, Greenham [4765] in 1895 and 1951.

Rubus echinatus Lindl. n 7

Rubus discerptus P.J. Müller

Heaths and birch woods.

East Berks: Finchampstead [7963] (**OXF**).

West Berks: frequent; Ilsley [4981] (**OXF**), Frilford [4497] (**Cantab**).

Rubus euryanthemus W.C.R. Watson n 7

Rubus pallidus Weihe var. *leptopetalus* Friderichsen ex Rogers

Alder woods and oak-birch woods.

West Berks: Burnt Hill [5674].

Rubus flexuosus P.J. Müller and Lef. n 7

Woodlands.

Rubus insectifolius Lef. & P.J. Müll. n 7

Rubus nuticeps W.C. Barton and Riddelsd.

Heaths, hedge-banks and wood borders.

West Berks: Hen Wood [4803], Didcot [5190] (**OXF**).

Rubus largificus W.C.R. Watson n 7

Wood borders, heaths and hedge-banks.

Rubus longithyriger Lees ex Focke n 7

Damp woods and shady hedge-banks. It has low-arching purple stems with few hairs but many short stalked glands.

Rubus radula Weihe ex Boenn. n 7

Woods, heaths and hedgerows.

West Berks: frequent in north and west Berkshire: Catmore [4580] in 1887.

Rubus rudis Weihe n 7

Woods, heaths and hedge-banks.

Rubus rufescens Lef. & P.J. Müll. n 7

Rubus rosaceus Weihe and Nees var. *infecundus* Rogers

Frequent; forming thickets in woods on less acid soils.

Series 10. Hystrices

Rubus atrebatum A. Newton n 7

Rubus cognatus N.E. Br., pro parte

Rubus viridis sensu Rogers, non C. Presl ex Ortm.

Woods, heaths and hedge-banks. Named after the ancient Berkshire tribe (see p. 215).

East Berks: Sandhurst [8361] (**OXF**), Crowthorne [8463].

West Berks: occasional in [59], [68].

Rubus bercheriensis (Druce ex W.M. Rogers) W.M. Rogers n 7

Rubus rosaceus Weihe and Nees var. *bercheriensis* Druce ex Rogers

Woods margins, heaths and hedges.

West Berks: occasional in [59], [67], [68].

Rubus dasyphyllus (W.M. Rogers) E.S. Marshall n 7

Rubus koehleri Weihe and Nees subsp. *dasyphyllus* Rogers

Widespread and abundant in many habitats including woods, heaths and hedges on peaty acid soils. this is the commonest bramble in places where *R. ulmifolius* does not grow. The stems are hairy, the leaflets are glabrous above but softly hairy beneath, and the petals are pink.

Silwood Park: the common hairy-stemmed bramble of partial shade, as on the edge of Rookery copse and amongst the birch trees on Reactor Bank.

East Berks: common in woods throughout.

West Berks: Greenham [4765], Wash Common [4564], Frilford [4497], Wytham [4708].

Rubus infestior Eedes n 7

Rubus infestus sensu W.C.R. Watson, non Weihe ex Boenn.

Dry woods, hedges and heaths.

Unlocalized. No recent records.

Rubus marshallii Focke and W.M. Rogers n 7

Woodland borders and heaths. Widespread.

Silwood Park: on waste ground at the Header House in full sun.

East Berks: Finchampstead [7963], Wellington College [8363], Crowthorne [8463] (**OXF**).

West Berks: Boars Hill [4802].

Rubus phaeocarpus W.C.R. Watson n 7

Widespread in heaths and wood borders.

East Berks: Sandhurst [8361], Crowthorne [8463].

West Berks: Greenham [4765], Tilehurst [6874], Mortimer [6564].

Rubus watsonii W.H. Mills n 7

Woods, heaths and hedge-banks.

Section B. Corylifolii

Rubus conjugens (Bab.) Warren n 7

Rubus corylifolius Smith var. *conjugens* Bab.

Rubus purpureicaulis W.C.R. Watson

Rubus ooliticus W.C.R. Watson

Hedges; widespread.

West Berks: Buckland Warren [3495], Wootton [4701] in 1932 (**OXF**).

Rubus pruinosis Arrh. n 7

Rubus sublustris Lees

Woods, heath margins and hedge-banks. Widespread and locally frequent.

West Berks: Boars Hill [5002] in 1932, Frilford and Hurst Hill (**OXF**).

Rubus tuberculatus Bab. n 7

Rubus dumetorum Weihe ex Boenn. var. *diversifolius* J.B.L. Warren

Rubus myriacanthus sensu W.C.R. Watson, non Focke

Hedges, railway embankments and waste ground in towns and villages. Early flowering.

West Berks: Radley [5398] (**OXF**).

Rubus warrenii Sudre n 7

Hedge-banks and woods. An endemic, at its southern limit in Berkshire.

Section C. Caesii

Rubus caesius L. *Dewberry* n 5

Hedges, ditches, stream-sides, usually in lowlands on clayey soil; common and generally distributed. Dry and damp woods, hedges and heaths; locally frequent. Fruit composed of just a few loosely-packed drupes each with a conspicuous bloom on the surface; leaflets only 3.

Ascot: no records, presumably because the sandy soils are too dry and too acid.

East Berks: Atlas 2000: all except [96]

West Berks: Atlas 2000: all except [46], [68], [69]

¶ **Rubus** *R. 'Benenden', R. 'Betty Ashburner', R. biflorus, R. cockburnianus, R. fruticosus 'Loch Ness', R. idaeus 'Autumn Bliss', R. idaeus 'Glen Moy', R. idaeus 'Malling Jewel', R. pentalobus, R. phoenicolasius, R. rosifolius 'Coronarius', R. spectabilis 'Olympic Double', R. thibetanus, R. tricolor*

Potentilla fruticosa L. *Shrubby Cinquefoil* • n 6

A common garden plant of shrubberies and borders, much used in municipal landscaping schemes; usually with yellow flowers but occasionally with white or other colours. Seldom self-seeding with us, but sometimes found as a garden outcast.

Silwood Park: locally frequent as self-sown, trampling-dwarfed plants in gaps between the brick pavements of the Science Park car park adjacent to Garden Wood Bank in July 2004.

Ascot: no other records.

East Berks: on waste ground in Whistley Park [7873], Binfield [8370] and Maidenhead [9081] in 2002.

West Berks: Faringdon [2995] in 1998 and [2895] in 2002, Newbury [4767].

Potentilla palustris (L.) Scop. *Marsh Cinquefoil* hel 5 ↓
Comarum palustre L.

A local rarity of boggy places. This is an abundant plant in northern and western Britain, but most of Berkshire is far too dry for it. Habitat destruction through drainage was the cause of its decline. NVC: M 22,27; S 2-4,8,10-12,25; W 1,4

East Berks: local and very rare in Heath Pool (OXF) near Wellington College in 1890. Considered extinct here by Bowen, but it survives in 2000 in a shady bog at Queens Mere [818649].

West Berks: at Kintbury [36] in 1871 (extinct).

Potentilla anserina L. *Silverweed* hr 6

Farmyards, waysides, waste ground in towns, commons, damp woodland rides, margins of ponds, clayey cornfields and in depressions in the chalk downs. Frequent on calcareous soils, occasional elsewhere. Indicative of grazing by geese (hence the Latin specific name), and dominant in goose-grazed farm yards. Particularly common in woodland clearings around Pheasant feeders. The leaves are mined by *Stigmella splendidissima* and attacked by the aphid *Pentatrachopus potentillae*.
NVC: M 22,24,27; MG 6,9,10,13; OV 4,9,21,26,28-32; S 19,23,26

Silwood Park: unaccountably rare. Very local on the bank opposite the Nuclear Reactor, and in the damp lawn by the goods entrance. It has gone from the lawn by 2000, replaced by *Ranunculus repens*, *Ajuga reptans* and *Pilosella officinarum*. Silverweed still persists nearby at the edge of the muddy track down to the Engineering Store.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	1

East Berks: widespread, but uncommon over wide areas. 27% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Potentilla rupestris L. *Rock Cinquefoil* ● hr 6

An uncommon, white-flowered rock-garden plant, seldom seen outside gardens.

Ascot: one plant in a crack in the pavement outside 46 Upper Village Road in Sunninghill on 15 May 2006, where the plant has grown in the front garden for many years.

Potentilla argentea L. *Hoary Cinquefoil* hs 6

A local speciality of short, heathy grass swards on slopes and banks on warm free-draining soils with *Ulex*, *Festuca*, etc.; absent from calcareous soils. It colonises new sites poorly, but is long-persistent in established sites. Distinguished from other cinquefoils by its narrow, parallel-sided leaflets, white tomentose beneath, and from *P. inclinata* by its smaller petals (4-5mm not 5-7mm).

NVC: U 1

Ascot: Kingsride in 1965, no recent records.

East Berks: roadsides and hedge-banks on sandy soil in sunny places; very local and rather rare. Near Lucas Hospital, Wokingham, Bulmarsh Park, Earley, old brickfield in Wellington College grounds, Loddon Bridge (RNG), Bray Wick, Maidenhead, plentiful in a gravelly lane between Coleman's Moor and Twyford (all pre-1897). Wellington College (RNG) in 1915, Finchampstead (RNG) in 1918. Formerly associated with other rarities like *Dianthus armeria*, *Petroselinum segetum*, *Torilis nodosa* and *Arabis glabra*. Wellington College (1960), Woodley (1962). Recently from Brook Farm, Winkfield [9071]. <1% (1km²). Atlas 2000: [77], [86], [97]

West Berks: local and rare centred on Frilford Heath golf course [4496] in the north-east and on Yattendon in the south-east; absent elsewhere. Frilford pit [448986] in 1988, Cothill [463000] in 1972, Tubney meadow [442991] in 1998, a ride on the southern end of Tubney Wood [446992] in 2005, Frilford Heath North Field [447981] in 2001, specially prepared bare ground on Frilford Heath Golf Course practice ground [4498] in 2003 and 2005, Drayton [4692], Wasing pits [5863] in 1988, dozens of plants on gravel near Building C24 at AWRE Aldermaston [5963] in 2003, Yattendon [57],

path-side near Ufton [617677] in 2002, Padworth Bridge Mill [66], Theale pits (RNG) [67] in 1953. Atlas 2000: [49], [40], [56], [57], [66], [67]

Potentilla recta L. *Sulphur Cinquefoil*

• hs 6

Roadsides, banks and waste ground on dry, acid soil. Very local.

Silwood Park: established on 3 separate occasions over the last 20 years. On Guinness's Hill, in short grassland under a broom bush, next to a young oak, just off the path where it enters Nash's Field; 6 July 1981, 10 August 1982 and 18 July 1983. Not seen since, the site was overgrown by 1989; the oak tree is now large and casts a dense shade. Pound Hill Field, one large plant in cultivated ground inside the fenced part of Block G of the 1992-cultivated PROSAMO experiments. In full flower on 25 June 1993. Big flowers (3cm) with 5 petals, and palmate leaves with green under-sides. There were 3 plants on 21 July 1997 and 1 plant on 6 July 1999. Water Meadow, 6 good plants in tall *Arrhenatherum* grassland below Cheapside on 9 July 1999.

East Berks: not in Druce. Still uncommon, but now widely distributed. Reading (1918), Woodley (OXF) in 1977. Recently at Shurlock Row and Warfield House. Atlas 2000: [77], [87], [96]

West Berks: Mortimer Common [66] in 1902 (OXF), Boars Hill [40] in 1919 (OXF), Ranikhet Camp [67] in 1958, Frilford pit [448986] from 1963-88, roadside at Kingston Bagpuize [49] in 1964, near Greenham [501653] from 1971-88, Didcot [5190] from 1977-80 and Hogmoor Copse [6374] in 1985. On freshly disturbed gravel on the northern edge of Greenham Common [502653] in August 2005. Atlas 2000: [39], [46], [49], [56], [57], [58], [67]

Potentilla intermedia L. *Russian Cinquefoil*

• hs 6 †

A rare casual, probably extinct.

East Berks: Wellington College Station (RNG) [86] in 1916.

West Berks: Didcot Station (OXF) [59] in 1896, Cothill [49] in 1908. Last seen by R. Palmer 1993-95 when there were several clumps by the railway entrance to the Great Western Centre at Didcot Station [5290]. The site has now been destroyed by tidying up.

Potentilla norvegica L. *Ternate-leaved Cinquefoil*

• th 6 †

A casual of waste places, occasionally naturalised for a while on woodland margins and on hedge-banks. Known from the much commoner *P. recta* by its smaller petals (< 5mm) which are shorter, or no longer than the sepals.

East Berks: Twyford Station (1890) and between Sandhurst and the R. Blackwater (OXF) in 1895. In the old nursery at Sutton's seeds in Reading (1979).

West Berks: Didcot (OXF) [59] in 1918 and Hurdle Shaw [57] in 1973.

Potentilla erecta (L.) Räschel *Tormentil*

hs 6

Tormentilla erecta L.

Potentilla erecta subsp. **erecta**

Acid grasslands, heaths, dry pastures, hedge-banks and dry woodland rides; locally common and widely distributed, but absent from calcareous soils (as *P. silvestris*). The leaves are mined by *Stigmella serella*. One of Britain's commonest wildflowers, but nothing like as abundant in Berkshire as it is in the north and the west of Britain.

NVC: CG 2; H 2,3; M 13,16,21,22,24; MG 5,9; OV 27; U 1,2,20; W 4,16,23,25

Silwood Park: local and uncommon in damp grassland in Rush Meadow, Nash's Field, Rookery Slope, Ashurst Path and short grass near Silwood Bottom, William Penney, The Elms, and the wet lawn in the Japanese Garden. One of the few flowers growing below bracken. In Nash's Field, the plant is common only in the unfenced, unlimed part of Block N (to 2006). In short acid grassland on Rookery Slope on 27 July 2011 in Block A of the NutNet Experiment.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	7

Ascot: on the heathy parts of Ascot Racecourse, South Ascot, around Sole's Pond east of Ascot Station, and in the drier parts of Sunningwell Bog. Frequent at the edges of the Marist Convent pond at Frognall [941682] in September 2005.

East Berks: common in heathy rides through pine plantations on the Bagshot Sands. 17% (1km²). Atlas 2000: all squares

West Berks: absent entirely from the chalk and the northern clays; rare north of 75 and south of 95. Frequent in the Kennet valley and in the Northern Loop. Atlas 2000: all except [38], [48], [58], [68], [69]

Potentilla x mixta Nolte ex Rechb. = **P. erecta x P. reptans** and **P. anglica x P. reptans**
Potentilla x italica Lehm.

A plant with 4 petals (like *P. erecta* but unlike *P. reptans*). Commoner than, and much confused with, *P. anglica* from which it is told by having all its petioles the same length and by being highly sterile. *P. erecta* has sessile (not stalked) leaves. Under-recorded.

Silwood Park: in the steep lawn at the eastern end of the Japanese Garden in July 2005.

Ascot: rare at the edge of the track immediately in front of the new grandstand during construction work in August 2005.

East Berks: collected at Blackwater [8560] in 1892, Earley Heath [7570] in 1893 and Binfield [8070] in 1895 (all in OXF).

West Berks: At Tilehurst [6570] in 1962 (det. J.D. Grose). Near Heath End [5826 6351] and on the Wasing Estate [5839 6358] in August 2003 (herb. A.R.G. Mundell). Greenham Common [56] in 2004 and 2005 [502653].

Potentilla anglica Laichard. *Trailing Tormentil*
Potentilla procumbens Sibth., nom. illegit.

hs 6

A local speciality Woods, heaths, hedge-banks; rather local and not very common. Wood margins and woodland rides on moderately acid soils. Occasional but decreasing; absent from the chalk. This species arose by hybridisation associated with chromosome doubling; its parent species *P. erecta* and *P. reptans* both have 28 chromosomes, and *P. anglica* has 56. Told from *P. erecta* by some flowers with 5 petals (not all 4-petaled), carpels > 20, lower stem leaves with long petioles, > 10mm. Much over-recorded for *P. x mixta* (see above), which has few if any swollen achenes (it is a sterile hybrid) and all petioles the same length - not decreasing markedly as in *P. anglica*.

NVC: MG 4

Ascot: no recent records, but known in the past from Sunninghill Park and Virginia Water.

East Berks: on the roadside across Bagshot Common, Earley Heath, Twyford, Binfield, Bulmarsh, Coleman's Moor, Bearwood, Finchampstead Leas, Wellington, Sandhurst, Shurlock Row, Windsor Great Park, Bracknell, Frogmore. The latest records are from Loddon Hill Woodley (1968), Ashley Hill (1970), Bulmershe Wood (1972), Jealott's Hill [873733] (1973), Maidenhead Thicket (1986), Great Wood at Waltham [8576] (1987), Coppid Beech (1987) and Bisham Wood (1988). <1% (1km²). Atlas 2000: all except [78], [96]

West Berks: found only to the east of 45 or north of 95. Cake Wood [36], Furzewick Down [38], Pusey and Buckland [39], Tubney Wood and Wytham [40], Bagley Wood [50], Snelsmore and Ashridge Wood [47], Wasing Wood and Aldermaston [56], Hermitage [57], Padworth Gully [6165], Tilehurst [67]. Recent records from Lough Down at Streatley [5881] in 1986, Moor Copse [6373] in 1983, AERE Aldermaston [6063] in 1999, and Greenham Common [5164] in 2001. Atlas 2000: [29], [36], [38], [39], [46], [47], [49], [40], [56], [57], [58], [50], [66], [67]

Potentilla reptans L. *Creeping Cinquefoil*

hr 6

Farmyards, verges, trampled ground, hedge-banks, wood margins, roadsides, cornfields, pastures, heaths and waste ground in towns in a wide range of dry, sunny situations. The leaves are mined by *Stigmella aeneofasciella*, clustered stem galls are formed by the wasp *Xestophanes potentillae*.

NVC: CG 3; M 22,24,27; MG 1,5,6; OV 19,22-25; S 18; U 1

Silwood Park: much less abundant than in neighbouring parts of Berkshire, and not recorded from Silwood until 1988. Commonest in and around the Science Park where it was introduced with imported topsoil during the landscaping of the site in 1987 (e.g. on Garden Wood Bank). Perhaps first introduced to Silwood when chalk was brought in from road-widening operations at Maidenhead Thicket to create the Chalk Plots; the plant was first recorded on the First Year Field Course on 1 June 1989. Behind the 'balloon store' at the Met Tower in 1990. Only known in semi-natural habitat from Heronsbrook Meadow. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	3	5	9

East Berks: uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 68% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Potentilla sterilis (L.) Garcke *Barren Strawberry*

hs 2

Fragaria sterilis L.

Dry oak woods, hedge-banks, shaded grassland, heaths, etc. (as *P. fragariastrum*); common and generally distributed, but absent from the northern clays. Also on stone graves in churchyards and on the base of limestone walls. Told from *Fragaria vesca* by the leaves, in which the terminal tooth is noticeably smaller than the adjacent teeth (not the same size), and by its earlier flowering time. The leaves are mined by *Ectoedemia arcuatella* and *Agromyza potentillae*.

NVC: W 8,10,21,24

Silwood Park: very local and rare. A single patch in moist grass at the edge of the canopy of oaks and alders flanking the Outflow Stream where it passes through Water Meadow, and another patch on the edge of the trees flanking the Gas Pipeline, about 150m away. The oaks were cleared from Water Meadow in the winter of 1992-93 in order to encourage this plant (and *Stachys officinalis*) with some success on the eastern edge. Plants were still at the original, western site in June 2000. The site was cleared again in March 2002 to get rid of the bramble. The plant was occasional in the grass beyond the large hawthorn on the eastern edge of the meadow in 2003, but the bramble thicket had grown back densely by May 2004. On April 11 2007 there was one small patch on the edge of the trees and another in the centre of the grassland in Water Meadow West, representing stasis rather than decline (note, however, that the *Anemone nemorosa* had increased substantially in the last two years). One small colony in Nash's Copse, close to the Kissing Gate corner of the wood. A single small patch on the earth dam of The Lake by the Outflow Sluice in May 2003 and April 2007 growing with *Conopodium* and *Viola riviniana*. By the path near the western gate of the Outflow Sluice on 28 March 2013.

Ascot: on dry shady banks in Whitmore Lane opposite Blacknest Park.

East Berks: local and uncommon. Recent records from West Emmbrook, Remenham, White Waltham, Chawridge Bank, Hurley, Breakheart Hill, Holliday Plain, Windsor Great Park. 4% (1km²). Atlas 2000: all squares

West Berks: frequent to the south of 80 but absent to the north, except for the Northern Loop. In both chalk grassland and chalk woodland at Rivar Copse [3562]. Atlas 2000: all except [68], [69]

Potentilla inclinata Villars *Grey Cinquefoil*

• hs 6 †

East Berks: a garden escape at Twyford [7575] found by Druce in 1890 (OXF).

¶ **Potentilla** *P. alba*, *P. atrosanguinea*, *P. atrosanguinea* var. *argyrophylla*, *P. aurea* 'Plena', *P. 'Blazeaway'*, *P. crantzii* 'Pygmaea', *P. cuneata*, *P. eriocarpa*, *P. 'Etna'*, *P. 'Flamenco'*, *P. fruticosa* 'Abbotswood', *P. fruticosa* 'Abbotswood Silver', *P. fruticosa* 'Beesii', *P. fruticosa* 'Daydawn', *P. fruticosa* 'Elizabeth', *P. fruticosa* 'Goldfinger', *P. fruticosa* 'Katherine Dykes', *P. fruticosa* 'Marrob Marian Red Robin', *P. fruticosa* 'Primrose Beauty', *P. fruticosa* 'Blink Princess', *P. fruticosa* 'Red Ace', *P. fruticosa* 'Sunset', *P. fruticosa* 'Tangerine', *P. fruticosa* 'Tilford Cream', *P. 'Gibson's Scarlet'*, *P. megalantha*, *P. nepalensis* 'Miss Willmott', *P. recta* var. *sulphurea*, *P. recta* 'Warrenii', *P. rupestris*, *P. x tonguei*, *P. 'William Rollison'*

Fragaria vesca L. *Wild Strawberry*

hr 4

Dry woods, hedges, calcareous grassland, railway banks, and rarely on walls. Absent from the chalk ridge. Told from garden strawberries by the fact that the pips (achenes) stand proud from the surface (not sunken in pits as in commercial strawberries). Even though the leaves are hairy on the upper-

side, they look glossy. The flowers are bisexual and the hairs on the pedicle are upswept so that they point towards the strawberry. Told from *Potentilla sterilis* by the terminal leaf tooth being the same size as (not smaller than) the adjacent teeth. The genus *Fragaria* does not survive the new phylogeny; the traits of *Fragaria* sit comfortably within the range of *Potentilla*. The leaves are mined by *Agromyza potentillae* and *Stigmella splendidissima*.
NVC: CG 2; W 8,10,12,13,21,24

Silwood Park: very local and rare: extinct at one of its two sites. It grew at the edge of the concrete skirt along the north edge of the storage garages on South Gravel; 3 June 1980. Site destroyed during construction of the Science Park in 1987. Discovered in October 2000 on bare soil next to the boundary fence at the edge of the lawn in South Lodge.

Ascot: common on the bank of the railway cutting beneath the bridge on Sunninghill High Street. A huge plant at the top of the damp cellar stairs at South Ascot Church, with its runners descending step by step, and a rosette on each tread on 12 September 2006.

East Berks: common and locally dominant (with *Glechoma hederacea*) on waste ground by the railway at Kings Meadow Reading in September 2007. 22% (1km²). Atlas 2000: all squares

West Berks: widespread but absent on the chalk ridge north of 85 and south of 95. Atlas 2000: all except [69]

Fragaria moschata (Duchesne) Weston *Hautbois Strawberry* ● hr 5
Fragaria vesca L. taxon moschata Duchesne
Fragaria muricata sensu D.H. Kent, non L. nec Miller

Hedge-banks, very rare. The leaves are dull (not shiny) on the upper side, and the top-most pedicels have many spreading hairs at fruiting. Possibly under-recorded.

East Berks: “opposite the Whitening Factory at Warren Row. The hedge is the border of an old orchard, and the plant, which does not appear to be in the orchard, has extended itself into the adjoining bushy common” (Druce). Between Windsor and Cranbourne Park (1897). Finchampstead (1918) Plantations and hedges, rare. Bowen thought these sites extinct. Atlas 2000: no records.

West Berks: Kintbury [36] and Bere Court [67] pre-1897; Jarn mound [40] from 1965-81, between Aldermaston and Padworth [6065] in 1961, gravel pit at Tilehurst (LAN) [67] in 1958. Atlas 2000: [40]

Fragaria ananassa (Duchesne) Duchesne *Garden Strawberry* ● hr 5
Fragaria vesca L. taxon ananassa Duchesne

This is an escape from cultivation, occasionally found in a semi-wild state on hedge-banks or railway banks. The leaflets are glabrous on the upperside, and the strawberries > 15mm wide, with the achenes sunken in pits in the surface of the strawberry.

Silwood Park: Sunninghill Crossroads, Tractor Sheds, Silwood Farm, Drive Lawns.

East Berks: Bracknell, Ascot, Sandhurst, Maidenhead. Railway embankments, roadsides and waste ground; very local. Wellington College, Broadmoor, Bracknell, Furze Platt, Shinfield. Coppid Beech at Wokingham [8368] in 1986. 1% (1km²). Atlas 2000: [77], [86], [88]

West Berks: all but restricted to the extreme south-east: on the railway west of Newbury [458666] in 1978, Jarn Mound, Youlbury [4802] in 1981, Bulls Lock [46], Thatcham [56], Mortimer West End [66], Three Firs [66], Grazeley [66], Tilehurst [67]. Atlas 2000: [28], [46], [40], [56], [59], [66], [67]

Fragaria ‘Pink Panda’ *Red Strawberry*

East Berks: a common ground cover plant in Cookham churchyard 1995-2004.

¶ **Fragaria** *F. x ananassa* ‘Cambridge Favourite’, *F.* ‘Pink Panda’, *F. vesca* ‘Multiplex’

Duchesnea indica (Jacks.) Focke *Yellow-flowered Strawberry*
Fragaria indica Jackson

• hr 5

East Berks: Reading [7371] from 1983-88.

West Berks: Newbury [4766] in 1982. Kingston Bagpuize House [4097] in 1988; still there, and thoroughly naturalized in open woodland in 2003.

¶ **Duchesnea** *D. indica*

Geum rivale L. *Water Avens*

hs 5

A local speciality of meadows and bushy places on peaty soil. Damp woods and water meadows in south-west Berkshire. This plant, so characteristic of woods and stream-sides in Northern and Western Britain, is a great rarity in Berkshire.

NVC: M 27; W 8

Ascot: very rare, planted on the grave of Rose Eleanor Challis (d. 7 March 1993) in South Ascot churchyard on 26 April 2004. This is the only grave-planted individual I have ever seen.

East Berks: very rare. The best site is at Stanford End by the Fritillary Meadow. Absent from most of the area. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: all but restricted to the Kennet valley. Trenches by the railway from Hungerford to Reading, etc. In Druce’s time it was locally common about Theale, Midgham and Aldermaston, often associated with *Carex paniculata*. By Bowen’s time it was reduced to a few sites by the Rivers Blackwater, Enborne, Lambourn, Kennet and Loddon. Last seen on Appleton Lower Common [40] in 1982. Now restricted entirely to the south of 80. Hungerford, Inkpen and Kintbury [36], Shefford [37], Hamstead Marshall and Bulls Lock [46], Boxford [47], Goldfinch Bottom, Thatcham and Midgham [56], wet grass by the R. Pang [580716] in 2004, bridge over the R. Kimber by Stanford Dingley [57], Sulhamstead [66], Theale meadows and meadows between Bradfield and Tidmarsh [67]. Recent records from Cake Wood [3068], by the stream at Manor Farm Inkpen [361641], Benham Loch [424672], Sole Common [413707], Boxford [4271], by the R. Pang in Moor Copse [6374]. Atlas 2000: [29], [36], [46], [47], [56], [57], [66], [67]

Geum x intermedium Ehrh. *Hybrid Avens* = **G. rivale** x **G. urbanum**

Coppices and meadows; very local and rather rare. Intermediate in all respects and highly fertile, forming a complete spectrum between the parents.

East Berks: Foxhill, Reading (RNG) [77] in 1959.

West Berks: Newbury [46] and Boxford [47] pre-1920. More recent records are all from the Pang Valley in [67]: Moor Copse, Sulham (LAN), Bradfield, Englefield and Pangbourne.

Geum urbanum L. *Wood Avens*

hs 6

Woods, thickets and hedges in shade, and in shady gardens and waste ground. One of the ubiquitous woodland wildflowers in our area along with *Geranium robertianum* and *Glechoma hederacea*. The common leaf miner is *Metallus pumilus* which forms a large blotch mine, while *Stigmella aurella* and *S. splendidissimella* create serpentine mines.

NVC: W 6,8,12,14,21,22,24

Silwood Park: Pound Hill, Cheapside, Ashurst Old Orchard, Weir Wood, Silwood Farm, Water Meadow West, The Rookery, Kissing Gate, Nash's Copse, Heronsbrook, Silwood Road, Buckhurst Road, Technology Transfer Centre. Rare on the New Chalk Plots on 25 May 2006. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. There were several large plants at this site, close to the gate by the tennis court on 4 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	0	1	4	18

East Berks: wherever there is a fragment of woodland or ancient hedgerow. 73% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Geum coccineum Sibth. & Sm. *Red Avens*

• h 6

An uncommon garden plant, rare as an outcast.

East Berks: growing on piles of dried sewage solids at Maidenhead Sewage Works in October 2001. On waste ground in Ryeish Green [7267] in August 2002.

¶ **Geum** *G.* 'Borisii', *G.* 'Coppertone', *G.* 'Georgenburg', *G.* 'Lady Stratheden', *G.* 'Lionel Cox', *G.* 'Mrs J. Bradshaw', *G. rivale* 'Album', *G. rivale* 'Leonard's Variety'

Dryas octopetala L. *Mountain Avens*

• chw 6

Dryas babingtoniana A. Pors.

A northern British plant of upland limestone country, occasionally grown on rockeries and patios in Berkshire, but never found as an outcast or an escapee.

Silwood Park: seeds sown in the Nash's Field experiment in 1991 but they never came up.

West Berks: planted on Jarn Mound; collected by Sir Arthur Evans in 1933.

Agrimonia eupatoria L. *Agrimony*

hs 6

Roadsides, hedge-banks, wood-borders, copses, etc; locally abundant and widely distributed. It reaches its maximum of frequency on the grassy borders of copses on the chalk hills, and on the whole appears to prefer stiff soils to sandy and gravelly situations. Woodland rides, roadsides and grassy places; occasional. The leaves are mined by 5 species of *Stigmella* and by *Ectoedemia agrimoniae* (a blotch mine).

NVC: CG 2,3; MG 1,5,9; OV 18

Silwood Park: very rare and mostly introduced. The only clearly native sites are on the bank beneath the hedge on the roadside opposite the Thatched Tavern between April Place and Heronsbrook Cottage in Cheapside (1979-2004), and in grass on the Ashurst Path (1985). Rare on the Succession Plots in Silwood Bottom. Drive Field: one plant growing with *Bromopsis erecta* inside a small rabbit enclosure, probably introduced with turf from chalk grassland during air pollution experiments in the early 1990s. Common in the grass within 10m of the site of introduction by July 2006. Seeds sown in the Nash's Field experiment in 1991 never came up. A single plant came up and flowered in the western lawn by the central entrance to North Block on 14 July 2002, following the lax (some would say negligent) mowing regime of early 2002; its leaves were hidden amongst a mass of *Potentilla reptans*, so the plant may have been there undiscovered for several years (the lawn was created in 1989). A very rare colonist from sown seed in methyl-bromide-treated plots of the Oak Mead experiment in 1996; still surviving on the grazed part of Block E in May 2003. There were still a few plants surviving on grazed plots in June 2007: 2 plants in Block A (plot IIIc), 1 in Block C (plot Id) and 1 in Block E (plot Iic). A single plant at the edge of the Science Park lawn by the eastern entrance to North Block on 30 August 2003; there was little lawn mowing during the hot dry summer of 2003. Still there in July 2006. A single plant in Block A of the Heronsbrook Meadow experiment on 28 July 2007. Still present in the Oak Mead Experiment in July 2007 on grazed plots in Block A, C and E. A new, probably native site was found on 16 July 2009 while surveying the NutNet plots in Heronsbrook Meadow; there was a single plant with two flowering stems in Block A amongst tall *Arrhenatherum elatius* on the plot receiving, half way down the southern edge of the field adjacent to the grass track from Mertens Acres to Nash's Slope.

Ascot: locally abundant in the damp grassy triangle of Swinley Bottom at the northern end of the Race Course.

East Berks: frequent on waysides throughout, but especially abundant in the broad grassy strip bordering the A4 through Maidenhead Thicket. 20% (1km²). Atlas 2000: all squares

West Berks: common by the footpath between Aston Upthorpe and Blewbury [5485] and at Radley Station [5298] in 2002. Atlas 2000: all squares

Agrimonia procera Wallr. *Fragrant Agrimony*

hs 6

Agrimonia odorata auct., non (L.) Miller

Agrimonia repens sensu De Langhe et al., non L.

Wood borders, hedges, roadsides and grassy places, favouring clay soils. Much less common than *A. eupatoria*, and over-recorded in the past, probably because the possession of scented leaves is not a good character (some *A. eupatoria* genotypes have fragrant foliage). The fruiting hypanthium is bell shaped with diverging sides (rather than obconical with roughly parallel sides as in *A. eupatoria*), and the lowest rank of barbs on the fruit are reflexed (pointing downwards) rather than patent (pointing outwards and slightly upwards).

Ascot: no records.

East Berks: Windsor Forest, Twyford, Swinley, Wokingham, Haines Hill, Arborfield, Bulmershe, Bowsey Hill, Hurley pit, Bracknell, White Waltham, Old Windsor. Dinton Pastures, Lock's House, Warfield, Windsor Castle. There was a patch in Maidenhead Thicket [855808] in 2003. < 1 % (1km²). Atlas 2000: [77], [86], [88], [97]

West Berks: Badbury Hill [29], Hungerford [36], north of Hungerford Newtown [37], Welford, Hemley Copse and Chieveley [47], Catmore and Chilton [48], Ock Meadow [49], Long Leys, Cumnor and Wytham [40], Heath End, Bowdown House and Great Wood [56], Burnt Hill Yattendon and Fence Wood [57], North Unhill Bank, Lollingdon Hill, Aston Tirrold and Blewburton Hill [58], Sutton Courtenay [59], Bagley Wood [50], Pangbourne and Sulham [67]. Atlas 2000: all except [38], [39], [47], [68], [69]

Sanguisorba officinalis L. *Great Burnet*

hs 6 ↓

Poterium officinale (L.) A. Gray

Water meadows and by ditches. Very local and decreasing as a result of drainage, ploughing and pasture improvement.

Silwood Park: seeds sown in the 18 high diversity plots of the Tilman Experiment in Nash's Field experiment in October 1991 were thought to have failed, until a single plant was found amongst *Tanacetum vulgare* in the upper half of Block H on 13 July 2004!

Ascot: no records.

East Berks: rare in the Thames meadows at Sonning and Twyford. Also at Sandhurst, Wellington College, Coleman's Moor, Bracknell, Finchampstead, Englemere Pond, Tower Hill, Bearwood, Whiteknights Park in old grassland, Bisham Wood, north of Blackwater. By Bowen's time it was extinct at many of these sites. Recently at Dinton Pastures, Douglas Farm, Shepherd Meadow. 1% (1km²). Atlas 2000: [77], [86], [88]

West Berks: uncommon in the Thames and Kennet valleys and absent elsewhere. Grafton Lock [29], Pucketty Farm and Charney Bassett [39], Chimney Meadow [30], Donnington [46], Knollend [48], Newbridge, Bablockhythe, Swinford, frequent in Wytham meads, Farmoor reservoir and Cumnor [40], Heath End, Falcon Fields [5974 6268], Osgoods Gully and Aldermaston (**LAN**) [56], Frilsham [57], Blewbury and Unhill [58], Radley (**RNG**) [59], Iffley meadows and South Hinksey [50], Mortimer and Sulhamstead [66], Tidmarsh, Burghfield Mill (**RDG**) and Theale [67]. Atlas 2000: [29], [37], [38], [39], [46], [48], [49], [40], [56], [57], [58], [59], [50], [66], [67]

Sanguisorba minor Scop.

hs 5

Poterium sanguisorba L

Sanguisorba minor subsp. **minor** *Salad Burnet*

Calcareous grassland, chalk downs, railway banks; locally frequent on the chalk, but rare or absent elsewhere. The plant of urban waste ground and motorway embankments is typically subsp. *muricata*, a bigger plant confirmed by the fruits (scarcely winged with reticulate faces in subsp. *minor*, but undulate winged on the angles with smooth faces in subsp. *muricata*). The leaves are mined by *Stigmella* (4 spp.) and *Ectoedemia angulifasciella*.

Silwood Park: sown in the Oak Mead Experiment in 1996, and well established on both the cultivated and methyl-bromide-treated plots. It was still present in 2001 in the fenced parts of on Blocks A and E.

Ascot: no records.

East Berks: on the chalk at Park Place, and in Thames meadows at Maidenhead, Bray, Cookham, Hurley and Wargrave. Also at Windsor, Bracknell and Wellington College. Recently at Stanford End, Rose Kiln Lane, Reading Station, Ruscombe, Park Place, Temple Coombe, Broadmoor, Bill Hill, Hurley, Hurley Lock, Temple, Maidenhead Thicket, Winter Hill, Bray Mead, Holyport, Widbrook Common, meadows at the western end of Windsor Racecourse, Windsor Castle. 6% (1km²). Atlas 2000: all except [96]

West Berks: widespread. Atlas 2000: all except [68], [69]

Sanguisorba minor subsp. **muricata** (Greml.) Briq. *Fodder Burnet* ● hs 5 ↑
Sanguisorba muricata Greml.
Poterium polygamum Waldst. & Kit.
Poterium muricatum Spach, nom. illegit.
Sanguisorba minor Scop. subsp. *polygama* (Waldst. & Kit.) Holub

This is the Burnet that is a common component of wildflower mixtures, because it is cheap to buy in Eastern Europe where it is grown as a fodder crop. It is sold as if it were Salad Burnet at a vast profit. Told from subsp. *minor* by its fruits which have undulate wings on the angles, and by its larger size and more deeply toothed leaflets.

Silwood Park: sown in the New Chalk Plots in 1994. It has prospered, and is now one of the commonest wildflowers on the plots (as in May 2002 and June 2007).

Ascot: locally common on waste ground at the station in 1998. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: chalk fields, railway banks, etc.; locally common in fields near Hurley and near Cookham Dean. Dry waste places, very local; Reading gasworks, Bracknell. Recent records from M4/A33 Interchange, on recently made-up embankments flanking Westacott Way [8479], Upperwood Farm, landscaping schemes in Reading, Frampton's Bridge, Ham Island, in a wildflower mix sown at the edge of the golf course in Windsor Castle in 1997. In sown grassland on the Northern Relief Road at Quelm Park in Bracknell, 1999-2004, and on the banks of Farleymoor Lake in Bracknell [8569] in 2002-03. 1% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: Tilehurst sandpit (RDG) [67] in 1915, Carswell [39] in 1918, Hatford pit [39] in 1966, Cothill pit [49] in 1971, north of Hermitage [57] in 1974. Atlas 2000: [29], [36], [39], [47], [48], [49], [40], [56], [59], [67]

¶ **Sanguisorba** *S. obtusa*

Acaena novae-zelandiae Kirk *Pirri-pirri-bur* ● chw 6 ↑
Acaena sanguisorbae auct., non M. Vahl
Acaena anserinifolia auct., non (Forster and G. Forster) Druce

The leaves are bright glossy green (not matt green) on their upper sides, and the apical pair of leaflets relatively long (1.8-2.5 times as long as wide, rather than 1.2-2 times in *A. anserinifolia*).

East Berks: invasive and forming dense ground cover beneath Scots Pine in damp woodlands at Heath Pond and Swinley Brick Pits in 2000. It has spread to Kingsride [91538 67509] by June 2012. <1% (1km²). Atlas 2000: [86], [96]

Acaena anserinifolia (J.R. Forst. & G. Forst.) Druce *Bronze Pirri-pirri-bur* ● chw 6
Ancistrum anserinaefolium Forster and G. Forster
Acaena sanguisorbae M. Vahl, nom. illegit.
Acaena pusilla (Bitter) Allan

East Berks: not in Druce or Bowen. A weed in paths through the Botanic Garden in Whiteknights Park 1970-88 (no specimen; it needs to be confirmed that that it is not *A. novae-zelandiae*).

Acaena inermis Hook.f. *Spineless Acaena* ● chw 6
Acaena microphylla auct., non J.D. Hook.
Acaena microphylla J.D. Hook. var. *inermis* (J.D. Hook.) Kirk

The spines on the hypanthium are unbarbed or absent, and the apical pair of leaflets are almost circular in outline (as long as broad).

East Berks: A garden escape growing in pavement cracks in West Dedworth in 1999.

Alchemilla filicaulis Buser *Hairy Lady's-mantle* hs 6 ↓
Alchemilla filicaulis subsp. **vestita** (Buser) M.E. Bradshaw
Alchemilla colorata auct., non Buser
Alchemilla vestita (Buser) Raunk.
Alchemilla hybrida F.W. Schmidt subsp. *vestita* (Buser) O. Bolòs and Vigo
Alchemilla vulgaris L.

Marshes, damp pastures and grassy places in woods; local, rare and decreasing. The upper part of the stem and the whole of the inflorescence are rather densely hairy, and the stem base and petiole bases are tinged wine red.

East Berks: in a damp meadow near the spring at Crazy Hill; frequent there in 1896. Crazy Hill (RNG) in 1931, Hurley (1962). Confined to the section of the Thames between Wargrave [7580] and Hurley [8080]. 1% (1km²). Atlas 2000: [78]

West Berks: in two centres, the largest in the western Kennet valley, and the other in the Northern Loop. There is an outlying population in Hailey Wood [28]. Hungerford meads, Woodhay and Kintbury [36], Rack Marsh Bagnor (OXF) [453693], Wickham [46], Wytham [40], Bagley Wood [50]. Atlas 2000: [28], [36], [47], [40]

Alchemilla mollis (Buser) Rothm. *Garden Lady's-mantle* ● hs 6 ↑
Alchemilla acutiloba Opiz var. *mollis* Buser

An ubiquitous cottage garden plant, a self-seeding like no other, and very commonly naturalised in paving, on walls and bare waste ground. Occasionally persisting in grass, but intolerant of shade. In towns and villages throughout.

Silwood Park: commonly self-sown in paving, patios, paths, borders and edges of lawns. Sunninghill Crossroads, Silwood Lodge, Tennis Court, Japanese Garden, Student Residences. Locally frequent on the shaded track through the woodland behind Southwood Halls in 2003.

Ascot: common on the earthen ramp by the railway bridge [906684] at Englemere in 2002. Waste ground in south Ascot. A persistent weed of the paved terrace in the garden of Styles on Charters Road in Sunningdale (1979-89).

East Berks: one of the most frequent of all the self-sown garden escapes; in villages and towns throughout. 20% (1km²). Atlas 2000: all squares

West Berks: frequent throughout. Atlas 2000: all except [69]

Aphanes arvensis L. *Parsley-piert*
 Alchemilla arvensis (L.) Scop.

th 4

Dry sandy arable fields, short grassland, banks, mud-topped walls in villages, and pastures; absent from clay soils. Care is needed to separate this from *A. australis*; the fruiting hypanthium is bigger (>2mm), and the sepals (0.6-0.8mm) are not converging (they may be upright or spreading). The whole fruit gives the jizz of having a “waist” beneath the teeth (i.e. it is not barrel-shaped).
 NVC: OV 7,9,10,12,21,39; U 1

Silwood Park: in arable fallow at Oak Mead and Pound Hill Field. Less common than *A. australis*. Locally abundant on bare soil at Ashurst Lysimeters in June 2008 following herbicide application in late summer 2007, presumably from seed imported with the topsoil. Abundant beneath *Holcus mollis* in the cultivated field at Pound Hill on 16 June 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	6

East Berks: common on the less acid soils in the north, but scattered elsewhere. 7% (1km²). Atlas 2000: all squares

West Berks: Widespread but rare on the chalk and the northern clays. Atlas 2000: all except [68]

Aphanes australis Rydb. *Slender Parsley-piert*
 Alchemilla microcarpa auct., non Boiss. & Reuter
 Aphanes microcarpa auct., non (Boiss. & Reuter) Rothm.
 Aphanes inexpectata Lippert

th 4

Dry acid grassland, arable fields and compacted ground like cinder paths. Rarely on base rich soils and less common than *A. arvensis* on arable land. The fruiting nodes have stipules with their teeth as long as the entire portion. It is hard to tell the two species apart in the field; you really need to measure the fruiting hypanthium under a microscope. Including the converging sepals (0.3-0.5mm), it is less than 2mm long. The whole fruit gives the jizz of a barrel, with no waist beneath the teeth (sepal length is not a reliable character with us).
 NVC: OV 1,3,5

Silwood Park: bare places in acid grassland, waste ground and on paths. Nash's Field: highly tolerant of rabbit grazing and increasing on annually cultivated ground that is unfenced. Present at more than 30% cover in many years on Block D. Very common in the seedbank beneath old grassland at Nursery Field in April 2004 following cultivation in 2003. Abundant in the top corner of Silwood Bottom on 22 May 2007, following autumn cultivation in 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	9

Ascot: very local and rare from the seed bank on bare ground and topsoil piles during the construction of the new grandstand at the Racecourse in September 2005.

East Berks: not separated by Druce. Common on the acid sands of the south and east, but scattered elsewhere. Reading, Finchampstead, Englemere Pond, Tower Hill, Bearwood. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 10% (1km²). Atlas 2000: all except [78]

West Berks: scattered in the north and south, but absent from the chalk (between 75 and 95). Atlas 2000: all except [29], [38], [48], [59], [50], [69]

Rosa *Wild Roses*

Roses are difficult because of their breeding system and the extent of hybridization. A pentaploid rose has 35 chromosomes, 14 paired and 21 univalents (a diploid complement (2 x 7) plus 3 sets of 7 unpaired chromosomes). Since it is only the paired chromosomes that can take part in meiosis (reduction division), the 21 univalents are lost during pollen formation. They are maintained, however, in the female line, so mother contributes 28 chromosomes (7 + 21) and father provides 7 chromosomes (1 from each pair), restoring the pentaploid complement of 35. Old floras recognized masses of varieties and few hybrids, and many of Druce's old *Rosa* specimens in **OXF** were mislabelled. Modern treatments emphasise the prevalence of hybrids and recognize few varieties (Graham and Primavesi 1993). The Dog Roses, *R. canina* and *R. caesia*, are particularly variable and hard to identify. The *Rosa* flora of Berkshire is still very poorly known, and much work remains to be done.

Rosa multiflora Thunb. *Many-flowered Rose*

• n 6 ↓

Planted in hedgerows and a garden outcast on waste ground. The air can be heavy with its fragrance in June. It is similar to several of the common garden Ramblers, but the flowers are single (not double as in 'Rambling Rector') and the corymbs of flowers are smaller than in 'Kiftsgate'.

Ascot: by the army huts on Kingsride (**OXF**) [9065] in 1965.

East Berks: abundant in the planted Hawthorn hedge protecting the western boundary of Summerleaze Quarry in northern Maidenhead [890829] on 9 June 2002.

West Berks: Welford Manor (**OXF**) [4073] in 1978, Mapleash Wood [4671] in 1970, Cholsey (**BM**) in 1952, Aston Tirrold [58] 1961-76 (**LAN**), Barton Lane, Abingdon (**OXF**) [5097] in 1980.

Rosa arvensis Huds. *Field-rose*

n 6

Woodland rides and margins, and in hedges. Common and widely distributed but rare or absent from the chalk.

NVC: W 21,25

Ascot: very rare, seen only at Sunninghill Park during 2000. Roses are very uncommon in the country around Silwood.

East Berks: Maidenhead, Winkfield, Riseley, Finchampstead. A pink flowered form was found at Earley. 25% (1km²). Atlas 2000: all except [96]

West Berks: all but ubiquitous, except on the chalk between 80 and 95. Atlas 2000: all squares

Rosa x pseudorusticana Crép. ex T.A. Preston = **R. arvensis x R. sylosa**

Rosa x bibracteoides Wolley-Dod

East Berks: collected by Druce at Winkfield [8570] in 1893 (**OXF**).

Rosa x verticillacantha Merat = **R. arvensis x R. canina**

Rosa x kosinskiana Besser

Rosa x pouzinii auct., non Tratt.

Rosa x deseglisei Boreau

Rosa x wheldonii Wolley-Dod

West Berks: determined by R. Melville (as *R. arvensis x R. dumetorum*) from Beenham [5868]. Beedon Wood (**BM**) [47] in 1887, Frilford Heath (**BM**) [49] in 1895, Boars Hill (**OXF**) [40].

Rosa pimpinellifolia L. *Burnet Rose*

n 5

Rosa spinosissima L., pro parte

Mainly a coastal plant in Britain, but found on heaths and limestone inland. Usually a garden escape in Berkshire.

NVC: W 8

Silwood Park: naturalised in long grass in the graveyard of St Michael's Church at Ashurst since 1971.

East Berks: not in Druce or Bowen. A garden escape, occasionally found on walls or waste ground. Silver Street in Reading [7172] on garden walls (1988). Recent records from Kennet Mouth, South Twyford, Crazies Hill, Savernake Park. In a hedge at White Waltham [855777] in July 2003. <1% (1km²). Atlas 2000: [77], [78], [86]

West Berks: Crookham Heath (**OXF**) [56] in 1891. On walls at Buscot [29] in 1987. Atlas 2000: [29], [58]

Rosa rugosa Thunb. *Japanese Rose*

• n 6

The commonest alien rose, much used in urban landscaping schemes and as a hedge plant in villages. Produces copious orange hips and often regenerates from seed on waste ground, but seldom far from houses or factories. Also planted as thickets on motorway verges. Known at once by the high density of prickles on its stems, and its rugose leaves (glossy green, with deeply impressed veins). The commonest cultivars seen outside gardens are 'Sarah Van Fleet' (pale pink, double) and 'Frau Dagmar Hartopp' (clear silver pink, single), 'Blanc Double de Coubert' (double white) and 'Alba' (single white flowers), and 'Roseraie de l'Hay' (fragrant, semi-double with purplish-red flowers).

Silwood Park: a large clump where the track from the Nuclear Reactor emerges next to Silwood Bottom; it was there in 1971 and is still there in 2004 (although the canopy is somewhat less dense than formerly). A second thicket is adjacent to Heronsbrook Meadow opposite Virginia Water Lodge (1979-2004). Widely planted on the Science Park in 1988 and self-seeding on pavements and waste ground in 2001.

East Berks: not in Druce. Extremely common on new industrial estates and business parks in Bracknell and Reading. Also in the central reservations of dual carriageways. Becoming more common as a bird-sown garden escape. First recorded from Barkham Green and Old Windsor in 1965. Now in towns and villages throughout. 14% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [96], [97]

West Berks: Aston Tirrold [58] in 1957, Southmoor [39] in 1961, Tilehurst [67] in 1962, Mapleash Wood [47] in 1970, Bucklebury Upper Common [56] in 1980, Theale [67] in 1987, Silchester Common [66] in 1988, Kingston Bagpuize [4098] in 2003. Now widespread. Atlas 2000: [36], [38], [39], [46], [47], [49], [40], [56], [58], [67], [68]

Rosa ferruginea Vill. *Red-leaved Rose*

• n 6

Rosa glauca Pourret

Rosa rubrifolia Villars, nom. illegit.

Silwood Park: self-sown by Flowers Halls in 1989, and in the Rosemary bed bordering the main drive of the Science Park in October 2003.

East Berks: hedges, rather local and rare. Not in Druce or Bowen. Recently at Waltham, Stubbing's Heath and Ashley Hill.

West Berks: self-sown in the grounds of the Old Rectory at Burghfield [6668] in 2004.

Rosa virginiana Herrm. *Virginian Rose*

• n 6

East Berks: not in Druce or Bowen, but casual on rubbish tips and waste ground. Whiteknights Park (1973).

West Berks: Cothill pit [49] in 1953, Padworth Common tip [66] in 1966, south of Theale [6569] in 1986.

Rosa stylosa Desv. *Short-styled Field-rose*

n 6

Rosa systyla Touss. Bast.

A local rarity of hedges, scrub and wood borders; found on clay soils, and probably absent from large parts of the chalk. Told from the much commoner *R. arvensis* (which also has its styles fused into a column) by the fact that its styles are conspicuously shorter than the stamens, and by its pinnately lobed (not entire) sepals.

East Berks: Winkfield, Whistley Mill, Loddon Bridge, Twyford (**BM**), Hurst (**OXF**), Wargrave, Knowl Hill, Littlewick Green, Ashridge Wood, Waltham, Ruscombe, Blackwater, Sandhurst. Maidenhead (**OXF**) in 1895, and by the Loddon (**OXF**) in 1893, Stratfield Saye in 1918, Hurley (1966). Atlas 2000 [76], [88]

West Berks: Pucketty Farm [39], Wytham and Cumnor Hill [40], Headley and Brimpton (OXF) [56], Mortimer (OXF) [66], Bradfield [67]. Atlas 2000: [46], [40], [56], [57]

Rosa x andegavensis Bastard = **R. stylosa x R. canina**

East Berks: by the R. Loddon (OXF) [76] in 1893, at Shinfield (OXF) [76] in 1933.

West Berks: Tubney (E) [49] in 1919, Brimpton (OXF) [56] in 1910.

Rosa caesia Sm. *Northern Dog-rose* n 6

Both subspecies of *R. caesia* are recorded from Berkshire. They are told from *R. canina* by their persistent, upright (not reflexed) sepals and wider disc orifice (1/3 of disc width rather than 1/5). The sunny side of the twig is wine red.

Rosa caesia subsp. **caesia** *Hairy Dog-rose* n 6
Rosa coriifolia Fr.

Hedges, scrub and wood borders, very local in the Northern Loop. Stems green and leaflets rugose, not glaucous, densely hairy beneath.

West Berks: Abingdon (OXF) [49], Boars Hill (OXF) [40].

Rosa caesia subsp. **glauca** (Nyman) G.G. Graham and Primavesi *Glaucous Dog-rose* n 6
Rosa afzeliana Fr. nom. illeg.
Rosa vosagiaca N.H.F. Desp.
Rosa glauca Vill. ex Loisel, non Pourr.

Stems red and leaves not (or little) rugose, distinctly glaucous, leaflets folded down at the midrib, hairless beneath.

East Berks: a single record from Hurst (OXF) [77] in 1913.

West Berks: Wantage (OXF) [48], Tubney (BM) [49], Wootton (OXF) [40], Compton (BM) [57], Burghfield (BM) [66], between Streatley and Pangbourne (BM) [67].

Rosa x dumalis Bechst. = **R. caesia x R. canina** n 6
Rosa x subcanina (H. Christ) Dalla Torre & Sarnth
Rosa x subcollina (H. Christ) Dalla Torre & Sarnth
Rosa canina L. x *R. afzeliana* Fries

One of the most frequent of the hybrid roses. Told from *Rosa canina* by the large elongated hips (24mm x 14mm) and the broad dome of hairy stigmas, and from *R. caesia* by the small orifice (1/5 rather than 1/3 of the width of the disc) and the reflexed (not upright) sepals which fall before the hip is ripe. Like *R. caesia*, the young twigs are wine-red on the sunlit side. The subspecies of *R. caesia* involved in the hybrid (see above) is determined on the basis of leaf hairiness.

Silwood Park: very local and rare; three bushes in all, one with hairy leaves, and two with glabrous leaves. A single plant at Pound Hill, in the fence between the Cultivation Timing Experiment and Gravel Pit [9388 6934] with glabrous leaves (1979-2004). A single plant in the fence of the Horse Pasture opposite The Cedars on Church Lane Footpath [942 6869] also with glabrous leaves (1979-

2004). A single plant amongst Gorse and regenerating Oaks at the northern end of Nash's Slope [9447 6918] has dark green, more rugose leaves that are hairy on both surfaces, with a densely hairy midrib, beneath, suggestive of *R. caesia* subsp. *caesia* as the other parent. But as Graham and Primavesi (1993) say, without a hint of irony, "such determinations are somewhat conjectural".

East Berks: Whiteknights Park [738714] (RNG) in 1981, and since 1999 at Sonning, Cookham and Windsor Great Park.

West Berks: Newbury [46] and Thatcham [56] in October 2002; certainly under-recorded.

Rosa canina L. *Dog-rose*

n 6

Rosa corymbifera Borkh.

Rosa dumetorum auct., non Thuill.

Rosa lutetiana Léman

Rosa squarrosa auct., non (Rau) Boreau

Grassy banks, wood margins, hedges, thickets and scrub; generally distributed except on the peaty heaths. Our only common native rose; what follows relates to the species as a whole. Records for the different Groups within *R. canina* are given after the species account. Sometimes festooned with spectacular red galls of Robin's Pin Cushion (the 'Bedeguar' gall) which are caused by a cynipid wasp called *Diplolepis rosae*. Less commonly, you might find the Spiked Pea-Gall, made by *D. rosarum*, which looks like a First World War mine from the Minesweeper game. Circular discs cut out from the leaves have probably been removed by leaf cutting bees of the genus *Megachile*. The commonest leaf miner is *Nepticula centifoliella*, which makes a serpentine mine lined with a continuous string of frass. Sawflies include leaf rollers like *Blennocampa pusilla*, and defoliators such as *Cladius pectinicornia*.

NVC: CG 3,4; W 5,6,8,10,12,21,22,24,25

Silwood Park: very local and rare; there were only 5 Dog Rose bushes in the whole of Silwood Park during the study period (and three of these were *R. x dumalis*, see above); one plant died and there was no recruitment in the period 1979-2004. A single sprawling plant on the Dam west of the Outflow Sluice [9415 6915] on Silwood Lake. One bush in Ashurst Upper Field [9395 6838] in 1979-1986; gone by 1990.

Ascot: uncommon and scattered: South Ascot village, by the path through South Ascot Bog [9267], Ascot Station, Ascot Heath, Charters Road, Sunninghill Park, Sunningdale Park, Sunningdale Village.

East Berks: Druce recorded 5 varieties from the Loddon district (see Groups, below). 64% (1km²). Atlas 2000: all squares.

West Berks: widespread but never abundant. Atlas 2000: all squares

Rosa canina is very variable, and current opinion (Graham and Primavesi, 1993) prescribes a pragmatic division into 4 reasonably clear cut groups, all recorded from Berkshire, as follows:

1. Whole plant glabrous 2
1. Leaves sparsely hairy beneath, at least on the mid-veinGroup **Pubescentes**
2. Leaflets uniserrate and eglandularGroup **Lutetianae**
2. Leaflets biserrate or irregularly serrate, with small, scentless glands 3

3. Stipules densely fringed with small shining red glands Group **Dumales**
 3. Stipules with some stipitate glands on the margin, leaf margins
 irregularly uniserrate with alternating large and small teeth Group **Transitoriae**

Rosa canina group **Dumales**

East Berks: by the lock at Sonning in 1996, Waltham (**OXF**), Cookham in 1994.

West Berks: Greenham Common (**OXF**) [46] in 1930, Charlton (**OXF**) [48], Marcham (**OXF**) [49], Appleton (**OXF**) [40] in 1933, Brimpton (**OXF**) [56], Abingdon [59].

Rosa canina group **Lutetianae**

Ascot: a single plant on the Sunninghill Park side of Watersplash Lane [945698] (1979-2004), with slender, urceolate hips (20mm x 9mm) and very narrow, pointed leaflets (the first lateral leaflet 34mm x 13mm) and stipules lined with short-stalked, red glandular hairs.

West Berks: East Hanney (**OXF**) [4290] in 1992. Denchworth (**OXF**) [3692] and Shillingford [59], both in 1994. The record from Andersey Island at Abingdon is on the Oxfordshire bank of the R. Thames. Drayton [4694] in 2001.

Rosa canina group **Pubescentes**

Silwood Park: a single sprawling plant on the Dam, west of the Outflow Sluice [9415 6915] on Silwood Lake (1979-2004).

East Berks: Riseley (**OXF**).

West Berks: Kintbury (**OXF**) [36] in 1891, Greenham (**OXF**) [46], Tubney (**BM**) [49] in 1919, Boars Hill (**BM**) [40] in 1881, Radley (**OXF**) [59] in 1894.

Rosa canina group **Transitoriae**

East Berks: Binfield (**BM**) in 1929, Maidenhead (**OXF**) in 1819, Cookham Lock in 1994.

West Berks: Wytham (**OXF**) and Wootton (**OXF**) [40] in 1894, Appleton (**OXF**) [40] in 1933, Brimpton (**OXF**) [56] in 1910, Compton (**BM**) [57] in 1887, Abingdon and Shillingford [59] both in 1994. Drayton [4692], [4694], [4892] and [4894] in 2001.

Rosa obtusifolia Desv. *Round-leaved Dog-rose*

n 6

Hedges and bushy places, rare and declining. Known by the small orifice to the hip (the orifice makes up less than 1/5 of the total width of the disc), by its strongly hooked, rather squat prickles, and by its short pedicels (less than 15mm). The leaflets are often overlapping.

East Berks: Reading (**OXF**) in 1893, Riseley (**OXF**) in 1889, Earley (1893), Bearwood, Windsor, Maidenhead, Stubbing's Heath, Bisham, Hurst, Wokingham, Blackwater. Not seen by Bowen. Atlas 2000: no records.

West Berks: Radcot [288996], Buckland Warren [3496], Beedon [47], Chieveley [4773], East Hanney (**OXF**) [4290], Cumnor (**BM**), Boars Hill (**OXF**) and Wytham (**OXF**) [40]. Atlas 2000: [49]

Rosa x dumetorum Thuill. = **R. obtusifolia** x **R. canina**

West Berks: Beedon Wood (**BM**) and Chieveley (**OXF**) both [47] in 1887, Cumnor (**OXF**) [40], Boars Hill (**OXF**) in 1942, Compton (**OXF**) [57], Andersey Island, Abingdon and Shillingford [59] in 1994, East Hanney (**OXF**) [4290] in 1992.

Rosa tomentosa Sm. *Harsh Downy-rose* n 6
Rosa scabriuscula auct., non Smith

Hedges, thickets and open woods. Widely distributed but uncommon, and seen recently only from calcareous soils. Note that Druce's records in **OXF** are confused with *R. sherardii*. Known by its small, almost spherical hips (1-2cm) and glandular pedicels, distinguished from *R. obtusifolia* by its longer, less hooked prickles and longer pedicels (more than 15mm). *R. sherardii* has a much wider orifice to the hip (1/3 to 1/2 of the width of the disc) and has wooly styles.

East Berks: Bearwood, Waltham (1893) (**OXF**), the Berkshire part of Stratfield Saye, Stubbing's Heath, Hurst. Sindlesham (**OXF**) in 1982. Atlas 2000: no records.

West Berks: Langley Farm Beedon (**BM**) in 1887, Snelsmore [47], Moulsoford [48], Frilford and Cothill [49], Wittenham [59] (all in **OXF** pre-1897). Nutwood [38], Ashridge Wood (**OXF**) [5078], Fair Mile [5583], Sulham [67] (**RDG**) in 1914. Atlas 2000: [57], [67]

Rosa sherardii Davies *Sherard's Downy-rose* n 6
Rosa tomentosa Smith subsp. sherardii (Davies) A. Pedersen

Hedges and scrub; local and rare in the north. Druce had this mixed up with *R. tomentosa* (above). Told by its woolly styles, wide orifice (1/3 or more of the total width of the disc), and at least some of its prickles curved.

East Berks: no records.

West Berks: Pucketty Farm [39], Frilford (**OXF**), Tubney Wood (**BM** and **OXF**) and Cothill [49], Boars Hill (**BM** and **OXF**) and Cumnor (**OXF**) [40], Northcourt, Abingdon [59]. Most recently at Boxford (**OXF**) in 1987.

Rosa rubiginosa L. *Sweet-briar* n 6

Hedges, scrub and woody places; not common but widely scattered, mostly on the chalk. Told in the field by the abundant stalked glands beneath the leaves which give an apple scent when crushed. The pedicels bear abundant long-stalked glandular hairs and the sepals are persistent on the ripe hips.

Silwood Park: a single plant on the grassy bank above the Farm Road below the Met Tower [9390 6925] from 1979-2004. This is a distinctive plant with tall, straight, upright, pale-green shoots, and small hips bearing horizontally spreading sepals at maturity. The leaves are densely glandular on the margins and lamina, with sparse non-glandular hairs beneath.

East Berks: rare and scattered. Park Place, Stubbing's Heath, Ashley Hill, Maidenhead, Wargrave, Loddon Bridge, Windsor Great Park, Bearwood, Bisham Wood, Finchampstead, Wellington College (**RNG**) in 1917. Tilehurst (**LAN**), Bisham, Trilakes, Maidenhead Thicket. <1% (1km²). Atlas 2000: [76], [78], [96]

West Berks: occasional on the chalk and the oolitic limestone, rare elsewhere. Walbury Hill [36], Whitehorse Hill [38], Chilton and Ardington [48], Dry Sandford and Abingdon [49], Wytham, Swinford, Foxcombe Hill, Jarn Mound, Cumnor Hill and Boars Hill [40], Brimpton (**OXF** and **E**) [56], Hermitage (**OXF**) and Hampstead Norreys [57], Lowbury Hill, Lardon Hill (**BM**), Streatley (**RDG**) and Blewbury [58], Little Wittenham and Sulhamstead [66], Sulham, Pangbourne, Tilehurst and Purley [67].

Rosa x bigeneris Duffort ex Rouy = **R. micrantha x R. rubiginosa**
Rosa x dubia Wolley-Dod, non Wibel

West Berks: collected at Aston Tirrold [58] in 1962 (det. R. Melville).

Rosa micrantha Borrer ex Sm. *Small-flowered Sweet-briar* n 6
Rosa elliptica auct., non Tausch

Hedges and bushy places; thinly scattered through the county. Under-recorded. Told from *R. rubiginosa* by the arching (not erect) stems, and non-persistent sepals fallen from the ripe hips.

East Berks: Maidenhead (**OXF**), Cookham, Windsor Forest, Wokingham, Finchampstead (**OXF**), Swallowfield, Wargrave, Ascot (**OXF**) (all pre-1897). Dry scrubland; rare and decreasing. Not seen by Bowen from our area.

West Berks: Boxford, Woodspen (**OXF**) in 1987, Drayton (**OXF**) [4694] and Frilford golf course [49] in 1978, Cumnor (**OXF**) [40], Brimpton Common (**OXF**) [56], Compton [57], Streatley Hill (**BM** and **OXF**) [58].

Rosa agrestis Savi *Small-leaved Sweet-briar* n 6 †
Rosa elliptica auct., non Tausch

Hedges and scrub on calcareous soils; once a great rarity, now extinct. Told from *R. rubiginosa* and *R. micrantha* (the other roses with abundant sticky glands on the leaves) by its glabrous pedicels and cuneate (not rounded) leaf bases.

East Berks: not reported by Druce or Bowen.

West Berks: very rare, but long extinct. Boars Hill and Wytham [40] (both 1887 in **BM** and **OXF**).

¶ **Rosa** *R.* 'Abraham Darby', *R.* 'Abundance', *R.* 'Adélaïde d'Orléans', *R.* 'Agnes', *R.* 'Aimée Vibert', *R. x alba* 'Alba Maxima', *R.* 'Albéric Barbier', *R.* 'Albertine', *R.* 'Alister Stella Gray', *R.* 'Allgold', *R.* 'American Pillar', *R.* 'Apple Blossom', *R.* 'Ascot', *R.* 'Ballerina', *R. banksiae* 'Lutea', *R.* 'Blairii Number Two', *R.* 'Blanc Double de Coubert', *R.* 'Bleu Magenta', *R.* 'Bobbie James', *R.* 'Boule de Neige', *R.* 'Brother Cadfael', *R. brunonii* 'La Mortola', *R.* 'Buff Beauty', *R.* 'Cantabrigiensis', *R.* 'Capitaine John Ingram', *R.* 'Cardinal de Richelieu', *R.* 'Cécile Brünner', *R.* 'Céleste', *R. x centifolia* 'Cristata', *R. x centifolia* 'Muscosa', *R.* 'Chicago Peace', *R.* 'Chinatown', *R.* 'Cleopatra', *R.* 'Climbing Allgold', *R.* 'Climbing Ballerina', *R.* 'Climbing Cécile Brünner', *R.* 'Climbing Etoile de Hollande', *R.* 'Climbing Iceberg', *R.* 'Climbing Lady Hillingdon', *R.* 'Climbing New Dawn', *R.* 'Compassion', *R.* 'Complicata', *R.* 'Constance Spry', *R.* 'Cornelia', *R.* 'Crimson Shower', *R.* 'Danse de Feu', *R.* 'Dublin Bay', *R.* 'Easlea's Golden Rambler', *R.* 'Elizabeth Harkness', *R.* 'Escapade', *R.* 'Etoile de Hollande', *R.* 'Fantin Latour', *R.* 'Felicia', *R.* 'Félicité Parmentier', *R.* 'Félicité et Perpétue', *R.* 'Ferdinand Pichard', *R. filipes* 'Kiftsgate', *R.* 'Francis E. Lester', *R. x*

francofurtana, *R.* 'François Juranville', *R.* 'Freedom', *R.* 'Frau Dagmar Hartopp', *R.* 'Frühlingsgold', *R.* 'Frühlingsmorgen', *R. gallica* var. *officinalis*, *R. gallica* 'Versicolor', *R. moyesii* 'Geranium', *R.* 'Gertrude Jekyll', *R.* 'Gloire de Dijon', *R.* 'Golden Wings', *R.* 'Graham Thomas', *R.* 'Handel', *R.* 'Helen Knight', *R.* 'Highdownensis', *R.* 'Harwanna', *R.* 'Iceberg', *R.* 'Ispahan', *R.* 'Jacqueline du Pré', *R.* 'Kew Rambler', *R.* 'Königin von Dänemark', *R.* 'Korbin', *R.* 'Korpinka', *R. macrophylla* 'Master', *R.* 'Madame Alfred Carrière', *R.* 'Madame Grégoire Staechelin', *R.* 'Madame Hardy', *R.* 'Madame Isaac Pereire', *R.* 'Madame Pierre Oger', *R.* 'Madame Plantier', *R.* 'Maigold', *R.* 'Margaret Merrill', *R.* 'Marguerite Hilling', *R. mollis*, *R. moyesii* var. *fargesii* (S), *R. mulliganii*, *R. multibracteata*, *R.* 'Nevada', *R.* 'New Dawn', *R.* 'Nozomi', *R. nutkana* 'Plena', *R. x odorata* 'Mutabilis', *R.* 'Ophelia', *R.* 'Parade', *R.* 'Paul Transon', *R.* 'Paul's Himalayan Musk', *R.* 'Paul's Scarlet Climber', *R.* 'Madame A. Meilland' *R.* 'Peace', *R.* 'Penelope', *R.* 'Perle d'Or', *R. pimpinellifolia* 'Andrewsii', *R.* 'Pink Grootendorst', *R.* 'Prosperity', *R.* 'Rambling Rector', *R.* 'Reine Victoria', *R.* 'Roseraie de l'Hay', *R.* 'Rosy Cushion', *R. rubiginosa*, *R. rugosa* 'Alba', *R. rugosa* 'Rubra', *R.* 'Sanders' White Rambler', *R.* 'Sarah van Fleet', *R.* 'Scharlachglut', *R.* 'Schneezwerg', *R.* 'Seagull', *R. sericea* subsp. *omeiensis* f. *pteracantha*, *R.* 'Souvenir de Claudius Denoyel', *R.* 'Souvenir de la Malmaison', *R.* 'Summer Wine', *R.* 'Surrey', *R.* 'The Fairy', *R.* 'The Garland', *R.* 'The Queen Elizabeth', *R.* 'Trumpeter', *R. virginiana*, *R.* 'Wedding Day', *R.* 'Westerland', *R.* 'White Wings', *R.* 'William Lobb', *R. xanthina* 'Canary Bird', *R. xanthina* f. *hugonis*, *R.* 'Yesterday', *R.* 'Zéphirine Drouhin'

Prunus serrulata Lindl. *Japanese Cherry* ● m 4

A great many cultivars of flowering cherry are grown, but few produce viable seeds and none are naturalised in Berkshire. These two records are of garden outcasts. The leaf colour was particularly good in autumn 2007 after a very wet summer. Commonly cultivated forms are listed below, under ¶ *Prunus*.

West Berks: South Hinksey [50] in 1965, Cole's Pits Fernham [29] in 1987.

Prunus persica (L.) Batsch *Peach* ● m 3
Amygdalus persica L.
Persica vulgaris Miller

East Berks: not in Druce. Seedlings on rubbish tips from outcast peach stones; rare. Reading tip (1962), Smallmead tip (1971).

West Berks: South Hinksey tip [50] in 1965.

Prunus dulcis (Mill.) D.A. Webb *Almond* ● m 2
Amygdalus dulcis Miller
Prunus amygdalus Batsch

Common as a planted tree, flowering in February. The large, white flowered form is 'Macrocarpa'. There are several beautiful cultivars of flowering almonds in Silwood but they are not naturalised (see below).

East Berks: Reading [7172] in 1831 (RNG).

West Berks: Hinksey [50] in 1965. A single mature tree on Streatley [5980] High Street in February 2004.

Prunus cerasifera Ehrh. *Cherry Plum*

• m 2

Planted in hedges, plantations and motorway verges; our commonest early-flowering tree, yet it is all but invisible for most of the year. White flowered, like a very early Blackthorn, blooming in February. Commonest on the clay, uncommon on acid sands and rare on the chalk. Known by its green (not brown) first year twigs. Seldom found far away from villages or plantations. Generally seen as a single specimen in a hawthorn or blackthorn hedge, but occasionally forming dense thickets on roadsides. Seldom if ever self-sown. Under-recorded in the past, when it was overlooked as early-flowering Blackthorn.

Silwood Park: local and rare, always planted. A single plant on the west-facing wall of Southwood Halls, and another in the car park next to Unit C on the Science Park. There is a top-worked grafted weeping form in the upper bed of the Japanese Garden.

Ascot: there is a superb specimen in Sunningdale Village at the crossroads of Whitmore Lane, south of the church, which is always the first local tree into flower each spring. Ribblesdale Park, Hatchet Lane, Cranbourne, Peanut Roundabout, The Crispin, near Ascot Church. Rare in the wooded railway cutting in Sunninghill. Common along the northern boundary of Ascot Place. Beside the village green in South Ascot.

East Berks: locally frequent in hedges at Heath Lake, Bearwood College, Earley, Sandhurst, Wellington College, Barkham, Wokingham, Finchampstead, Road Research Lab, western approaches to Bracknell, Lily Hill Park, Rapley Lakes, Waltham St Lawrence, Charvil, Knowl Hill, Littlefield Green, Pudding Hill, Winter Hill, Cox Green, Maidenhead, Twyford, Stanlake, Ruscombe, Queens Arbor, Winkfield, New Lodge, Foliejon, Stag Meadow, coverts by Prince Consort Ride in Windsor Great Park, Boulter's Lock, Cookham Lock, White Waltham. Locally dominant in Cantley on the northern edge of Wokingham and by the M4 motorway south of Maidenhead. Sometimes abundant for considerable stretches of the hedgerow, as between Oakley Green and Windsor Marina and on Drift Road past High Standinghill Woods [926735]. 10% (1km²). Atlas 2000: all squares.

West Berks: not at all a common hedgerow plant in a thorough survey in February 2002. Absent from the chalk and rare on the clay. Rare by the M4 as at Reading Services [66] and by the A33 at Harwell and Milton [48]. Shrevenham [28], Buscot and frequent between Eaton Hastings and Faringdon [29], Kintbury [36], Hungerford New Town [37], Challow Station [38], Buckland Park and Stanford-in-the-Vale [39], Enborne, eastern Newbury and Greenham [46], Chieveley [47], Lockinge, East Hendred and Wantage [48] and [38], on either side of the A420 at Kingston Bagpuize, Drayton and by the A34 at Abingdon [49], Wootton, Boars Hill and Jarn Mound [40], Streatley and near The Gables railway bridge between Moulsford and Cholsey [58], Sutton Courtenay and Little Wittenham bridge [59], Stratfield Mortimer [66], Winterbrook and Wallingford [68]. Subsequently from Inkpen, Kintbury and Cold Harbour in [36] and Grove, Williams Formula One, East Hanney, Honeybottom, and Hutchins's Copse in [49]. There is a long hedge across arable land to the east of Upton Lane [617690] that is solid Cherry Plum in an otherwise flowerless landscape in February. Atlas 2000: all squares

'Atropurpurea' has whitish, pale pink flowers and bronzy leaves and is very commonly planted in new towns like Bracknell and in Army villages like Arborfield. This is the plant that Alan Mitchell used so vehemently to refer to as "Pissard's 'Orrible Plum". 'Nigra' has candy pink flowers and darker leaves. The pink flowered cultivars are locally common by the A4 between Douai Abbey and Midgham [5766] on either side of Woolhampton.

Prunus spinosa L. *Blackthorn*

m 3

One of our commonest hedgerow plants, found in woods, coppices, hedgerows and scrub in old grassland; generally abundant, but less plentiful in the heathy districts. Commonest on roadsides and in hedges of gardens and in villages, but not common in hedges in agricultural areas or on acid sands where it is replaced by Hawthorn. Flowers appearing as early as February, but always *after* the flowers of *P. cerasifera* (see above). Hawthorn (*Crataegus monogyna*) flowers much later (April-May) as its leaves are coming out. The leaves of Blackthorn are often heavily attacked by the gall mite *Eriophyes similis*, and mined by *Stigmella prunetorum* and *S. plagicolella*. The small, bright yellow-green aphid is *Aphis nasturtii* which spends the summer on potato and tomato plants. NVC: W 6,8,10,21,22,24,25

Silwood Park: very local and rare. Presumably the soils are too acidic and too dry for this species to thrive in Silwood. A single, apparently bird-sown individual, next to a fence-post perch on the edge of Pound Hill field in October 2002.

Ascot: on the edges of Railway Wood in Sunningwell Bog [932682]. Rare by the side of Charters Road, close to the school. Hedges in Sunningdale Village. Ascot Place. Sunninghill. Abundant as soon as one crosses the boundary onto the clay at New Lodge.

East Berks: abundant in hedges on the clay. Thicket-forming in mixed woodland on clay soils. 68% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Prunus x fruticans Weihe = **P. spinosa x P. domestica**

East Berks: in hedges to the east of Wokingham [829682] in August 2003; det. A.R.G. Mundell.

Prunus domestica L. *Wild Plum* o m 4

Woods, plantations and hedges; not uncommon almost always the offspring of the garden plum or damson. Always in small quantity and absent from the most acid soils. The distributions of the 3 subspecies within Berkshire have not been worked out.

Silwood Park: very local in the hedge on the footpath from the Church at Ashurst behind The Cedars beyond the gate into the graveyard. The 3 trees have been here since before 1971.

Ascot: locally abundant in the boundary hedge of the Civil Service College on Silwood Road near the entrance to the cemetery.

East Berks: Swallowfield, Bulmershe, Bisham, Winkfield, Shottesbrooke, Ashley Hill, Long Moor, Windsor, Riseley, Arborfield, Ruscombe, Cookham Dean. In villages throughout, seldom far from houses. Common on Long Lane [8875]. 6% (1km²). Atlas 2000: all except [78]

West Berks: scattered throughout but more frequent in the Thames valley in the north than in the Kennet valley in the south. Atlas 2000: all squares

Prunus domestica subsp. **domestica** *Plum*

This has spineless, sparsely pubescent twigs and a large, flattened stone.

Silwood Park: locally common at Ashurst by the track from the graveyard to Oak Mead.

East Berks: Whiteknights in 1974, Ambarrow [827630].

West Berks: Beckett Park [2589], Faringdon [2894], Carbins Wood [5668], Burnt Hill at Yattendon [5774].

Prunus domestica subsp. **insititia** (L.) Bonnier and Layens *Bullace or Damson*
Prunus insititia L.

This has densely pubescent and spiny twigs, small fruits and a less flattened stone.

East Berks: in a hedge at Reading gas works in 1979 [773737].

West Berks: Wytham [40], Bucklebury Upper Common [5369], Lower Basildon (LAN) [67].

Prunus domestica subsp. **italica** (Borkh.) Gams ex Hegi *Greengage*
Prunus italica Borkh.
Prunus insititia L. convar. *italica* (Borkh.) Dost 1

Silwood Park: in the Old Orchard, 1971-2004, self sown nearby.

This is intermediate between plum and damson. In practice it is often impossible to name the subspecies found in the wild with any degree of confidence.

Prunus avium (L.) L. *Wild Cherry*
Prunus cerasus L. var. *avium* L.

m 4

Dry oak and beech woods, coppices, not uncommon, especially on the chalk. Very common in late twentieth century woodland planting schemes, once the vogue for planting native species caught on. Typically put in wholly inappropriate places. Told (often with difficulty) from *P. cerasus* by the shape of the hypanthium: it is bowl-shaped in *P. avium* and cup-shaped in *P. cerasus*. If any of the bud scales at the base of the flowers are green and leaf like then your plant is *P. cerasus*. The leaves are often disfigured by Peach Leaf Curl *Taphrina deformans* in summer, and attacked by the leaf curl aphid *Myzus cerasi*.

NVC: W 8,10,12,14

Silwood Park: almost always as isolated, single trees; most if not all are planted. Sunninghill Crossroads, Ashurst Church, Farm Wood, Cheapside, Guinness's Bridge, Tractor Sheds, Cricket Wicket, South Lodge, Ha Ha, William Penney, Merten's Acres, Heronsbrook Meadow, East Lodge. Ray Davies had an unfortunate habit of planting 'Plena' in unnatural settings in natural habitats, where it looks totally incongruous (e.g. Wood Bank, Hell Hill Wood, Cascade Marsh, Reactor Bank). I am ashamed to say that I have not had the heart to cut them out. The blossom was magnificent in April 2002 following an early spring with no air frosts. The one-magnificent tree in the lawn outside The Reactor Block in front of The Manor House is suffering in 2006 and has two large *Ganoderma* brackets at the base in December 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	15

Ascot: very commonly planted on the roadside edges of plantation woodlands on the Crown Estates, especially near the Peanut Roundabout: conspicuous when in flower in April or May.

East Berks: Shinfield, conspicuous amongst the beeches in Park Place in the spring, Ashley Hill, Bowsey Hill, Cookham, Quarry Woods, Bisham, Swinley, Windsor Great Park. Big trees in Big Wood [837680]. Ubiquitous, but so frequently planted that it is impossible to work out native sites. 34% (1km²). Atlas 2000: all squares

West Berks: very common, with frequent large individuals, in the woods on either side of the M4 on the high ground between Reading and Newbury [57], along the A4 between Theale and Thatcham [56], around Ashampstead [57], and at Hungerford [36]. Locally abundant at West Woodhay [3963] and in Little Rivar Copse [356622]. Massive trees in ancient Ash woodland on RAF Welford [4175]. Widespread south of 85, and in the Thames valley. Rare or absent between 85 and 95. Atlas 2000: all squares

Prunus cerasus L. *Dwarf Cherry*

○ m 4

Hedges and wood margins; locally common on the chalk but always much less common than *P. avium*. Told from *P. avium* by features of the hypanthium; there are many errors in the old records. *P. cerasus* has a deep hypanthium cup- (not bowl-) shaped, parallel-sided (not constricted at opening), and fewer flowers per umbel (2-4 rather than 2-6); some of the bud scales beneath the flowers are green and leaf-like. The leaves are rounder, glossier, and *lack* the 2 red glands at the top of the petiole.

Silwood Park: three trees by the entrance to the students' allotments in Silwood Bottom were planted by Josie Harral in 2000 in defiance of the "no trees" ruling for the allotments. She was like that.

Ascot: no records.

East Berks: Rare and scattered. Wellington College, Park Place, Sandford Mill on the banks of the Loddon, Ashley Hill, Quarry Wood, Hurley, Bisham, Bowsey Hill. Bracknell, Woodley, Bisham Wood, Wellington College. Recently from Old Windsor and The Priory. <1% (1km²). Atlas 2000: [77], [86], [87], [88], [97]

West Berks: uncommon in the Northern Loop and along the Kennet valley; absent elsewhere. Kirby House and Inkpen [36], Coldridge Copse [37], Snelsmore Common [47], Marcham (**OXF**) [49], Wootton and Cumnor Hill (**OXF**) [40], Cakeball Wood on the northern edge of Greenham Common in May 2001 and Fence Wood [56], Trash Green [66], Theale and Pangbourne (**BM**) [67]. Atlas 2000: [36], [37], [47], [40], [57]

Prunus padus L. *Bird Cherry*

● m 4

Not native in Berkshire, and nowhere properly naturalised. Occasionally planted in woodland and shrubberies, and rarely in hedgerows. Often mistaken for *P. serotina* which also has flowers in elongate racemes, but *P. padus* has larger petals (> 5mm vs. < 5mm) and the sepals fall before the fruit is ripe (they persist in *P. serotina*).

Silwood Park: scattered trees, planted in various places (e.g. behind the Japanese Garden and on Garden Wood Bank). Used by the insect behaviour people for rearing Bird-Cherry/Oat aphids. Flowers well before the *P. serotina*.

Ascot: very rare. A single individual in a hedge in South Ascot, between Oliver Road and the railway bridge. Rare in the pine woodland at Englemere, apparently bird-sown rather than planted.

East Berks: planted in the landscaping at Tesco's Superstore at Martin's Heron station. Flowering 17 April 2004.

West Berks: planted in hedges and woodlands, but nowhere common. Malcolm Storey recorded the plant from the wood split by a road north of the new Thatcham development at Dunstan Park [521683] in 2006.

Prunus serotina Ehrh. *Rum Cherry*

• m 5 ↑

Commonly naturalised in woodlands on acid soils. Sometimes mis-recorded as *P. padus* because its flowers are held in long panicles. Told from it by the smooth upper surface of its leaves (*P. padus* has deeply impressed veins), later flowering, smaller petals (less than 5mm) and persistent sepals on the ripening fruit. A serious pest of woodlands in part of Europe (e.g. around Paris).

Silwood Park: a single, large tree in mixed deciduous woodland on Hell Hill at the corner of Nash's Field. A second tree on Cannon Path was rescued from the destruction of Crown Wood, Bracknell, when this was bulldozed for housing development at Martins Heron in late 1980. The tree was planted in Garden Wood on 2 October 1980, but had to be moved again, when that area was felled during the construction of the Science Park. It was planted in its present position in February 1986, and has survived drought and storms ever since. Self-sown in heathland north of the Croquet Lawn in 2000; still there in 2012 despite repeated coppicing to ground level.

Ascot: very local. Two old trees in wet grassland at the transition between oak and sallow in Sunningwell Bog [928683] in May 2002. It is not obvious why they should have been planted here, and they may be amongst the oldest of the self-sown plants.

East Berks: not recorded by Druce or Bowen. Naturalized from planted trees in Crown Wood, Swinley [8866] etc. A recent increaser; Bracknell Forest, Coral Reef, Forbes Field, Holliday Plain, Highstanding Hill, Windsor Great Park. Locally dominant in the north-eastern corner of the pine plantation just west of the Bagshot Road [883664] in May 2004. 1% (1km²). Atlas 2000: [86], [97]

West Berks: Frilford golf course [49] in 1955 (OXF), old gravel pit at Cothill [4699] in 1977, Bagley Wood [50] in 1965. Atlas 2000: [46], [49], [67].

Prunus lusitanica L. *Portugal Laurel*

• m 5

A frequent shrubby evergreen, told by its red petioles. Much planted in landscaping schemes in towns. Very rare in hedgerows in farmland.

Silwood Park: mass-planting (1987) around the new Biology Buildings and on Garden Wood Bank. In woodland at Sunninghill Crossroads, Ashurst Wood, The Church, TTC, Cannon Path, East lodge, Weir Wood and Sandyride.

East Berks: not in Druce. Forming dense evergreen thickets where planted in gardens and on the larger estates. Hedges in farmland at Clayhill Farm in Windsor Great Park [9774]. Widespread but much less frequently naturalised than *P. laurocerasus*. Rarely self-sown. 12% (1km²). Atlas 2000: all squares

West Berks: rare and scattered in the Thames valley and in the east of the region. Locally abundant in parkland, as at Welford Park [4073]. Atlas 2000: all except [36], [50], [68], [69]

Prunus laurocerasus L. *Cherry Laurel*

• m 4 ↑

Forming dense thickets to the exclusion of all other vegetation. In some areas, it is a worse problem than *Rhododendron ponticum* and often grows with it, in mixed-species, alien shrublands. Commonest as an understorey shrub in pine plantations on the Bagshot Sands. The smaller, neater, dark leaved cultivar 'Otto Luyken' is much planted in urban landscaping schemes.

Silwood Park: common and widespread in woodlands, especially close to buildings. Also planted as a fast-growing hedge to screen ugly buildings (e.g. M-Scan, Garden Wood Bank).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	27

Ascot: a serious invader in the birch woodlands that form the remnants of Sunningwell Bog in South Ascot.

East Berks: plantations often self-sown; not in Druce, occasional or rare in Bowen's time, now locally abundant. 53% (1km²). Atlas 2000: all squares

West Berks: uncommon and scattered in towns and villages, seldom far from houses. Atlas 2000: all squares

We lost a mature (15 year old) *Prunus serrula* in the lawn outside North Block which never leafed out in spring 2006, presumed to have died from Honey Fungus attack. *Malus trilobata* by Hut 7 shed its leaves in May 2006 perhaps through drought exacerbated by Honey Fungus? Replaced in a different location with a new plant in February 2009 (thriving in May 2009). In the late spring of 2009, Tai Haku and Shirotae peaked in flowering on 9 April, by which time *P. x yedoensis* was well past its peak (1 April). In front of Hamilton, the two *P. avium* 'Plena' peaked on 13 April 2009.

¶ **Prunus** *P.* 'Accolade', *P.* 'Amanogawa', *P. avium*, *P. avium* 'Merchant', *P. avium* 'Plena', *P.* 'Benden', *P. x blireana*, *P. cerasifera* 'Nigra', *P. cerasifera* 'Pissardii', *P. cerasus* 'Morello', *P.* 'Chôshû-hizakura', *P. x cistena*, *P. domestica* 'Blue Tit', *P. domestica* 'Early Laxton', *P. domestica* 'Early Victoria', *P. domestica* 'Edwards', *P. domestica* 'Imperial Gage', *P. domestica* 'Laxton's Delight', *P. domestica* 'Pershore', *P. domestica* 'Sanctus Hubertus', *P. domestica* 'Victoria', *P. dulcis*, *P. dulcis* 'Macrocarpa', *P. dulcis* 'Praecox', *P. dulcis* 'Roseoplana', *P. glandulosa* 'Sinensis', *P. incisa* 'Praecox', *P. insititia* 'Prune Damson', *P. x juddii*, *P.* 'Kanzan', *P.* 'Kiku-shidare-zakura', *P.* 'Kursar', *P. laurocerasus* 'Otto Luyken', *P. lusitanica* subsp. *azorica*, *P. mahaleb*, *P. mume*, *P.* 'Okame', *P. padus* 'Colorata', *P. padus* 'Watereri', *P.* 'Pandora', *P. pendula* 'Pendula Rosea', *P.* 'Pink Perfection', *P.* 'Pink Shell', *P. prostrata* 'Anita Kistler', *P. salicifolia*, *P. sargentii*, *P. serotina*, *P. serrula*, *P.* 'Shirofugen', *P.* 'Shirotae', *P.* 'Shôgetsu' (= *P.* 'Shimidsu Zakura'), *P.* 'Spire', *P. x subhirtella* 'Autumnalis', *P. x subhirtella* 'Autumnalis Rosea', *P.* 'Taihaku', *P. tenella* 'Fire Hill', *P. triloba* 'Multiplex', *P.* 'Ukon', *P. virginiana*, *P. x yedoensis*

Oemleria cerasiformis (Torr. & A. Gray ex Hook. & Arn.) J.W. Landon *Osoberry*
Osmaronia cerasiformis (Torrey & A. Gray ex Hook. & Arn.) E. Greene

• n 3

A very early spring (March) flowering shrub, forming dense thickets, but not spreading far beyond the original point of planting.

East Berks: Cookham Lock [9085] on a wooded island, not obviously planted; 1999.

¶ **Oemleria** *O. cerasiformis*

Cydonia oblonga Mill. *Quince* ● m 5
Pyrus cydonia L.

Silwood Park: an ancient tree overhangs the inflow stream just outside the Walled Garden.

East Berks: not in Druce. Reading (RNG) [77] in 1831. Four trees in a pit near White Waltham Church (1966). Atlas 2000: [97]

West Berks: Padworth Church [66], 4 trees in an old orchard in 1987.

¶ **Cydonia** *C. oblonga* 'Meech's Prolific', *C. oblonga* 'Vranja'

Chaenomeles speciosa (Sweet) Nakai *Japanese Quince* ● n 3
Cydonia speciosa Sweet
Cydonia japonica auct., non (Thunb.) Lindley ex Spach

East Berks: rare garden outcasts in villages. On waste ground in Whitley [7270] in 2003. 1% (1km²). Atlas 2000: [77], [88], [96], [98]

¶ **Chaenomeles** *C. speciosa* 'Geisha Girl', *C. speciosa* 'Moerloosei', *C. speciosa* 'Nivalis', *C. x superba* 'Crimson and Gold', *C. x superba* 'Knap Hill Scarlet', *C. x superba* 'Pink Lady', *C. x superba* 'Rowallane'

Pyrus pyraeaster (L.) Burgsd. *Wild Pear* ● mm 4

Hedges, etc. Genuine Wild Pear is very rare. Distributions of the 3 pear taxa have not been worked out in Berkshire. The records under *P. communis* are for the aggregate, including planted trees and trees regenerated from seeds in discarded fruit.

Pyrus pyraeaster subsp. **pyraeaster** L. has more or less glabrous leaves and globose fruits.

Silwood Park: a good collection of four wild pears was planted in the woodland behind Southwood Hall by Ted Green in 1984. The plants came from Dinton Pastures. The fruits are small and spherical, the calyx is half the width of the base of the fruit, and the straight stalk is as long as the fruit. There was a spectacular fruit crop in September 2004 which highlighted the variation in fruit size and shape from one tree to another. The biggest tree (the south-western of the four) had the classic tiny round fruits on long, cherry-like stalks; these ranged from 25mm to 30mm in diameter. The two northern trees has round fruits 30-40mm diameter, but the south-eastern tree, closest to the track, had larger, more pear-shaped fruits (40-50mm diameter). There were no fruits in September 2007.

East Berks: Dinton Pastures [7772] (1983-2004).

[**Pyrus pyraeaster** subsp. **achras** (Wallr.) Terpo] has pubescent leaves and obconical to obovoid fruits. No Berkshire records yet.

Pyrus communis L. *Pear*

● mm 4

Only distinguishable from *P. pyraster* in fruit: in *P. communis* the fruits are 'proper pears' 6cm or more (pear-shaped, rather than small (c.25mm) and round, as in *P. pyraster*). The leaves are attacked by slugworms, which are larvae of the sawfly *Caliroa cerasi*.

Silwood Park: an excellent specimen in the Arboretum below William Penney on Garrison Ridge. A few plants apparently naturalized in the graveyard hedge at Ashurst. A large tree in the vacant lot off London Road opposite Ashurst Four Acre Field.

East Berks: a large tree in Park Place between Ivy Lodge and the Boat House, with rugged bark and somewhat thorny branches. One tree near Old Windsor lock. Holyport. Hedges on nutrient rich soils, as single trees. Whiteknights Park, Woodley, Wokingham, Bracknell, White Waltham. Scattered in the centre of the region, north of 65 and south of 80 on the clay. Recently at Riseley Farm, Great Wood, White Waltham, Kenney's Farm, Foliejon Park, waste ground near the R. Thames in Maidenhead. 1% (1km²). Atlas 2000: all except [88]

West Berks: almost confined to the region east of 50, with outliers at Coxwell and Faringdon [29], Denchworth [39] and East Hanney [49]. Churn and Blewbury [58], Mortimer [66], Tilehurst [67] Atlas 2000: [29], [37], [39], [49], [56], [57], [58], [66], [67]

¶ **Pyrus** *P. calleryana* 'Chanticleer', *P. communis* 'Beth', *P. communis* 'Conference', *P. communis* 'Doyenné du Comice', *P. communis* 'Williams' Bon Chrétien', *P. pyraster*, *P. pyrifolia*, *P. pyrifolia* 'Kumoi', *P. salicifolia* 'Pendula'

Malus sylvestris (L.) Mill. *Crab Apple*

m 5

Pyrus malus L. var. *sylvestris* L.

A rare native in deciduous woodland. Almost all the Apple trees recorded are *M. domestica*. NVC: W 8,10,21

Malus domestica Borkh. *Apple*

● m 5

Malus sylvestris (L.) Miller subsp. *mitis* (Wallr.) Mansf.

Oak woods, hedges, roadsides, motorways, picnic areas, railway embankments and thickets. Common and generally distributed, wherever apple cores are thrown away. Typically in small quantity. *Malus sylvestris* is told from *M. domestica* by the possession of glabrous mature leaves, pedicels and outer calyx. Most of our apples are *M. domestica* but the distribution of the 2 taxa has not been worked out in Berkshire (if indeed it ever could be worked out). There are reputable botanists who would say that there is only one kind of apple in Britain, and that there are no really wild *M. sylvestris*. Big crops of apples tend to be borne every other year ('alternate bearing'); e.g. there was a heavy crop in 2004 and virtually nothing at all in 2005.

Silwood Park: Garrison Ridge a single tree on the track to Pond Field in 1979; over-topped and killed by the oak trees in the mid 1990s. Observatory Ridge a thicket of young trees in the north-west corner. The Oaks, Ashurst churchyard, Cheapside, Ashurst Warren, The Rookery, Silwood Lake, Reactor Bank. The Orchard at Ashurst has many cultivars including 'American Mother' which always raises a smile, but 'Cox's Orange Pippin' is the most numerous cultivar (see ¶ *Malus*, below).

Ascot: dominant on the edge of the willow carr in South Ascot village in May 2004, opposite the playing fields.

East Berks: frequent by the M4 motorway between Reading and Bray and the A329(M) between Reading and Bracknell. Occasional on all the railways (e.g. Sunningdale to Reading). 20% (1km²). Atlas 2000: all squares

West Berks: particularly common next to roadside lay-bys, as where the A338 passes beneath the M4 at Junction 14 west of Shefford Woodlands [37]. Common in both verges of the M4 motorway all the way from Membury [37] to Reading [67]. Atlas 2000: all squares

Malus x purpurea (E. Barbier) Rehder *Purple Crab* = **M. niedzwetzkvana** x **M. atrosanguinea**
Malus floribunda Siebold ex Van Houtte 'Purpurea' Barbier

Common in towns and villages as a feature tree in lawns, etc. Sometimes in wild looking hedges, but always planted.

East Berks: Fifield. With mistletoe on Upper Village Road, Sunninghill (1998-2004).

West Berks: Stanford in the Vale.

Malus hupehensis (Pampan.) Rehder *Hupeh Crab* ● m 5

A beautiful tree, with huge white flowers (4cm dia.) that cover the entire canopy in early May. In autumn, the canopy is festooned with tiny red fruits (1cm dia.) on long peduncles (4cm), that look much more like cherries than apples. Flowering in the first week of May in most years, but on 20 April in the early spring of 2002. The calyx lobes are hairy (hairless in *M. baccata*) and the young twigs are densely hairy. The leaves are large (9cm x 5cm), but less than 2 times as long as wide (more than 2 times as long in *M. baccata*).

Silwood Park: bird-sown in three places, each a long way from houses and surrounded by similar aged natural regeneration (probably dating from c.1975). Below Garrison Ridge on the track below William Penney facing Silwood Bottom. On the edge of Pound Hill Wood, beyond the Met Tower on the track facing the Disturbance Experiment. In the depths of Cascade Marsh, growing amongst *Lysichiton americanus* and *Carex pendula*; clearly bird-sown, right in the middle of the most inaccessible part of the swamp. Its enormous flowers make it conspicuous in early May, but it becomes completely invisible once the alder canopy has closed.

East Berks: in a plantation in Leighton Park [7371] in 1986.

Malus baccata (L.) Borkh. *Siberian Crab* ● m 5

Another cherry-fruited apple (like *M. hupehensis*) but not so frequently self-sown. It has relatively more elongate leaves that are glossy on the upper side, smaller flowers (3.5cm) and hairless calyx lobes.

East Berks: in the graveyard at Clewer [9577], probably planted (1997).

¶ **Malus** *M. x atrosanguinea* 'Gorgeous', *M. baccata*, *M. 'Cheal's Weeping'*, *M. coronaria* var. *dasycalyx* 'Charlottae', *M. 'Crittenden'*, *M. domestica* 'Adam's Pearmain', *M. domestica* 'Allen's Everlasting', *M. domestica* 'Arthur Turner', *M. domestica* 'Ashmead's Kernel', *M. domestica*

'Baxter's Pearmain', *M. domestica* 'Belle de Boskoop', *M. domestica* 'Blenheim Orange', *M. domestica* 'Bramley's Seedling', *M. domestica* 'Charles Ross', *M. domestica* 'Claygate Pearmain', *M. domestica* 'Cox's Orange', *M. domestica* 'Discovery', *M. domestica* 'Edward VII', *M. domestica* 'Egremont Russet', *M. domestica* 'Ellison's Orange', *M. domestica* 'Epicure', *M. domestica* 'Fortune', *M. domestica*, *M. domestica* 'Grenadier', *M. domestica* 'James Grieve', *M. domestica* 'Jupiter' (D), *M. domestica* 'Lane's Prince Albert', *M. domestica* 'Merton Charm', *M. domestica* 'Mother', *M. domestica* 'Newton Wonder', *M. domestica* 'Peasgood's Nonsuch', *M. domestica* 'Ribston Pippin', *M. domestica* 'Rosemary Russet', *M. domestica* 'Sunset', *M. domestica* 'Suntan', *M. domestica* 'Warner's King', *M. domestica* 'Winston', *M. domestica* 'Worcester Pearmain', *M. 'Evereste'*, *M. floribunda*, *M. x hartwigii* 'Katherine', *M. hupehensis*, *M. hupehensis* 'Rosea', *M. 'John Downie'*, *M. 'Pink Perfection'*, *M. prunifolia* 'Cheal's Crimson', *M. prunifolia* 'Pendula', *M. x purpurea* 'Lemoinei', *M. x purpurea* 'Neville Copeman', *M. x robusta* 'Red Sentinel', *M. x robusta* 'Red Siberian', *M. x robusta* 'Yellow Siberian', *M. 'Royal Beauty'*, *M. x schiedeckeri* 'Hillieri', *M. x schiedeckeri* 'Red Jade', *M. transitoria*, *M. trilobata*, *M. tschonoskii*, *M. 'Van Eseltine'*, *M. x zumi* 'Golden Hornet'

The Orchard at Ashurst was lovingly nurtured until the ground staff got too small in numbers to do the necessary annual pruning after about 1984. Much of the Orchard was lost when Ashurst was sold in 1986 and the Lawson's Cypress hedge planted. Subsequently, deer and rabbits have killed many of the trees. The horticultural records show that the following domestic apples were grown in Ashurst Orchard at its peak in the late 1970s: 'Adams Pearmain', 'Allington Pippin', 'American Mother', 'Annie Elizabeth', 'Beauty of Bath', 'Belle de Boskoop', 'Blenheim Orange', 'Bramley's Seedling', 'Cellini', 'Charles Ross', 'Chivers Delight', 'Cox's Orange Pippin', 'D'Arcy Spice', 'Early Victoria', 'Egremont Russet', 'Ellison's Orange', 'Gravenstein', 'Grenadier', 'Isaac Newton', 'Keswick Codlin', 'Lane's Prince Albert', 'Laxton Epicure', 'Laxton Fortune', 'Laxton Superb', 'Lord Lambourne', 'Newton Wonder', 'Norfolk Royal', 'Ontario', 'Orleans Reinette', 'Peasgood's Nonsuch', 'Red Victoria', 'Rev W. Wilks', 'Royal Jubilee', 'Saint Cecilia', 'Sterling Castle', 'Sunset', 'Tydeman's Late Orange', 'Wealthy', 'Winston', 'Winter Hawthornden', 'Worcester Pearmain'.

Sorbus domestica L. *Service-tree*

● mm 5

Possibly native in Britain, but not a component of any natural habitats in Berkshire. Very rare.

West Berks: in a hedge at Kingston Bagpuize [49] in 1966. One tree about 60 years old plus a sapling.

Sorbus aucuparia L. *Rowan*

mm 5

One of our commonest trees, in oak and birch woods on acid soils; rarely in woods on calcareous or alluvial soils (as *Pyrus aucuparia*). The leaves are mined by *Stigmella sorbi*.

NVC: H 2; W 5,8,10,14-16

Silwood Park: common in all the woodlands, and regenerating freely even in rough grass. In the verge of London Road by the telephone kiosk. Regenerating abundantly from seed in the deer and rabbit enclosure at the Rhododendrons in July 2008 (4 years after fencing)

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	2	5	23	42

East Berks: widespread, but uncommon to the north of 75. 38% (1km²). Atlas 2000: all squares

West Berks: common in the Kennet valley south of 75, but absent or rare elsewhere. Atlas 2000: all except [48]

Sorbus intermedia (Ehrh.) Pers. *Swedish Whitebeam* ● mm 5 ↑
Pyrus intermedia Ehrh.

Planted in hedges and parks as single trees; now frequently bird-sown.

Ascot: rare, self-sown on the western boundary of the Racecourse. Not in Silwood Park.

East Berks: not in Druce. Rush Court (1966), Virginia Water (1966), Whiteknights Park (1973). M4/A33 Interchange, Worton Grange, Reading, Sandhurst, West Hanworth, Great Hollands, Wildridings, Arlington Square, Bracknell Industrial Estates, Westacott Way, Ockwells Manor, Sunninghill, Sunningdale, Bray, self-sown in the middle of the big A308(M) roundabout in Bray Wick, Windsor Great Park, Windsor Castle. 4% (1km²). Atlas 2000: all except [78], [88]

West Berks: bird-sown seedlings in rather remote places like the centre of Greenham Common [46] in 1999. Prosperous House [36] in 1965, Inholmes [37] in 1965, planted at Burnt Hill, Yattendon [57] in 1986, Cole's pits Fernham [29] in 1987, Bucklebury Common [56] in 1987 and Aston Upthorpe reservoir [58] in 1988. Atlas 2000: all except [28], [37], [46], [47], [48], [40], [58], [50], [66], [67], [68]

Sorbus aria (L.) Crantz *Common Whitebeam* mm 5
Crataegus aria L.
Pyrus aria (L.) Ehrh.

Beech and oak woods, hedges, etc., common on the chalk, but absent from the heaths. Much planted in towns and villages. A very rare host of Mistletoe.
 NVC: W 8,12-14,16,21

Ascot: very local and rare. A small sapling in the roadside verge opposite Charters School, presumably as a bird-sown garden escape (April 2002). Commonly planted in Silwood Park but not regenerating.

East Berks: woods between Maidenhead Thicket and Great Marlow, very abundant near Bisham Wood, common about Park Place, and at Cookham, Crazy Hill, Ashley Hill, Bowsey Hill, Wargrave, Sonning, etc. Occasional where the Thames comes close to the chalk, as near Bisham, but rare elsewhere and practically confined to calcareous soils (except in Windsor Great Park). Recent records (including garden escapes) from Reading Station, Upper Wargrave, Remenham, Temple Coombe, Culham Court, Crazy Hill, West Hanworth, Bracknell, Savernake Park, Lily Hill Park, Knowl Hill, Brooklands, Yate's Farm, Hazelwood Copse, Hurley chalk pit, Temple Park, Stubbings, in the northern block of Maidenhead Thicket at Pinkneys Green, Dungrovehill, Inkydown Woods, Winter Hill, Quarry Wood, Dial Close, Maidenhead, Windsor Castle. A single tree, festooned with Mistletoe at Hall Place [8382] in 2002. 6% (1km²). Atlas 2000: [77], [78], [86], [87], [88], [97]

West Berks: local in the middle east, centred on Compton [5080]; absent or rare elsewhere. Inkpen, Rivar Copse and Hungerford [36], Lambourn and Chilton Foliat [37], Blowingstone Hill, Uffington and Letcombe [38], Enborne and Greenham [46], Ilsley and Lockinge [48], Tubney [40], Ashampstead, Yattendon and Bucklebury [57], Blewbury and Streatley [58], Radley and Wittenham

[59], Bagley Wood [50], Tilehurst, Basildon, Pangbourne, Bradfield and Sulham [67]. Atlas 2000: all except [28], [39], [68], [69]

Sorbus torminalis (L.) Crantz *Wild Service-tree*

mm 5

Crataegus torminalis L.

Pyrus torminalis (L.) Ehrh.

A good indicator of ancient woodland on clay; local and rare. Oak woods and hedges in small quantity, but absent from both the chalk and the acid sands.

NVC: W 5,8

Silwood Park: in the woodland garden behind Southwood Halls with other native trees like *Pyrus pyrastrer* and *Frangula alnus*. Planted there by Ted Green from local seed in 1985. The plants in the hornbeam clearing of Garden Wood were destroyed during the construction of the Science Park in 1987. Other planted individuals at Heronsbrook and Buckhurst Road.

East Berks: commonest in [87] and [88]. Not infrequent in beech woods at Park Place, Rose Hill Wood. Whiteknights Park (seedlings), Farley Hill, Whiteknights Park, West Court, Winnersh, Park Place, Waltham St Lawrence, Ashley Hill, St Leonard's. Recently at Simon's Lane [7868], Binfield [856713], Surrells Wood [822738], Lock's House [8367], Ham Bridge [8267], Wykery Copse [851686], 3 trees in Big Wood [8376 6820], Great Wood [8576], by Hawthorn Lane in Nuptown [8873], Great Thrift Wood [8778], Hazelwood Copse [8672], Wokingham [8368], Crimphill Old Windsor [9874], Gardeners Copse [8473], Warren Copse [8374], Ashley Hill [830803]. 4% (1km²). Atlas 2000: all squares

West Berks: restricted entirely to the extreme south-east, centred on Theale [6570] with an outlier at Bagley Wood [50]. Absent or rare to the west of 50. Red Hill [57], Hookend Farm [57], Silchester Common [66], Bradfield (LAN) [67], Mortimer [66], Burghfield [66], Tilehurst (RNG) [67], Sulham Wood [67]. Atlas 2000: [39], [56], [57], [50], [66], [67],

The collection of *Sorbus* in the arboretum at Silwood runs to 111 taxa.

¶ **Sorbus** *S. alnifolia*, *S. americana*, *S.* 'Apricot Lady', *S. arachnoidea*, *S. aria*, *S. aria* 'Lutescens', *S. aria* 'Majestica', *S. x arnoldiana* 'Chamois Glow', *S. x arnoldiana* 'Schouten', *S. aronioides*, *S. aucuparia* 'Apricot Lady', *S. aucuparia* 'Aspleniifolia', *S. aucuparia* 'Fastigiata', *S. aucuparia* 'Fructu Luteo', *S. aucuparia* 'Hilling's Spire', *S. aucuparia* 'Pendula', *S. aucuparia* 'Rowancroft Coral Pink', *S. aucuparia* 'Scarlet King', *S. aucuparia* 'Sheerwater Seedling', *S. aucuparia* 'Winterdown', *S. cashmiriana*, *S. chamaemespilus*, *S.* 'Chinese Lace', *S. commixta*, *S. commixta* 'Creamlace', *S. commixta* 'Embley', *S. commixta* 'Serotina', *S.* 'Coral Beauty', *S. croceocarpa*, *S. x decipiens*, *S. decora*, *S. decora* 'Grootendorst', *S. dentata*, *S. domestica*, *S.* 'Eastern Promise', *S.* 'Edwin Hillier', *S. eminens*, *S. esserteauana*, *S. folgneri* 'Lemon Drop', *S. forrestii*, *S. fruticosa* 'Koehneana', *S.* 'Ghose', *S. glabrescens*, *S. glabrescens* 'Roseoalba', *S.* 'Golden Wonder', *S. gonggashanica*, *S. gracilis*, *S. graeca*, *S.* 'Guardisman', *S. harrowiana* 'Bellona', *S. hemsleyi*, *S. x hostii*, *S. hupehensis* var. *obtusa*, *S. hupehensis* var. *obtusa* 'Rufus', *S. hupehensis* 'Pink Pagoda', *S. hupehensis* *roseoalba*, *S. hybrida* 'Gibbsii', *S. insignis*, *S. intermedia* 'Brouwers', *S.* 'Joseph Rock', *S. x kewensis*, *S.* 'Kirsten Pink', *S. latifolia*, *S. laxiflora*, *S.* 'Leonard Messel', *S.* 'Leonard Springer', *S. leyana*, *S. lingshiensis*, *S. matsumurana*, *S. megalocarpa*, *S. meliosmifolia*, *S. microphylla*, *S.* 'Molly Sanderson', *S. monbeigii* 'McLaren', *S. mougeotii*, *S. obtusa* *aureus*, *S. pogonopetala*, *S. porrigentiformis*, *S. poterifolia*, *S. prattii*, *S. pseudovilmorinii*, *S. randaiensis*, *S. reducta*, *S. reducta*, *S. rehderiana* 'Pink Pearl', *S. reticulata* subsp. *pekinensis*, *S. rinzenii*, *S. sargentiana*, *S.* 'Savill Orange', *S. scalaris*, *S.* 'Schouten', *S. setschwanensis*, *S.* 'Signalman', *S. sinensis*, *S.* 'Sunshine', *S.*

thibetica ‘John Mitchell’, *S. x thuringiaca*, *S. x thuringiaca* ‘Fastigiata’, *S. torminalis*, *S.* ‘Tundra’, *S. ursina*, *S. x vagensis*, *S. vestita*, *S. vexans*, *S. vilmorinii*, *S. wardii*, *S.* ‘White Wax’, *S.* ‘Wilfrid Fox’, *S. willmottiana*, *S. wilsoniana*, *S.* ‘Winter Cheer’

¶ **Aronia** *A. arbutifolia*, *A. x prunifolia*, *A. melanocarpa*

¶ **Eriobotrya** *E. japonica*

Amelanchier lamarckii F.G. Schroed. *Juneberry*

• m 4 ↑

Amelanchier canadensis auct., non (L.) Medikus

Amelanchier grandiflora auct., non Rehder

Amelanchier confusa sensu Dandy et auct., non N. Hylander

Woods and plantations on acid soils; a real increaser. Not in Druce, “very local, increasing” in Bowen, now widespread and locally common. Flowering briefly but spectacularly and with good autumn colour.

Silwood Park: regenerates freely from seed, even in the dense shade of the understorey. Common in woodland and scrub at Water Meadow, Japanese Garden, Croquet Lawn, Heronsbrook, The Heath. Also widely planted in thickets; e.g. opposite Flower Halls and next to the corner of the Technology Transfer Centre. Self-sown below a bird perch inside the rabbit enclosure on Guinness’s Slope.

Ascot: common in acid woods. First record from a wood between Ascot and Bracknell (**RNG**) in 1915. Tower Hill, Englemere, Coronation Road, South Ascot, Charters Road, Sunningdale Village.

East Berks: Whiteknights Park (1967), Wellington College (1963), Heath Lake (1965 and 2000), Ashley Hill (1966), Sandhurst (1963), between Ascot and Bracknell (1915), Broadmoor (1970), Nine Mile Ride in Crowthorne (1984) and Coppid Beech Roundabout (1986). Finchampstead (1999), Hurst (2002). Atlas 2000: all squares

West Berks: Inholmes [37] in 1963, Ufton Park (**RNG**) [66] from 1961-86, Snelsmore Common [47] in 1974, Padworth Common [66] in 1984. Atlas 2000: [56], [66]

¶ **Photinia** *P. davidiana*, *P. davidiana* ‘Palette’, *P. x fraseri* ‘Red Robin’, *P. x fraseri* ‘Robusta’, *P. x fraseri* ‘Rubens’, *P. glabra* ‘Parfait’, *P.* ‘Redstart’, *P. serratifolia*, *P. villosa*

Cotoneaster is a huge genus of ornamental shrubs, with 54 species given in Bean as hardy in the British Isles, and 68 species listed in Stace, with over 200 taxa listed for sale in the 2001 edition of the *Plant Finder*. Rumsey Gardens of Waterlooville hold the National Collection and offer more cultivars for sale than anyone else. They are hard to identify because, to use the keys, you need flowers and ripe fruits simultaneously. Once the taxa are known, however, they can be told apart by the jizz of the

leaves, but this requires a level of commitment with which few are blessed. A handful of species are genuinely naturalised (e.g. *C. simonsii*, *C. horizontalis*), but most occur as planted individuals by roads or in landscaping schemes, and as rare, bird-sown casuals close to these parents. Here are the commonest planted cultivars, ranked by the number of nurseries that sell them:

<i>frigidus</i> 'Cornubia'	40
<i>franchetii</i>	29
<i>dammeri</i>	26
<i>atropurpureus</i> 'Variegatus'	25
<i>salicifolius</i> 'Pendulus'	25
<i>salicifolius</i> 'Exburyensis'	22
<i>conspicuus</i> 'Decorus'	21
<i>salicifolius</i> 'Rothchildianus'	21
<i>lacteus</i>	20
<i>microphyllus</i>	20
<i>simonsii</i>	20
<i>cochleatus</i>	18
<i>congestus</i>	18
<i>integrifolius</i>	18
<i>salicifolius</i> 'Gnom'	18
x <i>suecicus</i> 'Skogholm'	16
<i>bullatus</i>	15
<i>salicifolius</i> 'Repens'	14
'Herbstfeuer'	12
<i>procumbens</i>	12
x <i>watereri</i>	12
<i>adpressus</i>	10
<i>divaricatus</i>	8
<i>dielsianus</i>	3

Cotoneaster frigidus Wall. ex Lindl. *Tree Cotoneaster* ● m 6
Cotoneaster affinis auct., non Lindley

Introduced in plantations on motorway verges. Much the largest of the Cotoneasters. Some records may refer to *C. x watereri* from which it is told by its broader, smoother leaves and smaller fruits (see below).

Silwood Park: several mature plants but no seedlings.

East Berks: not in Druce. In a roadside verge at Sonning (1966).

West Berks: Bagley Wood [50] in 1964, Upton Lodge [58] in 1978. Bird-sown by the road along the northern rim of Greenham Common [510648] in September 2001.

Cotoneaster x watereri Exell *Waterer's Cotoneaster* = **C. frigidus x C. salicifolius** ● m 6

The semi-evergreen leaves have strongly impressed veins on the upper surface and the fruits are larger than in either parent.

Not in Druce or Bowen but common in Surrey (Leslie, 1987) and London (Kent 2000).

Cotoneaster salicifolius Franch. *Willow-leaved Cotoneaster* ● m 6 ↑

Not in Druce or Bowen but common in Surrey (Leslie, 1987) and London (Kent 2000).

Silwood Park: the yellow berried 'Rothchildianus' is commonly planted and self-sown around Immunology and the Student Residences.

West Berks: self-sown in John Killick's garden in Abingdon.

Cotoneaster 'Hybridus Pendulus' = **C. salicifolius x C. dammeri** *Weeping Cotoneaster* ● m 6

The glossy leaves have impressed veins on their upper surface, the fruits (on our plant) were in 9's and the fruits contained 5 stones.

East Berks: on waste ground in Bracknell [8569] on 4 October 2003.

Cotoneaster dammeri C.K. Schneid. *Bearberry Cotoneaster* ● n 5
Cotoneaster humifusus Duthie ex J.H. Veitch

Much used as ground-cover on industrial parks and office developments. The fruits have 5 stones.

Silwood Park: locally dominant in shrub beds on the Science Park. It occasionally self-seeds in paving cracks etc.

East Berks: on waste ground in Bracknell [8569] in October 2003.

West Berks: on waste ground in central Abingdon [4997] in 2002 and near Didcot power station [5191] in 2004.

Cotoneaster 'Coral Beauty'

• n 5

Dense, mound-forming bush with profuse, orange fruits with 3 or 4 stones. Often used for ground cover.

Silwood Park: mass-planted in June 2002 in the new bed on the edge of the Science Park car park by East Lodge.

Cotoneaster lacteus W.W. Sm. *Late Cotoneaster*

• n 5

The commonest of the evergreen species with medium-sized leaves to be self-sown (3.5-9cm, tomentose, often rusty brown, below). Not in Druce or Bowen but common in Surrey (Leslie, 1987)

Ascot: a well grown plant on the trackbed at the eastern end of the abandoned Platform 4 at Ascot Station, growing with a self-sown forest of 7-year-old Scots Pines, in February 2002. Also self-sown at Broomhall, Sunningdale.

Cotoneaster conspicuus C. Marquand *Tibetan Cotoneaster*

• n 5

This is a small-leaved, mound-forming species often used in landscaping schemes.

West Berks: on waste ground in Abingdon [4998] in July 2002.

Cotoneaster integrifolius (Roxb.) G. Klotz *Entire-leaved Cotoneaster*

• n 5

Crataegus integrifolia Roxb.

Cotoneaster microphyllus Lodd., non Wallich ex Lindley

Cotoneaster thymifolius Wallich ex Lindley

Told from *C. microphyllus* by its bigger leaves 7-15mm (not 5-12mm) and 1-flowered (not 1-5 flowered) inflorescence. Fruit with 2 stones and white flowers 11mm across.

Silwood Park: self sown by the cold frames at the Horticultural Greenhouses, probably from parent bushes in the hedge opposite Drive Field (2001-07).

East Berks: Reading, Windsor (2000). 1% (1km²).

Cotoneaster horizontalis Decne. *Wall Cotoneaster*

• n 5

Introduced on garden walls; one of the most frequently self-sown species on waste ground, railways, etc. Common in suburban areas on and below old walls, in pavement cracks, etc.

Ascot: self-sown on waste ground at Ascot Station carpark in 2002. Dwarfed plants in cracks in a busy tarmac road on Upper Village Road in Sunninghill, 1992-2007. Locally, on the banks of the stream [919708] that runs by the northern end of New Road opposite Ascot Place (2000-2007).

East Berks: Wargrave (1966), Finchampstead Church (1966 and 2002). Remenham (1969), Sandhurst (1987). Recently, it has been found in most of the urban 1km squares surveyed. 20% (1km²). Atlas 2000: all squares

West Berks: Dry Sandford [45] in 1966, Abingdon [49] in 1976, Sparsholt Church [38], Ashbury [28] in 1988. Self-seeding freely at Godstow Lock [40] in September 2002. Now common on old walls in villages throughout. Atlas 2000: all squares

Cotoneaster divaricatus Rehder and E.H. Wilson *Spreading Cotoneaster* ● n 5

Not in Druce or Bowen but recorded in Surrey (Leslie, 1987) and London (Kent 2000).

Silwood Park: self-sown on the Science Park.

Cotoneaster simonsii Baker *Himalayan Cotoneaster* ● n 5 ↑

A common bird-sown alien, this is the second most frequently naturalized Cotoneaster (after *C. horizontalis*). Introduced on waste ground and plantations; local but increasing. Invasive of heathland in northern Britain (e.g. Rum National Nature Reserve), so it should be watched closely on our heathland reserves.

Silwood Park: self-sown beneath the east-facing wall of the churchyard at Ashurst, and growing intertwined with *C. horizontalis* further along the path towards The Cedars. A large bush, self sown at the base of the kitchen wall outside Virginia Water Lodge. Self-sown in the garden of South Lodge.

Ascot: first recorded from the churchyard at South Ascot in 1979 (still there in 2004 where it is regenerating beneath the church walls and in all the surrounding hedgerows). Recently at The Orangery, Tower Hill, Fernbank Road, Woodlands Ride, Coronation Road, Platform 4 at Ascot Station, Kings Beeches, Upper Village Road and Bridge Road Sunninghill, Sunningdale. Self sown on ruined walls at Frognall [940681] in September 2005.

East Berks: not in Druce. Leighton Park, Bearwood. High Wood, Bulmershe (1970, still there in 2002), Dinton Pastures (1986), Wellington College (1986), Finchampstead Church (2002). Recently at Three Mile Cross, Riseley, Shinfield, Farley Court, Newlands, Eversley Bridge, Bearwood, Coppid Hill, Roundhill, Finchampstead, Limmerhill, West Whitley, throughout Reading, Winnersh, Charvil, Wargrave, Remenham, Temple Court, Wokingham, Simons Wood, Heath Pond, Crowthorne, throughout Bracknell, College Town, Knowl Hill, Shottesbrooke, Binfield, Paley Street, Touchen End, Cox Green, Warfield, Little Foxley, Winkfield Row, Bray Wick, Hurley, Bisham, Pinkneys Green, Furze Platt, throughout Maidenhead, Cookham, Winkfield, Squirrels, St Leonard's Hill, Dedworth, Frogmore, Windsor Castle, Old Windsor. 20% (1km²). Atlas 2000: all squares

West Berks: Compton Beauchamp [28], Cole's Pits Fernham [29], Inkpen Common [36], Inholmes [37], East Shefford [37], Newbury [46], Lockinge [48], Cothill pit and Abingdon [49], Youlbury and Boars Hill [40], Brimpton Common [56], Aston Tirrold, Blewbury and Streatley [58], Sutton Courtenay and Radley [59]. Atlas 2000: all except [39], [47], [57]

Cotoneaster dielsianus E. Pritz. ex Diels *Diels' Cotoneaster* ● m 6

Not in Druce or Bowen but common in Surrey (Leslie, 1987) and London (Kent 2000).

West Berks: self-sown in John Killick's garden in Abingdon [49].

Cotoneaster franchetii Bois *Franchet's Cotoneaster* ● m 6 ↑

Cotoneaster wardii hort., non W. Smith

Not in Druce or Bowen but common in Surrey (Leslie 1987) and London (Kent 2000).

West Berks: self-sown in John Killick's garden in Abingdon [49].

Cotoneaster ascendens Flinck & B. Hylmö *Ascending Cotoneaster*
Cotoneaster horizontalis Decne. var. *wilsonii* Havemeyer ex E. Wilson

• m 6

West Berks: self-sown in John Killick's garden in Abingdon [49].

Other species, recorded by Kent (2000) as self-sown in London (v.c.21), but not yet found in Berkshire include **C. bacillaris** Wall. ex Lindl., **C. hjelmqvistii** Flink and Hylmö., **C. ignotus** Klotz., **C. insignis** Pojark, **C. marginatus** (Loudon) Schldl., **C. mucronatus** Franch., **C. nitens** Rehder and E. Wilson, **C. obtusus** Wall. ex Lindl., **C. pannosus** Fanch., **C. turbinatus** Craib., and **C. villosus** (Rehder and E. Wilson) Flink and Hylmö. These species are worth looking out for.

Pyracantha coccinea M. Roem. *Firethorn*

• m 5 ↑

A very common garden plant, often used in municipal shrubberies on account of its tough, spiny stems. Often bird-sown on waste ground in towns and villages, but seldom far from houses. The yellow berried form is frequent in gardens, and is self-sown in a few places. The Firethorn Leafminer *Phyllonorycter leucographella* is an alien insect, established in Britain since the early 1990s and studied at Silwood (along with Knopper gall on oak) as part of the government-sponsored alien insect project; it is less common in Berkshire than in adjacent parts of London where it sometimes defoliates entire plants.

Silwood Park: planted on the walls of the Manor House and self-sown on beds nearby.

Ascot: Heatherwood hospital, Ascot Station, Sunninghill, Sunningdale, South Ascot. Occasional in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007.

East Berks: not in Druce or Bowen but common in Surrey (Leslie, 1987). Recently at Lambs Lane, Spencer's Wood, Riseley, Mill house, West Reading, Coley, Whitley, Shinfield, Upperwood Farm, Lower Earley, Newlands Farm, Eversley Bridge, Bearwood, Wheatlands, Warrens Lodge, Dole Hill, Limmerhill, Childs Hall, Bulmershe, Sutton's seeds, Sonning, Winnersh, Douglas Farm, Wargrave, Blackwater, Ravensworth, Crowthorne, Popeswood, Wildridings, Arlington Square, Savernake Park, Ashridge, Kiln Green Lane, Old Malt House, Binfield Park, Woodlands Park, Little Lowbrook Farm, Cox Green, Harvest Hill, Little Foxley, Winkfield Row, Burchett's Green, Maidenhead, Hillgrove Wood, Cookham Rise, Cookham, Thames Lock, Bray Court, Kimbersfarm, St Leonard's, West Dedworth, Hogg Common, The Goswells, Old Windsor. 12% (1km²). Atlas 2000: all squares

West Berks: waste ground on the industrial estate at Faringdon [2895] and by the canal in central Newbury [4767] in July 2002. Atlas 2000: [28], [29], [36], [37], [49], [56], [50], [67]

¶ **Pyracantha** *P. coccinea* 'Red Column', *P.* 'Golden Charmer', *P.* 'Mohave', *P.* 'Orange Glow', *P.* 'Soleil d'Or', *P.* 'Sparkler', *P.* 'Teton', *P. rogersiana*

Mespilus germanica L. *Medlar*

• m 5

Hedges, very rare. Mostly planted in orchards (as *Pyrus germanica*). Reported extinct by Bowen.

West Berks: recorded by J. Lousley in Hampstead Norreys [57] and Purley [67] in 1839. At Arborfield Court [76] in 1975 and Theale [67] in 1987, both clearly planted.

¶ **Mespilus** *M. germanica* ‘Nottingham’

X Crataemespilus grandiflora (Sm.) E.G. Camus *Haw-medlar* ● m 5
Mespilus x *grandiflora* Smith
X Crataegomespilus grandiflora (Smith) Bean

East Berks: in a hedge in Warfield Park [870715] in 1966.

Crataegus crus-galli L. *Cockspurthorn* ● m 5

West Berks: not in Druce. Planted by motorways. Perhaps an error for *C. persimilis*. South Hinksey [50] in 1965, Boxford (RNG) [47] in 1985, both probably planted.

Crataegus x lavallei Héringq ex Lav.
= **C. pubescens** x **C. crus-galli** *Hybrid Cockspur Hawthorn* ● m 6

Easy to recognise by its large unlobed leaves (to 11cm), which are hairy on the veins beneath (unlike *C. crus-galli*), and its big (1.6-1.9cm dia.), persistent fruits that stay on the bush well into winter. There are very few thorns on our plant.

Ascot: very rare, in a hedge in South Ascot, by the corner of Oliver Road 1970-2004.

Crataegus persimilis Sarg. *Broad-leaved Cockspurthorn* ● m 5

Crataegus crus-galli L. ‘Splendens’ hort.
Mespilus prunifolia Poirlet, non Marshall
Crataegus prunifolia Pers., non (Marshall) Baumg.

Silwood Park: much planted on the Science Park, and self-sown in a few places.

East Berks: not in Druce or Bowen but occasional in Surrey as *C. prunifolia* (Leslie, 1987).

Crataegus monogyna Jacq. *Hawthorn* m 5
Crataegus laciniata Ucria

Hedges, woods, thickets, parks, etc. Abundant and generally distributed, “Very handsome thorns are to be found in Windsor Park. The Glastonbury Thorn is said to grow about Reading and is interesting in the fact that a few blossoms are put forth about Christmas time” (Druce). The commonest hedging plant in agricultural districts, often the only woody species in the hedge. The leaves are mined by *Stigmella* (6 spp.), spotted with pustulate pin galls of the mite *Eriophyes similis*, with leaf margins rolled by the mite *E. goniothorax*. The pinkish-grey aphids in crumpled leaf galls in spring belong to a complex of species in the genus *Dysaphis*.

NVC: CG 3-5; W 1,4-6,8,10,12,13,16,21,24,25

Silwood Park: very common in woodland, and invasive of grassland once rabbit grazing is relaxed as in the enclosures in Nash’s Field erected in 1996 (but not in the enclosures on Nash’s Slope erected in 1989).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	1	7	11	46

East Berks: 92% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Crataegus x media Bechst. = **C. monogyna x C. laevigata**
Crataegus x macrocarpa auct., non Hegetschw.

East Berks: Whiteknights Wilderness in 1986.

West Berks: Wytham [40] in 1918, Radley [59] in 1918, Theale (LAN) [67] in 1961.

Crataegus laevigata (Poir.) DC. *Midland Hawthorn* m 5
Mespilus laevigata Poiret
Crataegus oxyacanthoides Thuill.

Hedges, woods, thickets, parks. Druce said “plentifully in all the districts” but Bowen thought it “in very small quantity in hedges”. It is not clear whether Druce was exaggerating, or whether the plant has declined dramatically. In any case, it is extremely uncommon now. It usually has 2 or 3 styles and fruits with 2 or 3 stones, and leaves with upswept, less divided bases than hawthorn (3 lobes rather than 5).

NVC: W 5,8,10,21

Ascot: no recent records.

East Berks: rare and scattered, recently at Hall Farm [7468], Arborfield, Ruscombe, Ashley Hill, Waltham, Bray, Stubbing’s Heath, Windsor. Bearwood, Ascot, Whiteknights Park, Windsor Great Park. Janet Welsh found the plants at [826701] on 11 May 2006. 1% (1km²). Atlas 2000: [76], [77], [87], [88], [96], [97]

West Berks: essentially confined to the Thames valley and common only in the Northern Loop. Faringdon Park [29], Kintbury [36], Stanford-in-the-Vale and Pucketty Farm [39], Priors Court [47], Harwell [48], Steventon Wood [49], Eaton, Appleton Lower Common, Long Copse Cumnor, Filchampstead, Wytham Wood and Youlbury [40], Lowbury and Streatley [58], Didcot, Shillingford and Little Wittenham Wood [59], Bagley Wood [50], Basildon [67]. Atlas 2000: all except [36], [46], [47], [56], [66], [68]

¶ **Crataegus** *C. crus-galli*, *C. laciniata*, *C. laevigata* ‘Paul’s Scarlet’, *C. x lavalleyi* ‘Carrierei’, *C. persimilis* ‘Prunifolia’

MIMOSACEAE

Acacia melanoxylon R. Br. *Australian Blackwood* ● mm 6

East Berks: a garden outcast, fly-tipped with other rubbish on Ascot Racecourse in 1989. It did not survive the winter.

CAESALPINIACEAE

Cercis siliquastrum L. *Judas Tree* ● m 5

A beautiful garden plant with purple pea-flowers; rather frost sensitive and spoiled in many years. Especially good in the frost free spring of 2002.

East Berks: very rare in a hedge at Braywoodside on 2 May 2002.

¶ **Cercis** *C. canadensis* 'Forest Pansy', *C. siliquastrum*

Gleditsia triacanthos L. *Honey Locust* ● m 5

A golden, pinnate-leaved small tree that is occasionally planted, but very rare away from gardens.

Ascot: self-sown in paving near the Carpenters Arms on Upper Village Road in Sunninghill; 2001.

East Berks: in a hedge at Knowl Hill in 1999.

¶ **Gleditsia** *G. triacanthos* 'Sunburst'

¶ **Gymnocladus** *G. dioica*

FABACEAE

Lens culinaris Medik. *Lentil* ● th 6

East Berks: on tips, as a culinary throw-out. Windsor, Camberley.

Vigna radiata (L.) Wilczek *Mung-bean* ● th 6

West Berks: as bean sprouts, culinary throw-outs on rubbish tips; Newbury.

¶ **Indigofera** *I. amblyantha*, *I. heterantha*

¶ **Parochetus** *P. africanus*, *P. communis*

¶ **Piptanthus** *P. nepalensis*

Wisteria floribunda (Willd.) DC *Japanese Wisteria* ● n 4

The plant on the south-facing side of Silwood Manor House was truly spectacular in flower in the very early and frost-free spring of 2007, peaking in magnificence on April 23. In the cooler spring of 2008 it was not in full flower until 15 May.

Silwood Park: growing right to the top of the canopy of an Ash tree by the Cheapside Footpath at Silwood Farm. Clearly planted, but very natural-looking now.

¶ **Wisteria** *W. floribunda* 'Alba', *W. floribunda* 'Multijuga', *W. x formosa* 'Kokuryû', *W. sinensis*, *W. sinensis* 'Alba'

¶ **Sophora** *S. japonica*, *S. microphylla*, *S. tetraptera*

Cicer arietinum L. *Chick Pea* ● th 6

Silwood Park: discovered in Oak Mead in cultivated ground; 2 large plants flowering on 6 July 1996 on ground that had been fumigated with methyl bromide and fenced against rabbits. When the seeds ripened, they were cached by woodmice, directly beneath the plants; 1 September 1996. Origin unknown, but perhaps introduced with horse feed during the previous winter? Not seen since.

East Berks: no other records.

West Berks: no records.

Pisum sativum L. *Garden Pea* ● th 6

Grown occasionally as an arable crop, and volunteers and recruits from spilled seed are found from time to time throughout the arable areas of the county.

East Berks: Woodley tip [7774] in 1971. A common crop around Waltham St Lawrence in June 2002.

West Berks: Sutton Courtenay [59] in 1913, Frilshal chalk pit [5570] in 1942, Didcot tip [5090] in 1965, Battle Farm tip [6974] in 1969.

¶ **Pisum** Pod peas without leaflets, including 'Bikini' and 'Novella'; Mange tout peas with flat pods like 'Oregon Sugar Pod'; Mange tout with swollen pods like 'Sugar Snap' and conventional pod peas including 'Waverex', 'Little Marvel' and 'Hurst Beagle'.

Trigonella foenum-graecum L. *Fenugreek* ● th 6

Used by organic growers as a winter-grown green manure and weed suppressant which is dug into the soil in the spring. A rare but increasing garden escape.

West Berks: Bird-seed alien at Didcot [5190] in 1897 and grown as a crop plant at Bradfield [589722] in 1988 (RNG).

¶ **Trigonella** *T. caerulea*, *T. foenum-graecum*

Phaseolus coccineus L. *Runner Bean* ● th 6

East Berks: on Woodley tip [7774] in 1971 and seedlings at Smallmead tip [7070] in 1988.

¶ **Phaseolus vulgaris** L. *French Bean*, and **Phaseolus coccineus** L. *Runner Bean* grown on the student allotments and formerly in Drive Field.

Scorpiurus muricatus L. *Caterpillar-plant* ● th 6

West Berks: As a garden weed at 51 Rectory Close Newbury [4766] in 1971.

Scorpiurus vermiculatus L. ● th 6

West Berks: A bird-seed alien in a garden in Cholsey [5886] in 1962 (det. C.J. Cadbury).

Robinia pseudoacacia L. *False-acacia* ● mm 6 ↑

Plantations and hedges in small quantity; there is a specimen 23m x 5.1m at Frogmore. Suckering freely to produce large thickets around planted individuals. In Central Europe it is a pernicious invader, and can be a major conservation problem in woodlands, taking over completely from the native trees and forming an entire canopy and shrub layer. This species needs to be watched carefully in Berkshire, and removed at once from conservation woodlands. An occasional host for Mistletoe, as on the edge of the car park of the *Bird in Hand* by the A4 at Knowl Hill, where there were 5 big Mistletoes in 2001.

Silwood Park: a large tree in Garden Wood, next to the giant Monkey Puzzle, was felled in clearing for the new Biology Buildings in 1987. Suckers from the felled tree survived in the heather bed, but were grubbed out in 1994. North Gravel, several mature trees (up to 93cm bgh in October 1979), suckering freely opposite CIBC greenhouses. A tree at Sandyride (now Princes Gate) with mistletoe in its canopy in 1972 is now gone. Currently at Sunninghill Crossroads, Ashurst Warren, Ashurst, Weir Wood, Buckhurst Road, Science Park and Cannon Crossroads, mainly in boundary woodlands. A single seedling uprooted from the gravel beds at Ashurst Rabbit Enclosure on 18 September 2008.

Ascot: suckering freely on the edge of Ascot Station car park, and by Platform 1 (1979-2004). Forming an avenue leading to Index House, off St George's Lane in Ascot. Self-sown on bare sand on a construction site on Dry Arch Road on 2 August 2004.

East Berks: not in Druce. Common, except on the chalk. 19% (1km²). Atlas 2000: all except [78]

West Berks: not in Druce. Formerly scattered and rare, more or less confined to the Thames valley, with a hotspot south of Didcot [58], but now widespread. Atlas 2000: all except [37], [47], [57], [66]

¶ **Robinia** *R. hispida*, *R. hispida* 'Rosea', *R. x margaretta* 'Pink Cascade', *R. pseudoacacia* 'Bessoniana', *R. pseudoacacia* 'Frisia', *R. pseudoacacia* 'Tortuosa', *R. x slavinii* 'Hillieri'

Galega officinalis L. *Goat's-rue*

• hp 6

A cottage garden plant, sometimes grown in herbaceous borders and occasionally found as an outcast on roadsides, waste ground and rubbish tips; rare in Druce's time, now much commoner. It also self-seeds and can form a large seed bank, so that it can be locally dominant for a year or two following soil disturbance. Soon out-competed by perennial grasses.

Silwood Park: a few stragglers at East Lodge on 4 July 1982, but long persistent in disturbed ground by the Greenhouses (1979-2004). Occasional on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003; there were 10 plants by May 2004.

Ascot: locally frequent on dumped soil at the wooded edge of South Ascot playing fields during levelling operations in July 2001 [920677]; still common in July 2005, May 2006, August 2007 and May 2008. White-flowered plants in the verge at the end of Elizabeth Gardens in South Ascot [927678] in 2002. Very rare on disturbed ground not yet grassed over following the construction of the new Racecourse at southern corner of New Mile Road [926690] on 15 September 2006.

East Berks: not in Druce. Finchampstead (1917), Cookham pit (1958), Reading (RNG) in 1961, Twyford Mill (1966), Windsor (1966). Recently at Fobney, Rivermead, Reading Station, Earley, on waste ground between Tesco and the railway in Reading [725737] in 2002, M4/A329M Interchange, Camberley, Broadmoor, Devil's Highway, Wokingham, Amen Corner, Binfield Park Hospital, Maidens Green, Prospect Hill, Furze Platt, Charters Road, South Coworth, Kimbersfarm, Queen's Eyt, Pennyroyal Field at Bray, Cranbourne, Forest Lodge, by the R. Thames in Maidenhead. On

newly landscaped roadside banks at Quelm Park in Bracknell (2000-04). 4% (1km²). Atlas 2000: [77], [86], [87], [88], [96], [97], [98]

West Berks: Tilehurst [67] in 1962, Cumnor Hill [40] in 1963, East Hagbourne [58] and Benson Loch [69] in 1966, Pangbourne Station [67] in 1967, Speen [46] in 1974, Theale [66] in 1983 and Pingewood tip [66] in 1986. On the remnants of Abingdon Abbey [4997], by the roundabout at Chilton [4886] and by the railway at Newbury [4766] in July 2002. Common throughout the Reading Lake District [67] in 2005. Atlas 2000: [28], [46], [58], [59], [66], [67], [69]

¶ **Galega** *G. bicolor*, *G. x hartlandii* 'Alba', *G. officinalis*, *G. officinalis* 'Alba', *G. officinalis* var. *compacta*, *G. orientalis*

Colutea arborescens L. *Bladder-senna* ● m 5

Railway embankments and rubbish tips; rare. Known by its transparent, inflated, bladder-like fruits.

Silwood Park: the old shrub by the door into the Table Tennis room sets good seeds each year, but has yet to produce any seedlings.

East Berks: not in Druce. Reading (1959), Maidenhead tip (1960), Warfield (1963), Battle Farm tip (1965), Smallmead tip (1972). Recently on waste ground at Whitley [7270] in 2003.

West Berks: a single record from a grass track near Knighton Bushes [301822] in 1960.

¶ **Colutea** *C. arborescens*

¶ **Caragana** *C. arborescens* 'Lorbergii'

Arachis hypogaea L. *Ground-nut* ● th 9

Known by its leaves which have two pairs of large leaflets, and no tendrils.

Ascot: local and rare. A single plant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: rare in a maize crop, east of Wokingham [828684] in August 2003 (herb. A.R.G. Mundell).

Astragalus danicus Retz. *Purple Milk-vetch* hp 5 †

Chalk grassland; always very rare in Berkshire, now extinct.

West Berks: between West Ilsley and Catmore Wood in 1894 and at Gore Hill [490835] in 1931 (OXF).

Astragalus glycyphyllos L. *Wild Liquorice* hp 7 ↓

By roadsides and under hedges, calcareous fields and grasslands, thickets and scrub on calcareous soil; local in the drier parts of the county and usually in small quantity.

East Berks: between Twyford and Reading (1805), Woodley (1962), Sonning (1800 and 1963), Wargrave. Bisham Wood (1962). Atlas 2000: [77], [88]

West Berks: local and rare. Pusey [35], Bagnor [47], Marcham [49], Tubney Wood, Wytham Wood, Rockley Copse and Cumnor [40], Cholsey and Streatley [58], North Farm [5892] in 1987, Bagley Wood in 1981 and South Hinksey in 1974 [50], Chilswell path [501037] in 2001, Sulham Woods (LAN) [67]. Along the footpath near Brightwell Barrow [582914] in profusion on 20 August 2003. Atlas 2000: [49], [40], [58], [59], [50], [67]

Glycyrrhiza echinata L. *German Liquorice* ● th 6 †

West Berks: casual on rubbish heaps on waste ground at Grandpont [50] pre-1897.

Onobrychis viciifolia Scop. *Sainfoin* hp 5 ↓ & ● hp 5 ↑

Short, dry calcareous grassland, sown fields, roadsides, railway banks and waste ground; possibly native on the chalk, but formerly cultivated and often escaping. Much sown on motorway verges in the 1980s (e.g. on stretches of the M4 and on the Newbury bypass), making conspicuous splashes of red in spring time. A common ingredient of wildflower mixtures used in landscaping schemes. NVC: CG 2,3

Silwood Park: sown in October 1991 into fenced, cultivated ground in Nash's Field Blocks G, H and J (the "Tilman Experiment"). The first flowering plants were recorded in all Blocks on 26 May 1993. Numbers subsequently declined but plants were still present in May 1998 growing with *Tanacetum vulgare* and *Silene dioica* (but only on the plots originally sown; there had been no invasion of adjacent plots that had been sown originally with grasses); still flowering in October 2001. The same populations were confined to Block H by May 2002.

East Berks: possibly native in chalk grassland at Wargrave, Hurley, Aston, Bisham, Twyford, Maidenhead. Landscaped verges of new roads; e.g. the northern relief-road around the sprawl of suburban Bracknell in 1999 (declined with grass encroachment in November 2001, and uncommon by 2003), and on new shopping developments in south-east Reading in 2000. Introduced at Crazies Hill, Frampton's Bridge, Forest Park. <1% (1km²). Atlas 2000: all except [76], [86]

West Berks: follows the chalk and oolite native pattern but this is blurred by former cultivation and current use in wildflower mixtures. Tilehurst (LAN) [67] in 1956. Frequent on roadsides at Dragon Hill [3087] in 2002. Chilton Cutting [48] (Plate 3). On the west-facing bank of the slip-road to Newbury off the new Newbury bypass [472708], where it had replaced the previously dominant *Leucanthemum vulgare* by May 2004. Atlas 2000: all except [56], [66], [68], [69]

Hedysarum coronarium L. *Italian Sainfoin* ● th 6

West Berks: as a garden weed at Pyle Hill, Newbury [4766] in 1978 (RNG).

Anthyllis vulneraria L. *Kidney Vetch* hs 6

Anthyllis vulneraria subsp. **vulneraria**

Anthyllis vulneraria L. var. *coccinea* L.

Anthyllis maritima auct., non Schweigger

Chalk downs and short calcareous grassland, roadsides in chalky districts, railway banks, field borders, gravel pits, etc. Locally abundant but confined to chalky or limestone soils, or to gravels

which contain fragments of these formations. Commonly sown in wildflower mixtures used in landscaping schemes on roadside banks. Host plant of the Small Blue butterfly *Cupido minimus*.
NVC: CG 2-5; U 1

Silwood Park: not native, and always from introduced seed with us. Chalk Plots from seeds sown in May 1983; seedlings came up in considerable numbers, even on the acid plots, by July 1983. Still frequent on the chalkiest plots in 1989 but much reduced by 2000. North Gravel, sown in the conservation mixture in front of Southwood Halls in 1983 but never common. Site destroyed during the construction of Flowers Halls. North Gravel, grassy paths. One plant on the path from Immunology to The Tip; 24 June 1984. Site destroyed during the construction of Colditz (also known as John Smith Hall) in 1989-90.

East Berks: locally frequent at Wargrave and Hurley, Quarry Woods, Maidenhead on the Thames valley chalk. Also at Bray Wick in a gravel pit. On Temple Golf Course, in chalk grassland in 2000. Rose Kiln Lane, Reading, on landscaped banks by a new shopping complex in 1999. <1% (1km²). Atlas 2000: [77], [87], [88], [97]

West Berks: occasional throughout the central chalk from Ashbury [28] to Streatley [58], and on the southern chalk at Combe Gibbet and Walbury Camp [36], but rare elsewhere. Abundant in Chilton railway cutting [4985] from 1995-2004. Uncommon on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all except [39], [48], [40]

Anthyllis vulneraria subsp. **polyphylla** (DC.) Nyman hs 6
Anthyllis vulneraria L. var. polyphylla DC.

Calyx without the red tip of subspecies *vulneraria*, lower part of the stem with spreading (not appressed or semi-appressed).

East Berks: uncommon in wildflower mixtures used in landscaping new road verges. Bracknell in 1999.

Anthyllis vulneraria subsp. **carpatica** (Pant.) Nyman var. **pseudovulneraria** (Sagorski) Cullen
Anthyllis carpatica Pant.

Much larger calyx than the other 2 subspecies (5-7mm wide rather than 2-4mm), and a much larger terminal leaflet relative to the lateral leaflets.

East Berks: sown in wildflower mixtures and much used in landscaping new road verges, as in Reading and Bracknell.

Lotus glaber Mill. *Narrow-leaved Bird's-foot-trefoil* hp 6 ↓
Lotus tenuis Waldst. & Kit. ex Willd.
Lotus corniculatus L. subsp. tenuis (Waldst. & Kit.) Syme

Roadsides, dry grassy places and waste ground; very local and rather rare. An uncommon plant of set-aside land, but long-persistent in the seed bank.

Silwood Park: first recorded on 28 August 2004; two widely separated plants inside the rabbit fence at Ashurst Lysimeters from topsoil imported in August 2003. Still there in 2005 and 2006 but not seen

in 2007. Local but uncommon in the top-left corner of the enclosure on 3 September 2008, almost buried beneath *Medicago lupulina*.

Ascot: rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: on a heath near Crowthorne, Starve All Farm, Wellington College; Druce was “inclined to think that the plant has been introduced with grass seeds in all these localities”. Reading (1918), Remenham (1951), Emmbrook brickyard (1965). Excellent extensive population in Bracknell (thousands of plants) in 1999 on derelict land destined for industrial development, north of the A329 dual carriageway below Hewlett Packard [847688]. Site destroyed in early 2000 for a car park during the construction of Dell Computers. By the northern relief road at Quelm Park Bracknell, from a sown wildflower mix, in November 2001. A single patch, 50cm diameter, in mown turf at the rear of 3M by the Cain Road Roundabout [8469] in September 2004, increased to more than 10 scattered patches by July 2005; still there on 1 September 2007 in the same abundance on the verge of the outer rim of the roundabout facing Cable and Wireless, but only one plant on 6 September 2008. Near Field Farm [672702] found by Bill Helyar on 20 August 2005. <1% (1km²). Atlas 2000: [77], [86], [87]

West Berks: occasional in the Thames Valley, absent or rare elsewhere. Shrivenham [28], Buscot Park [29], Hungerford [36], Buckland [39], by the path from West Hanney to Denchworth [396922], Atomic Energy Research Establishment at Harwell [48], Frilford Heath and Abingdon [49], Lower Whitley Farm, Long Leys Farm west of Cumnor, Boar’s Hill, Long Leys and Bessels Leigh [40], Clay Hill [57], Lollington Hill [58], Didcot [59], Nunhide Lane and Tilehurst [67]. Atlas 2000: [29], [39], [48], [49], [40], [58], [59], [67]

Lotus corniculatus L. *Common Bird’s-foot-trefoil* hp 6

Pastures, roadsides, sunny banks, chalk downs, acid grasslands, commons and waste ground in towns, on most soils; locally abundant. The stems are solid, but where reseeding has been carried out (e.g. on roadsides) you might find var. *sativus* which has hollow stems.

NVC: CG 2-5; MG 1,4,5,9; U 1,20; W 24

Silwood Park: one of our commonest wildflowers; 15th most frequent species and 2nd commonest legume (after *Trifolium repens*) in small quadrats. Long persistent in the seed bank below grassland and resistant to methyl bromide fumigation that kills all other seeds except *Trifolium repens* (as at Oak Mead and Nash’s Field in 1997 experiments). On the methyl-bromide-treated plots, the individuals are capable of growing to more than 1m in diameter within a single growing season, when freed from competition with other species. Recruitment in Nash’s Field is seed limited, even in the absence of extra soil disturbance. Frequent on the New Chalk Plots in Ashurst Four Acre Field in May 2002. Host plant of the Six-spot Burnet Moth *Zygaena filipendulae*, and the Common Blue butterfly *Polyommatus icarus*. Leaves are mined by *Trifurcula eurema*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
15	23	24	29	67

East Berks: common and widespread, 60% (1km²). The var. *sativus* is locally abundant on road-widening schemes in Bracknell and Reading (e.g. on the embankments of Coppid Beech Roundabout). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lotus pedunculatus Cav. *Greater Bird’s-foot-trefoil* hp 6

Lotus uliginosus Schk.

Marshes, brook-sides, wet meadows, damp woodland rides, marshes, damp grasslands, bogs and flushed heaths; widely distributed and locally common but absent from the chalk and northern clays. Told from *L. corniculatus* by its hollow stems (but note that *L. corniculatus* var. *sativus* also has hollow stems), and by the acute (not obtuse) sinus between the upper 2 calyx lobes. Host plant of the spectacular black-and-red Five-spot Burnet Moth *Zygaena trifolii*. Leaves are mined by *Trifurcula cryptella*.

NVC: M 13,22,27; MG 1,5,9,10; OV 26; S 3,4,7,14,18,25,26; W 1,4

Silwood Park: abundant in Rush Meadow, Pond Field, Water Meadow, Gunness's Bridge, Rookery Slope, Kissing Gate and other wet grassy places in full sun. Less common in wet woodland as at Nash's Copse. Local and declining in Heronsbrook Meadow on 26 June 2007, in a damp patch of *Juncus acutiflorus*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	3	10	21

Ascot: abundant in ditches on Ascot Heath and at Virginia Water. Very local at the edges of the Marist Convent pond at Frognall [941682] in September 2005.

East Berks: "between Bracknell and Wellington College some very dwarfed specimens were found with flower heads densely covered with down, probably as a result of some disease" (Druce). Particularly common on the firing ranges at Sandhurst as in Wishmoor Bottom [8762]. Locally abundant in rushy grassland on Wildmoor Heath [8463] following scrub clearance in June 2003. 23% (1km²). Atlas 2000: all squares

West Berks: absent from the chalk and the Vale of the White Horse, but widespread in Kennet valley. Atlas 2000: all except [37], [48], [68], [69]

¶ **Lotus** *L. berthelotii*, *L. hirsutus*, *L. maculatus*

Tetragonolobus maritimus (L.) Roth *Dragon's-teeth*

• hs 6 †

Lotus maritimus L.

A local speciality of chalk grassland, presumed to be an introduction. Flowers yellow.

East Berks: not in Druce. Remenham (1913 and 1955, **RNG**) behind Leander [767835] in 1948 and 1961 (**OXF**).

West Berks: Basildon in 1913 (**OXF**), 1929 (**RNG**) and 1961 (near "Woods Farm", **RNG**), which may well be the same site as Grims Ditch, Bennet's Wood, Streatley [595795] in 1977. There is a Wood Farm at [584794]. I have not been able to find the plant anywhere near Streatley, despite repeated searches.

Tetragonolobus purpureus Moench. *Asparagus pea*

• th 6

This uncommon vegetable has beautiful, deep crimson flowers and strongly winged pods.

Silwood Park: a rare relic of cultivation in the student allotments in Silwood Bottom in July 2004.

Short acid grassland, heathy lawns, paths and dry, open heaths on acid sandy soils; locally common but absent from large areas of clay or calcareous soils.

NVC: OV 1; U 1

Silwood Park: a delightful feature of dry banks, lawns and paths. Extremely common following cultivation of heathland, as when the Heather Patch was dug up to extend the Croquet Lawn; 24 April 1983. Grew to great size (shoots 1m long) on raised gravel beds in Ashurst Warren, when protected from rabbits and freed from competition with other species (1996-97). Flourished inside the rabbit enclosure at the Gravel Pit in the first year after the fence was erected; 27 June 1998. A feature of compacted cinder paths around the Manor House and on the pot stand at the Greenhouses. Abundant in the seedbank beneath the grassland in the western part of Nash's Field when Blocks A and B were initially cultivated in 1986. Planted as one of the 7 species in the Ashurst raised beds experiment, sown in September 2002. These plants were the last to germinate, and did not reach full size until September 2003, staying bright green right through the drought of July and August; the other species had died back by May or June. Very rare at Ashurst Lysimeters in August 2004 on imported topsoil. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with 3 massive plants in bare ground beneath *Chamaecyparis lawsoniana* on 27 May 2006. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with 3 massive plants in bare ground beneath *Chamaecyparis lawsoniana* on 27 May 2006. Very rare from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	13	13

Ascot: abundant in the lower lawn of Agatha Christie's house, called Styles, on Charters Road in Sunningdale, 1980-2004, growing with *Pilosella officinarum*. Seed was collected from here with Gebre Asefa on 16 July 2002 for the Ashurst Experiment, to the curiosity and amusement of the residents of Styles (many of whom had never seen an Ethiopian at close quarters).

East Berks: "it is fond of the driest and most sunny heaths" (Druce). Bagshot, Wellington College, Park Place, Hurst, Windsor Great Park near Virginia Water, Finchampstead, Riseley, Bracknell, Ascot Racecourse, Sandhurst College grounds, Jouldern's Ford, Farley Hill, Sunningdale, Twyford, Long Moor, Ambarrow, 'Bircher's Green', Sonning Cutting, Stubbing's Heath. Widespread on the heathy ground south of 70, but rare or extinct elsewhere. 6% (1km²). Atlas 2000: all except [78]

West Berks: occasional on the Kennet heaths, in the Northern Loop and by the upper reaches of the Thames, but absent from most of the country north of 75 and south of 95. Greenham Common [46], Snelsmore Common [47], "between Besilsleigh [40] and Tubney [49] in great abundance", Frilford Heath [49], Cold Ash [56], Bucklebury and Hampstead Norreys [57], Blewbury [58], Padworth [66] "in the greatest abundance", Mortimer, Ufton and Silchester [66]. Atlas 2000: [29], [39], [46], [47], [49], [40], [56], [57], [66]

Hippocrepis comosa L. *Horseshoe Vetch*

One of the classic chalk grassland species, and one of the first to disappear following fertiliser application or scrub encroachment after cessation of grazing. Host plant of the Chalkhill Blue butterfly *Lysandra coridon*, and the Adonis Blue *Lysandra bellargus*.

NVC: CG 2-5

East Berks: very uncommon in our few surviving fragments of short chalk grassland. Restricted to the north of the area, overlooking the Thames. Near the Sham at Henley (1831), “plentiful on the borders of a wood near Hall Place, on a chalky bank near the entrance to Park” (Druce). In Bowen’s time there were only 3 sites: on the chalk at Remenham, Hurley pit and Winter Hill. The best site nowadays is the steep chalk grassland overlooking Cock Marsh. <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: a typical chalk grassland distribution (south of 90 and north of 75, with an outlier at Walbury Camp [36] on the Hampshire border), but not found on the oolitic limestone. Baydon [27], Ashdown Park and Ashbury [28], Shefford, Coppington Down and Lambourn Downs [37], Whitehorse Hill, Segsbury Camp, Seven Barrows, Fawley and Furzewick Down [38], Cherbury Camp [39], Chilton [48], Hurdle Shaw and Grims Dyke [57], Lowbury Hill, Blewburton Hill, Streatley and Fair Mile [58], Pangbourne [67]. Atlas 2000: [28], [36], [37], [38], [47], [48], [57], [58], [59], [67]

¶ **Hippocrepis** *H. emerus*

Securigera varia (L.) Lassen *Crown Vetch*
Coronilla varia L.

• hp 6

A long-lived garden escape, capable of persisting in competition with perennial grasses, nettles and such like. Its pale purple flowers are borne throughout the summer until the first frosts in October or November.

Silwood Park: established on waste ground behind the Header House since at least 1971; origin unknown. They survived the indignity of being partially buried beneath Portakabins from March 1994 to December 1997. The plants were dug up and potted in autumn 1999 to rescue them before the whole area was concreted over in summer 2000 during the construction of the largest of the new Jiff Greenhouses. Thirteen pots were planted out again on 28 April 2001 on the surviving green fragment of North Gravel next to the BP Greenhouse. All were thoroughly well established by summer 2001 and flowered (even after mowing) into November 2001. By August 2002 the plants were rampant in their new sites, smothering all in their path and flowering profusely. Locally dominant in the strip of soil between the CABI Greenhouse and the Header House in August 2007. The plants established on the Pot Standing at the Greenhouses while they were stored there 1999-2000; still there in 2004. Seeds were sown in the Nash’s Field experiment in 1991 but they never came up.

East Berks: not in Druce. Introduced on railway banks and waste places; rare and usually impermanent; Crowthorne (RNG) in 1923, Bray (1934 and 1949), Maidenhead (RDG) in 1962. <1% (1km²). Atlas 2000: [96], [97]

West Berks: Radley (OXF) [59] in 1915, Membury on the old airfield [312748] in 1978, Childe-Beale Trust [6178] in 1976, Upper Basildon [6075] in 2002. Atlas 2000: [37], [67]

¶ **Clianthus** *C. puniceus*

Vicia faba L. *Broad Bean*

• th 5

A common field crop, with volunteers often seen in the following cereal or oilseed rape crops. Seed spilled in transit in gateways and lanes produces stragglers in all the arable areas of the county. Also found as a garden escape near allotments and from culinary waste in towns and villages throughout. Leaf margins often scalloped by *Sitona* weevils.

Silwood Park: regularly grown as a crop in Silwood Bottom in the 1970s and 80s for Michael Way's work on the Black Bean Aphid *Aphis fabae*. Occasional strays found on waste ground at the Header House. No longer grown as a crop, and now very rare as a casual except on Rookery Tip where large numbers of potted greenhouse outcasts are often to be found.

East Berks: first record Smallmead tip [7169] in 1965. A common crop on clay soils, as in Windsor Great Park, where the air is heavy with the smell of its flowers in late May; stray plants common around The Village in 2002. Scattered throughout. 7% (1km²). Atlas 2000: all squares

West Berks: first record Kennington tip [50] in 1951. A common crop around Inkpen [36] in 2002. Under-recorded. Atlas 2000: all except [29], [39]. [47], [48], [56], [57], [58], [59], [66], [67]

¶ **Vicia faba** Broad beans, var *major*, including 'Hylon', 'Aquadulce Claudia' and 'Giant 4-seeded Green Windsor'. Tick beans, var *minor* (grown as an arable crop for long term work with Black Bean Aphid, *Aphis fabae*).

Vicia benghalensis L. *Purple Vetch* ● th 6 †

West Berks: not in Druce or Bowen. In an arable orchard with *V. villosa* at Kingston Bagpuize [4098] in 1972.

Vicia narbonensis L. *Narbonne Vetch* ● th 6 †

West Berks: "This plant comes up periodically in cultivated ground near Dorchester and Mr Bruce has seen it in a field at Burghfield" (Druce). At Sotwell [5590] in 1890 (OXF) and Burghfield [6565] in 1937 (RNG).

Vicia cracca L. *Tufted Vetch* hp 6

Hedges, fence-lines, marshes, fens and river-banks, water meadows, pastures, railway banks and damp woodland rides. Generally distributed and locally abundant, but much less frequent on the heathy ground, and rare in dry calcareous grassland. Variable in both the number and shape of its leaflets.

NVC: CG 2-5; M 13,22,24,27; MG 1,4,5,7,9,10; OV 26; S 18,25,26

Silwood Park: rampant in the deer fence surrounding the biomass willows in Silwood Bottom in July 2000, making a 2m high blue curtain of flowers, but absent from the May-cultivated part of Silwood Bottom after the very dry spring and early summer of 2005. Local and patchy in the seed bank of the arable parts of Silwood Bottom and Pound Hill. Scrambling through bramble thickets at Astrophysics. Oak Mead, Biodepth, The Rookery, Nuclear Reactor, Observatory Ridge, Ashurst churchyard. Growing over the *Phalaris* 'Picta' opposite Drive Field in July 2002. Greatly increased inside the rabbit fences at Oak Mead in Blocks A and B in July 2002. Locally dominant, with one large patch (c.4m diameter) and 4 smaller patches (c.1m) to the north-west of the track across Silwood Bottom in June 2004 following a year in which there was no cultivation of that plot, and again in July 2005 following October cultivation. Very common on 15 July 2007 inside Tilly Collins' Willow Enclosure in Silwood Bottom.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	6

East Berks: frequent by the Thames at Reading, Henley, Bray and Windsor and by the Blackwater near Sandhurst. 21% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous; Bowen had no records from the 5km squares [4575], [4580] or [5075]. Atlas 2000: all squares

Vicia tenuifolia Roth *Fine-leaved Vetch* ● hp 6

West Berks: not in Druce. Alien in chalk grassland, very rare. At Aston Tirrold [5080]: a single plant in 1965, and Blewburton Hill (RNG) [5486] in 1962.

Vicia sylvatica L. *Wood Vetch* hp 6

Wood margins on calcareous soils; considered to be extinct by Bowen.

East Berks: no records.

West Berks: older (pre-1897) records from Welford Wood and Ashridge Copse [47], Tubney Wood [49], Appleton Common and the upper parts of Marley Wood (from 1859 up to 1892) [40] and Rowcroft Wood [5570]. More recent records from Inkpen [3560] in 1966, Great Plain Wytham in the 1950s, Cake Wood [303689] in 1970 and Hungerford [3068] in 1971. Atlas 2000: [36], [40]

Vicia villosa Roth *Fodder Vetch* ● hp 6

Vicia dasycarpa auct., ? an *Ten.*

Vicia varia Host

Vicia villosa Roth subsp. *varia* (Host) Corbière

A rarity of dry, sandy soils in the Northern Loop.

East Berks: not in Druce. A rare alien of bare waste ground. Whiteknights Park (1967). Atlas 2000: no records.

West Berks: old records from Boars Hill [40] in 1902 (OXF) and Cothill [4595] in 1910 (OXF). In an "arable orchard" at Kingston Bagpuize [4098] in 1966-72. Botley Row [4806] in 1965 (OXF). In a garden on Station Road, Didcot [5190] from 1976-77 (OXF), and on a grassy field margin by the A338 to Tubney [443977] in 1994. On Frilford Heath [4496] in June 1996 (OXF) and [447981] in 2001. Atlas 2000: [49]

Vicia hirsuta (L.) Gray *Hairy Tare* th 5

Ervum hirsutum L.

Hedges, bushy ground, railway-banks, sandy fields, arable fallows, woodland rides, roadsides, and waste ground. Not uncommon and widely distributed.

NVC: OV 1,4,7,8

Silwood Park: our commonest vetch by far. Locally dominant in fallow arable land in Ashurst Four Acre Field, Pound Hill and Silwood Bottom, forming a waist-high tangle, but absent from the May-cultivated part of Silwood Bottom after the very dry spring and early summer of 2005. A component of the U1 acid grassland in Gravel Pit, responding vigorously to rabbit exclusion. In the seed bank beneath grassland in Oak Mead and Nash's Field. Waste ground around the Manor House and Residences. Frequent on the New Chalk Plots in Ashurst Four Acre Field in May 2002 and June 2007. Common on imported topsoil at Ashurst lysimeters in May 2004. Very rare in the second year

after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Abundant amongst *Holcus mollis* in the cultivated field at Pound Hill on 19 June 2008. Common from the seed bank on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	2	1	19	30

East Berks: widespread. 34% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, least common on the chalk ridge. Atlas 2000: all squares

Vicia parviflora Cav. *Slender Tare*

th 6

Vicia laxiflora Brot., nom. illegit.

Vicia gracilis Lois., non Sol. ex Lowe

Vicia tenuissima auct., non (M. Bieb.) Schinz and Thell.

Grassy ground, waysides that are wet in winter but dry in summer, woodland rides and dry grassland; very local and sporadic. Separated from *V. tetrasperma* on the size of the hilum (little longer than wide in *parviflora*, more than 2 times as long as wide in *tetrasperma*); also has more flowers (1 to 5 per peduncle) and more seeds per pod (4 to 8).

East Berks: near Loddon Bridge (as *V. gemella* var *tenuissima*). Windsor Forest [9070] in 1964. Atlas 2000: no records.

West Berks: Wootton (OXF), Upper Seeds at Wytham (still there in 2002-12), Eynsham Road (OXF) and Boars Hill (OXF) in 1897 [40], Mortimer [66], Bradfield [67] pre-1897. Recent records from Blewburton Hill [5486] in 1962, from a gravel pit in Milton (OXF) [492922] in 1977, Aston Upton [545835] in 1984 and Didcot Power Station [5090] in 1987. Atlas 2000: [40], [59]

Vicia tetrasperma (L.) Schreb. *Smooth Tare*

th 5

Ervum tetraspermum L.

Arable and fallow land on acid sandy soils, wood margins, hedges, roadsides and railway banks and rough waste places (as *V. gemella*); occasional but absent from the chalk.

NVC: MG 1

Silwood Park: fluctuating markedly in abundance from year to year, sometimes almost as common as *V. hirsuta* (and often growing with it). Under imported hogweed in the north-east corner of Silwood Bottom; 13 July 1984 and still common in August 2002. Common throughout the fallow in both *Arrhenatherum* and *Holcus* on 17 June 1995. Common in the unmown grass verge opposite the Telephone Box at Knight Frank on 3 June 1995. North Gravel, two large plants growing through a chicken wire fence at the bottom of the soil heap made during the construction of Southwood Halls; 28 June 1982. Not seen in 1983 or 1984, but reappeared amongst the *Amelanchier* in 25 June 1984. Not seen in 1995 or subsequently following the construction of Flowers Hall. Header House, on disturbed soil next to the new BP Nutrition greenhouse; August 1989. Not seen again until June 2002, when it was locally frequent. Pond Field, in long grass by the corner of Silwood Bottom; 13 July 1984. Nash's Field Cultivation Experiment, in the fenced/cultivated part of Block C; first seen in June 1993. Ashurst Four Acre Field, Gravel Pit, The Elms, Nuclear Reactor, Observatory ridge, Heronsbrook, Cannon Crossroads. Reappeared on the surviving fragment of North Gravel beneath *Prunus avium* in June 2004. Very common in Silwood Bottom in June 2005 following autumn

cultivation, but absent from the May-cultivated part of Silwood Bottom after the very dry spring and early summer of 2005. Frequent in the May-cultivated enclosure on 6 September 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	14

Ascot: locally frequent in drier parts of the Sunningwell Bog, a fen-meadow north of the railway west of St George's Lane [927683] in 2002. Swinley, Sunningdale. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: Wellington College, Crazy Hill, Billingbear, Wargrave, Finchampstead, Devil's Pound, Sandhurst, Windsor, Wokingham, Jouldern's Ford, Earley, Bracknell, Loddon Bridge, Sonning, Bagshot, Long Moor, Barkham, Maidenhead, Paley Street. Scattered throughout to the south of 75, and occasional in the Thames valley as far as Hurley. Frequent at the rear of 3M on Cain Road Bracknell on 2 September 2007. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Occasional in the ancient grassland nature reserve at Chawridge Bank [894738] in 2008. 14% (1km²). Atlas 2000: all squares

West Berks: frequent only to the south of 75 and north of 95. Absent from substantial areas of the interior, but found recently at Little Coxwell [2892]. Atlas 2000: all except [48], [68], [69]

Vicia sepium L. *Bush Vetch* hp 5

Hedges, oak woods and thickets; rather common and widely distributed, commonest on the clay, but rare or absent on very acid soils in the heathy districts. The leaves are mined by *Phyllonorycter nigrescentella*.

NVC: MG 1,4; OV 16; W 8,24

Silwood Park: unaccountably rare. Uncommon on the eastern boundary fence of Silwood Bottom on 12 July 1980 but not seen since then. In short grassland on North Gravel by the Header House in 1988. No further records until one plant was discovered in the south-east corner of the Pot Standing at The Greenhouses on 26 May 2004; this patch had spread somewhat by June 2007.

Ascot: locally frequent in South Ascot.

East Berks: widespread, but least common in the far south-east from Sandhurst to Old Windsor. Particularly common in the churchyard at Binfield. Locally abundant with *Dactylorhiza fuchsii* by the upper lake at Park Place in 2004. A form with violet coloured flowers was noticed at Bisham Wood. 25% (1km²). Atlas 2000: all squares

West Berks: very abundant on the borders of woods on the chalk. Almost ubiquitous, but rare or absent from the country immediately west of Abingdon and Wallingford (Bowen had no records from the 5km squares [4585], [4590], [5080], [5085], [5585], [5590]). Atlas 2000: all except [68], [69]

Vicia pannonica Crantz *Hungarian Vetch* • th 6 †

West Berks: in a sown vetch-field at Fyfield [4298] in 1941, and in arable land at Kingston Bagpuize [4098] from 1969-72.

Vicia sativa L. th 5

The 3 subspecies are treated separately. The native subspecies *nigra*, found in undisturbed natural habitats, is *Narrow-leaved Vetch*, the common alien is subspecies *segetalis* and the uncommon alien is subspecies *sativa*. They are distinguished as follows: subspecies *nigra* is strongly heterophyllous with upper leaves abruptly narrower than lower leaves, and its flowers are concolorous (single-coloured). The other two have bicolourous flowers (claret and blue - like West Ham United). They are distinguished by their pods: subspecies *segetalis* has smooth, shiny, black, hairless pods that are not constricted between the seeds; subspecies *sativa* has dull yellowish brown hairy pods that are slightly constricted between the seeds.

Vicia sativa subsp. **nigra** (L.) Ehrh. *Narrow-leaved Vetch*

th 5

Vicia sativa L. var. *nigra* L.

Vicia angustifolia L.

In natural habitats like grassland, dry banks, hedge-banks, and heathy ground, as well as on waste ground, bramble thicket, arable fields and sandy roadsides. Widely distributed and locally common. Known by its small leaves and concolorous (not 2-tone claret and blue), dark purple flowers.

NVC: MG 1,7; OV 3,4,19; S 18; U 1; W 24

Silwood Park: in the U1 acid grassland at Gravel Pit, responding strongly to the erection of the rabbit fence; 13 May 2000. Also in MG6 grasslands in Nash's Field and the older parts of the churchyard at Ashurst. Locally abundant on the un-limed, rabbit-fenced plots in Nash's Field that do not receive nitrogen fertilizer. Arable fallow at Pound Hill, Ashurst Four Acre Field and Silwood Bottom. Particularly common in the New Chalk Plots. Very abundant at Ashurst Orchard in May 2004 inside the uncultivated parts of the new rabbit-and-deer-exclosure fence (erected in 2003). Frequent in the New Chalk Plots at Ashurst on 6 June 2007 and 29 August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	10	15	32	25

East Berks: first record; in a moor between Sonning and Maidenhead (1666). Abundant in railway cutting near Twyford, Sandhurst, Finchampstead, Long Moor, Farley Hill, Swallowfield, Earley, Loddon Bridge, Bearwood, Wokingham, Ascot, Windsor Park, Stubbings Heath, Bisham, Wargrave. 27% (1km²). Atlas 2000: all except [78]

West Berks: widespread in the north and the south, but rare and scattered in the central chalk districts. Atlas 2000: all except [69]

Vicia sativa subsp. **segetalis** (Thuill.) Gaudin *Common Vetch*

o th 5

Vicia segetalis Thuill.

A common alien of disturbed habitats; rare or absent in natural habitats. Mentioned by Druce (as *V. angustifolia* var. *segetalis*) as a larger plant, occurring on somewhat richer soil, but he gives no locations. Bowen gives no detail. Host to the common aphid *Megoura viciae*.

NVC: OV 10,23,25

Silwood Park: common around the Header House and on waste ground generally. Also in arable fallow at Pound Hill, Silwood Bottom and Four Acre Field. Frequent as a climber on wire-mesh rabbit fences. Frequent in the New Chalk Plots in Ashurst Four Acre Field in May 2002. On imported topsoil at the Ashurst Lysimeter site in June 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
------------------	-------------------	--------------------	---------------------	-----------------------

0	1	1	13	17
---	---	---	----	----

East Berks: common throughout. A component of the wildflower mix used to sow the banks of the northern relief road in Bracknell in 1999. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 51% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Vicia sativa subsp. **sativa**

th 5

Uncommon casual of disturbed habitats, with hairy pods, constricted between the seeds. Not separated by Druce or Bowen, this is the least common of the 3 subspecies. It used to be a major component of the crop known as “Vetches and Tares” that was widely grown until the 1950s.

Silwood Park: local and rare. Header House on waste ground between the greenhouses in 1999 and 2000. East Block in the chicken wire protecting the young *Magnolia grandiflora* from rabbits in June 1995. Ashurst Four Acre Field locally common in the 1997-98 fallow on 7 July 1998 (unusually, the flowers were uniformly deep purple, not bicoloured), and common in the western part of the field on 13 July 2002. In the Walled Garden, on a wire fence in June 2003. The flowers were pale blue on the outside, darker blue on the inside, and bright claret on the wings (but these were hidden inside the pale blue standard).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	2

East Berks: local, sporadic and rare, California Country Park, West Hanworth, Martins Heron, Charity Wood, Whitelocks Farm, Mount Skippet, Maidenhead, Brook Farm, Bray, on the Cavalry Exercise Ground in Windsor Great Park. Rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 2% (1km²). Atlas 2000: all except [78]

West Berks: on soil heaps on Greenham Common [46] during operations to dig up and remove the old runway in 1999. Frequent on open waste ground used to store topsoil at Tadley Common [605625] on 12 June 2001. Atlas 2000: all except [28], [36], [46], [67], [68], [69]

Vicia lathyroides L. *Spring Vetch*

th 5 ↓

Short, dry grassland and sandy places; very local and rare though possibly overlooked. Leaves typically without tendrils; the flowers are small (6-9mm) and solitary. It can be confused with small *V. sativa* subsp. *nigra* on these characters, so it is important to check that the seeds are tuberculate (*V. sativa* has smooth seeds).

East Berks: Sonning cutting (1897), dry heathy ground near Bracknell (1897), Twyford. Not seen by Bowen. There is an unlocalized 1950+ record from [97]. Atlas 2000: no records.

West Berks: Longworth pit [39] in 1964, Frilford Heath [4498] in 1963, 1971, 1996-2004, Cothill [49] in 1953, Hurst Hill [40] in 1954, Tubney Wood [40] in 1965, Foxcombe Hill [4500] in 1953, gravelly soil in short heathy ground on Greenham Common [5164] in 1999-2002. Atlas 2000: [49], [40], [56]

Vicia lutea L. *Yellow-vetch*

th 6 ↓

Vicia laevigata Smith

Rare casual of bare places.

East Berks: not in Druce. By the Thames on Ray Mill Island, Maidenhead in 1958.

West Berks: Cothill [49] in 1918, on arable land at Kingston Bagpuize [49] from 1965-71.

Vicia bithynica (L.) L. *Bithynian Vetch* hp 5 †
Lathyrus bithynicus L.

West Berks: not in Druce. Bowen considered it extinct. In a chicken run at Cothill [4595] in 1908 (OXF) and in grassy ground near the railway crossing of the southern cooling towers at Didcot Power Station [5090] in 1987. An introduced species in Berkshire.

Lathyrus linifolius (Reichard) Bassler *Bitter-veich* hp 5 ↓
Orobis linifolius Reichard
Lathyrus tuberosus auct., non L.
Orobis tuberosus L.
Lathyrus montanus Bernh.

Open woods, coppices, and bushy heaths and infertile grasslands on acid soils; occasional but decreasing. Its dull claret and muddy blue flowers are unmistakable.

NVC: MG 5; W 10

Ascot: uncommon on rides in old oak woodland. Ascot, Swinley, and Tower Court. In unfertilized acid grasslands by roadsides in Windsor Great Park, as at the crossroads near Poets Lawn [960722] in 2002.

East Berks: first record: “*Orobis tuberosus*, a variety with linear leaves, which is found in Windsor Forest” (1809; still there in 2000 on High Standing Hill). Finchampstead Wood, Bulmarsh Park, Billingbear Park, rather common at Park Place, woods near Marlow, Wokingham, Farley Hill, Riseley, Bracknell, Quarry Wood, Bowsey Hill, Ashley Hill, Stubbing’s Heath, Pinkneys Green, Bisham Wood, Warren Row. Bowen knew it from Binfield, Jealott’s Hill (1962), Maidenhead Thicket, Quarry Wood, Tower Hill, Winkfield Plain. Rare in Windsor Forest, and extinct at most of its southern stations. Now at Arborfield Garrison, North Bracknell, Swinley Park, New Lodge, Forbes Fields, Holliday Plain, High Standing Hill, and on the steep slopes below Windsor Castle. 1% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [97]

West Berks: virtually restricted to the heathy tracts of the Kennet valley. Extinct in most of its northern stations. Inkpen and Kintbury [36], Enborne Lodge [46], Cold Ash, Corbus Wood and Brimpton [56], Oare Wood, Fence Wood, Park Wood Hampstead Norreys, Yattendon and Bucklebury [57], Burghfield and Silchester Common [66], Sulham, Bradfield and Tilehurst [67]. Atlas 2000: [36], [37], [56], [57], [66], [67]

Lathyrus pratensis L. *Meadow Vetchling* hp 5

Meadows, pastures, lake-sides, hedges and banks. Common and generally distributed except on the dry upper chalk downs and the dry heaths. Frequent in meadows and grassy places.

NVC: CG 2-4; M 13,22,24,27; MG 1,4,-7,9; OV 26,27; S 7,25,26; W 24

Silwood Park: common in wet grassland like Rush Meadow and Pond Field. Locally abundant in the uncultivated edge of Silwood Bottom below William Penney where the fence protects it from rabbit grazing. In several of the experimental plots inside the deer and rabbit enclosure in Oak Mead it has formed long-persistent monocultures (1998-2004), excluding all other species. Frequent on the New Chalk Plots at Ashurst in May 2002 and locally abundant by May 2004 (only occasional in June 2007). A pestilential weed in herbaceous borders, spread about amongst the roots of divided perennials. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	12

Ascot: particularly abundant in the moist, orchid-rich grassland in the triangle at the northern end of the Race Course [923700], and in the wet meadow at Sunningwell Bog [926683]. Abundant on the sandy construction site on Dry Arch Road on 2 August 2004.

East Berks: widespread and locally abundant; 36% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lathyrus tuberosus L. *Tuberous Pea* • hp 7 †

A rare casual with us, found in cornfields, hedgerows and roadsides. Short-lived and not persistent.

West Berks: in a wood border at Pusey [353965] in 1956 and 1963 and at [356976] in 1968. In sandy grassland at Frilford [4095] in 1962. No recent records from either location.

Lathyrus sylvestris L. *Narrow-leaved Everlasting-pea* hp 6 ↓

Woods, thickets and hedges. Very local and rare.

East Berks: “Crazy Hill” in 1897. Not seen by Bowen. Atlas 2000: no records.

West Berks: Letcombe [38], Newbury [46], Ashridge Wood [47], Tubney Wood [49], Whitley Copse and Wytham [40], Sutton Courtenay [59], South Hinksey [50]. Atlas 2000: [46], [40], [57], [59], [50]

Lathyrus latifolius L. *Broad-leaved Everlasting-pea* • hp 5

A common garden escape, found in almost every village. This is the common railway-side and waste ground everlasting pea; long persistent as a garden throw-out. Leaves occasionally bear the serpentine mines of *Liriomyza congesta*.

Silwood Park: very local and rare, long naturalised in the wire mesh boundary fence at Ashurst Lodge (1971-2004). In the churchyard; 1 July 1998-2007. Abundant in the wire mesh deer-fence separating the beehives from the Pot Standing at The Greenhouses (2001-05).

Ascot: frequent in rough grass at the Sunninghill Gasometers, near the Carpenter’s Arms on Upper Village Road, and by the railway from 1980-2004. Occasional on the sandy construction site on Dry Arch Road on 2 August 2004.

East Berks: “Quite naturalized and plentiful on the railway-banks between Maidenhead and Cookham” (Druce); still common there, over 100 years later in 2002. Suttons Reading (1978),

Swallowfield, Twyford, Broadmoor, Cookham village (2001), Shinfield (1988), Bearwood (1982), and more recently east of Reading Station, Earley Station, Castle Hill, Maidenhead, Quelm Park, Englemere Pond. 16% (1km²). Atlas 2000: all except [78]

West Berks: scattered along the Thames valley and in the area south and west of Reading. Longcot [29], Hungerford [36], by the M4 near Shefford Woodlands [37], Buckland Warren [39], Cumnor Hill [40], Crookham [56], Upton Lodge [58], Barrow Hills, Radley pits and Didcot [59], Aldermaston Wharf and Silchester Common [66], by the M4 at Theale [6471], Basildon, Purley, Tilehurst Station and Pangbourne Station [67]. Atlas 2000: all except [48], [49], [50], [69]

Lathyrus hirsutus L. *Hairy Vetchling* ● th 5 †

West Berks: in the border of a chalky field at Aston Tirrold [5586] in 1956 (no specimen).

Lathyrus nissolia L. *Grass Vetchling* th 5

A delightful species of grassland, quarries and banks, usually on soil that has been disturbed. The flowers are a startling brick red, and are held singly, on implausibly long peduncles. Non-flowering plants are virtually invisible amongst the grass.

Ascot: frequent on Sunningwell Bog in late May (sometimes even locally abundant) in the fen-meadow to the north of the railway, west of St George's Lane [926683] from 1970-2007. Locally common in grasslands on either side of the A332 road through Windsor Great Park just south of Queen Anne's Gate, and in the grasslands around the Copper Horse (1990-99). Locally frequent on the grassed-over soil pile at the edge of the playing field at Liddel Way in South Ascot [919677] on 28 May 2006, but not seen here on 24 May 2008. Not in Silwood Park.

East Berks: not in Druce. Mostly in the Thames Valley; local and often sporadic. Wargrave, Hall Place Farm near Hurley, Bracknell, on the new embankments of the flyover at Coppid Beech roundabout [837688], Bray Wick, Cookham Dean, Maidenhead Thicket, Windsor Great Park. Recently at Loddon Bridge, White Swan Lake, Dinton Pastures, in the long grass at the edge of the airfield at White Waltham, Pinkneys Green, Woodlands Park, Paddock Wood, Chawridge Bank, Fifield, superb in unfertilised hay meadows in Foliejon Park in 1999, ditch banks at Stroud Farm on reclaimed landfill [903777], Bray, in the grasslands between Ascot Road and the M4 in north Holyport, The Village in Windsor Great Park, Stag Meadow, Clayhill Farm. At The Grove Shinfield Park [730690] on 26 May 2010 (Jan Haseler). 5% (1km²). Atlas 2000: all except [76]

West Berks: scattered in the Thames and Kennet valleys; rare elsewhere. Inkpen and Wallingtons [36], Poughly [37], Pucketty Farm [39], East Ilsley [48], Grove, Black Horse Field [468979], Cothill pit and Abingdon [49], Rockley Copse pit and Cumnor Hill [40], Ashampstead [57], Didcot and Sutton Courtenay [59], Burghfield and Grazeley [66], Tilehurst [67]. Extraordinarily abundant in June 2001 on Tadley Common [66] on bare ground that had been used for storing topsoil. There was a string of patches, each about 10m x 2m spreading over several hundred metres, in which it was locally dominant, and for considerable stretches, the only plant. At Greenham Common on the occasion of the BSBI visit on 23 June 2007, a single individual was discovered, protected from the grazing cattle by a clump of *Juncus inflexus*. In the field by Wantage Health Centre [399891] on 19 June 2010 (Thomas N Todd). Atlas 2000: all except [38], [47], [56], [50], [68], [69]

Lathyrus aphaca L. *Yellow Vetchling* th 6 ↓

Calcareous grassland, hedge-banks and waste ground; rare and often casual.

East Berks: near Sonning (1892). Suttons nurseries (**RDG**) in 1912, Reading allotments (1890), Windsor Great Park (1959). Atlas 2000: no records.

West Berks: Greenham and Newbury [46] and Burghfield (pre-1897), Kennington [50] in 1918, Abingdon [49] in 1928, Moulsoford (**LAN**) [58] in 1956, in a nursery garden at Didcot [59] in 1962, Inkpen [36] in 1966. Atlas 2000: [29], [49], [58], [59]

Lathyrus cicera L. *Red Vetchling* ● th 6 †

West Berks: in a sown vetch field at Fyfield [4095] in 1941.

Lathyrus inconspicuus L. ● th 6 †

West Berks: a bird-seed alien found in a chicken run at Cothill [4595] in 1908 (**OXF**).

¶ **Lathyrus** *L. aureus*, *L. latifolius* ‘Rosa Perle’, *L. latifolius* ‘White Pearl’, *L. nervosus*, *L. odoratus*, *L. rotundifolius*, *L. vernus*, *L. vernus* ‘Alboreus’

Ononis alopecuroides L. *Salzmann’s Restharrow* ● th 6 †

Ononis salzmanniana Boiss and Reuter, *O. baetica* auct. non Clemente

Not in Druce. A rare casual of waste places (as *O. salzmanniana*); Reading tip (1963). Bird-seed alien.

Ononis baetica Clemente *Andalucian Restharrow* ● th 6 †

East Berks: Reading tip [7070] in 1963 (det. M.M. Webster).

West Berks: South Hinksey tip [50] in 1965.

Ononis natrix L. *Yellow Restharrow* ● n 6 ↓

West Berks: not in Druce. Crookham Common [46] from 1947-51, next to the runways of the aerodrome on Greenham Common (**RNG**) [46] in 1951, on the old aerodrome at what is now Membury Services on the M4 (**RNG**) [312748] in 1978 and 1986.

Ononis spinosa L. *Spiny Restharrow* hp 6 ↓

Ononis campestris Koch

Ononis repens L. subsp. *spinosa* (L.) Greuter

Barren pastures, borders of fields and roadsides on calcareous or clay soils; rare and decreasing, but still locally abundant in protected chalk grasslands as on Dragon Hill. Note that *O. repens* is sometimes spiny (var. *horrida*).

NVC: CG 3,5

Silwood Park: sown in the Nash’s Field and Oak Mead experiments. Rare in the fenced cultivated plots at Oak Mead on 12 September 1996. Persisting until 2001 on the methyl bromide plots, but extinct on the others where competition was more intense. However, in a remarkable turn-around, it was locally frequent in July 2002 (and 2003) on several of the unfenced plots, most notably in Block D. In July 1996 the plant was on the 1996-cultivated fenced plots in Blocks A, D and E and in July

1997 it was on grazed 1996-cultivated plots in Blocks D and E, but it was restricted to a single grazed plot in Block D in 2007. On the Biodepth II plots in July 2003.

East Berks: Wargrave, Bray, Hurst Hill. Hurst, Hurley, Bracknell. Bowen thought the plant extinct in half of the locations listed by Druce. Recently at Crazies Hill, Prospect Hill. < 1% (1km²). Atlas 2000: [86], [96]

West Berks: Ashbury and Compton Beauchamp [28], Faringdon and Watchfield [29], locally abundant in the roadside across The Manger at Whitehorse Hill, Dragon Hill and Nutwood [38], Stanford-in-the-Vale and Buckland [39], Welford [47], East Hendred Down [48], Wytham and Northmoor Lock [40], Lowbury Hill and Kingstanding Hill [58], Little Wittenham Wood, Long Wittenham, Willington's Down Farm and Barrow Hills [59], South Hinksey [50]. Very abundant and very large plants by the roadside across the northern face of Whitehorse Hill [300865] on the occasion of the BSBI visit on 24 June 2007. Atlas 2000: [28], [29], [38], [39], [48], [49], [40], [56], [57], [58], [59]

Ononis x pseudohircina Schur = **O. spinosa x O. repens**

West Berks: in chalk grassland on East Hendred Down [4585] in 1964 (det. P. Morisset).

Ononis repens L. *Common Restharrow* hp 6

Ononis repens subsp. **repens**

Ononis repens L. subsp. *arvensis* (L.) Greuter

Chalk grassland, dry fields, roadsides and railway banks; occasional on calcareous substrates.
NVC: CG 2-5; OV 27

Silwood Park: sown in the Oak Mead and Nash's Field experiments; never seen in Nash's Field but occasional on most of the fenced, cultivated or methyl bromide treated plots at Oak Mead. Persisting for at least 5 years after sowing. Commoner than *O. spinosa* and clearly capable of growing on acid sands if freed sufficiently from competition at the regeneration stage. Locally frequent in July 2002 on both fenced and unfenced plots, most notably Blocks C and D. In June 2007 it was locally frequent on the grazed Block C (plot IIIId), occasional on the fenced Block C (plot IIc where it had spread beyond the sown area), grazed Block D (plots Ib, c & d) and fenced Block D (plot Ib with 15% cover, and plot IIb at 10%) and grazed Block E (plot IIc) and fenced Block E (plot IIc).

East Berks: confined to the chalk of the Thames Valley; Marlow, Sonning, Remenham, Wargrave, Loddon Bridge, Cookham, Bisham, Hurley, Bray, Old Windsor. Recently at Coley, Dinton Pastures, Remenham, Crazies Hill, Rosehill Wood, Windsor Eyot, Prospect Hill, Temple Golf Course, Bray Meads, Cookham village green. 2% (1km²). Atlas 2000: all except [76]

West Berks: occasional north of 75 and south of 90 and in the Thames valley. Rare or absent in the south. Inkpen [36], Newbury [46], Dry Sandford Pit [49], Theale [67]. On compacted waste ground at Radley Station [5298] in September 2002. Atlas 2000: all except [68], [69]

Melilotus altissimus Thuill. *Tall Melilot* ○ hp 6 ↓

Railways, rubbish heaps and waste ground (as *M. arvensis*); rare and sporadic. Told from the much commoner *M. officinalis* by fruits more than 5mm, typically 2-seeded and pubescent. The keel is equal to (not shorter than) the wings.

East Berks: first record in a chalk pit between Wargrave and Henley (1871). Maidenhead, near Windsor one plant. Warren Row, Wellington College (1927), Bracknell, Maidenhead tip, Leighton Park (1968), Smallmead tip (1973), Ambarrow (1981), Queens Eyot (1988). Recently from Dinton Pastures, Wellington College, Chawridge Bank. < 1% (1km²). Atlas 2000: [77], [87], [88]

West Berks: absent from most of the area west of 50 and south of 95, rare in the Northern Loop and in an area centred on Theale [66]. Odstone and Ridgeway [28], Crog Hill, Letcombe Castle and Wantage [38], Newbury [46], Wytham [40], Didcot [59] and Grandpont [50]; all pre-1897. More recent records from Bourton and Ashdown Park [28], Buscot, Faringdon and Badbury Hill [29], Childrey, Challow and Seven Barrows [38], Buckland [39], Ashridge Wood [47], Frilford and Marcham [49], Long Leys, Swinford and Chawley pits [40], Thatcham Marsh and Wasing pits [56], north of Hermitage and Yattendon [57], Lollingdon Hill and Aston Upthorpe Downs [58], Radley Station and Didcot Power Station [59], South Hinksey [50], Padworth Common tip, Pingewood pits and Theale [66], Sulham [67]. Atlas 2000: all except [68], [69]

Melilotus albus Medik. *White Melilot*

• th 7 ↓

Cinder tracks, waste places, roadsides and rubbish tips, rarely in arable fields on the chalk. Local and sporadic.

Ascot: rare casual at Ascot Station in 1999, and one plant in the car park at Ascot Station on 28 October 2009. No records from Silwood Park.

East Berks: a rare casual, not reported by Druce from our area. Reading power station tip, Remenham, Wokingham, Shottesbrooke, Warren Row, Bracknell, Warfield, Binfield, Wargrave (1984), Queen's Eyot (1988). Somewhat increased, now scattered throughout, but still absent to the east of 90. Recently at Crazies Hill, Coley, Woodcraze Cottages, Amen Corner, Cain Road, Popeswood, Hut Hill, Braywoodside, Chawridge Bank, Maidenhead, Summerleaze Lakes, Bray, Oakley Court, Quelm Park, Cranbourne Tower, Home Park. With *M. officinalis* next to the sliproad where the A329(M) joins the westbound M4 motorway [7970] in June 2002. Locally abundant on the waste ground left after development of the new car parks for Dell Computers at Amen Corner [8469] in September 2004-05. Locally common in the roadside of London Road in Binfield east of Coppid Beech [841692] on 16 September 2008. 2% (1km²). Atlas 2000: all squares

West Berks: scattered in the Thames and Kennet valleys but absent or rare elsewhere. Recent records from Hungerford Newtown [37], Buckland [39], Cothill pit, Drayton gravel pit and Caldecot [49], Cumnor [40], Colthrop and Wasing pits [56], Kingstanding Hill (RNG) [58], Thrupp gravel pit [59], between Aldermaston and Theale (RNG), Tadley Common and Pingewood pits [66], Theale [67]. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all except [47], [68], [69]

Melilotus officinalis (L.) Pall. *Ribbed Melilot*

• hs 7

Trifolium officinale L.

Melilotus arvensis Wallr., nom. illegit.

Track-sides, motorway verges, waste ground and rubbish tips, fields, hedge-banks, waste places, open spots in woods, railway banks, and newly turned-up soil. Rather common. This is the only common yellow melilot of our area (see *M. altissima* for identification); the leaves are fragrant from the presence of coumarin.

Silwood Park: 3 large plants on waste ground on Reactor Bank in the second year after soil was dumped from excavations for the foundations of the Wind Tunnel in July 1986. Gone by 1987. In arable fallow at Pound Hill adjacent to Farm Road; 1 plant on 15 September 1994. The flowers were common throughout the Science Park during the dry summer of 1990, two years after imported topsoil was spread. Not seen since, and locally extinct until 2004. Frequent inside the rabbit fence at Ashurst Lysimeters in August 2004 from topsoil imported in August 2003, and still common in July 2005, but uncommon in 2008.

Ascot: local and rare; on waste industrial land to the south of Ascot Station in 2000.

East Berks: New Lock at Marlow, Wargrave, Wellington College, Braywoodside roundabout, Beenhams Heath, Ruscombe, Burchett's Green, Maidenhead, Cookham, Aston, Bracknell, Old Windsor; scattered and sporadic throughout. Common on compacted cleared ground destined for factory development at Green Park, Reading [7069] on 2 September 2007. Local and uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 9% (1km²). Atlas 2000: all squares

West Berks: scattered and sporadic throughout. On the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37]. Locally abundant along stretches of the ancient drovers road of The Fair Mile [5583]. Atlas 2000: all squares

Melilotus indicus (L.) All. *Small Melilot* ● th 6 ↓
Trifolium indicum L.

Waste ground, a rare casual on rubbish tips.

East Berks: rare in a field near Sonning railway bridge, Wellington College (RNG) in 1915, Cookham pit (1958), Reading tip (1962), Knowl Hill (1963), Smallmead tip (1988). Atlas 2000: [76], [77], [87]

West Berks: Wytham Mill [40], Abingdon [49], Newbury [46] and Pangbourne [67] all pre-1897, Beenham [56] in 1918, Frilford (OXF) [49] in 1923, Theale tip (LAN) [67] in 1956, Didcot [59] in 1965, Battle Farm tip [67] in 1969, Bradfield [57] in 1988. Atlas 2000: [57]

Medicago praecox DC. *Early Medick* th 5 †

West Berks: found at Abingdon [49] in 1921 (OXF).

Medicago lupulina L. *Black Medick* th 4

Grassland, arable fields, waysides, wall-tops, heaths, and waste ground, very common and generally distributed. A very pubescent form occurs on some of our heathlands. Frequent on calcareous soils, occasional elsewhere.

NVC: CG 2-5; MG 6; OV 3,10,15,16,18-23,39,41

Silwood Park: common in grasslands and on open waste ground throughout. Sub-dominant on North Gravel, in the conservation mixture in 1984, following sowing in 1983. Over-topped by 100% cover of ox-eye daisy in June 1984, but persisting longer; the daisy was all but gone by 1986 whereas the medic remained abundant. Site destroyed during the construction of Flowers Halls. Abundant, Ashurst Four Acre Field, on the new chalk plots; the commonest legume after 2 years of growth in October 1995. By the end of the second full growing season (2006), this was the dominant plant over

much of the Ashurst Lysimeters and had out-competed the *Lotus glaber*. In the cultivation-timing experiment at Pound Hill, it was particularly common on 2 September 2007 on the D plot cultivated in March 2007 and on all the March-cultivated plots on 15 July 2008. Dominant over the whole ground surface of the Ashurst Lysimeters on 15 July 2008, following herbicide treatment and no cultivation in late 2007 (replacing *Myosotis arvensis*, *Holcus lanatus* and *Poa trivialis* from early summer). Abundant and locally dominant in the May-cultivated herbivore enclosure in Silwood Bottom on 6 September 2008. Dominant again as the ground layer in Ashurst Lysimeters on 1 September 2009, following herbicide treatment and cultivation in late spring 2009. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	26

Ascot: common on soil piles and bare ground during construction of Ascot Racecourse in August 2005. The only Medick found on the site. Common in the car park of Ascot Station on 28 October 2009.

East Berks: frequent and locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 67% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Medicago sativa L.

Medicago sativa subsp. **falcata** (L.) Arcang. *Sickle Medick*

• hp 6 ↓

Medicago falcata L.

A rare native of calcareous grasslands, but a casual of waste ground in Berkshire.

NVC: MG6, CG2-5

East Berks: not in Druce. Casual or temporarily established on waste ground; Reading, Knowl Hill (1963). Smallmead tip [7070] in 1965, Bulmershe College (1968). Atlas 2000: no records.

West Berks: South Hinksey [50] in 1965. Atlas 2000: no records.

Medicago sativa subsp. **sativa** *Lucerne*

• hp 6

Sown fields, roadsides, railway banks and waste ground; “highly deserving of cultivation and more or less naturalized” (Druce). Occasional on calcareous soils, rare elsewhere.

NVC: OV3,10,15,16,18-23,39,41

Silwood Park: rare, but quite long persistent, as a naturalised plants, even in long grass. Silwood Bottom, on the eastern fence by the Reactor Track gate; 12 June 1980, gone by 1984. By the Zoology Greenhouses in 1983. At the trackside on Gunness’s Hill, next to Silwood Bottom; one persistent clump by the fence (1980-89), presumably an escape from an alfalfa crop cultivated at some time before 1970 (no one recalls such a crop being grown in recent years, and it has certainly not been grown since 1979). Not seen for 13 years (1990-2002), then one plant found behind the CABI Quarantine Greenhouse in June 2003.

East Berks: Wellington College, Wargrave, Henley, Maidenhead, Twyford, Old Windsor. Scattered throughout, but particularly common by the path from Ryeish Green to Shinfield [725678] in August 2002. Locally frequent on the banks of Farleymoor Lake on the industrial estate in Bracknell [8569]

in November 2002, and by the Drift Road on Braywoodside Roundabout [8775] in July 2003. Urban waste ground at Coley [7172] in October 2004. 4% (1km²). Atlas 2000: all squares

West Berks: occasional on the chalk and clay to the north of 80 but rare and scattered elsewhere. Hungerford Newtown [3672] in 1982, Thatcham Marsh [5167] in 1974, Pingewood pits [6869] in 1987. A form with sulphur yellow flowers was found at Wantage [38] in 1961. By the A4 south of Theale [640709] on 29 September 2009. Atlas 2000: all squares

Medicago minima (L.) Bartal. *Bur Medick* th 5 †
Medicago polymorpha L. var. minima L.

West Berks: found as a casual by Druce at Abingdon [49] in 1917 and 1919 (OXF). Not a native Berkshire plant.

Medicago polymorpha L. *Toothed Medick* th 6 ↓
Medicago nigra (L.) Krockner
Medicago hispida Gaertner, nom. illegit.
Medicago apiculata Willd.
Medicago denticulata Willd.
Medicago polymorpha L. subsp. polycarpa (Willd.) Zarco, nom. inval.

Waste ground and cinder tracks, very rare. The commonest of the spiny-fruited casual medics.

East Berks: not in Druce or Bowen, Suttons Nurseries, Reading [77] in 1912. Smallmead tip [7070] in 1988. By the Thames-side path on the Berkshire side of the river at Henley [767836] on 17 June 2002. Atlas 2000: no records.

West Berks: waste ground at Didcot [59] and by the railway at Newbury [46], both in 1896. Wantage Road Station [49] in 1964, Cry Sandford [49] in 1922 (OXF) and again in 1983, Abingdon [49] in 1927 (OXF). Collected by Susan Erskine near the gatehouse to Didcot Power Station [514914] in 2004. Atlas 2000: [49]

Medicago arabica (L.) Huds. *Spotted Medick* th 4 ↑
Medicago polymorpha L. var. arabica L.

Waste places, arable fields, railway banks and compacted ground in lawns and car parks; local but increasing. Druce tells the story of Captain Vancouver who came upon some seeds in a vessel that he had found wrecked on a desert island. On his return home, he presented the seeds to his brother, then residing at Newbury. The seeds were sown and expectation was raised; Dr Lamb and Mr Bicheno, with the vigilance of botanists, watched their progress, and were in hopes to have been able to announce to the agricultural world a valuable plant from the remotest island of the Pacific, when lo! it turned out to be the *Medicago arabica*, which is a native plant of Berkshire. It was found to produce a luxuriant foliage, and the cattle were extremely fond of it (Druce 1897 from Mavor, 1813).
NVC: OV 23

Silwood Park: it behaves as an alien here. In the central bed of the Science Park below newly planted beech trees on imported topsoil on 13 May 1990. Not seen since. In trampled grass at the edge of the lawn where it meets the concrete kerb stone on the CABI side of the road opposite M-Scan; a single plant on 22 March 1998. Still there 24 April 1999 but not seen in 2000-03 – there was one small plant in the middle of the bed in May 2004. Locally abundant on the grassy triangle at the Cheapside end of Mill Lane in May 2001 (and still in December 2002) following pipe-laying work. Very rare inside the

rabbit fence on April 28 2004, on imported topsoil used to landscape the site from which the Lysimeters had been removed in summer 2003. Increased in abundance at Ashurst Lysimeters by 15 May 2008. In the sown sward of the newly drilled lawn at Heronsbrook on 1 May 2004.

Ascot: very frequent in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008. Occasional in new landscaping at Sytner's BMW garage south of Ascot Station on 13 January 2009.

East Berks: "in the Home Park and in the meadow near Windsor where it seeds freely in the spring and the seeds germinate, so that the plants appear in the autumn and last through the winter" (Druce). Scattered records, but definitely increased since Bowen's flora. Old Windsor, Reading. Recent records from Rivermead, Sutton's Seeds, on waste ground between Tesco and the railway in Reading [725737], White Swan Lake, Ashbury Park, Ruscombe, Twyford, Highfield Park, Road Research Lab, White Waltham, Shottesbrooke, recently made-up embankments on Westacott Way [8479], Altmore, Lillibrooke Manor, Burchett's Green, North Town Moor, Fernbank Road, Foliejon Park, locally dominant on compact gravel at Queen's Eyot, Pennyroyal Field at Bray, very common in the grassland between Ascot Road and the M4 motorway in north Holyport, West Dedworth, Clewer, Hog Common, Windsor Castle, Home Park, Old Windsor, Ham Island, Cookham Lock, Old Windsor Lock, Runnymede Island. Banks of the A308 roundabout in Windsor in 2001. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 6% (1km²). Atlas 2000: all squares

West Berks: occasional down the length of the Thames valley and in the Northern Loop, but absent or rare everywhere else. Common in the nature reserve at Dry Sandford Pit [468997] in Cothill in 2000. In set-aside at [467983] in 2001. Local in lawns in Abingdon [4997] in July 2002. Atlas 2000: all except [37], [48], [57]

Trifolium hirtum All. *Rose Clover*

● th 6 †

East Berks: on waste ground in Reading gas works [77] in 1979 (RNG).

Trifolium tomentosum L. *Woolly Clover*

● th 7 †

West Berks: Abingdon Racecourse [49] in 1917 (no specimen).

Trifolium lappaceum L. *Bur Clover*

● th 6 †

West Berks: by the railway at Didcot [59] in 1896 (OXF).

Trifolium ornithopodioides L. *Bird's-foot Clover*

th 5 ↓

Trigonella ornithopodioides (L.) DC.

A local speciality of bare places on acid soils. Essentially a coastal plant in England and Wales, thriving in trampled places like car parks, tracks, viewpoints and picnic sites. It is typically a winter annual, but its rosettes are tolerant of winter flooding.

East Berks: extinct, formerly at Sutton's Nurseries at Reading (RNG) in 1889 and Shinfield (1918).

West Berks: known from Greenham Common in 1893. Bowen considered the plant to be extinct in Berkshire, but it is still (1999) locally plentiful on Greenham Common [4560] in very short, open sandy heath in the south-east corner, where it was first recorded in 1893. The open (extinct) symbol in

the Scare Plant Atlas for [46] is an oversight. Still there in some numbers as tiny cushions, flattened to the ground by rabbit grazing, on the occasion of the BSBI visit on 23 June 2007.

Trifolium repens L. *White Clover*

h 6

Meadows, pastures, and waysides, heaths, fallow and waste land in a very wide range of semi-natural, man-made and disturbed habitats. Abundant everywhere, one of our commonest native plants. The leaves are mined by *Liriomyza trifolii*.

NVC: CG 2-4; M 13,22; MG 1,4-7,9-11; OV 1,3,4,8-10,12,13,15,16,19-23,25,28,30,32,33; S 19; U 1,20; W 24

Silwood Park: the tenth most frequently observed species in small quadrats, and by a considerable margin the commonest legume (*Lotus corniculatus* is the next). The only clover found in most of our acid grasslands. Also an arable weed and an abundant and long-persistent member of the seed bank. A pink flowered form, growing in lawns above the Ha Ha, superficially similar to *T. fragiferum*, was found on 20 June 1986. Dominant on cultivated ground in Oak Mead in 1996 on the methyl-bromide-treated plots. Its seeds were amongst the only members of the seed bank that were not killed by fumigation (*Lotus corniculatus* was the other hard-seeded survivor). Dominance lasted for 4 years before it was broken up by grasses whose seeds invaded after fumigation. Plants grown on the competition-free bare soil of the methyl-bromide-treated plots grew to a diameter of over 1m during their first year.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
20	30	36	43	82

East Berks: the most frequent species at this spatial scale; no other plant was found in every sample. 100% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Trifolium** *T. repens* ‘Purpurascens’, *T. repens* ‘Purpurascens Quadrifolium’

Trifolium hybridum L. *Alsike Clover*

• hs 6

Trifolium hybridum subsp. **hybridum**

Roadsides, cultivated ground, fallow fields, railway banks, sown grasslands, waste ground and rubbish tips.; not infrequent and widely distributed. In small quantity unless planted; sporadic but commonest in disturbed ground near buildings. This subspecies is the cultivated plant and has distinctive hollow stems.

NVC: OV 33

Silwood Park: 2 plants in Silwood Bottom on 16 June 1980 on the 4-year old succession plots. The plant has increased substantially in Silwood Bottom and was locally abundant in several places on summer-cultivated ground in September 2002 and May 2003. Locally frequent in Pound Hill Field, but severely wilted in the exceptionally dry spring of 1990; the regrowth was vigorous in late June but wilted again in July. On a grassy bank by Farm Road with *Trisetum flavescens* in June 1992. Found in 1999 on Ashurst Four Acre Field, Tractor Sheds, South Lodge, Reactor Bank, and Cannon Crossroads. On imported topsoil at Ashurst Lysimeters on 10 July 2004. Very rare, on 22 September 2009 on the autumn-cultivated part of Silwood Bottom.

Ascot: scattered and uncommon on the earthworks and landscaping associated with the new Race Course (2005-07). Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: scattered throughout, but rare to the east of 90. Ascot, Wargrave, Twyford, Maidenhead, Barkham, Finchampstead, Arborfield, Sonning, Windsor. By the northern relief road in Bracknell, sown in 1999 in the wildflower mix used to landscape the banks; still there in 2001. 3% (1km²). Atlas 2000: all squares

West Berks: scattered records from the Thames and Kennet valleys, but rare elsewhere. Lechlade [29], Hungerford and Kintbury [36], Lambourn and Chilton Foliat [37], Wantage [38], Pusey [39], Newbury [46], Beedon [47], Cothill and Frilford [49], Wootton, Appleton and Cumnor [40], Brimpton [56], Hermitage, Stanford Dingley and Bucklebury [57], Moulsoford [58], Upton and Cholsey [58], Didcot and North Farm [59], Kennington [50], Silchester, Padworth and Tadley Common [66], Sulham, Basildon Bradfield and Theale [67]. Atlas 2000: all except [68], [69]

Trifolium fragiferum L. *Strawberry Clover*

hs 7 ↓

Galearia fragifera (L.) C. Presl

Trifolium fragiferum subsp. **fragiferum**

Xerosphaera fragiferum (L.) Soják

Water meadows on clay or alluvial soils, and wet grassland on roadsides chiefly on clayey soil where water has stood for a time. Declining with the loss of undrained meadow land.

East Berks: rare in Thames meadows from Sonning to Cookham; once plentiful in Sonning meadows and at Ruscombe. Remenham, Hurley, Cock Marsh. Druce regarded the plant as “not uncommon”, but much declined in the Thames Valley and rare or extinct elsewhere. There was a patch in Maidenhead Thicket [852816] in 2003. <1% (1km²). Atlas 2000: [78], [88]

West Berks: occasional in the upper Thames from Lechlade [29] to Abingdon [49] but absent elsewhere (south of 85) save for an outlying station at Hungerford [36]. Fernham [29], Balking [39], Buckland Marsh [39], Challow [38], Grove [49], Harrowdown Hill [30], Long Leys [40], Newbridge [40], Swinford [40], Marcham [49], Wytham Meads [40], Radley Meads [59], Pangbourne [67]. Atlas 2000: [29], [38], [49], [40], [59], [67]

Trifolium resupinatum L. *Reversed Clover*

• th 6 ↓

Galearia resupinata (L.) C. Presl

Xerosphaera resupinata (L.) Soják

Waste places, rare.

West Berks: Greenham [46] in 1894 (**OXF**), Tidmarsh Mill [67] in 1912 (**RNG**) and in a lawn in Eynsham Road, Botley [485059] in 1969.

Trifolium aureum Pollich *Large Trefoil*

• th 7 †

Cultivated fields, rare.

East Berks: Wellington College (1897). Rare casual in sown fields, Cookham (1954).

West Berks: Wootton [40] in 1888.

Trifolium campestre Schreb. *Hop Trefoil*

th 6

Cornfields, fallow fields, dry pastures, roadsides, railway banks and gravel pits (as *T. procumbens*). Generally distributed, but seldom common.

NVC: U 1

Silwood Park: a rare ruderal on cultivated ground in Silwood Bottom 3 August 1980; the site was part of the succession experiments and is now woodland. Ashurst Warren on cinder and gravel on 21 July 2000. Rare in the lawn at East Lodge adjacent to Buckhurst Road in June 2000.

East Berks: scattered throughout; Kenney's Farm, Rose Kiln Lane, Earley, Remenham, Wargrave, Woodcraiy Cottages, Devil's Highway, Wishmoor, Knowl Hill, Hurley, Holyport, Cranbourne Tower, Ham Island. 3% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, least common on the chalk. Atlas 2000: all squares

Trifolium dubium Sibth. *Lesser Trefoil*

th 5

Trifolium filiforme auct., non L.

Meadows, pastures, on sandy and gravelly soil, dry woodland rides, dry grassland and heaths. Frequent but least common on the chalk ridge. Common in lawns and short grass. Told from non-fruited *Medicago lupulina* by the absence of a tooth (the apiculus) in the depression at the tip of the leaflet, and by the glabrous calyx. Told from *T. micranthum* by the possession of a relatively long stalk on its terminal leaflet.

NVC: MG 4-7; OV 1,4,21-23; U 1

Silwood Park: very common on cultivated ground, gaps in grassland and in lawns.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	17	38

Ascot: frequent in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: 75% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Trifolium micranthum Viv. *Slender Trefoil*

th 5

Trifolium filiforme L.

Chrysaspis micrantha (Viv.) Hendrych

Lawns, short grassland on acid soils, heathy commons, tracks, dry sandy pastures, compacted gravel, and in peaty places; locally frequent but absent from the chalk. The terminal leaflet is sessile, and flowering is earlier (cf. *T. dubium*).

Silwood Park: common in all of the close-mown lawns, but absent from taller grass. Local in Nash's Field where the rabbit grazing is most intense, but very rare in 2000 when rabbit grazing was much lower. Locally abundant on compacted ground where a footpath crosses the surviving fragment of North Gravel by the BP Greenhouse on 15 May 2003. A single plant on imported topsoil at Ashurst

lysimeters on 11 June 2004. In short turf by the entrance drive opposite CPB beneath the new sign for Security by the *Quercus nuttallii* on 18 May 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	16	20

East Berks: sides of Virginia Water, Ruscombe, Wellington College, Wokingham, Bear Grove, Bracknell, Ascot, Windsor. Common in the south, rare on the chalk. 42% (1km²). Atlas 2000: all squares

West Berks: Absent from the central area, rare in the Thames Valley and occasional in Kennet valley. Atlas 2000: all except [28], [38], [48], [58], [59], [50], [69]

Trifolium pratense L. *Red Clover*

hp 5

Meadows, pastures, waysides, railway banks, waste ground and woodland rides; common and generally distributed. Attacked by the weevils *Apion apricans* and *A. nigritarse*. NVC: CG 2-5; M 13,22,24; MG 1,4-7,9,10; OV 9,10,15,18,21-25,33

Silwood Park: much less common than in places where the soils are less acid. Seldom found in natural grasslands, and more of a ruderal and waste ground plant with us. In the grassy verge of Church Lane footpath. On imported topsoil on Garden Wood Bank; a plant with long peduncles and no bracts, looking somewhat like *T. medium*, but with the needle-like stipules of *T. pratense* on 8 May 1992. In 1999 the plant was found at the Met Tower, Sunninghill Crossroads, Ashurst, Oak Mead, Ashurst Four Acre Field, Churchyard, Water Meadow, Tractor Sheds, Silwood Bottom, Tennis Courts, Reactor Block, M-Scan, Manor House, Cannon Crossroads. Very rare in Nash's Field in June 2005. Inside the deer fence on the uncultivated verge of Silwood Bottom in July 2005. Very rare in the Pound Hill Cultivation Timing Experiment on 15 July 2008, with a single individual on the October-cultivated plot in Block C. Uncommon, but local in the top left corner of the Ashurst Lysimeter enclosure on 3 September 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	5	31

Ascot: rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: huge plants (to 70cm tall) from seeds sown during landscaping of the northern relief road at Quelm Park in Bracknell in 1999; they had flower heads like pink *Echinops*, and massive hispid leaves. 92% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Trifolium medium L. *Zigzag Clover*

hp 6 ↓

Hedge-banks, rough borders of meadows, woodland rides, roadsides and railway banks; local and rather rare, Druce thought it was "commonest on heavy soils", while Bowen considered it to be "on dry, usually acid soils". Both agreed it was absent from the chalk. This is a local and very uncommon plant with us. It can only be distinguished reliably from *T. pratense* by the tips of the stipules. In *T. medium* they are green and linear lanceolate, rather like the blade of a Roman sword, but the stipule-tips are brown and bristle-like in *T. pratense*. Of course, you might prefer to count the chromosomes

($2n = 14$ in *T. pratense*, $2n = 80$ in *T. medium*); sorry, only joking. The possession of an extended bare peduncle between the flower head and the uppermost bracts is *not* a reliable character.

Silwood Park: no records.

Ascot: rare, near Ascot Racecourse (1897), but no recent records.

East Berks: local and uncommon. Sonning, Wargrave, Hurley, between Earley and Wokingham, on the railway banks between Wokingham and Wellington College Station, Twyford, Owlsmoor, Bracknell, Warfield, White Brook, Leighton Park, Woodley, Twyford, Wokingham, Cookham reach. Recent records from Chawridge Bank, Dinton Pastures and Windsor Great Park. Apparently much declined (but perhaps previously over-recorded?). $< 1\%$ (1km^2). Atlas 2000: [87]

West Berks: rare in the Northern Loop with scattered records from south of 75. Near Buscot [238962] and Little Coxwell [281934] Harrowdown Hill [30], Poughley [37], East Challow [38], Enborne Street [46], Welford [47], Tubney Wood [49], Wytham Wood, Tubney Wood, Rockley Copse, and on the east side of Boars Hill [40], Cold Ash [56], Fence Wood [57], by the Ridgeway [58]. Atlas 2000: [29], [36], [37], [38], [46], [40], [57], [58], [50], [67]

Trifolium incarnatum L.

● th 5 ↓

Trifolium incarnatum subsp. *incarnatum* *Crimson Clover*

In Druce's time it was frequently cultivated and "a field of it in full flower is a very beautiful sight". Sown fields, once occasional, now rare and sporadic.

East Berks: Wellington College, Maidenhead, Twyford, Wargrave, Sonning (**RDG**) in 1931, Cookham, Winter Hill. Between Wokingham and Crowthorne (1946), Spencer's Wood (1956). Much reduced. Atlas 2000: no records.

West Berks: Garford [49], Thatcham [56], Streatley [58], Silchester [66], Southcote (**RDG**) and Tilehurst (**LAN**) [67]. Now very rare. Kingston Bagpuize [4098] in July 2003. Atlas 2000: [58]

Trifolium striatum L. *Knotted Clover*

th 5 ↓

Dry open turf in grasslands and commons on gravelly or sandy soils; local and rare. Absent from the chalk. The leaves are hairy on their upper surface, and the veins are straight all the way to the leaf edge. The calyx is white-hairy, with 10 green veins.

Silwood Park: very local and rare. Silwood Bottom, compacted ground on the edge of the 4-year old succession plot by the Guinness's Hill fence on 16 June 1980, but not seen since. Garden Wood Bank, disturbed ground close to the mown grassy strip along the top of the bank at the TTC end on 13 May 1990, but not seen since. Farm Road, at road level on the sunny bank of the side-road to Astrophysics; 13 May 1990, with *Trisetum flavescens* and *Carex muricata* subsp. *lamprocarpa*. One plant was still there in 2000, but not seen again until May 2004 when again there was one plant but there was nothing in 2005 or 2006. Locally frequent on 27 May 2006 on the compacted cinder path in the Pot Standing at The Greenhouses following herbicide treatment in late summer 2005. Rare amongst grass inside the *Senecio inaequidens* rabbit fence in Nursery Field on 1 June 2006.

Ascot: locally frequent in short turf on compacted sandy ground near the road at Manor Hill in Windsor Great Park [956696] on 24 May 2006.

East Berks: Wellington College, Old Windsor, Swallowfield, Loddon Bridge, in a brickfield near the railway bridge in Twyford, railway cutting at Sonning (RDG) in 1913, Spencer's Wood Common. Rare in the Thames valley, absent elsewhere. Sutton's old nursery at Reading, Woodley (LAN), Maidenhead Thicket, Cookham, at the foot of the chalk slope near Pond 1 in Cock Marsh, Coleman's Moor, Old Windsor. Recently at Ashenbury Park, Wellington College, North Crowthorne, Bray Meadows, Windsor Great Park. Rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 1% (1km²). Atlas 2000: [76], [77], [86], [88], [96], [97]

West Berks: absent from the chalk and much of the interior. Little Coxwell [29], Buckland Warren, Hatford, Gainfield and Longworth pit [39], Greenham Common, Youlbury and Newbury [46], Grove, Frilford Heath, Tubney Wood, Hitchcopse pit [453997], Dry Sandford pit [465996], and elsewhere in Cothill [49], Youlbury and Chilswell Farm [40], Crookham Common, Bomb Dump and Cold Ash [56], Downe House [57], Lough Down and Streatley [58], Long Wittenham and Radley pit [59], Silchester [66], Church End, Ranikhet Camp and Tilehurst [67]. Atlas 2000: [29], [39], [46], [49], [40], [56], [57], [58], [59], [66], [67]

Trifolium scabrum L. *Rough Clover*

th 5 ↓

A local speciality of bare sandy places on dry fields and commons. A coastal species that is very local and rare inland. The lateral veins of the leaflets are thickened and arched-recurved at the leaf margin which distinguishes it from *T. striatum*.

East Berks: extinct. Formerly on ground occupied by a brickyard near Twyford (1897). Bowen did not find it here, despite repeated search. Atlas 2000: no records.

West Berks: still at Frilford Gold Course (RDG) [448986] and 2 flowering plants recorded by Susan Erskine at [442976] on 22 June 2005 in a scrape made by English Nature to encourage seedling recruitment, Hills Sandpit at Tubney [40] in 1995 and 2003, formerly at Cothill [49], Bessels Leigh [40], Padworth Common [66], Bradfield [67]. Atlas 2000: [49], [40], [59]

Trifolium leucanthemum Bieb.

• th 7 †

East Berks: a wool and tan bark casual found on rubbish pits in Reading [77] in 1924 (det. C.C. Townsend).

Trifolium arvense L. *Hare's-foot Clover*

th 6

Sandy fields, commons and heaths, dry banks, cinder tracks and waste places on acid soils. Local but abundant where it occurs; absent from the chalk.

NVC: OV 1

Silwood Park: uncommon and sporadic. Silwood Bottom, on compacted ground at the edge of the field adjacent to the Guinness's Hill track; 18 June 1980. Not seen recently, and this site has become densely overgrown during the succession experiments. Rare, Guinness's Hill, grassland where it appeared in the north-most rabbit enclosure of the CIBC broom experiment (presumably from the seed bank), during the first summer after fencing; a single, large, multi-stemmed plant, about 50cm in diameter on 15 August 1991. Not seen since; the plot was completely overgrown and shaded out by broom in 1992. In the Playground at Cheapside in 1999. East Lodge; rare in the lawn beneath the birch trees adjacent to Buckhurst Road on 25 June 2000.

Ascot: locally abundant on the abandoned Platform 4 of Ascot Station from 1985-2007. It survived resurfacing of the adjacent Platform 3 in spring 2000, when a fence was erected to stop passengers from imagining that a train would ever arrive on the now thoroughly forested track of Platform 4 (pine, birch and sweet chestnut were more than 2m tall, but the eastern end of the track was cleared up to the start of the platform in 2007). Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: Sonning, Boyne Hill, Wellington College, Remenham, Windsor, Ambarrow, Bracknell, Ascot, gravel pit near Twyford, Maidenhead, Bray Wick, abundant in Sonning Cutting, Sandhurst, Queens Mere, Wokingham, Waltham St Lawrence, Cookham, Tower Hill, Bray. Particularly abundant in the old sandpit at Cookham Dean [874858] in July 2003, growing with *Filago minima*. 2% (1km²). Atlas 2000: all except [97]

West Berks: scattered and uncommon north of 90 and south of 75: Kintbury [36], Hackpen Warren [38], Stanford pit, Buckland Warren and Longworth pit [39], Cothill pit [46], Snelsmore Common [47], Goddard's Barn [48], Frilford Heath, Hitchcopsie pit [453997], Dry Sandford pit [465996] and Abingdon [49], Tubney Wood and Youlbury [40], Hermitage [57], Didcot [59], Burghfield [66], Tilehurst [67]. Atlas 2000: [29], [38], [39], [46], [47], [48], [49], [40], [56], [57], [59], [66], [67]

Trifolium subterraneum L. *Subterranean Clover*
Calycomorphum subterraneum (L.) C. Presl

th 5

Gravelly commons and dry, sandy, acid banks; very local and rare. Now most often found in the compacted parts of lawns.

Silwood Park: one of the specialities of the native flora. In the lawn above the Ha Ha; two small patches above the footpath ramp, about one third of the way between the edge of the Ha Ha and oak number 7. First discovered in flower on 9 May 1984. Still there 13 May 1987, but not seen in the very dry May of 1989. Still there on 13 May 1990. Lots of patches, but few flowers; 6 June 1993 and 19 May 1994. Beautifully marked leaves 20 April 1996, and good flowering in a series of patches measuring 6m by 2m; 25 May 1996. Good on 4 May 1998 and the patch measured 6m x 4m in May 2000. This patch was almost gone by May 2004. It also occurs sparingly all along the edge of the lawn, by the kerb stones marking the edge of the car park in front of the Manor House (1984-2004). Drive Field, on the banks of the lawn beneath beech by the Drive in thin turf with *Vulpia bromoides*; 5 small patches 22 May 1994. Still there, in heavily trampled turf at the edge of the beech canopy, flowering well in May 1999 and 2003. Lily Pond Lawn, on the sloping bank facing the pond below Phase 1. Discovered 9 May 1984, but Ted Green says he had known about it for years; typical! Present in low numbers 16 May 1996 and not seen again until 2000. In 2002 the patch was 5m x 2m at the end of the lawn closest to the Manor House. Croquet Lawn Cedars; one plant on bare ground of the path under the larger cedar; 8 May 2000. Much increased in recent years; locally abundant in 2001 in 4 patches on the grassy bank of the lawn between the Manor House and the Lily Pond, where students sit on the grass in summer during their tea breaks. In flower abundantly below Phase 1 on 24 April in the very early spring of 2002, but 2004 was a poor year for the plant in all its Silwood sites (it grows with *Ornithopus perpusillus* and this species did particularly well in 2004). After a cool spring in 2008 the plant was not in flower until 10 May 2008: it was common by the ramp at the end of the Ha Ha, scattered throughout the edge of the lawn by the kerb in front of Silwood House, scattered sparsely all along the top of the bank of the lawn facing the Lily Pond, and locally frequent in the lawn by South Block close to the stone steps (the rest of the lawn is shaded by the building and the plant flowers later there). Uncommon in the late, dry spring on 13 May 2009 on the Lily Pond lawns and beneath South Block. The plant did well in the dry spring of 2010 and was growing with *Trifolium micranthum*, *Ornithopus perpusillus*, *Veronica arvensis*, *Oxalis exilis*, *Aira praecox* and *Aphanes australis* on 18 May 2010.

East Berks: near Hurst (1875), Wellington College, “rather plentiful over a limited area of Bircher’s Green between Twyford and Maidenhead” (1892-96), Sandford Mill (1918). Woodley (RNG), Coleman’s Moor (1958), Ascot (1951), Wellington College (1960). Recently only at White Swan Lake and Wellington College. <1% (1km²). Atlas 2000: [77], [86], [96]

West Berks: Frilford Heath golf course practice ground in 2000, and in set-aside at Frilford [446981] in 2002. Formerly at Grove and Tubney [49]. Atlas 2000: [39], [49], [56]

¶ **Thermopsis** *T. lanceolata*, *T. montana*, *T. villosa*

Lupinus arboreus Sims *Tree Lupin*

• n 6 ↓

Not in Druce. Introduced, on dry sandy grassland. Locally established.

East Berks: Coleman’s Moor (1966), Woodley tip (RNG) 1958-71, Broadmoor (1963), Winnersh Halt (1967), Bracknell (1974), Owlsmoor (1970), Yateley Bridge (1975), Suttons old nursery (1978).

West Berks: Tilehurst [67] in 1949, Frilford Heath golf course (RNG) [449985] from 1954-2004, Boar’s Hill [40] in 1955.

Lupinus x regalis Bergmans *Russell Lupin* = **L. arboreus** x **L. polyphyllus**
Lupinus x polyphyllus auct., non Lindley

• h 6

Under-recorded as *L. polyphyllus*. Most garden escapes are *L. x regalis*. All the Lupin records are aggregated here.

Silwood Park: very local and rare. A single red-flowered plant on 27 July 2004 at the Ashurst Lysimeter from imported topsoil. The plants in the perennial bed at The Greenhouses are still common in July 2007 after 20 years of neglect.

East Berks: railway in Reading (1978), Suttons old nursery (1979), south of Bracknell (1979), Coppid Beech (1986), Bulmershe (1998), Swallowfield (1999), common in Earley on the banks of the A3290 [741733] in 2002. 13% (1km²). Atlas 2000: all squares

West Berks: Frilford Heath golf course practice ground [442968] in 1980 and in set-aside nearby [447981] in 2001, Battle Farm tip [67] in 1969, and roadside of the A34 close to M4 interchange [47], Drayton and south-west of Abingdon [49], and at Wash Hill [46], all in 1988.

Lupinus polyphyllus Lindl. *Garden Lupin*

• h 6

Introduced on railway banks and waste ground. Locally established or casual; not in Druce.

East Berks: east of Reading, Woodley, well established on the railway bank at Twyford, South Ascot (1965). In the absence of herbarium specimens it is not possible to be sure that these were not *L. x regalis*.

¶ **Lupinus** *L. arboreus*, *L. chamissonis*, *L. ‘Chandelier’*, *L. ‘Lulu’*, *L. ‘My Castle’*, *L. ‘Noble Maiden’*, *L. ‘The Chatelaine’*, *L. ‘The Governor’*, *L. ‘The Page’*

Laburnum anagyroides Medik. *Laburnum*

• m 5 ↑

Introduced to plantations, hedges and waste ground in small quantity. In every village; often self-sown in hedgerows, railway sidings and on waste ground. Leaves and young shoots covered in silvery, silky hairs. The commonest aphid is *Aphis cytisorum*.

Silwood Park: self-sown on the roadside at South Lodge, 1989 (still there in 2000, but weeded out in 2001) and at Ashurst Warren, Tractor Sheds, Drive Lawns.

Ascot: abundantly self-sown on the abandoned railway track, next to what used to be Platform 4 of Ascot Station, south of the current Platform 3 where trains go to Bagshot. Seedlings in the car park at Ascot Station on 28 October 2009.

East Berks: not in Druce. Clearly increased. Self-sown on a bank opposite Bray Marina in 2001, and in a hedge near Finchampstead Church in 2002 and in an isolated hedgerow at Beenham's Heath [8475] in 2003. 21% (1km²). Atlas 2000: all squares

West Berks: self-sown plants particularly common in Faringdon [29] and Burghfield [66]. By the railway at Fulscot Bridge [543896] in 2002. Frequent in Abingdon [4997] and Kingston Bagpuize [4098]. In a roadside hedge at Southridge Farm [574786]. Atlas 2000: all except [47], [48]

Laburnum x watereri (Wettst.) Dippel = **L. anagyriodes x L. alpinum**
Cytisus x watereri Wettst.

This is the most commonly planted *Laburnum* these days. Sold in every garden centre, but not yet seen outside of gardens. Its hybrid sterility ensures that it does not spread by seed. Intermediate in flower and raceme characters, but much less hairy than *L. anagyroides*.

Laburnum alpinum (Mill.) J.S. Presl *Scottish Laburnum* ● m 5
Cytisus alpinus Miller

Glabrous to sparsely pubescent twigs and smaller flowers (13-18mm rather than 17-23mm) in rather longer racemes (25-35cm rather than 15-30cm). No records, but worth searching for.

¶ **Laburnum** *L. alpinum* 'Pendulum', *L. x watereri* 'Vossii'

Cytisus multiflorus (L'Hér. ex Aiton) Sweet *White Broom* ● m 5
Spartium multiflorum L'Hér. ex Aiton

East Berks: not in Druce. Introduced; on a sandy slope near Englemere Pond (1961), and on a roadside at St Ann's, Wokingham [835690] in 1984.

Cytisus scoparius (L.) Link *Broom* n 5
Spartium scoparium L.
Sarthamnus scoparius (L.) Koch

Sandy fields, coppices, margins of dry woods, heaths and waste ground on dry, acid soils, heaths, etc. Locally common but absent from considerable areas of the clays and chalk. Host to a wide range of insect herbivores, including the dull-coloured chrysomelid beetle *Phytodecta olivacea*. Feeding by the pea aphid *Acyrtosiphon pisum spartii* is one of the main causes of reduced seed production, but the common black aphid is *Aphis sarothamni*. The form with a partly red standard (sometimes known as f. *andreaeus*) comes from the seedbank beneath the former Richards and Waloff experiment on Nash's Ridge in Silwood Park.

Silwood Park: infrequent and ephemeral, but locally abundant. A weed of The Heath and of shrub beds along the Cannon Path; these require annual removal of the broom to maintain the heather. Abundant all around the periphery of Gravel Pit from 1979-89, but it had gone completely by 2001. Formerly locally dominant on South Gravel until the site was cleared for construction of the Science Park in 1987. A single plant in the clearing of Water Meadow West in April 2003. In some parts of Silwood Park there is spectacular recruitment from the seed bank as soon as a rabbit fence is erected. There are superb examples of such broom-defined fence lines on Guinness's Hill and in Nash's Field. On Observatory Ridge, broom sprang up inside the deer enclosure (erected 1995) protecting the Holly Leaf Miner host plants, and by April 2003 the broom were overtopping the holly bushes. The footprint of Nadia Waloff and O.W. Richards' celebrated experiment, in which they sprayed broom plants with insecticides for several years, is still clear cut in the seed bank of the central part of Nash's Field; excluding insects greatly reduced the death rate of the plants and increased their seed production. The prominent broom thicket on Guinness's Hill moved steadily southwards since 1979, and there has been no recruitment from seed on the ground where the adult plants died. The original broom patch lay on the crest of the ridge below the fence separating Nash's Field and Guinness's Hill; all that remains is a few skeletons of dead broom trunks. There was no natural regeneration in this site, and the next cohort of bushes became established on the southern half of the ridge. This was at its peak of vigour in 1990, and was harbourage to a vast rabbit population. The rabbits sculpted elaborate topiaries from a few bushes, but did nothing to halt the general advance. This second patch was dead and gone by the winter of 1993-94. Commonly regenerated also in the PROSAMO rabbit fences erected amongst the bracken in 1990, but by 2001 most of the plants in these populations were senescent or already dead. More rabbit-fences were erected on Guinness's Hill by CIBC in spring 1991; copious seedlings sprang up inside the fences in the first year, with first mass flowering of these recruits in May 1994. By 1995, these fences contained a unbroken thicket of plants over 2.5m tall, at which point self-thinning began and the populations were dead by 2001. It is not clear what stops regeneration from seed in these ageing populations (e.g. depletion of key soil resources, allelopathy, build up of soil pathogens).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	8	32

Ascot: common by South Ascot playing fields and on banks near Ascot Station. Abundantly self-sown on bare sand in a construction site on Dry Arch Road on 2 August 2004. Seedlings in the car park of Ascot Station on 28 October 2009.

East Berks: frequent in the south, rare or absent in the north. Often at very low population density over large areas, but occasionally dominant and thicket-forming. 34% (1km²). Atlas 2000: all squares

West Berks: absent from most of the region except for the south-east and the Northern Loop. Atlas 2000: all except [37], [38], [48], [50], [68], [69]

¶ *Cytisus* *C. battandieri*, *C. x beanii*, *C. 'Burkwoodii'*, *C. 'Cottage'*, *C. 'Goldfinch'*, *C. 'Hollandia'*, *C. x kewensis*, *C. 'Killiney Red'*, *C. 'Killiney Salmon'*, *C. 'Lena'*, *C. 'Minstead'*, *C. 'Porlock'*, *C. x praecox 'Albus'*, *C. x praecox 'Allgold'*, *C. x praecox 'Warminster'*, *C. scoparius* f. *andreasus*, *C. 'Windlesham Ruby'*, *C. 'Zeelandia'*,

Spartium junceum L. *Spanish Broom*

• n 5 ↑

A garden escape found on waste ground, roadsides, railways and grasslands. Much increased. Now occasional on waste ground and sandy roadsides, and very conspicuous when in bloom (each flower is 20-28mm, rather than 15-20mm in *Cytisus scoparius*).

Ascot: no records.

East Berks: recently from Worton Grange, Riseley, by the railway east of Reading Station, Lower Earley, Alder Moor, Marsh Mills, Great Hollands, Warfield Church, Summerleaze Lakes, Owlsmoor, Clewer, Bray Wick. 2% (1km²). Atlas 2000: all except [87], [96]

West Berks: not in Druce or Bowen. First recorded from chalk grassland at Aston Tirrold [5085] in 1961. Waste ground near the canal in central Newbury [4767] and by the roadside near Amner's Farm [675696] in May 2002. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. A single bush on dumped hardcore in Chilton railway cutting [4985] on 12 June 2004. Atlas 2000: [59], [66]

Genista monspessulana (L.) L.A.S. Johnson *Montpellier Broom* ● m 5 †
Cytisus monspessulanus L.
Teline monspessulana (L.) K. Koch

Silwood Park: very rare, now extinct. A single self-sown individual, 2m tall and first fruiting in 1989, on waste ground between the CABI quarantine greenhouse and the BP Greenhouse. The plant was in full flower on 22 March 1999 but continued to produce a trickle of flowers throughout the summer. Survived the building of the new Jiff Greenhouses in June 2000, but only just! Probably the offspring of one of CABI's test plants, used in a biocontrol screening programme for potential agents against *Cytisus scoparius*. This is the only Berkshire record. The leaves and flowers are produced only at the ends of the branches, because the plant is ruthlessly attacked by snails which climb up at night to eat the tender leaves. Somewhat recovered by April 2002, but then swamped by the growth of the transplanted *Securigera varia* in late summer 2002. Ring-barked by rabbits on 28 Jan 2004 after weeding of the surrounding area had exposed the trunk; the plant was dead by 9 March 2004.

Genista tinctoria L. *Dyer's Greenweed* n 7 ↓

Ancient grasslands, heaths, dry unimproved pastures, and woodland rides, often on clay soils. Local and decreasing.
NVC: CG 5; MG 5

Silwood Park: extinct as a result of shading by *Cytisus scoparius* and *Holcus mollis*. It grew for many years just south of the Ashurst Path on the crest of Rookery Slope (since before 1970), amongst grass below the broom. The plants were rabbit grazed and hard to find in winter. First flowers seen 28 July 1980. Still there in 1989, but not seen since. It is not clear whether this was native or a planted patch. The insect fauna of Dyer's Greenweed had been studied over many years by Dr S. McNeill and his students at Chawridge Bank (below), and it was cultivated by the Header House as a screening plant for gorse biocontrol insects by CIBC from 1983, but it never sowed itself here.

East Berks: near Wellington College, Waltham, Maidenhead, Blackwater, Winkfield, between the river at Jouldern's Ford and Finchampstead, abundant but much damaged by the June frost of 1892. Finchampstead Leas, Binfield Manor, Jealott's Hill, Hawthorn Hill, Arborfield, Windsor Forest (1974), Twyford [812751] (1984). A single plant in the northern verge on the Wokingham side of Coppid Beech roundabout [835689] in June 2003. Still common in the ancient grassland (MG5c)

nature reserve at Chawridge Bank [894738] in 2008, where it thrives in co-dominance with *Succisa pratensis* on the field that was stripped of its topsoil for construction of the dog-racing track next door. 1% (1km²). Atlas 2000: [86], [87]

West Berks: local and rare, in the Northern Loop and on the southern heaths. The only recent records are Inkpen [36], Crockham Heath and Enborne [46], Cothill [49], Wytham [40], Bucklebury (**LAN**) [57], Mortimer Common (**RDG**) [66]. Also at Briff View field [545705], Enborne [436653] and [439652]. Atlas 2000: [36], [46], [49], [40], [56], [57], [66]

Genista anglica L. *Petty Whin*

n 5 ↓

Heaths, bogs, woodland rides and acid grasslands; local, rare and decreasing. One of the first plants to disappear as a result of cultivation. Many of the plants on mown rides in the Crown Estates woodlands are close to extinction as a result of over-frequent cutting and shading from overhanging trees.

NVC: H 2

Ascot: very rare and declining on woodland rides in the Crown Estates, as at Whitmoor Bog [8968], Swinley Park [8967], Blane's Allotment [8966], and in woods near The Orangery, south of the A322 roundabout [906647]. Still in the short rough on the western part of the golf course on Ascot Heath Racecourse [9169] in May 2002, but rare and threatened by fertilization. Formerly on Sunningwell Bog, and on the eastern part of Ascot Heath [9269], where it was last seen in 1972. There is a 'new Berkshire' site in Sunningdale [965660] on Chobham Common NNR across the border in v.c.17 Surrey.

East Berks: formerly at Cookham Down, Twyford, Hurst, Arborfield, Finchampstead Leas, Pinkneys Heath and Coleman's Moor. Now confined to the south of the district at Owlsmoor bog [849631], Queens Mere and Nine Mile Ride, Bracknell, Wishmoor Cross [8863], Edgebarrow Hill, Sandhurst, and Wellington College bog. 1% (1km²). Atlas 2000: [76], [86]

West Berks: confined to acid sands in the south-east of the district, with an outlier at Cothill [40]. Enborne Row [450635] and [448635], Silchester Common [6162], Gibbet Piece [6465]. There were 3 plants in the bog on Inkpen Common with *Cirsium dissectum* and *Narthecium ossifragum* [380637] on 10 May 2005. Atlas 2000: [36], [47], [40], [56], [57], [66], [67]

Genista hispanica L. *Spanish Gorse*

● n 4 ↑

A garden plant, increasingly used in landscaping schemes to give a low, but vandal-deterring, ground cover, with the bonus of good yellow flowering in spring. Mass-planted on modern industrial estates and business parks in all the larger towns.

Silwood Park: a ground cover common plant on the Science Park (planted 1987). Self-sown individuals are found up to 100m or so away from the parents. Cannon Path: a self-sown individual inside the rabbit fence in the new shrub planting opposite *Betula* 'Jermyns' at the TTC, 14 May 2000; still there in 2004.

Ascot: self sown from landscaping at Crown Hill Court in South Ascot in May 2004.

East Berks: on a shaded hedge-bank near Farley Hill Court (**RNG**) [7564] in 1987. On waste ground in Whitley [7270], Earley [7571], west Binfield [8370], East Maidenhead [8981] and [9081] in 2002. 2% (1km²).

West Berks: on waste ground near the railway at Cow Lane in Kennington [5202] in September 2002

Genista aetnensis (Raf. ex Biv.) DC. *Mount Etna Broom* ● m 5
Spartium aetnense Raf. ex Biv.
Cytisanthus aetnensis (Raf. ex Biv.) Cristof. & Feoli

Silwood Park: self-sown in the shrub bed by Immunology where it was planted in 1982 as part of the screening, when Southwood Halls were under construction. Not (yet) self-sown from individuals planted on the Science Park in 1987. Much the tallest *Genista* grown in the Park.

Ascot: dominant around the car park at the southern end of the tunnel at Ascot Station above the industrial estate from 1985 (still there in 2006).

¶ **Genista** *G. aetnensis*, *G. canariensis*, *G. lydia*, *G. pilosa*, *G. pilosa* ‘Vancouver Gold’, *G. sagittalis*, *G. tinctoria* ‘Royal Gold’

Ulex europaeus L. *Gorse* n 3

Heaths and dry pastures. Locally common and widely distributed. Wood margins and heaths on dry, acid, nitrogen-poor soils and on the tops of the chalk downs; rare or absent from much of the chalk and clays. “The severe winter of 1895 destroyed a large quantity of plants” (Druce). Flowering all year round, hence the old Scottish folk saying :”When the gorse is in flower, then kissing’s in season”. Host plant of the Green Hairstreak butterfly *Callophrys rubi*.
 NVC: CG 2-5; H 2,3; M 16; MG 5; OV 27; U 1,2,20; W 10,16,22-25

Silwood Park: locally frequent on Elm Slope, Cannon Path, Buckhurst Road, Science Park, Nash’s Copse, The Heath, Croquet Lawn Heath, Rush Meadow, Pound Hill, Farm Road. Once the most abundant plant on South Gravel (now the Science Park). The plants adjacent to Gravel Pit wood were burned down in August 1983 when vandals from Cheapside set fire to Richard Brown’s experimental wheat crop. The fire scars had completely healed by 1991, but the gorse had been replaced by broom.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	1	9

Ascot: common by South Ascot playing fields and on banks near Ascot Station. Locally abundant by the Marist Convent Lake [941682].

East Berks: frequent in the south, rare in the north. Often at very low population density over large areas, but occasionally dominant and thicket-forming. By the M4 at Billingsbear. Very rare on sunny waste ground between the railway and Tesco’s Superstore at Kings Meadow in Reading [719738] on 6 September 2008. 34% (1km²). Atlas 2000: all squares

West Berks: absent from the chalk but occasional in the Thames valley and frequent south of 75. It occurs on the tops of chalk downland where the chalk is overlaid with more acidic sediments, as on Test Way at the top of Rivar Copse on the Hampshire Downs [3561]. Atlas 2000: all except [68], [69]

[**Ulex gallii** Planch. *Western Gorse*]

Not in Berkshire. Reported occasionally in error for *U. minor*, but there are no specimens or reliable records. The records in Druce are errors (vide M.C.F. Proctor). Not in Bowen. All the recent specimens I have been sent (e.g. from Greenham Common in 1999) are *U. minor*.

Ulex minor Roth *Dwarf Gorse*

n 7

Heaths, commons, wood margins and damp acid grasslands. Locally abundant and widely distributed in the heathy, southern part of our area. the south-eastern dwarf gorse with short (<9mm) calyx (cf. *U. gallii* with calyx >10mm) characteristic of *Calluna/Molinia* heath on the Bagshot sands. Particularly abundant over the Surrey border on Chobham Common and Sunningdale golf course, where it is found with *Agrostis curtisii* and *Erica cinerea*. A palatable species, it is suppressed by heavy grazing. Found on acid heath podzols, rather than acid brown earth soils, where *U. europaeus* dominates.

NVC: H 2,3; M 16; U 1

Silwood Park: very uncommon in the few surviving tiny fragments of heathland, on Elm Slope, Cannon Path (now gone) and Croquet Lawn Heath. A precarious survivor, in need of constant vigilance. It is notable by its absence from the U1 grassland in Gravel Pit. There are just 2 small plants left on Elm Slope, threatened with being over-run by bracken in June 2002, and there are only two bushes left in Croquet Lawn Heath, flowering on 29 July 2002 amongst profuse *Erica cinerea*. One plant, close to the edge of the canopy of the young beech tree by the Cannon Path on 28 August 2010.

Ascot: first record, Sunninghill (Sir Joseph Banks, 1773). Locally frequent in Windsor Great Park and on heathy rides through the Crown Estates woodlands. Uncommon in the heathy parts of the rough on the Golf Course on Ascot Heath. Blane's Allotment, Buttersteep, The Orangery, Swinley, Kingsride, Heatherwood, Coronation Road, Peanut Roundabout.

East Berks: common on the heaths to the south of 75, absent in the north. Highlands, Longmoor Bog, rare in California Country Park, Wellington College, Edgebarrow, Owlsmoor, Road Research Lab, Caesars Camp, Wishmoor Bottom [879633], Royal Military Academy, Poppy Hills, Devil's Highway, Coral Reef. A curious record is from Jealott's Hill [873733] in 1973 (this is clay country). 6% (1km²). Atlas 2000: [76], [77], [86], [87], [96], [97]

West Berks: common on the southern heaths in [47], [56] and [66]. Locally dominant with *Calluna vulgaris* in regularly mown ground next to the former runway at Greenham Common [46] and [56], Ashridge Wood and Snelsmore Common [47], Cold Ash Common, Crookham Common and Aldermaston [56], Oare Common and Bucklebury [57], Burghfield [66], Basildon [67]. There were about 100 bushes planted on Jarn Mound [40] in 1933. Atlas 2000: [36], [46], [47], [56], [57], [66], [67]

ELAEAGNACEAE

Hippophae rhamnoides L. *Sea-buckthorn*

• m 3 ↑

Much used in modern urban landscaping schemes where a vandal-proof hedge is required. Self-seeding abundantly in many places, especially on sandy soils. A British native, but introduced in Berkshire, bird-sown from planted bushes.

Silwood Park: commonly planted in shrubberies (e.g. Immunology, Garden Wood Bank) but not self-sown.

Ascot: abundantly self-sown on the recreation ground in South Ascot, on the edge of tarmac. Also on Charters Road. At the end of the dead-end that was formerly the Drift Road at Cranbourne, where it survived the massive tidying up operation of May 2008 when the *Verbascums* were destroyed.

East Berks: not in Druce or Bowen; increasing rapidly. Planted in the central reservation of the A329 at Wokingham (1987). Roadside south of Easthampstead (1988). Recently from Westacott Way, the M4/A33 Interchange, Finchampstead Bridge, Childs Hall, Woodley, Twyford, Knowl Hill, North Crowthorne, Edgebarrow, West Hanworth, industrial waste land in Bracknell [8569], Holloway, Stubbings, Maidenhead. 3% (1km²). Atlas 2000: all except [78], [87]

West Berks: seeding at Swinford waterworks [40] in 1964. Planted at Jarn Mound [40] in 1965. Frilford Heath [447981] in 2001. In scrub at Dry Sandford Pit [4699] in 2002. Atlas 2000: [29], [49], [40], [67]

Elaeagnus pungens Thunb. ‘**Maculata**’ *Variegated Oleaster* ● n 5

A common shrubby plant with striking golden-yellow variegation, also used widely in urban landscaping schemes.

East Berks: on waste ground in Bulmershe [7573] and Bracknell [8769] in 2002.

West Berks: waste ground in central Newbury by the canal [4767] in July 2002.

Elaeagnus x ebbingei Door. *Oleaster* = **E. macrophylla x E. pungens** ● n 5

Widely planted in urban landscaping schemes on new factories, business parks, and such like.

Silwood Park: planted around the Manor House, and occasionally producing seedlings. Common in the landscaping on the Science Park, but not regenerating.

Ascot: rare, on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: planted around many of the new factories and office buildings in Bracknell (1995). Self-sown seedlings in the construction site at Arlington Square in 1999. In a hedge in Holyport [8977] and by the R. Thames in Maidenhead [9081] in 2002. Waste ground at Whitley [7270] in 2003.

West Berks: on waste ground near the canal in Newbury [4767] in 2002.

¶ **Elaeagnus** *E. angustifolia*, *E. x ebbingei*, *E. x ebbingei* ‘Gilt Edge’, *E. parvifolia*, *E. pungens* ‘Maculata’, *E.* ‘Quicksilver’, *E. x reflexa*, *E. umbellata*

HALORAGACEAE

Myriophyllum verticillatum L. *Whorled Water-milfoil* hyd 7

Rivers, streams, ponds and ornamental waters; “locally common and widely distributed in all our larger streams and large sheets of ornamental waters” in Druce’s time; now uncommon. A scarce plant in Britain. Submerged aquatic with emergent flowering spikes, found in ponds with base rich

water, often growing with water lilies and pondweeds. Declines by over-deepening or canalisation of waterways, and by overtopping by bulky emergent monocots.

Ascot: local and rare: Sunninghill Park Lake.

East Berks: in ditches with nutrient rich, calcareous water. Mostly by the R. Thames from Sonning to Hurley, and from Crown Estates. Recorded from a stream in Reading (**LAN**) in 1957. Ditches near Bray. Local, Henley Reach, Wellington College. Cookham Moor, Widbrook Common, Dinton Pastures, Thimble Farm. Atlas 2000: all except [76], [97]

West Berks: occasional throughout the Thames valley from Lechlade [29] down to Reading [67], but absent from the bulk of the area and not recorded from the Kennet valley save for a single record from Hungerford [36]. In an old pit at Appleford Holt (**OXF**) [5293] in 1976. Atlas 2000: [29], [36], [39], [40], [58], [59], [50], [67]

Myriophyllum aquaticum (Vell.) Verdc. *Parrot's-feather*

● hyd 6 ↑

Enydria aquatica Vell. Conc.

Myriophyllum brasiliense Cambess.

This is the common aquarists' plant, becoming naturalized in ponds where it has been thrown out. An aggressive alien, covering over whole ponds, and turning them terrestrial by the end of summer with their solid carpet of emergent, water repellent bright green shoots (the eponymous Parrot's feathers). Told from *M. verticillatum* (which also has its leaves in 5's per whorl unlike the 4 per whorl of *M. spicatum* and *M. alterniflorum*) by the dense sessile glands which make the emergent leaves so amazingly water repellent, and by the whitish, entirely female flowers (*M. verticillatum* has reddish flowers, the upper of which are male). This is a pestilential weed of ponds in subtropical countries.

Silwood Park: grown in an aquarium in CABI's open Polytunnel in July 2004 without any security measures.

East Berks: local and rare. In the ornamental pond in Savernake Park, off New Forest Ride in eastern Bracknell [886677] where, in the absence of harsh winter weather, it can dominate large areas of the water surface in early summer. In the pond of the primary school on Oxford Road in Reading [7073] in July 2002. Atlas 2000: [86]

West Berks: no records until 1998, when the plant was found in Abbey fishponds at Abingdon [511981]. Found by Susan Erskine in the pond at Lydes Copse [296931] in April 2004, where it was spreading rapidly.

Myriophyllum spicatum L. *Spiked Water-milfoil*

hyd 6

Ditches, ponds, streams, water tanks, canals; locally common in base-rich water. Told from *M. alterniflorum* by its whorled (not opposite or alternate) leaves, and by its reddish, spike-like emergent flower stalks.

Silwood Park: locally dominant in the metal-sided Water Tank that was built for fire-fighting during army occupation of the Park in the Second World War. Still abundant in June 2003 after the water level fell catastrophically (but for unknown reasons) in 1998. The water level in the tank was so high for the whole of 2007 (from January to December) that the plant could not grow tall enough to reach the water surface to flower. I have no idea where the water comes from to fill the tank, but it has been

full to the brim for many months now. Still full continuously to April 2008, and flowering freely on 25 August 2008.

East Berks: Cookham Dene in shallow ponds, ditches opposite Hurst Grove, in the Thames at Henley, Remenham, Sonning, Wokingham, ditches by Loddon Bridge, Windsor Park, Sandhurst, Wargrave, Bracknell, Wellington College. Occasional in the Thames valley from Reading to Sonning and Hurley and throughout the south (south of 70). In the R. Loddon at Swallowfield [717649] in 1977. Absent from the interior (north from 70 to the Thames). Old gravel pits at Dinton Pastures [7882] in 1988. Recently at Howland Bridge, Crazies Hill. Moor Green Lakes nature reserve [8062] in 2001. Atlas 2000: all except [78]

West Berks: occasional along the whole length of the Thames from Lechlade [29] to Reading [67] and the whole length of the Kennet from Hungerford [36] to Reading [67]. Absent from the interior (north of 70 and south of 95). In the R. Enborne at Crookham [542637], Greenham [488638] and Brimpton [553634]. In the R. Pang at Pangbourne [637756] in 1977. In the R. Kennet at [3568] and [4266] in 2006 (D. Broughton). In a pond on the Wasing Estate [584635] in 2003. Atlas 2000: all except [38], [47], [48], [57], [68], [69]

Myriophyllum alterniflorum DC. *Alternate Water-milfoil* hyd 6

Ditches and ponds in base-poor water. The upper flowers are not in whorls (as they are in *M. spicatum*) but are opposite or alternate, and the leaves have many more segments (13-38 compared with 6-18).

Ascot: very local in Virginia Water [9668] in 1987.

East Berks: Loddon Bridge (1699). Very local and rare in a pond near Finchampstead. Ponds with acid water; local in south Berkshire. Long Moor Pond (1965), Sonning, Bulmershe Lake (**RDG**) in 1965, Heath Lake (1961, and still there in 2001), Wokingham (1918), Sandhurst (1965, still there in 2002 in the v.c.22 part of Lower Lake), Trilakes [829614] in 1975 and Broadmoor (1999). Atlas 2000: [76], [77], [86], [96]

West Berks: extinct in Druce's celebrated site in Wigmoreash Pond [36] on top of Walbury Camp and Gibbet Hill (1890) (**OXF**), and from the site at Enborne [46]. More recent records are from Sandlesford Priory [46] in 1965 and from the R. Cole [29] in 1978. Atlas 2000: [46]

¶ **Myriophyllum** *M.* 'Red Stem'

GUNNERACEAE

Gunnera tinctoria (Molina) Mirb. *Giant-rhubarb* ● h 5
Panke tinctoria Molina
Gunnera chilensis Lam.

Planted by water in parkland and larger gardens. Told from *G. manicata* by its smaller leaves (less than 2m across) that are cordate (not peltate) at the base. I have not seen it self-sown in Berkshire.

East Berks: not in Druce. Alien at Virginia Water (1961-2004). Trilakes Sandhurst [8261] in 1987. By the R. Thames at Maidenhead Court [905833] and Maidenhead [901817] in 2002. By the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003.

West Berks: in an old bog garden at Benham Park [46] in 1986 and at Stanford Dingley [57] in 1961. Recent mass-planting by the lake at Benham [437674] in 2001.

¶ **Gunnera** *G. manicata* Linden ex André *Brazilian Giant-rhubarb*

LYTHRACEAE

Lythrum salicaria L. *Purple-loosestrife*

hel 6

Sides of streams and ponds, and wet meadows. “Forming a great adornment of our river scenery; especially abundant by the Thames where a glow of rich purple meets the eye, even from a considerable distance, wherever the purple loosestrife predominates” (Druce). Wet woods, marshes, margins of rivers, streams and ditches; occasional, absent from the chalk.

NVC: M 13,22,24,27; OV 26,30; S 1,4,5,7,8,12,14,15,18,23,25,26; W 5

Silwood Park: locally abundant in The Marsh of the southern inflow stream and on the margin of The Lake in Guinness’s Thicket and occasional on the dam by The Farm. Also in Weir Wood, Wood Bank, Cricket Wicket, Nash’s Copse. Planted as part of a weed biocontrol project (purple loosestrife is a serious pest of wetlands in Canada and the USA); it was grown in the driest part of Silwood Bottom in the driest year on record (1995) where special irrigation pipes had to be installed to water the plants. It made an extraordinary visual impression in August 1995, with a perfect square of bright purple flowers in the midst of a landscape that was baked to a uniform cornflake colour. Following late spring cultivation of the site in 2003, there were 25 flowering individuals scattered over the central portion of the field in July (inside the newly erected deer fence) and a similar number in July 2004 (again, after May cultivation) but only 6 on 3 September 2005 after a very dry spring and early summer. There were numerous small flowering stems inside the grazing enclosure in Silwood Bottom on 17 August 2008 as a legacy of this 1995 introduction. A single, massive individual appeared in dry ground by the Sea Beet population next to the Header House Greenhouses 4B and 5C in July 2002 and was still there in 2007 but gone in August 2008. A single individual had returned and was in full flower on 6 July 2009 and again on 12 July 2010. Common on the derelict pot standing at the greenhouses on 29 July 2007 and 26 August 2008, and surviving the general devastation caused by the newly-acquired flock of hens here in July 2009. In flower for the first time, four plants amongst *Typha* on the advancing front of the 95 Islands on 2 September 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	7

Ascot: a single, statuesque plant in the centre of the grassy triangle at the northern end of Ascot Heath racecourse in September 2002.

East Berks: common on the banks of the R. Thames, as at Hurley, Henley, Aston, Wargrave and Windsor Racecourse, and on pond-sides and ditches in towns (e.g. at Bulmershe and Maidenhead in 2002). Locally frequent by the canal in down-town Reading. Rare in ditches near Beenham’s Heath [8475]. Frequent in the open muddy pond at Cock Marsh with *Butomus* and *Rumex hydrolapathum*. 15% (1km²). Atlas 2000: all squares

West Berks: occasional throughout the Thames and Kennet valleys but absent from the central region north of 75 and south of 90. Frequent in Reading’s Lake District [66] and [67]. A garden escape at Kingston Bagpuize [4098] in 2003. Atlas 2000: all except [48]

Lythrum hyssopifolium L. *Grass-poly*

o th 6 ↓

A *Red Data Book* species of seasonally wet arable fields. It has pink, crumpled petals, and grows at only 5 surviving sites in Britain (Wigginton, 1999). A spring-germinating annual of hollows, ruts and low-lying ground in cultivated fields, possessed of long-lived in the seed bank. Bowen reckoned that the plant was extinct in Berkshire, but it was rediscovered at Cholsey by Ron Porley in 2001 (see below).

NVC: OV36

East Berks: found only once (by Gotobed in 1805) on a wet piece of ground near Windsor (possibly in v.c.24 Buckinghamshire).

West Berks: collected by Prof. J.S. Henslow at Cholsey from 1825-35 (**OXF, RNG, BM**, etc.) and from “near Wallingford” (probably the same site) in 1897. Not seen again until found by John Souster in 1968. Rediscovered by Ron Porley in the corner of a winter-flooded field near Cholsey (presumably the same place where Henslow found it) at [60535 86154] where there were 435 plants growing with *Juncus bufonius* in tractor ruts west of the main drainage ditch on 14 August 2001. Word soon spread of its rediscovery and there are other references from 2001 and 2002 at [60531 86164], [601864], and a single plant in a wheat-field at [60499 86085] south of Wallingford opposite North Soke (total numbers c.600). After two dry (i.e. non-flooding) winters, there were no plants in 2006. There were more than 500 plants on the Cholsey site in 2009, but none in 2012 when it was so wet. It is ironic that such a rarity as a native plant (but now considered to be an archaeophyte), should be so common as an alien plant overseas. For instance, it has been introduced into New Zealand, and is frequent weed of damp disturbed ground in many parts of both North and South Islands (see also *Mentha pulegium*).

Lythrum portula (L.) D.A. Webb *Water-purslane*
Peplis portula L.

th 6

Wet places and pond margins on heathy ground on the Bagshot Sands.

NVC: OV 20,31,35

East Berks: common in the heathy parts of the district, on the acid sands of the south and east; Bulmarsh, Watery Lane, Park Place, Warren Row, Earley, Ascot, Bagshot, Wellington College, Long Moor, Finchampstead, Sandhurst, Spencer’s Wood Common, Ambarrow, Hurst Green, Windsor Park by Virginia Water, Bearwood, Easthampstead Plain. Damp woodland rides, on bare mud in marshes and by streams or ponds. Local and absent from calcareous soils. It is not clear whether it is decreasing or has been overlooked in recent years. Farley Hill, Woodley, Warfield. Sandhurst (1975), Rapley Lakes (1986). Moor Green Lakes nature reserve [8062] in 2001. 1% (1km²). Atlas 2000: [76],[77],[86],[87],[96],[97],[98]

West Berks: all but confined to the heaths of the extreme south-east (south of 75 and east of 45). Inkpen [36], Newbury and Greenham Common [46], Snelsmore Common [47], Cold Ash Common, Crookham Common, Wasing Wood and Carbin’s Wood [56], Oare Church pond and Fence Wood [57], Bagley Wood [50] in 1833, Burghfield [66], Aldermaston Soke, Mortimer Common, Ufton Nervet and Silchester [66]. Atlas 2000: [36],[47],[40],[56],[57], [66],[68]

¶ **Lythrum** *L. salicaria* ‘Blush’, *L. salicaria* ‘Brightness’, *L. salicaria* ‘Feuerkerze’, *L. salicaria* ‘Lady Sackville’, *L. salicaria* ‘Robert’, *L. virgatum* ‘Rosy Gem’

THYMELAEACEAE

Daphne mezereum L. *Mezereon*

n 2 ↓

A scarce plant in Britain, found in woodland on calcareous soils with *Brachypodium sylvaticum*, *Hyacinthoides non-scripta* and *Mercurialis perennis*, and in chalk pits where there is little competition from other ground flora; very rare and sporadic. Many of the plants, however, are garden escapes.

NVC: W 8

East Berks: in dense woods and thickets; rare and local. Knowl Hill in 1897 and Bearwood (**RDG**) in 1911. In the thicket nearly opposite the whitening factory at Warren Row (1897). Bowen failed to find the plant in these sites. Only one surviving site under beech in Park Wood at Bisham (**RNG**) [851840] in 1983.

West Berks: Wantage [3585] in 1961, Appleton Lower Common [4200] in 1948, Hinksey woods [5004] in 1821, Tubney [4400] in 1821, Frilsham Common [5373] in 1839, Hampstead Norreys (**RDG**) [5276] in 1913, Ashampstead [5676], Burghfield Common near Three Firs [6566]. Recently recorded by Jacqueline Wright in 2002 who found 4 stems in the north-west pit and 1 stem in the north-east pit at Chawley Brick Pit at Cumnor Hurst [475044]; the plants were struggling by 2004. Atlas 2000: no records.

Daphne laureola L. *Spurge-laurel*

n 2

Oak and beech woods on calcareous soils, in small quantity, also in thickets and hedgerows on the chalk. Local and absent from very acid soils. Seldom more than one or two plants at any site.

Ascot: very local and rare in Kings Beeches in 1999; probably a garden relic.

East Berks: on the northern chalk at Rose Hill, Park Place, Remenham Wood, Wargrave, Culham, Bisham, Whiteknights Park, Lindenhill Wood [812795], Hall Place, Hurley, Temple golf course, Crimphill, and at Old Windsor [9874]. 3% (1km²). Atlas 2000: all except [76], [86]

West Berks: Great Coxwell churchyard [29], Kingston Lisle and Blowingstone Hill [38], Buckland Warren and Denchworth [39], Newbury [46], Westbrook [47], East Lockinge and Ginge Brook [48], Drayton and Cothill Fen [49], Tubney, Wytham Wood and Cumnor [40], Hampstead Norreys and Bucklebury [57], Streatley [58], in shade by the pond at the Old Rectory at Burghfield [66] in 2004, Basildon Park, Pangbourne and Sulham [67]. Atlas 2000: all except [37], [46]

¶ **Daphne** *D. bholua* var. *glacialis* 'Gurkha', *D. bholua* 'Jacqueline Postill', *D. blagayana*, *D. x burkwoodii*, *D. x burkwoodii* 'Somerset', *D. cneorum* 'Eximia', *D. cneorum* 'Variegata', *D. mezereum*, *D. mezereum* f. *alba*, *D. x napolitana*, *D. odora* 'Aureomarginata', *D. tangutica*, *D. tangutica* 'Retusa'

¶ **Pimelea** *P. prostrata*

MYRTACEAE

¶ **Leptospermum** *L. grandiflorum*, *L. lanigerum*, *L. myrtifolium*, *L. rupestre*, *L. scoparium* 'Kiwi', *L. scoparium* 'Red Damask'

¶ **Ugni** *U. molinae*

Eucalyptus gunnii Hook. f. *Cider Gum* ● mm 6

Eucalyptus perriniana F. Muell. ex Rodway *Spinning Gum* ● mm 6

Silwood Park: most eucalypts in Berkshire look terrible, but the individual at the southern end of the Greenhouse walled garden opposite Silwood Lodge is truly magnificent. It has a wonderfully well formed crown which hangs with vast curls of cinnamon coloured strips of shed bark. No seedlings have ever been found despite the fact that the ground underneath is completely covered by shed fruits each winter, and totally bare of other plants (an example of allelopathy, perhaps).

¶ **Eucalyptus** *E. viminalis*, *E. johnstonii*, *E. urnigera*, *E. perriniana*, *E. pulchella*, *E. globulus*

¶ **Luma** *L. apiculata*, *L. apiculata* ‘Glanleam Gold’

¶ **Myrtus** *M. communis*, *M. communis* subsp. *tarentina*, *M. communis* subsp. *tarentina* ‘Microphylla Variegata’, *M. communis* ‘Variegata’

ONAGRACEAE

Epilobium L. *Willowherbs*

Willowherbs are notoriously difficult to identify correctly. The species with club-shaped stigmas are much more difficult than the species with their stigma-ends split into a cross. The trick is to leave them well alone until late summer when you can be sure of finding ripe fruits with mature seeds, and to be able to tell what sort of over-wintering rosettes the plant has formed at the base of the stem (sessile rosettes, or stolons, for example). But more than anything else, you need to pay close attention to the kind, size and orientation of the hairs on the fruits and upper stem. The difficulty is greatly increased by the fact that willowherbs are such promiscuous hybridisers. Many of the plants you find may not be attributable to any of the species, but will show intermediate phenotype in one or more of the key characters. The hybrids are often bigger plants with more branched stems, and dark petal tips. Many are infertile with aborted fruits, but some are fertile which complicates matters greatly.

- 1. Stigma entire and club-shaped2
- 1. Stigma 4 lobed6
- 2. Stem hairs all appressed.....3
- 2. At least some stem hairs spreading4
- 3. Glandular hairs present on hypanthium **E. obscurum**
- 3. No glandular hairs on hypanthium **E. tetragonum**
- 4. Seeds with a terminal appendage5
- 4. Seeds without terminal appendage**E. roseum**
- 5. Surface of seed with longitudinal papillose ridges ... **E. ciliatum**
- 5. Surface of seed uniformly papillose **E. palustre**
- 6. At least some spreading hairs non-glandular7

- 6. Spreading hairs all glandular8
- 7. Petals large (>9mm)**E. hirsutum**
- 7. Petals small (<10mm)**E. parviflorum**
- 8. Leaf base cuneate **E. lanceolatum**
- 8. Leaf base rounded..... **E. montanum**

Epilobium hirsutum L. *Great Willowherb*

h 7

River-, brook-, stream- and pond-sides, damp woods and moist waste ground; very common and generally distributed. The banks of the Thames are often bordered with a profuse growth of this plant. Common in ditches but often out-competed by *Oenanthe crocata*. Rare or absent from the chalk ridge. The leaves are often shotgun-holed by the beetle *Haltica oleracea*, whose adults are a beautiful bright, metallic blue. White flowered plants are rare.

NVC: M 22,27; MG 1; OV 3,22,25-27; S 3-7,12-14,18,23,25,26,28; W 5,6,8,24

Silwood Park: locally dominant in sun at the edge of Silwood Lake, scattered individuals at Sunninghill Crossroads, Ashurst churchyard, Farm Wood, Farm Road, Weir Wood, The Swamp, Pond Field, Heronsbrook, Japanese Garden Pond. One large individual in very dry ground by the cold frames at The Greenhouses, and others in dry ground by CABI Polytunnel in July 2002. One big plant in dry gravel at the base of the wall by the west entrance to North Block on 25 June 2007. In the derelict cold frames at the greenhouses on 29 July 2007. Common in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	9

East Berks: common throughout. 71% (1km²). White flowered plants in the dry streambed of the flood control channels in East Maidenhead in August 2002. Atlas 2000: all squares

West Berks: widespread, but rare on the chalk. Atlas 2000: all squares

Epilobium parviflorum Schreb. *Hoary Willowherb*

h 7

Damp waste ground, paths, forest rides, ditches, meadows, brook-sides, boggy and wet places, and much less dependent on water as *E. hirsutum*. Common and generally distributed. Locally common on set-aside land. Absent from the chalk ridge. A plant that is instantly identifiable by its jizz when still a youngster: the dark purple stem, partially visible through the dense clothing of white hairs, gives the whole plant a distinctive dull, matt-grey appearance.

NVC: M 22; OV 26; W 5

Silwood Park: mainly on bare waste ground and paths. On the gravel of the Church car park at Ashurst, and the apron of compacted ground in front of the Engineering Store at the Nuclear Reactor and on the Science Park. In grassland at Church Field, Rabbit Warren, Cheapside, Silwood Lodge, Cricket Wicket, Walled Garden, and an arable weed in Silwood Bottom. In the derelict cold frames at the greenhouses on 29 July 2007. Very common on the abandoned gravel beds at Ashurst on 9 July 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	10	8

Ascot: frequent both in the villages (e.g. waste ground in Sunninghill and South Ascot) and in the countryside (e.g. on forest rides at Whitmoor Bog).

East Berks: least common in the east. Riverside stonework at Boulter's Lock. 20% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet valleys (south of 75), but rarer in the interior. Common on chalky set-aside land on Weathercock Hill [2882] in 2002. Common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all except [48], [69]

Epilobium x limosum Schur = **E. parviflorum x E. montanum**

West Berks: one of the commonest of all the hybrids: found at Wytham [40] in 1946 (OXF) (det. G.M. Ash).

Epilobium x palatinum F.W. Schultz = **E. parviflorum x E. tetragonum**
Epilobium x weissenburgense F. Schultz

West Berks: collected by Druce at Uffington [38] in 1889 (OXF) (det. G.M. Ash).

Epilobium x dacicum Borb s = **E. parviflorum x E. obscurum**

West Berks: found by Bowen at Wytham [4505] in 1946 (OXF) (det. G.M. Ash).

Epilobium x persicinum Rechb. = **E. parviflorum x E. roseum**

West Berks: found by Bowen at Wytham [4505] in 1946 (OXF) (det. G.M. Ash).

Epilobium parviflorum x ciliatum

East Berks: Cookham tip [8580] in 1958 (det. G.M. Ash).

Epilobium montanum L. *Broad-leaved Willowherb*

h 6

Damp waste ground in towns, woods, hedges, thickets, ditches and as a garden weed. Often to be found on pollarded willows. After *E. ciliatum*, the commonest species of *Epilobium*. Woodland rides, waste places, gardens and walls. Generally distributed. Known at once by its cross-shaped, 4-lobed stigma.

NVC: OV 9,27,42; W 6,8,12,24

Silwood Park: curiously uncommon, and very seldom in natural habitats. Mostly in damp disturbed places close to roads or buildings. Farm Road, Ashurst Church, Cheapside Village, Water Meadow, South Lodge, Drive lawns, behind the Japanese Garden, Manor House, Science Park.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	11

Ascot: locally common on shady banks, as in the verge of St George's Lane, opposite the school.

East Berks: 30% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Epilobium x aggregatum Celak. = **E. montanum x E. obscurum**

West Berks: Wytham [40] in 1946 (**OXF**) (det. G.M. Ash).

Epilobium x mutabile Boiss. & Reut. = **E. montanum x E. roseum**

East Berks: collected at Reading [7070] in 1931 by S.O. Ridley (**RDG**).

Epilobium montanum x ciliatum

Epilobium adenocaulon x montanum

Probably the commonest off all the hybrids.

East Berks: first record Leighton Park [7070] in 1960 (det. G.M. Ash).

Epilobium lanceolatum Sebast. & Mauri *Spear-leaved Willowherb*

h 7 ↓

A rare willowherb of disturbed sites with open vegetation cover and reduced competition like open banks, walls, quarries, railway ballast, and occasionally as a garden weed. Often found growing with *Senecio squalidus*. Above ground stolons terminate in leaf-rosettes. Stigma 4-lobed and pubescence like *E. montanum*, from which it is distinguished by cuneate lower leaves with longer petioles, 3-10mm (*E. montanum* has abruptly rounded leaf base and a short petiole 2-6mm).

East Berks: no records.

West Berks: on hedge-banks and ditches on gravelly soil; very local and rare. Between Mortimer and Silchester, and Mortimer and Stratfield Saye. In the absence of herbarium specimens, Bowen disputes these records. Still, it is worth looking for. On a wall at Ferry Lane Moulsoford [5983] in 1985 (**OXF**) (det. T. Pennington). A single plant on railway ballast west of Didcot [509913] on 26 September 1987 (field record, det. H.J. Killick). <1% (1km²). Atlas 2000: [58], [59]

Epilobium tetragonum L. *Square-stalked Willowherb*

h 7

Epilobium lamyi F. Schultz

Epilobium adnatum Griseb.

Epilobium tetragonum L. subsp. *lamyi* (F. Schultz) Nyman

Waste ground, pavements, gardens, ditches, stream-sides etc. Relatively easy to tell from *E. ciliatum* and *E. obscurum* by the complete lack of any spreading glandular hairs on the fruits or upper stem. These parts are uniformly clothed by very distinctive appressed, forward-pointing hairs. The plant has large fruits (6.5-10cm long) and perennates by sessile leafy rosettes. The seeds lack the terminal appendage of *E. ciliatum*. From a distance, the plant is known by its narrow leaves that are often held almost vertically, parallel with the axis of the stem.

Silwood Park: almost as common as *E. ciliatum* and much more common than *E. obscurum*. Ashurst Warren, Ashurst churchyard and car park, Rush Meadow, Silwood Bottom, Cheapside Village, Observatory Ridge, Japanese Garden, Manor house, Garden Wood Bank, Cannon Path. Frequent on the cinder pot standing at the Greenhouses and in the gravel drainage strips on either side of the main road into the Science Park. Locally frequent on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. On imported topsoil at the Ashurst Lysimeter site in June 2004. In the derelict cold frames at the greenhouses on 29 July 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	11	13

East Berks: Swallowfield, Wargrave, Wokingham, Park Place, Crazy Hill, by the roadside near Bowsey Hill, Waltham, Ruscombe, Coleman's Moor, Shurlock Row, Windsor, Blackwater, Arborfield, Winkfield, Bracknell. Bear Grove [8079], Ruscombe Lake [8075], Cookham pit (as subsp. *lamyi* det. G.M. Ash) [8580] (1958-62). Frequent at the rear of 3M on Cain Road Bracknell on 2 September 2007. 12% (1km²) but certainly under-recorded. Atlas 2000: all squares

West Berks: scattered throughout. Shrivenham [28], Little Coxwell [29], Kintbury [36], Wantage and Uffington [38], Benham Park and Newbury [46], Marcham and Abingdon [49], Appleton, Wootton and Sunningwell [40], Burnt Hill, Yattendon [57], Radley and Didcot [59], Bagley Wood (OXF) and Kennington [50], Burghfield [66], Tidmarsh, on the banks of the Thames at Tilehurst Station, Pangbourne and Theale [67]. Atlas 2000: all except [69]

Epilobium tetragonum* x *ciliatum

East Berks: Reading [7173] in 1982 (no specimen).

West Berks: Appleton Lower Common [40] in 1965 (det. T. Pennington).

Epilobium obscurum Schreb. *Short-fruited Willowherb*

h 7

Ditches, woodland rides, and damp waste ground. Occasional. Hard to tell from *E. ciliatum* but easier to distinguish from *E. tetragonum*. From *E. tetragonum* it is told by the presence of at least a few spreading glandular hairs at the base of the sepals and on the upper stem and base of the fruit, and by its much shorter (more dumpy) fruits which are 4-6cm long (rather than 6.5-8cm). *E. obscurum* perennates by elongated stolons which distinguish it from both *E. ciliatum* and *E. tetragonum*. Its seeds lack the distinct terminal appendage shown by *E. ciliatum*.

NVC: M 23,27; OV 31

Silwood Park: damp waste ground and wet grassland. Less common than *E. tetragonum*. Ashurst Church, Rush Meadow, Playing Field, Water Meadow, The Rookery, The Swamp, Kissing Gate, Cheapside, Tractor Sheds, Silwood Lodge, Nuclear Reactor, South Lodge, Virginia Water Lodge, Science Park. Common amongst brick pavements at the base of the walls of the Centre for Population Biology on 1 July 2009 in the last year of its NERC-funded existence.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	15

East Berks: Ascot, Bracknell, Finchampstead, Earley, Bagshot, Sandhurst, Crowthorne, Wargrave, Long Moor, Windsor Park, Frogmore, Cookham, Bisham, Winkfield, Hurst, Ambarrow, Arborfield,

Farley Hill, Ashridge Wood near Wokingham. Rapley Lakes (1986). 2% (1km²) but certainly under-recorded. Atlas 2000: all squares

West Berks: Faringdon [29], Inkpen [36], Chilton Foliat and Wickham [37], Enborne, Newbury, Greenham and Hamstead Marshall [46], on an old hardstanding at Sole Common [47], Frilford and Abingdon [49], Wytham and Cumnor [40], Aldermaston and Beenham [56], Bucklebury [57], Wittenham [59], Silchester [66], Tidmarsh and Theale [67]. Atlas 2000: all except [46], [69]

Epilobium x brachiatum Celak. = **E. obscurum x E. roseum**

East Berks: collected by E.S. Marshall at Sandhurst [8060] in 1898 (det. G.M. Ash).

Epilobium x schmidtianum Rostk. = **E. obscurum x E. palustre**

West Berks: collected by Druce on Greenham Common [4560] in 1891 (OXF) (det. G.M. Ash).

Epilobium roseum Schreb. *Pale Willowherb*

h 7 ↓

This is a rare willowherb and may include the earliest records of *E. ciliatum* (see below). They are separated critically on their seeds (truncate and minutely papillose in *E. roseum*; appendaged and with longitudinal papillose ridges in *E. ciliatum*). By their jizz, *E. roseum* has petiolate (not sessile) leaves and distinctly pale-pinkish (not reddish) flowers and fruits.

Stonework, woodland rides, damp gardens and waste ground, ditches and stream-sides; local and rather rare. "It is somewhat remarkable to find this plant growing to a height of three feet by brooksides and to find it in garden ground even in a large town like Reading, where it is usually seen about the railway station, bearing the smoke without damage. In such situations the plant, however, is less luxuriant" (Druce).

Ascot: no records.

East Berks: Shinford Green, near Windsor, by the Blackwater. Reading (RDG) in 1930. Leighton Park (1962), Smallmead tip (1965). Farley Hill in 1992. On stonework by the R. Thames just north of the road bridge in Maidenhead [9081], and on a rotting pier-post in the R. Thames at Remenham [767837] in July 2002. <1% (1km²).

West Berks: Inkpen [36], Eastbury [37], Greenham and Hamstead Marshall [46], Appleton Lower Common and Wytham [40], Cold Ash and Bagnor [56], Frilsham and Greathouse Wood [57], Pingewood tip (RDG) in 1915, Padworth and Mortimer [66], Pangbourne and Sulham [67]. Bowen thought it was extinct at many of the southern Kennet sites; would repay further investigation. Atlas 2000: [29], [46], [40], [59], [67]

Epilobium ciliatum Raf. *American Willowherb*

● h 6 ↑

Epilobium adenocaulon Hausskn.

This is our commonest willowherb, and one of the great alien plant success stories. It was first recorded in 1891. Now it is the commonest willowherb of disturbed waste ground, gardens, roadsides, wood margins, ditches and streams. The key identification features are the appendaged seeds, and the abundance of spreading glandular hairs amongst the appressed, upward pointing non-glandular hairs that clothe the fruits and upper stem (these distinguish it from *E. tetragonum* which has no glandular hairs at all). It is separated from *E. obscurum* by its seeds which have a distinct appendage between

the pappus and the top of the seed (see Fig. 445 in Stace), from *E. roseum* by the absence of distinct petioles, and from *E. palustre* by its sessile leafy rosettes.

NVC: OV 19,22,32; S 15

Silwood Park: frequent on paths, paving, cinder and disturbed ground generally, and occasional on fallow soil. Often growing with *E. parviflorum* and *E. tetragonum*, as in the brick paving surrounding the Centre for Population Biology (1999-2004). Seed is dispersed over long distances, and the plants were common in the seed traps at Ashurst in 2002-07. In imported topsoil at Ashurst Lysimeters in June 2004. A white-flowered plant was rare in the Rhododendron Exclosure behind the Tennis Court close to the double gates on 15 July 2007. In the derelict cold frames and on the pot standing at the greenhouses on 29 July 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	11	35

East Berks: not in Druce, but see *E. roseum* (above). First records; Coleman's Moor (1928), Bulmershe (1933), Crowthorne (1933). Frequent throughout. 54% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, but uncommon on the chalk and northern clays. Atlas 2000: all except [69]

***Epilobium palustre* L. Marsh Willowherb**

h 7

Marshes, boggy ground and a wide variety of wet places, as among *Phragmites* in fens, and by acid ponds. Local and not very common; absent from the chalk and clays. It has longer petioles than most of the other species. Told from *E. ciliatum* with confidence by its long slender stolons which end in a tight bud (*E. ciliatum* perennates by sessile leafy rosettes) and by the uniformly papillose (not papillose-ridged) seeds.

NVC: M 13,22,27; OV 32; S 1,3,6,8,10,12; W 1,4,6

Silwood Park: on the edge of the lake, in rushy clearings by Cascade Marsh and in Great Mead in the wettest part of the wood. In sun amongst rushes in Rush Meadow. Farm Road and Farm Wood. Local and rare. It was present in the new spring at the Farm (appeared January 2001) by July 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	4

Ascot: Englemere Pond, Sunninghill, Ascot, in the boggy wood in South Ascot, Sunningdale, Virginia Water. Locally frequent in Sunningwell Bog below St George's School [929684], especially in sun on the edge of shading willow bushes in the wetter parts of the Bog.

East Berks: most frequent in the south-east and rare or absent from the interior. A marsh near Queens Bridge, Bulmarsh, Park Place, Crazy Hill, Wellington College, Ambarrow, Crowthorne, Bracknell, Windsor Park, pond-side near Cumberland Lodge, Coleman's Moor. Hurley, Broadmoor, Wishmoor Bottom, shaded swamp at Long Moor pond (1975, 1983 and 2002). 6% (1km²). Atlas 2000: all squares

West Berks: uncommon except in the Kennet valley, and absent from most of the interior. Hungerford [36], Greenham Common, Bagnor and Hamstead Marshall [46], Snelsmore Common [47], Frilford and Tubney [49], Wytham [40], Beenham and Aldermaston [56], Hermitage and Upper Basildon

[57], Radley gravel pits [59], the canal between Theale and Aldermaston, Padworth and Ufton Nervet [66]. Atlas 2000: all except [28], [29], [37], [38], [47], [48], [58], [68], [69]

Epilobium brunnescens (Cockayne) P.H. Raven and Engelhorn *New Zealand Willowherb* • h 6
Epilobium pedunculare Cunn. var. *brunnescens* Cockayne
Epilobium nerteroides auct., non Cunn.

Much less common in southern England than in northern and western Britain, presumably because the climate is too dry. Not known from Berkshire in Druce's time, and still very uncommon.

Ascot: no records.

East Berks: first recorded on a wall in Redlands Road, Reading [7272] by Bowen in 1968.

West Berks: first recorded from a garden in Thatcham [5167] in 1983, and between the bricks of a garden path in Abingdon [4997] in 1995.

¶ **Epilobium** *E. dodonaei*, *E. glabellum*

Chamerion angustifolium (L.) Holub *Rosebay Willowherb* h 7
Epilobium angustifolium L.
Chamaenerion angustifolium (L.) Scop., nom. illegit.

Cleared woodland and waste ground, motorway verges, woods, swamps, bushy commons, burnt heaths, and railway embankments, from a wide range of open and woodland habitats. It remains to be determined (e.g. by molecular genetic tests) whether the aggressive lowland plants that behave as if they were invasive aliens are, in fact, one or more alien genotypes, introduced from North America in the early years of this century and/or during the Second World War. In Victorian times, rosebay willowherb was such a spectacular rarity, that special trips were arranged to see it growing in its natural habitats (e.g. on the cliffs of the whin sill below the Roman Wall in Northumberland). Host plant of the spectacular pink-and-grey Elephant Hawk-moth *Deilephila elpenor* whose larvae can be found feeding at night from July to September.

NVC: MG 1; OV 9,10,19,21-23,27,32; S 12,15,18; U 1,2; W 4,6,8,10,12,15,16,24,25

Silwood Park: forming large patches in grassland that are virtual monocultures, as in Upper Pond Field and Nash's Slope. After repeated attempts at elimination by spring and summer mowing, the site on Upper Pond Field was eventually eliminated by 5 successive mowings during 1991 (one problem replaced another, however, as a bracken patch developed where the willowherb had been). Pound Hill, Nursery Field, Ashurst Church, Rush Meadow, Gravel Pit, Astrophysics, Gunness's Thicket, Farm Wood, Cheapside, Silwood Farm, Water Meadow, Kissing Gate, Nash's Field, Elm Hill, Nuclear Reactor, South Lodge, Japanese Garden, Manor House, Observatory Ridge, The Heath, Science Park, and an extensive, long-lived stand at Virginia Water Lodge that was there from 1971-2004. Occasional in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	2	1	22	39

East Berks: locally common, and very fine near Sandhurst in Druce's time. Locally dominant in Bowen's time. Very rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 46% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Chamerion** *C. angustifolium* var. *album* is a splendid plant, without invasive tendencies.

Oenothera *Evening-primroses*

• hs 7

A fascinating, and excruciatingly complicated genus of alien monocarpic plants from North America. What makes them so special is their chromosomes. They have an anomalous genetic system called *permanent translocation heterozygosity* (PTH) that is known from some other Onagraceae (49 spp.), and a handful of species from other families like Campanulaceae (2 spp.), Commelinaceae (2 spp.), Clusiaceae (2 spp.), Iridaceae (3 spp.), Paeoniaceae (2 spp.), and Papaveraceae (1 sp.). They have rings of chromosomes resulting from reciprocal translocations, and these form linkage groups involving more than one bivalent. This system represents the ultimate in linkage disequilibrium: each of the 7 haploid chromosome complements is connected through reciprocal translocations, making the entire genome behave as a single linkage group. The system allows one or two basic genotypes to be reproduced virtually unchanged in each generation, allowing well adapted genotypes to increase very rapidly in the open, disturbed environments that they typically inhabit. The reproductive system is a bit like apomixis, but without the asexuality; reproduction in *Oenothera* is exclusively sexual, but self pollination is very common. When new varieties arise by rare mutations or recombinations, or more frequently by hybridisation, these immediately form true-breeding lines, and these genotypes may become very abundant if local conditions are favourable. Heterozygosity is maintained through the prevention of homozygous combinations through a system of *balanced lethals*: homozygosity of nonallelic recessive lethal genes results in mortality (either sporophytic or gametophytic) when the parent plant is autogamous.

One of the things that makes the taxonomy of these plants so challenging is that many of the taxa first came into contact with one another as aliens in Europe (they were geographically isolated from one another in their native North American communities). The resulting hybrids were able to breed true, but often intercrossed with other new taxa, or back-crossed with their parental types.

Genome and plastome composition is the key to understanding their relationships. There are 3 major differentiated genomes in the native range, designated A, B and C. The genome groups are associated with the morphological features that we use in identification keys, like stem pubescence, leaf colour, leaf shape, and so on. Likewise, there are 5 basic plastid genomes designated as plastomes I-V. These can combine in various ways: diploid individuals, for example, could have both genomes of the same type (e.g. AA) or of different types (e.g. AB, AC or BC), and each of these could be associated with one of the plastomes. The essentially clonal PTH populations are delimited according to their genomes and plastome types, but only certain combinations of genome and plastome types are viable. For instance, genome BC is only viable when it occurs with plastome IV (as represented by *O. parviflora*). The most complicated combinations involve *O. biennis* (e.g. genome AB with plastome II is Biennis group II, while genome AB with plastome III is Biennis group I, containing our common *O. glazioviana*).

O. glazioviana is especially interesting. It is a species of hybrid origin, probably formed in Britain in the late eighteenth century, as the result of a cross between alien parent taxa that were growing as garden outcasts on open waste ground. It was introduced into horticulture by Carter and Co. in 1860, but it was not described as new to science until it was collected from a potato field in Holland by Hugo de Vries in 1886. He went on to make the study of *O. glazioviana* his life's work. The type specimen comes from plants cultivated in Rio de Janeiro in 1868, which demonstrates how rapidly and how widely the plant had been distributed by the horticultural trade since 1860. It now has an almost worldwide distribution as a secondary alien spread from Britain for horticulture and as an

unintentional seed contaminant. At present, it is not possible to distinguish between 3 competing hypotheses for its hybrid origin:

- *O. elata* subsp. *hookeri* (AA-I) x *O. biennis* (BA-III)
- *O. elata* subsp. *hookeri* (AA-I) x *O. grandiflora* (BB-III)
- *O. biennis* (AB-II or BA-III) x *O. grandiflora* (BB-III)

The first cross gives the correct genomic combination and plastome if the *O. biennis* parent was Biennis-I. The second is unlikely because the only known end arrangements of the chromosomes of *O. grandiflora* differ from the B genome of *O. glazioviana*. The third has the A genome from *O. biennis* and the B genome from *O. grandiflora* but again, the proper chromosome end arrangements are not known. Hypothesis 1 is therefore the most plausible on current evidence. It is the only regularly outcrossing PTH species in the family Onagraceae. In addition to the ring chromosome, it has a single bivalent chromosome in meiotic metaphase I.

The 562 published names of *Oenothera* were ruthlessly lumped into 13 species by Dietrich, Wagner and Raven (1997). “Good on them”, you may say, but for Berkshire botanists, this was one lumping too far, because they sunk *O. cambrica* (our very distinctive, Really-small-flowered Evening-primrose) within *O. biennis*. I retain the old British usage here in order to give names to Silwood’s 3 very distinctive taxa: *O. biennis*, *O. cambrica* and *O. biennis* x *O. cambrica*

Literature:

- Cleland, R.E. (1972) *Oenothera Cytogenetics and Evolution*. Academic Press, London
Dietrich, Wagner and Raven (1997) Systematics of *Oenothera* Section *Oenothera* Subsection *Oenothera* (Onagraceae). *Systematic Botany Monographs* 50: 1-234
Munz, P.A. (1965) Onagraceae. *North American Flora*, ser. 2, 5:1-278

Oenothera glazioviana P. Micheli *Large-flowered Evening-primrose*

• hs 6 ↑

Oenothera erythrosepala Borbas

Oenothera grandiflora L’Hér. subsp. *erythrosepala* (Borbas) Á. Löve and D. Löve

This is much the commonest of our big yellow-flowered Evening Primroses, frequently seen on roadsides and in villages as a garden escape. Railway tracks, waste places and tips; local but increasing. The petals are very large (50mm long and 55mm wide), and the stigma is elevated above the anthers at anthesis; in all the other Berkshire taxa, the stigmas are interspersed with the anthers and hence self-pollinated.

Silwood Park: abundantly self-sown and completely naturalised in beds around The Greenhouses, looking for all the world as if it had been intentionally planted. In the 1980s, people used to dig up large quantities of the rosettes every winter and move them to their gardens. Drive Lawns. Chalk Plots, accidentally introduced with the chalk from Maidenhead Thicket in 1983 when the plots were constructed; first rosettes seen in November 1983, but flowers have not been seen since 1985. Garden Wood Laboratories, waste ground, one plant on imported topsoil; 10 July 1989. Cheapside Village, The Playground. A group of plants on the cinder pot standing at The Greenhouses, next to the beehives on 3 July 2004, 27 August 2005 and 29 July 2007. A single plant in the southern boundary fence of Silwood Bottom on 27 August 2005. Much less common on waste ground in Silwood than *O. biennis* x *O. cambrica*, but commoner in flower beds. A single plant in full flower beneath the fence on London Road at South Lodge during Royal Ascot on 20 June 2007; still flowering on 29 August 2007. The plants in the perennial bed at The Greenhouses were greatly reduced in numbers in July 2007 after 20 years of neglect. Very rare on dry gravel on the Raised Beds at Ashurst; just one

rosette on plot A5 on 28 August 2007. A single plant in the grassy triangle between The Farm and The Lake on 29 August 2011.

Ascot: Fernbank Road, Coronation Road, Sunninghill, Charters Road, Sunningdale, Locks Ride, New Road, North Ascot, Ascot Place, Cranbourne Roundabout. On the steep banks of Truss Hill Road and in the playground of Sunninghill School. The once-magnificent population on King's Ride [903682] has been greatly reduced following construction of the new science park. There was only 1 plant there in July 2001, where formerly there had been many hundreds, but the plant is still common on railway banks nearby [9168]. Scattered amongst abundant *Conyza sumatrensis* on the steep slopes of the spoil heaps at Short's Skips south of Ascot High Street in October 2004. A dense population in the corner next to the swimming pool in Sunninghill School (not seen there in previous years) was mowed down on 13 September 2007 (it had previously grown in the raised bed next to the rear entrance along with *Cosmos*).

East Berks: not in Druce. Road-sides at Charvil [7775] in 1987, Amen Corner [8469] in 1991, but now frequent throughout, especially by the railway. Growing with *O. biennis*, *O. x fallax* and *O. cambrica* on waste ground by the railway at Kings Meadow Reading on 2 September 2007 and 6 September 2008. 23% (1km²). Atlas 2000: all squares

West Berks: first recorded in 1908 from the railway at Didcot. Scattered in the Thames valley and Kennet valley but rare or absent from the interior. Sutton Courtenay [59] in 1980, gravel pits at Theale [66] in 1983, Wasing pits [56] in 1987, Marcham [49] in 2002, Kingston Bagpuize [4098] in 2003, Bourton [2386], Coleshill [2393], by the R. Lambourn in Great Shefford [3875], Steventon [4791], Blewbury [5385], by the A4 at Theale [6370] and west of Reading Station [6974] in 2004. Atlas 2000: all except [47], [48], [69]

Oenothera x fallax Renner *Intermediate Evening-primrose* ● hs 6 ↑

This is like *O. cambrica* in that the fruits have red-based bulbous hairs, but the fruits are small (20-30mm) and all of them are covered with glandular hairs, the top of the rachis is red (to reddish), and the sepals are red-striped. The petals are slightly wider than long (28 x 32mm)

East Berks: common on railway ground at Kings Meadows Reading in September 2007 growing with all three species in a complicated swarm, varying in the possession of red-based bulbous hairs.

West Berks: on waste ground behind Sainsbury's superstore in Wantage [397882] in October 2004. Growing with plants that had pale green, unstriped sepals (these would be *O. x fallax* x *O. cambrica* in Stace, with fruits 25-30mm long).

Oenothera biennis L. *Common Evening-primrose* ● hs 7 ↓
Oenothera novae-scotiae Gates

Railway banks and waste places. Rare in Druce's time, commoner in Bowen's, but uncommon again now; *O. glazioviana* is truly the "Common" evening primrose in Berkshire nowadays.

As now revised, *O. biennis* embraces two types: to the geneticists (Cleland, 1972) they are Biennis-I and Biennis-II, while to the taxonomists (Munz, 1965) they are subspecies, *O. biennis* subsp. *centralis* and *O. biennis* subsp. *caeciarum*. The main difference between the two relates to a reversal of maternal and paternal transmission of the complexes. "In Biennis-I, which has a BA genomic combination, the B genome is transmitted through the egg, whereas in the other race, Biennis-II,

which has an AB genomic constitution, the B genome is transmitted through the pollen” (Dietrich, Wagner and Raven, 1997). They are distinguished as follows:

1. Inflorescence lacking glandular hairs, but with dense, appressed, upward-pointing hairs, lower leaves lobed towards the base, stems typically green Biennis-I (*centralis*)

1. Inflorescence glandular pubescent, lower leaves merely dentate, stems often flushed with red Biennis-II (*caeciarum*)

Biennis-II (*caeciarum*) is the most commonly naturalized in Europe. The new *O. biennis* “consists of literally hundreds of minutely differing phenotypic races that are true-breeding, and recognizing any of them in the taxonomic system would lead to a never-ending description of them” (Dietrich, Wagner and Raven, 1997). The traditional British interpretation followed here has small flowers (petals 1.5-3cm long) and lacks red bulbous-based hairs on the green parts of the stem. Otherwise similar plants with red bulbous-based hairs on the stems and fruits are assigned to *O. cambrica* or their hybrids.

Silwood Park: rare and sporadic. One plant in the grass opposite M-Scan on 1 November 1984. Two large plants on the path to the Science Park from Garden Wood Bank, presumably brought in as seeds in imported topsoil; 6 August 1989. Not seen since.

Ascot: very rare. A single plant under the hedge at the extreme eastern end of the car park at Ascot Station on 29 June 2001 (**K**). There were six plants in July 2002 and two in July 2004. These Ascot plants have no red-based hairs at all, but they have dense, short, clear glandular hairs on the fruits, and sparse, short, clear glandular hairs on the stem. The fruits (20mm x 4mm) have sparse, long, clear-bulbous-based hairs, which are even sparser on the light-green, rather shiny stems. The flowers are intermediate in size (25mm long) and slightly wider than long (27mm). The yellow sepals are red-tipped. Several plants in the grass verge by the railway on Bridge Road Sunninghill on 31 August 2011 opposite the gas works gate.

East Berks: quite naturalized on heathy ground near Bracknell in 1892 (**OXF**). By the railway near Twyford (1897). Wellington College (**RNG**) (1916), Wokingham Station (**OXF**) (1965), Winter Hill (1954), Coleman’s Moor (1960), Bracknell (1965), Park Place (1965). Recently from Edgebarrow, Dinton Pastures, Braywoodside, Mount Skippet, Maidenhead, Cookham. Growing with *O. glazioviana* and *O. cambrica* on waste ground by the railway at Kings Meadow Reading on 2 September 2007. 1% (1km²). Atlas 2000: [78], [86], [87], [88], [96]

West Berks: Enborne [46] in 1895 (**BM**), Frilford Heath [49], Radley [59] in 1918, Kennington tip [50] in 1951, Tilehurst (**LAN**) [67] in 1956, Tubney Wood [40] in 1965 (**OXF**). Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003; a few of the plants have red bulbous-based hairs, but are otherwise identical (there is a striking absence of *O. glazioviana* at this site). Kingston Bagpuize [4098] in July 2003 and two clumps in the northern verge of the A420 at Tubney [4399] on 23 September 2006. Atlas 2000: [49], [40]

Oenothera biennis x Oenothera cambrica *Small-flowered Evening-primrose* ● hs 7 ↑

Under the British treatment, the Silwood plants have been allocated to *O. biennis* x *O. cambrica* because of the combination of very small flowers, red bulbous bases to the stem hairs, etc. (the petals are only 13mm long, which is a *O. biennis* character) and the plants are very tall (to 1.8m, again a trait of *O. biennis*). However, half of the bulbous hairs on the stem are red-based, not clear, and the petals are as long as wide (features of *O. cambrica*). There are no glandular hairs on the fruits but there is a

mixture of forward-pointing, long, clear-based hairs and denser, short hairs. The upper parts of the plant are predominantly green with a scattering of pink, bulbous-based hairs and clear bulbous-based hairs, but no glandular hairs. The leaves are short-hairy above (but densely appressed hairy on the upper midrib) and longer-hairy beneath. It begins to flower a good 14 days later than *O. biennis* and *O. cambrica* in Silwood (in mid-July most years). The anthers shed their abundant pollen directly on to the unfolded stigma lobes. Under the modern US treatment, *O. cambrica* and all its hybrids are sunk within *O. biennis* (see above).

Silwood Park: locally common; the most frequent member of the genus. Ted Green always maintained that the Small-flowered Evening-primrose that grew wild in the beds surrounding the Sirex Unit in the 1970s had been introduced as seed from the Middle East, though by whom (and why) was never clear. The Sirex Unit was demolished in 1986 to make way for the CABI Building, but the *Oenothera* lived on in bare ground around the Header House. Frequent every year in the flower beds of the perennial borders at the Horticultural Greenhouses, but somewhat less abundant there than *O. glazioviana*. Abundant and increasing from year to year on the cinder pot stand. By 29 July 2007 it was less common in the flower beds, but abundant on the cinder pot standing. Header House, behind the greenhouses from 1993 onwards, especially amongst the naturalised Sea Beets (qv), surviving the construction of the new greenhouse complex in 2000-01. Silwood Lodge, Cricket Wicket, on the ruined foundations of the Cocoa Greenhouse, but gone by 2003. A rare ruderal in arable land at Silwood Bottom in 1999 and 2002. Locally common on bare ground in the rockery of the Japanese Garden in August 2003.

East Berks: no other records

West Berks: no records

Oenothera cambrica Rostanski *Small-flowered Evening-primrose*

• hs 7

Oenothera parviflora auct., non L.

Oenothera ammophila auct., non Focke

Oenothera novae-scotiae auct., non Gates

Railway tracks and waste places on disturbed soil. This is included within *O. biennis* by Dietrich, Wagner and Raven (1997). The British treatment is that *O. cambrica* has capsules 3-4cm (not 2-3cm to distinguish it from *O. x fallax*) and small flowers (petals 1-3cm, rather than 3-5cm in *O. glazioviana*), that are as wide as long (not wider than long as in *O. biennis*). It is also told from *O. biennis* by the possession of red (not clear-coloured) bulbous-based hairs on the upper stem.

Silwood Park: there was a group of 5 plants on the cinder pot-standing at The Greenhouses on 3 July 2004: they had relatively big petals (30mm long and 32 mm wide, compared with 13mm long in the hybrid, above), lots of red bulbous-based hairs on the upper stem, capsules and peduncles, but absolutely no glandular hairs on either the stem or capsules (there were dense, clear, appressed, upward-pointing hairs instead, like illustration *e* in Fig. 30 of Dietrich et al., 1997). This matches the description of *O. biennis* subsp. *centralis* of Munz (1965) in pubescence, but the petals on the Silwood plant are rather large. There was just one plant here in July 2005 but 10 on 29 July 2007.

Ascot: very local and rare. Heatherwood Hospital, Sunninghill Village.

East Berks: not in Druce. Cookham Allotments (1956), Whiteknights Park (1964), Bracknell (1965), Battle Farm tip (OXF) in 1965. On sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 11 October 2003 and 2 September 2007. Atlas 2000: [76], [77], [96]

West Berks: Didcot Station (OXF) [59] in 1965 and 1977, by the railway at Appleford (OXF) [5293] in 1977. Atlas 2000: [59]

Oenothera stricta Ledeb. ex Link *Fragrant Evening-primrose* ● hs 6
Oenothera odorata auct., non Jacq.

An uncommon garden plant with dark red upper stems and sepals and fragrant yellow flowers that soon fade to red.

East Berks: not in Druce. Reading tip (1960). Very rare in North Hanworth [8667] in 1999. Atlas 2000: [86]

West Berks: in paving cracks in Wallingford [68] in 1968 and 1981. Atlas 2000: no records.

Oenothera macrocarpa Nutt. *Ozark Sundrops* ● hs 6
Oenothera missouriensis Pursh.

This is the common bedding plant, often used in mass-plantings at the front of herbaceous borders and on rockeries. The huge yellow flowers stay open all day, and are held on almost prostrate, mat-forming stems. A rare outcast on tips, not naturalised or persistent in Berkshire.

East Berks: Reading tip in 1998.

West Berks: at Kingston Bagpuize [4098] in 2003.

¶ **Oenothera** *O. fruticosa* ‘Fyrverkeri’, *O. fruticosa* subsp. *glauca*, *O. fruticosa* subsp. *glauca* ‘Erica Robin’, *O. fruticosa* subsp. *glauca* ‘Sonnenwende’, *O. macrocarpa*, *O. pallida* ‘Innocence’, *O. perennis*, *O. speciosa* ‘Pink Petticoats’, *O. speciosa* ‘Rosea’, *O. speciosa* ‘Siskiyou’, *O. stricta* ‘Sulphurea’, *O. versicolor* ‘Sunset Boulevard’

Fuchsia cultivars *Fuchsia* ● m 6

Not naturalised in Berkshire in the way that they are in western Britain, and our few records are clearly garden relics or outcasts. The plants are often cut down to ground level by frosts, but usually regrow vigorously the following year. Fuchsias are often recorded uncritically as *F. magellanica*, which has slender, downward pointing sepals, but several cultivars occur outside gardens in Berkshire. Our most frequent hardy cultivars are ‘Riccartonii’ which has fatter buds and wider, more spreading sepals than the species, and ‘Mrs. Popple’ which has cerise-centred, purple-violet corollas. Here is what W.J. Hooker said about trying to give names to Fuchsias: “the difficulty of discriminating those different kinds of *Fuchsia*, now so common in our gardens has been felt by everyone who has turned his attention to the subject; and this difficulty has been increased by cultivation and the skill of the horticulturist in fertilizing one kind with the farina of another; so that what few characters were supposed to exist to enable them to rank as species, are, of necessity, obliterated”.

Ascot: no records. Not self-sown in Silwood Park.

East Berks: on the tip in Whiteknights Park [742720] as a casual in 1972. Recently from Oxford Road in West Reading, Whitley, Coppid Hill, Ravenswood, Popeswood, Warfield Park, East Maidenhead. A plant with white sepals on waste ground in Whitley [7270] in August 2003. Atlas 2000: [76], [77], [87], [88], [98]

West Berks: waste ground near the canal in central Newbury [4767]. Atlas 2000: [46], [49]

¶ **Fuchsia** *F.* ‘Abbé Farges’, *F.* ‘Alice Hoffman’, *F.* ‘Annabel’, *F.* ‘Applause’, *F. arborescens*, *F.* ‘Army Nurse’, *F.* ‘Auntie Jinks’, *F.* ‘Autumnale’, *F. x bacillaris*, *F.* ‘Barbara’, *F.* ‘Beacon’, *F.* ‘Beacon Rosa’, *F.* ‘Bealings’, *F.* ‘Bicentennial’, *F.* ‘Billy Green’, *F.* ‘Blue Gown’, *F.* ‘Blue Veil’, *F.* ‘Blue Waves’, *F.* ‘Blush of Dawn’, *F. boliviana*, *F. boliviana* var. *alba*, *F.* ‘Border Queen’, *F.* ‘Brilliant’, *F.* ‘Brutus’, *F.* ‘Cambridge Louie’, *F.* ‘Cardinal Farges’, *F.* ‘Carla Johnston’, *F.* ‘Caroline’, *F.* ‘Cascade’, *F.* ‘Cecile’, *F.* ‘Celia Smedley’, *F.* ‘Checkerboard’, *F.* ‘Chillerton Beauty’, *F.* ‘Coachman’, *F.* ‘Coralie’, *F.* ‘Corallina’, *F.* ‘Dancing Flame’, *F.* ‘Dark Eyes’, *F.* ‘Devonshire Dumpling’, *F.* ‘Display’, *F.* ‘Dollar Princess’, *F.* ‘Eva Boerg’, *F.* ‘Flash’, *F.* ‘Flirtation Waltz’, *F.* ‘Garden News’, *F.* ‘Gartenmeister Bonstedt’, *F.* ‘Genii’, *F.* ‘Harry Gray’, *F.* ‘Hawkhead’, *F.* ‘Heidi Ann’, *F.* ‘Jack Shahan’, *F.* ‘La Campanella’, *F.* ‘Lady Thumb’, *F.* ‘Lena’, *F.* ‘Lottie Hobby’, *F.* ‘Lye’s Unique’, *F.* ‘Madame Cornélissen’, *F. magellanica* var. *gracilis* ‘Aurea’, *F. magellanica* var. *gracilis* ‘Tricolor’, *F. magellanica* var. *gracilis* ‘Variegata’, *F. magellanica* var. *molinae*, *F. magellanica* var. *molinae* ‘Sharpitor’, *F. magellanica* ‘Versicolor’, *F.* ‘Margaret’, *F.* ‘Marinka’, *F. microphylla*, *F.* ‘Mrs Popple’, *F.* ‘Natasha Sinton’, *F.* ‘Nellie Nuttall’, *F.* ‘Peppermint Stick’, *F.* ‘Phyllis’, *F. procumbens*, *F.* ‘Prosperity’, *F.* ‘Riccantonii’, *F.* ‘Royal Velvet’, *F.* ‘Snowcap’, *F.* ‘Son of Thumb’, *F.* ‘Swingtime’, *F.* ‘Tennessee Waltz’, *F.* ‘Thalia’, *F.* ‘Tom Thumb’, *F.* ‘Tom West’, *F.* ‘Winston Churchill’

Circaea lutetiana L. *Enchanter’s-nightshade*

h 5

Moist shady woods, plantations, shady gardens and waste ground on nutrient-rich soils; widespread and locally abundant.

NVC: OV 27; S 23; W 6,8,10,12,14,21,25

Silwood Park: one of the commonest wildflowers of dense shade in the wetter parts of all the woodlands. Great Mead, Mann’s Copse, The Willows, Rush Meadow, Farm Wood, The Cemetery, Weir Wood, Water Meadow, The Marsh, Wood Bank, Nash’s Copse, Virginia Water Lodge.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	3	13	27

East Berks: in woods throughout, and locally common on urban waste ground as in Maidenhead. 25% (1km²). Atlas 2000: all squares

West Berks: common throughout. Atlas 2000: all except [69]

Clarkia unguiculata Lindley *Clarkia*
Clarkia elegans Douglas, non Poiret

• th 6

West Berks: not in Druce. A casual garden outcast on Didcot tip [59] in 1962 and on Cothill tip [49] in 1963.

¶ **Clarkia** *C. amoena*, *C. breweri*, *C. concinna*, *C. pulchella*, *C. repens*, *C. unguiculata*

MELASTOMATACEAE

¶ **Tibouchina** *T. urvilleana* (the whole family is regarded as highly invasive in the sub tropics)

NYSSACEAE

¶ **Davidia** *D. involucrata* var. *vilmoriniana*

The Croquet Lawn tree produced its first handkerchiefs on 14 May 2008.

¶ **Nyssa** *N. aquatica*, *N. sinensis*, *N. sylvatica*, *N. sylvatica* ‘Jermyns Flame’, *N. sylvatica* ‘Sheffield Park’, *N. sylvatica* ‘Windsor’, *N. sylvatica* ‘Wisley Bonfire’

CORNACEAE

Cornus L. *Dogwoods*

Dogwoods are widely planted in urban landscaping schemes and along motorways, often for the winter effect of their colourful twigs. Even in winter, these can be told at once from ornamental willows by the fact that *Cornus* has buds in opposite pairs, whereas *Salix* has alternate buds.

Cornus sanguinea L. *Dogwood*

m 6

Swida sanguinea (L.) Opiz
Thelycrania sanguinea (L.) Fourr.

This is the native Dogwood of wood margins, hedge-banks, thickets, lane-sides on the clay, and river-sides. Common, but absent from large parts of the Bagshot Sands. Much planted as the green-twigged cultivar ‘Viridissima’ and the orange-twigged cultivars ‘Winter Beauty’ and ‘Winter Flame’. Black winged aphids in autumn are *Anoecia corni*.

NVC: W 8,12,21

Silwood Park: local and rare in natural habitats, as at Weir Wood and Rookery Copse, but commonly planted on the Science Park.

Ascot: very local, but abundant at Heatherwood Hospital, Kings Beeches, and at Sole’s Pond below Ascot Station.

East Berks: frequent in hedges at Marlow, common about Park Place, Wellington College, Bagshot, Wargrave, Maidenhead, Bisham, Cookham, Hurley, under the terrace of Windsor Castle. Common on the chalk and on gravel workings (as at Whistley Park). On sunny waste ground between the railway and Tesco’s Superstore at Kings Meadow in Reading [719738] on 11 October 2003, 2 September

2007 and 6 September 2008. All but ubiquitous, uncommon only in the extreme south-east along the Surrey border. 28% (1km²). Atlas 2000: all squares

West Berks: locally dominant by the Thames at Sutton Courtenay [59] in 2000. Atlas 2000: all except [69]

Cornus sericea L. *Red-osier Dogwood*

• n 6

Cornus stolonifera Michaux

Thelycrania stolonifera (Michaux) Pojark.

Thelycrania sericea (L.) Dandy

Swida sericea (L.) Holub

Introduced by ponds in parks, in small quantity. Much planted as the rather sickly, lime-yellow twigged 'Flaviramea' and as the red-tipped, yellow-green 'Kelseyi'. Fruits white, not purplish black as in *C. sanguinea*.

Ascot: no records of garden escapes, but commonly planted in shrubberies.

East Berks: not in Druce. Bearwood, Finchampstead Church, Tilehurst. Recently from Upperwood Farm, Bearwood College, Coley, Earley, Douglas Farm, North Twyford, Warfield House. 1% (1km²). Atlas 2000: all except [88], [97]

West Berks: Shrivenham [28], Leverton [37], Kingston Lisle [38], North Audley farm, Youlbury and Jarn Mound [40], Stanford Dingley [57], Tilehurst [67], Wallingford bridge [68]. Atlas 2000: all except [29], [47], [48], [58], [59], [50], [66], [69]

Cornus alba L. *White Dogwood*

• n 6

Thelycrania alba (L.) Pojark.

The red-stemmed dogwood *C. alba* 'Sibirica' is much loved by urban landscape designers, and mass-plantings are to be found on embankments of motorways, in business parks and industrial estates in all the larger towns. The blackish-purple twigs of 'Keselringii' can be very effective to break up mass-plantings of yellow and red twigged forms. The most commonly planted variegated White Dogwood is *C. alba* 'Elegantissima' which has broad white margins to its leaves. The cultivar 'Spaethii' is popular in gardens, but less widely used in landscaping schemes; it has yellow-margined, mid-green leaves.

East Berks: Reading (1999), Bracknell (1999), Windsor (1999), embankments of the M4 motorway south of Reading (1999). Cookham and by the R. Thames in Maidenhead [9081] in 2002. <1% (1km²).

West Berks: planted in chalk grassland at Aston Tirrold [58] in 1956 for no obvious reason at all. Atlas 2000: no records.

Cornus mas L. *Cornelian-cherry*

• m 6

Silwood Park: several well grown trees (e.g. between the Stable Block and the Rector Centre) but not self-sown.

East Berks: no records.

West Berks: in a hedge at Didcot [59] in 1965. Atlas 2000: [28]

¶ **Cornus** *C. alba*, *C. alba* ‘Albovariegata’, *C. alba* ‘Aurea’, *C. alba* ‘Elegantissima’, *C. alba* ‘Sibirica’, *C. alba* ‘Spaethii’, *C. alternifolia* ‘Argentea’, *C. amomum*, *C. canadensis*, *C. capitata*, *C. controversa*, *C. controversa* ‘Variegata’, *C. ‘Eddie’s White Wonder’*, *C. florida*, *C. florida* ‘Alba Plena’, *C. florida* ‘Apple Blossom’, *C. florida* ‘Cherokee Chief’, *C. florida* ‘Rainbow’, *C. kousa* var. *chinensis*, *C. kousa* var. *chinensis* ‘China Girl’, *C. kousa* ‘Greta’s Gold’, *C. kousa* ‘Madame Butterfly’, *C. kousa* ‘Satomi’, *C. mas*, *C. mas* ‘Aurea’, *C. mas* ‘Variegata’, *C. ‘Norman Hadden’*, *C. nuttallii*, *C. sanguinea*, *C. sanguinea* ‘Midwinter Fire’, *C. sanguinea* ‘Winter Beauty’, *C. stolonifera* ‘Flaviramea’

Aucuba japonica Thunb. *Spotted-laurel*

● m 6

This is the common, urban-landscaping shrub with glossy, yellow green leaves with whitish spots. An essential component of old fashioned shrubberies in larger gardens. Mass-planted around office developments, industrial estates and business parks.

Silwood Park: very common in the landscaping shrubberies on the Science Park and around the Manor House, but not self-sown.

East Berks: not in Druce. Introduced in plantations; Whiteknights Park (1966), Twyford (1966). Much planted but rarely self-sown. Recently from South Charvil, West Reading and East Maidenhead. <1% (1km²). Atlas 2000: [77], [88]

West Berks: Buscot Park [29], Newbury and Benham Park [46], Lockinge [49], Wallingford [68]. Atlas 2000: [49], [68]

¶ **Griselinia** *G. littoralis*, *G. littoralis* ‘Variegata’

GARRYACEAE

¶ **Garrya** *G. elliptica*, *G. elliptica* ‘James Roof’, *G. x issaquahensis* ‘Glasnevin Wine’

SANTALACEAE

Thesium humifusum DC. *Bastard-toadflax*

p 6 ↓

A wonderfully curious plant of short turf in unimproved chalk grassland, dry chalky banks and downs, which is parasitic on the roots of *Asperula*, *Scabiosa*, *Festuca*, etc.; very local and decreasing. NVC: CG 2,3,5

East Berks: an extinct local speciality, known to Druce from the chalk at Park Place, and near Hurley, but not seen there by Bowen or by me.

West Berks: formerly across the whole width of the chalk, but now extinct or rare to the west of 45, presumably as a result of habitat destruction through fertiliser pollution, ploughing and re-seeding. Kingstone Coombes [270850], Odstone Coombes and Dean Bottom [28], Lambourn [37], Crog Hill, Uffington and Letcombe [38], Cherbury Camp (OXF) [39], East Hendred Down, Ardington Down and Knollend Down [48], Hurdle Shaw and Basildon [57], Churn Halt, Lowbury Hill, Blewburton Hill (OXF), Streatley Hill (RNG and RDG), Streatley Downs (RDG and LAN), Roden Downs,

Moulsford Downs, Kingstanding Hill and Thurle Down [58], but probably extinct at Ashbury [28], Cherbury [39], Farnborough [48] and Cholsey [58]. Recent records from Weathercock Hill [288820], Crog Hill [323835] and Lough Down at Streatley [588810]. The plant would clearly repay further study. Atlas 2000: [27], [37], [38], [48], [57], [58], [67]

VISCACEAE

Viscum album L. *Mistletoe*

p 2

A parasitic shrub on trees; rather rare but locally frequent. Stately homes, parkland and plantations, usually close to buildings. Never recorded from ancient or semi-natural woodland. The usual host plant is *Tilia x europaea* in Berkshire, and where it is abundant, the parasite can fill the entire inner volume of the canopy. Large trees can support more than 100 mistletoe individuals. In the Queen's garden at Frogmore, the abundance of mistletoe and the range of host plants is the greatest I have seen anywhere: *Robinia pseudoacacia*, *Salix alba*, *Quercus rubra*, *Juglans nigra*, *Tilia cordata*, *Populus alba*, *P. 'Robusta'*, *P. x canadensis*, *Syringa vulgaris*, *Betula pendula*, *Acer rubrum*, *A. saccharinum*, and various ornamental cultivars of *Malus*, *Prunus* and *Crataegus* are all hosts. Although *Quercus robur* is a frequent host of mistletoes in continental Europe, there are no Berkshire records. I have only once seen mistletoe on *Sorbus aria* in Berkshire (at Hall Place, Burchett's Green; see below). Where mistletoe infects apple trees, it has a substantial impact in reducing fruit production; it can kill infected branches, but seldom kills the whole tree.

Silwood Park: oddly, given the huge abundance of mistletoe on some of the neighbouring properties, this is one of Silwood's rarest wild plants. For many years, there was only a single individual in the tall lime tree on the edge of the Cricket Wicket; this plant produced an offspring in 2001. There are 2 plants in Lime trees on the edge of Ashurst Four Acre Field, opposite the Marist Convent, one of them appearing to grow on a beech (but a lime branch has infiltrated the canopy). Two parasites in the tall limes at the entrance to the stable yard at the back of the house were cut down by Ray Davies in 1981 when he topped the trees for safety reasons. Although the limes soon regained their earlier height, they were not recolonised by mistletoes until one plant was rediscovered high up in the canopy of the tree closest to the Stable Yard in January 2000 (a wonderful moment). By November 2003, the lime trees had 2 mistletoes each. The lime tree on the boundary between Ashurst Orchard and the churchyard was colonised by a single mistletoe soon before April 1997. A single plant in a tall lime tree opposite the Old Vicarage on the road to Ashurst. The two lime trees on the southern side of London Road at Sandyridge (now Princes Gate) supported an increasing population of mistletoes; there were 5 plants in one and 4 in another in December 1979, this had changed to 6 and 1 by December 1991, but there was considerable recruitment during the 1990s so that the populations were 33 and 13 by January 2001, and 36 and 21 by November 2003. Intriguingly, all of the plants in the western of the two trees had gone by November 2004, vanished without a trace, while those in the eastern tree had grown in size and increased to 40 in number. It was as if the western tree had developed an immunity to the parasite. It turned out, however, that the two trees were on different properties, and the owner of the tree nearest Ascot had paid for tree surgeons to come in and remove all of the parasites from their tree. There had been no recruitment on the cleared tree by 20 January 2007 (but see below). In November 2010 there were 25 plants in the eastern tree and 15 in the western tree. A third, younger lime tree, back from the road towards the buildings, had 3 juvenile mistletoes in November 2004. In March 2009, the recently-cleared western Lime tree (the Ascot side) has 12 small *Viscum* and the eastern tree (the Silwood side) has 22 very small *Viscum*. The Ascot-side (western) tree was cut down to a bare, 3m high stump in early 2011, and it is not clear whether it will re-grow as a pollard (November 2011). The *Viscum* population in the eastern tree recovered well, to 20 plants on 1 January 2012. Sadly, on 16 January 2012, all of the mistletoe plants in the eastern trees were cut down, when tree surgeons carried out a canopy reduction (it is not clear whether the *Viscum* was the

target of the work or just a consequence, but anyway none of the 20 or so plants survived). The western tree, that was pollarded to 3.5m has so far produced shoots only from the base of the trunk.

A new recruit in *Malus tschonoskii* by the gate to Drive Field in November 2004. The was one mistletoe in the clump of Lime trees at the top of Nash's Field in January 2005, and another in Ashurst Copse. The tall Lime tree by the bridge at the Walled Garden had two mistletoes in February 2005. A single young plant in the middle one of the five Hawthorns on the boundary between Lower Church Field and Horse Field in March 2005, but not re-found during the intensive survey of March 2009, nor seen since. In February 2007 it had colonized the ornamental crab-apple 'Golden Hornet' next to the *Malus tschonoskii* by the gate to Drive Field. There is no doubt that Mistletoe has been increasing slowly but steadily within Silwood since 2001. In February 2010 there were 6 plants in the lime tree by the Stable Yard, and 3 in the other. A new host record, first discovered on 13 November 2011, when the overhanging *Vitis coignetiae* was removed to uncover a new *Viscum* growing on *Sorbus sargentiana* in the Transformer Bed in the car park between Silwood Manor, Phase One and West Block. Two new recruits in the tall Lime tree by the Horticultural Yard on 16 January 2012.

Ascot: mistletoe is extremely abundant in some of the lime trees on the boundary of Windsor Great Park from Blacknest Gate to Ascot Gate (Plate 15), down Mill Lane, and in the Park at Johnson's Pond and Breakheart Hill, and at Cranbourne Court on the Peanut Roundabout, but there are no records at all of mistletoe from the western side of Ascot (see Map on the web site). It grows on *Quercus rubra* at Johnson's Pond (1980-2004). Sunningdale Church, in three of the Flowering Crab Apple trees flanking the entrance path in December 2001 (but not in neighbouring *Malus floribunda* or *M. x purpurea*). Locally abundant in the cross-shaped avenues of limes in the centre of Swinley Park, and in the magnificent circle of 12 mature lime trees on the top of the hill nearby [89452 67540]. At eye-level, in *Malus x purpurea* overhanging the pavement at 66 Upper Village Road in Sunninghill (2000-13). A single large plant in *Sorbus aucuparia* in the front of 76 Upper Village Road, overhanging the car park of the Carpenters Arms (April 2013). Locally frequent throughout Sunninghill Park on 10 March 2010 on a variety of trees including *Acer* and *Salix* as well as commonly on *Tilia* and *Populus*. In Holmes Close, between the housing estate at Cavendish Meads and Devenish Road in 2010. There were two large plants in the big *Acer* on Church Road in South Ascot on 2 February 2011. Just outside our area, by the A30 in Sunningdale (vc. 17), there were more than 20 big plants in a *Populus x canadensis* by the village car park behind the shops opposite the junction with the Chobham Road.

East Berks: "Abundantly and luxuriantly on an avenue of lime-trees in front of Sir W. East's place, Hurley" (Druce). This is Hall Place at Burchett's Green, where there were many plants in an old Whitebeam (*Sorbus aria*) at the north-west end of the farm buildings in January 2001 (the only record of this host in Berkshire). Common on poplar and thorn at Park Place. Cookham on a crab-tree. Cliveden on black poplar (this is in v.c.24 Buckinghamshire). Parasitic on *Malus* or *Tilia*, less commonly on *Salix*, *Populus*, *Crataegus* or *Acer*. Local and in small quantity; decreasing. Sonning, Ruscombe Lake, Hurley, White Waltham, St Leonard's, Windsor, in flat farmland close to the Thames east of Hurley at 'La Pergola' (!) [835835], Shottesbrooke, Sandhurst, Burchett's Green. Recently at Beech Hill, Kings Mead in Reading, still at Park Place, Wargrave (where there is an enormous single individual in the lime tree by the church), Sonning, White Waltham, Bill Hill Park [7071], Knowl Hill churchyard, Scotlands, Foliejon Park, frequent in old limes at South Hill Park in Bracknell (but not at Easthampstead Park on the western side of the town), Forest Lodge, Great Meadow Pond, Richardson's Lawn, Frogmore, Home Park and Windsor Castle, where there is a fine (143cm dbh) old Black Walnut *Juglans nigra* below the chalk cliff with 10 *Viscum* in January 2002. In two poplar trees (*P. x canadensis*) planted on the western edge of the green, and abundant in an avenue of poplars in the village Holyport in January 2000. In *Robinia pseudoacacia*, 5 big mistletoes on the edge of the car park of the *Bird in Hand* at Knowl Hill in 2001. On 3 trees of *Acer saccharinum* in Windsor in the middle of the roundabout where the A308 meets the Long Walk, on

New Year's Day 2002 and increased substantially by October 2011. Notably abundant on a range of host trees in White Waltham in February 2002. In *Robinia* and *Tilia* at Beech Hill [7064] in 2002. Two plants in a tall *P. x canadensis* on the far island at Hurley Lock [8284] in 2003. Along the Surrey border from Bagshot Park [9064] in v.c.22 to Penny Hill [8962] in v.c.17 in January 2005. Very local, in only 4% (1km²). Atlas 2000: all squares.

West Berks: Woolstone [28], Watchfield [29], Hungerford and Inkpen [36], East Shefford [37], Denchworth [39], on *Crataegus monogyna*, *Fraxinus excelsior* and *Acer campestre* in Hamstead Marshall [46], Boxford and Welford Park [47], Harwell [48], on apple and *Robinia* in Abingdon [49], on willows at Appleton [40], Woolhampton and Midgham Park [56], Wyld Court, Hampstead Norreys and Bucklebury [57], Unhill Wood and Moulsoford [58], Aldermaston Court and on *Populus* at Mortimer [66], Purley, Englefield and Pangbourne [67]. There were 20 plants in the big lime tree in the churchyard at Aldermaston in 2001, and one in *Populus x canadensis* behind Thatcham Church. A special 'missing mistletoe' survey was undertaken on 4 Jan 2000 to make as sure as possible that there really wasn't any mistletoe in [38], [59], [50] or [68]. Knowledgeable local people in these places, who knew of mistletoe in sites as far away as Oxford, claimed never to have seen the parasite in [38] nor in the towns of Wantage [4088] or Wallingford [6089]. Two new records were made however: a huge mistletoe was discovered in an ornamental *Malus* in Bell Lane, Brightwell-cum-Sotwell [582908], and another plant in an old cooking apple tree in a garden on Upper Road, Kennington [520025]. So, although the plant is widespread, it is clear that mistletoe really is extremely uncommon on the Berkshire side of the Thames, especially on the chalk. Atlas 2000: all except [38], [68]

A detailed survey of *Viscum* at Silwood and in its neighbouring properties was carried out in March 2009, to coincide with the start of the Flora of London project.

Within Silwood Park

Silwood Manor House

Both of the big, old Lime trees by the entrance to the Stable Yard had *Viscum* in the late 1970s, but these were cut down when the trees were pruned by Ray ("Chain-Saw") Davies in 1981. The Lime trees have subsequently regained their height and had been recolonized by *Viscum* in January 2000. The Stable Yard tree has 5 large *Viscum* and the Refectory tree has 2 large *Viscum*.

Ashurst Path

Out of the 6 poplar cultivars planted in pairs on either side of the path below the Cricket Wicket, one tree has two *Viscum*

Drive Field

One in *Malus tschonoskii* and one in *Malus* 'Golden Hornet' on either side of the entrance gate. The big, ivy-filled Lime with the dead top has had at least one *Viscum* continuously since at least 1971, but now has more than 20 big individuals. The tall limes on either side of this have recently gained mistletoe (one in the tree to the west, three in the tree to the east).

Walled Garden

Three big Limes by the road-bridge over the stream all had *Viscum*; the biggest tree blew down in January 2009 and the roe deer climbed into the fallen canopy to eat the mistletoe.

Nash's Field

One *Viscum* in the tallest of the Lime trees in the westernmost of the clump-planted groups of trees on the ridge-top, but none in the other tree-groups.

Nash's Copse

None

Silwood Farm

None

Héronsbrook

None on the Silwood side (but see below)

Ashurst Orchard

Two large *Viscum* in a tall lime tree next to *Pinus nigra* in the boundary with the graveyard

Ashurst Copse

Three big *Viscum* in a big Lime opposite the entrance to Beechgrove

Ashurst Four Acre Field

Four *Viscum* in a tall Lime tree in the London Road boundary woodland, opposite the Marist Convent (formerly Frognall).

Ashurst Park

The big Lime tree sandwiched between two old oak trees opposite Fairwinds (the old vicarage) has 3 large *Viscum*.

Lower Church Field

There was a single young plant on the middle one of the five Hawthorns on the boundary between Lower Church Field and Horse Field in March 2005, but it is not there now.

Silwood's neighbouring properties

The Cedars

None that I can see; most of the mature trees are conifers.

Fairwinds

None, but present on the Ashurst Park side of the road (see above).

Beechgrove

None, but present on the opposite side of the road (see above). The house and outbuildings are due for demolition soon, with plans for the erection of a 14-bedroomed house with two new detached houses for servants. The garden has the largest *Cryptomeria japonica* in the neighbourhood.

Kingswick

None, despite the fine double-avenue of tall old Limes

Froggnall

None, despite the proximity of the long-established Ashurst Four Acre Field plants, and plenty of host trees.

Princes Gate

The population of *Viscum* in the two big old Limes on the corner of London Road was cut out in 2004 (the western of the two) and 2007 (the eastern individual), but both are recovering. The Lime tree in the centre of the property was hard-pruned in late 2008 when all the *Viscum* were removed. The recently-cleared western Lime tree (the Ascot side) has 12 small *Viscum* and the eastern tree (the Silwood side) has 22 very small *Viscum*. The Ascot-side (western) tree was cut down to a bare, 3m high stump in early 2011, and it is not clear whether it will re-grow as a pollard (November 2011).

Royal Berkshire Hotel

None in the famous Tulip Tree, but several in each of the two large Lime Trees (one with a double trunk) on the southern lawn, and even more in the Limes on the northern boundary behind the walled garden adjacent to the Harewood boundary footpath.

Tittenhurst

Two *Viscum* in a single Lime tree just west of the eastern gate on London Road (opposite the Titness Park gate), and another in Lime behind Callaly off Whitmore Lane

Harewood

Good populations of *Viscum* in many of the big old Lime trees, especially on the eastern and northern borders of the property. Building work on the new house and gardens is still in full swing after a whole year (the house is said to be costing 65 million and the garden 10 million, for a wealthy Russian client). There are 5 heavily infested Lime trees set back from the corner of Buckhurst Road and Mill Lane, and a single tree at the end of the vista from the Harewood Gate opposite the Water Mill. There are two heavily infested lime trees in the south-eastern corner by the footpath, and one Lime tree with a single *Viscum* on the eastern boundary.

Titness

Several good colonies in Limes on the Blacknest Gate border of the property. Seven *Viscum* in an isolated population in a Lime tree in a line of woodland set back from London Road by a strip of pasture (opposite Tittenhurst, west of the sharp bend), and on the Mill Lane side, one *Viscum* in apple close to the second gate.

Buckhurst Park

Three *Viscum* in *Populus* opposite the main gate of Harewood on Mill Lane, and 20 *Viscum* in *Populus* by Mill House opposite the other Harewood gate.

Blacknest Park

A single Lime amongst the London Road boundary trees, just east of the sharp bend, with 3 *Viscum*

Blacknest Gate

A hot-spot for mistletoe, with large numbers of plants in many Lime trees behind the Pink Gatehouse, plus one very heavily infected Lime tree on the left, just before the first bridge across Virginia Water, and more in Limes on the boundary behind the Belvedere Arms. Also, many *Viscum* in two *Populus* trees amongst pines behind the stables on the border with Titness Park (north-west of Ascot Oriental).

Belvedere Arms

A heavy infestation with more than 10 *Viscum* in an old crab-apple tree, overhanging London Road, and many *Viscum* in Limes behind the pub car park in the boundary of Virginia Water.

Cheapside

A single plant in *Populus x canadensis* in the Heronsbrook Cottage verge opposite the Thatched Tavern.

Golden Gate and Silwood Close

None that I can see

Tetworth Park

A single Lime tree with two *Viscum*, close to Tetworth House in the centre of the property, and 3 *Viscum* in a large *Populus x canadensis* on the boundary facing The Wells.

Agincourt and The Wells

None

Coombe Lane, White Wells and The Glen

None

Beechgrove

None, despite the proximity of the Silwood trees in Ashurst Wood.

Sunningdale Church

The main path to the entrance of the church is lined by 7 old flowering-crab-apples, two of which are infected, with 5 and 10 *Viscum* respectively

Sunningdale Cemetery opposite the Civil Service College fork

One *Viscum* in each of two tall Lime trees amongst pine trees on the ridge of high ground behind the cottages.

CELASTRACEAE

Euonymus europaeus L. *Spindle*

m 5

Hedges, woods and open bushy places, locally common especially on the oolite and chalk. Its beautifully coloured fruits are very ornamental in many of our hedgerows in the autumn.

Silwood Park: much planted by Michael Way and Mike Cammell in the 1970s as part of their long term studies on the black bean aphid *Aphis fabae* which overwinters on spindle. Commonest in the woodland adjacent to the Cricket Wicket. There is a large bush amongst sycamore on Garrison Ridge above Silwood Bottom. Also on Rookery Slope, Ashurst Path, Gunness's Bridge, and by the Ha Ha. As far as I can judge, all of these are planted and none self-sown.

East Berks: Swallowfield, Bisham Wood, Park Place, Windsor, Wargrave, Coleman's Moor, Twyford, Hare Hatch, Loddon Bridge, Cookham, Sonning. Common only in the Thames valley and Loddon valley south of Reading and absent from a considerable area where the ground is occupied by heath and pinewoods. 17% (1km²). Atlas 2000: all squares

West Berks: hedges throughout. Atlas 2000: all except [69]

Euonymus fortunei (Turcz.) Hand.-Mazz.

• n 5

This is the common variegated ground-cover plant, so familiar as the golden ('Emerald n' Gold'), pink ('Emerald Gaiety') and silver ('Silver Queen') cultivars. Not seeding with us, and seldom thrown out.

East Berks: 'Silver Queen' on waste ground in Whitley [7270] in August 2003.

Euonymus japonicus L.f. *Evergreen Spindle*

• m 5 ↑

A common hedging plant, sometimes self-seeding on waste ground in towns and villages.

Silwood Park: garden outcasts on waste land in Cheapside Village.

Ascot: local and rare; South Ascot churchyard (1979-2004).

East Berks: Three Mile Cross, West Reading, Central Reading, Kennet Mouth, Sindlesham, Winnersh, Dinton Pastures, Highfield Park, Kiln Ride, College Town. 2% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: on waste ground by the canal in Newbury [4767] in 2002. Atlas 2000: [29], [46], [58], [50]

¶ **Euonymus** *E. alatus*, *E. alatus* 'Compactus', *E. europaeus* 'Red Cascade', *E. fortunei* 'Blondy', *E. fortunei* 'Canadale Gold', *E. fortunei* 'Coloratus', *E. fortunei* 'Emerald Gaiety', *E. fortunei* 'Emerald n' Gold', *E. fortunei* 'Harlequin', *E. fortunei* 'Highdown', *E. fortunei* 'Minimus', *E. fortunei* 'Silver Queen', *E. fortunei* 'Sunshine', *E. fortunei* 'Sunspot', *E. hamiltonianus* subsp. *sieboldianus* 'Coral

Charm', *E. hamiltonianus* subsp. *sieboldianus*, *E. japonicus* 'Albomarginatus', *E. japonicus* 'Latifolius Albomarginatus', *E. japonicus* 'Microphyllus Albovariegatus', *E. japonicus* 'Ovatus Aureus', *E. phellomanus*, *E. planipes*

¶ **Celastrus** *C. orbiculatus*

¶ **Maytenus** *M. boaria*

AQUIFOLIACEAE

Ilex aquifolium L. *Holly*

mm 5

Oak woods, beech woods and hedges; frequent in the south, but rare or absent on the chalk. The principal shrub layer species in many of the woodlands. Leaves often mined by larvae of the agromyzid fly *Phytomyza ilicis*. The black leaf aphid is *Aphis ilicis*. Host plant of Holly Blue butterfly *Celastrina argiolus*. The upper leaves (away from herbivores) have fewer, if any, prickles, compared with the lower leaves, exposed to browsing animals.

Silwood Park: very common, with seedlings occurring in all terrestrial habitats. There are excellent holly hedges on several of the estate boundaries, notably the Ascot Road. Holly grows epiphytically on several of the veteran oak trees in Merten's Acres and on Guinness's Hill.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	3	8	14	65

Ascot: the most abundant component of the shrub layer in the birch woodlands than form the last remnants of Sunningwell Bog in South Ascot, locally forming impenetrable thickets.

East Berks: uncommon in pine plantations but widespread in other types of woodland. 72% (1km²). Atlas 2000: all squares

West Berks: widespread but rare on the chalk and the northern clays. Common in the Kennet Valley to the south of 80. Atlas 2000: all squares

Ilex x altaclerensis (hort. ex Loudon) Dallim. *Highclere Holly*
Ilex aquifolium L. var. *altaclerensis* hort. ex Loudon

● mm 5

East Berks: Whiteknights Wilderness [7371] in 1986.

West Berks: Basildon Park [67] in 1968.

The national collection of *Ilex* with 52 species and 301 cultivars is held nearby in Valley Gardens at Virginia Water.

¶ **Ilex** *I. x altaclerensis* 'Belgica Aurea', *I. x altaclerensis* 'Camelliifolia', *I. x altaclerensis* 'Golden King', *I. x altaclerensis* 'Lawsoniana', *I. aquifolium* 'Argentea Marginata', *I. aquifolium* 'Aurea Marginata', *I. aquifolium* 'Bacciflava', *I. aquifolium* 'Ferox Argentea', *I. aquifolium* 'Ferox Argentea', *I. aquifolium* 'Golden Milkboy', *I. aquifolium* 'Golden Queen', *I. aquifolium* 'Golden van Tol', *I. aquifolium* 'Handsworth New Silver', *I. aquifolium* 'J.C. van Tol', *I. aquifolium* 'Pyramidalis', *I. aquifolium* 'Silver Queen', *I. aquifolium* 'Silver van Tol', *I. crenata*, *I. crenata* 'Convexa', *I. crenata* 'Golden Gem', *I. x koehneana* 'Chestnut Leaf', *I. x meserveae* 'Blue Angel', *I. x meserveae* 'Blue Princess', *I. verticillata*.

BUXACEAE

Buxus sempervirens L. *Box*

• m 4

Old woodlands on chalk soils, shrubberies, pleasure grounds. Possibly native in some beech woods on chalk at Childs Court Farm [57] and Sulham [67], but usually planted; often self-sown, as at Park Place. There is a story that Box may have given Berkshire its name. In Camden (1610) it states that “Astericus Menevensis deriveth the name [of the county] from a certaine wood called Berroc, where grew good store of Box”. However, the “last remains of Boxgrove in Sulham parish [67] near Reading whence the country probably took its name, were grubbed out about forty years ago” (Gough, 1789). “At Buckland [39] there are some very fine specimens of the Box, and it is also well grown at Besselsleigh [40], Kingston Bagpuize [49] and at Park Place [7781] where Mr Stanton tells me it reproduces itself from seeds in the woods” (Druce).

Silwood Park: in the churchyard at Ashurst, in the hedge adjacent to Ashurst Orchard, and by the Machinery Centre at the shady end of the Ha Ha. Clearly planted in all these places.

East Berks: common only in the Thames valley, but scattered garden escapes occur in and near villages throughout. Abundant and locally dominant at Park Place (see above). Self-seeding at Shaw Farm and Frogmore. 7% (1km²). Atlas 2000: all squares

West Berks: scattered throughout in chalky woodlands, occasionally locally dominant; particularly abundant at Flamborough [29], Lynch Wood Lambourn [37], Kingston Lisle and Blowingstone Hill [38], Buckland [39], Basildon Park [67]. Atlas 2000: all except [56]

¶ **Buxus** *B. balearica*, *B. microphylla*, *B. microphylla* ‘Faulkner’, *B. sempervirens* ‘Aureovariegata’, *B. sempervirens* ‘Elegantissima’, *B. sempervirens* ‘Latifolia Maculata’, *B. sempervirens* ‘Suffruticosa’

Pachysandra terminalis Siebold and Zucc. *Carpet Box*

• n 4

Commonly planted as ground cover in landscaping schemes, parkland and larger gardens.

Silwood Park: locally naturalised in Cannon Wood, where it survived construction of the Science Park car park in 1987. Still there in 2004.

East Berks: much planted around industrial and office development in the 1980s and 1990s in Bracknell, Maidenhead and Reading. On waste ground in Whitley [7270] and Bulmershe [7573] in 2002.

¶ **Pachysandra** *P. terminalis*, *P. terminalis* ‘Green Carpet’, *P. terminalis* ‘Variegata’

¶ **Sarcococca** *S. confusa*, *S. hookeriana*, *S. hookeriana* var. *digyna*, *S. hookeriana* var. *digyna* ‘Purple Stem’, *S. hookeriana* var. *hookeriana*, *S. hookeriana* var. *humilis*, *S. orientalis*, *S. ruscifolia*, *S. ruscifolia* var. *chinensis*

EUPHORBIACEAE

Ricinus communis L. *Castor-oil-plant*

• th 7

Used as a central feature in municipal annual bedding schemes, especially the purple-leaved cultivars. Uncommon as a domestic garden plant, but sometimes found in autumn as an outcast on tips in towns. Often cut down by frost before it flowers, and not found self-sown in Berkshire.

East Berks: waste ground in Maidenhead in 2000.

Mercurialis perennis L. *Dog's Mercury*

hp 2

Woods, thickets, hedgerows and old lanes. Common and generally distributed, especially on stiff soil. Locally dominant in the drier parts of oak and beech woods, and in hedge-banks in wooded regions; typically dominant in those woodlands where bluebell is less competitive (it replaces bluebell in the north-west of the county in the triangle between Lambourn, Buscot and Pusey, and in the chalky woodlands around Streatley). Often indicative of former cultivation in secondary woodland, where it replaces bluebell in patches with sharp boundaries that mark ancient field edges within what now looks like an otherwise uniform woodland. Rare on the very acid soils of south-east Berkshire. This plant has the curious distinction of keeping its leaves longer than any other deciduous species. They are the first into leaf in early spring and the last to drop them in autumn. When they are on the plant they are highly toxic and eaten by very few herbivores. As soon as they fall off the plant they are as palatable as can be; earthworms gobble them up immediately. This suggests that when they are attached to the plant they have very active toxins with rapid turnover, and that all defence is lost as soon as the leaf is dead. By late summer the leaves are often shot through with the feeding holes of the specialist beetle *Hermaphysa mercurialis*. Unpalatable to rabbits, and hence dominant in heavily grazed shade. Tolerant of pollution by fertilizer drift, and often the only surviving ground flora in woods surrounded by arable land.

NVC: MG 1; OV 27; W 6,8,10,12,13,14,21,22,24,25

Silwood Park: surprisingly uncommon. The only really extensive population is in woodland on both sides of the track from The Farm to the Kissing Gate. Farm Road, Old Orchard, Weir Wood, on the bank beneath Guinness's Bridge, Kissing Gate, Nash's Copse.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	8

Ascot: uncommon in woods by Ascot Station, Sunninghill Park.

East Berks: woodlands throughout, but commonest on the chalk and the clay. 29% (1km²). Atlas 2000: all squares

West Berks: often forming extensive monocultures, carpeting the ground in steep chalk woodlands like Rivar Copse [3562]. Locally dominant in Lynch Wood Lambourn [3279], Upper Wood, Ashdown [2881], Grove Copse [2392], Flamborough [2493], Taylor's Hill Buscot [2497], Eaton Wood [2696], Grove Wood Faringdon [2996], Pusey woods [3697], Shellingford [3293], Childrey [3687], Blowingstone Hill [3286], Kingston Lisle [3289]. Appleton Lower Common [4200]. In large-scale mosaics with bluebell and bracken in the larger woods like Tubney [4400] and Bagley [5002]. Atlas 2000: all except [68], [69]

Mercurialis annua L. *Annual Mercury*

• th 7

Waste ground in towns, and cultivated soil in gardens; rather local. Restricted to warmer-than-average microhabitats.

NVC: OV 9,13

Silwood Park: local and rare. A few plants at the end of the greenhouses next to the Header House from 1993-2000 when the site was destroyed for construction of the Jiff Greenhouses. This was one of the few plants in flower at the dawn of the new millennium on 1 January 2000. One vigorous clump of plants on the concrete base of the new greenhouses on 18 June 2002, close to the original site, but gone by 2003. In bare soil at the extension of the CABI car park opposite M-Scan in July 1996; not seen since. A single plant in a crack in the concrete by the Jiff Greenhouse on 1 January 2009, close to the original site. A flourishing population in the shrub bed at the Cannon end of Unit F on the Science Park on 27 August 2008, in ground formerly shaded by the canopy of the (scandalously) felled *Cercidiphyllum japonicum*. One vigorous plant, growing out of the skeleton of a dead *Senecio viscosus* in a crack in concrete at the entrance end of the Jiff Greenhouse on Armistice Day 11 November 2008 on the 90th anniversary of the end of World War I. Sill nearby, with a single plant at the edge of the concrete apron between the Jiff Greenhouse and CABI Quarantine on 29 July 2010, with *Festuca gigantea* and *Senecio inaequidens*.

Rare, from the seed bank at Ashurst Lysimeters on 29 July 2009, following herbicide treatment in spring 2009 and cultivation in mid June; there were 5 large plants in flower on 20 September 2009.

Ascot: locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Presumably from a long-persistent seed bank; this species is very uncommon in the district. Very rare on ruins near the new grandstand during construction work on Ascot Racecourse [920689] in August 2005. Very rare on the soil pile by the Straight Mile at the racecourse end of New Mile Road on 12 September 2006.

East Berks: in a cornfield at Finchampstead, near Windsor, Hurley, common in arable ground and gardens at Bisham. Gardens and rubbish tips; local but increasing. On Oxford Road in West Reading, Kings Meadows railway ground, Earley Station, Bray Court, Maidenhead, Cookham, Cox Green, Winkfield, Windsor, Smallmead tip, Wokingham. Recently at Maidenhead sewage works, on dumped soil on derelict industrial land off Howarth Road [8980], by the river at Queen's Eyot, and common near the riverside between the railway and the Hockey Club in Windsor Home Park. Scattered but locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 4% (1km²). Atlas 2000: all except [78].

West Berks: commonest in the south-east [56] but also scattered down the Thames valley. Stanford-in-the-Vale [39], Newbury and Newbury Station [46], on the M4 roundabout at Chieveley [47], Drayton [49], Appleton and Botley [40], Baughurst, Colthrop, Thatcham and Aldermaston [56], Cholsey [58], Didcot and Long Wittenham [59], Kennington [50], Basildon and Theale [67]. Atlas 2000: all except [48], [57], [66], [69]

Euphorbia hyberna L. *Irish Spurge* ● hp 5

Very rare garden escape or long-persistent relic. Like *E. dulcis*, the cyathium has rounded glands with no horns, and the fruit is covered with cylindrical warts. The two are told apart by the absence of scales at the base of the stem and bigger fruits in *E. hyberna* (5-6mm not 2-3mm).

East Berks: naturalized in grass beneath the tower, facing the river at Bisham Church [8485] (1998-2004), and at the eastern end of the island at Hurley Lock [828844] in 2000. Atlas 2000: [88]

Euphorbia dulcis L. *Sweet Spurge* ● hp 5 ↑

A bedding perennial, often grown as the purple foliaged cultivar *E. dulcis* 'Chameleon'.

Silwood Park: a single purple individual in the churchyard at Ashurst below the wall facing the tower (2001-04).

East Berks: the purple-leaved form was thoroughly naturalised in Stuart McNeill's garden on Northumberland Avenue in suburban Reading [7271] in 1999. Atlas 2000: [77], [86], [96]

West Berks: very local and rare. The green-leaved plant was on a derelict building plot in New Hinksey [5204] in September 2002. The purple-leaved plant was frequently self-sown in the grounds of the Old Rectory at Burghfield [6668] in 2004.

Euphorbia platyphyllos L. *Broad-leaved Spurge* ○ th 6

Arable fields and waste ground; very rare. An annual spurge found on calcareous clays or on lighter chalky soils, typically on field margins at low density where it has escaped the herbicide application. Known best from the capsule which has hemispherical (rather than cylindrical) papillae.

East Berks: a single plant at Queen's Eyot [912784] in 1988. On disturbed ground in Reading [710702] in 2000. Atlas 2000: [97]

West Berks: Hamstead Marshall [46] in 1906 (**OXF**), Bulls Lock [46] in 1965, Newbury [46] in 1984, Eynsham churchyard [40] in 1990, Marcham churchyard [49] in 1990. Atlas 2000: [49], [40]

Euphorbia serrulata Thuill. *Upright Spurge* ● th 5
Euphorbia stricta L., nom. illegit.

An occasional garden plant, self-seeding freely but seldom found as a garden escape (e.g. in paving cracks).

West Berks: found by Neville and Mary Diserens in 1987 on newly imported soil used to fill a tip in an old gravel pit at Wasing Ponds [584633]; also seen by Bill Helyar.

Euphorbia helioscopia L. *Sun Spurge* ○ th 5

Waste and cultivated ground; frequent in gardens and cornfields, and among crops of turnips and mangold. Generally distributed, but much less common now than in Druce's time.
NVC: OV 4,7,8,10,13,15,19,33

Silwood Park: local and rare. Oak Mead; a single plant, presumably from the seed bank, in the unfenced cultivated part of Block D on 5 September 1996. In fallow to the south of the central grass track through Silwood Bottom on 7 September 2000, but not seen since. There was one plant inside the deer fence in Silwood Bottom on 3 September 2005, following May cultivation. Very rare inside the rabbit fence on April 28 2004, on imported topsoil used to landscape the site from which the Lysimeters had been removed in summer 2003; not seen in 2005. The plant was back in style on 28 July 2007 following two successive herbicide applications to kill the thistles and grasses (after the driest April ever, then the wettest ever May, June and July), with 16 big individuals; these were left to set seed in autumn 2007, after which the ground was thoroughly herbicided once more. One plant flowering here in a cool spring on 20 April 2008. After herbicide treatment of the Lysimeters in spring 2009, followed by cultivation in mid-June, abundant plants had come up from the seed bank over most of the Lysimeter plot on 9 July 2009 and these were in full flower, covering at least 50% of the area of the site, on 28 July 2009. Locally frequent on 22 September 2009 on the July-cultivated part of Silwood Bottom.

Ascot: rare on Charters Road in 1999. Very rare, five plants from imported topsoil used to landscape the edge of the tarmac road alongside the new Straight Mile [93338 69226] on 31 August 2005, but occasional on the landscaped banks on both sides of Winkfield Road, north of the new underpass [925693]. Frequent on the surviving soil pile by New Mile Road in September 2006.

East Berks: frequent in the west around Reading, but absent or rare to the east of 90. Common on the allotments at Bulmershe in 2002 and in wheat fields by the Drift Road [8975] in 2003. Frequent in Shaw Farm [9775] and on the grace-and-favour allotments at Frogmore [9776] in 2003. 10% (1km²). Atlas 2000: all squares. Very local and rare in Albany Road Old Windsor [98322 74596] on 15 December 2012 in front of council houses.

West Berks: occasional on waste ground, railway yards and cultivated ground. Atlas 2000: all except [69]

Euphorbia lathyris L. *Caper Spurge* ○ h 6 ↑

Gardens, waste ground and woods, from a very long-lived seed bank. Very rare in Druce's time, rare and sporadic in Bowen's time, but now frequent. In gardens, it seeds itself in all the wrong places. Rural folk swear by it as a way of keeping moles out of their gardens (the plant is known locally as 'Mole Plant'), but the scientific evidence supporting the efficacy of this practice is not compelling (Lloyd and Rice 1991).

Silwood Park: on The Tip in 1983, 1985 and 1989. Common at The Greenhouses underneath *Eucalyptus perriniana* in 1994, but only one plant in 1999. Rookery Copse on waste ground by the Ashurst Road in August 1980. South Lodge Wood beneath the Wellingtonia; two plants in August 1980, still there in 1990. An occasional weed of gardens in Cheapside Village in 2000. On 1 September 2009, in beds in front of the patio, and in the former orchard of Silwood Lodge, in ground that was cultivated in May 2009 following renovation of the house as student accommodation. Perhaps from seed originating from Vicky Taylor's industrial-size bird feeder that was situated here from 1985-2008. Still common here in August 2010, but reduced in extent as the garden has grassed over.

Ascot: pavements and alleyways between the High Street and the Race Course 2001-04.

East Berks: about cottages at Park Place, probably an escape in a thicket at Shinfield, Sindlesham, railway near Maidenhead. Winnersh, Reading, Kings Mere. Much increased. Now frequent in waste ground close to buildings in villages throughout; Winkfield, behind the church at Binfield and an abundant weed in the garden next door to it. The dominant plant on an abandoned but recently cultivated allotment between Reading West Junction and Cow Lane [702742] on 11 October 2003. Very rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 9% (1km²). Atlas 2000: all except [78]

West Berks: scattered throughout in towns and villages. Goosey [3591] and Buscot [2397] in 2000. Common in Wantage [3987] and Appleton [4401] in 2004. Soil heaps in Norman Hall, Sutton Courtenay [5093] in 2002. Planted at the four corners of each vegetable patch to ward off moles in Upper Basildon [6075] in 2002. Atlas 2000: all except [57], [66], [69]

Euphorbia exigua L. *Dwarf Spurge* ○ th 6 ↓

Arable land, open ground on waysides, and in gardens; uncommon, but locally frequent on calcareous soils, and absent from the acid soils of south-east Berkshire.

NVC: OV 10,15,16

Ascot: no records.

East Berks: scattered and rare, most records from the chalk of the Thames valley. In a commercial strawberry field at How Lane Farm [863758] in June 2002. <1% (1km²). Atlas 2000: all except [86], [96]

West Berks: frequent on the chalk and the clay in the central region, but rare or absent in the Kennet valley. Sheepgrove Farm [3379]. Upper Seeds at Wytham [40] following cultivation in 2003. Atlas 2000: all except [68], [69]

Euphorbia peplus L. *Petty Spurge* ○ th 4

Pavements, waste ground in towns, fields and gardens; this is the common weedy spurge.

NVC: OV 7,8,13,14,42

Silwood Park: waste ground in full sun by Ashurst Church, Cheapside Village, Old Orchard, Silwood Lodge, Drive Lawns, Heronsbrook, Merten's Acres, M-Scan, Science Park, Cannon Crossroads, flower beds around the Manor House, Stable Yard at the base of the wall in the edge of the tarmac, Header House on gravel pot stands.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	16

East Berks: frequent in gardens and disturbed ground, but less common in arable fields. Frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 42% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Euphorbia villosa Waldst. & Kit. ex Willd. *Hairy Spurge* ● hr 5
Euphorbia pilsoa auct. non L.

East Berks: waste ground in Reading [77] in 1964 (RNG).

Euphorbia esula L. *Leafy Spurge* ● hp 5 †

This is an aggregate of difficult forms, consisting of 3 spp and their hybrids (over 60 named taxa have been recognised within the aggregate). Leaf shape is the only reliable diagnostic character: oblongate (*E. esula*), lanceolate (*E. waldsteinii*), linear (*E. cyparissias*).

East Berks: Druce knew the plant from "Between Henley and Marlow, but on the Buckinghamshire bank of the Thames in a well established if not native condition, where it has been known for the last fifty years". Not in Bowen, but there are several 1960s Atlas records (none of them supported by specimens).

[**Euphorbia x pseudoesula** Schur *Figert's Spurge*]

Found in Surrey and worth looking for in Berkshire. Its leaves are narrower (less than or equal to 4mm) than in *E. esula* (wider than 4mm). Atlas 2000: [58] (but no specimen)

Euphorbia x pseudovirgata (Schur) Soo *Twiggy Spurge*

• hp 5

Euphorbia virgata Waldst. & Kit. var. *pseudovirgata* Schur

Euphorbia x virgata auct., non Waldst. & Kit.

Euphorbia x uralensis auct., non Fischer ex Link

Euphorbia x podperae Croizat

East Berks: not in Druce. Dry railway banks, roadsides and waste places (as *E. uralensis*). Very local; Reading (**RDG**) in 1924. Cock Marsh (1958). The commonest of the aggregate in Berkshire. The leaves are about 4.5mm wide. This is the plant, or a genotype very like it, which is such a pestilential weed in North American pastures. A great deal has been spent on the search for biocontrol agents for the plant, and some of the work has been done at CABI at Silwood Park. It has never been grown outside the quarantine greenhouses. Atlas 2000: [88] (but with no specimen; I have never seen it at Cock Marsh, in all my visits there).

West Berks: rare in the Thames valley, absent elsewhere. Newbridge (**OXF**) [40] in 1936, Wallingford (**OXF**) [68] in 1938, Blewbury [59] in 1954, Marcham [49] in 1955, Tilehurst (**LAN**) [67] in 1956 (**LAN**), Wootton [40] in 1977.

Euphorbia cyparissias L. *Cypress Spurge*

• hp 5

It is very rare as a native on slopes in chalk grassland, but locally frequent as an alien garden escape in dry waste places. A common and invasive rockery plant, soon outgrowing its welcome, and hence frequently thrown out.

NCV: CG 2

Silwood Park: a very rare escape on pavements in Cheapside village (1989-2000).

East Berks: dry grassland and waste places; locally frequent as a garden escape. Cookham pit, Moor Hall are possible native records. The record in the Wellington College List was probably not from Berkshire or was a garden escape. 8% (1km²). Atlas 2000: all squares

West Berks: on waste ground in villages throughout. First records include Sulhamstead Park [66] in 1897 and Brimpton Common (**OXF**) [56] in 1910. Other specimens from Sulham wood (**RDG**) [67] in 1912, Cholsey (**OXF**) [58] in 1923, Gozzards Ford (**OXF**) [49] in 1940, Sulham (**LAN**) [6474] in 1956, and East Garston (**K**) [3676] in 1962. On set-aside land at Frilford Heath North Field [447981] in 2001.

Euphorbia amygdaloides L. *Wood Spurge*

hp 3

Euphorbia amygdaloides subsp. **amygdaloides**

Woods, hedges, and thickets; locally frequent in oak woods, but absent from the chalk ridge.

A conspicuous feature of our woodland scenery, and one of the species indicative of ancient woodland.

NVC: W 8,10,12,14

Silwood Park: a single clump came up in a canopy gap, probably from long-lived seed, in the woodland between the Kissing Gate and The Farm, created when a giant beech tree came down in the great storm of 16 October 1987; there were 8 flowering stems in May 1998. Common and thoroughly naturalised where it was planted in the woodland garden behind Southwood Hall in 1983; still there,

but only 5 plants in May 2003. They self-sowed across the road into the Buckhurst Road woodland in 1994 and are now frequent on both sides of the track. Introduced with woodland plants from Kent in 1979 and established in the Walled Garden and on the Pot Stand at The Greenhouses (still there on 29 July 2007). In shade by the Kissing Gate (on the corner of the ancient woodland fragment of Nash's Copse); this may be its only native location within Silwood.

Ascot: very rare as a native plant; in woods at Sunninghill, Ascot Place and Locks Ride. On the wooded edge of the playing fields below St George's School. By the lake in Blacknest Park in 2001.

East Berks: common in woods like Bowsey Hill and Ashley Hill in [77], [87] and [88] but rare and scattered elsewhere, including Maiden Erleigh, Alder Moor, Ashenbury Park, Dinton Pastures, Winnersh, Park Place, Remenham, Billingbear, Temple, Culham Court, Rosehill Wood, Blackwater, Heath Lake, Lock's House, Pockets Copse, Beenham Heath, Foliejon Park, New Lodge, frequent on Holliday Plain, High Standing Hill, Forrest Park, Windsor Great Park, Old Windsor. Very common in the woods adjacent to The Cut below the embankment leading to the M4 crossing [855751], and in Shrubbery Copse, SW of Ockwell Manors [869782]. 9% (1km²). Atlas 2000: all squares

West Berks: frequent throughout the Kennet and Pang valleys, but absent from the northern clays (north of 80 and south of 95) and rare in the Thames valley. Locally dominant on the south-facing bank of the M4 Motorway at the summit of the hill between Reading and Newbury [550739] 1996-2013. Dominant over much of the woodland floor after clear felling of the oaks at Round Hill Wood [518722] south-east of Hermitage in February 2002. Locally frequent in parts of Bagley Wood [5102] in 2004. Atlas 2000: all except [28], [29], [38], [68], [69]

Euphorbia amygdaloides subsp. **robbiae** (Turrill) Stace
Euphorbia robbiae Turrill
Euphorbia amygdaloides L. var. robbiae (Turrill) R.-Smith

• hp 3

A very common, bronze-red foliated garden plant, often found as an outcast and self-sown on hedge-banks and waste ground in towns and villages throughout.

Ascot: a rare garden escape on waste ground in Sunninghill Village. In shade at South Ascot churchyard (1979-2004). Self sown at the edge of the gravel drive at 88 Upper Village Road Sunninghill on 20 September 2009 and abundant there by April 2013.

East Berks: scattered throughout, but always close to gardens. 6% (1km²). Atlas 2000: all except [78]

West Berks: at Jam Mound [4802] in 1961. Ashbury in 2001. An escape from the lock-keeper's garden at Buscot Weir [2397] in 2001. On waste ground near the canal in central Newbury [4767] in 2002 and Kingston Bagpuize [4098] in 2003 and in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [28], [36], [38], [46], [48], [56], [57], [58], [66], [68]

Euphorbia polychroma Kerner. *Yellow Spurge*
Euphorbia epithymoides

• hp 3

A very distinctive, early flowering, chrome yellow spurge used at the front of herbaceous borders.

Silwood Park: appeared spontaneously in the shrubbery of the Immunology Building that was planted in 1982 to screen the ugly old war time building from the spanking new Southwood Halls, first flowering in April 1983. Not seen since 1988. Presumably imported as a horticultural contaminant in the rootball of potted shrubs.

Euphorbia characias L. *Mediterranean Spurge*

• hp 3 ↑

Common garden plants grown for their statuesque presence, self-sowing freely and naturalising on bare waste ground, on walls and cracks in pavements.

Euphorbia characias subsp. **characias**

This is the form with 'black eyes' (the glands on the cyathia are dark reddish brown with short points).

Euphorbia characias subsp. **wulfenii** (Hoppe ex W.D.J. Koch) Radcl.-Sm.

Euphorbia wulfenii Hoppe ex Koch

This is the form without 'black eyes' (the glands on the cyathia are yellowish with long points), and is the commoner garden escape in Berkshire.

Silwood Park: planted in the landscaping scheme for the Science Park in 1988 in the dry corner next to East Lodge and soon seeding itself. Now scattered as self-sown plants over the whole of the Science Park.

Ascot: an uncommon escape in Sunninghill Village. Self-sown on pavements in Woodby Drive Sunningdale in 2003.

East Berks: self-sown at The Mount, Earley, Oxford Road in Reading, Bulmershe, Woodley, Sonning, Wargrave, Twyford, Cockpole Green, Hewlett Packard at Pine Wood, College Town, Wildridings, Stanlake Park, Littlewick Green, Touchen End, Scotlands, Lee Lane, Hall Place, Winter Hill, Maidenhead, Foliejon Park, Clewer Green, Old Windsor and Clewer. 5% (1km²). Atlas 2000: all squares

West Berks: villages throughout. Atlas 2000: [29], [38], [49], [59], [66]

Euphorbia griffithii Hook. f.

• hp 3

A frequent bedding perennial with invasive rhizomes that are often thrown out onto waste ground. The two most commonly cultivated forms are 'Fireglow' (inflorescence bright red) and 'Dixter' (inflorescence orange and leaves dark and luxuriant).

Silwood Park: long persistent in shrubs by The Greenhouses.

Ascot: a very popular garden plant in Sunningdale, presumably shared from gardener to gardener, but uncommon as an escape; Charters Road.

East Berks: Woodley Green. Atlas 2000: [77], [96]

West Berks: churchyard at East Garston [3368] in 1986. Atlas 2000: no records.

Euphorbia species cultivated in the CABI greenhouses during screening of biological control agents: *E. amygdaloides*, *E. cyparissias*, *E. esula*, *E. lucida*, *E. pannonica*, *E. x pseudovirgata*, *E. seguieriana*.

¶ **Euphorbia** *E. amygdaloides* ‘Purpurea’, *E. amygdaloides* var. *robbiae*, *E. characias* subsp. *characias*, *E. characias* subsp. *wulfenii*, *E. characias* subsp. *wulfenii* ‘Lambrook Gold’, *E. corallioides*, *E. cornigera*, *E. dulcis* ‘Chameleon’, *E. griffithii* ‘Dixter’, *E. griffithii* ‘Fireglow’, *E. x martinii*, *E. mellifera*, *E. myrsinites*, *E. palustris*, *E. polychroma* ‘Candy’, *E. schillingii*, *E. seguieriana* subsp. *niciana*, *E. sikkimensis*

RHAMNACEAE

Rhamnus cathartica L. *Buckthorn*

m 5 ↓

Wood margins and hedges on calcareous soils; occasional but absent from the Bagshot Sands. The serrate leaves and winter buds with scales distinguish this from *Frangula*.

NVC: W 5,8,21

Ascot: no records. Not even planted in Silwood Park.

East Berks: occasional in the Thames valley but rare or absent elsewhere. Wargrave, Swallowfield, Park Place, Rose Hill, Aston, Remenham, Reading, Hurley, Maidenhead, Bisham, Aston, Stubbings Heath, White Waltham, Waltham St Lawrence, Bearwood, Loddon-side, Arborfield, Sonning, Finchampstead, Frogmore. This is a good example of the kind of species where the 10km square data give a totally misleading indication of distribution and abundance. 1% (1km²). Atlas 2000: all squares

West Berks: frequent, especially in the north-west. Ashbury, Odstone Hill and Shrivenham [28], Coleshill, Lechlade and Faringdon [29], Hungerford, Inkpen and Kintbury [36], Lambourn, Chilton Foliat and Shefford [37], Wantage and Uffington [38], some ancient trees up to 12m high survive at Charney Bassett, Longworth, Pusey and Buckland [39], Langley and Beedon [47], Catmore, Lockinge and West Ilsley [48], Garford, Barrow Farm Fen and Marcham [49], Cumnor, Wytham and Appleton [40], Yattendon, Bucklebury, Compton and Hampstead Norreys [57], Moulsoford and Streatley [58], Radley, Wittenham and Didcot [59], Hinksey, Bagley and Kennington [50], Pangbourne, Bradfield, Basildon, Tilehurst, Sulham, Englefield and Theale [67], Wallingford [68]. Atlas 2000: all squares

¶ **Rhamnus** *R. alaternus* ‘Argenteovariegata’

Frangula alnus Mill. *Alder Buckthorn*

m 5

Rhamnus frangula L.

On wet heathland and on peaty soil in damp copses, local and rather rare, restricted to acid soils. Leaves entire and winter buds without scales distinguish this from *Rhamnus*.

NVC: W 1,5,16

Silwood Park: one of our few rare native tree species. Ray Davies attempted to increase the population in Merten’s Acres by seed between 1978 and 1980 but without success. One of the last surviving native bushes was cut back to the ground (in error) on 18 June 1980 while cutting a ride through the thicket. The stump was clearly dead by 1981. A good young tree was discovered on 4 August 1980 during thinning below Paddy’s Oak, behind the Refectory; the tree was felled (again in error) some time during 1981. It is still found in Nash’s Copse under hazel and rhododendrons by the stream, but this is in danger of being overgrown. The individuals planted behind Southwood Halls in 1989 have done extremely well and were locally dominant by 1998.

Ascot: locally common on the edge of thickets by acid water in Buttersteep, Englemere Pond, Ascot Gate, and Sunningwell Bog. Excellent pollarded plants on Ascot Heath Racecourse, in the woody scrub between the fairways and in hedges near the cricket pavilion; locally abundant in the wet heath south of the Cricket Pavilion [92176 69439].

East Berks: this species is practically confined to the sandy peaty tracts of the Bagshot Sands in the south. Coleman's Moor, below Loddon Bridge, Earley, Cox's Wood, Finchampstead Ridges, Jouldern's Ford, Wellington, Sandhurst, Broadmoor. Damp woods on acid soils, in small quantity. Sindlesham Meads, Heath Lake, Wokingham, Pond Wood, Bracknell, Arborfield, Finchampstead Leas. Recently at Hartley Court, Longmoor Bog, Heath Lake, Wellington College, Edgebarrow, Pine Hill, Broadmoor Hospital, Wishmoor Bottom, Ascot Heath. Still on the eastern edge of Upper Lake at the Royal Military Academy Sandhurst (v.c.17). The most abundant shrub on the margins of Heath Lake [829652] in September 2005. 2% (1km²). Atlas 2000: [76], [86], [96]

West Berks: Extremely local along the R. Kennet and on the commons of [56] and [66] (south of 75). Inkpen Common [36], Greenham Common (RDG) [46], Bishops Green, Wasing Wood, Turners Green and Bucklebury Common [56], Yattendon and Fence Wood [57], Burnt Common and Padworth Gully [66]. Atlas 2000: [29], [36], [46], [49], [56], [57], [66]

¶ **Ceanothus** *C.* 'A.T. Johnson', *C. arboreus* 'Trewithen Blue', *C.* 'Autumnal Blue', *C.* 'Blue Mound', *C.* 'Burkwoodii', *C.* 'Cascade', *C.* 'Concha', *C.* 'Delight', *C. x delileanus* 'Gloire de Versailles', *C. impressus*, *C.* 'Italian Skies', *C. x pallidus* 'Perle Rose', *C.* 'Puget Blue', *C. thyrsiflorus* var. *repens*, *C. x veitchianus*

VITACEAE

Vitis vinifera L. *Grape-vine*

• m 5

Vineyards come and go in Berkshire with the vagaries of wine prices. The Ascot vineyard closed in the early 1990s, but there are still commercial vineyards at Littlewick Green [8479] and at Stanlake Manor [8075].

Silwood Park: growing through a hedge of *Thuja occidentalis* 'Rheingold' at Silwood Lodge (1980-2008, when the hedge was cut down and the vine grubbed up). Self-sown in shrubbery on the Science Park in 1994. Rampant in an old hedge at Heronsbrook in 2001 prior to the redevelopment work.

Ascot: very rare garden relic in Ascot Place in 1999. Self sown on ruined walls at Frognall [940681] in September 2005.

East Berks: not in Druce. Railway bank at Reading Station (1965), railway bank at Reading abattoir (1968), Smallmead tip (1971). Recently at Ryeish Green, Whitely Wood, Hurley churchyard, Linderhill Wood, Pitlands Farm, Foliejon Park, Cookham Dean. 1% (1km²). Atlas 2000: [76], [87], [88], [96], [97]

West Berks: very rare in hedgerows. Self-sown in paving in Faringdon [2894] in September 2004. On the fence of the signal box by the railway at Colthrop [5366] in October 2004. Atlas 2000: [68]

Vitis coignetiae Pulliat ex Planch.

• m 5

A big-leaved climber, grown for its spectacular autumn colour.

Silwood Park: the massive plant that grew right through the canopy of the Cork Oak at East Lodge was cut down in 2001 by unsupervised contract gardeners who took it to be a trifid. Still rampant in the central shrub bed between Phase I and CPB in 2002.

East Berks: rare on waste ground in Earley [7571], Bulmershe [7573] and Sonning [7575] in 2002.

West Berks: scrambling through hedges at Kingston Bagpuize [4098] in 2003.

¶ **Vitis** *V. 'Brant'*, *V. coignetiae*, *V. vinifera* 'Purpurea'

Parthenocissus quinquefolia (L.) Planch. *Virginia-creeper* ● m 5 ↑
Hedera quinquefolia L.

Railway embankments, waste ground, hedgerows in towns, ruins, etc. Very conspicuous in autumn when it turns long stretches of rail-side fencing into a fiery red. A seed bank species, springing up following soil disturbance many years after the parents disappeared.

Silwood Park: self-sown behind the Header House. Mass regeneration from the seed bank in September 2000, on bare ground below the Leyland Cypresses after the trees were felled in June 2000; still common in 2002. Also naturally regenerated at Silwood Farm, Silwood Lodge and South Lodge. Dominant on the wall in the corner of the Walled Garden, whence it grows up into the canopies of adjacent Cypresses, trifid-like and massive.

Ascot: on waste ground at Ascot Station in 2000. Festooning the canopy of the big oak tree on Brockenhurst Road at the eastern entrance to South Ascot in 2003. Self sown on ruined walls at Frognall [940681] in September 2005.

East Berks: not in Druce. Swallowfield, Reading Station, Whitley, Loddon Mouth, Wokingham, Windsor Station, Whistley Park, Woodley tip. Now occasional throughout the area; locally abundant on the ground in shade by the R. Thames at Windsor Racecourse, on the river bank at Cookham and at Maidenhead Court. Climbing into the top of a tall sycamore tree by the Thames in Maidenhead [9081] in July 2002. 8% (1km²). Atlas 2000: all squares

West Berks: in the hedgerow in the northern verge of the A4 at Stockcross [46] and swamping Hawthorns at Radley Station [5298], very conspicuous when the leaves go flame red in September. On waste ground near the canal in central Newbury [46], Wantage Station [49], Pangbourne and Tilehurst Stations [67]. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003, where it was growing on flat ground. In the roadside hedge at Brimpton [557647] on 29 September 2009. Atlas 2000: [28], [29], [36], [46], [47], [48], [40], [58], [59], [68]

¶ **Parthenocissus** *P. henryana*, *P. himalayana* var. *rubrifolia*, *P. quinquefolia*, *P. tricuspidata*, *P. tricuspidata* 'Lowii', *P. tricuspidata* 'Veitchii'

LINACEAE

Linum bienne Mill. *Pale Flax* ● th 5 †

West Berks: on the aerodrome at Crookham Common [56] in 1951 but no specimen.

Linum usitatissimum L. *Flax*

• th 5

Waste places, rubbish heaps, on ballast by the railway, near flour mills “but without the slightest pretension to be considered a native plant” (Druce). Currently (at least until its massive subsidy is stopped) a very common arable crop, painting the landscape in great patches of powder blue in summer. Plants from spilled seed on most lane sides in all the arable regions of the county.

Silwood Park: very rare casual; one plant on 5 August 1989 on imported topsoil on Garden Wood Bank.

Ascot: no records.

East Berks: farm near Crowthorne, waste ground at Sandford Mill, plentiful in a field of oats near Culham, Twyford. Farm yards and waste places. An occasional casual; Reading tip, Finchampstead, Wokingham Station, Woodley tip [777745] in 1969. Highgrove Copse, Thatcher’s Ford, Sandpit Lane, Great Copse, Warren Lodge, Emmbrook, Wokingham, Drift Road, Dowlesgreen, Edgebarrow Hill, The Holt, Old Malt House, Pitlands Farm, Binfield Lodge, Howlane Bridge, Old Beams, Ashley Hill, Burchett’s Green, Temple Park, Stubbings, Hillgrove Wood, Halfway House, Maidenhead, Sheephouse Farm, 5% (1km²). Absent or rare to the east of 90. Atlas 2000: all except [78], [97], [98]

West Berks: Didcot tip [59] in 1969 and Aldermaston [56] in 1976. Local and scattered. Atlas 2000: [29], [38], [39], [46], [47], [49], [40], [56], [57], [59]

Linum perenne L. *Perennial Flax*

• hp 6 †

NVC: CG 2,3

East Berks: in the old nursery of Sutton Seeds in Reading [733737] in 1979. Gone now, following development of the site as a business park and the consequent tidying up.

West Berks: local and rare at the Old Parsonage, Buscot [224982] in 1987. Probably planted.

Linum catharticum L. *Fairy Flax*

th 6

Dry pastures, heaths, chalk downs, and waysides in short grass, ascending to the top of Walbury Camp at 297m. Occasional, but much more local, on acid soils.

NVC: CG 2-5; M 13,24; MG 1

Silwood Park: very local and rare in Ashurst Warren, on sand with other chalk grassland plants like *Blackstonia* and *Carlina*; 28 July 2000; still there in 2001 but the site destroyed in spring 2002 during renovation of the sleeper beds. Origin unknown.

Ascot: very local and rare. In a few places on the western edge of the damp grassland in the northern triangle on Ascot Race Course.

East Berks: occasional on the chalk of the northern loop but absent or rare elsewhere. pre-1896 records from Crowthorne, Sandford Mill, Culham, Twyford and Maidenhead. Recent records from Maidenhead Thicket [8580] in 1986. Temple Coombe, Road Research Laboratory, Wishmoor Cross, Coral Reef Roundabout, Chawridge Bank, Temple Golf Course, Maidenhead Cemetery, Winter Hill, Cock Marsh. Locally frequent on gravelly tracks through heathland near Lower Star Post, Wishmoor Bottom and on Poppy Hills in 2002-05. 2% (1km²). Atlas 2000: all squares

West Berks: widespread and often abundant on the chalk from Ashbury [28] to Streatley [59] and above Inkpen [36], but rare in the Thames Valley and absent or rare in other parts of the Kennet valley. Lechlade [29], Newbury and Benham Park [46], Wytham and Wootton [40], Didcot [59], Grandpont [50], Tilehurst, Southcote, Calcot and Pangbourne [67]. Common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all except [68], [69]

¶ **Linum** *L. arboreum*, *L. flavum* ‘Compactum’, *L.* ‘Gemmell’s Hybrid’, *L. monogynum*, *L. narbonense*, *L. narbonense* ‘Heavenly Blue’, *L. perenne*, *L. perenne album*, *L. perenne* ‘Blau Saphir’

Radiola linoides Roth *Allseed* th 7 ↓
Millegrana radiola Mihi

A local speciality of bare sandy or peaty depressions on heaths where water has stood during winter. Tracks, ditches and edges of ponds. Now greatly reduced in abundance. Absent from the chalk, but it used to be locally common on the heathlands of the south.

Ascot: first recorded from Sunninghill by Sir Joseph Banks in 1773. Not seen since.

East Berks: Druce knew it from Heath Pool, Ambarrow, Riseley, Finchampstead, Long Moor, Bagshot Heath, Sandhurst, Broadmoor, Owls Moor. By Bowen’s time it was rare and decreasing, close to extinction. The most recent records are from Rapley Lakes [8964] in 1948 and Bracknell [8866] in 1952, east of White Waltham [8575] in 1959, and Wellington College [8060] in 1963. Atlas 2000: no records, but suitable habitat is still to be found about Rapley Lakes, and might repay close scrutiny.

West Berks: restricted to the Kennet valley. Probably extinct at many of Druce’s sites, currently restricted to heaths in [56] and [66]. Inkpen Common [36], Wickham [37], Newbury and Greenham Common [46] and [56], Snelmore Common [47] in 1974 and 2003, Mortimer Common, Aldermaston Heath, Wokefield Common [6566] in 1985, Ufton Nervet and Padworth Common [66], Burghfield Heath [67]. Atlas 2000: [46], [47], [56], [66]

POLYGALACEAE

Polygala vulgaris *L. Common Milkwort* chh 5
Polygala vulgaris subsp. **vulgaris**

Short turf in chalk grassland, calcareous pastures, the drier parts of fens and water meadows, hedge-banks, grassy chalky slopes; locally common in a variety of colours from deep blue through pale blue to white and deep pink.
NVC: CG 2-5; M 13,24

East Berks: restricted to the chalk at Marlow, Bisham, Hurley, Cookham, Remenham, and near Park Place. Sonning, Alder Moors, Crazies Hill, Southbury Farm. <1% (1km²). Atlas 2000: [78], [88]

West Berks: a curious distribution, rare or absent in both the south-east and north-west corners of the area, but common in chalk grassland from Ashdown [28] to Streatley [58]. Buscot Park [29], Woodhay and Inkpen [36], Uffington [38], Bell Hill and Newbury [46], Ashridge Wood [47], Frilford, Cothill and Marcham [49], Appleton [40], Beenham [56], Ashampstead, Hampstead Norreys and Compton [57], Upton and Streatley [58], Mortimer [66], Tilehurst and Basildon [67]. Atlas 2000: [28], [29], [36], [37], [38], [48], [49], [40], [57], [58], [67]

Dry pastures, heaths, downs, short grassland and woodland rides on acid soils (as *P. serpyllacea*); common and widely distributed. The plant is an abundant feature in our heath vegetation, where the flowers are often white; but forms with dark blue, pink, and pale blue flowers are found. The plant is much less frequent on clay soils, and on the chalk downs it is replaced by *P. calcarea* and *P. vulgaris*. Apart from the almost complete habitat separation, it is told from *P. vulgaris* by the fact that the very lowest leaves are opposite (not all alternate); you need to look closely at the lowest leaf scars, because the opposite leaves may have fallen off with age, leaving only alternate ones behind.
NVC: H 3; M 16,21

Silwood Park: very local and rare. Long persistent on the bank of the croquet lawn facing the Lily Pond. A few of the plants are white flowered. Known here in 1959. Also with *Nardus* on the flat ground on the edge of the croquet lawn. Rather sporadic (e.g. very good numbers in 1986, no flowers at all 1990-93, but back again in 1994). Not seen since 1996; it looks as if the bryophytes have grown too deep for it to survive.

Ascot: common on heathy rides in the Crown Estates lands like Buttersteep and Swinley. On the heathy parts of Ascot Heath golf course. The white flowered form is not uncommon.

East Berks: West Emmbrook, Crowthorne, The Orangery, Tower Hill, Swinley, Kingsride, heathy rides in Bracknell Forest, Windsor Great Park. White-flowered plants are common amongst closely-mown heather at Bearwood churchyard. 1% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: restricted to the Kennet valley (south of 75), and absent entirely from the chalk and clay of the interior and north, save for a single outlying station near the Thames in Bagley Wood [50]. Inkpen Common [36], Snelsmore Common [47], Greenham Common [56], etc. Atlas 2000: [36], [46], [47], [56], [57], [50], [66]

Polygala calcarea F.W. Schultz *Chalk Milkwort*

Polygala amara sensu D. Don, non L.

Chalk downs. Druce waxed lyrical, calling it “one of the typical flowers of Berkshire. The grassy chalk downs in spring time are a beautiful sight from the abundance of this plant in the round patches which are so characteristic of it. The more frequent tint of the flowers is a *lapis lazuli* blue, which affords a brilliant contrast to the yellow flowers of the *Helianthemum* and the darker orange flowers of the *Hippocrepis*”. Told from our other milkworts by the possession of a basal rosette of bigger leaves, and by the nature of the veins in the inner sepals (they are anastomosing (i.e. with lots of joining cross-veins) in *P. vulgaris* but only sparsely branched in *P. calcarea*). A very distinctive feature of *P. calcarea* is that the comb-like stamens project beyond the inner sepals (they are enclosed in *P. vulgaris*).

East Berks: locally abundant in short chalk grassland at Harehatch near Wargrave in Druce’s time. Still locally frequent in chalk grassland remnants at Cock Marsh, Remenham and Hurley chalk pit. <1% (1km²). Atlas 2000: [78], [88]

West Berks: it occurs in a broad band across the width of the region all the way from Ashdown Park [28] to Pangbourne [67], picking out the chalk (north of 75 and south of 90). An outlying station is on the chalk at Walbury Camp, Inkpen [36]. Odstone Lane [28], Coppington Down and Henley Farm [37], Seven Barrows, Crog Hill, Hackpen Hill, Furzewick Down, Pigtrough Bottom, Hell Bottom,

Segsbury Camp and Whitehorse Hill [38], Chaddleworth [47], Farnborough, Ilsley Bottom, Lockinge and Chilton [48], Grim's Dyke between Ardington Down and Blewbury Down [57], Lowbury Hill, The Fair Mile, Churn Hill, Aston Upthorpe Downs, Blewburton Hill, Moulsoford Downs, Oven Bottom and Streatley [58]. Atlas 2000: [28], [36], [37], [38], [48], [57], [58], [67]

¶ **Polygala** *P. chamaebuxus*, *P. chamaebuxus* var. *grandiflora*, *P. x dalmaisiana*, *P. myrtifolia*

STAPHYLEACEAE

Staphylea pinnata L. *Bladdernut* ● m 5

East Berks: Whiteknights Park [7371] 1974-86.

West Berks: Childrey rectory [38] in 1930 and Stanford Dingley [57] in 1980.

¶ **Staphylea** *S. colchica*, *S. holocarpa* 'Rosea', *S. pinnata*

SAPINDACEAE

¶ **Koelreuteria** *K. paniculata*

¶ **Xanthoceras** *X. sorbifolium*

HIPPOCASTANACEAE

Aesculus hippocastanum L. *Horse-chestnut* ● mm 5

Plantations, parks and hedges. Seedlings are found in hedgerows, on railway banks and at woodland edges, increasing in frequency as the popularity of conker collecting diminishes. Branches and trunks are sometimes infested with dense colonies of the scale insect *Pulvinaria regalis* which produces tufts of white woolly wax. The alien leaf miner *Cameraria ohridella* has become very abundant in continental Europe in recent years and was well established on Wimbledon Common in south London in 2002 (having probably arrived in 2000 or 2001), but it did not reach Silwood Park until 2003. A county-wide survey of *Cameraria* damage was carried out on 23 September 2006 (see below). NVC: W 12

Silwood Park: commonly planted, with seedlings found occasionally in a wide range of habitats, but seldom far from the parents. Four large adult trees died suddenly in 2003: one at The Greenhouses, one at the lakeside by The Farm and two on the southern edge of the Cricket Wicket. They probably succumbed to Bleeding Canker, which may be one or both of *Phytophthora cactorum* and *P. citricola*, but the killing agent may not be *Phytophthora* at all. The first tree in Silwood to be defoliated by *Cameraria ohridella* was the individual on the edge of Ashurst Four Acre Field opposite the Marist Convent in September 2003 (75% loss of green leaf area). There was complete defoliation (c.100% loss of green leaf area) of all our trees by *Cameraria ohridella* in September 2006. but the Silwood tree on London Road closest to Sunninghill Roundabout had 75% defoliation on 13 September 2005. Defoliation was much less in Silwood in September 2007 (perhaps 40-50%) after a cool wet summer (fewer generations, possibly), but still at 100% green leaf area loss in Windsor and elsewhere. In the cold spring of 2008 the trees were completely clear of leaf miners until very late: by the end of June 2008 the mines typically covered less than 50% of leaf area, but damaged increased rapidly through July.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	7	25

Ascot: by September 2005 *Cameraria* was destroying about 20% of the leaf area, most of the trees on the Surrey side of Virginia Water had *c.*75% leaf area loss in 2005. Most trees throughout the district were completely brown from top to bottom with *Cameraria ohridella* mines by September 2006. This was the first year of uniformly high defoliation since the invasion in 2003. Only a few shaded leaves close to the trunk retained any chlorophyll, but despite the leaf loss there was a large fruit-set on most trees.

East Berks: not in Druce, but now widespread and often abundantly self-sown especially by railways. The leafminer was abundant in Bracknell and Windsor in September 2005 and common throughout East Berks by September 2006. 54% (1km²). Atlas 2000: all squares

West Berks: frequent throughout. Very commonly self-sown by the railway to the north-west of Cholsey [5787] in 2004. The leafminer was occasional in Hungerford in September 2005. A comprehensive survey of *Cameraria* damage on 23 September 2006 showed high levels of defoliation (50-100%) with the following distribution: Ridgeway [2784], Asbury, Bourton, Shrivenham, Watchfield [28], the famous roadside avenue of horse chestnuts to the east of Buscot was completely defoliated, but many of the biggest trees within Buscot Park were unaffected, Eaton Hastings, Faringdon, Great Coxwell [29], Hungerford, Foxley Covert, Kintbury, Elcot [36], Woodland St Mary, Poughley, Lambourn [37], Buckland, Pusey [39], Chieveley [47], Harwell, East Ilsley [48], Besselsleigh, Tubney, Milton [49], Cumnor, Wooton [40], in the woods by the M4 Frilsham and Hermitage [57], Abingdon, Radley [59], by the M4 west of Reading [67]. Atlas 2000: all squares

Aesculus x carnea J. Zeyh. = **A. hippocastanum** x **A. pavia** *Red Horse-chestnut* • mm 5

Plantations, parks and shelter-belts, in small quantity. Occasionally producing seedlings but most are planted, typically grafted onto rootstocks of *A. hippocastanum*. There were a few mines of *Cameraria ohridella* on a few leaves in September 2006, at a time when *A. hippocastanum* was completely defoliated by the leafminer.

East Berks: not in Druce. Reading, Hurley, Winkfield, Bray, Stanford End, Keep Hatch Park [8269]. <1% (1km²). Atlas 2000: [86], [87], [97]

West Berks: Buscot [29], Prosperous [36], Shefford [37], Fawley and Letcombe Regis [38], Ardington [48], Marcham [49], Moor Copse [67], Wallingford [68]. Atlas 2000: [40]

¶ **Aesculus** *A. x carnea* 'Briotii', *A. flava*, *A. glabra*, *A. hippocastanum* 'Baumannii', *A. indica*, *A. x neglecta* 'Erythroblastos', *A. parviflora*, *A. pavia*, *A. turbinata*

ACERACEAE

Acer platanoides L. *Norway Maple* • mm 4 ↑

Plantations, gardens and hedgerows, often reproducing by seed and, in many places, the most numerous alien tree seedling. The leaves are typically unblemished by herbivores, unlike the other two common maples, save for occasional mines of *Ectoedemia sericopeza*. The variegated cultivar

'Drummondii' is much planted and frequently back-mutates to the all-green leaf type, as with the line of trees on Sunninghill Road, just south of Sunninghill Roundabout.

Silwood Park: commonly planted in several cultivars and self-seeding freely. Natural regeneration along the fence of the Royal Berkshire Hotel on Buckhurst Road. Frequent seedlings in shade next to the Church at Ashurst (although outnumbered here by sycamore seedlings) and in the wood opposite the Marist Convent. Also at Sunninghill Crossroads, Ashurst Warren, Cheapside, Nash's Copse, Nash's Field, Silwood Lodge, Observatory Ridge, Science Park.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	10

East Berks: not in Druce. Commonly self-sown on the western edge of Ascot Racecourse. Bulmarsh, Wargrave, Bisham, New Lodge, Boulter's Lock, Frogmore, Englemere Pond, Whiteknights Park, Maidenhead Thicket, Coppid Beech. Often the commonest self-seeding alien tree, out-numbering *Quercus cerris*, *Acer pseudoplatanus* and *Castanea sativa*. 33% (1km²). Atlas 2000: all squares.

West Berks: Coleshill, Eaton Hastings and Fernham [29], Leverton [37], Newbury [46], Curridge Common [47], East Hendred and Lockinge [48], Wytham, Tubney Wood and Youlbury [40], Crookham Common [56], Stanford Dingley and Fence Wood [57], Thrupp [59], Bagley Wood [50], Englefield and Basildon Park [67], Wallingford [68]. Atlas 2000: all except [36]

Acer campestre L. *Field Maple*

mm 5

Oak woods and hedges. "A very frequent plant in our hedges, especially on the chalk and dry gravelly soils; adds much to the beauty of the country lanes by its autumnal colouring" (Druce). Widespread on chalk and clay, but rare on the very acid soils. Large, old trees are occasionally found in ancient woodland. The leaves are often abundantly peppered by pin galls of the mite *Eriophyes macrorhynchus* and may bear the serpentine mines of *Stigmella aceris*. This is one of the few exceptions to the rule that native plant species support more species of herbivore than do their alien counterparts (the alien sycamore supports more herbivore species than the native Field Maple).

NVC: W 8,10,12,21

Silwood Park: not native, but planted and growing well in the experimental hedgerow on the slope opposite the Ashurst Path. The hedge was made from material collected from the Crown Estate woodlands that were being destroyed for the development of Martins Heron. Planted on 20 May 1980.

Ascot: there are plenty of good native sites close to Silwood, most notably in Windsor Great Park where huge veteran trees can be found. Also at Fernbank Road, South Ascot, Ascot Place and Sunninghill. The plant becomes abundant abruptly in hedgerows and ancient woodlands as one crosses onto the clay soils at New Lodge, Cranbourne and Winkfield.

East Berks: widespread and often the commonest hedgerow species, but rare (and usually planted) on the Bagshot sands in the extreme south-east (east of 85 and south of 70). On the banks of the R. Thames at Remenham and The Odney Club in Cookham. Druce noted a form with glabrous samaras at Wargrave. 61% (1km²). Atlas 2000: all squares

West Berks: sometimes the principal component of hedgerows. The ash woodlands at RAF Welford [4175] have many fine old trees. Rare in acid communities like Fence Wood [5171]. Atlas 2000: all squares

Acer pseudoplatanus L. *Sycamore*

• mm 4

Woods, hedges, railway embankments and waste ground common. “The sycamore occurs so frequently as a planted tree throughout the county; it readily propagates itself by seeds and is now thoroughly established and looks quite wild as at Pinkneys Heath” (Druce). Introduced in the fifteenth century and first recorded from the wild in 1632.

The most ecologically influential of the naturalised alien trees, capable of forming virtual monocultures and excluding native vegetation (see also *Castanea sativa* and *Quercus cerris*). The leaves are often blotched with big black spots of the Tar Spot fungus *Rhytisma acerinum*, which is said to be an indicator of relatively clean air (it is less common in polluted areas). In addition to the red pin galls of the mite *Eriophyes macrorhynchus* the leaves often feature the pale coloured pouch galls of another mite *E. megalonyx*. Aphids *Drepanosiphum platanoides* are abundant on the undersides of the leaves in early and late summer, and their feeding has a significant negative effect on wood increment; the insects space themselves out on the underleaf by constantly kicking out at one another. Leaf mines are conspicuous by their absence from sycamore. Seedlings of sycamore are unpalatable and hence avoided by rabbits; in certain years the seedlings can form solid carpets on the woodland floor, with thousands of plants per square metre.

NVC: OV 27,42; W 6,8,10,12-16

Silwood Park: one of our commonest plants, with seedlings springing up in sun and shade in all the terrestrial habitats. Only develops to maturity in full sun, or in light gaps in woodlands. Of the trees, only *Quercus robur* is found more often, and sycamore is the fourteenth most frequently recorded species in small quadrats in Silwood.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
15	22	35	49	94

East Berks: forming tall woodland on the banks of the R. Thames at Windsor Racecourse, with *Hedera* and *Glechoma* as the ground flora. Only *Quercus robur* (96%), *Crataegus monogyna* (93%), *Sambucus nigra* (86%) and *Fraxinus excelsior* (84%) are more frequent. 83% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Acer saccharinum L. *Silver Maple*

• mm 4

A fast-growing and highly ornamental tree with us, especially when the wind turns over the leaves to show their silvery undersides. It is a rare host of Mistletoe, as at Windsor.

Silwood Park: commonly planted, especially on the Science Park, but not self-sowing.

Ascot: planted on the western edge of Ascot Racecourse in wild-looking vegetation. North Ascot [9169] in 1999.

East Berks: in a hedge at Spencer’s Wood [7065] in 1965. Rowes Farm [7364] in 1999. Harvest Hill [8879] in 2000. Between Bracknell Town Football Club and the cricket ground. In the traffic island at Windsor by the Long Walk (1988-2004). <1% (1km²).

West Berks: also in Tubney Wood [40] and Theale gravel pit [66]. On waste ground in central Abingdon [4997] in 2002.

Acer negundo L. *Ashleaf Maple*
Negundo aceroides Moench

• mm 4

A seriously invasive alien tree in Central Europe, we should look out for signs of naturalisation. Unusually for an *Acer*, it has pinnate leaves (it is known as *Box Elder* in the United States where it is indigenous). The tree is dioecious, so both sexes need to be reasonably close together for seed set to occur. Seedlings are found near planted adults.

East Berks: in a hedge at Twyford [7876] from 1969-86. In hedgerows and on railway banks near Loddon Mouth [7778] in 2002. By the R. Thames in Maidenhead [9081] in 2002. 1% (1km²). Atlas 2000: [77], [87], [88]

West Berks: in a plantation at Basildon [67] from 1966-86, and at Benham Park [46] in 1986. Seedlings on waste ground near the canal in central Newbury [4767] in 2002.

Acer palmatum Thunb. *Japanese Maple*

• mm 4

Silwood Park: seedlings are produced profusely beneath parent trees when these are growing in gravel to eliminate competition from grasses, but never when the parent trees grow in grass.

East Berks: seedlings at Virginia Water [9669] in 1986. Also recorded from Bearwood [7869] in 1983. <1% (1km²).

West Berks: Buckland Park Lake [39] in 1970.

There were 178 cultivated taxa of *Acer* growing in Silwood Park in October 2001, but none of them other than *A. platanoides* and *A. palmatum* produce seedlings. *A. cappadocicum*, *A. saccharinum*, *A. mono*, and *A. negundo* all regenerate from planted trees in woods and parks in London (Kent, 2000), and there is a field record of *A. cappadocicum* from East Hanney [4290] in 1992.

Of the autumn colour maples in Silwood Park, *A. rubrum* 'October Glory' is much the most reliable and spectacularly red in most years. In the very late autumn of 2006 it did not begin to colour up until 10 November (about 4 weeks later than normal: in 2006 there was no frost at all until November 2, following the warmest May, June, July, August and September months on record, and all this following on of the latest springs on record, when the oak and the ash leafed out at the same time). All the leaves were fallen by 25 November 2006, but the colour was extraordinarily intense and uniform red. Apart from the two frosts on 1 and 2 November 2006, the rest of the month was frost-free, with air temperatures of 14 °C on the last day of the month (one of the warmest and wettest on record).

The autumn colour was particularly good in 2007 after a very wet summer, but the leaves of *A. rubrum* 'October Glory' fell on a single night on 5 November 2007 while *L. styraciflua* 'Lane Roberts' was still reddening up.

¶ **Acer** *A. acuminatum*, *A. alboburpurascens*, *A. amplum*, *A. argutum*, *A. barbinerve*, *A. buergerianum*, *A. caesium*, *A. calcaratum*, *A. campbellii*, *A. campbellii* subsp. *flabellatum*, *A. campestre* 'Autumn Red', *A. campestre* 'Carnival', *A. capillipes*, *A. cappadocicum*, *A. cappadocicum* 'Aureum', *A. cappadocicum* 'Rubrum', *A. carpinifolium*, *A. caudatifolium*, *A. caudatum*, *A. caudatum* subsp. *ukurunduense*, *A. cinerascens*, *A. circinatum*, *A. cissifolium*, *A. cordatum*, *A. coriaceifolium*, *A. x coriaceum*, *A. crataegifolium*, *A. davidii*, *A. davidii* 'Ernest Wilson', *A. davidii* 'George Forrest', *A.*

dauidii ‘Serpentine’, *A. diabolicum*, *A. x dieckii*, *A. distylum*, *A. divergens*, *A. elegantulum*, *A. erianthum*, *A. fabri*, *A. forrestii*, *A. franchetii*, *A. giraldii*, *A. glabrum*, *A. glabrum* subsp. *douglasii*, *A. granatense*, *A. griseum*, *A. grosseri*, *A. grosseri* var. *hersii*, *A. heldreichii*, *A. henryi*, *A. x hillieri*, *A. hookeri*, *A. hyrcanum*, *A. japonicum*, *A. japonicum* ‘Aconitifolium’, *A. japonicum* ‘Attaryi’, *A. japonicum* ‘Viride’, *A. japonicum* ‘Vitifolium’, *A. laevigatum*, *A. lanceolatum*, *A. laxiflorum*, *A. lobelii*, *A. longipes*, *A. longipes* subsp. *catalpifolium*, *A. macrophyllum*, *A. mandschuricum*, *A. maximowiczianum*, *A. maximowiczianum* *morifolium*, *A. maximowiczii*, *A. micranthum*, *A. miyabei*, *A. mono*, *A. monspessulanum*, *A. morifolium*, *A. negundo*, *A. negundo* ‘Flamingo’, *A. negundo* ‘Variegatum’, *A. nipponicum*, *A. oblongum*, *A. obtusifolium*, *A. okomotoanum*, *A. oliverianum*, *A. opalus*, *A. palmatum*, *A. palmatum* ‘Atropurpureum’, *A. palmatum* ‘Aureum’, *A. palmatum* ‘Bloodgood’, *A. palmatum* ‘Burgundy Lace’, *A. palmatum* ‘Butterfly’, *A. palmatum* ‘Chitoseyama’, *A. palmatum* ‘Coral Pink’, *A. palmatum* ‘Corallinum’, *A. palmatum* ‘Crippsii’, *A. palmatum* var. *dissectum*, *A. palmatum* var. *dissectum* ‘Crimson Queen’, *A. palmatum* var. *dissectum* *Dissectum* *Atropurpureum*, *A. palmatum* var. *dissectum* ‘Dissectum Flavescens’, *A. palmatum* var. *dissectum* ‘Dissectum Nigrum’, *A. palmatum* var. *dissectum* ‘Dissectum Palmatifidum’, *A. palmatum* var. *dissectum* ‘Dissectum Rubrifolium’, *A. palmatum* var. *dissectum* ‘Dissectum Variegatum’, *A. palmatum* var. *dissectum* *Dissectum* *Viride*, *A. palmatum* var. *dissectum* ‘Inaba-shidare’, *A. palmatum* ‘Elegans’, *A. palmatum* ‘Garnet’, *A. palmatum* ‘Linearilobum’, *A. palmatum* ‘Osakazuki’, *A. palmatum* ‘Red Pygmy’, *A. palmatum* ‘Seiryū’, *A. palmatum* ‘Wada’s Flame’, *A. pectinatum*, *A. pennsylvanicum*, *A. pennsylvanicum* ‘Erythrocladum’, *A. pentaphyllum*, *A. platanoides* ‘Columnare’, *A. platanoides* ‘Crimson King’, *A. platanoides* ‘Crimson Sentry’, *A. platanoides* ‘Drummondii’, *A. platanoides* ‘Laciniatum’, *A. platanoides* ‘Royal Red’, *A. platanoides* ‘Schwedleri’, *A. pseudoplatanus* ‘Atropurpureum’, *A. pseudoplatanus* ‘Brilliantissimum’, *A. pseudoplatanus* ‘Leopoldii’, *A. pseudoplatanus* ‘Prinz Handjéry’, *A. pseudoplatanus* ‘Worley’, *A. pseudosieboldianum*, *A. pycnanthum*, *A. rubrum*, *A. rubrum* ‘October Glory’, *A. rubrum* ‘Schlesingeri’, *A. rufinerve*, *A. saccharinum*, *A. saccharinum* f. *laciniatum*, *A. saccharum*, *A. Scanlon*, *A. sempervirens*, *A. serrulatum*, *A. shirasawanum* ‘Aureum’, *A. sieboldianum*, *A. sieboldianum* ‘Kinugasayama’, *A. sinense*, *A. sinense* var. *pubinerve*, *A. spicatum*, *A. stachyanthum*, *A. stachyophyllum* (planted 1996 in Wellingtonia avenue), *A. takesimense*, *A. taronense*, *A. tataricum*, *A. tataricum* subsp. *ginnala*, *A. tegmentosum*, *A. tenellum*, *A. tenuifolium*, *A. tetramerum*, *A. trautvetteri*, *A. triflorum*, *A. truncatum*, *A. tschonoskii*, *A. turkestanicum*, *A. velutinum*, *A. wilsonii*, *A. x zoeschense*

ANACARDIACEAE

Cotinus coggygria Scop. *Smoke-tree*

● mm 4

Rhus cotinus L.

A common garden shrub, especially in its purple-leaved forms, producing seedlings in occasional years.

East Berks: not in Druce. Planted at Arborfield Court [7566] in 1974 and at Sonning churchyard [7575] in 1986. <1% (1km²).

West Berks: in a hedge near Rush Court [69] in 1966. Waste ground in central Newbury [47567] in 2002.

¶ **Cotinus** *C. coggygria* in several cultivars

Rhus typhina L. *Stag’s-horn Sumach*

● mm 6

Datisca hirta L.

Rhus hirta (L.) Sudw.

A very popular tree for small gardens. Occasionally established in waste ground and on roadsides well away from houses, but more usually found as a suckering garden escape (e.g. forcing its way under boundary fences). Conspicuous in autumn when the foliage turns flame red. The cultivar 'Dissecta' was on waste ground in Bracknell [8569] in October 2003.

Ascot: Fernbank Road, Locks Ride [9070], North Ascot [9169], but this site is destined to be destroyed by the construction of 'luxury homes' in Kennel Green Park in 2002.

East Berks: not in Druce. Recently from Bearwood, Hartley Court [7068], Spencer's Wood, Riseley, Swallowfield, Ryeish Green, Shinfield, The Leas, West Reading, Whitley [7270], Whiteknights, Bulmershe, Arborfield, Langley Common, Wheatlands, Finchampstead, Doles Hill, Loddon Bridge, Twyford, Heath Ride, Kiln Ride, Wokingham, Popeswood, College Town, Owlsmoor, Great Hollands, Quelm Park, Hare Hatch, Linderhill, Wiltshire Farm [8371], Broadmoor [8463], Bracknell [8569], Amen Corner, Paley Street [8676], Holyport [8977] and [8978], Binfield Park, Shottesbrooke, Waltham St Lawrence [8276], West End, Woodlands [8678], Cox Green, Shepherds Lane, Holloway [8480], Halfway House [8883], Harvest Hill [8879], East Maidenhead [8981], Cookham [8985], Thames Lock, Bray Meads, Summerleaze Lakes, Bray Court, Bray, self-sown at Maidenhead sewage works in November 2001. 10% (1km²). Atlas 2000: all except [78]

West Berks: not in Druce. Padworth Common [6164] in 1966, tip at Aldermaston Soke [6163] in 1966, Didcot tip [59] in 1969 and Smallmead tip [7070] in 1988. Suckering extensively as at Boxford Church [4271], but seldom if ever self-sown. By the canal in central Newbury [4767] and on waste ground in Abingdon [4997]. In the roadside [384750] and near the church [381753] at Great Shefford and at Kingston Bagpuize [4098] in 2002. Planted by Godstow Lock [4809]. Abundant in the hedge by the A4 just west of the Pangbourne roundabout [630705] on 29 September 2009. Atlas 2000: [36], [47], [40], [67], [68]

¶ **Rhus** *R. copallina*, *R. glabra*, *R. x pulvinata* 'Red Autumn Lace', *R. radicans*, *R. trichocarpa*, *R. trilobata*, *R. typhina* 'Dissecta', *R. verniciflua*

SIMARUBACEAE

Ailanthus altissima (Mill.) Swingle *Tree-of-heaven*
Toxicodendron altissimum Miller

• mm 6 ↑

Spreading by seeds and suckers. A pestilential invasive species in Continental Europe; the British plants should be carefully watched.

Silwood Park: The Silwood plants grow extremely well and sucker over enormous distances (more than 50m in one case), but not regenerating from seed.

East Berks: not seen by Druce or Bowen. On abandoned allotments at Bulmershe [7573] in 2000. Suckering beneath metalled roads in Cookham Dean [8785] and White Waltham [8577] in 2003. On waste ground by Wokingham Road, Reading [7373] in October 2004. <1% (1km²).

West Berks: not in Druce. Foxcombe Hill [40] in 1961 and Youlbury [40] in 1964.

MELIACEAE

¶ **Melia** *M. azedarach*

¶ **Toona** *T. sinensis*, *T. sinensis* ‘Flamingo’

RUTACEAE

An important family of plants that has no native British representatives. Several genera are important garden plants, however, including trees like *Phellodendron*, shrubs like *Choisya* and *Skimmia*, and herbs like *Ruta*. The genus *Citrus* is perhaps the most important member of the family in our daily lives, and outcast pips of orange, lemon and lime are often found on compost heaps and rubbish dumps. They are impossible to identify to species at this age, and are inevitably killed by frost. They are excluded from this account.

Ruta graveolens *Rue* ● n 5

Common in herb gardens and on rockeries, and occasionally found in pavement cracks and on waste ground as a garden outcast.

Ascot: no records.

East Berks: on waste ground in Earley, Windsor, Maidenhead, etc. On sunny waste ground between the railway and Tesco’s Superstore at Kings Meadow in Reading [719738] on 11 October 2003. 3% (1km²). Atlas 2000: all except [78], [96]

West Berks: particularly common in the churchyard of St Nicholas, Newbury, Hungerford, Faringdon. Self-sown in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [28], [29], [38], [46][67]

¶ **Ruta** *R. graveolens* ‘Jackman’s Blue’, *R. graveolens* ‘Variegata’

¶ **Correa** *C. backhouseana*

¶ **Choisya** *C.* ‘Aztec Pearl’, *C. ternata*, *C. ternata* ‘Sundance’

¶ **Dictamnus** *D. albus*, *D. albus* var. *purpureus*

¶ **Phellodendron** *P. amurense*

¶ **Skimmia** *S. x confusa* ‘Kew Green’, *S. japonica*, *S. japonica* ‘Fragrans’, *S. japonica* ‘Nymans’, *S. japonica* subsp. *reevesiana*, *S. japonica* ‘Rubella’, *S. laureola*

¶ **Poncirus** *P. trifoliata*

¶ **Ptelea** *P. trifoliata*

OXALIDACEAE

Oxalis corniculata L. *Procumbent Yellow-sorrel* ● th 5
Oxalis stricta sensu Robinson et auct., non L.

Garden ground, rubbish tips, waste ground, etc. Very rare in Druce's time, but a rather common weed at Frogmore pre-1897. Described as local by Bowen. It is not clear whether the rash of new records in the early 1970s marked a sudden spread of the plant, or just a pulse of enthusiasm in recording effort. The leaves are often purple-brown (var. *atropurpurea* Planchon).

Silwood Park: local and rare; not seen for the first 18 years of the study. A massive plant (1.5m diameter) on gravel inside a derelict Polytunnel at the CABI Greenhouses 16 June 1997 (still there in August 2003). Several purple-leaved plants in fruit in the gravel strip between the CABI greenhouses and the small greenhouses; 16 July 1997; still there in abundance in May 2004. Purple-leaved plants in pavement cracks in the graveyard at Ashurst on 18 June 2002. The green-leaved plant was locally frequent on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. Both green- and brown-leaved plants occasional in the Ashurst Lysimeters in August 2006 and July 2007. Locally frequent in gravel at the base of the rear wall of the CABI building on 20 May 2007. Uncommon in Ashurst Lysimeters on 1 September 2009, following herbicide treatment and cultivation in late spring 2009.

Ascot: Tower Hill, Fernbank Road, South Ascot, Ascot Place, New Road, North Ascot, Winkfield, Winkfield Lodge, locally frequent on gravel paths on Upper Village Road and in Bridge Road in Sunninghill in 2003, in the purple-leaved form. Very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005. *Oxalis corniculata* var. *atropurpurea* was dominant in gravel at the base of the wall of the Dog and Partridge on Upper Village Road on 20 May 2007.

East Berks: Reading University, New Town, Bulmershe, Leighton Park, Sonning, Wellington College, Easthampstead Park, Holyport. Jealott's Hill in 1973. Now widespread, mostly in the purple-leaved form. 14% (1km²). Atlas 2000: all squares

West Berks: Inkpen Common [36], Buckland House [39] in 1970, Newbury [46] in 1969, Kingston Bagpuize [49] in 1974, Milton [49] in 1980, Wytham village [40], Brimpton [56] in 1969, Thatcham [57] in 1973, Upper Basildon [57] in 1974, Hermitage [57] in 1986, Didcot [59], Aldermaston [66] in 1978, Wallingford [68] in 1974. Pavement cracks in Faringdon [2895] in 2003. Now throughout. Atlas 2000: all except [37], [69]

Oxalis corniculata* var. *villosa (M. Dieb.) Hohen *Yellow-sorrel* ● th 5

Told from the common var. *corniculata* by its bigger seeds (1.3-1.7mm rather than 1-1.3mm) with fewer (4-6 not 8-11), more obtuse ridges. The hairs on the capsule are a mix of glandular and simple hairs which are not, or scarcely, touching (not eglandular, dense and touching). Only recorded from four other British locations, it is frequent as a native in Turkey and from south-east Europe to south-east Asia.

West Berks: at the base of the church wall of St Leonard's, Wallingford [608891] on 29 May 2002 (E). Found by Roy Maycock, det. Mark Watson at Edinburgh.

Oxalis exilis A. Cunn. *Least Yellow-sorrel* ● th 5 ↑

Oxalis corniculata L. var. *microphylla* J.D. Hook.

Xanthoxalis exilis (Cunn.) Holub

Oxalis repens sensu R.M. Burton, non Thunb.

Common in compacted bare ground on paths and below walls. Also capable of competing with lawn grasses, when the shade of a wall or an overhanging tree maintains soil moisture in the heat of the day. Told from *O. corniculata* by the inflorescence always being 1-flowered (and 1-fruited), having

much smaller capsules (3-4.5mm rather than 8-20mm), and by the flowers having 5 stamens with anthers and 5 without.

Silwood Park: locally dominant in the bare strip at the base of the west-facing wall of Phase One, opposite the Lily Pond and on cinder paths nearby. It has now spread into the adjacent lawn under the big Yew tree. At the base of brick walls in the Stable Yard, by the back door; 25 June 1980. Still there in 2004. Frequent at the Greenhouses on compacted ground. Drive Field, occasional on compacted gravel and on the vertical bare soil where lawn edges have been cut. At the base of the wall of the Machinery Centre, opposite The Refectory, amongst *Carex muricata* in June 2002. Dominant over a considerable area of compacted ground in partial shade at The Tip in August 2002. Silwood Farm, Cricket Wicket, Drive Lawns, Japanese Garden, Croquet Lawn, The Heath, Science Park, Hayes Wood. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	9

Ascot: Heatherwood Hospital, South Ascot, Kings Beeches, common in pavement cracks on Bridge Road, Sunninghill.

East Berks: not in Druce or Bowen. First Berkshire record by Bowen in 1983 from cracks in paving at 8 Glebe Road, Reading. Locally abundant near Oxford Road in West Reading in 2002. It was already abundant in Silwood Park in 1970, so I suspect that it was overlooked as a small form of *O. corniculata* for many years prior to 1983. Now widespread, as at Three Mile Cross, Ryeish Green, Whitley, Sonning, Arborfield Cross, Hogwood, Earley, Wargrave, Ruscombe, Highfield Park, Crazies Hill, Wokingham, College Town, Bracknell, Grange Farm, Stud Green, Hurley, Burchett's Green, Summerleaze Lakes, Foliejon Park, Cranbourne, The Village in Windsor Great Park, Windsor, Windsor Castle. Growing in lawns in Swallowfield in 2002. 6% (1km²). Atlas 2000: all squares

West Berks: not in Druce or Bowen. Almost certainly under-recorded. Atlas 2000: [28], [46], [40], [56], [68]

Oxalis stricta L. *Upright Yellow-sorrel*

• hp 6 ↓

Oxalis dillenii auct., non Jacq.

Oxalis fontana Bunge

Oxalis europaea Jordan

Xanthoxalis fontana (Bunge) Holub

I suspect that several (perhaps even many or most) of the Berkshire records are *O. corniculata* (the distinction 'stems procumbent' versus 'stems decumbent' in the key does not instil great confidence). *O. stricta* is actually closest to *O. dillenii* from which it differs in never having white patches on the seeds, and pedicels erect in fruit (both species have capsules erect in fruit, but the pedicels of *O. dillenii* are patent or reflexed). Fruiting pedicels in *O. corniculata* are patent or reflexed in fruit in distinction to *O. stricta* which has fruiting pedicels erect in fruit, forming a cymose inflorescence.

East Berks: casual near the railway in Maidenhead pre-1897. Gardens and rubbish tips. Rare and often sporadic in Bowen (as *O. europaea*). Prospect Park Reading (1912), Whiteknights Park (1972), Coley (1977), Finchampstead Ridges (1917), Rapley's Farm, Bracknell, Gardeners Green, Cookham tip (1958), Clewer (1960), Sunningdale allotments, Crowthorne. No recent records.

West Berks: Harwell [48], Marcham and Cothill [49], in the garden of the Chalet in Wytham Wood [40] in 1987, Thatcham [56], Blewbury [58] in 1976, Tilehurst [67] in 1974. Recently at Little Coxwell [281934]. Atlas 2000: [46], [48], [49], [40], [50]

Oxalis articulata Savigny *Pink-sorrel*
Oxalis floribunda auct., non Lehm.

• hr 5 ↑

This is the common pink-purple flowered sorrel of gardens, self-seeding freely and spreading by rampant rhizomes. Often thrown out and long persistent on waste ground, even amongst grass. The leaves have orange spots and arise from rhizomes, not bulbs.

Told from the other 4 pink flowered sorrels (*O. debilis*, *O. latifolia*, *O. tetraphylla* and *O. decaphylla*) by the lack of underground bulbs (and see those species descriptions). Orange warts on the under-leaves is *not* a good character; it is shared with *O. debilis*. You really need to dig up some rhizome to be sure of your determination.

Silwood Park: with imported topsoil during construction of the Science Park; a single plant on Garden Wood Bank on 13 May 1990. Numerous isolated plants scattered over the Science Park in summer 1991. Most of them gone within 5 years, having been shaded out by trees and shrubs.

Ascot: on waste ground and in derelict gardens on Ascot High Street in June 2003.

East Berks: not in Druce or Bowen. Smallmead tip at Reading in 1988. Very common on grassy waste ground in Bracknell and Wokingham (1999-2004). Common in suburban Reading, as at Earley and Bulmershe in 2002. By the Thames below Old Windsor Lock. 25% (1km²). Atlas 2000: all squares.

West Berks: garden outcast near Aldermaston Wharf [66] in 1961. Now a common garden outcast in towns and villages throughout. Atlas 2000: all except [37], [39], [47], [48], [56], [57], [58], [59], [50], [67]

Oxalis acetosella L. *Wood-sorrel*

hr 4

Oak and alder woods, thickets and hedge-banks, widespread but very local on the chalk ridge. A curious distribution; only abundant in very local patches, perhaps reflecting surviving remnants of ancient woodland. Infrequent in heathy woods, and absent from the more recently planted woodlands. NVC: U 20; W 4,8,10,14,15,16,22

Silwood Park: rather uncommon, despite plenty of apparently good habitat. The best population is in Lake Wood at the zigzag in the path beyond the south-west corner of Rush Meadow; here, Wood-sorrel dominates 20m x 20m under oak, birch and alder. Locally frequent in the ancient woodland fragment of Nash's Copse. Also in Guinness's Thicket, Silwood Farm, The Swamp, Guinness's Bridge, Water Meadow, Silwood Lodge, and by the bridge where the Cheapside footpath crosses the outflow stream, and eastwards along the streambank beneath the trees. Regenerating freely in June 2008 on the bare soil made of the abandoned underground den that had been dug by the Cheapside Children in 2001 in Water Meadow East close to the Outflow Stream.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	5	5	10

Ascot: very local and patchy. Heatherwood, Ascot Station, Sunninghill, Charters Road, Johnson's Pond and Breakheart Hill, but absent from many of the other woodlands in Windsor Great Park.

East Berks: surprisingly uncommon in, or absent from, many of the better woodlands. It is very local even in woods like California Country Park [7865] on acid sands. 9% (1km²). Commonest in the ancient woodlands to the north and west of Wokingham, such as Beech Wood near Billingbear where it covers large areas of the woodland floor. 14% (1km²). Atlas 2000: all squares

West Berks: throughout the south, but absent north of 85, save for the Northern Loop. It grows with bluebell and other acid loving species on the flatter, summit parts of the chalk woodlands at Rivar Copse [3562] where the chalk is overlain by more acid substrates, but not in the bulk of the woodland where the chalk is at the surface. Atlas 2000: all except [29], [38], [59], [68], [69]

Oxalis debilis Kunth *Large-flowered Pink-sorrel* ● gb 5
Oxalis corymbosa DC.
Oxalis debilis Kunth var. corymbosa (DC.) Lourt.
Oxalis debilis Kunth subsp. corymbosa (DC.) O. Bolòs and Vigo

The leaves are orange spotted (as in *O. articulata*) but they arise from a scaly bulb (rather than from a rhizome) and the flowers are pale (not deep) pink. Told from the other 2 pink-flowered bulb-producing species as follows: *O. decaphylla* has 5 or 10 leaflets (rather than 3), while *O. latifolia* has leaflets that are widest at the apex and which lack the submarginal orange dots.

Silwood Park: rare on the cinder pot stand at the Greenhouses in a derelict cold frame on 7 July 1998. Not seen since.

East Berks: not in Druce. Gardens, rare but persistent (as *O. corymbosa*). Sonning cemetery in 1963, Reading in 1967, Whiteknights Park in 1968. Recently at Wokingham, Waltham St Lawrence. <1% (1km²). Atlas 2000: [76], [77], [86], [87], [96]

West Berks: Pusey House [39] in 1971. Atlas 2000: [46], [67]

Oxalis latifolia Kunth *Garden Pink-sorrel* ● gb 5 ↓
Oxalis vespertilionis Zucc.

A bulb-possessing pink sorrel (cf. the much commoner *O. articulata* which has a tough brown rhizome), *O. latifolia* has big leaves (8cm broad) with leaflets that are widest at the apex and which lack the submarginal orange dots of *O. debilis*. The leaflets are highly distinctive with their fish-tail terminal lobes.

Silwood Park: a plant rescued from construction at Ascot Racecourse (below) was grown as a windowsill pot plant for a year, then planted out on the cinder Pot Standing at the Greenhouses just before the St Kilda trip on 2 August 2006 to save it from death through desiccation. It appeared above ground very late in 2007, but was in full leaf on 27 July 2007. It is at the base of the wall, exactly half way between the left hand end of the greenhouse and the down-pipe.

Ascot: at the roadside beneath a wall behind Ascot Racecourse [923688]; a single plant in 2003-05. Locally frequent on ruins close to the main entrance [919689] during reconstruction of Ascot Racecourse in August 2005. Self sown on ruined walls at Froggnall [940681] in September 2005.

East Berks: not in Druce. Gardens, rare but persistent. Cookham (1961), Reading Old University (1964). No recent records.

West Berks: Downe House [57] in 1957, Kingston Lisle [38] in 1961. Atlas 2000: [36]

Oxalis tetraphylla Cav. *Four-leaved Pink-sorrel* ● gb 5
Oxalis deppei Lodd. ex Sweet

This is the “four-leaved clover” of gardens, leaves often with dark brown centres (the cultivar ‘Iron Cross’ has the coloured bands on the leaves entirely purple). A rare garden escape.

Ascot: a single outcast on Upper Village Road in Sunninghill on 1 September 2003. Escaped into paving in South Ascot churchyard in August 2004.

East Berks: waste ground in suburbia in Cookham Dean (1998). ‘Iron Cross’ by the M4/A33 Interchange [709702] in August 1999. Locally frequent on waste ground in Whitley [7270] in August 2003. <1% (1km²).

West Berks: recorded from Wantage and Newbury.

Oxalis incarnata L. *Pale Pink-sorrel* ● th-gb 5 †

This species is an annual with an erect aerial stem (branching above ground), arising from a bulb and producing axillary bulbs. The petioles of the other pink sorrels arise below ground.

East Berks: not in Druce. Gardens, very rare. Shinfield (1957), Tilehurst Road, Reading (1967).

Oxalis decaphylla Kunth *Ten-leaved Pink-sorrel* ● gb 5
Oxalis lasiandra auct., non Zucc.

East Berks: one of the few pink-flowered sorrels that is easy to identify, because it has 5 (or 10) rather than 3 leaflets.

East Berks: Maidenhead (1998). <1% (1km²).

¶ **Oxalis** *O. adenophylla*, *O. depressa*, *O. drummondii*, *O. enneaphylla*, *O. enneaphylla* ‘Alba’, *O. enneaphylla* ‘Minutifolia’, *O.* ‘Ione Hecker’, *O. magellanica* ‘Nelson’, *O. purpurea* ‘Ken Aslet’, *O. tetraphylla* ‘Iron Cross’

GERANIACEAE

Geranium endressii group J. Gay *French Crane’s-bill* ● hs 6

The *endressii* group consists of perennials with compact or creeping (but long persistent) rhizomes that are often thrown out of gardens, and survive on waste ground, rough grass, hedge-banks and ditches in villages and towns throughout Berkshire. The naturalised pink-flowered *Geraniums* have all tended in the past to be recorded as *G. endressii*, but it is clear that several different taxa are involved. The details of their distributions have yet to be worked out, but *G. endressii* is rare and *G. x oxonianum* is common. True *G. endressii* has the veins and petals the same shade of deep pink (not contrasting, as in several of the others; see below). The cultivar ‘Wargrave Pink’ has bright salmon coloured, distinctly notched petals and grows to twice the height of *G. endressii* when grown in full

sun. It is of local origin, produced in 1930 by Waterer, having been found in the nursery (on the A30) by the foreman Mr G.W. Wright. **Geranium x oxonianum** Yeo *Druce's Crane's-bill* combines characters of *G. endressii* and *G. versicolor*, with funnel-shaped flowers, pink petals with a darker network of veins, notched at the apex; it is the most frequent outcast. The cultivar 'Claridge Druce' is a very vigorous, strongly hairy plant, with rosy pink petals up to 26 x 14mm. **Geranium x riversleaiannum** Yeo is a trailing hoary perennial grown for ground cover and hence often thrown out when it outgrows its welcome. The cultivar 'Russell Pritchard' has flowers of 3cm diameter of rich magenta and is the most commonly seen. See Yeo (1985) for details and keys to all the hybrids.

G. endressii is told from *G. x oxonianum* by its shorter style (measured in fruit, from the base of the stigma to the tip of the column) which is 2.5-3mm (rather than 4-6mm).

G. versicolor is told from *G. x oxonianum* by its trumpet rather than funnel-shaped flowers (i.e. the petals are curved outwards rather than straight at their tips), and by the petal ground colour which is white rather than pink.

G. endressii is told from *G. versicolor* by the colour of the petal veins; they are darker than the ground colour in *G. versicolor* (the same colour or paler than ground colour in *G. endressii*).

Geranium endressii cultivars and hybrids *French Crane's-bill* ● hs 5

Records for the aggregate are as follows, but most of these are probably not *G. endressii* s.s.:

East Berks: not in Druce. Established in a few hedge-banks near gardens; Knowl Hill (1963). Now one of the commonest garden escapes: Bisham, Sonning, Maidenhead, etc. 31% (1km²). Atlas 2000: all squares

West Berks: Kennington [50] in 1964, Tidmarsh [67] in 1946, Burghfield Common [66] in 1974. Now frequent and widespread. Atlas 2000: [28], [29], [36], [38], [46], [49], [56], [50], [66], [67], [68], [69]

Geranium x oxonianum Yeo *Druce's Crane's-bill* = **G. endressii x G. versicolor** ● hs 5

Probably the commonest of the garden escapes in this group. The petal veins may be darker or lighter (colourless and translucent) than the background pink. The most commonly grown cultivars are 'Claridge Druce' with dark-veined rose-pink flowers, 'A.T. Johnson' with silvery pink flowers, and 'Wargrave Pink' with salmon pink flowers. The flowers are funnel-shaped (not trumpet shaped; i.e. not strongly flared at the mouth).

Ascot: waste ground on Bridge Road in Sunninghill 1971-2004. South Ascot, Sunningdale and Ascot High Street in 2003.

East Berks: garden escape in Bulmershe and Whitley, by the R. Thames in Maidenhead in 2002 and Harvest Hill [8879], Cookham Dean [8785] and Drift Road [8975] in 2003. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008.

West Berks: the hybrid is recorded from Purley Lodge [67] in 1926 (**RNG**), Bradfield [67] in 1962 (**LAN**) and Sutton Courtenay [59] in 1977 (**OXF**). On waste ground in Botley [4906] in 2002 and in ditches at Kingston Bagpuize [4098] in 2003.

Geranium versicolor L. *Pencilled Crane's-bill* ● hs 5

Low growing perennial with blotched leaves that are shallowly cut and broadly lobed. The trumpet-shaped flowers have white petals, but they are so strongly veined with rose-red that they look pink from a distance. This is the least common of the group in Berkshire.

East Berks: rare beneath a wall in Sonning in June 2002.

Geranium endressii J. Gay s.s. *French Crane's-bill* ● hs 6

Not common in Berkshire. The veins and the background are the same deep rose pink at the tip of the petal, so there is virtually no contrast between them, but at the base of the petal the veins are colourless and translucent. The leaves are wrinkled with pointed segments. Petals 3-4cm, notched. The style of the fruit is shorter (4-6mm not 2.5-3mm) than in *G. x oxonianum*.

East Berks: a rare garden escape in Reading, Maidenhead and Windsor, long persistent but not forming large patches.

West Berks: in Newbury, on waste ground near allotments in July 2001.

Geranium nodosum L. *Knotted Crane's-bill* ● hs 5

A perennial with swellings above the nodes, a 3 or 5 elliptic leaf divisions, which are toothed but scarcely lobed. Flowers are held in a diffuse inflorescence and have bright purplish pink slightly veiny and distinctly notched petals, and short hairs (< 0.2mm) on pedicels and peduncles.

West Berks: Sudbury House [29] in 1890 (OXF), Bessels Leigh [40] pre-1918 and Stanford Dingley [57] in 1961.

Geranium rotundifolium L. *Round-leaved Crane's-bill* th 6 ↑

Dry hedge-banks, tops of mud-covered walls, waste ground and waysides; local and uncommon. Commonest in the Thames valley, where it is locally frequent on calcareous sandy soils. The petals are rounded (rather than notched), the sepals are pointed (apiculate) and the leaves are relatively shallowly divided (to less than $\frac{3}{4}$ of the way to the base). The presence of glandular hairs is *not* distinctive. See *G. molle*, below, for more identification tips.

Silwood Park: very local and rare in bare ground where the grass meets the kerb on the north-east corner of the roundabout at Sunninghill Crossroads, below the Silwood Park sign; 25 April 2000 but not seen in 2001 or since. Rare in the fallow at Pound Hill in June 2001. Locally abundant on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at The Cedars in September 2002. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Occasional on 20 April 2008 in a cool spring on bare ground at Ashurst Lysimeters that had been herbicided thoroughly in late summer 2007.

Ascot: very rare. Fernbank Road [9069] in 1999.

East Berks: Bulmershe, Whistley Park, Maidenhead, Wargrave, between Sonning and Twyford, between Hurst and Reading. On the Berkshire bank of the Thames at Henley, Whiteknights, Sonning, Bowsey Hill, Maidenhead, on dumped soil on derelict industrial ground off Howarth Road [8980], Cookham, Bisham, Waltham St Lawrence, Bray, Old Windsor, etc. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 16% (1km²). Atlas 2000: all squares

West Berks: confined to the Thames valley; locally abundant on the limestone. By the railway bridge between Uffington and Watchfield [28], Faringdon [29], Wantage [3987], Stanford-in-the-Vale and Charney Bassett [39], Kingston Bagpuize [4098], in the churchyard at Marcham [4596], Drayton [4694], Abingdon [4998], Sutton Courtenay [5093], Culham and Appleford [59]. Atlas 2000: [28], [29], [46], [47], [49], [40], [58], [59], [50], [67], [68]

Geranium psilostemon Ledeb. *Armenian Crane's-bill* ● hs 5

A common garden plant (this and the hybrid 'Ann Folkard' are the tall "black-eyed" geraniums of herbaceous borders), rarely found on waste ground as an outcast.

East Berks: White Waltham in 2001.

West Berks: Shrivenham [2388] in 1999, Kingston Bagpuize [4098] in 2003.

Geranium pratense L. *Meadow Crane's-bill* hs 6 & ● hs 6

Water meadows, damp thickets and osier holts, damp grassland, roadsides and railway banks. Locally common close to the Thames and its larger tributaries on alluvial and clay soils, but absent from acid soils in south-east Berkshire. Also a classic cottage garden plant, self-seeding copiously and hence found as an outcast and a foundling on banks and waste ground in towns and villages, often a long way from the nearest water meadow.

NVC: MG 1

Silwood Park: sown in various conservation mixtures in 1991. A few plants survive in the bottom half of Block H and the corner of Block J of the Tilman Experiment (sown October 1991) in Nash's Field (2000-03); in July 2004 there was 1 plant in the lower half of Block G, 2 plants in the upper half of Block H and one plant in the near half of Block J. On 26 June 2007 the population had declined to one plant in the centre of the bottom half of Block H and one in the left half of Block J. Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003 where it was sown in 1999. Not in any of the semi-natural habitats.

Ascot: there are no meadows in the district, but the plant is occasional as a garden escape. Grounds of Heatherwood Hospital in 1998, Sunninghill Village in 1999, Truss Hill Road in 2002.

East Berks: common in meadows by the Thames, as at Windsor, abundant at Marlow, Wargrave, Cookham, Aston, Bolney Ferry, between Henley and Wargrave, Sonning, Hurley, Coleman's Moor, Waltham, Maidenhead, Harvest Hill, Bray Wick, Old Windsor Lock. There is an outlying station in Shepherd's water meadows at Sandhurst. In relatively dry grassland at Popes Meadow in Bracknell [8469]. Many of the recent records, however, are of garden escapes. 22% (1km²). Atlas 2000: all squares

West Berks: one of the most abundant wildflowers of roadside verges in the Vale of the White Horse, and of grassy track-sides along the Ridgeway; widespread to the north of 75, but scattered and rare to the south of this. Water meadows of the Kennet at Hungerford [36], common on chalky roadsides south of Wantage [38], Newbury [46] and Theale [67] and of the Lambourn at Boxford [47]. Occasional on dry waysides through chalk country, as between Membury and Lambourn [3177], and along the ancient drovers road of The Fair Mile [5583]. Also a common garden escape in villages like Inkpen [36] and Marcham [49]. Atlas 2000: all squares

Geranium sanguineum L. *Bloody Crane's-bill*

• hp 7 ↑

A common rockery and edging plant, in a variety of flower colours: 'Album' is self explanatory, 'Glenluce' is exquisite wild rose pink, var *striatum* is white with red veins, and there are all shades of red to deepest crimson. All of these may be seen occasionally in towns and villages on paving or waste ground near houses. Increasing, but only as a garden escape or outcast.

Silwood Park: a rare garden escape in Cheapside Village.

Ascot: locally frequent in the car park of the Telephone Exchange on Upper Village Road in Sunninghill, and on waste ground in South Ascot in June 2003.

East Berks: on the Grotto in Windsor Park (1897), but planted. A rare relic of cultivation; Finchampstead (1963), Wellington College (1962), South Ascot (1965), in a field west of Sandford Mill (1977), Swallowfield, West Reading, Whitley, Earley, Maidenhead and Bulmershe (2002). 12% (1km²). Atlas 2000: all squares

West Berks: Frilsham [57] in 1942, Didcot [59] in 1962, Jarn Mound [40] in 1968. Locally frequent by Godstow Lock [4809] in 2002 and on waste ground in Shrivenham [2388] in 2004. Atlas 2000: [28], [36], [46], [49], [40], [58], [59], [68]

Geranium columbinum L. *Long-stalked Crane's-bill*

th 6 ↓

Fields, dry banks and stony places, hedge-banks; rather local and decreasing. Told from the other annual species by its long pedicels (more than 2.5cm) and glabrous or only sparsely hairy mericarps.

East Berks: Bisham, Wargrave, Sonning, Remenham, very fine in a lane between Farley Hill and Jouldern's Ford, Hurley, Waltham, Hurst, Twyford. Bowen considered it to be extinct at all of these sites. Recent records from Sandpit Lane, Farley Court, Crazies Hill, Wishmoor Bottom. <1% (1km²). Atlas 2000: [76], [78], [86], [97]

West Berks: occasional in [57] and [58] but rare and scattered elsewhere. Inkpen [36], Buckland [39], Chieveley and Boxford [47], Catmore [48], Hitchcopse pit [453997], Dry Sandford pit [465996], and on the railway at Grove [49], Cumnor and Upper Seeds Wytham [40], Stanford Dingley, Hermitage and Hurdle Shaw [57], Fair Mile, Kingstanding Hill and Streatley golf course (LAN) [58], Thrupp House, Sotwell and Castle Hill Sinodun [59], Sulham, Tilehurst and Purley [67]. Atlas 2000: [36], [39], [47], [48], [49], [40], [57], [58], [59], [67]

Geranium dissectum L. *Cut-leaved Crane's-bill*

o th 5

Waste ground, grassland, dry arable fields, cultivated ground, a weed of oilseed rape, set-aside, hedge-banks, etc.; common and widely distributed in many open habitats. One of the newer host plants exploited during the range expansion of the Brown Argus butterfly. Like *G. rotundifolium* it has dense glandular hairs on the flower stalks, but unlike that species it has lobed (not rounded, entire) petal tips.

NVC: MG 1; OV 3,4,8,13,15,19,23-25; S 18

Silwood Park: this is the common cranesbill of fallow and waste ground on Pound Hill and Silwood Bottom. On waste ground at North Gravel, Walled Garden, Mill Lane Triangle and the Science Park. Frequent on the New Chalk Plots in Ashurst Four Acre Field in 2002. Uncommon on imported topsoil at Ashurst lysimeters in May 2004. Present on the May-cultivated plots in the disturbance experiment

at Pound Hill, but much less abundant than *G. molle*. Occasional in the Pound Hill Exclosure on 10 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	10	15

Ascot: rare in newly sown grassland that was part of the landscaping scheme for the new Race Course, on the corner of the junction to car parks 7, 8, and 9 on 4 June 2007.

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 60% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Geranium x magnificum = G. ibericum x G. platypetalum *Purple Crane's-bill* • hs 6 ↑

The best and most popular blue-flowered ground-cover geranium, with massive dark blue flowers, 50mm across, marked with dark, almost black, veins. It has long, spreading non-glandular hairs and uniform short glandular hairs on its peduncles and petioles.

West Berks: planted in a monoculture around the base of the Monument above the A338 Wantage road at Fawley [400805].

Geranium pyrenaicum *Burm. f. Hedgerow Crane's-bill* • hs 6 ↑

Roadsides, railway banks, compacted waste ground, ditches; locally common and “more often found about villages, but yet a native of the county” (Druce). Bowen thought this was an increasing species. Now considered to be a neophyte. It is commonest close to the R. Thames.

Silwood Park: increased greatly following the construction of the Science Park in 1987 when seed was unintentionally imported in topsoil. The first flowers were recorded on 20 May 1991, on bare ground on both sides of the entrance road and around the Technology Transfer Centre. Common throughout the Science Park in 1997, but all these populations were gone by 2001. Never found in any of the natural habitats, and now all but extinct (a single individual survived on 18 June 2002 below the *Rosa* ‘Kiftgate’ on the Science Park drive, and still just one nearby amongst ivy on 2 June 2004). Several plants on imported topsoil at Ashurst lysimeters on 11 June 2004, but just one left by June 2006.

Ascot: uncommon on waste ground and roadsides in North Ascot, South Ascot and Sunningdale. In the verge of St George’s Lane, opposite the school.

East Berks: scattered and infrequent, but locally abundant, especially by the Thames. Swallowfield, Hartley Court, Shinfield, Hall Farm, Rivermead, Earley, Kennet Mouth, Suttons Business Park, Bulmershe, Sonning, White Swan Lake, Loddon Bridge, South Charvil, Loddon Mouth, Dinton Pastures, Twyford, Sheepslands, Wargrave, Willow Lane, Furze Covert, Hurst, Wild’s Beit, Wokingham, Transport Research Laboratory Crowthorne, West Hanworth, Central Bracknell, Bill Hill, Southbury Farm, The Holt, Haines Hill, Scarlett’s Farm, Kiln Green, Waltham St Lawrence, Kiln Copse, Shurlock Row, Binfield Park, Great Wood, Hazelwood Copse, Bisham, Lilibrooke Manor, Braywoodside roundabout, Ockwells Manor, Maidens Green, Mount Skippet, Bray Wick, Shepherds Lane, Prospect Hill, Cox Green, Hurley, Hurley chalk pit, Holloway, Temple Golf Course,

Bisham Abbey, Bisham Church, West Maidenhead, Cookham Dean, March House, Halfway House, Cookham Rise, Cookham, Foliejon Park, New Lodge, Bray, Holyport, Cranbourne, Okley Court, Kingsmead, Sutherland Grange caravan park, Windsor Race Course, Clewer, The Goswells, Home Park, Old Windsor, Ham Island, Runnymede Island. 18% (1km²). Atlas 2000: all squares.

West Berks: common in the Thames valley and in the Northern Loop, but rare and scattered elsewhere. Roadsides at Stanmore [4778]. Particularly common in the churchyard at Cholsey [5886] and on waste ground opposite the Merry Miller in Cothill [4699] in 2002. Atlas 2000: all squares

A white flowered plant with predominantly empty, smooth seeds (probably a hybrid) was locally common in the hedgerow at Lower Radley [533987] in June 2004; it had the mixed glandular and non-glandular hairs of *G. pyrenaicum*, but the petals were short (6mm long with a 1mm deep notch at the apex) with pale pink veins in a white background, held on 30mm long, slender pedicels. There were 5 anthers (not 10). The long-petioled (4cm) leaves were small (2.3cm radius) with sinus 1.4cm deep (60%) and both long and short spreading hairs and short glandular hairs. The mericarp was shortly hairy.

Geranium pusillum L. *Small-flowered Crane's-bill* th 6

Dry arable fields, cultivated land, waysides, waste ground; local and uncommon, absent from the chalk. Told from the much commoner *G. molle* by smooth, appressed-pubescent mericarps (not glabrous and ridged), smooth (not reticulated) seeds, pedicels with short hairs only (not mixed long and short), and outer 5 stamens lacking anthers.

Silwood Park: local and rare. Ashurst, Cheapside, M-Scan. At the edge of grassland at the Met Tower on 4 June 1987. In the grass between the Water Tank and Tree Physiology on 5 June 1987. The building was demolished in 1988 and the site destroyed. On imported topsoil in the Central Bed of the Science Park; 13 May 1990. Occasional in thin soil on graves in the churchyard at Ashurst on 5 August 2000 growing with *G. molle*. On imported topsoil at Ashurst Lysimeters on 10 July 2004, and more frequently following a second herbicide application to kill the grasses and thistles on 26 July 2007.

Ascot: uncommon; Sunningdale and South Ascot.

East Berks: Sonning railway sidings, common about Marlow and Henley, Knowl Hill, Farley Hill, Twyford, Maidenhead, Windsor Park, Sandhurst, large specimens form near Park Place. scattered in the Thames valley to the north and in the Blackwater valley to the south; rare or absent elsewhere. Seldom found east of 90. Dinton Pastures, Sheeplands, Remenham, Crazies Hill, Western Industrial Estate at Bracknell, Waltham St Lawrence, White Waltham, Kingsmead. 3% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley and the Kennet valley but absent from the chalk and large areas of the interior. Woolhampton (LAN) in 1960, Abingdon [4998] in 2000. Atlas 2000: all except [47], [48], [57], [58], [69]

Geranium molle L. *Dove's-foot Crane's-bill* th 4

Abundant in dry grassland, arable fields, fallow set-aside, waysides, heathy places, lawns, waste ground, etc; generally distributed but least common on the chalk. Told from *G. pusillum* by its hairless mericarps and from *G. rotundifolium* by smooth (not pitted) seeds (both species have abundant glandular hairs, so this character is no use in distinguishing them). Note that you need to remove the mericarp in order to see whether the seeds are smooth or pitted. The flowers vary in

colour from white to light purple. With a lens, the hairs on the pedicel are clearly seen to be of two different lengths; long spreading wispy hairs, and dense, short, glandular hairs (the hairs are all the same length in *G. pusillum*). One of our commonest wildflowers.

NVC: OV 9,19,21,25,39; U 1

Silwood Park: common in sunny places on waste land, fallow, and gaps in grassland. Very common in the seedbank beneath old grassland at Nursery Field in April 2004 following cultivation in 2003, but only conspicuous in the rabbit-fenced plots (evidently, its seedlings are highly palatable to rabbits). In the cultivation-timing experiment at Pound Hill it is commonest on the May-cultivated plots, flowering in September and again in May just before cultivation.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	2	3	22	33

East Berks: 53% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Geranium macrorrhizum L. *Rock Crane's-bill*

• hs 5

A common groundcover plant in larger gardens, often thrown out and occasionally found on waste ground, ditches, hedgerows and woodland edges in and around villages and in towns. It has leaves that are fragrant when crushed. Also used in landscaping schemes, especially on roundabouts in towns.

Silwood Park: long established below nettles on waste ground at the corner of the CABI quarantine greenhouse. Site destroyed when the wooden tool shed was moved to this site following clearance operations to make way for the new Jiff Greenhouses in spring 2000. The plant reappeared in March 2001, and flowered in May 2002; it was flourishing in May 2004 (the patch was roughly the same size on 5 May 2007). The shed was removed on 14 November 2007 and the patch was thriving in its newly illuminated environment in January 2008.

Ascot: planted on the grave of Rose Eleanor Challis (d. 7 March 1993) in South Ascot churchyard on 26 May 2004, where it grows with *Geum rivale*.

East Berks: in towns and villages throughout. On waste ground by the R. Thames at Maidenhead [9081] in July 2002. 8% (1km²). Atlas 2000: all squares

West Berks: abundantly naturalized in the woodland garden at Kingston Bagpuize House [49] in 2001. Atlas 2000: [28], [29], [36], [37], [38], [49], [57][67], [68]

Geranium lucidum L. *Shining Crane's-bill*

th 5

Shaded hedge-banks, old limestone walls, gravel soak-aways and damp brickwork in towns. Local and rather rare. This plant behaves much more like an alien than a native in Berkshire, and is not recorded from any semi-natural habitats. It is long-persistent, however, in some of its locations.

Silwood Park: seedlings in the gravel strip behind CABI on 13 September 2004; this was the first record from Silwood, despite repeated searches. Two rosettes survived to flower in late April 2005; the first was lost before setting seed, but the second, near the western edge of the gravel strip survived repeated rabbit grazing. There were two seedlings near the dead remains of this plant on 1 September

2005. On 22 April 2006 there was one large flowering plant at the very base of the wall plus two much smaller non-flowering rosettes in the gravel nearby which had still not flowered at the end of July 2006. The flowering plant died, but there were three vigorous rosettes in the gravel nearby on 27 August 2006. These were weeded by CABI staff tidying up on 1 September 2006, but by 16 September 2006 a good crop of seedlings had come up as a result of the late summer rains and very high temperatures (we had the warmest September day ever (31°C) this year). These plants thrived and on 1 January 2007 there were 20 large rosettes in gravel at the corner of the CABI building, and one outlying individual in the middle of the building about 20m from the main group of plants. Lots of the plants had been grazed almost flat to the ground on 9 March 2007; grazing continued, such that only the 2 plants closest to the CABI wall were flowering on 20 April 2007 when the Sunninghill plants (below) were in full flower. Still flowering and still heavily grazed on 4 June 2007. There were masses of seedlings in autumn 2007 but many of them had died by January 2008. In a very cool April there were only a handful of surviving seedlings and no flowering plants on 20 April 2008. The population has definitely crashed here, and by 16 May 2008 there were just 4 tiny flowering plants in the original location and 1 medium-sized flowering plant in the middle of the rear wall of CABI, still very few small plants flowering on 24 June 2008. The population was covered over by plastic sheeting for an extended period towards the end of 2008 during building work involved in conversion of the CABI Building to The Hamilton Building (opened 5 January 2009). On 27 February 2009 there were 16 small rosettes in gravel, all along the base of the wall from the corner to the door of the Field Lab. The population came through the protracted snow cover of December 2009 and January 2010 in good condition, and by 12 February 2010 there were 50 rosettes in the gravel beneath the windows of the Hamilton Building. On 1 May 2010 there were two thriving, but spatially distinct populations in gravel to the north of the Hamilton Building: there were 47 small plants in the original (western) bay, with 12 much larger plants in the eastern bay (the bays in between had no plants). Abundant in both these locations in May 2011. There were thousands of seedlings in the very cold March of 2013.

Ascot: locally common in Sunninghill village, especially beneath brick walls on Upper Village Road. There is a large colony on lane sides, centred on the derelict house at No. 21 Exchange Road which has been there since at least 1970. Also in South Ascot. Occasional on the pavement in Bridge road Sunninghill on 2 March 2009. The formerly abundant population in Exchange Road Sunninghill was extant but much reduced in April 2013.

East Berks: Wellington College (1894), Sindlesham, Loddon Bridge, Hurst. Shinfield (**RNG**) in 1955, Sandford House (1962), Woodley (**LAN**) in 1957, Reading [7272] in 1982. Recently from Shinfield Court, central Reading, Sindlesham Mill, Woodley Green, White Swan Lake, Winnersh Station, The Throat, Westcott, Wellington College, Martin's Heron, Shottesbrooke, White Waltham, Long Lane, Warfield Park, Bisham Abbey, Hillgrove Wood, St Luke's Maidenhead, Sheephouse Farm, St Leonard's Hill, Forest Lodge, Boulter's Lock. Common on the banks of the sunken lane from the Aircraft Museum to Sandford Mill [777729] in 2000, and in the car park of Knowl Hill village hall [824794] in 2003. Very local and rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 5% (1km²). Atlas 2000: all except [78]

West Berks: Buscot [29], Inkpen and Kintbury [36], Newbury and Greenham [46], Welford [47], on the steps of the gazebo, and carpeting the ground beneath tall conifers at Kingston Bagpuize House and Abingdon [49], Cumnor and Jarn Mound [40], Hermitage [57], Hagbourne and Blewbury [58], South Hinksey and Kennington [50], Round Oak and Tadley [66], Bere Court, Pangbourne [67]. Atlas 2000: [29], [36], [37], [46], [40], [56], [58], [50], [66]

Geranium robertianum L. *Herb-Robert*

h 5

Hedge bottoms, woodland, wall-tops and shady waste ground; common and generally distributed. One of the three virtually ubiquitous wildflower species of woodland, with *Geum urbanum* and *Glechoma hederacea*.

NVC: M 28; OV 24; W 5,6,8,10,12,21,22,24,25

Silwood Park: surprisingly uncommon; Header House, Sunninghill Crossroads, Cheapside, Kissing Gate, Nash's Copse, Heronsbrook, South Lodge, Buckhurst Road Entrance, Cannon Crossroads, East Lodge, Farm Wood, Water Meadow. The best patch is in the grass at the entrance to Farm Road, opposite Silwood Nurseries. Occasional on gravel around the CABI building and the Header House in May 2004. Very abundant at both edges of the concrete between Greenhouses 8A and 9A on 16 May and still yet to flower on 8 November 2008 at the Header House; a sudden and unexpected increase in this previously uncommon species.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	11

Ascot: very attractive white-flowered plants were common at the edge of Ascot Station car park, on the wall below Platform 1; in full flower on 7 October 2002, 5 June 2003 and 28 October 2009 (when it was the only Herb-Robert present).

East Berks: widespread. White-flowered plants noticed at Earley Heath and Simon's Wood [8163]. 74% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Geranium wallichianum D. Don.

• hs 5

Silwood Park: spontaneous but long persistent in the western shrubbery of the student residence known affectionately as Colditz (actually, 'John Smith Hall'). Our plant is 'Buxton's Variety'; it has big, china blue flowers with a white centre and dark stamens and stigma. It comes true from seed. From 1996-2004, flowering into October in most years.

Geranium phaeum L. *Dusky Crane's-bill*

• hs 5 ↓

Hedges and rough grass near houses; an escape from cultivation.

Ascot: no records. Not in Silwood Park, except in cultivation.

East Berks: very rare. Sonning (1800), Remenham Lane. Crowthorne (LAN) in 1958, Wellington College (1960), Binfield Lodge (1965). <1% (1km²).

West Berks: Boxford [47] in 1918, Frilford [49] in 1960, Stanford Dingley [57] in 1960, Bagley Wood [50] in 1963, naturalized along with white-flowered forms in the grounds of the Old Rectory at Burghfield [6668] in 2004.

¶ **Geranium** *G.* 'Ann Folkard', *G. asphodeloides*, *G.* 'Brookside', *G. x cantabrigiense*, *G. x cantabrigiense* 'Biokovo', *G. x cantabrigiense* 'Cambridge', *G. x cantabrigiense* 'St Ola', *G. cinereum* 'Ballerina', *G. cinereum* 'Laurence Flatman', *G. cinereum* var. *subcaulescens*, *G. cinereum* var. *subcaulescens* 'Giuseppii', *G. cinereum* var. *subcaulescens* 'Splendens', *G. clarkei* 'Kashmir Pink', *G. clarkei* 'Kashmir Purple', *G. clarkei* 'Kashmir White', *G. dalmaticum*, *G. dalmaticum*

'Album', *G. endressii* 'Castle Drogo', *G. gracile*, *G. himalayense* 'Gravetye', *G. himalayense* 'Irish Blue', *G. himalayense* 'Plenum', *G. 'Johnson's Blue'*, *G. libani*, *G. macrorrhizum* 'Album', *G. macrorrhizum* 'Bevan's Variety', *G. macrorrhizum* 'Czakov', *G. macrorrhizum* 'Ingwersen's Variety', *G. macrorrhizum* 'Variegatum', *G. maculatum*, *G. maderense*, *G. x magnificum*, *G. malvijlorum*, *G. x monacense*, *G. x monacense* 'Muldoon', *G. 'Nimbus'*, *G. nodosum*, *G. orientalitibeticum*, *G. x oxonianum* 'A.T. Johnson', *G. x oxonianum* 'Claridge Druce', *G. x oxonianum* 'Hollywood', *G. x oxonianum* 'Rebecca Moss', *G. x oxonianum* 'Thurstonianum', *G. x oxonianum* 'Walter's Gift', *G. x oxonianum* 'Wargrave Pink', *G. x oxonianum* 'Winscombe', *G. palmatum*, *G. 'Patricia'*, *G. phaeum*, *G. phaeum* 'Album', *G. phaeum* 'Lily Lovell', *G. pratense* f. *albiflorum* 'Silver Queen', *G. pratense* 'Mrs Kendall Clark', *G. pratense* 'Plenum Violaceum', *G. pratense* 'Striatum', *G. psilostemon*, *G. psilostemon* 'Bressingham Flair', *G. pyrenaicum* 'Bill Wallis', *G. renardii*, *G. x riversleaianum* 'Mavis Simpson', *G. x riversleaianum* 'Russell Prichard', *G. robustum*, *G. 'Salome'*, *G. sanguineum* 'Album', *G. sanguineum* 'Glenluce', *G. sanguineum* 'Max Frei', *G. sanguineum* var. *striatum*, *G. sessiliflorum* subsp. *novae-zelandiae* 'Nigricans', *G. sylvaticum* 'Album', *G. sylvaticum* 'Amy Doncaster', *G. tuberosum*, *G. versicolor*, *G. wallichianum* 'Buxton's Variety'

Erodium moschatum (L.) L'Hér. *Musk Stork's-bill*
Geranium cicutarium L. var. *moschatum* L.

th 5 ↓

A casual of waste places, very rare.

East Berks: not in Druce. Rare casual at Hurley (1966).

West Berks: First record from Mortimer [6764] in 1891, Round Oak (RNG) [66] in 1891, Abingdon [49] in 1918, Downe House [57] in 1966, The Holt Abingdon [4997] from 1976 to 1980.

Erodium cicutarium (L.) L'Hér. *Common Stork's-bill*
Geranium cicutarium L.
Erodium pimpinellifolium (Curtis ex With.) Sibth.

th 6

Sandy fields, dry arable land, disturbed ground and heaths, bare ground on waysides and wall-tops. Locally common but absent from a large area of the clays and chalk. Exceptionally abundant in 1996 following the great drought of 1995 as a result of competitor release. One of the host plants of the Brown Argus butterfly.

NVC: OV 10,14,20; U 1

Silwood Park: locally abundant in fallows at Ashurst Four Acre Field and Pound Hill, commonest in the May-cultivated plots where it flowers in September and again, pre-cultivation, in May. Particularly abundant on 3 August 2005 when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought; by 30 August 2005 the plant was abundant on Blocks A and B but very rare on Block C and common only in the later-cultivated (western) half of Block D. Waste ground at the Greenhouses. Thin grassland at Church Field and Cemetery Field (where it grew in abundance with *Myosotis discolor* flowering on 15 May 1996 following the 1995 drought) and in Nursery Field. Locally frequent in May 2003 following the pipe-line excavations opposite Little Chef in 2002; probably introduced with the grass seed. There were 3 plants on the grassy triangle at Mill Lane in April 2004. Rare on imported topsoil at the Ashurst lysimeter site in May 2004. Very common on the June-cultivated plots at Pound Hill on 9 July 2009 after the rains finally came. Occasional from the seed bank on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	9

Ascot: very common in the lawn lining the drive up to Charters in summer 2003. Locally frequent, and reaching great size, on the soil heaps associated with building the new grandstand at Ascot Racecourse in September 2005.

East Berks: scattered and infrequent on compacted ground, often in towns (as at Earley Station). 10% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames valley, common in the Northern Loop around Frilford [49], and from scattered stations around [57] but rare elsewhere. Recent records include Beckett Park [28], Faringdon [29], Buckland Copse [39], Benham Park [46], Greathouse Wood [57], Pingewood [66]. Atlas 2000: all except [36], [38], [50], [68], [69]

¶ **Erodium** *E. castellanum*, *E. chrysanthum*, *E. foetidum* ‘County Park’, *E. glandulosum*, *E. guttatum*, *E. x kolbianum* ‘Natasha’, *E. manescaui*, *E. pelargoniiiflorum*, *E. reichardii*, *E. x variabile* ‘Album’, *E. x variabile* ‘Bishop’s Form’, *E. x variabile* ‘Roseum’

¶ **Pelargonium** *P.* ‘Amethyst’, *P.* ‘Apple Blossom Rosebud’, *P.* ‘Atomic Snowflake’, *P.* ‘Attar of Roses’, *P.* ‘Bird Dancer’, *P.* ‘Caroline Schmidt’, *P.* ‘Chocolate Peppermint’, *P. crispum* ‘Variegatum’, *P.* ‘Graveolens’, *P.* ‘Lady Plymouth’, *P.* ‘L’Elégante’, *P.* ‘Lord Bute’, *P.* ‘Mabel Grey’, *P.* ‘Prince of Orange’, *P. quercifolium*, *P.* ‘Rober’s Lemon Rose’, *P.* ‘Sweet Mimosa’, *P. tomentosum*

LIMNANTHACEAE

Limnanthes douglasii R. Br. *Meadow-foam*

• th 6

A frequent garden plant, used for edging perennial beds and growing beneath roses. Self-sowing freely in gardens and often becoming weedy. An occasional garden escape or throw-out, seldom long persistent.

Silwood Park: rare and transient; self-sown on waste ground near the Manor House and on the Science Park in 1998. Not seen since.

East Berks: recently at Mill House, Arborfield Cross, Limmerhill, White Swan Lake, Bracknell, The Holt, Binfield Park, Altmore, Jealott’s Hill, Sheephouse Farm, West Dedworth. 2% (1km²). Atlas 2000: all except [78]

West Berks: between Pangbourne and Purley [67] in 1870 and at Hurst [77] in 1897. An occasional garden escape in West Hagbourne [5187] in 2002. Self-sown to the point of weediness on allotments in Botley [4906] in September 2002. Atlas 2000: [28], [40], [56], [58]

TROPAEOLACEAE

Tropaeolum majus L. *Nasturtium*

• th 6

A common garden annual, often rampant by the end of summer and often thrown out onto tips in autumn. Seldom self-sowing outside gardens. Casual on rubbish tips.

East Berks: not in Druce. Woodley tip (1971-5). Locally frequent on waste ground to the north of Oxford Road in West Reading [7073] and Earley [7571] in July 2002. On waste ground beside the Kennet and Avon canal in Coley [7172] in October 2004. 2% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: Kennington tip [50] in 1953, Didcot tip [59] in 1961, South Hinksey tip [50] and Theale tip [67] in 1965, Burghfield tip [66] in 1974, Eaton Hastings tip [29] in 1978. Urban waste ground in Faringdon [2895], Newbury [4767], Botley [4906] and Abingdon [4997] in 2002. Atlas 2000: [28], [46], [49], [40]

Tropaeolum speciosum Poepp. & Endl. *Flame Nasturtium*

• hp 6

A garden escape, occasionally found growing through hedges in villages, but never far from the garden in which it was planted.

East Berks: not in Druce or Bowen. White Waltham in 1998. <1% (1km²).

Tropaeolum peregrinum L. *Canary-creeper*

• th-hp 6

A garden outcast, casual on rubbish tips. This is the familiar yellow-flowered climber.

East Berks: not in Druce or Bowen. Smallmead tip [7169] in 1971.

West Berks: at Abingdon [49] in 1890 (OXF), Kennington [50] in 1953.

¶ **Tropaeolum** *T. ciliatum*, *T. majus* 'Hermine Grashoff', *T. peregrinum*, *T. speciosum*, *T. tricolorum*, *T. tuberosum* var. *lineamaculatum* 'Ken Aslet'

BEGONIACEAE

Begonia 'Semperflorens-Cultorum Hybrids' *Bedding Begonia*

• th-hp 6

These are the ubiquitous pink or red-flowered bedding plants beloved of municipal gardeners. Often grown in tubs and window-boxes these days. Killed by the first frosts of autumn.

Silwood Park: from spilled seed at Ashurst in 1981, near the Manor House in 1999, and by Southwood Halls in 2002.

East Berks: rare on waste ground from seed, but occasional on tips in Windsor, Maidenhead and Reading.

West Berks: Faringdon church [29], Newbury [46], Thatcham tip [56].

¶ **Begonia** *B.* 'Cleopatra', *B. fuchsoides*, *B. grandis* subsp. *evansiana*, *B. grandis* subsp. *evansiana* var. *alba*, *B. sutherlandii*

BALSAMINACEAE

[*Impatiens noli-tangere* L. *Touch-me-not Balsam*]

This is not a Berkshire plant. On the Buckinghamshire side of the Thames near Henley in Druce's time, but probably introduced even there. Not in Bowen.

Silwood Park: grown by CABI 2005-07 as a screening plant in their efforts to find a biological control agent for *I. glandulifera*. Two potted plants from the Cumbrian native population were planted out by CABI employees amongst *I. capensis* close to Silwood Lake in June 2007.

Impatiens capensis* Meerb. *Orange Balsam
Impatiens biflora Walter

• th 6 ↑

Borders of streams and in wet woodlands. "The presence of this plant is due to its having been planted near Milford Pond in the Earl of Carnarvon's Park at Highclere. From this place it has been carried down the Emborne Stream for many miles, and will doubtless extend into the Kennet. It is a great ornament to the stream as it passes by Greenham Common" (Druce). Locally frequent and increasing. The leaves often bear the white serpentine mines of *Phytoliriomyza melampyga*.
 NVC: W 5

Silwood Park: it forms dense thickets (if an annual plant can be said to form thickets) by recruitment from a long-lived seed bank following scrub clearance. The largest population is in Water Meadow, next to where the Cheapside Footpath crosses the Outflow Stream (1979-2004); the population increased markedly following bramble clearance in winter 1997-98. There is a more or less stable population in swampy alder carr woodland just to the east of Cascade Bridge, where it grows with *I. parviflora* in a clump which has stayed about 10m x 5m since 1980. Locally dominant below the alders at the boundary of Silwood Park, by the outflow stream east of Water Meadow, at Heronsbrook and behind the Cheapside Pumping Station. On the earthen dam of Silwood Lake following removal of the alder trees in 1984; still there in 2004. In Guinness's Thicket following clearance of the oaks and hawthorns in February 1995; much reduced by 1998 by the subsequent growth of *Rubus*, *Holcus mollis*, *Lysimachia vulgaris* and such like. Also in Great Mead, The Willows, Rush Meadow, Farm Road, Guinness's Bridge, Weir Wood, Nash's Copse. Locally abundant in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	4	10

Ascot: by the lake in Blacknest Park in 2001 before the housing development began. Common on the southern and northern shores of Virginia Water, and uncommon around Johnson's Pond. Sunninghill, Sunningdale. There were no species of *Impatiens* at the Marist Convent lake or in Frognall gardens on 24 September 2005.

East Berks: first recorded from the banks of the R. Thames at Old Windsor (**HULL**) on 16 August 1900, by the R. Loddon in 1929 and R. Blackwater in 1965. Now scattered throughout, in wet places in sun or shade. Loddon Mouth, Wargrave Marsh, New Mill Ford, Roundhill, Finchampstead Bridge, Fobney, Kennet Mouth, Reading Marina, Thames Valley Park, Dinton Pastures, Whistley Park, Lands End, Remenham, Moor Green Lakes, Sandhurst, Camberley, Stud Green, Hurley Meadows, Dial Close, Maidenhead, East Maidenhead, Bray Meads, Cock Marsh, Widbrook Common, Cookham, Blacknest Park, Frostfarm Plantation, Oakley Court, Clewer, Great Meadow Pond, Windsor Castle, Home Park, Old Windsor Lock. 9% (1km²). Atlas 2000: all squares

West Berks: first recorded as locally abundant by the Emborne Stream in 1890. An interesting distribution in the Thames downstream from Oxford and in the Kennet downstream from Greenham, but no upstream records until recently. Common south of Reading, but absent from the interior of the region. By R. Thames at Purley [67] in 1936 and Radley [59] in 1950, the R. Kennet in 1954. South Stoke [58] in 1970, Little Wittenham Wood [59] in 1983 and Thatcham [56] in 1984. Local and uncommon at Godstow Lock [485090] and Kennington [527023] on 1 October 2002. By the R. Kennet at [3568], [4266] and [5265] in 2006 (D. Broughton). Atlas 2000: [29], [46], [49], [40], [56], [57], [58], [59], [50], [66], [67], [68], [69]

Impatiens parviflora DC. *Small Balsam*

• th 7

Damp woods, waste ground, gardens, timber yards, shady places and hedge-banks. Locally abundant but absent from the chalk.

NVC: W 5

Silwood Park: this is strictly a woodland species with us, preferring drier parts of the wood than *I. capensis*. Fluctuating in abundance from year to year, but always present around Cascade Bridge and on the Silwood boundary through Cascade Marsh; especially abundant in 1994 and 1998, both in the centre of the swamp and around the edges. Also in Great Mead, The Willows, Farm Road and Nash's Copse. Locally frequent in shady verges at the Buckhurst Road end of Church Lane Footpath. On 15 June 2009 it was dominant all down the boundary between Tetworth and Great Mead, and locally abundant near to Monitoring Post 3 [93959 68992] on the Red Stream in Cascade Marsh.

Ascot: Englemere Pond, Ascot Station, Charters Road, Sunningdale, Blacknest Park, Breakheart Hill, Sunninghill. Locally abundant by the public footpath from the Church at Ashurst to The Wells.

East Berks: first found in 1889. Near Sandhurst in several places, and near Ascot pre-1897. Leighton Park (1956), Whiteknights Park (1959), Woodley (1935), Cookham Church (1958), Bray, Windsor (1960). Scattered throughout in damp woodland and occasionally (as at Whiteknights Park in 1998) in large stands in full sun. Farley Hill, Newlands, Barkham Manor, White Swan Lake, Ashenbury Park, Queen's Mere, Big Wood, Ambarrow, Dial Close, Formosa Court, Cookham Lock. Locally frequent in the *Castanea sativa* woodland on the firing ranges at the Royal Military Academy at Sandhurst and on the dump at Devil's Pound in August 2002. 4% (1km²). Atlas 2000: all except [78], [87]

West Berks: abundant in Pusey Woods [39] pre-1897 where Druce thought it might have been introduced unintentionally with pheasant food. Common in the Thames valley upstream of Abingdon [49] but uncommon and scattered elsewhere. Childrey [38] in 1930, Kingston Lisle [38] in 1933, Long Copse Cumnor [40] in 1940, Bagley Wood [50] in 1946, Sole Common [47] in 1970, Burghfield Common [66] in 1974, Beckett Park [28] in 1981, Moor Copse [67] in 1986, Little Coxwell [29] in 1987, Cumnor Hurst in [40] 2002. Very common in shady parts of the churchyard at Kingston Bagpuize [4098] in 2003. On damp sand in Tubney pit [447006] on 23 September 2006. Atlas 2000: all except [36], [37], [46], [47], [58], [68], [69]

Impatiens glandulifera Royle *Indian Balsam*

• th 7

Impatiens roylei Walp., nom. illegit.

Margins of rivers, streams and ditches, marshes, wet woodlands, damp shady waste ground and rubbish tips. Recorded by Druce as a rare casual alien without a date, it was locally frequent by Bowen's time. Capable of forming impenetrable thickets on riverbanks and damp waste ground in towns; a remarkable achievement for an annual plant.

NVC: W 6

Silwood Park: nationally the commonest of the 3 alien species, but was until recently much the rarest *Impatiens* in Silwood Park. A very late arrival, not recorded until 1993 despite repeated searches since 1979. On 5 October 1993 there were 5 plants on a gravel pot-standing at the Header House, in the rabbit fence surrounding the holding pen for test plants for the CIBC Quarantine Greenhouse used for screening biocontrol agents; plenty of seedlings April 1994. The flower stems were hacked back in summer 1994, perhaps in an attempt to contain the spread, but seed was set on regrowth shoots in October 1995. There were two plants in 1996 but not seen since, and the site is now buried beneath the concrete of the Jiff Greenhouses. At that time, the only surviving population was at Ashurst (6m x 6m) in relatively dry ground in the shade of sycamores behind the garden shed at the end of the car park by the main entrance (1997-2006). On 6 September 2008, the plant was abundant at the southern end of the Ashurst Overflow Car Park, and in light gaps in the surrounding woodland, with a small population on the Silwood side of the fence behind the derelict Ashurst Shed. Since the late 1990s, however, a new population has established on the banks of the Clear Brook where it flows below Graveyard Field near Ashurst. By August 2004 there was an extensive clump on the western bank between the Norway Spruce and the White Willow and a smaller patch further downstream, but there were no plants between the Bamboo Clump and Guinness's Bridge. On the eastern side of the Clear Brook there was a population of about 300 plants in a light gap caused by tree falls at the margin of Rookery Slope. It will be interesting to see how long these populations last and how far they spread. By 1 August 2007 there was a dense population beneath the *Salix alba* spreading all the way to the boundary fence opposite the Churchyard at Ashurst. On 6 September 2008 the population was abundant on both banks of the inflow stream below Rookery Slope with an isolated big patch further downstream on the Church side of the stream. Also, the plant was abundant at the southern end of the Ashurst Park carpark and in light gaps in the surrounding woodland. There was a small patch on the Silwood side of the fence in a light gap behind the derelict Ashurst shed (6 September 2008). The plant had broken out of the woodland into Rookery Slope by 1 August 2009, and there was a thicket of tall plants amongst the fallen oak tree on the edge of the clearing. On 20 September 2009 the plants were right on the edge of the Potassium-only plot of Block A of the Rookery Slope replicate of the NutNet Experiment. On 20 September 2009 there was a single plant in nettles on the edge of the soil dump in The Rookery. The plant had spread right through the swamp and emerged on the other side by 1 October 2009, when the plant lined the Silwood side of the fence all the way along the Graveyard Pasture, and the first plant had colonized the field itself, in nettles half way towards the Graveyard fence. There was a single flowering individual in the Dump in Rookery Copse on 31 July 2011.

Ascot: it was in the garden of Heron's Brook and in the grounds of Sandyride in 1979, both sites just outside the boundary of Silwood Park. It is still locally dominant along the stream from Broomhall Farm down to the railway embankment in Sunningdale [951670]. Occasional at Blacknest Park, and uncommon behind the Sunningdale bowling Club off Whitmore Lane [953678] in 2001. In the stream south of Sunningdale Church [955675] in 2003. Rare at the base of the north-facing wall of South Ascot church in October 2004. There were no species of *Impatiens* at the Marist Convent lake (just upstream from the most recently discovered Silwood population on the Clear Brook) or in Froggnall gardens on 24 September 2005.

East Berks: Aston Ferry. Eversley by the Blackwater (1963). Sandford Mill (1969), Arborfield Mill (1973). Locally dominant opposite Queen's Eyot near Bray in [916783] in 1999-2004. In the stream below the bridge opposite the Three Legged Cross in Warfield [871715] in 2001. Streambanks of The Cut on both sides of the bridge on the northern relief road, west of Quelm Park in Bracknell [866707] in 2001. On the banks of The Cut where it flows next to the M4 Motorway at Beenhams Heath [8575]. In ditches close to the Thames in urban Maidenhead [9081] in 2002. Now scattered throughout. The most spectacular population in terms of plant size (2.2m tall) and population density (impenetrable thickets) is on the banks of the R. Loddon from Sandford Mill through Whistely Park [7873] in July 2002. 15% (1km²). Atlas 2000: all squares.

West Berks: occasional in the Thames, Kennet and Enborne valleys but rare elsewhere, and absent from large areas of the interior. In Bagley Wood [50] and near Padworth Mill [66] pre-1897. East Hendred [48] in 1962, by Marcham Brook [49] in 1963, by R. Enborne below Greenham [46] in 1963, Sutton Courtenay [59] in 1980, Theale [67] in 1983, Buscot [29] in 1987, Hungerford [36] and Woolstone [28] in 1988, Bucklebury [57] in 1990, Wytham [40] and Faringdon [29] in 2002. Sparse near the stream at Foxley Covert [3667] in 2004. Abundant at Able Bridge [561642] in August 2005. Atlas 2000: all except [47], [69]

Impatiens walleriana *Busy Lizzie*
Impatiens sultanii

• h 5

Grown as annuals, these perennial bedding plants used to be favourites for municipal bedding schemes. Still widely planted in private gardens. Occasional as garden outcasts, and sometimes self-sown, but killed by the first winter frosts.

Ascot: flowering on 24 October 2006 in the drain beneath a hanging basket outside the courtyard wall of 86a Upper Village Road in Sunninghill [933678] (a very late autumn, following the warmest May, June, July, August and September on record). Remarkably quick from germination to flowering (the baskets were not put out until late July, and the first seeds were not ripe until September). One flowering individual and several seedlings in the same drain on 1 September 2007, but there were no *Busy Lizzie* planted in the hanging basket in 2007 so evidently these originated from over-wintered seed. A single seedling in the patio drain, inside the front wall to the right of the door on 1 October 2009.

East Berks: uncommon in south Twyford in 1999 and near the R. Thames in Maidenhead [9081] in 2002. <1% (1km²).

West Berks: on waste ground in Abingdon [4997] in July 2002.

¶ **Impatiens** *I. niamniamensis* ‘Congo Cockatoo’, *I. tinctoria*, *I. walleriana* ‘Busy Lizzie’ cultivars

ARALIACEAE

Hedera helix L.

m 9

Hedera helix subsp. **helix** *Common Ivy*

As a climber in woods, hedges and old buildings; frequent except on the chalk downs. Also as a carpeting species, it can form an extremely characteristic community of the woodland floor in which ivy is completely dominant, with close to 100% cover, with occasional *Rubus*, *Ilex* or *Hyacinthoides* poking through. The black aphid is *Aphis hederæ*.

Silwood Park: abundant in the drier parts of the woods, and on walls and buildings; also climbing up ornamental conifers as in the big *Tsuga heterophylla* by the Refectory. It has a curious frequency profile and is very patchily distributed:

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	3	0	10	46

East Berks: widespread and common throughout. 90% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Hedera helix subsp. **hibernica** *Atlantic Ivy*

• m 9

Told by its pale, yellowish brown (not whitish) hairs on the underside of the leaves, which all lie parallel to the leaf surface (i.e. none projecting away from the surface). The leaves are typically bigger than those of Common Ivy (> 8cm diameter) especially in the garden cultivars, and the plants are seldom capable of climbing. The cultivar 'Hibernica' *Irish Ivy* is the most commonly seen as a garden outcast.

East Berks: on the ground on waste land in Reading, Windsor and Maidenhead.

West Berks: on waste ground in Faringdon, Hungerford and Newbury in 1999.

Ornamental ivies (mainly **H. colchica** (K. Koch) K. Koch) are widely used as ground cover in urban landscaping schemes in Bracknell and Reading, and on the Science Park at Silwood, but these are uncommon as bird-sown garden escapes or outcasts.

¶ **Hedera** *H. canariensis* 'Gloire de Marengo', *H. colchica* 'Dentata Variegata', *H. colchica* 'Sulphur Heart', *H. helix* 'Adam', *H. helix* 'Arborescens', *H. helix* 'Buttercup', *H. helix* 'Congesta', *H. helix* 'Conglomerata', *H. helix* 'Dragon Claw', *H. helix* 'Erecta', *H. helix* 'Glacier', *H. helix* 'Goldchild', *H. helix* 'Green Ripple', *H. helix* 'Ivalace', *H. helix* 'Kolibri', *H. helix* 'Little Diamond', *H. helix* 'Midas Touch', *H. helix* 'Oro di Bogliasco', *H. helix* 'Parsley Crested', *H. helix* 'Sagittifolia', *H. helix* 'Sagittifolia Variegata', *H. helix* 'Spetchley', *H. hibernica*, *H. hibernica* 'Deltoidea'

¶ **Kalopanax** *K. septemlobus*, *K. septemlobus* var. *maximowiczii*

¶ **Fatsia** *F. japonica*, *F. japonica* 'Variegata'

¶ **Schefflera** *S. actinophylla*

APIACEAE

Hydrocotyle vulgaris L. *Marsh Pennywort*

h 6

Bogs, lake-sides, marshes, lawns and damp woodland rides on acid soils. Locally frequent, but absent from calcareous soils. Known at once by its hairless peltate leaves.

NVC: M 13,22,24,27; OV 35; S 4,8,12,19,25; W 1,4,5

Silwood Park: very local, in Gunness's Thicket below *Lysimachia vulgaris* at the edge of The Lake. Not seen since 1982.

Ascot: uncommon. On the southern shore of Virginia Water, Tower Hill, Swinley, Englemere, by Sole's Pond below Ascot Station, Johnson's Pond and on Breakheart Hill below the edge of Valley Gardens in damp roadside grass with *Ophioglossum vulgare*. Growing in shade in ferruginous swamp with *Carex curta* beneath *Salix cinerea* in Sunningwell Bog and with *Equisetum fluviatile* in South Ascot Bog.

East Berks: Wellington College, Cookham, Waltham, Bulmarsh, Warren Row, Finchampstead, Hurst Green, Bearwood, Twyford, Cookham, Cock Marsh, Waltham; a floating form occurs in Virginia

Water. In cotton-grass bogs by Wishmoor Stream. Very common as prostrate, ground-hugging plants in lawns on goose-grazed lakesides at Sandhurst. 3% (1km²). Atlas 2000: all except [78]

West Berks: widespread in the Kennet valley and occasional in the Northern Loop, but absent from the interior, north of 75 and south of 95. Wickham [37], Buckland [39], Greenham Common and Craven Hill [46], Snelsmore Common and Sole Common pond [47], Marcham, Frilford and Cothill [49], Wytham, Sunningwell and Boars Hill [40], Fence Wood, Bucklebury and Oare Common [57], Appleford [59], Padworth Common [66]. Atlas 2000: [29], [46], [47], [49], [40], [56], [57], [59], [66], [67]

[Hydrocotyle moschata G. Forst. *Hairy Pennywort* • h 5
Hydrocotyle microphylla Cunn.
Hydrocotyle sibthorpioides Colenso, non Lam.

One of three recent arrivals, commonest in the mild south-west of Britain and Ireland, not yet recorded from Berkshire but worth looking for in lawns and on grassy banks. Told from *H. novae-zeelandiae* by its crenate (rather than serrate) hairy leaves, and its larger fruits (more than 2mm wide vs. less than 1.7mm).

[Hydrocotyle novae-zeelandiae DC. *New Zealand Pennywort* • hs 5
Hydrocotyle microphylla auct., non Cunn.

No Berkshire records yet, but worth looking for in damp lawns and on golf courses. It has hairy serrate leaves and small fruits (1.6mm wide and 1.5mm long).

Hydrocotyle ranunculoides L.f. *Floating Pennywort* • hs 5 ↑

A pernicious alien water-weed from North America, first recorded in Britain in 1990, but spreading quickly. An aquatic (not terrestrial) plant with hairless leaves divided almost half way to the base; the leaves have a deep basal sinus (not peltate like *H. vulgaris*).

Silwood Park: grown in two small experimental water tanks in the open Polytunnel at CABI in April 2004, but not yet found in the open.

East Berks: no records from the wild so far, but it was being cultivated in open-topped tanks at the University of Reading's Aquatic Research Centre by the R. Thames at Sonning in 1999 [760758].

West Berks: first record from the wild in September 2001, 'choking' Great Coxwell pond [268939]. Also in Drayton Millennium Green pond [480945] (**OXF**) in autumn 2001.

Sanicula europaea L. *Sanicle* hr 5

Beech woods, dry oak woods, thickets and bushy places, mostly on calcareous soils; absent from the northern clays and much of East Berkshire. Druce's statement is curious, and it is not clear whether he really meant it when he wrote "abundant throughout the county except in the pinewoods". It is now uncommon to rare, except in the best of the surviving chalk woodlands. It may be a victim of eutrophication and acid rain.

NVC: W 8,10,12

Ascot: no records.

East Berks: scattered and uncommon except on the chalk in the Thames valley. Absent from the interior and the east. Recently at Remenham Wood, Highlands, Park Place, Culham Court, Rosehill Wood, Kiln Green, Scotlands, Temple Park, Dungrovehill, Temple Golf Course, Quarry Wood, Park Wood, Ashley Hill, Maidenhead Thicket, Inkydown Woods, Pinkneys Green. Most of the records are from [88] and there are no recent records to the east of 90. 3% (1km²). Atlas 2000: [76], [77], [78], [86], [87], [88]

West Berks: widespread and locally frequent, but generally uncommon; rare or absent on the northern clays (north of 90 and south of 00). Shrivenham [28], Woolstone, Sparsholt and Kingston Lisle [38], Kitemore Copse [39], Lockinge [48], Steventon, Milton and Tubney Wood [49], Wytham Wood and Appleton Lower Common [40], Bagley Wood and Radley Large Wood [50]. Particularly common on shady banks in Fence Wood [5171] in 2002. Atlas 2000: all except [68], [69]

Astrantia major L. *Astrantia* ● hs 5

A universal herbaceous border plant, self-sowing in gardens but very rarely escaping and uncommon but locally long-persistent as outcasts.

East Berks: a garden outcast in Bisham [8585] in 2002.

West Berks: Enborne [46] in 1833 and at Cleeve Court Streatley [597814] in 1963 (RNG). On waste ground near the industrial estate in Newbury [4767] in 2002. At Kingston Bagpuize [4098] in 2003 and Buscot Weir [2298] in 2004.

¶ **Astrantia** *A. carniolica*, *A. major* ‘Buckland’, ‘Claret’, ‘Lars’, ‘Sunningdale Variegated’, *A. maxima*.

Eryngium campestre L. *Field Eryngo* ○ hs 7 †

A *Red Data Book* species, restricted to three seaside grasslands in Devon, but now considered to be an alien. It is a common contaminant of continental European seed mixtures, however, and can spring up as a casual after reseeding. Worth looking out for on roadside landscaping schemes and other places where foreign seed might be used.

West Berks: casual in a field by the railway at Hermitage [57] in 1934 (det. W.H. Pearsall).

Eryngium giganteum M. Bieb. *Tall Eryngo* ● hs 7

West Berks: two flowering plants on disturbed stony ground on Greenham Common [50701 64371] found on 8 July 2005 by Ron Porley, growing with *Dipsacus laciniatus*.

Eryngium x tripartitum Desf. ● hs 7

A popular garden plant with blue stems and small, metallic blue flower heads.

East Berks: on waste ground at Whitley [7270] in August 2003.

¶ **Eryngium** *E. agavifolium*, *E. alpinum*, *E. amethystinum*, *E. bourgatii* ‘Oxford Blue’, *E. eburneum*, *E. giganteum* (formerly ‘Miss Willmott’s Ghost’), *E. horridum*, *E. x oliverianum*, *E. planum*, *E. x tripartitum*, *E. variifolium*, *E. yuccifolium*, *E. x zabelii*

Anethum graveolens L. *Dill*

• th 6

Grown in herb gardens, but no longer much used in bottling or pickling. Very rare as an outcast or self-sown from discarded seed.

West Berks: waste ground on the outskirts of Oxford [40] on the Berkshire side of the Thames in 1999.

Cuminum cyminum L. *Cumin*

• th 6

Occasionally grown in herb gardens and rarely found on waste ground from discarded seed.

East Berks: waste ground in Reading in 2000.

Chaerophyllum temulum L. *Rough Chervil*

hs 6

Chaerophyllum temulentum L.

Thickets, hedge-banks, and wood margins; occasional and absent from acid soils in south-east Berkshire. Told from the much earlier-flowering *Anthriscus* by its roughly hairy, solid (not hollow) stems, and its longitudinally ridged fruits. The whole plant is pinkish in colour as the foliage dies back in summer. Leaves have irregular serpentine mines of *Phytomyza chaerophylli*.

NVC: MG 1; W 24

Ascot: local and rare. Charters Road, Blacknest Road, Frostfarm Plantation. Not in Silwood Park.

East Berkshire. an interesting distribution, occasional to the north and west of a line from Maidenhead to Arborfield, absent or rare to the south and east. Recently from the Courage Brewery by the M4, Highgrove Copse, Whitley, by the M4 at Earley, Upperwood Farm, Greenacres, Arborfield, Hall Farm, Newlands, Reading Station, Maiden Erleigh, Ashenbury Park, Dinton Pastures, Remenham, Temple Coombe, Crazies Hill, Heath Ride, Coalpit Copse, Heath Pond, Heath Lake, Pockets Copse, Amen Corner, Charity Wood, Burdows Farm, Castle Royle Golf Course, White Waltham, Fernygrove Copse, Chawridge Bank, Mount Skippet, Old Beams, Hurley, Ashley Hill, Holloway, Stubbings, Temple Golf Course, Cookham Dean, Hillgrove Wood, Winter Hill, Brook Farm, Fifield, Bray Court, Oakley Green, St Leonard's Hill. 10% (1km²). Atlas 2000: all squares.

West Berks: widespread, but uncommon in the far north-west [28] and [29]. Locally frequent along the Ridgeway as at Segsbury Camp [3884]. Atlas 2000: all except [37], [69]

Anthriscus sylvestris (L.) Hoffm. *Cow Parsley*

hs 4 ↑

Cerfolium sylvestre Bess.

Chaerophyllum sylvestre L.

Hedges, waysides, fields, shady places, woods, plantations, thickets; abundant and generally distributed in rich moist soil. The commonest and most conspicuous umbellifer, and the first into flower. Much increased in recent years. Now dominant over much of the county in eutrophic verges where fertiliser has drifted from adjacent fields. It forms a tall community containing few (if any) low growing wildflowers. Recruits from seed most frequently in years following severe summer drought, when the dominant grasses have been knocked back. Leaves have irregular serpentine mines of *Phytomyza chaerophylli*.

NVC: MG 1; OV 24-27; W 8,10,12,24

Silwood Park: common in roadside verges opposite Knight Frank on London Road, and on grass paths at Ashurst and Guinness's Bridge. Sunninghill Crossroads, Ashurst Church, Cheapside, Cannon Crossroads. It has not recruited onto the limed, fertilised plots in Nash's Field during the first 20 years (1991-2011), perhaps because the soil is too freely draining; it is abundant on the limed plots receiving N, P and K in the Park Grass Experiment at Rothamsted, v.c.20 Hertfordshire.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	18

East Berks: the second most frequent umbellifer (after *Heracleum sphondylium*), found in 88% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Anthriscus caucalis M. Bieb. *Bur Chervil* th 5 ↓
Cerefolium anthriscus Beck
Anthriscus vulgaris Pers., non Bernh.
Anthriscus neglecta Boiss. & Reuter ex Lange
Anthriscus scandicina (G. Weber) Mansf., nom. illegit.

An elegant plant, preferring dry sandy soil, and found in bare places in dry grassland, arable fields, limestone walls, waysides and dry hedge-banks; local, rare and sporadic. It has small fruits (< 5mm) covered in hooked bristles.

Ascot: no records. Not in Silwood Park.

East Berks: Marlow, Saunder's Lane, Wokingham, Earley Court Park. Reading Abbey (**RNG**), Woodley. <1% (1km²) Atlas 2000: [77]

West Berks: occasional in the Northern Loop and on the Golden ridge (north of 95 and west of 50). Faringdon [29], Stanford-in-the-Vale, Southmoor, Longworth pit, and Buckland Warren [39], Sutton Wick, Drayton (**OXF**) in 1977, Frilford, Frilford Heath golf course, Marcham, Abingdon and Cothill [49], Dry Sandford and Farmoor [40], Hermitage [57], perhaps extinct at Radley (**RNG**) [59], Newbury [46], Southcote [47]. Atlas 2000: [29], [36], [39], [49], [40], [57]

Anthriscus cerefolium (L.) Hoffm. *Garden Chervil* • th 5 ↓
Cerefolium sativum Bess.
Scandix cerefolium L.

A rare casual of waste ground; told from *A. sylvestris* by the well differentiated beak on its elongated, hairless fruits and by its pubescent rays. The crushed foliage smells of aniseed and Persil.

Silwood Park: very local and rare as an outcast. A single individual amongst nettles on a soil heap by the entrance to the CABI Polytunnel on 5 June 2005. Five plants in the same place on 17 May 2006, and many very small fruiting plants on 26 August 2007 beneath the nettles.

East Berks: hedge near Windsor, probably from a garden (1805). Bray and Cookham (1918). Whiteknights Park [77] in 1945. Atlas 2000: no records.

West Berks: Kintbury [36] in 1957. Atlas 2000: [36]

Scandix pecten-veneris L. *Shepherd's-needle*

○ th 4 ↓

Formerly a weed of heavy calcareous arable soils that dry out in summer, but now almost eradicated by herbicide use. Sometimes almost the only weed species, but in other places part of a diverse community with *Kickxia elatine*, *Papaver argemone*, *Legousia hybrida*, *Petroselinum crispum*, *Ranunculus arvensis* and *Valerianella dentata*. In Druce's time it was "very common and generally distributed. Cornfields, too frequent (1809); everywhere about Marlow (1843)". By Bowen's time it was "locally frequent but decreasing. Sonning (1963)". It is now scarce in Britain.

NVC: OV 15

Ascot: no records.

East Berks: local and rare: at the edge of a cornfield north of Drift Road [891753] (1979-2007); the pub next to the site (known locally as The Cider House) burned down under mysterious circumstances in 1998, and was eventually replaced by two new detached houses. Mount Skippet. Formerly in Reading (RNG) in 1831, Maidenhead (HULL) in 1923, Sonning (RNG) in 1963. <1% (1km²). Atlas 2000: [77], [87], [88]

West Berks: a curious central distribution, absent from the Kennet valley and rare in the Thames valley. Fair Mile [58] in 1968, Didcot (RDG) [59] in 1939, Tilehurst (LAN) [67] in 1956. Aston Upthorpe Downs [550844] in 2002. Atlas 2000: [28], [36], [38], [39], [48], [57], [58], [50], [67]

Scandix stellata Banks and Sol.

● th 5 †

Scandix pinnatifidum (Vent.) Thell.

West Berks: a rare bird-seed casual found by Druce on rubbish tips at Grandpont [50] in 1892.

Myrrhis odorata (L.) Scop. *Sweet Cicely*

● hs 5 ↓

Scandix odorata L.

Another of those aliens that is much commoner in the north of England and in Scotland, presumably because the climate of Berkshire is too dry (*Epilobium brunnescens* and *Mimulus guttatus* are others). Much grown in herb gardens for its wonderfully aniseed-scented leaves, but seldom escaping. Its seeds have the distinction of being the largest of any British herb (at 35mg, only a few tree seeds are heavier).

NVC: MG 1

East Berks: no records.

West Berks: a rare casual or garden escape. Purley (RDG) [67] in 1927, in a farm gate at South End [57] in 1953, in an abandoned garden at Hyde End Mill [56] in 1987. Atlas 2000: [28], [56], [57]

Coriandrum sativum L. *Coriander*

● th 6 ↑

A very popular garden herb, much used in the flavouring and garnish of curries. The seeds are harvested in late summer for use as spice and flavouring. Formerly grown as an aphrodisiac. An occasional garden escape and a frequent culinary outcast on tips. Fresh coriander has been sold in supermarkets since about 1985.

East Berks: not in Druce. A rare casual of rubbish tips. Woodley (1934) (**RNG**), Smallmead tip (1969). <1% (1km²).

West Berks: Cothill [49] in 1907, Bradfield [67] in 1916, Bradfield [589722] in 1988 (**RNG**).

Smyrniololusatum L. *Alexanders*

o hs 4

Hedge-banks, roadsides and gardens near houses. Rare, but persistent. This is an alien with a very interesting distribution in Britain; it is locally dominant on lane-sides, banks and cliffs on many parts of the coast but almost never extends more than a few kilometers inland. It is increasingly common inland in south-western Britain, but it is certainly not increasing rapidly in Berkshire at present.

NVC: OV 24

Ascot: long persistent north-west of the Peanut Roundabout [935721] despite annual mowing; it grows on the western verge of the B383, about 200m beyond the north-west exit from the roundabout, under overhanging trees. It is conspicuous in years when the verge is mowed sufficiently late to allow it to flower, as on 14 April 1998, 20 April 2000 (it was cut early in 1999) and 10 April 2001. The single clump is long-lived but not spreading, presumably because it is always mowed before it ripens its seed. It grows here with *Petasites japonica*, another uncommon alien.

East Berks: Druce knew the plant from Windsor Castle, but Bowen could not find it there. Sonning Halt in 1953, Reading in 1960, Ruscombe in 1964, on the railway at Berkeley Ave., Reading in 1952 and 1976. These populations had gone by 1990. Finchampstead, by the church [7963] in 1999. 1% (1km²). Atlas 2000: [76], [97]

West Berks: very local and rare, but in abundance in lanes near Southcote [67] pre-1897, and again in 1953 and 1987. Ufton Nervet [66] in 1962 (still there in 2001 on the lane side, and dominant in a corner of the churchyard), Bradfield [67] in 1963, Calcot (**LAN**) [67] in 1956, Aldermaston [65] in 1959, Didcot [59] in 1976. On the riverside path where the Pang flows through Moor Copse [67] in 2002. Atlas 2000: [46], [66], [67]

Smyrnioperfoliatum L. *Perfoliate Alexanders*

• hs 5

An excellent garden plant for dry shade, after earlier-flowering species like hellebores, primrose and snowdrops have given up. It has brilliant lime green foliage, and people sometimes mistake it for a *Euphorbia*. A short-lived monocarpic plant, it self-sows freely 3 years after the seeds are sown. Abundantly naturalized in Kew Gardens, just down the river from us, where it forms dense clouds of golden yellow amongst the bluebells in open woodlands (they regard it as a weed). It does much less well in Berkshire, but it is frequent in the woodland garden at Wisley (just over the Surrey border).

East Berks: very local and rare, on open ground in a woodland at Farley Court [7564], where it has been for many years in fluctuating numbers; still there in 2004. <1% (1km²). Atlas 2000: [76]

West Berks: self-sown in the grounds of the Old Rectory at Burghfield [6668] in 2004.

Conopodium majus (Gouan) Loret *Pignut*

g 5

Bunium majus Gouan

Oak woods, thickets, hedges, heaths, and grassland as a woodland relict (as *C. denudatum*); locally frequent, but absent from the northern clays.

NVC: MG 1,5,9; OV 24; U 20; W 8, 10, 25

Silwood Park: Sunninghill Crossroads, on the shady bank of Farm Road (greatly reduced since 1980 as the shade from overhanging trees has increased), Pound Hill Wood, in U1 grassland at Gravel Pit, and in less acid soils in Water Meadow, Cheapside, Ashurst graveyard, Mann's Copse, on top of the earthen bank of The Lake with *Viola riviniana*, in the rabbit-fenced margins of the Pound Hill fallow experiment, in the New Chalk Plots and in the edge of Ashurst Four Acre Field, very local in Nash's Field (it is common only in the fenced part of Block K). This species illustrates a highly aggregated distribution, and is present in a greater proportion of 1000m² samples than in the larger hectare plots. Rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a few scattered plants on 27 May 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	10	7

Ascot: in the woods opposite Ascot Station, Johnson's Pond, South Coworth, Breakheart Hill. Especially common in mown churchyards, as at Sunningdale and South Ascot.

East Berks: scattered, but locally frequent; Great Copse, Farley Court, Arborfield, Fleet Copse, Finchampstead, Ruscombe, Twyford, Wokingham, Easthampstead, Bracknell, Swinley Park, Martins Heron, Ashridge Wood, Ockwells Manor, Warfield, Summerleaze Lakes, The Orangery. Occasional south of 75 but rare to the north of this except for a few Thames side locations. 10% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys but absent or rare north of 85 and south of 95. Atlas 2000: all except [68], [69]

Pimpinella major (L.) Huds. *Greater Burnet-saxifrage* hs 6 ↓
Pimpinella saxifraga L. var. *major* L.

Oak woods and thickets on clay soils; local and decreasing, confined to north Berkshire. Told by its hollow stems and larger fruits (3-4mm not 2-3mm).
 NVC: MG 1

East Berks: extinct at its only site. It was very local at Wargrave in Druce's time.

West Berks: Appleton Lower Common and Wytham [40], and extinct at Ashridge Wood [47], Ilsley [48], Cumnor [40] and Burghfield [66]. There is a field record from Hid's Copse [40] in 1985. Atlas 2000: [40]

Pimpinella saxifraga L. *Burnet-saxifrage* hs 7

Chalk downs, dry pastures, ancient grassland, roadsides and railway banks; locally frequent on calcareous soils, rare or absent on acid soils.
 NVC: CG 2-5; MG 1,5,6

Silwood Park: very local and rare. Drive Field, a few plants inside a tiny (1m x 1m) rabbit enclosure on the edge of the paved Pollution Pad, flowering freely on 25 August 2000. Probably introduced with turves from chalk grassland during air pollution experiments in the late 1980s. Sown in 1996 in the Oak Mead Experiment, but by June 2007 there was just one plant surviving on the uncultivated, grazed Block E (plot IIIc).

Ascot: no records except for the introduced plants at Silwood.

East Berks: occasional in the north and west, but absent or rare to the south-east of a line from Windsor to Arborfield. Stanford End in the Fritillary meadow, Arborfield Court, Twyford, Sheeplands Farm, Temple Coombe, Crazies Hill, Cockpole Hill, North Hanworth, South Hill Park, Ashridge Wood, Binfield, Woodlands Park, West End, Warfield Church, Warfield Park, Nuptown, Chawridge Bank, Hurley, Temple, Bisham, Maidenhead, Holyport, Pinkneys Green, Winter Hill, Cock Marsh, Cookham, meadows at the western end of Windsor Racecourse, ancient grasslands in Windsor Great Park like Stag Meadow and Copper Horse. On disturbed waste ground in Bracknell [8569] in October 2003, and in cracks in pavements on Market Street, Bracknell in February 2004. 7% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [69]

Pimpinella anisum L. *Aniseed*

● hs 5

Grown in herb gardens for its scented foliage, it only ripens seed in the longest summers and hence is seldom found as a garden escape. It does come up from discarded seed, however, and can be found on pathsides and tips on allotments.

East Berks: Reading (1989), Windsor (2000).

West Berks: Hungerford in 1997.

Aegopodium podagraria L. *Ground-elder*

○ hs 5

A pernicious weed of herbaceous borders in gardens, woodland edges, hedgerows, waysides, ditch-banks and disturbed waste ground in towns; rather common and generally distributed. “The deep-running, brittle roots, the least fragment of which will grow, render it very difficult of extirpation” (Druce). Least common on the chalk. Allegedly introduced as a pot herb, but much better thought of an excellent, weed-suppressing ground cover plant. If you are less prone to self-delusion than this, you can always clear it with several doses of glyphosate, so long as you are willing to sacrifice everything else in the bed and put up with bare ground for a whole year or more (don’t try to rescue perennials from infected areas, because you will only reintroduce ground-elder which hides as tiny fragments amongst the roots of the valued specimens). Curled leaves house nymphs of the black aphid *Aphis podagrariae*.

NVC: MG 1; W 10

Silwood Park: an interesting distribution, in almost a quarter of the hectares, but so local that it appears in none of the smaller samples. Not found in any of the natural habitats, always close to buildings, and commonest on roadsides on the periphery of the estate. Sunninghill Crossroads, Cheapside Village, Ashurst Church, Old Orchard, Silwood Farm, Tractor Sheds, South Lodge, dominant in the ditch of London Road between Knight Frank and Crossways, Cannon Crossroads, East Lodge, shady verges on Buckhurst Road, dominant on the banks of the stream where it passes the Walled Garden, locally abundant on the Pot Stand at The Greenhouses.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	22

Ascot: dominant over substantial areas of the woodland on South Ascot Bog [9267]. Common in Frognall [940681] and by London Road in the fence of the Marist Convent [941682] in September 2005.

East Berks: often in hedgerows and woodland edges, 70% (1km²). Of the umbellifers, only *Heracleum* and *Anthriscus* are more frequent. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Sium latifolium L. *Greater Water-parsnip*

hel 7 ↓

River-, brook- and canal-sides on nutrient-rich mud. A local speciality, now enormously depleted by river traffic and bank-side development. Druce considered the plant to be “locally common, occurring at intervals all along the Thames”. By Bowen’s time it was “mostly in the Thames valley where it is local, rare and decreasing”. Now it is just plain rare. Riverside bays, protected from boat waves, need to be constructed to grow this and other bulky aquatic rarities.

NVC: S 4,18

East Berks: Reading, in the largest pond at the foot of Cookham Down, ditches by the Thames at Maidenhead, Wargrave, Sonning, Aston, Windsor (1805), very fine near Bolney and Shiplake. Owlsmoor (1963) and Cock Marsh (1956); confined to the Thames with one outlying site at Broadmoor; extinct at 5 out of its 7 sites. <1% (1km²). Atlas 2000: [88]

West Berks: confined to the Thames, and extinct at all but a handful of its original sites. By the canal near Wantage and Uffington [38], north of Harrowdown Hill [30], Marcham and very luxuriant at Abingdon [49], ditches by Radcot Bridge in 1805, Appleton, Harts Weir, Newbridge and the ditches below Wytham [40], ditches on Blewbury Common and Moulsoford [58], Radley, Culham, Sutton Courtenay and Wittenham [59], Kennington [50], Pangbourne (**RDG**) in 1926, Tilehurst, Sulham Woods (**RDG**) in 1930 and Tidmarsh [67], Wallingford [68]. Bowen had records from Wytham Meads [40] and Donnington Bridge [466687] in 1969. The best place to see the plant these days is just south of the Thames in Wytham Meads Ditches, centred on [465098], where there were four groups of plants in 2004, growing with *Oenanthe fistulosa*, *Samolus valerandi* and *Hottonia palustris*. Susan Erskine counted 15 flowering plants from Hagley Pool ditch [470450] on 8 August 2005. There were 51 plants in the ditch by Hagley Pool at Wytham on 7 August 2006 growing with 24 plants of *Ranunculus lingua*. The floods of July 2007 had a serious impact but in 2009 there were 49 plants in 2009 of which 36 were flowering. There were 24 flowering plants in 2012 (Alison McDonald). Atlas 2000: [49], [40], [67]

Berula erecta (Huds.) Coville *Lesser Water-parsnip*

hel 7 ↓

Sium erectum Hudson

Siella erecta (Hudson) Pim., nom. illegit.

Ditches in water meadows, especially in the Thames valley. Druce thought it “rather common and widely distributed”, but Bowen had it as “occasional, clearly much less common than formerly”. Told from *Apium nodiflorum* by the presence of a ring mark on the petiole, some way below the lowest pair of leaflets, and from *Sium latifolium* by the much smaller fruits with less pronounced ridges.

NVC: A 2,3,17; M 22; OV 26,30,32; S4,S5,S12,S23,S25; W 5

Ascot: no records.

East Berks: Shiplake, Wargrave, Windsor, Jouldern’s Ford, Coleman’s Moor, Twyford, Ruscombe, Shurlock Row, Earley, Wokingham, Waltham, Wellington College. Rare by the Thames with scattered outlying records by the R. Loddon in Earley [758697] in 1977. Recently at Aston, Widbrook Common and Shepherd Meadow. <1% (1km²). Atlas 2000: all except [78], [86], [96]

West Berks: recent records include a pond at Beckett Park, Bourton and Shrivenham [28], by the R. Ock from Watchfield to Little Coxwell [29], water meadows at Hungerford [36], R. Lambourn at Lambourn [37] and Hunts Green [47], Grove [38], by the Thames at Buckland Marsh and by R. Ock [39], water meads at Boxford [47], the canal at Aldermaston [56], North Farm [59], in the R. Pang at Pangbourne [67]. Atlas 2000: all except [48], [57], [50], [66], [68], [69]

Oenanthe fistulosa L. *Tubular Water-dropwort* hel 7 ↓

Wet ditches, riverside meadows, marshy fields, pools; rather local. Fond of still or stagnant water and often associated with *Hydrocharis*, *Lemna*, *Callitriche obtusangula* and *Stellaria palustris*. Told from the other *Oenanthe* species by its petioles which are longer than the divided part of the leaf, and by the globose ultimate clusters of ripe fruits.

NVC: MG 13; OV 29; S 4,23

Ascot: no records.

East Berks: in water meadows and by ditches in the Thames Valley; ponds at the foot of Cookham Down (this is the Cock Marsh site), Sandhurst, Culham, Aston, Hurley, Wargrave, Sonning, White Waltham, Coleman's Moor, Ruscombe, Twyford, Windsor Park, Old Windsor, Bisham. Bowen thought it "more frequent than the foregoing records suggest". Remenham, Pond Wood, Maidenhead, Cookham, the Fritillary field at Stratfield Saye [705633]. Recently from Shiplake, Loddon Court, Dinton Pastures, Crazies Hill, Cock Marsh, Widbrook Common. There is an outlying recent record from Blackwater meadows at Sandhurst. 1% (1km²). Atlas 2000: all except [86], [96], [97]

West Berks: occasional in the Thames valley and rare in Kennet valley: Compton Beauchamp [28], Radcot Bridge, St Johns Lock, Little Coxwell and Longcot [29], Radcot Lock [295002], Hungerford, in a tiny triangular wet meadow east of Denford Mill [352683] and north of the bridges on 5 July 2008, Frilford, Marcham Church [452968], Barrow Farm and Drayton [49], Wytham ditches, Newbridge and Swinford [40], Radley [59], Streatley and Cholsey [58], Clifton Meadow and Little Wittenham reserve [59], Iffley meadows and Kennington pool [50], Pangbourne (RDG and LAN) and Theale [67], Wallingford [68]. Atlas 2000: all except [37], [38], [47], [48], [57], [68], [69]

Oenanthe silaifolia M. Bieb. *Narrow-leaved Water-dropwort* hs 6 ↓

Wet, low-lying water meadows cut for hay; very local and rare by the R. Thames (close to extinction, if not extinct already). Fruits less than 4mm and bracts usually absent. Rays thick (>1mm at maturity) and stems hollow and straw-like.

NVC: S 23

East Berks: no records (the old record from Eton was on the Buckinghamshire (v.c.24) side of the river).

West Berks: pre-1897 records from Binsey (OXF), Eynsham meads and Wytham Meads (OXF) [40], Kennington (OXF) [50], Pangbourne [67]. The only post-1950 record is from Newbridge (OXF) [40] in 1966. Worth a careful search of Wytham Meads in June. Atlas 2000: [40]

Oenanthe pimpinelloides L. *Corky-fruited Water-dropwort* hs 6 †

East Berks: commons and rough ground on clay. A single plant on a stabilized dump in Reading [734739] in 1985 (RNG). Site bulldozed in 1988. Atlas 2000: no records.

Oenanthe lachenalii C.C. Gmel. *Parsley Water-dropwort*

hs 6 ↓

A local speciality of rough water meadows, marshes by ponds on clay, fens and bogs, very local. Told from *O. pimpinelloides* by its unthickened rays and pedicels less than 0.5mm thick, and from *O. silaifolia* by the presence of bracts.

NVC: M 13,22; S 4,25

East Berks: no records.

West Berks: St Johns Lock [29], Buckland [39], Frilford Heath, Cothill fen (LAN), meadows by Noah’s Ark Inn, and Barrow Farm fen [49], from the saline spring at Marcham (RNG) [49] in 1962, Purley (RDG) [67] in 1926. Still at 3 sites around Cothill. Atlas 2000: [49], [40], [59]

Oenanthe crocata L. *Hemlock Water-dropwort*

grt 6 ↑

Our most conspicuous and common plant of ditches and streamsides. Often clogging ditches with plants so large that they collapse under the weight of their own stems. Also abundant on the margins of streams and ponds, and in wet woodland. It is interesting that in a genus where most of the species are declining or already extinct, another species should be thriving so flamboyantly as this. “Its distribution in Berkshire is very peculiar, being absent from the Upper Thames and its tributaries from Lechlade as far as Wallingford. Neither is it found by the Ock stream, although present in a single locality at Hagbourne in the Ock District. On the north side of the Kennet it is local, but extends up the Lambourn nearly to the village of that name. On the south side on the Kennet and through the greater portion of the Loddon district it is too abundant to need mention of its localities” (Druce). Rare or absent on the chalk. This is a classic example of a species whose geographic range is stable but which is increasing in abundance within that range (see also *Anthriscus sylvestris*).

NVC: M 27; MG 10; S 3,4,6,14,26,28; W 5,6

Silwood Park: locally dominant on the margin of The Lake on the Farm bank, on the sedimented inflow both upstream and downstream of Gunness’s Bridge, upstream in The Marsh, and in The Willows, Weir Wood and by Farm Road.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	4

Ascot: frequent and locally abundant on both shores of Virginia Water, and occasional on the shaded shores of Johnson’s Pond. Dominant in the ditches of the B383 past Sunninghill Park [945704], Kings Beeches, Charters Road, Johnson’s Pond, Breakheart Hill, Frostfarm Plantation, North Ascot, Ascot Place, picking out the boundary of the clay.

East Berks: widespread, but least frequent on the chalk. Common by the R. Thames at Windsor Racecourse, and in the clay country [87] (Plate 6). There are big gaps in its distribution; for example, it is absent from [88] except along the R. Thames itself (as at Hurley), from those parts of [78] to the north of the Walthams, and from the south-east quarter of [86]. 46% (1km²). Atlas 2000: all squares

West Berks: restricted to the south of 75; absent from the Thames valley, and from the northern clay and the chalk. Common by the R. Lambourn, as at Welford Park [4073] and by the R. Enborne south of Newbury [4764]. By the R. Kennet at [3568], [4266], [5265] and [5666]. Berkshire is right on the edge of its distribution within Britain. Atlas 2000: all except [28], [38], [48], [49], [40], [58], [50], [68], [69]

Oenanthe fluviatilis (Bab.) Coleman *River Water-dropwort*
Oenanthe phellandrium Lam., nom. illegit. var. fluviatilis Bab.

hyd 6

A species of fast-running streams and rivers, often growing in chalk streams with *Ranunculus penicillatus* subsp. *pseudofluitans*, where it forms large cylindrical masses; avoiding stagnant water. Druce found it “abundant in shallow places in all our larger streams. Too abundant and generally distributed to need enumeration of the localities” but it was much reduced by Bowen’s time, and is no longer abundant in the Thames. Records for the Scare Plants Atlas were commoner in urban and suburban rivers than in agricultural areas. Like *O. aquatica* but its fruits are larger (more than 5mm), but this is a shy flowerer, so it is best identified on leaf shape (both the submerged and the aerial leaves are broader, the latter much less parsley-like than in *O. aquatica*).

East Berks: below Loddon Bridge in Earley (RNG) [7671] in 1932; Smallmead [7169] in 1972. <1% (1km²). Atlas 2000: [76], [77]

West Berks: all but restricted to the R. Kennet and the adjoining canal, with outliers from the R. Cole at St John’s Lock, Lechlade [2298], and the Northern Loop at Abingdon [49], Kennington [50], by the Thames opposite Mapledurham (RNG) in 1923 and Pangbourne [67]. Hungerford and Kintbury [36], Newbury and Hamstead Marshall [46], Thatcham (RNG) [56], Stanford Dingley [57], Aldermaston Wharf [66], Theale (LAN) and Holybrook [67]. There are 1991 records from Holy Brook [694715]. Much reduced. Atlas 2000: [46], [40], [56], [50]

Oenanthe aquatica (L.) Poir. *Fine-leaved Water-dropwort*
Phellandrium aquaticum L.

hyd 6

Cattle trampled, stagnant ponds on nutrient-rich mud in sun or partial shade; local in small quantity and decreasing (as *Oe. phellandrium*). This is a robust, upright plant (not a floater) with filiform submerged leaves; its umbels are leaf opposed (like *O. fluviatilis*) but its fruits are small (less than 4.5mm). Leaves attacked by the beetle *Prasocuris phellandrii*.
NVC: A 11; S 23

East Berks: ponds at the foot of Cookham Down in 1843 (this is now known as Cock Marsh, and the plant was still there in 2004), Bulmarsh, Windsor, Wargrave, Ruscombe, Whiteknights Park, Remenham, Broadwater, Waltham, Shottesbrooke, abundant at Coleman’s Moor, Hurst, Winkfield, abundant in a wood between Shurlock Row and Shottesbrooke, near Henley. Ruscombe, Cock Marsh, Thrift Wood, Twyford pit, Ruscombe. Rare and declining. Widbrook Common. Scattered in the Thames valley, absent or extinct elsewhere. Recently seen in a small, part-shaded pond in the eastern arm of Beenham’s Copse at Binfield [857741] in 2000, and frequent in the shady pond on Long Lane at [878758] in 2002. Found by Sarah Gorman on 18 May 2006 in a heavily shaded pond at Great Park Copse [6845 6599]. 2% (1km²). Atlas 2000: [77], [87], [88]

West Berks: restricted to the east. Lockinge Park lake [48] in 1979. Beech Hill and Knights Farm, Pingewood [66], Pangbourne (RDG) in 1926, recently in a shady pool at Sulham, Southcote and Theale pits [67]. Atlas 2000: [57], [66], [67]

Aethusa cynapium L. *Fool’s Parsley*
Aethusa cynapium subsp. **cynapium**

th 7

Cultivated ground; abundant and generally distributed. Arable fields, bare ground and gardens; occasional or locally frequent. The subsp. *agrestis* is a much smaller plant, with the longest pedicels

about as long as the bracteoles (rather than less than half as long). This plant behaves more like an alien than a native in Berkshire; it does not grow in any natural habitats.

NVC: OV 7,8,15,16

Silwood Park: local and rare. Frequent amongst cabbages in Lodge Field when the field was still used for growing vegetables for the Refectory in 1980. Now extinct following the erection of the Tractor Sheds (1986) and grassing over the remainder of the field for the New Pinetum. Garden Wood Bank, brought in with imported topsoil following construction of West Block in 1988, not seen since. Rare in Silwood Bottom; a single plant amongst couch grass on 17 June 1995. Rare on the Ashurst Lysimeters: two plants, much browsed by deer, half way up the right hand side of the rabbit enclosure on 22 August 2008. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: uncommon, North Ascot, Kings Beeches, Sunninghill, Charters Road, Sunningdale. Locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. The site was built over in 2004.

East Berks: occasional throughout, but rare in the south-east; probably under-recorded. An arable weed at Shottesbrooke and White Waltham, a garden weed in Reading, and on waste ground in Maidenhead. Commoner in towns than in the country. 15% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [69]

Aethusa cynapium subsp. **agrestis** (Wallr.) Dostál

• th 7

Aethusa cynapium L. var. *agrestis* Wallr.

It is worth looking for this plant on arable land. It is smaller (stems to 20cm) with the longest pedicels about as long (not less than half as long) as the bracteoles, and mostly shorter than the fruits (not twice as long). It is probably an alien introduction. The following locations were all recorded before 1897.

East Berks: Maidenhead, Twyford, Windsor, Binfield, Finchampstead.

West Berks: Cumnor, Buscot, Wootton, South Hinksey, Lockinge, Wantage, Appleford, Wittenham, Yattendon, Bradfield, Theale, Newbury.

Foeniculum vulgare Mill. *Fennel*

○ hp 7 ↑

Waste places, railway banks, roadsides, gardens, pavements and waste ground; rare and mostly impermanent. Either much increased or badly under-recorded in the past; now a very common self-sown garden escape. *Foeniculum vulgare* 'Purpureum' is a common garden plant occasionally seen as an escape on pavements and waste ground. Florence Fennel or Florentine (*F. vulgare* var. *azoricum*) is grown in gardens and allotments for its swollen leaf bases, but I have not found it as an outcast.

Silwood Park: thoroughly naturalised and permanent at Silwood Farm (1979-2007). Also at Cheapside Playing Fields, Cheapside Playground and Cheapside Village. Rare in Silwood Bottom and at the Cannon Crossroads in 1999. Commonly naturalized, with many large plants on the student allotments in Silwood Bottom in August 2006 and 2007.

Ascot: common on the pavements in South Ascot, also on Charters Road and waste ground at Ascot Station. Locally abundant at Cranbourne Roundabout [929730] on 30 August 2004. The cultivar 'Purpureum' occurs in paving cracks on Upper Village Road in Sunninghill and opposite Hyn's Restaurant in South Ascot. In the very curious habitat of dense, wet grassland in fen-meadow below Ascot Station [926682] (both purple and green-leaved forms) in May 2002. Frequent in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007.

East Berks: abundant by the banks of the Blackwater near Sandhurst, waste ground near Windsor, railway-side at Maidenhead. Boulter's Lock (1960), Old Windsor (1965), Bracknell (1965). Now common on pavements and waste ground in towns and villages throughout. Locally abundant on the Coppid Beech roundabout [8368] on the A329(M) in September 2002. The purple form is particularly common below garden walls on pavements at Three Mile Cross (2002).
9% (1km²). Atlas 2000: all squares

West Berks: occasional in villages and towns, but never far from houses. Commonly self-sown in gardens. Particularly conspicuous in Shrivenham [2388] and Cumnor [4604]. Common in rough ground on the periphery of Newbury Station car park [469666] on 24 September 2005 and 2006. Atlas 2000: [28], [29], [38], [46], [47], [49], [40], [58], [59], [50], [66], [67], [68]

Silau silaus (L.) Schinz and Thell. *Pepper-saxifrage*
Peucedanum silaus L.

hs 6 ↓

Ancient grasslands, roadsides, meadows and unimproved pastures on clay or alluvium. Druce considered the plant to be "rather common and widely distributed (as *Silau flavescens*). More frequent on stiff soils and absent from the heathy tracts and from some portions of the chalk downs". It was uncommon by Bowen's time and is now something of a rarity. Absent from the chalk and most of south Berkshire. A decreaser under modern grassland management, intolerant of fertiliser application.

NVC: MG 4,5,9

Silwood Park: seeds sown in the Chalk Plots in 1983 but not seen until one plant flowered and fruited on Chalk Plot 8 in July 2001 following clearance of the mat of bryophyte and dead organic matter during the winter of 2000-01 (**K**). It is not clear whether the plant came from dormant seed or from a small, suppressed vegetative individual. Still one plant in July 2002, June 2003 and May 2004. Not seen in 2005 or 2006, but there was one plant in exactly the same location as before on 27 June 2007 and 7 July 2008. Seeds sown in the Nash's Field experiment in 1991 never came up.

Ascot: no records, but the plant appears as soon as the boundary of the clay is crossed (e.g. at Chawridge Bank to the west, and in Stag Meadow, on the edge of Windsor, to the north).

East Berks: meadows on clay at Cookham and under Bisham Wood, Wargrave, Bowsey and Crazye Hills, Wargrave, Windsor, Sandford Mill, Waltham, Whistley Green, Loddon Bridge, Bearwood, Bray, Wokingham, the Fritillary field at Stanford End [705631], Windsor Great Park, Winnersh. Recently at Loddon Court, Thames Valley Park in Reading, Dinton Pastures, Crazyes Hill, still common in the ancient grassland (MG5c) nature reserve at Chawridge Bank [894738] in 2008, where it thrives in co-dominance with *Genista tinctoria* and *Succisa pratensis* on the field that was stripped of its topsoil for construction of the dog-racing track next door (less common in the sheep grazed grasslands on the other side of the bourne). Winkfield, Stag Meadow in Windsor. 1% (1km²). Atlas 2000: all except [88], [96]

West Berks: occasional in the Thames and Kennet valleys but absent or rare north of 70 and south of 90. Recent records from Grafton Lock [29], Hayes Well field [362643], Buckland meadow [30], Enborne [436653], East Ardington [48], Harwell [484875], Cothill Fen [49], Wootton [40], Fairchild's field [545695], Bath Road field [562667], Briff View field [545705] and Jennett's Hill [582710], Blewbury Mill meadow [58], Little Wittenham and Didcot [59], Iffley meadows [50]. A curious recent record is of 20 plants from short, heathy turf in the centre of the Greenham Common runway [506645] on 17 May 2001. Atlas 2000: all except [37], [47], [68], [69]

Conium maculatum L. *Hemlock*

o hs 6 ↑

Motorway verges and embankments, waste ground, manure heaps, by streams and ditches, coppices, hedges and river-banks, especially in towns. A locally abundant weed of oilseed rape. The plant was "rather local, more frequent on the clay, especially where there is a stratum of drift gravels. Exceedingly fine by the river at New Lock. No records from the southern heaths" in Druce's time. One of the most conspicuous dominants of recently worked motorway verges; there are massive stands next to the M25. Greatly increased in distribution and abundance since Bowen's time. Tolerant of eutrophication from fertilizer drift.
NVC: OV 22,24,25; S 23

Silwood Park: formerly a rare ephemeral, seldom flowering in the same spot twice. Reactor Bank, 3 plants on a soil heap in the second year following construction; 15 May 1986, but not seen since. North Block, a single plant growing in the chicken wire protecting the *Prunus serrula* specimen from rabbits in June 1996. There was a single plant on the soil pile made during excavation of the roots of this tree on 20 April 2007 after the tree had died in its prime (presumably from Honey Fungus) at the end of 2005; many rosettes here in 2008. Ashurst Four Acre Field, a group of 4 plants close to the student allotments in June 1994. One big plant on the Cannon Path by the fence erected in 1991 on 6 June 1993. In the central bed of the Science Park, from imported topsoil, in May 1990. Walled Garden, a single plant probably introduced accidentally with woodland material from Kent; 4 June 1980, not seen since. Occasional in the grassy triangle at the Cheapside end of Mill Lane in May 2001 following pipe-laying work; just one plant in 2002, three in 2003 and one in 2004. One huge plant in April 2002, unfenced by the road to Southwood Halls, on a soil pile left behind after the construction on the JIFF Greenhouses in 2001; it left 8 offspring in April 2003 but there were no plants in 2004 (they had been shaded out by nettles but there was one plant, about 3m away towards Southwood Halls, in June 2004). There was a major resurgence of this population in 2005, with 15 tall plants in the original locality. In 2006, there were 13 full-sized plants on the soil heap and in a ring up to 10m away from it, some in shade but most in full sun. On 4 June 2007 there were more than 100 flowering plants between the Insectary Hut and the gravel pile outside the Jiff Greenhouse. Many fewer plants in July 2008, when only 3 large flowering plants were seen here. The population was low in 2009, but there were 8 large plants on the gravel heaps on 24 June 2010. One plant in the Ashurst Lysimeters on 2 June 2006. There were several inside the rabbit fence on the eastern lawn of Munro Building with the dying *Quercus dentata* on 21 June 2010

Ascot: on roadsides at The Orangery, on tipped soil on Ascot Heath, King's Beeches, Sunninghill, Charters Road, Sunningdale. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006. Occasional throughout the sown grasslands created during landscaping work for the new Race Course in May 2006 and 2007.

East Berks: widespread, much increased since Bowen, but least frequent in the south-east. Locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 38% (1km²). Atlas 2000: all squares

West Berks: frequent to the north of 90 and to the south of 70, but rare and scattered in the centre of the region. On freshly tipped soil in Faringdon [2894] and Watchfield [2590] in 2004. Locally abundant all the way along the M4 motorway, and in and around Newbury. Atlas 2000: all squares

Bupleurum rotundifolium L. *Thorow-wax* ○ th 7 †

Cornfields, chiefly on gravelly soil, sporadic, and never more than locally frequent. Extinct since the 1960s according to Stace. The umbels have 4 to 8 rays (not 2 or 3).

East Berks: known only from Reading in 1924 and 1930 (**RDG** and **RNG**).

West Berks: extinct, but once local at Buckland [39] in 1863 (**OXF**), with other pre-1897 records from Wickham [37], Tubney [49], Bablock Hythe Ferry and Wootton [40], Lollingdon Hill, Blewbury, Streatley and Cow Down at Compton [58]. Other records were Wytham Mill [40] in 1906 (**OXF**), Cothill [49] in 1913 (**RNG**), Cholsey [578851] in 1954 and Riddle Hill [5484] in 1955, Tilehurst [676749] in 1956. Atlas 2000: no records.

Bupleurum falcatum L. *Sickle-leaved Hare's-ear* ● hs 7 †

West Berks: an unlikely record. The sheet in **RNG** from Greenham in 1915 may be mislabelled.

Bupleurum tenuissimum L. *Slender Hare's-ear* th 7 †

West Berks: collected by J.S. Henslow at Cholsey [5785] in July 1836 (det. Bowen) (**WAR**).

Bupleurum subovatum Link ex Spreng. *False Thorow-wax* ● hs 7
Bupleurum lancifolium auct., non Hornem.

Casual in gardens; in the past, this was often confused with *B. rotundifolium*. The umbels have 2 to 3 rays (not 4 to 8) and the leaves are longer (more than 2 times as long as wide). This is an occasional component of wildflower mixtures with *Agrostemma githago*, *Centaurea cyanus*, *Anthemis austriaca* and *Gebionis segetum*.

East Berks: not in Druce. Reading (1957 and 1963), Wokingham (1955).

West Berks: a bird-seed alien recorded from Cothill [49] in 1908, Abingdon (**OXF**) [49] in 1918, Snelmore [47] in 1924, Downe House [57] in 1966, Cholsey [58] in 1978.

Apium graveolens L. *Wild Celery* hs 6 ↓
Apium graveolens L. subsp. *dulce* (Miller) Lemke and Rothm., nom. inval.

Marshy meadows and brook sides, very local as a native plant. Saline ditch and waste places. Very local. Cultivated celery, *A. graveolens* var. *dulce* is a common garden and allotment crop, also found as culinary waste on tips. Celeriac, *A. graveolens* var. *rapaceum*, is grown for its swollen corms. NVC: S 4,14,23

East Berks: there is a single record of var. *dulce* from Smallmead tip [7169] in 1971.

West Berks: a local speciality; south of Marcham [49] in 1881, and again in 1964 when there were about 100 plants. This celery-filled ditch is all that remains of the once-celebrated saline spring (one of Berkshire's most unusual plant communities ; see p. 116). In 2000 there were about 200 plants left

in the population at Manor Farm, Marcham [453960]. There were about 40 flowering plant and thousands of seedlings here in August 2006 (*Ashmolean Rare Plants Group* 2006 Newsletter). Of the 384 adult plants counted on 21 August 2009 all but one had been eaten by sheep when the site was next visited (*Ashmolean Rare Plants Group* 2009 Newsletter). By 2012 the celery patch had grown to 24 x 18m and counting the individuals was no longer an option. Also as a garden escape at Cumnor [40] in 1865. Other 20th century records include Abingdon [49] in 1921 (although this may be the Marcham site), Silchester and Padworth Common [66] but with no specimens. Swinford Meadow [40] in 1985. Atlas 2000: [49], [40], [66], [67]

Apium nodiflorum (L.) Lag. *Fool's-water-cress*
Sium nodiflorum L.

hel 7 ↑

After *Oenanthe crocata*, the second commonest umbellifer of ditches, shallow slow streams and wet places, often forming continuous carpets over the water surface; occasional but absent from the chalk. Told from *Berula erecta* by the absence of a ring mark on the petiole, some way below the lowest pair of leaflets. Common except on the central chalk, and in the extreme east.
NVC: A 1,2,8,19; S 12,14,15,22,23,26; W 1,6

Silwood Park: very local, but frequent in Cascade Marsh, by the stream through the swamp. In quite dense shade cast by alders, growing with *Myosotis scorpioides*.

Ascot: in slow streams at Pump Lane Cheapside, North Ascot and Ascot Place, but very local.

East Berks: widespread to the west of 90, uncommon to the east. 16% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames and Kennet valleys, but rare or absent on the central chalk (north of 75 and south of 85). Atlas 2000: all except [69]

[**Apium nodiflorum** x **repens**]

Not recorded from the populations on either side of the Thames at Oxford (see below).

Apium repens (Jacq.) Lag. *Creeping Marshwort*
Sium repens Jacq.

hel 7

Apium nodiflorum (L.) Lagasca subsp. *repens* (Jacq.) Bonnier

A great rarity of damp places by rivers, generally flooded in winter. Associates include *Alopecurus geniculatus*, *Galium palustre*, *Glyceria notata*, *Juncus articulatus*, *Mentha aquatica*, *Myosotis scorpioides*, *Ranunculus flammula* and the ubiquitous *Apium nodiflorum*. Spreads by runners at, or just below, the soil surface. Told from *A. nodiflorum* by its having more bracts (3-7 rather than 0-2) and the peduncles are longer than adjacent rays and petioles. DNA work shows that they are distinct species and that, at the famous Port Meadow site in Oxford at least, there are no hybrids.

East Berks: no records.

West Berks: a *Red Data Book* species, first collected by R.A. Finch at Chilswell Farm [4903] in 1962. Now known from Binsey Green [495076], where the population is being monitored each year by the *Ashmolean Rare Plants Group*. They found 6 patches in 1999 and 5 patches in 2000, all of them flowering (the missing patch may have succumbed to competition from *Carex riparia*). There were 80 flowers in the largest patch in July 2000, and 14 in August 2001. The population was very low in 2006 with no flowers found (Susan Erskine, personal communication), but the introduced population

at North Hinksey had “masses of inflorescences” and the patch was evidently increasing in diameter as a result of recruitment from seed (*Ashmolean Rare Plants Group* 2006 Newsletter). There were serious floods in the water meadow in July 2007 and it was feared that the plant would suffer as a result. There were plenty of seedlings in 2009 but no adult plants. At the introduced site in North Hinksey, however, there was good seed production in 2009 (*Ashmolean Rare Plants Group* 2009 Newsletter). Flooding was extreme in the summer of 2012 and the winter of 2012-13 so very little seed was set (a “Port Meadow Lake” was persistent on the Oxfordshire side of the river).

Apium inundatum (L.) Rchb.f. *Lesser Marshwort* hyd 6 ↓
Sison inundatum L.

Pools on heaths, ditches; more frequent in the heathy districts. Much declined since Druce’s time, and Bowen writes “once widespread, now very local”. The lower leaves are 2 to 3 pinnate (not 1 pinnate as in *A. nodiflorum*), with filiform segments if submerged.
NVC: A 11; OV 35; S 5

Ascot: extinct, formerly at Virginia Water and Sunningdale.

East Berks: Wellington College, Swallowfield (**RNG**) in 1892, Bulmarsh, Coleman’s Moor, Bearwood, Bagshot Heath, Finchampstead, Riseley, Hurst Green, Easthampstead, Sandhurst, Blackwater, Long Moor. Extinct at all of these sites by Bowen’s time. South Lake [755722] in 1972, Cock Marsh, 1998. <1% (1km²). Atlas 2000: [77], [88]

West Berks: once quite widespread in Kennet valley, now all but confined to [57] and [66]. The following sites are probably all extinct: Walbury Camp pond [36] in 1897 and 1939, Hamstead Marshall, marshes near Newbury, Greenham Common [46], near Abingdon [49], Wytham meadows [40], Oare Common [57], Moulsoford [58], Radley [59], Bagley Wood (**OXF**) [50] in 1820, Burghfield, Mortimer, Silchester (**OXF**), Three Firs (**RDG**) in 1927, Aldermaston Decoy and Soke [66]. Recent records from Three Firs Pond (**LAN**) [652662] in 1970, Faircross Farm, Hermitage [5072], and 10 plants on Decoy Heath [612635] in June 2003. Atlas 2000: [57], [59], [66]

Petroselinum crispum (Mill.) Nyman ex A.W. Hill *Garden Parsley* ● hs 6 ↓
Apium crispum Miller

Walls, waste places, and rubbish tips (as *Carum petroselinum*); rare and sporadic. Garden parsley is grown in virtually every garden, and in window boxes or on kitchen window sills of even the smallest apartments. The common form is crisped-leaved parsley. Flat leaved parsley is sometimes grown for use as food decoration, but one rarely sees Hamburg parsley (var. *tuberosum*) which is grown for its swollen root as well as its flat leaves.

East Berks: old walls near the Tower in Cranbourne Chase and on Reading Abbey. Reading tip [7070] in 1969, Woodley tip [7774] in 1974. Atlas 2000: no records.

West Berks: more or less confined to the Thames valley, and extinct at many of its former sites including Newbury [46], Shippon [49], Cumnor [40], Streatley [58], by the railway at Pangbourne [67] all pre-1897. In pavement cracks at Didcot [58] in 1980. Common on allotments as a relic of cultivations as at Botley [40] and Grandpont [50]. Atlas 2000: [46], [40], [50]

Petroselinum segetum (L.) W.D.J. Koch *Corn Parsley* hs 8 ↓
Sison segetum L.
Carum segetum (L.) Benth. ex J.D. Hook.

A rare native of dry arable fields, mostly on calcareous soils, waste ground and dry, sunny hedge-banks; very local. It looks a bit like *Sison amomum*, but it lacks the paraffin-like smell, has more basal leaflets (4-12 pairs rather than 2-5), and has rays of very unequal lengths. The very smart, neatly cut, dark grass-green leaves have a highly distinctive jizz, once learned.

Silwood Park: first recorded on 25 August 2010 at Ashurst Lysimeters, following a no-cultivation and no-herbicide year in 2009-10. There were a dozen big plants in fruit in a patch about 4m long roughly 2m inside the fence parallel with the road at the Silwood end of the plot. Probably imported with topsoil following decontamination of the Lysimeters in summer 2003, which would mean that the seeds were at least 8 years old at germination.

Ascot: no records until August 2010 (see above), and no other records subsequently.

East Berks: local and rare at Wargrave, near The Dreadnought at Sonning, Sonning Cutting, White Waltham. Meadow Farm Road Cookham (1956). <1% (1km²). Atlas 2000: [76], [77]

West Berks: Snowswick Farm [220962], Watchfield [242903], Upper Lambourn and Wantage [38], Hatford [344948], Peasemore [47], Chilton [48], Milton [483914], Drayton, Cothill and Sutton Courtenay [49], Wootton and Swinford [40], Woolhampton and Aldermaston pits [56], Hampstead Norreys [57], Riddle Hill [5485], Blewbury, Aston Upthorpe reservoir [5585] and Cholsey [58], Sinodun Hills, Didcot, Appleford and Wittenham [59], Calcot [67], Crowmarsh Gifford [6287]. Recently from Tadley Common [605625] where topsoil had been stored on waste ground of a former gravel pit; June 2001, and Home Farm, near Burghfield [691636] on the margin of a set-aside field with *Kickxia elatine* and *K. spuria* in August 2003. Atlas 2000: [29], [38], [39], [47], [48], [49], [40], [57], [58], [59], [66], [67]

¶ **Petroselinum** *P. crispum*

Sison amomum L. *Stone Parsley*

hs 7

Hedge-banks, roadsides, lanes and wood margins on clayey or calcareous soil; locally abundant, but conspicuous by its absence from acid soils. The foliage is glossy, yellowish green and has a sickly smell of paraffin when crushed (making the plant very easy to recognise). First recorded from Sunninghill by Sir Joseph Banks in 1773, which is somewhat surprising, because it is not there now, and it's not obvious where it would have been then. Absent from the chalk and very acid soils.
NVC: MG 1; W24

Ascot: one of the best indicators of the location of the junction between the acid sands and the clays, it appears commonly in hedgerows as soon as one is west of New Lodge [9175] or north of The Village in Windsor Great Park [9572]. Common in both verges of the lane [927685] from Ascot High Street to St George's School in 1979-2004. Casual at Ascot Station in 1999. Not in Silwood Park.

East Berks: occasional in the north and west, but rare or absent to the south-east of a line from Windsor to Arborfield. Recently at Swallowfield, Beech Hill, Highlands, Courage Brewery, Lambs Lane, Three Mile Cross, M4/A33 Interchange, Shinfield, frequent on urban waste ground at Whitley, Lower Earley, Newlands, Winnersh, Dinton Pastures, Twyford, Crazies Hill, Holme Green, Keephatch, Downshire, Wildridings, at 47 sites in [87], Warren Row, Winkfield, Hog Oak Lane, Chawridge, Foliejon Park, Braywoodside roundabout, Fifield, Winkfield Plain, Cranbourne, Oakley Green, Kingsmead, Forest Park, Cavalry Exercise Ground. Locally abundant as a weed of vegetable crops in the market garden at West End, Warfield, in August 2003. Rare at the bottom of the

enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 22% (1km²).
Atlas 2000: all squares

West Berks: absent from the interior (north of 75 and south of 90) but occasional in the Thames and Kennet valleys. On the ruins of the Prince of Wales pub at Challow Station [3590], and on urban waste ground in Newbury [4767] in July 2002. Atlas 2000: all except [37], [47], [68], [69]

Ammi visnaga (L.) Lam. *Toothpick-plant* ● th 6 †

West Berks: a bird-seed alien at Cholsey [5880] in 1970.

Ammi majus L. *Bullwort* ● th 6 †

A rare bird-seed alien, but an occasional component of wildflower mixtures with *Agrostemma githago*, *Centaurea cyanus*, *Anthemis austriaca* and *Gebionis segetum*.

East Berks: no records

West Berks: Segsbury Camp [38] in 1909 (OXF) and Abingdon [49] in 1927 (OXF). Last seen in 1987 at the foot of a building in West St Helens Street in Abingdon.

Falcaria vulgaris Bernh. *Longleaf* ● h 7 †

A classic chalk grassland plant in Central Europe along with *Eryngium campestre*; a rare alien with us.

West Berks: not in Druce. In arable land at Wallingford [48] in 1923 and 1950, Stone Farm Longcot [29] in 1950, railway bank at Hermitage [57] in 1967.

Carum carvi L. *Caraway* ○ hs 6 †

Waste places, sown fields and rarely in meadows, as a rare casual. Grown in herb gardens where it self-sows freely, and hence found on tips as a garden outcast.

East Berks: first record 1711 from Reading. Shepherds Hill [77] in 1949.

West Berks: by the railway at Didcot [59] in 1897, Burghfield Meadows [66] in 1897.

Carum verticillatum (L.) W.D.J. Koch *Whorled Caraway* hr 7 †
Sison verticillatum L.

A very rare member of the *Juncus effusus*, *J. acutiflorus*, *Galium palustre* rush pasture. A very long way from its other British stations in Cornwall, south-west Wales and south-west Scotland which are exclusively western.

NVC: M 23

East Berks: found by Alan Morton and Jo Francis in a damp meadow at Winkfield [911721] in 1992 (RNG), but the site was destroyed the following year. Given the isolation of the site from the main range of the species (see above), it is likely that the plant was unintentionally introduced rather than native at Winkfield.

West Berks: no records.

Angelica sylvestris L. *Wild Angelica*

hs 7

This is the conspicuous umbellifer of wet grassland (the bulky umbellifer filling the ditches themselves is *Oenanthe crocata*). Also found in a wide range of damp woods, thickets, hedgerows, stream-sides, fens and marshy meadows. Common and generally distributed, but rare on the chalk ridge and on acid heaths. The leaves have blotch mines of *Phytomyza angelicae*.

NVC: M 13,22,24,27; MG 9,10; OV 26; S 3-8,10,14,15,18,25,26,28; W 1,4-6,8,25

Silwood Park: common in Rush Meadow, occasional in Pond Field, Heronsbrook and Water Meadow, and uncommon at The Willows, Farm Road, Gunness's Bridge, Weir Wood, Silwood Farm, Kissing Gate, Nash's Copse, Virginia Water Lodge. The plant was much reduced in Pond Field by September 2007 following several years of drying out of this site. Common in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	5	5	13	13

Ascot: first record, Sunninghill by Sir Joseph Banks in 1780. Still frequent in Sunningwell Bog below St George's School in 2002. Common on the southern shore of Virginia Water.

East Berks: particularly common in the Thames-side meadows. 17% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, but rare on the chalk north of 80 and south of 90. Atlas 2000: all squares

Angelica archangelica L. *Garden Angelica*

• hs 6

Archangelica officinalis Hoffm.

Waste ground, old gardens, canal sides, Thames embankments, etc. Often a relic of planting, sometimes an outcast, seldom self-sown outside gardens.

Silwood Park: long persistent in the old walled garden of Sandyride (1971). Site destroyed for the construction of Princes Gate in 1981.

East Berks: casual in Reading. Three plants by the path at the end of Long Lane at Hay Hill Farm [877757] on 30 May 2002. <1% (1km²). Atlas 2000: [77]

West Berks: a rare garden outcast. Self sown in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [46]

Pastinaca sativa L. *Wild Parsnip*

hs 7 ↑

Pastinaca sylvestris Miller

Peucedanum sativum Benth. & Hook. fil.

Motorway verges, dry chalk grassland, railway banks, roadsides, field borders and waste ground in towns; locally abundant and achieving maximum frequency on clays and chalk where it is often more numerous than Hogweed; absent from a considerable area of the heathy districts. There has been a major increase in abundance following the construction of the motorways, and Wild Parsnip has become locally abundant over substantial sections of the verge and in the central reservation. Long persistent as a relic of cultivation. Host to the aphid *Cavariella pastinacae*.

NVC: CG 3; MG 1

Silwood Park: a single plant in The Tip on 3 June 1980. More than 20 years elapsed before the next sightings, when two plants grew in the grass below the For Sale sign of CABI next to M-Scan in April 2002. Two more plants next to the soil pile left behind after the construction of the Jiff Greenhouse on 6 May 2002. A further single individual in rough grass by the entrance to the Furniture Store on 29 July 2002. The origin of these 2002 plants is unknown. One plant in the doorway of the bird enclosure behind the CABI Quarantine Greenhouse and another on the Southwood Hall side of the road in June 2003; the former population increased greatly by November 2004. The CABI Polytunnel plants were abundant along with *Cruciata laevipes* on 4 June 2007 and had spread even further towards the BP greenhouse by 7 July 2008.

Ascot: very local and rare. Englemere, all around the abandoned car park at South Ascot playing fields, Charters Road. Locally frequent on the edges of the car park at Ascot Station. Still abundant at the abandoned car park (above) between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: common on the verges of the A329(M) dual carriageway from Bracknell to Reading, and on the M4 at Billingbear. Particularly abundant at Pinkneys Green. Common on railway ground at Kings Meadows Reading in September 2007. 11% (1km²). Atlas 2000: all squares

West Berks: scattered throughout. Common in the Reading Lake District [67]. Frequent on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37]. Atlas 2000: all squares

Pastinaca sativa var. **hortensis** Gaudin *Parsnip*

Very common allotment and vegetable garden plant, long persistent in abandoned gardens and often found on waste ground and tips as a garden outcast. The hairs on the stem are straight (not long and wavy). The swollen root is quickly lost in feral plants.

Silwood Park: persistent remnants on the student allotments in Silwood Bottom (1998-2004), and in fallow in Ashurst Four Acre Field from June 1994 to 1996, as a survivor of vegetables grown on the old student allotments.

East Berks: on allotments and garden ground. Windsor, Reading, Maidenhead.

West Berks: scattered records from villages throughout; e.g. Stanford in the Vale.

Heracleum sphondylium L. *Hogweed*
Heracleum sphondylium subsp. **sphondylium**

hs 6

Roadsides, wood margins, hedge-banks, un-grazed grassland, and railway banks. Frequent and widespread; greatly increased in abundance as a result of eutrophication and fertilizer pollution of roadside verges. It is found on freely drained but well watered soils with high nutrient availability, and is intolerant of low nitrogen, phosphorus and potassium. It grows best on fertilized, water-retentive soils with relatively high pH. This species has been the subject of long-term research at Silwood. When the work began, Hogweed was relatively uncommon in Silwood Park, but Andy Sheppard planted the north-east corner of Silwood Bottom with rootstocks collected from local roadside verges in 1982. These plants were the parents of a population which flourished for 4 years in the damp grass between Silwood Bottom and the pond in Pond Field. This population died out, but offspring from it moved uphill towards Nash's Slope where they are still found today. The Silwood

Bottom population persisted for 20 years despite repeated cultivation, but was virtually extinct by 2004. Hogweed is one of the few species in Silwood grasslands that is demonstrably seed limited; that is to say, if you sow more hogweed seeds, then you get more hogweed plants. Only 4 species out of more than 80 sown species in the Nash's Field Experiment proved to be seed limited (others were *Centaurea nigra*, *Rumex acetosa* and *Lotus corniculatus*). This means that insect herbivores that reduce seed production in hogweed (like the ray-feeding aphid *Cavariella pastinacae*) have a direct negative impact on plant numbers in the next generation (see p. 238). Hogweed is tolerant of cutting once or twice a year, but is highly intolerant of grazing; hence it is much commoner in hay meadows and motorway verges than in grazed pastures or in frequently mown grasslands. The leaves and stems are highly palatable to sheep, cattle and rabbits. Roe deer consume the immature seed-heads on tall plants inside the rabbit fences. Leaves are often marked by the blotch mine of *Philophylla heraclei* and the serpentine mines of *Phytomyza spondylii* and *P. pastinacae*.

NVC: M 27; MG 1,4,5,9; OV 3,10,12,15,18,19,21-27; S 23,26; W 6,8,10,12,21,24,25

Silwood Park: formerly local and rare, but increased following repeated introductions. Pre-introduction, it was found sparingly in the Walled Garden, Ashurst Four Acre Field, Church Field, Farm Wood, Silwood Farm, The Marsh, Rookery Slope, South Lodge, Nuclear Reactor, and the verges of Silwood Road, Buckhurst Road and London Road. Much increased following introduction of rootstocks in 1982 and seed sowing in 1996. It was sown in 1996 on the Nash's Field experiment, where it was well established by 2000 and had spread to many other plots, especially those inside the rabbit fences, by 2004. It was significantly more abundant on the sown plots receiving N, P and K fertilizer than on the unfertilized sown plots (see p. 238). A single plant near the door of the bird-exclusion cage by CABI Greenhouse in May 2003, perhaps introduced with the *Cruciata laevipes*. One plant in dense *Alopecurus* and *Arrhenatherum* in Tilman Block J in Nash's Field in May 2004. Rare in the New Chalk Plots, just 2 plants in July 2004, but increased substantially so that it was occasional on 6 June 2007. Very uncommon as an immigrant on the Raised Beds at Ashurst; only on plots F23 and J25 on 27 August 2007 after abandonment of the weeding.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	26

East Berks: one of our commonest roadside plants, and the most frequent of the umbellifers; 93% (1km²). Atlas 2000: all squares.

West Berks: Atlas 2000: all squares

[*Heracleum sphondylium* x *H. mantegazzianum*]

Not recorded from Berkshire, but common in the London area and should be looked for. It is intermediate in all its characters and highly sterile.

Heracleum mantegazzianum Sommer and Levier *Giant Hogweed*

• hs 6

Wet grassland, lake-sides, hedge-banks, roadsides, riversides, ditches, water features and damp waste ground. Often planted by ornamental lakes on the larger estates. Escaping in villages, where it is targeted by the pest control operatives of the local authorities. It is one of only a handful of British species mentioned by name in the Wildlife and Countryside Act: it is an offence to introduce plants or seeds into the wild (Japanese knotweed is another). This is a little late, since Victorian gardeners scattered its seeds far and wide, regarding the plant as "the most suitable for the retired corner of a churchyard, or for a glade in a wood" (Loudon). The problem is that the plant is highly attractive to children because it makes a proper jungle for them to play in; it then attacks them and photosensitises

their skin, so that when they emerge into the sunlight they come out in an awful rash on their lips, eyes and arms.

Silwood Park: there were two small introduced populations; one in wet grass between Silwood Farm and The Lake, growing with *Rumex sanguineus*, *R. obtusifolius* and nettles (5 plants in 1999, down to 1 in 2002-03 and gone by 2004), and another at the Ashurst end of The Orchard under Cox Orange Pippins (3 plants in 1999, 1 in 2002, gone by 2003). The rosettes and rootstocks are surprisingly attractive to rabbits, who dig away the crown of the rosette to get down to the evidently tasty roots, and to roe deer which devour the leaves. The last of the plants by Silwood Farm was eaten down to the ground by deer in June 2003.

Ascot: the individuals on the eastern end of Ascot High Street are attacked by council workers every year, but the plants keep coming back. The plant-killers invariably miss a number of individuals (e.g. the long-established populations behind Budgen's supermarket, in the Car Park, and on St George's Lane), and these probably act as a refuge for subsequent recolonization. Also at Ascot Station and Johnson's Pond.

East Berks: not in Druce, and "rare, and not well established" in Bowen. First recorded from Sonning (1963), Wargrave (1966), Reading (1966), Three Mile Cross (1987). Now, there are massive, statuesque plants in the grass verge opposite the Superstores at Camberley, Hare Hatch, The Holt, Scotlands, Foliejon Park, Odney Club in Cookham, The Village in Windsor Great Park, Frogmore. 2% (1km²). Atlas 2000: all except [78]

West Berks: Abingdon [49] in 1917 (OXF). Pusey House [39] in 1971, Buscot wharf [29] from 1981-87, Newbury [46] in 1981, East Garston [37] in 1986, Whitehorse Hill [38] in 1978, Marcham [49] in 1986, The Fair Mile [58] in 1994, damp verges at Grazeley Green [6767] in 2000. Frequent in Coleshill Park [2393] (1995-2004). Common by the Wiltshire boundary stream at Shalbourne watercress beds in July 2001 [36]. Locally frequent in Longworth Manor [3899] in September 2002. Abundant at the base of walls in the car park behind Argos in down-town Newbury; 29 September 2001. By the M4 motorway, where it passes through the Reading "Lake District" at Pingewood [6869] in 2002. Atlas 2000: [29], [37], [38], [39], [46], [49], [58], [50], [66], [67]

Tordylium maximum L. *Hartwort*

• th 6 †

West Berks: hedge-banks. near Sheepstead House Frilford [4597] in 1870. No specimen or expert determination. Extinct by Druce's time.

Torilis japonica (Houtt.) DC. *Upright Hedge-parsley*

th 7

Caucalis japonica Houtt.

Torilis anthriscus (L.) C. Gmelin, non Gaertner

Hedgerows, borders of fields and woodlands, waste places (as *Caucalis anthriscus*). Abundant and generally distributed. Woods and hedge-banks on nutrient-rich soils; occasional.

NVC: OV 23; W 21

Silwood Park: below the *Amelanchier* that were planted to screen the Nuclear Reactor from the new Southwood Halls in 1983. A few plants in the woodland behind Southwood Halls on 16 August 1980, still there in 2003. By the London Road footpath adjacent to South Lodge Wood and in the opposite verge, further down the hill, at Sandyride, 10 August 1980. Header House, 1 November 1989, on broken concrete foundations. Garden Wood Bank, 4 plants grazed down by rabbits into small cushions at the edge of the lawn by North Block on 5 August 1996. Weir Wood, Rookery Slope, Tractor Sheds, verge of Silwood Bottom, South Lodge, The Heath, Buckhurst Road Entrance.

Common inside the rabbit fence on Cannon Path in July 2003 by *Pinus x holfordiana*. Particularly abundant in July 2005 after a very dry spring, on both sides of the track behind Southwood Halls.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	9

Ascot: frequent in hedge-bottoms on Ascot Heath.

East Berks: occasional throughout, but commoner on the chalk. 16% (1km²). Atlas 2000: all squares

West Berks: common on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands. Common along the Ridgeway as at Segsbury Camp [3884]. Atlas 2000: all except [68], [69]

Torilis arvensis (Huds.) Link *Spreading Hedge-parsley* o th 7 ↓
Caucalis arvensis Hudson

A scarce plant in Britain, and a local speciality of dry arable fields, once frequent but now rare. It is an annual or biennial weed of winter-sown cereal crops on heavy calcareous soils, also found on waste ground in open, well drained situations. Poor dispersal, often found close to the parent plant. Susceptible to herbicides and a poor competitor in fertilized crops. Often found with *Euphorbia platyphyllos* and *Ranunculus arvensis*. The fruit has straight spines that are minutely hooked at the end (unlike the curved spines of *T. japonica*).

East Berks: “rather frequent especially on chalk soils” in Druce’s time but “local and uncommon” by Bowen’s. Wargrave, Marlow, Shinfield, Swallowfield, Sonning, Remenham, Hurley, Bisham, Cookham, Bray, Maidenhead, White Waltham, Windsor. Between Ruscombe and Waltham St Lawrence, Maidenhead, Cookham. Rare in the western section of the Thames valley between Reading and Hurley. 2% (1km²). Atlas 2000: [88]

West Berks: scattered on the eastern chalk around [58] with outliers at Kintbury [36], Membury airfield [37], Chaddleworth [37] and Harrowdown Hill [30]: Chilton [48], Blewbury and Cholsey [58], Appleford [59], Burghfield [66]. Found by Ian Curtis in an arable field margin at Swannybrook Farm near Kingston Bagpuize [408966] in 2002. Atlas 2000: [36], [37], [47], [48], [49], [56], [58], [59]

Torilis nodosa (L.) Gaertn. *Knotted Hedge-parsley* th 5 ↓
Tordylium nodosum L.
Caucalis nodosa Scop.

Dry sunny banks, pavements, and borders of fields on gravelly soil; local. It has very distinctive dimorphic fruits; one with spines and one tuberculate.

East Berks: Windsor, Cookham Green, White Waltham. Refound in Windsor on King Edward VII Avenue, just west of Windsor Road Bridge in 1998, growing out from the grass verge onto the concrete of the pavement. Restricted entirely to the Thames valley, and extinct at most of its former sites. <1% (1km²). Atlas 2000: [77], [97]

West Berks: formerly in the Thames valley from Kennington [50] down to Reading [67] and scattered through the Kennet valley, but extinct at most of its former sites. Wickham [37], Newbury (1986) [46], East and West Ilsley [48], Frilford Heath [49], Hill End Camp at Wytham (1987) and Boar’s

Hill [40], between Hermitage and Newbury [56], Streatley and Riddle Hill (1977) [58], Didcot (2004) [59], Bagley Wood [50], Cothill and Englefield Park [67], Wallingford (1976) [68]. Extinct at many of its former sites. Atlas 2000: [29], [46], [49], [40], [58], [59], [67]

Caucalis platycarpus L. *Small Bur-parsley*

• th 6 †

Caucalis daucoides L. (1767) non L. (1753).

East Berks: cornfields, very rare. Near Reading in 1805.

West Berks: in fields between Wickham and Welford [47] and by the railway at Newbury (BM) [46] in 1896.

Turgenia latifolia (L.) Hoffm. *Greater Bur-parsley*

• th 6 †

Caucalis latifolia L.

West Berks: a grain and bird-seed alien recorded from Newbury [46] in 1896 (BM), Shaw Mill [46] in 1905 (BM) and at Cothill [49] in 1908 (OXF).

Daucus carota L.

hs 6

Daucus carota subsp. **carota** *Wild Carrot*

Dry pastures, motorway embankments, roadsides, railway banks and waste ground, etc., very common on the chalk, but uncommon on the acid sands. The flower heads are browsed by roe deer.

NVC: CG 2-4; MG 1; OV 4,25,41

Silwood Park: much less common in Silwood than nearby; a rare casual on acid sands. In grass at Nash's Field next to Block H in October 1994, the verge at the Cannon Crossroads, from imported topsoil on Garden Wood Bank, the third year after planting (July 1991), and on waste ground by CABI Greenhouse on 25 June 2000. Rare on disturbed ground on the grassy triangle at the Cheapside end of Mill Lane in May 2001, following pipe-laying work; there were 3 plants left in July 2004, but none seen since. Sown and established in the Chalk Plots (sown 1983), the New Chalk Plots (sown 1995, frequent by 2006, occasional in 2008), and Oak Mead (sown 1996) and persisting but not spreading from the cultivated ground where it was originally sown. A single, big plant on the floor of a derelict CABI Polytunnel by the Header House on 2 May 2002 (still flowering 2 August 2002). A single plant on the Ashurst Lysimeters in August 2004. A single plant on the eastern side of the Cinder Pot Standing at the Greenhouses in August 2006. Frequent on the New Chalk Plots at Ashurst on 29 August 2010.

Ascot: abundant on dry open waste ground at Ascot Station in summer 2000 and on pavements throughout South Ascot (1990-2007). Common on the sides of the dual carriageway from Bagshot to Bracknell, frequent by the gasometer on Bridge Road Sunninghill and at South Coworth. On tipped soil in 2001 at South Ascot playing fields [920677]; still common there in July 2005. Locally abundant in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: common by all of the motorways. Surprisingly frequent on gravel tracks through heathland on the firing range at Royal Military Academy at Sandhurst and at Poppy Hills. A weed of vegetables on the market garden at West End, Warfield. Very common on roadsides around the 3M Building on Cain Road in Bracknell in 2005 (perhaps sown in a wildflower mixture on new verges), and on waste ground at Amen Corner and in Popes Meadow [8469]. 30% (1km²). Atlas 2000: all squares

West Berks: on the ruins of the Prince of Wales pub at Challow Station [3590]. Frequent at Newbury Railway Station car park [4666] on 23 September 2006. Atlas 2000: all except [69]

Daucus carota subsp. **sativus** (Hoffm.) Arcang. *Carrot*
Daucus carota L. var. sativa Hoffm.

Much grown in gardens and allotments and thrown out as culinary waste on tips. There are 6 main groups: 'Amsterdam' small and quick growing earlyies; 'Nantes' long and more cylindrical, 'Round' for shallow or poor soil main crops; 'Chantenay' thick tapering roots for use in summer; 'Bericum' long cylindrical carrots for storage or late summer use; 'Autumn King' broad shouldered roots mainly for storage. Many named F1 hybrids are sold as seed in garden centres.

Bifora radicans Bieb. ● th 6 †

West Berks: found growing in a vetch field at Fyfield [49] in 1941 (det. J.P.M. Brenan).

Ferula communis L. *Giant Fennel* ● h 7

An uncommon garden plant that self-seeds in gardens once it is established. Seldom escaping, however.

West Berks: waste ground in Newbury [46] in 2002.

GENTIANACEAE

Centaurium erythraea Rafn *Common Centaury* h 6
Centaurium umbellatum auct., non Gilib., nom. inval.
Centaurium capitatum (Willd. ex Cham.) Borbàs
Centaurium latifolium (Smith) Druce
Erythraea centaurium Pers.

Dry fields, compacted grassy waste ground, chalk downs, heathy places, open ridings in woods, railway banks; locally common on nutrient-poor soils.
NVC: CG 2-5; U 1

Silwood Park: uncommon but highly variable in abundance, and apparently increasing. A single plant on waste asphalt on Reactor Bank, and a larger patch on the William Penney side of the road in July 1980. Good colonies on both sides of the Reactor Track at this point in 1983 and 1986. Survived the construction work and soil dumping during the building of the Wind Tunnel and the installation of the Engineering Store (this was moved from North Gravel in preparation for the site being cleared for the Science Park). On the Wind Tunnel soil heap in the second year after dumping; July 1986. Still there in 1989, but not spreading. Not found in the drought year of 1990, there were 10 plants in July 1994, but none seen in 1995, 1996 or 1997. There were a few in 1998 and 1999 and many in July 2000. It had spread to the top of Reactor Bank, next to the rabbit fence of The Arboretum by July 2002, following site clearance in autumn 2001. The plant was very abundant in July 2007 on the compacted ground in front of the Engineering Store. In the Japanese Garden, rare on compacted ground by the rockery at the north-east end of the bridge over the pond; 27 July 1980. This population had grown to 20 plants by July 2000, but was buried below wood-chips when the Japanese Garden bridge was renewed in 2002. On waste ground on Garrison Ridge, on the land that had been filled with building waste during the construction of William Penney Halls. This was Dick Southwood's "mid successional" plot. There was one small patch of plants on the Succession plot in July 1980, 10 years

after the construction of William Penney dumped subsoil over this area. This patch had grown to 3 metres in diameter in July 1983, and there were several large patches, including some next to William Penney in July 1992. About 12 patches each of 10 plants in July 1994, confined to the lower area that used to be rabbit fenced. The site was levelled in winter 1994-95 and landscaped as the new Arboretum. No plants survived in the mown part of the Arboretum, but 10 survived (in full flower on 16 July 1997) outside, on the rabbit grazed part of the site. Garden Wood Bank, several groups of plants, conspicuous in the summer of 2000 when rabbit numbers were low and lawn mowing was erratic; this population increased steadily and the plants were abundant beneath the pines by 28 June 2007. Science Park, in the lawn by East Lodge in June 2000. Ashurst Warren: in the sand pots with *Blackstonia* on 26 July 2000, gone by 2002. Pound Hill, two plants in the grass track separating the wood from the Disturbance Timing experiment on 15 August 2000. Scattered at the Met Tower and in the Gravel Pit in July 2002. Two big plants in the centre of the grassy triangle at Mill Lane following soil disturbance in July 2004 and one plant in tarmac by the entrance to The Farm. Common at the edge of the asphalt on the turning area at the end of Farm Road by the gate into The Farm on 28 June 2007. Common in the grass path at The Greenhouses behind the Mess-room in July 2007

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	8

Ascot: locally abundant. Tower Hill, frequent in *Cladonia* heath at Englemere, Heatherwood Hospital, Coronation Road, Ascot Heath, Blacknest Park, Johnson's Pond, Windsor Great Park.

East Berks: scattered but locally frequent. "So abundant in Sonning Cutting as to cover the slope with its bright pink flowers, especially fine in the brickyard at Crazy Hill where the white variety is also found, Park Place, Bagshot, etc." (Druce). These days, Sonning Cutting has no bare chalk left in it at all, and it is now a mature oak woodland with a dense bramble understorey and no botanical interest. Common on waste ground in Reading, South Charvil, Dinton Pastures, Lands End, Crazies Hill, Ambarrow, Heath Lake, Brookers Row, Transport Research Laboratory, Broadmoor, Devil's Highway, Wishmoor, Three Castles Path, Bracknell, Coppid Beech roundabout, Savernake Park, Thornhill, The Tip, Bowsey Hill, Linderhill, on the ramps approaching the M4 crossing at Beenham's Heath, Chawridge Bank, Ashley Hill, Windsor. Common on railway ground at Kings Meadows Reading in September 2007 and 2008. 8% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley and throughout the south, absent only from the Vale of the White Horse (north of 85 and south of 95). Frequent on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [361729]. Frequent in Reading's Lake District [66] and [67]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [68], [69]

Centaurium pulchellum (Sw.) Druce *Lesser Centaury*
Gentiana pulchella Sw.
Erythraea ramosissima Fries

th 6 ↓

A local speciality of dry sandy heaths on limestone, very rare. Told from *C. erythraea* by its annual habit (no basal leaf rosette at flowering time) and flowers with stalks (1-4mm) between the bracts and the base of the calyx.

East Berks: no records.

West Berks: confined entirely to limestone soils in the Northern Loop. Wytham [40] in 1946 (OXF) and in a cornfield south-south-west of Beacon Hill [40] in 1964 (OXF). Druce's plant in (OXF) is an

error for *C. erythraea*. Few recent records, but worth looking for around Stroud Copse [4407] and on Wytham Hill [4608]. Locally frequent on pulverised fly ash at Pumney [519970] in 2001. In a small clearing near a pond on the Wasing Estate [5839 6358] in 2003; Bill Helyar found the plant in two nearby places in 2004, at [585637] and [588637].

Blackstonia perfoliata (L.) Huds. *Yellow-wort*
Gentiana perfoliata L.

th 6

Chalk grassland, dry banks, clay pits and rarely on acid sand. Local and uncommon, a fast-decreasing species in Berkshire, according to Bowen. Uncommon but stable these days. An excellent indicator of good botanizing country.

NVC: CG 2-5

Silwood Park: unintentionally introduced on several occasions, and well established locally. In Drive Field it was naturalized in pavement cracks and on compacted gravel inside the rabbit fence (demolished in 2008 to make way for new open-top chambers). There were 20 flowering stems on 20 July 2000 and 30 in 2002, but the site was tidied up and there were none in 2003. Probably introduced with chalk grassland turf, used in air pollution experiments in the early 1990s using the original open-topped fumigation chambers. There were six plants on the eastern (grazed) side of the deer fence in August 2005, but none inside the fence where they used to be (the rabbit fence was upgraded to a deer and rabbit fence in 2003). The plants were cut down before they flowered by an over-enthusiastic gardener in May 2006 and did not flower that year. A single plant, presumably regrowth after mowing, in full flower on 8 October 2006 outside the fence opposite the door to the laboratory in Drive Field. There were three big plants outside the eastern fence of the deer enclosure on 25 June 2007 (two by the central post, one by the southern post), amongst lots of sucker growth from *Pterocarya fraxinifolia*, but none outside the northern fence opposite the door to the laboratory. The Drive Field site was destroyed in May 2008 when the paved area was extended to make way for the new open-topped chamber experiment, but there were 20 plants in a line, close to the edge of the new paving on 17 June 2009. Ashurst Warren; a dozen self-sown plants on gravel in the raised sleeper beds by the entrance gate on 25 June 2000. The parent plants still survived in 6 large planters that were filled with sand, and had been used in a plant competition experiment in 1998 (the same pots contained other rare introductions like *Carlina vulgaris*, *Saxifraga tridactylites* and *Centaureum erythraea*). Still common in 2001 before the pots were cleared away and the gravel herbicided in preparation for the new experiment; no plants in 2002 or since.

Ascot: no other records.

East Berks: Bisham Wood, Park Place. Remenham (RNG) in 1951. Recently from the chalk above the Thames at Remenham, Temple Golf Course, Crazies Hill, Bisham, Bowsey Hill, and from the Linderhill clay pit on Knowl Hill (1998-2004). 1% (1km²). Atlas 2000: [76], [78], [87], [88], [96]

West Berks: above Ashbury, Odstone Hill and Compton Beauchamp [28], Inkpen Lower Green and in the chalk pit on West Woodhay Down [36], on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37], Whitehorse Hill, Dragon Hill, Wixen Bushes, Hackpen Warren and Crog Hill [38], Cherbury Camp [39], in the railway cutting at Chilton [48], Marcham and Dry Sandford Pit [49], Leys Farm, Wytham and Appleton [40], Ashampstead, The Holies chalk grassland at Streatley [57], Fair Mile, Streatley Hill (LAN), Upton, old railway at Chilton, Blewburton Hill, Downside Farm Blewbury and Lollingdon Hill [58], Didcot [59], Pangbourne and Sulham [67]. Atlas 2000: all except [29], [47], [56], [50], [66], [68], [69]

Gentianella campestris (L.) Borner *Field Gentian*
Gentiana campestris L.

hs 7 †

Gentianella baltica sensu E. Warb. et auct., non (Murb.) Boerner

Dry open pastures and heathy commons. Very rare or extinct. This is a northern and western plant, and the absence of specimens must put some of the Berkshire records in doubt. Note, however, that it still occurs in North Hampshire (v.c.12) in Highclere Park [4560], just south of the Berkshire boundary, beyond Newbury (det. F. Rose). Populations are typically very low in dry summers.

East Berks: no records.

West Berks: very rare or extinct on the Kennet heaths. Woodhay Common [36] in 1874, Greenham Common [46] in 1891 (**RNG**), Wickham [37] in 1897, Enborne Street and Sandleford Priory Park [46] in 1897, Sulham [67] in 1897. Last seen at Brimpton [56] in 1930 (Report of the Botanical Exchange Club). Well worth searching for on Greenham and Snelsmore Commons.

Gentianella germanica (Willd.) Borner *Chiltern Gentian*
Gentiana germanica Willd.

hs 9

A local speciality of chalk grasslands. It is commonest on dry chalk downs on the northern escarpment, flowering very late in the summer (i.e. September-October). Scarce in Britain, this is a biennial reproducing by seed, found particularly in places where the soil has been disturbed by rabbits or off-road vehicles. Requires more shelter than *G. amarella* and is unable to withstand as much competition from other vegetation. A successful coloniser of bare chalk in chalk pits. Associates include *Anthyllis vulneraria*, *Euphrasia nemorosa*, *Gentianella amarella*, *Lotus corniculatus* and *Rhinanthus minor*. At risk from hybridisation with the more vigorous *G. amarella* (see below). Known by its large corolla (25-35mm rather than 12-22mm) which is more than twice as long as the calyx.

NVC: CG 2

East Berks: not recorded by Druce, but Bowen knew it from old chalk pits and open scrub at Hurley pit in 1964. <1% (1km²). Atlas 2000: [88]

West Berks: Inkpen Beacon [3562], Inholmes [3373] (**OXF**), Cleeve Hill [332765], Pit Down [3383], Rivar Copse [3562] (**OXF**), Wether Down Lambourn [3281], abundant at Letcombe Castle in 1897 (and 1991) flowering well after the *G. amarella*, Segsbury Camp [3884], Crog Hill and Gramps Hill [38], Upton [5186] in 1891 (**OXF**), Park Wood [5275], Streatley [5580] in 1937 (**OXF**). There were about 5,000 plants in flower on Gramps Hill [371844] on 25 August 2006 (Susan Erskine). Atlas 2000: [36], [37], [38], [57], [58]

Gentianella x pamplinii (Druce) E.F. Warb. = ***G. germanica* x *G. amarella***
Gentiana x pamplinii Druce

A local speciality. The hybrid is intermediate in corolla shape, size and colour and is about 50% fertile. It occurs near most populations of *G. germanica* (see above). It was described as new to science by Druce who noticed it for the first time in 1891 growing with *G. amarella* and *G. germanica* on the earthwork known as Letcombe Castle [3884]. "In this locality a good deal of *G. amarella* continued to flower with *G. germanica*; usually it is an earlier flowering plant. The obconical tube of *G. germanica* fully distinguishes it from the nearly cylindrical tube of *G. amarella*. In this instance a few plants of a distinctly intermediate character were found; they had a longer and more conspicuous corolla than *G. amarella*, but the corolla was more cylindrical than in *G. germanica*; the pollen was defective, and the plant was distinctly intermediate. *G. germanica* is, I think, distinct from *G. amarella*. In addition to the above character, the leaves are broader than those

of *G. amarella*, and the colour of the flowers is distinctly lighter, more blue than purple, and often lilac. It occurs more plentifully where the grass is very short and sparse” (Druce 1897).

East Berks: no records, but the plant should be sought at Hurley pit.

West Berks: Letcombe Castle [3884] in 1892, at the base of Rivar Copse (OXF) [3560] in 1913, Segsbury Camp (= Letcombe Castle) [3884] in 1956 (OXF), and Cleeve Hill SSSI [332764] from 1974-2004.

Gentianella amarella (L.) Borner *Autumn Gentian* hs 8
Gentiana amarella L.
Gentianella amarella subsp. **amarella**

This is our common Gentian of chalk grassland, frequent all the way along the chalk escarpment from Ashbury to Streatley. Pastures on limestone, grassy chalk downs, etc., flowering late in the summer (i.e. July – October). Told from *G. germanica* by its smaller corolla and from *G. anglica* by its greater number of internodes and small apical pedicel.

NVC: CG 2-5

East Berks: “locally abundant on the chalk near Marlow sometimes of great size and beauty” (Druce), Park Place, Rose Hill, Bisham Wood, Quarry Wood, Cookham, Culham, Stubbing’s Heath with very reddish purple flowers, Waltham. Ashley Hill (1970), edge of Maidenhead Thicket (1986), Remenham, Winter Hill and Cookham Downs (1999). 1% (1km²). Atlas 2000: [78], [88]

West Berks: Ashdown Park, Ashbury, above Compton Beauchamp and Idstone [28], Anville’s Copse, Walbury Camp and Gibbet Hill [36], Lambourn Downs [37], Sparsholt, Seven Barrows, Uffington, Letcombe Castle (= Segsbury Camp) and Whitehorse Hill [38], Cherbury Camp [39], Sandleford [46], East and West Ginge Downs, Knollend Down, East Hendred Down, Lockinge and Farnborough [48], Cumnor and Wytham [40], Hampstead Norreys and Ashampstead [57], Kingstanding Hill, Lowbury, Blewbury, Moulsoford, Compton Downs, Aston Upthorpe Downs, Streatley golf course and Ilsley Downs [58], Wittenham [59], Sulham (LAN), Basildon and Pangbourne [67]. Atlas 2000: [28], [36], [37], [38], [48], [40], [57], [58], [67]

[Gentianella amarella x anglica]

No records, but this should be sought where *G. anglica* grows (see below).

Gentianella anglica (Pugsley) E.F. Warb. *Early Gentian* hs 5
Gentiana anglica Pugsley
Gentianella anglica subsp. *anglica*

A local speciality of short chalk grassland; local and very rare. This plant is scarce in Britain and has the distinction of being one of the very few English endemics. It is an annual plant of sparsely vegetated, base-rich, parched grasslands, on south-facing chalk downs, on ground that is kept short by grazing and trampling. Seed germinates in spring, and numbers fluctuate greatly from year to year, apparently buffered by the existence of a long-lived seed bank. Threatened by cessation of appropriate grazing, leading to proliferation of coarse grasses and scrub encroachment, but also by fertiliser pollution of grazed land. The molecular geneticists have not yet found any distinguishing DNA, so there is some doubt about the status of the plant, but its phenology is highly distinctive and its morphology is constant under common garden conditions. England has few enough endemic species, so let’s not get rid of this one.

Known from the other two chalk grassland gentians as follows: *G. germanica* has a much larger corolla (25-35mm rather than 12-22mm), and *G. amarella* has more internodes (4-9 rather than 0-3), and the upper pedicel plus the uppermost internode is much less than half the total plant height (in *G. anglica* the top internode plus the top pedicel is usually much more than half of the total plant height). The relatively shorter apical pedicel of *G. amarella* also means that the pedicel of the apical flower is typically hidden by the calyces of adjacent flowers at the topmost node, whereas the apical pedicel of *G. anglica* is typically visible and stands proud of the calyces of adjacent, shorter pedicelled flowers from the topmost node.

NVC: CG 2

East Berks: it has never been recorded from the eastern chalk (e.g. Hurley or Winter Hill). Since the plant seems to have retreated westwards in recent years, it is unlikely to be discovered here.

West Berks: in Druce as *Gentiana amarella* var. *praecox*; “the form which flowers much earlier in the year (i.e. May-July) occurs on Whitehorse Hill, Lambourn Downs and Ilsley Downs”. This is still a very good description of its distribution. Kingstone Down and Compton Beauchamp [28], Hackpen Hill, Lambourn Downs and Whitehorse Hill [38], Catmore and East Hendred Down [48], Churn, East Ilsley Down and Streatley Warren [58]. The current strongholds are on Weathercock Hill opposite Ashdown Park [2882] and on Whitehorse Hill [3086] in the bare chalky strips in the northern verge of the road from the disabled car park down to Dragon Hill and in short turf around the tail and back legs of the White Horse itself (Plate 2). Susan Erskine counted 112 plants on the south-facing flank of Weathercock Hill [288820] and Kingstone Down [286822] on 21 May 1999 but only 3 plants on 24 May 2008 [2863 8233], and 525 plants on Whitehorse Hill [2986 and 3086] on 24 May 1999. George Osmond recorded the plant from Westfield Farm SSSI [355768] in “substantial numbers” in May 2000. There were 14 flowering plants on Hackpen Downs [355850] on 26 May 2006. A single plant found by Jan Haseler on 13 April 2009 at The Holies, Streatley, [5925 7990] on the south-west-facing slope of the valley on the southern side of The Holies. The plant is still in decline at Kingstone Down, and it is evident that the grazing pressure by sheep is simply too low to prevent the advance of coarse grasses like *Bromopsis erecta* and *Brachypodium pinnatum*. Atlas 2000: [28], [37], [38]. These days, the plant is known reliably from just four sites: Kingstone Down, Whitehorse Hill, Hagpen Hill and Streatley Warren.

Gentiana pneumonanthe L. *Marsh Gentian*

hp 8 †

Dasystephana pneumonanthe (L.) Soják

An extinct local speciality, formerly found in acid bogs on heathland. This species is scarce in Britain. It is a long-lived (c.20 year) perennial of damp heath and heathy grassland, typically growing with *Molinia caerulea* and *Erica tetralix*.

Ascot: it still survives in 2002 just outside our area on the wrong side of the A30 in what used to be the Surrey part of Sunningdale [96], in damp *Molinia* just north-west of Victoria’s Cross [964655], on the eastern side of the B383 road in Chobham Common National Nature Reserve. It flowers in August and September. I think the old Wildmoor Bottom record (below) is probably correct because the habitat there is identical to the habitat at the surviving Chobham Common site.

East Berks: Wildmoor Bottom near Sandhurst (1879). Extinct in Berkshire according to Bowen, who doubted the Sandhurst record (but see above).

West Berks: recorded without a specimen from Sulhamstead Common [6368] by N. Beeke in 1806. Planted at Jarn Mound [40] in 1933. Not seen since then.

¶ **Gentiana** *G. acaulis*, *G. asclepiadea*, *G. asclepiadea* var. *alba*, *G.* ‘Inverleith’, *G. lutea*, *G.* x *macaulayi*, *G.* x *macaulayi* ‘Kingfisher’, *G. paradoxa*, *G. saxosa*, *G. septemfida*, *G. sino-ornata*, *G.* x *stevenagensis*, *G.* ‘Strathmore’, *G. tibetica*, *G. verna* subsp. *balcanica*. Note that although *G. asclepiadea* seeds itself freely in gardens it is not naturalised in Berkshire, in contrast to wetter places like Sussex.

APOCYNACEAE

¶ **Trachelospermum** *T. asiaticum*, *T. jasminoides*, *T. jasminoides* ‘Variegatum’, *T. jasminoides* ‘Wilsonii’

Vinca minor L. *Lesser Periwinkle*

● chw 3

Woods, plantations, thickets and hedge-banks; much less common than *V. major*. Told from *V. difformis* by the corolla tube less than 12mm, and from *V. major* by hairless leaf margins. Very common garden plants used for weed-suppressing ground cover, and spreading out of the garden below fences and through hedges. In towns and villages throughout but never seen far from houses.

Silwood Park: locally dominant behind the Tractor Sheds on the boundary of Silwood House. This patch was 7m in diameter on 23 October 2009.

Ascot: locally dominant over substantial areas in the old garden on the corner of Coronation Road; survived the construction work during the erection of the two new houses known as Ravens Corner in 2004. Scattered in Ascot, Sunninghill and Sunningdale.

East Berks: widespread, but less frequent than *V. major*; first record 1897. Road between Easthampstead and Wokingham, abundant at Park Place, Wargrave, Arborfield, Windsor Great Park. Locally dominant in small patches or over hundreds of square metres as at Bisham. 14% (1km²). Atlas 2000: all squares

West Berks: widespread and locally common, first record “Merely Wood” [40] by Sir Joseph Banks 1770. Atlas 2000: all except [47], [49], [69]

[**Vinca difformis** Pourr. *Intermediate Periwinkle*]

Vinca major auct., non L.

An occasional garden plant, but I have not seen it outside gardens in Berkshire. It grows vigorously at Sutton Courtenay Manor [59] and at Kingston Bagpuize House [49].

Vinca major L. *Greater Periwinkle*

● ch 4

Vinca herbacea auct., non Waldst. & Kit.

Vinca major L. var. *oxyloba* Stearn

Vinca major L. subsp. *hirsuta* sensu D. McClint. et auct., non (Boiss.) Stearn

Plantations, hedge-banks near houses and waste ground; local but increasing. Much the commonest periwinkle outside gardens (see *V. minor*). Known from the other *Vinca* spp. by its hairy leaf margins.

Silwood Park: Ashurst Church, by the Ascot road adjacent to Four Acre Field, Ashurst churchyard, Cheapside Village, long-naturalised on the cinder pot standing at The Greenhouses.

East Berks: widespread, first recorded by Gotobed (1805). Hedge near Old Windsor, Hurst Grove, Park Place, Cookham, Wargrave, Twyford, Barkham, Arborfield. 43% (1km²). Atlas 2000: all squares

West Berks: widespread, recorded from Isis, Ock, Pang and Kennet pre-1897 including var. *oxyloba* with narrow, acute, violet blue petals. Stanford Dingley [57] in 1961, Brightwell [59] in 1963, Pincents Lane [67] in 1986. Atlas 2000: all squares

ASCLEPIDIACEAE

¶ **Stephanotis** *S. floribunda*

¶ **Tweedia** *T. caerulea*

SOLANACEAE

Petunia x hybrida (Hook.) Vilm. *Petunia* ● th 6

A ubiquitous garden plant grown in summer bedding schemes, hanging baskets and window boxes. Frequent as a throw out on waste ground, and occasionally self-sowing in cracks in the pavement, most often beneath hanging baskets outside pubs in towns.

Silwood Park: grown in extensive plantations in Silwood Bottom as a phytometer in an experiment on sewage sludge disposal in summers 2001-02. Outcast on garden waste dump by the Greenhouses in 1984. A single plant self-sown in the brick paving to the west of the Centre for Population Biology on 25 July 2005. Rare on 3 September 2009 in cultivated ground on the edge of the drive at Silwood Lodge following conversion of the house to student use in spring 2009.

Ascot: locally abundant in widely separated clumps on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. By newly sown grass at Ascot United following construction of the new racecourse in flower on 12 September 2006.

East Berks: in towns and villages throughout. Windsor in 1998, Cox Green in 1999, Maidenhead and Cookham in 2002. 1% (1km²). Atlas 2000: [76], [77], [87], [96], [98]

West Berks: first recorded from a building site in Kingston Bagpuize [49] in 1988. Pavements by pubs in Wantage [38] and Didcot [59] in 1998-99. Widespread in towns, as at Faringdon [29], Newbury [36] and Abingdon [49] in July 2002. Atlas 2000: [38], [46], [59], [69]

Nicotiana alata Link and Otto *Sweet Tobacco* ● th 6

Known from *N. forgetiana* (see below) by the filaments being inserted in the apical half (not the basal half) of the corolla tube.

Silwood Park: a single self-sown plant beneath the *Rhododendron* facing the Reactor Block from 13 May 1990 until autumn 1990.

East Berks: Smallmead tip [7169] in 1982 and on dumped soil at Reading gasworks [7373] in 1988. Earley in 1999. <1% (1km²).

West Berks: Kennington tip [50] in 1951 (OXF), Pingewood tip [66] in 1988.

Nicotiana tabacum L. *Tobacco*

• th 6

The petiole is unwinged (cf. *N. rustica*) and the corolla is widened at the distal end for about one quarter of its length (cf. *N. alata* where the wider part of the corolla is less than one eighth of the total length).

Silwood Park: one plant by the Header House on 1 October 1983, and 12 plants on the rubble of the Cocoa Greenhouse on 20 June 1996.

East Berks: West Whitley in 1998. <1% (1km²).

West Berks: records may be confused with *N. alata*. Abingdon [49] in 1918 (no specimen).

Nicotiana x sanderae W. Watson = **N. alata x N. forgetiana**

Intermediate in all its characters, and grown in a wide range of flower colours. An occasional garden stray or outcast. The uppermost anthers are inserted about half way down the tube (not clearly in the apical or basal parts as in the parents), and the flowers are wider at the mouth (c. 50mm) than in *N. forgetiana* (25 – 40mm).

Silwood Park: a single plant in the new *Narcissus* collection on Wishing Well Lawn in September 2004.

Ascot: a rare escape in Sunningdale and South Ascot in June 2003. With other ruderals in the derelict garden of the ruined Sunninghill Lodge on New Mile Road on 29 August 2004. A red-flowered plant was very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005.

East Berks: waste ground near the Thames in Maidenhead [9081] in July 2002. Whitley [7270] and Harvest Hill [8879] in 2003. Deep purple flowered plants on waste ground in Bracknell [8868] on 4 October 2003. <1% (1km²).

West Berks: old allotments at Botley [4906], and on a vacant lot in New Hinksey [5204] in September 2002.

Nicotiana forgetiana Hemsl. *Red Tobacco*

• th 6

Told from *N. alata* (which also has the wider part of the corolla less than one eighth of the total length) by the filaments being inserted in the basal half of the corolla tube (rather than in the apical half).

Silwood Park: our plants have red corolla lobes and calyx teeth shorter than the calyx tube; the anthers are inserted at the base of the corolla tube. Waste ground by the Header House, flowering in September and October 1999.

West Berks: rare on waste ground in Newbury [46] in 1999.

Nicotiana rustica L. *Wild Tobacco*

• th 6

Known by its winged petioles. Formerly grown for smoking and to obtain nicotine for use as an insecticide.

East Berks: on the tip at Manor Farm, Reading [77] in 1970 (OXF).

¶ **Nicotiana** *N. langsdorffii*, *N. sylvestris*, *N. x sanderae*

Capsicum annuum L. *Sweet Pepper*

• th 7 ↓

Two kinds of peppers are commonly grown: the large, hollow *Bell peppers* (also known as *Sweet Pepper* or *Pimento*) grown to be eaten raw in salads or cooked, and the small *Chilli peppers* (also known as *Hot peppers*, *Jalapeno* or *Cayenne*) used as hot spices. Bell peppers are typically eaten without the seeds, with the consequence that *Capsicum* seeds are thrown out onto compost heaps with culinary waste in considerable numbers. The seeds of Chilli peppers are used to increase the heat of curries and Mexican dishes.

Silwood Park: commonly grown on the Student Allotments, but never surviving the winter.

West Berks: South Hinksey tip [50] in 1965 (KEW) (det. C.C. Townsend).

¶ **Nierembergia** *N. caerulea*, *N. repens*

¶ **Vestia** *V. foetida*

Nicandra physalodes (L.) Gaertn. *Apple-of-Peru*

• th 6

Atropa physalodes L.

Petals pale sky blue with a white centre; fruit a brown berry encased in a horned, papery calyx.

Silwood Park: common with tomato and squash in the bed behind the CABI quarantine greenhouse. On waste ground by the Header House, usually just getting large enough to flower before the first frost and seldom setting ripe seed.

Ascot: local and rare. A single plant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: not in Druce. Rare casual on rubbish tips; Reading tip (1962), Suttons old nursery grounds (1978), Smallmead tip (1982). By the M4/A33 Interchange [709702] in August 1999.

West Berks: Bucklebury tip [57] in 1968. Allotments at Drayton [4894] in 2001. Found in a pavement crack outside 22 Gloucester Road, Faringdon [286955] by Susan Erskine on 15 September 2005.

Lycium barbarum L. *Duke of Argyll's Teaplant*

• n 6

Lycium halimifolium Miller

“Hedges and fences in and about villages. Scarcely naturalized” in Druce’s time, but “forming small thickets but rarely established in natural scrub” in Bowen’s day. No commoner now. Corolla divided to about half way, calyx 4mm.

Ascot: rare in hedges in South Ascot, and on waste ground at Ascot Station. Not in Silwood Park.

East Berks: Reading, Ashley Hill and Twyford (pre-1897), commonest north of 75 and east of 90, but scattered throughout. Recently at Whitley, Ryeish Green, Twyford Church, Great Hollands, Altmore, Woodlands Park, Touchen End, and locally abundant in Cookham Dean. 2% (1km²). Atlas 2000: all except [78]

West Berks: uncommon, but scattered throughout. Ashbury [2685], Buscot [2298], Uffington [38], Denchworth [39], Newbury [46], Cothill, Frilford, Hitchcopse pit [453997], Dry Sandford pit [465996], Kingston Bagpuize and Drayton [49], Appleton [4401], Cumnor [4604], Wootton [4702], Cholsey [58], Kennington [50], Tilehurst [67]. Atlas 2000: all except [68], [69]

[Lycium chinense Mill. *Chinese Teaplant* • n 6
Lycium barbarum auct., non L.

Corolla divided to more than half way, calyx 3mm, much confused with *L. barbarum* and probably under-recorded. Not in Druce, Bowen or Atlas 2000, but worth looking for. You need to measure the calyx very precisely. The jizz is of a plant with larger, broader leaves.

Atropa belladonna L. *Deadly Nightshade* hp 6 ↓

Disturbed ground and track-sides in woods on chalky soils. Also, rare and sporadic in gardens and waste places. Locally common where it occurs, but absent from many apparently suitable habitats.

Ascot: no records.

East Berks: Windsor Great Park, Bisham Wood, Culham Court. Reading, Sonning, Binfield, Quarry Wood. Bray (1974). Scattered records from the Thames valley, absent or rare elsewhere. Recently at Dial Close near Maidenhead. 1% (1km²). Atlas 2000: [77], [87], [88]

West Berks: scattered in woods on the chalk, but absent or rare to the north of 90 and south of 70. Lambourn and Cleeve Hill [37], Furzewick Down and Wantage [38], Buckland [39], Welford [47], Milton [49], Upper Seeds at Wytham [40], Park Wood, Hampstead Norreys and Ashampstead [57], Downs Farm, Moulsoford Down, North Unhill Bank, Aston Upthorpe Downs, Goring Gap and Streatley [58], Basildon (LAN) [67], Pangbourne [6277], Wallingford [68]. Atlas 2000: [37], [38], [39], [46], [47], [48], [40], [57], [58], [67], [68]

Hyoscyamus niger L. *Henbane* ○ hs 6

Roadsides, disturbed waste ground, bare places in woods and stone pits. Rare and sporadic, usually on nutrient-rich soils. A sinister, malodorous species, possessed of legendary seed longevity. The seeds can survive burial for many decades (perhaps even for centuries in the foundations of old buildings) then spring up again as soon as the soil is disturbed. Commonest round rabbit warrens on the chalk, but also close to ancient buildings where it is a relic of medicinal cultivation.

Ascot: no records.

East Berks: in the common pasture under Cookham Down, Knowl Hill, Pinkneys Heath, Finchampstead, Park Place, Windsor, Shiplake, Stubbing's Heath, Wellington College Station, Cockpole Green. Reading, Wellington College, Smallmead tip (1973), roadworks at Shinfield (1978). Most of the old records came from the Thames valley, scattered around Reading. Absent from the interior and to the east of 85. Quentin Groom found about 10 plants at Maidenhead Station [8880] on

31 August 2008 growing in the flower beds between platforms 2 & 3. <1% (1km²). Atlas 2000: [76], [77]

West Berks: scattered throughout, but least abundant in the interior, and lost from many of its former sites. Watchfield [29], Ashdown Park [28], Devil's Punchbowl and Whitehorse Hill [38], Crowhole Bottom [353848], Haremoor Farm [303964], Hamstead Marshall [46], Long Copse Cumnor and Wytham [40], Fairfield Nurseries at Hermitage [57], West Hagbourne [58], Sutton Courtenay and Radley [59], Streatley Warren (LAN) [58], Cholsey [58], Pangbourne tip [67]. Atlas 2000: [28], [38], [39], [48], [40], [58], [59], [67]. Subsequently, found by D. Broughton on a farm tip at Coldborough Hill, East Garston [365777].

Physalis ixocarpa Brot. ex Hornem. *Tomatillo* ● h 7

East Berks: as a weed in the Botanic Garden in Whiteknights Park in 1988 (RNG).

West Berks: on waste ground at Abingdon [49] in 1917 (OXF).

Physalis alkekengi L. *Japanese-lantern* ● h 7
Physalis franchetii Masters

Unmistakable in late summer with its conspicuous orange "paper lanterns". Petals white. Commonly grown in gardens and occasionally escaping onto pavements and waste ground.

Silwood Park: a recurrent casual on the disturbed ground around the Header House and the CABI Polytunnel; seen most years, but ripening seed very late in the summer and hence prone to frost-kill. Possessed of long-lived seeds.

Ascot: locally frequent at the Race Course end of Course Road in November 2001-2004. Common in a garden on Victoria Road South Ascot on 20 January 2007.

East Berks: recently recorded from College Town (1998-2000). On waste ground in Clewer, under the bank of the dual carriageway leading up to the Thames bridge in December 2001. In pavement cracks on Oxford Road in West Reading [7073] in July 2002. Beneath a wall close to the R. Thames in Cookham [8985] in September 2002. 2% (1km²).

West Berks: Buscot [29], on a grass verge at Aldermaston [56] in 1961 (LAN), and on waste ground near the river at Wallingford [68] in 1963. Locally abundant in the churchyard of St Nicholas, Newbury [470670] in September 2001. On abandoned allotments in Botley [4906] in September 2002.

Physalis peruviana L. *Cape-gooseberry* ● h 7

A very uncommon bird-seed and grain alien. Told by its green (not orange-red) fruiting calyx and (from *P. ixocarpa*) by its dense pubescence and cordate (not rounded or cuneate) leaf bases. Petals dull yellow with a purple-black base.

Silwood Park: two plants on the student allotments in Silwood Bottom on 25 August 2006. Ten plants, just coming into flower on 1 October 2006, in concrete gutters between Greenhouses 8A and 9A by the Header House.

East Berks: a single plant on the river bank close to the M4/A33 interchange [709702] in August 1999.

¶ **Physalis** *P. alkekengi*, *P. alkekengi* var. *franchetii*, *P. alkekengi* var. *franchetii* ‘Gigantea’, *P. alkekengi* var. *franchetii* ‘Variegata’

¶ **Cestrum** *C. ‘Newellii’*, *C. nocturnum*, *C. parqui*

Lycopersicon esculentum Mill. *Tomato*

• th 6

Solanum lycopersicum L.

Occurs occasionally on sewage filter beds, waste ground, rubbish tips, picnic areas, railway ballast, manure heaps, and sewage refuse but it seldom over-winters and it is not permanent. The seed survives passage through the human digestive tract and hence the plant is common on the cinder beds of sewage farms. Often found as a throw-out on rubbish tips and compost heaps, and growing from kitchen drains where seeds washed down the sink have lodged. Locally frequent in towns and villages throughout. Modern molecular genetic studies suggest that the genus *Lycopersicon* is not distinct from *Solanum*, and should be sunk within it (just as the Strawberry, *Fragaria*, is not distinct from *Potentilla*).

Silwood Park: very rare. A huge plant in a drain cover at the Header House. Animal House, in the bed by the Stable Yard entrance in July 1982. Colditz, in the bed below the hot air vent from the laundry, growing beneath the *Lonicera x purpusii* on 29 September 1994. A single plant next to the grass track that crosses Silwood Bottom; August 2000. One plant amongst nettles on Rookery Tip in September 2004. Tomatoes grow very poorly in Silwood, as generations of student allotment holders will attest.

Ascot: rare, on pavements and in alleyways between the High Street and the Race Course in November 2001. Locally frequent as fruiting individuals on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. A single plant in a pavement crack at the base of a brick wall at the Chinese Take-away on Upper Village Road in Sunninghill on 26 August 2005. Locally frequent on 18 September 2006 on the last soil pile from the racecourse construction by the New Mile.

East Berks: scattered but widespread; first records Windsor and Maidenhead (pre-1897). Derelict urban land in downtown Reading [7173] in 2002. Locally abundant where sewage slurry has been spread on arable land, as at Remenham in 1997. 2% (1km²). Atlas 2000: all except [88]

West Berks: first recorded from Grandpont [50] (pre-1897). Scattered throughout and certainly under-recorded. Atlas 2000: [37], [38], [46], [58], [66]

¶ **Lycopersicon** *L. esculentum* was grown under glass for many years in Drive Field and Lodge Field in the days when the Refectory was self-sufficient for vegetables. This practice stopped in 1978. Still open-grown in the Student allotments, but without much success.

Solanum sisymbriifolium Lam. *Red Buffalo-bur*

• th 7

An agricultural seed casual as well as a bird-seed and oil-seed alien. Not recorded from Berkshire until 2009. The stems and leaves have strong spines (as in *S. rostratum*), the flowers are pale blue (not yellow as in *S. rostratum*), the 5 anthers are equal in length and the berry is red (not yellow as in *S. carolinense*).

Silwood Park: very local and rare. A single individual on 25 July 2009 from the seed bank following cultivation of the old orchard at the rear of Silwood Lodge, close to the site of the huge bird-feeder

run for many years by Vicky Taylor and Mike Hassell, amongst abundant *Datura stramonium*. Still flowering on 2 November 2009, but the plant has not set any fruits.

Solanum rostratum Dunal *Buffalo-bur*

• th 7 ↓

A wool, grain and bird-seed alien or oil-seed casual, told from *S. sisymbriifolium* by the absence of glandular hairs and yellow (not white or purplish) corolla. It is very distinctive when leafless in senescence because the whole plant, including the fruits, is covered in golden spines.

Ascot: very local and rare, on 13 October 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: no other records.

West Berks: in an orchard at Milton [49] in 1956 (RNG), on new arable land at Grove airfield [39] in 1958 (OXF), in a chicken run in Stanton Harcourt in 1966, Abingdon in 1978, and a bird-seed alien in a garden at Bucklebury Place [5668] in 1990.

[**Solanum carolinense** L. *Horse-nettle*]

• th 7

A frequent soy bean alien. Not yet recorded from Berkshire but worth looking out for. The stems and leaves have strong spines (as in *S. rostratum*), but the 5 anthers are equal in length. The berry is yellow (not red as in *S. sisymbriifolium*) and the leaves are lobed more than half way to the midrib.

Solanum nigrum L. *Black Nightshade*
Solanum nigrum subsp. **nigrum**

th 7

Cultivated ground, especially in rich garden ground or manured soil. Local, and absent from a considerable area of the county, and chiefly occurring in the vicinity of the larger towns and more frequent in the south of our area. Damp arable fields, gardens, tips and disturbed ground. Long lived in the seed bank beneath grassland. Increasing, but rare on the chalk.

NVC: OV 4,7-9,13,14,19; S 8

Silwood Park: a late spring germinating, seed bank species, commonest on ground that was cultivated or disturbed after May. In some years (like 1992) the plants reach extraordinary size and abundance, so that large areas are covered in nightshade to a depth of 80cm or so. Huge seed crops are produced in these years which replenish the seed bank. Satellite Pad, Pound Hill Field, Ashurst Church, Ashurst Path, Rookery Slope, Ashurst Warren, Silwood Lodge, Cricket Wicket, Silwood Bottom, Drive Lawns, M-Scan, East Lodge. North Gravel, common in the seed bank where the Leyland Cypresses were felled after 18 years in 2000, but gone by 2002. Locally abundant on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at The Cedars in September 2002, but gone by 2004. Occasional in July 2004 from the seed bank beneath the Wishing Well Lawn at the end of the Conservatory at Silwood Manor House, after the long-established lawn was dug up in autumn 2003 to allow planting of the National Collection of *Narcissus*. Particularly abundant on 3 August 2005 at Pound Hill when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought. Very uncommon on May-cultivated plots on 2 September 2007 after the driest spring then the wettest summer on record. On 15 June 2009, there were many plants on a soil pile created in spring 2009 by the construction firm carrying out the building work at Silwood Farm stripping the topsoil from part of the ground inside the security fence at the Met Tower. In late July 2009 at Ashurst Lysimeters, by the brick-built laboratory at Pound Hill

and in the ground cultivated to make a new lawn at Silwood Lodge, all flowing June cultivation. Recorded on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011. Occasional on bare ash at the bonfire site by the Walled Garden on 12 September 2011, growing with *Sonchus asper*, *Anagallis arvensis*, *Senecio inaequidens* and *Stellaria media*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	10

Ascot: locally abundant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003, and on the sandy construction site on Dry Arch Road on 2 August 2004. Abundant and locally dominant on soil piles and bare ground during construction of Ascot Racecourse in August 2005 and on the surviving soil pile by New Mile Road in September 2006.

East Berks: scattered throughout. A weed of maize at Ryeish Green [7267] in August 2002. Common in fallow ground at Hall Place [8382] in June 2003. 11% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley and in the eastern park of the Kennet valley (east of 45), locally abundant on building sites and waste ground in towns and villages in the Vale, but absent or rare in open country. Atlas 2000: all squares

[*Solanum nigrum* subsp. *schultesii* (Opiz) Wessely] th 7
Solanum schultesii Opiz

Told from subsp. *nigrum* by the possession of frequent spreading glandular hairs. Not yet recorded from Berkshire, but should be looked for on waste and cultivated ground.

***Solanum sarachoides* Sendtn. Leafy-fruited Nightshade** • th 7 ↓
Solanum nigrum auct., non L.
Solanum chenopodioides auct., non Lam.
Solanum physalifolium auct., non Rusby
Solanum nitidibaccatum auct., non Bitter

NVC: OV 14

East Berks: not in Druce. Rare casual in a carrot field south of Wokingham (1965), and on sandy arable soil in a fruit farm at Gray's Farm, Wokingham [8267] in 1988 (RNG).

West Berks: on garden soil at Kingston Bagpuize [49] in 1975.

***Solanum dulcamara* L. Bittersweet** chw 6

Hedges in damp situations, by rivers and brooks; abundant and widely distributed. Hedges, fen carr, lake-sides, swamps and waste ground. Occasional. Common in towns on damp shady brickwork, and occasionally dominant on wet waste ground. The leaves are often holed by the beetle *Ochrosia ventralis*.

NVC: M 22; OV 26,27,30,41; S 3-8,10,12-15,18,22,23,25,26,28; W 1,5,6,24

Silwood Park: in all the wet woodlands and damp grasslands, by The Lake, and on damp shady brickwork on buildings (e.g. in the brick-lined wells of the basement windows of the Manor House). Growing over the stacked beer crates and in through the window of the bar on 4 June 1989. Following tree clearance and fencing against deer and rabbits, plants from the seed bank in Garden Wood reached massive diameters (more than 2m in several cases) by the end of their first growing season in September 2005, when freed from competition and herbivory. Still abundant on 4 June 2007 amongst nettles 3 years after fencing in the Tennis Court Rhododendron Plantation, and still increasing in cover in July 2008. By the ferruginous flush at the bottom of Farm Wood in 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	5	8	31

Ascot: locally frequent in the sunny parts of Sunningwell Bog below St George's School [929684]. Recorded from 16 of the 29 1km squares in [96].

East Berks: damp places in sun and shade throughout, 67% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Solanum tuberosum L. *Potato*

• g 6

A garden outcast and throw-out with culinary waste on compost heaps and garden rubbish tips throughout the area. Occasionally found on grassy waste ground and in hedge-banks, but never far from houses, except on lane-sides in arable areas where potatoes are grown commercially, and have been spilled in transit from the field to the farm. Potatoes are not a major agricultural crop in Berkshire, so these laneside strays and volunteers amongst succeeding crops are less common than in other parts of Britain. Planted or outcast individuals can be long-persistent in certain habitats (e.g. in the cultivation experiment at Pound Hill Field (1989-2004).

Silwood Park: The Rookery, Cheapside Playground, Silwood Bottom (especially following late spring cultivation), Guinness's Hill, Nuclear Reactor, Buckhurst Road, The Tip, Ha Ha. Long persistent in annually cultivated ground in Pound Hill Field. There were two huge, purple-flowered plants amongst nettles on a soil pile below the Engineer's Store on 18 June 2002; these survived the earth-moving operations, and were still present in otherwise bare ground in May 2003 after the soil mound had been bulldozed flat. GM potato plants grown in the PROSAMO Experiments were transgenic for expression of pea lectin (an insecticidal toxin), or Bt (a biological control against lepidopteran caterpillars). The experiments were repeated in 3 years (sown in 1990, 1991 and 1992) and monitored over 10 years; the GM plants were grown in 4 habitats (Rush Meadow, Pound Hill Field, Merten's Acres and Guinness's Hill). Most of the plants died within 4 years, but a solitary non-GM plant survived until 2001 amongst the bracken on Hell Hill (part of the Guinness's Hill plot). In no case did the GM plants survive longer than the conventional plants, nor were they more invasive (see Crawley et al., 1993, 2001). Rare, but surviving annual cultivation in May inside the deer fence in Silwood Bottom on 3 September 2005.

Ascot: locally frequent on 18 September 2006 on the last soil pile from the racecourse construction by the New Mile.

East Berks: not in Druce. Occasional on rubbish tips and waste ground. Recently at Kenney's Farm, Finchampstead, Reading Station, West Reading, Bulmershe, Sheeplands, South Twyford, Moor Green, Wokingham, Devil's Pound, Chapel Green, Downshire, Great Hollands, Shottesbrooke, Hazelwood, Pinkneys Green, Dial Close, Winkfield. 4% (1km²). Atlas 2000: all squares

West Berks: garden outcast in towns, as at Hungerford [36], Newbury [46], Botley [40] and New Hinksey [50], but certainly under-recorded: Atlas 2000: [36], [38], [46], [49], [40], [57], [50], [68]

Solanum vernei Bitter and Wittm. *Purple Potato* ● h 6
Solanum ballsii Hawkes

Alien perennial from Argentina.

East Berks: a local speciality, thoroughly naturalised and locally abundant in shrubberies near the Halls of Residence on Reading University Campus at Whiteknights Park (Hora, 1995, *BSBI News* 68, 36). Thought to have been imported originally with dumped soil in 3 places [7371] in 1985 (RNG) (det. J. Hawkes). This is the only British station for this South American alien which has big (35-45mm diameter) purple potato flowers. As far as I can tell it is not a garden plant in Britain, so how its seeds came to be in the dumped soil remains a mystery. Now in several places down to Black Bridge and on both sides of the drive to Foxhill House. There is a large patch on the bank of the lake amongst alder and dogwood, and the garden of Foxhill Lodge has been all but taken over by the plant. <1% (1km²). Atlas 2000: [77]

Subsequently, the plant has declined dramatically at its original sites at Whiteknights, largely as a result of tidying up of the landscape, and the creation of new lawns. Its status was reviewed by Renee Grayer in 2011, when there were just 3 plants left in the garden of Foxhill Lodge. Ricki Bull, however, had found plants in Lower Earley and when they visited together on 11 September 2011 they discovered plants in abundance at 5 neighbouring sites [7575 6994], [7550 7034], [756 700], [756 701], [755 702].

Solanum jasminoides ‘Album’ Paxt. *Potato Vine* ● h 7

This is the common white-flowered climber of gardens. It is rare as a garden escape.

Ascot: the very harsh winter of 2009-2010 killed many of the well established plants (e.g. at 86a Upper Village Road) as well as most of the newly planted individuals (e.g. those in the newly refurbished gardens at South Lodge, East Lodge and Virginia Water Lodge at Silwood Park).

East Berks: growing over a fence on waste ground near the R. Thames in Maidenhead [9081] in July 2002. In Cookham [8985], flowering profusely on 14 September 2002. <1% (1km²).

Solanum crispum Ruiz and Pav. *Chilean Potato Tree* ● h 7

This is the popular, blue-flowered climber of gardens, often grown as the cultivar ‘Glasnevin’. Very uncommon as an escape.

East Berks: by the railway on a sunny bank just east of Wokingham Station [8068] in September 2002. On waste ground in Whitley [9270] in August 2003. <1% (1km²).

Solanum villosum Mill. *Red Nightshade* ● th 6
Solanum luteum Miller

West Berks: in a field of coriander and fenugreek at Bradfield [589722] in 1988.

Solanum diflorum Vell. Conc. *Winter-cherry* ● n 7
Solanum pseudocapsicum L.

Solanum capsicastrum Link ex Schauer

Very common houseplants, often thrown out after Christmas once the orange fruits have fallen off. These plants wither as soon as they are hit by their first frost. Occasional as a casual summer annual from bird-seed.

East Berks: on waste ground in Whiteknights Park in 1981.

¶ **Solanum** *S. crispum* ‘Glasnevin’, *S. jasminoides* ‘Album’, *S. laciniatum*, *S. rantonnetii*

¶ **Solandra** *S. grandiflora*, *S. maxima*

Datura ferox L. *Angel’s-trumpets* ● th 7

Sometimes seen on tips as a throw-out from conservatories, but never surviving the winter.

East Berks: Reading tip in 1995 and 1999 [77].

Datura stramonium L. *Thorn-apple* ● th 7

Datura tatula L.

Demolition sites, waste ground, rubbish tips and rich garden soil; local and sporadic.

Silwood Park: long-lived in the seed bank but very rare as a flowering plant. Outside the door of the Cocoa Greenhouse 16 September 1980. Also on the ruined base after the Cocoa Greenhouse was demolished in June 1996. There were only 2 plants in 1997 and none in 1998. South Lodge Wood, on the track behind the Japanese Garden on 22 August 1983 (never seen again in this location). By the BP greenhouse in July 1997; 5 flowering plants. North Gravel; in the seed bank beneath the cypress hedge behind the Header House, coming up and flowering in September 2000 on the bare ground left after the hedge had been cut down in May 2000. The hedge had grown there for 18 years, having been planted to screen the Greenhouses from the site of the proposed Southwood Halls (built in 1983). A single plant in full flower on 1 July 2009 at the corner of the patio at Silwood Lodge in the place where the giant *Buddleja* had been removed in December 2008. At the rear of the garden of Silwood Lodge, where the senescent orchard had been grubbed out in winter 2008-9 and the ground cultivated to re-establish the lawn. Most of the area had no seed bank, but an impressive recruitment of 40 or so *Datura stramonium* in a patch of about 3m radius, with outlying plants up to 5m away, likely the offspring of a single fruiting parent at some time in the past. By August 2010 the population had disappeared as the site was grassed-over and regularly mown, but one large plant had survived on the crazy paving of the patio nearby (where the *Buddleja* had been) and was producing copious seeds. A single plant in Ashurst Lysimeters on 26 July 2009, probably moved to this site on cultivation equipment used earlier in the week to rotovate the old orchard at Silwood Lodge (see above); gone by August 2010.

Ascot: local and rare. A single plant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. A huge, tree-like plant (75cm tall) on rubble on the site of the demolished mansion at King’s Beeches [934668] on 1 December 2003. A single plant on a topsoil pile next to the New Mile [929692] during construction of the new Racecourse on 20 September 2005 and another much bigger individual in the centre of the main site [922689] on 22 October 2005. A single plant on 15 September 2009 in a derelict garden that had been herbicide-treated in spring on Lower Village Road in South Ascot.

East Berks: Cookham, by the railway between Shiplake and Twyford, Windsor, in garden ground at Frogmore. Leighton Park, Reading allotments, Woodley, Twyford, Wargrave, Wellington College, Wokingham, Maidenhead tip, Windsor. Farley Hill (1970), Smallmead tip (1971), tipped soil at Whiteknights Park (1973-84), Finchampstead Ridges (1975), Charvil (1978). 2% (1km²). Atlas 2000: all except [78], [87]

West Berks: scattered throughout but rarest in the interior. Shrivenham [28], Inkpen [36], Wantage [38], Kingston Bagpuize [49], Newbury [46], Wytham [40], Denchworth [39], Didcot [59], Abingdon [49], Grandpont [50], Rowstock [48], Sheepstead House [49], Long Wittenham [59], Radley [59], Stanford Dingley [57], Tilehurst allotments (LAN), Pangbourne, Battle Farm and Theale [67]. Atlas 2000: [36], [39], [46], [48], [49], [57], [59], [67].

¶ **Brugmansia** *B. arborea*, *B. x candida* 'Grand Marnier', *B. x candida* 'Knightii', *B. sanguinea*, *B. suaveolens*

¶ **Streptosolen** *S. jamesonii*

Browallia speciosa Hooker *Bush-violet*

• h 7

Shrubby perennials, woody at the base, native to Colombia. Flowers with a leathery calyx and corolla up to 5cm across, blue or deep purple with a white eye, illustrated in *Conservatory and Indoor Plants*, Vol 2, p 143 (Phillips and Rix, 1997).

East Berks: a local speciality which has been a weed since 1979 in the Botanical Garden at Whiteknights Park in Reading [7371] (RNG) (det. R. Rutherford). This is its only British station.

CONVOLVULACEAE

Convolvulus arvensis L. *Field Bindweed*

hp 6

A serious weed of cornfields, grasslands, cultivated ground, gardens, waste places, roadsides, railway-banks; abundant and generally distributed. A rare plant of old brick walls, as at Hamstead Park. NVC: CG 3; MG 1; OV 3,8,12-15,18,19,21,22,26

Silwood Park: local in both wet and dry grassland and on waste ground where it scrambles up mesh fencing. On the entrance to the rabbit warren in Nursery Field, Nash's Field on the ridge overlooking the Kissing Gate on 13 July 1984, Garrison Ridge below William Penney on 11 July 1983, Satellite Dish, Rush Meadow, Church Field, Playing Field, Cheapside Village, Garden Wood Bank.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	7

East Berks: frequent throughout. A pest of maize crops at Ryeish Green [7267] in August 2002. 44% (1km²). Atlas 2000: all squares

West Berks: frequent throughout. In a peculiar habitat, growing in hanging drifts on the west-facing 1665 brick walls of Hamstead Park at Craven House [416666] in July 2004. Atlas 2000: all squares

Calystegia sepium (L.) R. Br. *Hedge Bindweed*
Convolvulus sepium L.

hp 7

Calystegia sepium subsp. **sepium**

Hedges wood margins, damp thickets, fen carr, mesh fencing and waste ground on damp soil (as *Volulus sepium*); “not uncommon and widely distributed but absent from a few parishes on the higher chalk downs and local in the heathy tracts” (Druce). This is still a good description of its distribution. You can see the sepals between the non-overlapping bracteoles. Often growing at the same sites as *C. silvatica*, and occasionally intertwined with it.

NVC: M 22,27; OV 13,25,26,27,30,42; S 4-6,13,25,26,28; W 5,21

Silwood Park: on fences in full sun; Sunninghill Crossroads, Walled Garden, Ashurst, Rush Meadow, Churchyard, Cheapside, Silwood Farm, The Rookery, The Marsh, Wood Bank, Water Meadow, Silwood Lodge, Tennis court, Nuclear Reactor, Science Park, Header House, etc. Common in disturbed soil at the end of Ashurst churchyard in August following erection of the rabbit fence in spring 2002.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	25

Ascot: on the lane-side below St George’s School on the edge of Sunningwell Bog. Common around Ascot Station car park growing with *C. silvatica*.

East Berks: uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 65% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Calystegia x lucana (Ten.) G. Don = **C. sepium x C. silvatica**
Convolvulus x lucanus Ten.

Recorded without further details as present in Berkshire (Stace 1975).

Calystegia pulchra Brummitt & Heywood *Hairy Bindweed* • hp 7
Convolvulus dahuricus sensu Walters & D. Webb, non Herbert
Calystegia dahurica sensu Walters & D. Webb, non (Herbert) Don
Calystegia sepium (L.) R. Br. subsp. pulchra (Brummitt & Heyw.) Tutin, nom. inval.

Garden hedges, fences and waste ground; rare.

Ascot: rare, on a tall wire-mesh fence on the corner of Bridge Road and Bagshot Road by the railway bridge in Sunninghill Village (1979-2007).

East Berks: Leighton Park (1962), Dinton Pastures (1988). <1% (1km²). Atlas 2000: [96]

West Berks: Shrivenham [28], Wantage Road Station and Abingdon [49], Radley and Didcot Station [59], Tidmarsh [67]. Atlas 2000: no records.

Calystegia silvatica (Kit.) Griseb. *Large Bindweed* • hp 7
Convolvulus silvaticus Kit.
Calystegia sylvestris (Waldst. & Kit. ex Willd.) Roemer and Schultes
Calystegia sepium (L.) R. Br. subsp. silvatica (Kit.) Battand.

Hedges near houses, gardens and waste ground in towns; occasional. Told by its overlapping bracteole segments (you can not see the sepals between them, as you can in *C. sepium*). In several places it is much commoner than *C. sepium*.

Silwood Park: local and rare on the periphery of the Park and absent from the interior. Sunninghill Crossroads, with *C. sepium*. Cheapside Village, on the Cheapside footpath to The Farm, Silwood Road. Growing amongst the *Vitis* 'Brandt' on the fence by Unit B of the Science Park on 18 June 2002.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	3

Ascot: about half as frequent in this district overall as *C. sepium* but locally the most abundant. Coronation Road, Fernbank Road, Ascot Station, Sunninghill, Sunningdale, Blacknest, South Coworth, Frostfarm Plantation. Common on Lyndhurst Road in South Ascot on the southern approach to Ascot Station [923682], where it grows with other bulky aliens like *Fallopia japonica* and *Pyracantha coccinea*. Common around Ascot Station car park growing with *C. sepium*. Locally frequent at the Drift Road end of the old road at Cranbourne Roundabout [929730] and on the new verges next to the roundabout in August 2003; still like this in September 2007. Still in flower at Ascot Station on 28 October 2009.

East Berks: locally frequent, as at West Reading, Swallowfield, Holyport, Maidenhead and Paley Street, but less common than *C. sepium*. Common on railway ground at Kings Meadows Reading in September 2007. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 24% (1km²). Atlas 2000: all squares

West Berks: scattered in villages and towns throughout. Often locally dominant on abandoned allotments as at Shrivenham [28], Botley [40] and New Hinksey [50]. Atlas 2000: all squares

Ipomoea purpurea Roth. *Common Morning Glory* • p 8

Silwood Park: a single plant in nettles on the edge of the massive *Datura* patch at Silwood Lodge on 22 September 2009, no doubt from seed in the bird feeder, following cultivation of the former Orchard in autumn 2008.

CUSCUTACEAE

Cuscuta europaea L. *Greater Dodder* p 8 ↓

A local speciality, growing as a parasite on nettles in damp thickets near streams, and on herbage along the banks of our larger rivers. Local and rather rare.

East Berks: parasitic on *Urtica dioica* by the R. Thames; local and in small quantity. Bulmarsh Heath, Clewer, Caesar's Camp, Winter Hill, Park Place boat house, almost smothering the hedge opposite the cottage at Hennerton chalk-pit [7880] on the Wargrave road, Old Windsor. Sonning, between Aston and Hambledon Lock, Maidenhead sewage works, Bisham wood, Cliveden reach, Windsor. Declining. Last seen at Crazies Hill in 1986. <1% (1km²). Atlas 2000: no records.

West Berks: extinct at most of its former stations, now confined to the eastern reaches of the R. Thames at Cholsey and Streatley [58], Little Wittenham reserve [59], Tilehurst [67], Wallingford [68]. Previously found in the Kennet valley at Wickham [37] and Newbury [46], and from further upstream in the R. Thames as at South Hinksey [50] and Abingdon [49]. Declining. Atlas 2000: no records.

Cuscuta epithymum (L.) L. *Dodder*

p 7 ↓

Cuscuta europaea L. var. *epithymum* L.

Chalk grasslands and dry heaths, parasitic on *Ulex*, *Thymus*, *Calluna* and *Erica*; preferring sunny situations.

NVC: H 2,3

Ascot: Englemere (1966-74), Swinley (1974). Not seen recently, but worth looking for.

East Berks: Finchampstead (1918), Coleman's Moor (1918), Wellington College, Earley Common, Bulmarsh Heath (1883), Wokingham, Ascot, Ambarrow, Riseley, Bracknell. "The form parasitic on clover and beans (as *C. trifolii*) recorded from Winter Hill, Old Windsor, Shinfield, Swallowfield, Bray, Sonning, Waltham and Twyford may have decreased owing to greater care now bestowed on the cleaning of clover seed" (Druce). Parasitic on *Calluna* and *Ulex* on heaths. Local, rare, sporadic and decreasing. Wellington College, Rapley's Farm (1960-79). Extinct at 5 of its 9 stations by Bowen's time. Still declining. 1% (1km²). Atlas 2000: [86]

West Berks: extinct at about half of its former sites, but still at Inkpen Common on *Calluna* [36], Crookham Common and Bucklebury Upper Common [56], Hurdle Shaw [57], North Unhill Bank and Streatley [58], Silchester Common and AWRE Aldermaston [66], Sulham, Pangbourne and Southcote [67]. Atlas 2000: [36], [56], [57], [58], [66], [67]

Cuscuta epilinum Weihe *Flax Dodder*

• p 7 †

A serious weed of flax fields in the nineteenth century that was deliberately eradicated (last record from Britain in 1968).

West Berks: a single record by Druce as a casual at Didcot Station [59] in 1895 (no specimen).

MENYANTHACEAE

Menyanthes trifoliata L. *Bogbean*

hel 5

Marshes, bogs, fens and borders of slow streams and acid ponds; tolerant of shade. Locally frequent but decreasing. Planted in several locations in ornamental ponds and lakes.

NVC: M 13,22; OV 26; S 1,4,8,10,12,13,25; W 4

Silwood Park: planted in the pond on the patio outside the Refectory when it was refurbished in 2006. Thriving and flowering for the first time in 2007.

Ascot: very rare in a pond by Fernbank Road (2000).

East Berks: abundant by the Strand at Cookham, in a wet meadow near the spring at Crazy Hill, Sandhurst, Wellington College Station, Long Moor, Windsor Great Park. Bearwood Lake, Shinfield,

Queens Mere (1961). Trilakes at Sandhurst (1975), Finchampstead Ridges (1975). Extinct at all 3 of its former stations in the Thames valley Sonning, Crazies Hill. Survives in cluster of sites in the south-west, centered on Wokingham. Recently at Longmoor Bog where the stream flows through a clearing in the birches, Bearwood Lake, California Country Park, the north-west corner of Heath Lake, Wellington College, Bray. In the new village pond (planted *c.*2000) south of Knowl Hill [825793] in July 2003. 1% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: extinct at more than half its former sites in the Kennet valley and Northern Loop. By the R. Cole [29], water meadows west of Hungerford, Kintbury and West Woodhay [36], Greenham Common and Hamstead Marshall [46], Boxford and Snelsmore Common [47], Cothill Fen [49], in bogs between the old and new roads to Eynsham and by a stream under Wytham Wood, still locally dominant in the pond at Jarn Mound [40], in a pond east of Chapel Row and AWRE Aldermaston [56], luxuriant and abundant at Fence Wood [57], in the pond at Blewbury and amongst rushes on Hagbourne Moor [58], abundant in the meadows between Radley and Abingdon [5298], Didcot and Shillingford Hotel meadow [59], Aldermaston Decoy [66]. Atlas 2000: [36], [37], [38], [46], [47], [49], [40], [56], [57], [66]

Nymphoides peltata Kuntze *Fringed Water-lily* hyd 7 & ● □□hyd 7
Limnanthemum peltatum S. Gmelin, nom. illegit.

Native in still backwaters of the R. Thames and planted in ornamental ponds. A scarce plant as a native in Britain but widely planted. Both pin and thrum forms occur in the Thames Valley, which fact is used to argue that the plant is native here (in the East Anglian fens most plants are pin). Most of the plants I have seen have obviously been introduced as ornamentals (e.g. in Silwood Lake). Its characteristic associates are *Ceratophyllum demersum*, *Myriophyllum spicatum*, *Potamogeton crispus*, *P. pectinatus* and *P. perfoliatus*.
NVC: A 11

Silwood Park: locally abundant in Silwood Lake in 1979 on the eastern shore by the overhanging alders and in the aquatic part of the southern inflow. It was gone from these sites by July 2007, replaced by *Nuphar lutea*. Rare in the Lily Pond by the Manor House; declining over the period 1980-2001; not seen since then.

Ascot: in the pond to the east of Ascot Station (1971-2004).

East Berks: in the still pools of the Thames and ornamental waters; local. Ditches by Maidenhead, Bisham Wood, Wargrave, abundant near Park Place, between Wargrave and Shiplake. Whiteknights Park Lake (**RDG** and **RNG**), Bearwood (**LAN**) in 1956; extinct in most of its old Thames-side locations. Still present in ponds at Bearwood [7565], old gravel pits at Dinton Pastures [776725], Warren Row [8180], Cockpole Green [805811], Spout Pond [8163] and South Hill Park [8766]. Recently at Winnersh, Dinton Pastures, Savernake Park, East Bracknell, Hawlands Copse, Stud Green, Nobbscrook Farm. 2% (1km²). Atlas 2000: all except [78]

West Berks: Sutton Courtenay (**OXF**) in 1870, Purley Hall Park (**OXF**) in 1897. Extinct at most of the 12 stations on the R. Thames listed by Druce (e.g. Oxford at Isis (**OXF**) [50] in 1874). Still present at Aldermaston Park [5560] and Radley [522993]. Atlas 2000: [29], [40], [56], [59]

POLEMONIACEAE

Polemonium caeruleum L. *Jacob's-ladder* ● □□hs 6

A cottage garden and herbaceous border plant that is occasionally thrown out. It does not self-sow readily in Berkshire (its native range extends only as far south as the Derbyshire Dales).

Ascot: very rare garden escape. Coronation Road in 1989 and 1994.

East Berks: hedge-sides and waste places. On a ditch bank near Windsor (1805). Reading (**RDG**) in 1931. Recently at Three Mile Cross, Arborfield, The Leas, Finchampstead, Waltham St Lawrence, Hog Common. 1% (1km²). Atlas 2000: [76], [87], [96], [97]

West Berks: Sutton Courtenay [5090] in 1913, Snelsmore Common [4570] in 1957, East Hendred rectory [4585] in 1964, Kingston Bagpuize [4098] in July 2003, always as a garden escape. Atlas 2000: no records.

¶ **Polemonium** *P. caeruleum* subsp. *caeruleum* f. *album*, *P. carneum* 'Apricot Delight', *P. foliosissimum*, *P. foliosissimum*, *P.* 'Lambrook Mauve', *P. pauciflorum*, *P. reptans* 'Blue Pearl', *P. yezoense* 'Purple Rain'

Gilia capitata Sims. *Blue-thimble-plant* ● th 6

West Berks: a garden escape and bird-seed casual found at Abingdon [4595] in 1926 (**OXF**, det. C.C. Townsend).

Navarettia squarrosa (Eschsch.) Hook. & Arn. *Skunkweed* ● th 6

East Berks: a local speciality, and the only Berkshire alien to have its own paper in *Watsonia* (Clement et al., 1993). Introduced unintentionally with wildflower seed, when the appallingly mismanaged tip at Manor Hill [9569] within Windsor Great Park was finally tidied up. The site was bulldozed and landscaped in 1989. In July 1990, there were several thousand plants thickly scattered on more or less bare sandy ground. The site had been sown the previous autumn with a wildflower mix, the seed of which originated in Oregon, USA. Most of the seeds had failed, and the *Navarettia* was growing with a scattering of *Spergularia rubra* and *Gnaphalium uliginosum*. In 1991 the *Navarettia* and *Plagiobothrys scouleri* (also, presumably, in the seed mix) were present but in lower numbers. A few plants survived to July 1999, by which time the original site was overgrown, but new bare ground nearby had been colonised; this ground had been kept open by turning forest trucks. <1% (1km²).

West Berks: a small group of plants on the line of the former runway on Greenham Common [507644] in June 2001.

Phlox paniculata L. *Phlox* ● h 6

A common perennial in herbaceous borders and cottage gardens, occasionally persisting on waste ground as a garden outcast.

East Berks: on the tip in Whiteknights Park [7471] in 1973. Waste ground in Cookham Dean [8785] in July 2003.

West Berks: found by Druce at Cothill [4595] in 1915 (**OXF**).

¶ **Phlox** *P. adsurgens* 'Wagon Wheel', *P. carolina* 'Bill Baker', *P. carolina* 'Miss Lingard', *P. divaricata* 'Blue Dreams', *P. divaricata* subsp. *laphamii* 'Chattahoochee', *P. divaricata* 'May

Breeze', *P. douglasii* 'Crackerjack', *P. douglasii* 'Eva', *P. douglasii* 'Red Admiral', *P.* 'Kelly's Eye', *P. maculata* 'Alpha', *P. maculata* 'Natascha', *P. maculata* 'Omega', *P. paniculata* 'Amethyst', *P. paniculata* 'Blue Ice', *P. paniculata* 'Brigadier', *P. paniculata* 'Bright Eyes', *P. paniculata* 'Eventide', *P. paniculata* 'Franz Schubert', *P. paniculata* 'Fujiyama', *P. paniculata* 'Mother of Pearl', *P. paniculata* 'Norah Leigh', *P. paniculata* 'Prince of Orange', *P. paniculata* 'Sandringham', *P. paniculata* 'Starfire', *P. paniculata* 'White Admiral', *P. x procumbens* 'Variegata', *P. stolonifera* 'Ariane', *P. stolonifera* 'Blue Ridge', *P. stolonifera* 'Violet Vere', *P. subulata* 'Emerald Cushion Blue', *P. subulata* 'G.F. Wilson', *P. subulata* 'Maischnee', *P. subulata* 'McDaniel's Cushion', *P. subulata* 'Scarlet Flame', *P. subulata* 'Tamaongalei'

HYDROPHYLLACEAE

¶ **Nemophila** *N. maculata*, *N. menziesii*

Phacelia tanacetifolia Benth. *Phacelia*

• th 6 ↑

This beautiful blue flowered plant is increasingly popular as a conservation crop, used for reducing soil fertility. The plant is extremely good at sucking nutrients like nitrogen, phosphorus and potassium out of the soil, and when it is harvested and carted away, the levels of these nutrients are permanently reduced. It is also very popular with bee-keepers.

Silwood Park: first recorded on 28 May 2000 as a single plant on bare ground on the Science Park underneath a bird feeder suspended from the *Betula maximowicziana* outside Unit C. Not seen since. Very common on one of the student allotments in Silwood Bottom on 27 August 2005, but rare by 21 September 2008.

East Berks: not in Druce or Bowen. Recently at Bulmershe Court and Edgebarrow Hill. <1% (1km²). Atlas 2000: [77], [86], [97]

West Berks: first recorded at Abingdon [4595] in 1925 (OXF). Ufton Nervet [6367] in 1999. On gravel by Hanger 8 at Harwell [479869] in 2001. Lambourn Downs [357821] and Sheepdrove Farm [3482] in 2002. Headland strip near Paices Wood [5821 6399] in 2003. Atlas 2000: [46], [48], [68]

BORAGINACEAE

¶ **Heliotropium** *H.* 'Chatsworth', *H.* 'Princess Marina', *H.* 'White Lady'

¶ **Onosma** *O. alborosea*, *O. stellulata*, *O. taurica*

Lappula squarrosa (Retz.) Dumort. *Bur Forget-me-not*

• th 6 †

Lappula myosotis Moench.

Lappula echinata Gilib.

West Berks: at Didcot [59] in 1895 (OXF), Pangbourne [67] in 1897 (OXF), by the railway at Newbury [46] in 1897, Cothill [49] in 1910 (OXF), at Wantage Flour Mill [38] in 1956.

Lithospermum officinale L. *Common Gromwell*

hp 6

Woods, hedges, bushy places, coarse grassland and drier parts of fens on calcareous soils in small quantity; local and rare.

East Berks: Bisham Wood (1888), Park Place. Maidenhead Thicket (1952). Recently in hedge-banks in Remenham (2000), Temple and Maidenhead Thicket. Confined to the chalk in the Thames valley from Park Place to Hurley. Absent from the rest of the region. <1% (1km²). Atlas 2000: [78], [88]

West Berks: occasional in the north and west, absent or rare elsewhere. Ashdown Park [28], Foxley Covert [36], chalk grassland at White Shute Hill, Lambourn [37], Seven Barrows, Uffington Wood, and Whitehorse Hill [38], Stanford-in-the-Vale, Buckland Warren and Cherbury Camp [39], Cothill fen [49], Tubney Wood, Newbridge, Wootton and Wytham Wood [40], Hampstead Norreys [57], Lollington Hill, Streatley and Cholsey [58], Appleford and Wittenham Clumps [59], Park Wood Basildon, Sulham and Tilehurst [67]. Atlas 2000: all except [46], [48], [56], [50], [66], [68], [69]

Lithospermum arvense L. *Field Gromwell* ○ th 5 ↓
Buglossoides arvensis (L.) I.M. Johnston

Cornfields, especially on chalky or calcareous soil, but not restricted to them. Arable fields on dry, calcareous soils. Rare.

East Berks: cornfields near Marlow, Cookham, Bisham, Wargrave, Twyford. Bowen had no new records. <1% (1km²). Atlas 2000: [77], [87], [88], [97]

West Berks: occasional on the chalk north of 75 and south of 95, with outliers on the chalk of the Hampshire border [36] and on the oolitic limestone of the Northern Loop [40]; rare or absent elsewhere. Arable land at Tilehurst (LAN) in 1958. Locally frequent on Odstone Down [287830], Kingston Down [28], Sheepdrove Farm [3379], Seven Barrows, Whitehorse Hill, Devil's Punchbowl, Washmore Hill, and Ridgeway above Letcombe Bassett [38]. Atlas 2000: all except [29], [36], [46], [56], [66], [68], [69]

¶ **Lithodora** L. *diffusa* 'Alba', L. *diffusa* 'Grace Ward', L. *diffusa* 'Heavenly Blue', L. *diffusa* 'Inverleith', L. *diffusa* 'Picos', L. *oleifolia*

¶ **Cerinth** C. *major* 'Purpurascens'

Echium vulgare L. *Viper's-bugloss* hs 6 ↓

Heaths, dry sandy fields, walls, calcareous pastures. Druce considered the plant to be "local" while Bowen had "usually in small quantity; local and decreasing". The colonies that are flourishing at present (1995-2000) seem to be transient, and to pass from local dominance to extinction in just a few years. It is probably best to regard the plant as introduced and sporadic in Berkshire. Host to two attractive beetles: *Ceuthorhynchus geographicus* is covered in a network of wavy white lines on a dark background, while *Longitarsus exoletus* is clay coloured with "short black trousers" on its rear legs.

NVC: OV 25

Silwood Park: planted as a big, square plot, right in the middle of Silwood Bottom in 1995 and irrigated through the great drought of that year, as part of a biological control project on genotypic variation in alien weeds (along with *Carduus nutans* and *Lythrum salicaria*); well established (1997-98) but declining (in 2000) as the site became overgrown with *Holcus lanatus*. After late spring cultivation, there were 10 plants in July 2003. By June 2004, there was only one massive plant (with

17 flowering stems) to the north of the central track, but there was a solid row (c.30 plants) in the uncultivated strip along the central section of the western deer fence to the south of the track, and scattered individuals inside the deer fence (cultivated in May 2004). Scattered individuals survived in the margins to July 2005, but annual cultivation inside the deer fence kills the rosettes before flowering (there were plenty of non-flowering rosettes on 3 September 2005; see also *Carduus nutans*). Abundant flowering inside the deer fence in Silwood Bottom on 4 June 2007 after the late-spring ploughing was delayed by various redundancies and sackings of ground staff. Plants sown in wildflower mixtures in other parts of Silwood Park did not persist beyond 3 years (cf. the Windsor Great Park populations, below). Oak Mead: large plants on several of the Biodepth II plots on 8 July 2000, probably sown; still there in June 2003. Bare ground on North Gravel, behind the Header House, two plants on 10 June 2001 where the cypress trees had been cut down; nothing in 2002, but 3 plants in June 2003, none in June 2004 and one small individual in June 2005 under the last of the cypress trees. There was one plant at the edge of the concrete road behind the BP Greenhouse and another two smaller plants closer to Southwood Halls on 4 June 2007, beneath the cypresses. One massive plant (2m tall, with 15 flowering stems) on the Reactor Bank in June 2002 was still flowering on 1 October 2002, but it left no offspring in this location in 2003 or 2004, although there was one big, 12-stemmed individual by the door of the Engineering Store in June-September 2004. On 30 June 2005, however, there were 12 unbranched plants on Reactor Bank close to the site of the original 2002 individual, but none by the Engineering Store. On the student's allotments in Silwood Bottom in June 2003, but rarer by August 2005, and somewhat increased in August 2006. A single individual on the edge of the March-cultivated plot A in the Pound Hill Disturbance Experiment on 10 July 2005 and a single plant in the same place again on 27 June 2007. The strip between the deer fence and the grass track across Silwood Bottom was left uncultivated and there was a superb population in flower on 10 June 2007. In Silwood Bottom on 25 June 2008 the plant was confined to the centre of the lawn that had been created in 2007 and left uncultivated as part of the sludge disposal experiments. On the same day, there were six small plants in the usual site on North Gravel near the surviving Leyland Cypress. A good display on 1 July 2008 in the rabbit and deer enclosures built in 2005 to grow *Silene*, *Dispacus*, etc. on Silwood Lawn, Gravel Pit, Rookery Slope and Nash's Ridge. In June 2009, there were only a few small plants at the North Gravel site (one on either side of the concrete road), but numerous big rosettes on Reactor Bank. Two plants in a new site, in cracks in concrete between Greenhouses 6B and 5C on 26 July 2009 (increased to 3 by July 2010), and another by the Header House on 1 September 2009; these populations were thriving on 15 June 2010, and there were 9 small plants on the North Gravel site by the concrete road to the BP Greenhouse.

Ascot: there was a huge population on the former tip at Manor Hill in Windsor Great Park [956696] where *Navarettia squarrosa* grows. Introduced originally as wildflower seed (probably from Oregon, USA), but now thoroughly naturalised and locally abundant; still common in May 2006. Needs constant soil disturbance to allow regeneration from seed. Extremely susceptible to competition from dense grass. Also on Charters Road, and on waste ground in South Ascot.

East Berks: Sonning, Cookham, Henley, Shinfield, Wokingham, Wargrave, Ambarrow, Finchampstead, Windsor Great Park. Remenham. Bonfire site in Whiteknights Park. Bowen considered the plant to be extinct at 9 of its 11 former sites, surviving only in Reading and Remenham. Recently at Whistley Green, Billingbear, Crazies Hill, Woodcraze Cottages, College Town, Warfield Park, Nuptown. Common on compacted cleared ground destined for factory development at Green Park, Reading [7069] on 2 September 2007. 1% (1km²). Atlas 2000: [77], [78], [86], [87], [96], [97]

West Berks: occasional in the Northern Loop, many extinctions in Kennet valley, but absent elsewhere. Wantage [38], Hatford, Buckland Warren and Longworth pit [39], Boxford [47], East Hanney, frequent on Frilford Heath and Cothill pit [49], Tubney Wood, Youlbury and Wytham [40], Cold Ash and Brimpton [56], common in 2004 on freshly exposed gravel where the runway of

Greenham Common airbase was taken up [5064], Aldworth and Ashridge Wood [57], Streatley Downs [58], Didcot Power Station and railway sidings [59], Pangbourne [67]. Susan Erskine found the plant near a new roundabout at the junction of the A420 and A417 at [299952] in 2003 where it may well have been introduced with seeds used in landscaping. Atlas 2000: all except [28], [36], [48], [50], [69]

Echium plantagineum L. *Purple Viper's-bugloss* ● th 6 †

West Berks: two plants in a field by the railway at Newbury (RNG) [459671] in 1976. Headland strip near Paices Wood [5821 6399] in 2003.

Echium pininana Webb and Berthel. *Giant Viper's-bugloss* ● h 6

A spectacular monocarpic garden plant reaching as tall as 4m in its final year before flowering, seeding and dying aged 2 to 5 years. Naturalized in the extreme south-west of Britain, but not reliably frost hardy in Berkshire. Our recent run of milder winters has allowed plants to survive to flowering size much more frequently than in the past, and self-sown plants should be monitored closely.

Silwood Park: on waste ground behind the Tennis Court (1999-2002).

Echium italicum L. *Pale Bugloss* ● th 6 †

West Berks: in a chicken run at Cothill [49] from 1907-10 (OXF).

Pulmonaria officinalis L. *Lungwort* ● hs 3

A ubiquitous garden plant for winter and early spring flower colour; occasional as a garden escape both self-sown and as outcasts. The distribution of the different species and garden cultivars within Berkshire has not been worked out, and all the Atlas 2000 records are placed here. Introduced in plantations, rare.

Silwood Park: rare as a garden escape. Self-sown on the cinder pot stand at The Greenhouses (1979-2000).

Ascot: a rare garden escape, growing under the hedge at Whitmore Bog Cottages opposite Englemere [901684] in March 2002, and nearby in the grassy verge of the footpath in May 2004. Abundantly self-sown in cracks in the paving stones on the graveyard steps at South Ascot Church in October 2002. In the raised bed on Bridge Road Sunninghill on 2 March 2009.

East Berks: not recorded by Druce. Swallowfield Park (1962), gravel pit on Coleman's Moor (RNG) [7772] in 1985. Waste ground north of Oxford Road in West Reading [7073] in 2002. By the Thames at Maidenhead Court [9083] in 2002. Widespread and frequent as an escape. 13% (1km²). Atlas 2000: all squares

West Berks: Bagley Wood [50] in 1897, Radley shrubbery [59] in 1897, Bradfield [67] in 1899 (OXF), Kingston Lisle Park [38] in 1922, Childrey rectory [38] in 1963, Frilford [49] in 1965, Beckett Park [28] in 1981, Ashbury [28], Boxford [47], at the edge of the woodland in Appleton Lower Common [426002], Hermitage [57] and Blewbury [58] in 2002. Atlas 2000: all except [39], [66], [67], [69]

Pulmonaria rubra Schott *Red Lungwort* ● hs 3

West Berks: Frilford (K) [49] in 1965 (det. C.C. Townsend).

¶ **Pulmonaria** *P. angustifolia* subsp. *azurea*, *P.* ‘Blue Ensign’, *P.* ‘Lewis Palmer’, *P. longifolia*, *P. longifolia* ‘Bertram Anderson’, *P.* ‘Margery Fish’, *P.* ‘Mawson’s Blue’, *P. officinalis* ‘Sissinghurst White’, *P.* ‘Roy Davidson’, *P. rubra*, *P. rubra* ‘Barfield Pink’, *P. rubra* ‘David Ward’, *P. saccharata* Argentea group, *P. saccharata* ‘Dora Bielefeld’, *P. saccharata* ‘Mrs Moon’

Nonea lutea (Descr.) DC. *Yellow Nonea*

• th 3

Silwood Park: a local speciality of open bare ground and sunny brick walls (Plate 15). Long established, thoroughly naturalized and resilient to repeated attempts at eradication by Philistine gardeners who don’t know a good alien when they see one. Growing with *Briza maxima* on the cinder pot stand behind The Greenhouses (1970-2004). The original population was on compacted ground by the door at the end of the eastern greenhouse. This population was gone by March 1995, but a new population appeared on the opposite side of the pot standing in the angle made by the potting shed and the western greenhouse [9449 6851]. This population has expanded and was abundant, and flowering superbly in April 1996 around all of the sunny wall-bases. The population was herbicided and very poor in March 1997 but was fully recovered by 1999. A new, *Nonea*-friendly regime of weed management is now in place, with weed removal and soil disturbance in mid summer (after seed set) but no herbicides. Under this new, friendly management regime the plant declined to the verge of extinction by September 2007. There was just one flowering individual in 2007, the rest swamped by *Plantago lanceolata* and *Holcus lanatus*. So much for friendly management. The population was gone by April 2008 but the plants were thriving untended inside the derelict greenhouse on the opposite side of the wall. There was a significant range expansion when 30 plants came up on North Gravel, over 400m to the north, on bare ground created when the Leyland cypresses were felled in 1999; the first flowers from these plants appeared on 9 March 2001, but the population was gone by 2003. Since hens were introduced to the Pot Standing in 2008, there has been no sign of the plant here, but there is a thriving population on the floor of the derelict greenhouse behind the Potting Shed, and a single rosette on the floor of the alleyway through the western greenhouse on 26 January 2010.

East Berks: no other records.

West Berks: no records.

Symphytum L. *Comfreys*

The Berkshire Comfreys are not hard to tell apart, but there has been a tendency in the past to lump the various taxa together. There is only one native species *Symphytum officinale* whose natural habitats are wet woodland margins and shady river banks. The alien species are either former crop plants like *S. x uplandicum* or herbaceous perennials escaped from gardens. The latter comprise ground cover species like *S. grandiflorum* and upright, more clump-forming kinds like *S.* ‘Hidcote Blue’. To identify them, you need to inspect the ripe nutlets under high power (see below), and to pay close attention to the extent to which the leaf bases are decurrent down the stem (i.e. how many internodes down the stem do they run from the leaf axil in question). Presence of stolons separates *S. grandiflorum* and *S.* ‘Hidcote Blue’ from the other taxa.

Symphytum officinale L. *Common Comfrey*

hs 5

Sides of rivers and brooks, rides through riverside alder woods, marshes, ponds, ditches etc.; locally frequent but absent from the chalk. Much less common on waste ground and in dry places than *S. x uplandicum* (see below). Told by its smooth, shining (not tuberculate, dull) nutlet and by the fact that the leaves are decurrent for more than one whole internode. This is the only Comfrey found in semi-

natural habitats; the others are aliens of more or less disturbed ground. Host plant of the Scarlet Tiger moth *Callimorpha dominula* and the aphid *Aphis symphyti*.

NVC: M 22; MG 1; OV 9,26; S 7,25; W 5

Silwood Park: by the stream between the old Orchard and the Walled Garden, in the ditch where the Farm Road passes through Farm Wood, wet woodland at Cascade Bridge.

Ascot: damp shade at South Ascot, Ascot Station, and locally frequent in damp grassland in the northern triangle of Ascot Racecourse and locally dominant here by May 2007. At the edge of the re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: very common on the banks of the R. Thames and R. Loddon and frequent on their tributaries and back-waters. 16% (1km²). Atlas 2000: all squares

West Berks: particularly fine and locally dominant on the edges of the rides through The Wilderness [400675], the celebrated Kennet-side alder woodland south of Halfway House on the Bath Road to the west of Newbury. Common by the R. Thames at Sutton Courtenay Manor [59], and by the R. Pang in Moor Copse [67]. Widespread except in the chalky region north of 75 and south of 85, where it is absent save for sites by the R. Thames at [5575] and [5580]. Atlas 2000: all squares

Symphytum x uplandicum Nyman *Russian Comfrey* = **S. officinale x S. asperum** • hs 6 ↑
Symphytum x peregrinum auct., non Ledeb.

Waste places, roadsides, rough and damp ground, farmyards, woodland borders, and formerly as a relic of cultivation in arable ground. "Somewhat extensively cultivated for fodder" in Druce's time. Local but persistent and increasing. Told by its shorter decurrent leaf bases (less than one internode long), nutlets with tuberculate, dull (not smooth and shiny) surface, and (from its parent *S. asperum*) by the sessile (not shortly petiolate) uppermost leaves, and by the calyx hairs (there is a mix of broad-based and finer hairs along with all intermediates, whereas *S. asperum* has mostly broad-based whitish bristles, a few much finer smaller hairs, but lacks the range of intermediate hair sizes exhibited by *S. x uplandicum*).

Silwood Park: the Walled Garden population has increased, and had all but elbowed out the *S. officinale* population by 1990. Dominant all along the east-facing wall in June 2002. Locally abundant at Virginia Water Lodge in 2003. Abundant on waste ground behind the brick laboratory building in Drive Field on 13 July 2007.

Ascot: sunny waste ground at South Ascot, Ascot Station, Charters Road and on St George's Lane close to South Ascot railway bridge, where it survived the devastation associated with the works that followed a burst water main in June 2002.

East Berks: Maidenhead, Ambarrow. Much increased, and now commoner than *S. officinale* in most parts of Berkshire away from riversides. It is fertile and backcrosses with *S. officinale* to produce a continuum of intermediate phenotypes. The garden cultivar 'Variegatum' is seldom seen as an outcast; it is liable to revert, even under cultivation, especially if its roots are damaged or it is grown in poor soil. 18% (1km²). Atlas 2000: all squares

West Berks: first record Burghfield Bridge (RDG) [6870] in 1919. Now widespread; occasional or locally abundant. Atlas 2000: all squares

Symphytum 'Hidcote Blue' hort. ex G. Thomas

= **S. grandiflorum x S. x uplandicum** *Hidcote Comfrey* ● hs 6
Symphytum x tauricum auct., non Willd.

The commonest garden Comfrey of herbaceous borders, but surprisingly rare as a relic or outcast. The petiole is scarcely decurrent at all. It has branched flowering stems, blue-and-white flowers with pink buds.

Silwood Park: pink in bud, deep blue in flower, a long-persistent garden relic near The Greenhouses.

Ascot: in the verge of Whitmore Lane, by the junction with London Road; 18 April 2001.

East Berks: a single plant on a soil heap in a shady lay-by between the Marina and Oakley Cemetery [9277]; 6 April 2001. <1% (1km²). Atlas 2000: [96]

West Berks: in a bog garden in Mortimer [66] in 2001. Atlas 2000: no records.

Symphytum asperum Lepech. *Rough Comfrey* ● hs 6 ↓

Told from *S. uplandicum* by its calyx hairs and non-decurrent uppermost leaves (see above).

East Berks: very rare. White Waltham (1997), Scotlands (1999). <1% (1km²). Atlas 2000: [87], [88]

West Berks: Pusey House [358967] in 1971, Stanford Dingley [576715] in 1980 in old gardens. Atlas 2000: [47]

Symphytum tuberosum L. *Tuberous Comfrey* ● hs 6

A coarse creeping perennial with spiralled cymes of pendulous yellow, almost cowslip-like flowers. Told from *S. orientale* by its more divided calyx (more than halfway to the base) and yellow (not white) corolla. Told from *S. tauricum* (not yet recorded from Berkshire) by the presence of rhizomes and by its unbranched stems and sessile (not petiolate) middle and upper stem leaves.

East Berks: in a plantation at St Leonard's [9374] in 1969.

West Berks: in a plantation at Lockinge [48] in 1964 and on Inkpen Common [36] in 1967.

Symphytum grandiflorum DC. *Creeping Comfrey* ● hs 3 ↑
Symphytum ibericum Steven

This is the ground-covering Comfrey useful for carpeting unsightly shaded areas. Long persistent in wild gardens. Found on banks and shady waste ground near houses as a garden outcast or escapee. The inflorescences are unmistakable: they start out as cymes of red-tipped buds, then open to pale yellow flowers. Its leafy stolons distinguish it from all the other Comfreys except for the blue-flowered *S.* 'Hidcote Blue'.

Ascot: no records.

East Berks: not in Druce or Bowen. Recently at Winnersh, Upper Wargrave, Heriots, The Holt, West End. 1% (1km²). Atlas 2000: [77], [87]

West Berks: not in Druce. On the verge leading up the hill to the church at Ashbury [28], Kingston Lisle [38] from 1945-62, Sparsholt [38] in 1961 (LAN), Bagley Wood [50] from 1964 to 1980, Pusey House [39] in 1971, Stanford Dingley [57] in 1980, Kingston Bagpuize [49] in 1988. Recently at Ashbury [28], Inkpen, near the Crocus Meadow [36], dominant over long stretches of the roadside bank at Sparsholt [38], Longworth Manor [3899], Abingdon [4896], in an old bog garden in Mortimer [66], banks by the Red Lion in Upper Basildon [67]. Atlas 2000: [28], [36], [39], [38], [46], [50], [67], [68]

Symphytum orientale L. *White Comfrey*

● hs 4 ↑

Rough grass and waste ground; uncommon but increasing. Told by non-decurrent petiolate leaves, its dull tuberculate nutlets, white corolla, included corolla scales and calyx divided less than halfway to the base.

Silwood Park: locally abundant and increasing, but some of the populations are sporadic. Buckhurst Road Entrance, a single clump in shady grass next to the Lodgepole Pine on 17 May 1993. This area was tidied up in 1994 and the plant has not been seen since. South Lodge Wood: rare in the nettles behind the Japanese Garden on the north side on 22 May 1998. East Lodge: several large plants along the boundary road into the eastern car park of the Science Park on 22 April 2000; this population had increased to 12 plants by April 2001 and to 40 by 2002, when it was attacked with herbicides by gardeners who were renovating the shrub bed.

East Berks: not in Druce. Roadsides in small quantity. Local but likely to increase (Bowen). Whiteknights (1967), Shinfield (1964), Bracknell (1965), Buckland Drive Reading (1968), Earley Church (1970). Recently at Earley, The Mount, Holyport, East Maidenhead. 2% (1km²). Atlas 2000: [76], [77], [87], [96]

West Berks: not in Druce. In dumped soil at Milton [49] in 1977, Boars Hill [40] in 1967, Sutton Courtenay [59] in 1977, 1982 and 2001, Little London [50] in 1963, Wallingford [68] in 1979. Atlas 2000: [38], [48], [40], [59], [68]

¶ **Symphytum** *S. asperum*, *S. caucasicum*, *S.* 'Goldsmith', *S.* 'Hidcote Blue', *S. ibericum*, *S.* 'Lambrook Sunrise', *S.* 'Langthorns Pink', *S.* 'Rubrum', *S. tuberosum*, *S. x uplandicum* 'Variegatum'

Brunnera macrophylla (Adams) I.M. Johnst. *Great Forget-me-not*

● hs 4

Myosotis macrophylla Adams

Anchusa myosotidiflora Lehm.

Brunnera myosotidiflora (Lehm.) Steven

An uncommon garden outcast on rough ground and hedge-banks in villages.

Silwood Park: in rough grass by The Greenhouses (1979-96).

East Berks: not in Druce or Bowen. Recently at Great Copse, Wargrave, Upper Wargrave, West End. 1% (1km²). Atlas 2000: [76], [77], [87], [96]

West Berks: Blewbury [58] in 1962, Marcham [49] in 1967, Marley Wood [40] in 1970. Atlas 2000: [29], [40], [68]

¶ **Brunnera** *B. macrophylla* ‘Langtrees’, *B. macrophylla* ‘Dawson’s White’, *B. macrophylla* ‘Hadspen Cream’

Anchusa undulata L.
Anchusa hybrida Ten.

• hs 6 †

West Berks: an uncommon grain casual recorded from Cothill [49] in 1907-10 (**OXF**) and Tubney Wood [40] in 1965-75.

Anchusa officinalis L. *Alkanet*

• hs 6 ↓

Dry, sandy waste ground and gravelly heaths, very rare. The corolla tube is straight (not curved) with 5 equal (not slightly unequal) lobes.

East Berks: in a gravelly and heathy piece of ground near Finchampstead (1891), possibly introduced with pheasant food. Not seen by Bowen. Fleet Hall pit [76] in 1918 (**RNG**), Suttons old nursery ground [733737] in 1979. Atlas 2000: no records.

West Berks: Cothill [49] in 1907, Abingdon [49] in 1918, Tilehurst [67] in 1958 (**LAN**), Hatford pit [39] in 1966. Recorded by Susan Erskine on 9 July 1999 from waste ground behind the dentist’s surgery in Faringdon [287 955]. Found by Bill Helyar on a bank of soil in the carpark at Shalford Lakes [5687 6508] on 21 September 2004 growing with *Chrysanthemum segetum* and *Echium vulgare*. Atlas 2000: [29], [40]

Anchusa azurea Mill. *Garden Anchusa*

• hs 6 †

An uncommon herbaceous border garden plant, grown for its strikingly big, deepest azure blue flowers.

East Berks: Suttons old nursery grounds [733737] in 1979. Atlas 2000: no records.

West Berks: Cothill [49] in 1907, Marcham [49] in 1916 (**OXF**), on Kennington tip [50] in 1952. On waste ground in Faringdon [287955] as recently as 1999, but the site is now built over. Atlas 2000: no records.

Anchusa arvensis (L.) M. Bieb. *Bugloss*
Lycopsis arvensis L.

○ th 6

Dry arable fields, usually on sandy soils. Locally frequent but absent from clay and chalks soils. Cultivated fields, hedge-banks, waste places, occurring chiefly on sandy soil; generally distributed in our area.

NVC: OV 3,4,9

Silwood Park: rather local and uncommon in the arable seed bank at Pound Hill Field. It was most abundant following February cultivation in 1997, after the spring drought in May 2003, and in July 2005 after the very dry winter of 2004-05 following late spring cultivation in 2005, when it coloured the whole of the field. Very local in Silwood Bottom, where it is restricted to the eastern edge of the field and commonest in the north-east corner (1979-2005). Consistently rare in the fallow at Ashurst Four Acre Field (1979-2005). Rare in the grassland seed bank in Nash’s Field in the corner of grazed cultivated Block D in summer of 1991 (but not seen during the previous 5 years of cultivation). Locally abundant on the sand piles thrown up by the rabbits around the warrens in Nursery Field on

28 May 1996. It was common following early spring cultivation (March-April) at Pound Hill in June 2004 and even more abundant in July 2005. It was most frequent in the Disturbance Timing Experiment at Pound Hill on the March-cultivated plots in June 2005, following the very dry winter and spring of 2005. There was a huge, multi-stemmed plant on the south-west corner of the security at the base of the Met Tower in June 2005. Frequent to the south of the central grass track across Silwood Bottom on 23 May 2007 following May cultivation in 2006. Particularly good on 14 June 2007 in the eastern part of Ashurst Four Acre Field after spring cultivation and an unusually dry April. In Silwood Bottom, the skeletons, much infested by mildew, were conspicuous along with the skeletons of *Apera spica-venti* on 2 September 2007 between the gate and The Shed. Common on the March-cultivated plots in Blocks B and D at Pound Hill in June 2008. Very common on the June-cultivated plots at Pound Hill on 9 July 2009 after the rains finally came. Occasional rosettes on 16 September 2009 after Pound Hill Field had been ploughed and harrowed in July 2009 for the first time since the Prosamo Experiment in 1990; these produced a good crop of flowers in May 2010. Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation. On 2 June 2011 following the driest March, April and May in memory (see *Raphanus raphanistrum*) there was a bumper crop of flowers in Silwood Bottom and on Ashurst Four Acre Field that had been cultivated in October 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	5

East Berks: West Reading [7074], Wellington College, Sonning, Wargrave, Remenham, Culham, Hurley, Bisham, Cookham, most abundant in Sonning Cutting, Bagshot, Sandhurst, Wokingham, Bracknell, Maidenhead, Twyford, Bray, Clewer, Windsor Park. 4% (1km²). Atlas 2000: all squares

West Berks: common in the western part of the Thames valley from Lechlade [29] to Abingdon [49], and occasional in the Kennet valley, but absent or rare in the interior. Kintbury [36], Wickham [37], Buckland, Carswell, Longworth and Denchworth [39], Newbury [46], Beedon [47], Marcham, Kingston Bagpuize, Frilford, Tubney and Cothill [49], Sunningwell, Dry Sandford, Wytham, Besselsleigh and Appleton [40], Wasing pits and Aldermaston [56], Frilsham and Greathouse Wood [57], Radley and Wittenham [59], Sulham, Tilehurst, Tidmarsh and Theale [67], Wallingford [68]. Atlas 2000: all except [36], [37], [47], [48], [58], [68]

Cynoglossis barrelieri (All.) Vural & Kit Tan *False Alkanet* ● hs 5
Anchusa barrelieri (All.) Vitman

This looks like an over-sized, hispid Forget-me-not. The calyx is divided more than half way to the base, there is a collar-like structure at the base of the flower, and the corolla tube is much shorter than the limb.

Silwood Park: discovered on 6 October 2013, on a beautifully sunny Sunday, on abandoned cultivation in the Student Allotments in Silwood Bottom (the future allotment plot was under construction and about to receive its 3rd and final herbicide treatment). There were 10 plants in full flower, growing with *Spergularia arvensis* and *Galinsoga parviflora*. There is no evidence of intentional planting of this species.

East Berks: a new county record in October 2013 at Silwood (above).

West Berks: no records

Pentaglossis sempervirens (L.) Tausch ex L.H. Bailey *Green Alkanet* ● hs 5 ↑

Anchusa sempervirens L.

One of the most successfully naturalised of all the herbaceous perennial garden escapes. It forms extensive, single-species patches in sun and partial shade on waysides and waste places on dry soils near houses. “Local and in small quantity but increasing” (Bowen). Now one of our most frequent alien species, it varies in abundance from place to place, but is virtually ubiquitous in towns and villages, often to be found in an out-of-the-way corner of a churchyard where the grass is mown less frequently.

Silwood Park: monocultures of the plant occur on Reactor Bank and at various places along the Ashurst Road, especially in the woodland behind Drive Field and adjacent to The Rookery. The dominant plant below the London Road fence of Silwood House and in the grassy verge opposite Knight Frank. On waste ground at The Greenhouses, in long grass in the eastern verge of Silwood Bottom, and in the Walled Garden. In the churchyard and elsewhere at Ashurst. Waste ground in Cheapside Village, South Lodge, Tractor Sheds and Silwood Farm. A weed of flowerbeds in Silwood Lodge and the Herbaceous Border. Locally dominant in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006 (still abundant in June 2007 despite increase of the nettles). Host to *Orobancha minor* in 2005, 2006 and 2007 opposite the Gardeners’ Mess-room.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	5	27

Ascot: The Tip, Coronation Road, Ravens Corner, South Ascot, Ascot Station, Tower Court, Sunninghill, Charters Road, Sunningdale Park, South Coworth, Frostfarm Plantation, Sunningdale, North Ascot, Ascot Place.

East Berks: first recorded between Maidenhead and Kenton (1834), naturalized at Park Place. Now in every town and village. Particularly common in Cookham and Finchampstead. 36% (1km²). Atlas 2000: all squares

West Berks: recorded from Druce’s Isis, Ock and Kennet districts before 1897. Particularly common in Stanford-in-the-Vale [39] and Pangbourne [67]. Atlas 2000: all except [69]

Borago officinalis* L. *Borage

• th 6

Grown in every herb garden, and many a window box, but more for its strange blue flowers than for “dispelling melancholy and inducing euphoria”. The leaves are useful for adding to cold drinks in summertime. Waste ground near and about villages, roadsides, allotments; a sporadic casual rather than a naturalized species with us.

Silwood Park: Ashurst Orchard, close to the Greenhouses on 28 October 1981; this site was destroyed during construction of the new facilities in 1988. Southwood Halls, a single plant in flower on 24 October 1994 in the south-facing bed below a bird feeder. Heronsbrook, in the garden adjacent to Nash Copse on 20 August 1989. Silwood Bottom, locally frequent as a relic of cultivation in the Student Allotments in July 2000, and increased even in competition with tall grasses by September 2002; still there in 2005, 2006 and 2007 flowering well into October 2013, but less common in August 2008. Locally frequent on waste ground in Cheapside in October 2002. It had invaded the lawn of Silwood Bottom outside the rabbit fence, presumably from the adjacent student allotments in July 2004; still present on the site of the former manure pile on 6 October 2013. A single plant by the central brick path through the Science Park on 29 August 2006. By the Science Park road: there were

10 plants on 25 June 2007 on disturbed ground where the *Pyrus salicifolia* 'Pendula' had been removed.

Ascot: very rare casual. Ascot Place in 1998. Sunningdale in 2003. Frequent by the gate onto grass parkland at the south-east end of Ascot High Street on 23 October 2004. A single plant on the steps of the Chinese take-away on Upper Village Road Sunninghill [934678] on 2 October 2005.

East Berks: Arborfield, Aston Ferry, Twyford, railway-side near Maidenhead. Cookham Dean Common (1960). Woodley (1956), Smallmead tip (1988). Recently at Courage Brewery, West Reading, Ryeish Green, Woodley, Whitley, Twyford, Crazies Hill, Chapel Green, Westcott, College Town, North Hanworth, Littlewick Green, Lillibrooke Manor, Holyport, Warren Row, Prospect Hill, Maidenhead, Cookham. 4% (1km²). Atlas 2000: all squares.

West Berks: in villages throughout, but never far from houses. Englefield [67] in 1918, Harwell [48] in 1962, Abingdon [49] in 1963, Wantage [48] in 1964, Hungerford [36] in 1965, Holt Wood [46] in 1965, Hermitage [57] in 1966, Inkpen [36] in 1967, Sutton Courtenay [59] in 1980, Beckett Park [28] in 1981, Fair Mile [58] in 1983, Wytham chalet garden [40] in 1987. Common on allotments in towns throughout, as at Steventon [4691] and Cow Mead, Grandpont [5104]. Atlas 2000: all except [39], [47], [66], [67], [68], [69]

Trachystemon orientalis (L.) G. Don *Abraham-Isaac-Jacob* • hs 4
Borago orientalis L.

Naturalized on shady banks and in dampish woods. It has short sprays of starry purplish blue flowers appearing before the large coarse, hairy leaves in spring.

East Berks: not recorded by Druce or Bowen. On the railway bank at Earley Station [7571] in 1984.

West Berks: not recorded by Druce or Bowen. In a conifer plantation at Bere Court Farm [6174] in 1974.

¶ **Trachystemon** *T. orientalis*

Amsinckia micrantha Suksd. *Common Fiddleneck* • th 5
Amsinckia intermedia auct., non Fischer and C. Meyer
Amsinckia menziesii auct., non (Lehm.) Nelson and J.F. Macbr.
Amsinckia calycina auct., non (Moris) Chater

A wool, grain, bird-seed, carrot-seed, grass-seed and linseed alien. There must have been a marked improvement in the effectiveness of seed cleaning in the late 1920s because the plant has not been recorded from Berkshire since then.

East Berks: not in Druce. Between Reading and Sonning [77] in 1925 (OXF).

West Berks: Moulsoford [58] in 1921 (OXF), Hungerford [36] in 1923, Abingdon [49] in 1926. On a waste tip, now built over, at Letcombe Regis [38] in 1990. Still in a field in Little Coxwell [286933] in 2001.

Plagiobothrys scouleri (Hook. & Arn.) I.M. Johnst. *White Forget-me-not* • th 7 †

A rare casual, occasionally persistent, often as a contaminant of wildflower and grass seed mixes.

East Berks: introduced unintentionally with wildflower seed from Oregon, USA, when the tip at Manor Hill in Windsor Great Park [9569] was finally bulldozed and tidied up in 1989. It thrived on bare ground with *Navarettia squarrosa* (see p. 202 and Clement et al., 1993) for several years after 1991, but was gone by 1999.

West Berks: no records.

Asperugo procumbens L. *Madwort*

• th 5 †

Waste ground, rare by railways. Bowen reckoned that this was extinct in Berkshire.

East Berks: no records.

West Berks: formerly an occasional grain alien on the railway at Didcot [59] in 1895 (OXF) and Newbury [46] in 1897, and on waste ground at Grandpont [50] in 1892 and Speen [46] in 1918.

Myosotis L. *Forget-me-nots*

These plants fall naturally into two groups: the wetland species have straight, closely appressed hairs on the calyx, while the dry land species have spreading hooked hairs on the calyx. Subsequent critical determination really requires inspection of the nutlets under high power, but most of them can be identified accurately in the field. One of the most difficult separations is between large flowered forms of *M. arvensis* and small flowered forms of *M. sylvatica* (see below). The really important distinctions to make are between the dry land annuals *M. discolor* and *M. ramosissima* and the wetland biennials *M. laxa* and *M. secunda*.

Myosotis scorpioides L. *Water Forget-me-not*

hel 5

Myosotis palustris (L.) Hill, nom. illegit.

Sides of rivers, brooks and ponds, and in wet places; “very common and generally distributed, but replaced in the heathy districts of the south-west, at least in the upland bogs, by *M. laxa*.” (Druce). Margins of rivers, streams, ditches and ponds; locally frequent but absent from the chalk ridge. Told from *M. secunda* and *M. laxa* by its long style (often exceeding the calyx lobes at flowering, but not exceeding the petals) and by its equilateral (short sided) triangular calyx lobes.

NVC: A 5; M 22,27; MG 10,13; OV 28,29,32,35; S 3-6,12,14,15,22,23,25,26,28; W 1,5,6

Silwood Park: margins of The Lake, Cascade Marsh, Great Mead, on the southern inflow stream through The Marsh, in wet grassland at Gunness’s Thicket. Also in The Willows, Gunness’s Bridge and by the Outflow Stream at Heronsbrook.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	2	5

Ascot: Englemere Pond, Blacknest Park, Johnson’s Pond, Frostfarm Plantation, Breakheart Hill, Ascot Place, South Forest, Leiper Hill, Great Meadow Pond, Windsor Great Park.

East Berks: wet places generally, 12% (1km²). Atlas 2000: all squares

West Berks: generally distributed except on the chalk north of 75 and south of 85. Atlas 2000: all squares

Myosotis secunda Al. Murray *Creeping Forget-me-not*
Myosotis repens Don ex Borrer, non Moench

hel 5 ↓

Wet heathy places, and margins of ponds on acid soils; rare and decreasing. Told from *M. scorpioides* by its short style (shorter than the calyx lobes at flowering) and by its isosceles (long sided) triangular calyx lobes, and from *M. laxa* by the lower stem with spreading (not appressed) hairs.

Ascot: no records.

East Berks: Bagshot, near Cumberland Lodge, Easthampstead Plain (all pre-1897). Margins of acid streams and ditches; rare. Owlsmoor (1961). Extinct at all of its sites except Owlsmoor and Wellington College bog. <1% (1km²). Atlas 2000: no records.

West Berks: very local in the eastern Kennet [46], [56] and [66]: Greenham Common [46], Beenham and Turners Green [530697], Burghfield, Padworth and Mortimer West End [66]. Atlas 2000: no records.

Myosotis laxa Lehm. *Tufted Forget-me-not*

hel 5

Myosotis laxa subsp. **caespitosa** (Schultz) Hyl. ex Nordh.
Myosotis caespitosa Schultz

Pond-sides, wet marshy places on nutrient-rich mud, and on damp heaths; locally common but much less widely distributed than *M. scorpioides*, from which it is told by its short style (shorter than the calyx lobes at flowering) and by its isosceles (long sided) triangular calyx lobes. Told from *M. secunda* by the lower stem with appressed (not spreading) hairs. Flowers are sometimes pure white as at Virginia Water.

NVC: M 22; OV 26,30; S 4,12,14,15,19; W 5

Silwood Park: in wet woodland at The Swamp, growing next to the inflow stream with *Caltha palustris* and *Apium nodiflorum*. Also at Guinness's Bridge with *Lycopus*, *Mentha* and *Scirpus sylvatica*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	2

East Berks: Binfield, Crazy Hill, Warren Row, Ruscombe, Twyford, Easthampstead, Ambarrow, Bearwood, Wellington College, Finchampstead, Riseley, Barkham, Bracknell, Wokingham, Loddon Bridge, Coleman's Moor, Bulmarsh, Earley, Arborfield, Ascot, Windsor Park, Virginia Water. Generally distributed in the south of the area. Recent records from Puddles Farm [808811], Sandhurst [829614], Charvil [781752]. 2% (1km²). Atlas 2000: all except [78]

West Berks: Inkpen, Woodhay and Kintbury [36], Carswell [39], Rack Marsh, Bagnor and Greenham Common [46], Snelmore [47], Frilford, Cothill, Abingdon and Marcham [49], Cumnor, Wytham and Boars Hill [40], Aldermaston, Beenham, Crookham and Cold Ash [56], Bucklebury and Bucklebury [57], Didcot [59], Burghfield [66], Theale [67]. Atlas 2000: all except [38], [46], [47], [48], [68], [69]

Myosotis sylvatica Hoffm. *Wood Forget-me-not*

hs 5

Possibly native in hanging woods on the chalk escarpment; Druce was very excited by the population in Rivar Wood [3562] near Inkpen (see p. 86). The species is so common nowadays as a garden escape that it hardly raises any interest at all. Much increased since Bowen's time. A classic cottage

garden plant, often grown as an under-planting for tulips in spring bedding schemes. Very common as a garden escape in woodland, hedgerow and waste ground which makes it impossible to be sure of any putative native locations. Large-flowered *M. arvensis* are often mistaken for this species. The critical diameter of the flower is 5mm: if the flowers are larger than this, they are *M. sylvatica*, and if they are smaller then they are *M. arvensis*. Murphy's Law predicts that the flower you are looking at is exactly 5mm diameter. In this case, ask whether the petals are flat (*M. sylvatica*) or concave (*M. arvensis*).

NVC: W 8

Silwood Park: rather local. Most frequent in open woodlands around Silwood Farm, especially common under the large Weeping Willow, where white flowered individuals occur. Locally abundant around Geophysics. On cinder and gravel at the Header House. On imported topsoil on the Science Park. Common beneath the *Viburnum opulus* bushes on Garden Wood Bank despite the rabbits.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	3

Ascot: locally frequent, as by the path through South Ascot Bog [9267]. The rare white-flowered form was in Sunningdale churchyard and on Upper Village Road, Sunninghill in April 2002. The even rarer pink form was in South Ascot churchyard on 28 April 2002.

East Berks: common close to houses, rarer in remote places. 32% (1km²). Atlas 2000: all squares

West Berks: Rivar Copse [3562] was thought by Druce to be a native site. Frequent throughout as a garden escape. Atlas 2000: all squares

Myosotis arvensis (L.) Hill *Field Forget-me-not*

o th 4

Myosotis scorpioides L. var. *arvensis* L.

Myosotis annua Moench

Woods, cultivated fields, hedge-banks, waste-ground, fallow fields, set-aside, paths and gardens; very common and generally distributed. Flowers blue, less than 6mm diameter, often only 3mm, with concave (not flat) corolla lobes.

NVC: OV 1,3,4,9,10,12,15,19,21,24,25,33

Silwood Park: on sunny disturbed ground, gravel paths and arable fallows throughout. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk. Common on imported topsoil at the Ashurst lysimeter site in May 2004 and January 2008 (after herbicide treatment in September 2007). Locally frequent from the seed bank following the erection of the fence at the Rhododendron Plantation behind the Tennis Court in May 2005. Still locally abundant in May 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	2	3	29	48

East Berks: waste and fallow ground throughout. In a very curious habitat in the Wish Brook in Wishmoor Bottom with *Molinia* and *Carex* species. Frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 53% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Myosotis ramosissima Rochel *Early Forget-me-not*

th 4 ↓

Myosotis collina auct., non Ehrh. ex Hoffm.

Myosotis hispida Schldl.

Myosotis ramosissima Rochel subsp. *globularis* (Samp.) Grau

Bare places in dry grassland, sandy heaths, walls and arable fields; commonest on calcareous soils and absent from the wetter parts and much of east Berkshire. The young flowers are blue, the corolla tube is shorter than the calyx, the calyx teeth are spreading at maturity, the cymes are much longer at maturity than the leafy part of the stem, and the nutlets are pale brown with truncate bases (see below for the contrasting features of *M. discolor*).

NVC: OV 27; U 1

Ascot: no records.

East Berks: all but restricted to the Thames valley chalk. Wokingham, Sandhurst, Sunninghill, Finchampstead, Long Moor, Bracknell, Bearwood, Sonning, Twyford, Windsor, Cookham, Winter Hill, Wargrave. Bracknell, Jealott's Hill, Woodley, Maidenhead and Cookham Dean. Recently at Remenham, Prospect Hill. 1% (1km²). Atlas 2000: all except [76], [96]

West Berks: "The turf in the upper part of Hen Wood [40] is often a very beautiful sight in early spring from the abundance of this plant, which is there very much dwarfed, so that the dark blue flowers appear like little circles of *lapis lazuli* among the short grass" (Druce). Locally frequent in the Northern Loop, occasional elsewhere. Wickham [37], Pusey, Longworth and Carswell [39], Curridge Common [47], Abingdon, Frilford Heath and Marcham [49], Wytham, Cumnor, Bessels Leigh, Boars Hill, Tubney Quarry and Sunningwell [40], Beenham [56], Bucklebury, Ashampstead, Frilsham, Hawkridge and Compton [57], Streatley [58], Wittenham [59], Hinksey and Bagley Wood [50], Mortimer and Burghfield [66], Pangbourne, Bradfield, Sulham, Tilehurst and Theale [67]. One of the conspicuous features of the short turf at Dry Sandford Pit [4699] flowering with *Erodium cicutarium* in early spring. Atlas 2000: all squares

Myosotis discolor Pers. *Changing Forget-me-not*

th 5

Myosotis collina Ehrh. ex Hoffm.

Myosotis versicolor (Pers.) Smith

Myosotis discolor Pers. subsp. *dubia* (Arrond.) Blaise

Bare places in dry grassland on acid soils, dry sandy heaths, banks, walls, and as an arable weed on acid sandy soils, long-lived in the seedbank beneath grassland; locally common and generally distributed in the south of our area but absent from the clays and chalk. The young flowers are creamy yellow, the corolla tube is twice as long as the calyx, the calyx teeth are almost erect at maturity, the cymes are not much longer at maturity than the leafy part of the stem, and the nutlets are dark brown with rounded bases (see above for the contrasting features of *M. ramosissima* which is its ecological equivalent on dry calcareous soils). Unpalatable to rabbits and hence locally frequent in heavily grazed turf.

NVC: OV 1; U 1

Silwood Park: one of Silwood's most abundant wildflowers, producing sheets of colour in grassland turf that is closely grazed by rabbits, as in Church Field in May 1996 after the great drought of 1995 had opened up the sward, where it flowered with the rich pinkish purple of *Erodium cicutarium*. Also common in the fallow at Silwood Bottom, Pound Hill and the more nutrient-poor parts of Ashurst

Four Acre Field. It is extremely local in its distribution, however, and was present in only 1% of 100 m² samples. In bare patches in lawns at the Manor House, and in the graveyard at Ashurst where rabbits had disturbed the turf. In arable fallow at Pound Hill Field, particularly abundant in 1986 following glyphosate treatment of the perennial grasses; it does best after autumn (rather than spring) cultivation. One of the study species in the Ashurst Warren raised beds experiment; sown at high density in many of the beds in October 2002. Also on compacted bare ground of paths, pot standings and waste land. Frequent on damp stones at the base of the beech tree outside CPB on 20 April 2004 with *Montia fontana*. Very common in the seedbank beneath old grasslands at Nursery Field and Heronsbrook Meadow in April 2004 following cultivation in 2003, and most conspicuous on the rabbit-grazed plots. Abundant on 27 May 2006 in the southwestern cultivated part of Ashurst Four Acre Field after a very dry winter. Abundant with *Veronica persica* after a dry and very early spring on 21 April 2007 in Silwood Bottom to the south of the central grass track on ground that had been cultivated in late May 2006. The cold late spring of 2010 was particularly good, with a large population on the edge of the Croquet Lawn beneath the canopy of the larger Cedar of Lebanon. On Royal Wedding Day 29 April 2011 the plant was locally abundant on the autumn-cultivated part of Ashurst Four Acre Field, in a year when the *Raphanus* was almost absent.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	23	25

East Berks: commonest on the acid sands to the south of 70, rare in the Thames valley, and absent elsewhere. A form with permanently yellow flowers was common in Windsor Great Park in 1886, and at Long Moor, Finchampstead and Swinley. 11% (1km²). Atlas 2000: all except [78]

West Berks: occasional in the Thames valley and the Kennet valley but absent from the interior. Atlas 2000: all except [68]

Omphalodes verna Moench *Blue-eyed-Mary*

• hs 3 ↓

A garden plant whose main virtue is its tolerance of dry shade. Persistent in woodland and hedgerows as a garden outcast. Over-recorded in the past for *Brunnera macrophylla*.

West Berks: Buscot Park [2496] in 1952 (OXF).

¶ **Omphalodes** *O. cappadocica*, *O. cappadocica* ‘Cherry Ingram’, *O. cappadocica* ‘Starry Eyes’, *O. verna*, *O. verna* ‘Alba’

Cynoglossum officinale L. *Hound’s-tongue*

hs 6 ↓

Chalk grassland, waysides, dry woods, heaths, commons, chiefly on gravelly or calcareous soil. Druce considered the plant to be “local”, while Bowen had it as “in small quantity; local and decreasing, and only seen recently in north Berkshire”. Now it is on the verge of extinction in West Berkshire. The cause of its steep decline is not at all obvious, because it is still common enough in disturbed ground around rabbit warrens on the chalk in Kent and Hampshire.

NVC: CG 6; W 12

Ascot: no records.

East Berks: Reading, railway bank at Earley, Park Place, Twyford, Stubbing's Heath. Extinct at all of its former Thames-side locations by Bowen's time. Last seen on a roadside in Windsor Great Park [9572] in 1950. Atlas 2000: no records.

West Berks: now rare on the western Thames and in the Northern Loop. Absent from the interior, and extinct at all 6 of its former sites south of 90. Watchfield [29], Cherbury Camp, Buckland Warren, Charney Bassett and Pusey [39], north-west of East Hendred [48], Frilford Heath [49], Cumnor Hill [40], Unhill Wood and Cow Common [58], Barrow Hills [59]. Recently recorded from set-aside land at Black Horse field [467983] and Frilford Heath [447981]. Atlas 2000: [29], [39], [48], [49], [40], [57], [59], [67]. A substantial group of plants (10 or so individuals), on the edge of a *Sambucus nigra* thicket, towards the top of the slope in the central section of the chalk grassland on the north-facing slope of Streatley Warren on 9 June 2013.

VERBENACEAE

Verbena rigida Spreng. *Slender Vervain* ● h 6

A sporadic garden escape.

Silwood Park: Refectory, in the bed below the table-tennis room window in July 1982; subsequently shaded out by the vigorous growth of *Ceanothus*. Southwood Halls, one plant flowering in the gravel track at the rear of the halls on 14 June 1984.

Verbena x hybrida Groenl. & Ruempl. *Common Garden Verbena* ● h 6

Very popular as a bedding plant and in hanging baskets, where the plant is typically treated as an annual. There is a wide range of colours, but the purple-blue flowered cultivars are most commonly seen as self-sown escapes.

East Berks: on the main street of Cookham village [8985] where the pubs are festooned with hanging baskets (14 September 2002). <1% (1km²).

West Berks: waste ground in Faringdon [29] in 1998.

Verbena bonariensis L. *Argentinian Vervain* ● h 7

A very tall herbaceous late summer border plant (up to 1.5m), sometimes found on roadsides in towns and on waste ground in villages. This plant has a world-wide distribution as a roadside alien, commonest in the sub-tropics and warm temperate regions (it is native to South America). As a roadside alien, it grows commonly with *Conyza sumatrensis* in Africa and New Zealand; it will be interesting to see if it follows the British invasion of *C. sumatrensis* as the climate warms. It is still a rare garden escape in 2002, not really naturalised anywhere in Berkshire. Told from *V. litoralis* by the location of insertion of the stamens (at or below the middle of the corolla tube, rather than well above the middle) and by corolla size (5-6.6mm rather than 3-3.5mm).

East Berks: very rare garden escape or outcast. Smallmead tip (1969). By the M4/A33 Interchange [709702] in August 1999. On waste ground in Bisham [8585] in June 2002 and at Earley [7571] in August 2002. <1% (1km²).

West Berks: a rare escape on waste ground in Bourton [2386] in September 2004.

[*Verbena litoralis* Knuth *Brazilian Vervain*]

• h 6

An occasional wool casual that has been confused with *V. bonariensis* in the past (it has smaller flowers and shorter, more sharply serrate leaves; see above).

Verbena officinalis* L. *Vervain

○ h 7 ↓

Dry grassland, dry banks on riversides, roadsides and waste places near houses in sunny situations on calcareous soil. Local and in small quantity, decreasing.

Ascot: no records.

East Berks: Wellington College, Swallowfield, Shinfield, Crazy Hill, Aston Lane, Wargrave, Hurst, Earley, Knowl Hill, Stubbing's Heath, Hurley, Clewer, Maidenhead, Bray, Loddon Bridge, Sonning, on chalk ballast near Reading. Remenham, Hurley, Cookham. Extinct in many places. Rare in the western Thames, on the chalk between Sonning and Cookham, but extinct in most of its former stations. Absent from country to the south-east of a line from Maidenhead to Arborfield. Recently at West Whitley, waste ground near Reading Station, Crazies Hill, Wellington College, Shurlock Row, Temple, Maidenhead, The Goswells, and in Home Park. Locally frequent on the banks of the R. Thames [9974] from Old Windsor Lock down to Runnymede in 2002. Uncommon on railway ground at Kings Meadows Reading in September 2007. 2% (1km²). Atlas 2000: all except [86], [96]

West Berks: scattered throughout, but extinct at many of its former stations. Bourton [28], Newbury and Greenham [46], Harwell and East Ilsley [48], Milton (OXF), Steventon, Cothill, Tubney Wood [446992], Abingdon and Marcham [49], Dry Sandford Pit and Lashford Lane [40], Thatcham and Baughurst [56], Hurdle Shaw and Hermitage [57], Unhill Wood, Hagbourne, Cholsey, Fair Mile, South Moreton and Lollingdon Hill [58], Didcot and Abbey Fishponds [59], dry waste ground in Reading's Lake District [6969], Sulham and Pangbourne [67]. Atlas 2000: [28], [46], [47], [48], [49], [40], [56], [57], [58], [59], [66], [67]

¶ ***Verbena*** *V. bonariensis*, *V. corymbosa*, *V.* 'Homestead Purple', *V. x hybrida*, *V. peruviana*, *V. rigida*, *V.* 'Silver Anne', *V.* 'Sissinghurst'

¶ ***Callicarpa*** *C. bodinieri* var. *giraldii* 'Profusion'

¶ ***Clerodendrum*** *C. bungei*, *C. trichotomum*, *C. trichotomum* var. *fargesii*

Caryopteris x clandonensis A. Simmonds ex Rehd.

Bluebeard

• n 6

Silwood Park: a commonly planted shrub for its late summer blue flowers (often with *Ceratostigma* and *Perovskia*). Very rare as a self-sown plant. A single individual in gravel at the north end of East Block on 25 August 2008, about 12m from the nearest likely parent plant, growing in the south-facing bed of North Block.

¶ ***Caryopteris*** *C. x clandonensis* 'Heavenly Blue', *C. x clandonensis* 'Kew Blue', *C. x clandonensis* 'Worcester Gold', *C. incana*

¶ ***Vitex*** *V. agnus-castus*

LAMIACEAE

Lavandula x intermedia Loisel. *Garden Lavender*

• n 6

This is the common, grey-leaved edging and bedding garden lavender. It often self-seeds on paths and pavements, sometimes on walls and waste ground in towns.

Silwood Park: one of the dominant plants in the central zone of the Science Park along with other grey leaved plants like *Santolina* and *Brachyglottis* and sowing itself freely into cracks in the brick pavements. Also in Cheapside Village, Drive Lawns, William Penney.

Ascot: self sown on ruined walls at Froggnall [940681] in September 2005.

East Berks: towns and villages throughout, but never far from houses. In the sand traps on Billingbear golf course. 18% (1km²). Atlas 2000: all squares

West Berks: occasional on pavements in towns like Faringdon [29], Newbury [46], Abingdon [49] and Botley [40]. Atlas 2000: all except [37], [47], [56], [57], [58], [59], [69]

¶ **Lavandula** *L. angustifolia*, *L. angustifolia* ‘Hidcote’, *L. angustifolia* ‘Hidcote Pink’, *L. angustifolia* ‘Imperial Gem’, *L. angustifolia* ‘Loddon Pink’, *L. angustifolia* ‘Munstead’, *L. angustifolia* ‘Nana Alba’, *L. angustifolia* ‘Rosea’, *L. angustifolia* ‘Royal Purple’, *L. angustifolia* ‘Twickel Purple’, *L. dentata*, *L. x intermedia* Dutch group, *L. x intermedia* ‘Grappenhall’, *L. lanata*, *L. multifida*, *L. ‘Sawyers’*, *L. stoechas*, *L. stoechas* ‘Helmsdale’, *L. stoechas* subsp. *pedunculata*

¶ **Perovskia** *P. atriplicifolia* ‘Blue Spire’

¶ **Plectranthus** *P. forsteri* ‘Marginatus’, *P. oertendahlii*

¶ **Pycnanthemum** *P. pilosum*

¶ **Solenostemon** *S. ‘Picturatum’*

Stachys annua (L.) L. *Annual Yellow-woundwort* ● th 6 †

Waste places, rare in Druce’s time. Long extinct.

West Berks: at Didcot (OXF) [59] in 1895 and Grandpont [50] with other aliens (1897). Also seen at Cothill [49] in 1918.

Stachys officinalis (L.) Trevis. *Betony* hs 6 ↓
Stachys betonica Benth.
Betonica officinalis L.

Ancient grassland, woodland rides, roadsides, hedge-banks, coppices, heaths, etc. “This pretty species is scattered throughout the county rather frequently, occurring in most parishes where there are woods” (Druce); occasional in south Berkshire, but local or absent from clay soils. Much reduced in abundance, as ancient grasslands were ploughed up, fertilised or reseeded.

NVC: CG 2; MG 4,5

Silwood Park: one of our most attractive native wildflowers. Rare, but locally frequent in Water Meadow where the site is managed solely for the encouragement of Betony. The encroaching oaks are removed every 10 years or so, and the *Arrhenatherum*, *Dactylis* and brambles are cut down every 3 to 5 years, with the hay carried away to deplete the soil nutrient status. Regenerating well in April 1994

following the felling of the oaks in winter 1992-93. Four good colonies, each of about 50 plants, two on either side of the path to Cheapside on 3 July 1998, following clearance of the oaks in the previous winter. This population was rather poor in July 2000. The scrub was cut back in March 2002, after which there was good flowering on the eastern edge of the clearing in August 2002 (whereas the plants by the central path had gone). Locally frequent in the surviving open areas (i.e. those not filled by brambles and birch) in September 2005 prior to scrub clearance in winter 2005-06. There were a few plants amongst *Arrhenatherum* on The Farm side of the central path (with numerous *Stachys sylvatica*), with many more plants on the other side of the path, on the fringe of the clearing close to the Gas Pipeline on 28 June 2007. Local and rare as a native in Nash's Field; there were single plants in 3 of the 6 rabbit-fenced plots (A, B and D) in September 2003. There was a single clump of 50 flowering stems in the middle of the fenced, uncultivated Block D on 26 June 2007 and 7 July 2008 surrounded by tall *Arrhenatherum elatius*. Local on Nash's Slope, two clumps appeared in 1991 following bramble clearance, at the far end, towards the Church Lane footpath on 2 August 1991. Scattered individuals at the brow of the ridge in Nash's Field, overlooking the Kissing Gate; 16 July 1982; Ted Green recalls the plant being much more frequent here; not seen since 1984. Introduced from Dinton Pastures to the woodland garden behind Southwood Halls by Ted Green in 1984, initially abundant, it declined in the shade of the *Frangula alnus*, but still persists as slender, pink flowered plants in July 2005. Spectacularly successful colonist of the Chalk Plots where it was sown in May 1983. Found there each June since 1986. On all the plots except 1 and 2 on 2 August 1991. In flower on Plots 3, 4, and 5; 9 July 1993 with 4 to 8 stems on each plot. Fantastic on plots 3, 4, and 5 in July 1998 and 1999 with more than 20 flower stems on each plot, and even better in July 2000 when there were more than 200 flowering plants on plots 3 and 4. There was even a flower protruding above the *Calluna* monoculture in plot 2 on 29 October 2000. In July 2002 the plant was absent from Plots 1 (control grassland) and 2 (Heather monoculture) but frequent on all the others, and most abundant on Plot 4. In 2003, it was more or less restricted to Plots 3 and 4, while in July 2004 it was most abundant on Plots 4 and 5. An outstanding display in June 2006 after a very dry winter, but still not invaded the undisturbed control Plot 1, despite its frequency on the adjacent Plot 5 and amongst heather on Plot 2. On 26 June 2007 the following numbers of flowering stems were on plots 1 to 8: 0, 7, 50, 150, 35, 2, 1, 10. Particularly good on plots 3, 4 and 5 on 7 July 2008. Sown in the Chamber's Seed mixture in Blocks G, H and J of Nash's Field in October 1991 without any recruitment. Sown in the Oak Mead Experiment in 1996, but persisting only on the grazed part of Block D by 2001.

Ascot: rare in Sunninghill Park from 1979-2004.

East Berks: two centres, one in the north on the chalk in the Thames valley around Hurley and Cookham and another in the south around Wokingham and Bracknell. Absent or rare between these two regions and to the east of 90. A white flowered form was seen in Windsor Forest in 1894. Recently at Highlands, Riseley Farm, Ryeish Lane, Whistley Park, Thatcher's Ford, Farley Hill, Arborfield Garrison, Finchampstead Church, Thames Valley Park, Dinton Pastures, Wargrave Marsh, Moor Green Lakes, Coalpit Copse, Shepherd Meadow, meadows below the Camberley Superstores, North Bracknell, Warren Row, Oakley Court, Windsor Great Park. 5% (1km²). Atlas 2000: all except [78]

West Berks: Fernham meadows [29], Ilsley Bottom [48], Tubworth Barn meadow and Frilford Heath [49], Oven Bottom and Old Butts [58], Bagley Wood and Kennington [50], common south of 75, rare and scattered to the north of this, and absent from much of the interior. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [39], [68], [69]

Stachys byzantina K. Koch *Lamb's-ear*
Stachys lanata Jacq., non Crantz

• hs 6

This is the common garden plant (*Lamb's Lugs*) with woolly silver leaves and rather insipid purple flowers. Often found as an outcast and occasionally self-sown. Sporadic in towns and villages throughout.

Silwood Park: rare at Tennis Courts, Ashurst, and Cheapside Village.

Ascot: pavements on Upper Village Road in Sunninghill in 1971, 1979 and 2000-02.

East Berks: Beech Hill, Three Mile Cross, Riseley, Swallowfield, Mill House, Shinfield, Arborfield, Wheatlands, Barkham, Limmerhill, Reading, Whitley, Earley, Sonning, Woodley, Wargrave, Twyford, Wokingham, Chapel Green, Great Hollands, Hanworth, Binfield, Shottesbrooke, West End, Jealott's Hill, Newell Green, Touchen End, Warfield, Warren Row, Burchett's Green, Bisham, Maidenhead, East Maidenhead, Cookham, Fifield, Bray, Winkfield, Clewer, Hog Common, Old Windsor. 16% (1km²). Atlas 2000: all except [78]

West Berks: in villages throughout, often spilling out onto pavements and often outcast on tips. Atlas 2000: [28], [29], [36], [38], [46], [48], [49], [40], [56], [58], [50], [66], [67], [68]

Stachys germanica L. *Downy Woundwort* hs 6

West Berks: an Oxfordshire rarity and *Red Data Book* species, planted on the hill top at Wytham [4608] by C.J. Cadbury in 1965, but it did not persist, and has never reappeared.

Stachys sylvatica L. *Hedge Woundwort* hp 7

Woods, ditches, thickets, wood margins, hedges, brook-sides and shady waste ground in towns and villages. Most abundant in rich soil in low-lying situations, becoming much less frequent on the upper chalk.

NVC: OV 26,27; W 6,8,10,12,21,22,24

Silwood Park: Ashurst, Churchyard, Old Orchard, Silwood Farm, The Rookery, Guinness's Bridge, Nash's Copse, Nuclear Reactor, North Heronsbrook, The Heath. The population below the wall of the Ha Ha at the Machinery Centre end was destroyed in 1987 when the ditch and bank below the Ha Ha were levelled. It had always been the somewhat slovenly practice to tip the lawn clippings directly over the Ha Ha into the ditch, where, by late summer, they formed a steaming, nettle-infested heap. The bank was dug out and the ditch filled in during Mark Burleton's tenure as Horticultural Superintendent. Common below the large Elder, opposite the northern entrance to Immunology on 28 June 1980. This site was destroyed in 1988 when a mistake was made over the location of the new road during the construction of Flowers Halls. Mark Burleton was told that cars would need to get to the northern entrance, and so a swathe was cut through the shrub bed from North Gravel to the door. This involved the removal of a large *Salix cinerea* and several other important screening shrubs. It then transpired that the road was to go to the central door instead, so another swathe was cut through the middle of the shrub bed, and a rather large scar was left opposite the northern door, where the bike sheds were erected in August 1990. Locally frequent in Silwood Bottom after the fallow of 1997-98, about 15m from the *S. palustris* patch on 24 June 1998. Cannon Path, locally dominant inside the rabbit fence 4 years after its erection; 17 July 1998. Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006; locally frequent here by July 2008. On the top of The Dam at Silwood Lake, close to the Outflow Sluice on 29 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	4	13

East Berks: 56% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Stachys x ambigua Sm. *Hybrid Woundwort* = **S. sylvatica x S. palustris**

In ditches, rather rare, but certainly under-recorded.

East Berks: Twyford (1897), Sindlesham Mill (1962).

West Berks: west of Abingdon Station [59], South Hinksey [50], Mortimer [66], Bradfield and Chapel Hill Tilehurst (**RDG**) [6874] in 1918.

Stachys palustris L. *Marsh Woundwort*

gt 7

Ditches, stream-sides, thickets, marshes, margins of rivers and ponds, and rarely in damp arable fields. Commonest on the alluvium and the clay, rare on acid sands and absent from the chalk.
NVC: M 28; OV 26,32; S 8,16,26

Silwood Park: local and rare. It occurs as an arable weed in a patch of surprising dry soil in the north-east corner of Silwood Bottom where it has persisted despite ploughing and herbicide applications since 1971. It was not seen for several years, then c.50 spikes appeared (24 June 1998) after the 1997-98 fallow and the wet spring of 1998; not seen since (the site was used for an experiment on sewage sludge disposal from 1999 onwards). Also in wet ground at the foot of Wood Bank on the edge of The Marsh, and in the grass at the Observatory Ridge edge of Silwood Bottom (8 August 1980).

Ascot: no records other than those from Silwood. The closest population was in the southern ditch of the Drift Road at Braywood Orchard [874750] in July 2003.

East Berks: occasional in the western Thames valley from Reading to Cookham, and in the south-east of the region. Absent to the west of 90. Recently at the Courage Brewery in a ditch by the M4, Fobney, Kings Meadow, Kennet Mouth, Reading Marina, Aston, Henley, Wargrave, Sindlesham, Thames Valley Park, Dinton Pastures, Whistley Park, pond-sides at Billingbear, Lands End, Crazies Hill, Moor Green Lakes, Shepherd Meadow, Arlington Square, Middle Copse, Hazelwood Copse, Howlane Bridge, Warfield Church, Braywoodside, Stud Green, Warfield Park, White Waltham, Holyport, East Maidenhead, Frogmill, Shepherds Lane, Hurley Meads, Hurley, Thames lock, Summerleaze Lakes, Cookham, Bray, Oakley Court, Cavalry Exercise Ground, Windsor Castle. 9% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys, but rare or absent in the interior. Particularly fine in the marginal vegetation of the lake at Benham Park [4367] in 2002. Common in the Reading Lake District [67]. Atlas 2000: all except [28], [48]

Stachys recta L. *Perennial Yellow-woundwort*

• hs 6 †

West Berks: by the runway on Greenham Common airfield (**RNG**) [4864] in 1951. Not seen since.

Stachys arvensis (L.) L. *Field Woundwort*
Glechoma arvensis L.

○ th 4 ↓

Cultivated fields, more frequent on sandy soil. Rather local; Dry arable fields, mostly on mildly acid soils; local, sporadic and absent from clay soils.

NVC: OV 4

Ascot: no records.

East Berks: Finchampstead, Park Place, Hurst, Maiden Earley, Barkham, Wargrave, Maidenhead. Rare and extinct at half of its former stations. Surviving at Arborfield [7567], Eversley [7762], Wargrave [7878], and Jealott's Hill [8773], Oakley Court [9277]. By the M4/A33 Interchange [709702] in August 1999. < 1% (1km²). Atlas 2000: [76], [77], [86], [87]

West Berks: Beckett Park [28], Bushy Heath Buscot [29], Wickham [37], Seven Barrows [38], Pucketty Farm and Oldfield Farm [39], East Ilsley [48], Appleton and Bushy Leaze Copse [40], on an old bomb dump at Greenham Common [56], arable land south of Greathouse Wood, Frilsham and Tutts Clump [57], Streatley [58], Radley [59], Kennington tip [50], Silchester, Tadley and Padworth [66], Sulham and Tilehurst [67]. Atlas 2000: all except [46], [47], [49], [59], [68], [69]

¶ **Stachys** *S. byzantina* 'Silver Carpet', *S. coccinea*, *S. macrantha*, *S. macrantha* 'Nivea', *S. macrantha* 'Robusta', *S. macrantha* 'Rosea', *S. macrantha* 'Superba', *S. monieri*

Ballota nigra L. *Black Horehound*

○ hp 6 ↑

Ballota nigra subsp. **meridionalis** (Bég.) Bég.

Ballota ruderalis auct., non Sw.

Ballota nigra L. var. *foetida* Vis.

Ballota nigra L. subsp. *foetida* (Vis.) Hayek

Hedges, roadsides and waste places, typically near houses; "very common by footpaths and by our dustiest roadsides" (Druce). "Occasional and in small quantity" in Bowen's time, it is now much increased, and one of the commonest labiates in towns on roadsides, scrub and waste ground. Host plant to the beetle *Chrysolina banksi*.

NVC: OV 19

Silwood Park: waste ground and pathsides. Reactor Bank, 17 July 1990, on the soil heap made during excavation of the foundations for the Wind Tunnel. By the Furniture Store, common at the base of the wall, 22 June 1998. Water Tank, frequent after soil disturbance during cable laying in 2000. A single survivor inside the rabbit fence around the base of the cypress in June 2007. Sunninghill Crossroads, Ashurst, Churchyard, Biodepth, Cheapside Playground. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	6

Ascot: local and uncommon; North Ascot, Winkfield Lodge, Sunninghill, Charters Road and Sunningdale.

East Berks: throughout, but particularly common by the Thames. Common on railway ground at Kings Meadows Reading in September 2007. 40% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Leonurus cardiaca L. *Motherwort*

• hp 7 †

Very rare alien, casual in waste places. A striking species, now known only as a “plantsman’s plant” in gardens.

East Berks: in a hedge near Finchampstead (1891-96) (**OXF**). On Suttons Nurseries (**RDG**) in 1915-18, and at Bray (**RDG**) in 1934. Bowen regarded the plant as extinct in our area. There is a record from 8 Glebe Road, Reading [7272] in 1986. Atlas 2000: no records.

West Berks: West Woodhay Common [36], by the railway at Didcot (**OXF**) [59] in 1894. Atlas 2000: no records.

Lamium galeobdolon (L.) Ehrend. & Polatschek

chh 5

Galeopsis galeobdolon L.

Lamium galeobdolon (L.) L.

Galeobdolon luteum Hudson

A confusing species with a wide range of phenotypic variation comprising native woodland plants and rampant garden escapes. The forms with silvery-white leaf blotches and bigger fruiting calyx (> 12mm) are garden escapes (subsp. *argentatum*), while green leaved plants with smaller calyces are native or escaped (subsp. *montanum*).

Lamium galeobdolon subsp. **montanum** (Pers.) Ehrend. & Polatschek *Yellow Archangel*

Pollichia montanum Pers.

Lamium galeobdolon (L.) L. subsp. *montanum* (Pers.) Hayek

Lamium montanum (Pers.) Á. Löve and D. Löve

Galeobdolon luteum Hudson subsp. *montanum* (Pers.) Dvorkov

Beech, oak and alder woods on nutrient-rich soils; “locally common, and in some of our woods on the chalk the barren creeping stems form a considerable proportion of the undergrowth” (Druce). These days, the plant is local and seldom abundant. It is an indicator species of ancient woodland
NVC: W 8,10,12,14

Silwood Park: very local and rare in Nash’s Copse under hazel coppice by the Kissing Gate, on the stream bank by the entrance to the Walled Garden, and near Heronsbrook by the seep leading down into the stream by the *Sasa palmata*. On the edge of Nash’s Copse, close to the Church Lane footpath [9429 6917]; 2 flowering stems on 8 May 2005 with *Glechoma hederacea* and *Anemone nemorosa*, increased to 17 on 20 May 2006. On the northern bank of the Outflow Stream in Water Meadow West [9426 6932]; 12 flower stems beneath sycamore on 8 May 2005. Two substantial patches on the northern bank of the Clear Brook at the Walled Garden [9421 6838] on 8 May 2005.

Ascot: no other records.

East Berks: Park Place, Bowsey Hill, Remenham, Swallowfield, Wellington College, Ashley Hill, Cookham, Wargrave, Bisham, Stubbing’s Heath. Very local, but frequent at Bisham. In woodlands on the chalk of the Thames valley and on the clay of the south-east, but rare to the east of 90. Recently at Farley Hill, Culham Court, Crazies Hill, Roschill Wood, Pockets Copse, Wykery Copse, Fernygrove Copse, Park Wood, Bisham Wood, Winter Hill, Windsor Great Park. 2% (1km²). Atlas 2000: all squares

West Berks: frequent to the south of 85, but absent from the northern clays and surprisingly uncommon in the Thames valley (e.g. it is at Buscot [29], but then absent until Wytham [40] and the woods of the Northern Loop, but then there is another large gap until Streatley [58]). In old Ash woodland at RAF Welford [4175]. Locally frequent in Moor Copse, and in the wood to the west of Pangbourne [67]. Atlas 2000: all except [48], [68], [69]

Lamium galeobdolon subsp. **argentatum** (Smejkal) Stace • chh 5 ↑
 Galeobdolon argentatum Smejkal
 Lamium galeobdolon (L.) L. subsp. argentatum (Smejkal) J. Duvern.
 Lamium galeobdolon (L.) L. forma argentatum (Smejkal) Mennema

An rampant garden plant with silver-splashed foliage, often escaped or thrown out. Locally dominant in woodland and scrub; common in villages and towns throughout, but seldom far from houses. Very rare in undisturbed woodland.

Silwood Park: extensive patches in woodland near Silwood Nurseries, The Farm and behind the Tractor Sheds on the boundary of Silwood House. A good patch at the Mill Lane end of Church Lane Footpath by the disused Kissing Gate on Buckhurst Road on 8 November 2008, while doing the snagging on the newly completed security fencing on both sides of the footpath all the way to The Cedars at Ashurst.

Ascot: Fernbank Road, Coronation Road, South Ascot Bog, Ravens Corner, Chavey Down, Kings Beeches, Sunninghill, Whitmore Lane, Sunningdale Park.

East Berks: large patches in woodland at the western end of Nine Mile Ride near Hogwood [7764] in 2000. Urban waste ground and old gardens throughout. 17% (1km²). Atlas 2000: all squares

West Berks: in most of the villages, often in dense shade; e.g. entirely covering the high roadside bank at Letcombe Bassett [3785] in 2000 and in the grounds of the Old Rectory at Burghfield [6668]. Clearly under-recorded. Atlas 2000: all except [39], [47], [49], [57], [58], [59], [69]

Lamium album L. *White Dead-nettle* ○ hp 3

Waysides, waste places, borders of fields, hedge-banks, roadsides, grassy waste ground and gardens. Rare or absent from considerable areas of uncultivated ground, but locally plentiful. Flowers right through milder winters. Has all the behavioural and distributional traits of an alien species: it is difficult to attribute the species unequivocally to any native British habitat. One of the species whose flowering date has been most advanced by climate warming, blooming up to 55 days earlier than in the mid-twentieth century.

NVC: MG 1; OV 13,24

Silwood Park: Ashurst, Churchyard, Cheapside Playing Field, Ashurst Orchard, Silwood Farm, The Rookery, Drive Lawn, West Observatory Ridge, Buckhurst Road Entrance, rarely in grassland as on the southern boundary of Cemetery Field. Two plants on the Chalk Plots in 1991, still there in 2000, but gone by 2002. On the edge of the New Chalk Plots in May 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	13

East Berks: 72% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lamium maculatum (L.) L. *Spotted Dead-nettle*
Lamium album L. var. maculatum L.

• hp 5

A common edging and rockery plant in cottage gardens. Reasonably vigorous and sometimes thrown out. Hedge-banks and waste ground, almost always as an escape from gardens; rare and not well established. Told from *L. album* by the presence of one (not 2 or 3) teeth on either side of the lower lip of the corolla; leaves blotched with a central white line.
Ascot: on waste ground in Sunninghill (1995-2000). The Tip (1999).

East Berks: in villages and towns throughout as a garden outcast. Not seen by Druce. Woodley (1935), Shinfield Grange (1972, with the grid reference transposed in **RNG**). Locally frequent in West Reading, on waste ground near Oxford Road in 2002. 8% (1km²). Atlas 2000: all squares

West Berks: Sutton Courtenay (**OXF**) [59] in 1915, Theale (**RDG**) [67] in 1921, Tilehurst (**LAN**) [67] in 1956, and recent records from Ashbury [28], Faringdon and Coleshill [29], Welford and Shefford Woodlands [37], St Nicholas Newbury [46], Kingston Bagpuize [49], on the riverbank at Woolhampton [572666], Bucklebury and between Ashampstead and Streatley [57], East Hagbourne [58], Radley College, Didcot and Sutton Courtenay [59], Mortimer and Burghfield [66], Pangbourne, Theale and Tilehurst [67]. Atlas 2000: all except [39], [69]

Lamium purpureum L. *Red Dead-nettle*

○ th 3

Cultivated ground, fallow fields, roadsides, hedge-sides, disturbed waste ground and as a garden weed. Common and generally distributed.
NVC: OV 4,7-10,12-14,18,22,24,25; W 21

Silwood Park: arable land and waste ground. Satellite Pad, Ashurst, Churchyard, Ashurst Warren, Cricket Wicket, Silwood Bottom, Drive Lawns, Heronsbrook, Merton's Acres, Science Park, M-Scan, East Lodge. Less common than *L. amplexicaule* at Pound Hill fallows.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	13

East Berks: 35% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lamium hybridum Vill. *Cut-leaved Dead-nettle*

○ th 3 ↓

Gardens and waste ground near houses in the Thames valley. Local and rather rare, absent from the chalk and the very acid soils in south-east Berkshire, but probably under-recorded. Told from *L. purpureum* by leaves deeply serrate (not crenate-serrate), their teeth more than 2mm long.
NVC: OV 7,9,10,13

Silwood Park: local and rare, beneath the wall of Beechgrove at the mini-roundabout at the Sunninghill Crossroads on 21 April 2001, growing with *L. purpureum*.

Ascot: no other records.

East Berks: scattered throughout, on sandy soils in cultivated fields, nurseries, gardens and waste ground. Maidenhead (**HULL**) in 1879. Medmenham Ferry, Earley Rise, Wargrave, Knowl Hill, Quarry Woods, Maidenhead. Elm Lane Reading [740706] in 1979 and the north bank of the R. Blackwater at Finchampstead (**RNG**) [796623] in 1991. In neglected flower beds at Sandhurst in 2002. Commonest in the Thames valley, and absent or rare to the east of 90 except for scattered sites along the Surrey Border from Sandhurst to Virginia Water. Very local and rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. <1% (1km²). Atlas 2000: [76], [77], [78], [86], [87]

West Berks: occasional throughout the Northern Loop (e.g. [28], [29], [38] and [39]) and as far downstream as Wallingford [68]. Isolated records from Wantage and Letcombe Bassett [38], Wootton [40], Brimpton pit [56], Wittenham and Didcot [59] and Pingewood [66], but absent from the interior and from most of the Kennet valley. There is an outlying station at Inkpen [36]. Atlas 2000: [28], [29], [38], [39], [49], [40], [56], [58], [59], [66], [67]

Lamium amplexicaule L. *Henbit Dead-nettle* ○ th 4

Cultivated and waste ground, chiefly on sandy or gravelly soil, wall tops, etc. Locally common and widely distributed.

NVC: OV 7,14,17

Silwood Park: an uncommon arable weed as at Nursery Field, Pound Hill Field, Silwood Bottom. Rare in the seed bank in Nash's Field and uncommon on waste ground on North Gravel and by the ruins of the Cocoa Greenhouse. Commonest after later spring or early summer cultivation; very variable in abundance from year to year, but particularly frequent in April 2003. Particularly abundant in Silwood Bottom on 8 May 2004 after cultivation of that part of the field had been missed for 18 months. It was particularly abundant at Pound Hill on the March-cultivated plots on 5 June 2005, following the very dry winter and spring of 2005. Again, it was abundant in Silwood Bottom on 10 June 2007 following the exceptionally dry April of 2007. Occasional on the student allotments on 25 August 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	3

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 4% (1km²). Atlas 2000: all squares

West Berks: in chalky set-aside on Weathercock Hill [2882] in May 2002, and in arable land at Black Horse Field [468979]. Arable land at Silchester [66]. Atlas 2000: all except [50], [68]

¶ **Horminum** *H. pyrenaicum*

Galeopsis ladanum L. *Broad-leaved Hemp-nettle* ● th 7 †

West Berks: collected by Druce from the railway at Didcot (**OXF**) [59] in 1894-96 (det. C.C. Townsend).

Galeopsis angustifolia Ehrh. ex Hoffm. *Red Hemp-nettle* ○ th 7 ↓

This beautiful plant is one of our local rarities. It occurs sparingly in cornfields and cultivated ground, more frequent on calcareous soil and on rubbish tips. Sadly, much reduced in both distribution and abundance.

East Berks: probably extinct. First record; Sonning (1839). A single record from a chalk railway bank at Cox Green [8779]. There is an unlocalized 1950+ record from [97]. Atlas 2000: no records.

West Berks: all but restricted to the chalk downs centred on [58] with outliers at Inkpen [36], Denford [353687] and Shefford Woodlands [37]. Known from Baydon Hole Farm [291784] and Wayland's Smithy [28], Faringdon [29], eastwards to Whitehorse Hill, Furzewick Down and east of Wantage [38], Cherbury Camp [374963], Newbury [46], Ashridge Wood [47], Abbots Heath [461844], Mead Platt [427839], East Ilsley, Chilton Cutting, Yew Down at Lockinge [422838] and Ardington Down [48], Marcham and Didcot [49], Compton, Hermitage and Hampstead Norreys [57], Aston Upthorpe Downs, Blewbury, Cholsey, Moulsoford Downs, Streatley (**LAN**) in 1956, Lowbury Hill in 1962 and Lollingdon Hill [58], Radley [59] and Sutton Courtenay Gravel Pits [518930], Kennington [50], Sulham Lane [67]. Recently from near Inholmes, south of Lambourn Woodlands, on the eastern bank [327747] of the Chieveley cutting where the B4001 goes under the M4 Motorway; 3 plants in bare ground on 23 August 2001, and from the cutting of the abandoned railway at Chilton [497855]. Atlas 2000: [48], [57], [58], [59], [50]

Galeopsis speciosa Mill. *Large-flowered Hemp-nettle* ○ th 7 ↓

Cultivated fields, roadsides and tips; rare and sporadic.

East Berks: "Near Park Place appearing among the clover crops and vetches, but not common" (Druce), oat field at Sonning (1897), Wellington College brickyards (1894). Bearwood (**RDG**) in 1930, Warren Row (1962). One more recent record from Smallmead tip (1974). Atlas 2000: [76]

West Berkshire. one relatively recent record from Wytham [40] in 1984. 19th century records from Shaw [46] and Wittenham [59]. Atlas 2000: [40]

Galeopsis tetrahit L. *Common Hemp-nettle* th 7

Cultivated and waste ground, hedges, wood borders, and open places in woods on acid soils. Common and generally abundant, especially after woodland clearance, but less frequent than *G. bifida* in most districts. Locally frequent in south Berkshire but absent from much of the clay. Like most Hemp-nettles, this species has a long-lived seed bank, and will crop up following soil disturbance. The lip of the corolla is flat and un-notched (entire). The leaves are mined by *Liriomyza eupatorii*.

NVC: OV 4,9,33; M 28; W 6

Ascot: Fernbank Road, Charters Road, Blacknest Park.

East Berks: common in the west but rare to the east of 90. 2% (1km²). Atlas 2000: all except [78]

West Berks: throughout the Kennet valley but restricted to the Northern Loop in the Thames valley, and absent from the Vale of the White Horse (north of 85 and south of 95). Atlas 2000: all except [68], [69]

Galeopsis bifida Boenn. *Bifid Hemp-nettle* th 7

Cultivated and waste ground, hedges and woodland borders. Woodland rides, alder woods and fens; local or overlooked but absent from the northern clays. Possessed of a long-lived seed bank. Told from *G. tetrahit* by the saddle-shaped lip of the corolla (it has rolled down margins) which is clearly notched at the tip (emarginate not flat). The commoner of the two hemp-nettle species in many districts.

Silwood Park: this is Silwood's common Hemp-nettle. Locally abundant in the seed bank below old grassland; in the fenced cultivated plots in Oak Mead in 1996, and in the north-west sector of Silwood Bottom after it was first ploughed in 1998 (and again following October cultivation in July 2005 and 2006). Water Meadow in 1999. Abundant in the seed bank beneath the grassland in the newly rabbit-fenced part of Observatory Ridge (above the Silwood Bottom track) in June 2001. Common below the graveyard at Ashurst in August 2002 following soil disturbance during the erection of the rabbit fence in spring 2002. Uncommon in the north-east corner of Silwood Bottom in July 2004, but locally abundant here on 23 May 2007 following spring cultivation (not yet flowering) and in July 2009 in ruts following autumn ploughing (but not disc-harrowing). Frequent beneath oak Tree 1025 on Observatory Ridge on 29 August 2010 on disturbed ground following removal of brambles from the edge of the canopy in autumn 2009

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	3

Ascot: Sunningdale, Sunninghill, South Ascot and Virginia Water.

East Berks: first noted in Berkshire by H.C. Watson near Sunningdale. Reading, Twyford, Winkfield, Shurlock Row. Bulmershe Woods (1931). Whiteknights Park. Absent from most of the interior, but with recent records from the far north at Cock Marsh (1988), and the far south at Trilakes (1977), and meadows north of the R. Blackwater at Camberley (1987). 3% (1km²).

West Berks: common only in the south-east but with outliers at Cumnor [40], Frilford [49], Boars Hill [40], Bourton [28] and Wallingford [68]. The centre of the distribution is around Yattendon and Downe House in [57], but there are records from Lambourn [37], Brimpton and Turners Green [56], Silchester Common, Padworth Gully and Pingewood tip [66]. Atlas 2000: all except [39], [48], [49], [57], [58], [59], [50], [68], [69]

Phlomis fruticosa L. *Jerusalem Sage* ● n 6

A very rare garden outcast. A popular yellow-flowered shrub grown in Mediterranean beds.

East Berks: on the grassy lane-side at Long Lane Farm [880759] on 30 May 2002. An outcast on waste ground in Bisham [8585] in June 2002. <1% (1km²).

West Berks: on waste ground near the canal in central Newbury [4767] in July 2002.

¶ **Phlomis** *P. chrysophylla*, *P. fruticosa*, *P. italica*, *P. russeliana*

¶ **Melittis** *M. melissophyllum*

Marrubium vulgare L. *White Horehound* ● hp 6 †

Roadsides and waste places; rare and sporadic in Druce's time, now extinct.

East Berks: formerly at Sandhurst, Wokingham, between Crazy Hill and Wargrave, between Hurley and Pinkneys Green, Jouldern's Ford, by the railway at Maidenhead. Roadsides and waysides on dry soils; rare and decreasing. Sutton's Nurseries in Reading (RNG) in 1891, Clewer (1918). Extinct. Formerly on the chalk along the Thames valley from Wargrave to Cookham and in the district around Wokingham and Sandhurst. Atlas 2000: no records.

West Berks: extinct at most of its former sites in the Thames valley and on the eastern chalk. Chieveley [47], Frilford [49], Radley [59], Purley [67]. Atlas 2000: no records.

¶ **Marrubium** *M. incanum*

Scutellaria galericulata L. *Skullcap* hp 6

Damp woods, fens and margins of calcareous rivers. Also by canals, brooks, and ponds, and on stonework by the river-side. Common and generally distributed except on the high chalk downs. "When growing in shade among other herbage the skull-cap becomes a straggling plant of considerable size, as near Wokingham and Bulmarsh. A pretty adornment of our river banks as seen from a boat" (Druce). Occasional.

NVC: M 9,22; OV 26; S 3,6,7,14,25,26; W 5

Silwood Park: very local but quite frequent where it occurs in wet woodlands around The Lake: Great Mead, The Willows, Cascade Marsh, Guinness's Thicket, Guinness's Bridge. It grows with *Ranunculus flammula* and *Lysimachia vulgaris*. Flowering freely on 15 June 2009 in Great Mead.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	2	5

Ascot: very common all around the shaded shores of Johnson's Pond, where few other species are to be found. Blacknest Park and Breakheart Hill. Scattered amongst the fringing vegetation of Virginia Water.

East Berks: recently at Henley, Kennet Mouth, St Patrick's Bridge, on damp concrete above an ornamental stream at the Royal Military Academy at Sandhurst, Dinton Pastures, Bearwood Lake, Crazies Hill, Cock Marsh, Cookham, Leiper Hill, Great Meadow Pond, The Goswells, Windsor Great Park, Home Park, Old Windsor, stonework by the Thames at Maidenhead Bridge and Boulter's Lock. 5% (1km²). Atlas 2000: all squares

West Berks: in the Thames and Kennet valleys but absent from the interior (north of 70 and south of 90). Atlas 2000: all except [37]

Scutellaria x hybrida Strail = **S. galericulata x S. minor**

Scutellaria x nicholsonii Taubert

East Berks: Virginia Water in 1883 (RNG), Wokingham in 1897 and Windsor Great Park in 1970.

Scutellaria minor Huds. *Lesser Skullcap* hp 7

Damp alder woods, flushed bogs, damp heathy places, firebreaks in conifer plantations, and by acid ponds. Absent from the chalk; local and uncommon.

NVC: M 23,24

Ascot: still to be found in the Crown Estates woodlands on acid sands as at Englemere Pond, Kingsride, Coronation Road, South Ascot, Buttersteep, Blane's Allotment and Swinley, but gone from many of Druce's sites like Sunninghill. Not in Silwood Park.

East Berks: Warren Row, Broadmoor, Sandhurst, Jouldern's Ford, Long Moor, Bracknell, Finchampstead, Riseley, Earley, Ambarrow, Bagshot, Easthampstead, Binfield, Whiteknights, Bearwood, etc. Fleet Copse, Owlsmoor, Wokingham, Windsor Forest, Virginia Water. Finchampstead Ridges, Whitmoor Bog, Cranbourne Park, Deer Rock Hill [879633] (I suspect that this record is from Surrey), Rapley Lakes. Damp heathy rides in Bracknell Forest, but extinct in its northern and western stations. Still at Longmoor Bog, Sandhurst Lakes, Heath Pond, Broadmoor Hospital, Big Wood, Ashley Hill, Nobbscreek Farm, South Forest, Leiper Hill, Hilton's Covert, Windsor Great Park. 2% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: confined to the heathy parts of the Kennet valley, south of 75. Inkpen Common [36], Enborne Row and Newbury golf course [46], Snelsmore Common and Upper Ashpiece Copse [47], Wasing Wood, Bucklebury Common and Turners Green [56], Fence Wood [57], Aldermaston Soke, Ufton Nernet and Gibbet Piece [66]. Still found on bare rutted ground on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: [36], [46], [47], [56], [57], [66]

¶ **Scutellaria** *S. alpina*, *S. altissima*, *S. incana*, *S. lateriflora*, *S. scordifolia*

Teucrium scorodonia L. *Wood Sage*

hp 7

Dry open woods, commons, hedge-banks and heaths, preferring sunny exposures on acid soils. Locally abundant in the heathy districts, rare elsewhere. Oddly uncommon in many apparently suitable areas.

NVC: CG 2,4; MG 1; OV 27; U 1,2,20; W 8,10,12,16,21-23,25

Silwood Park: it is most abundant on the northern edge of Pound Hill Field with *Glechoma hederacea* and *Stellaria holostea* where the woodland overhangs the grassland. Dominant under oaks in the corner by the gate onto Church Lane Footpath, locally frequent on dry, sunny banks below Nash's Field (still there in 2006), in shade at the northern end of The Elms in 2002, where the *Equisetum arvense* used to grow, Nash's Slope, one small patch in grassland amongst brambles in the shade of The Elms in June 2000, Ashurst Wood, one patch on the edge of the grassland on 9 July 1999. In long grass and nettles below the Ha Ha; site destroyed in 1987 when the ditch was filled in and the bank levelled. Cheapside, Ashurst Warren, Nash's Copse, Heronsbrook.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	2	6

Ascot: Rapley Lake, Blane's Allotment, Swinley Park, Martins Heron, Tower Hill, Swinley Brick Pits, Fernbank Road, Racecourse, Ascot Heath, Sunningdale, Whitmore Lane, South Coworth, Frostfarm Plantation, Breakheart Hill, Sunninghill Park, South Forest.

East Berks: more or less confined to the acid soils in the south. In plantations around Beenhams Heath [8475] and [8575]. 12% (1km²). Atlas 2000: all squares

West Berks: very local, in the Northern Loop and in the Kennet valley south of 75. Absent from the interior and the western and eastern reaches of the Thames valley. Common in Bagley Wood [5102]. Atlas 2000: [36], [37], [46], [47], [49], [40], [56], [57], [59], [50], [66], [67]

Teucrium scordium L. *Water Germander*

hp 7 †

An extinct Berkshire plant, described from Neitford (St Neots) Meadow at Abingdon [5196] by Turner (1548) and Lightfoot (1780). It used to grow in calcareous ditches in Thames-side water meadows with wetland plants like *Menyanthes* and *Ranunculus lingua*. This community (plus *Sium latifolium* qv) ought to be reconstructed, in order to show how much the riverbank has been changed by boat traffic and by drainage of the adjacent water meadows.

East Berks: no records.

West Berks: Abingdon (BM) in 1780, Godstow (BM) [40] in 1864 and 1909, in a fen at Wytham meads (BM) [40] in 1906 (RNG) and last in 1934 (RNG). Atlas 2000: no records.

Teucrium hyrcanicum L.

• hp 8

A sparsely branched, pubescent perennial, with leaves rather like a pale-green Betony, uncommonly used in herbaceous borders. First recorded in 2009, but it was not clear whether the plant was a garden outcast (fly-tipped, perhaps), or whether it was self-sown.

West Berks: found by Clive Carter and Janet Welsh on 19 October 2008. Seed was collected and grown on in Clive’s garden; sent to Kew in 2009, where Gemma Bramley and David Moore identified the plant (confirmed MJC). The plant was growing in a pond on the south side of the common at the western end of Goldfinch Bottom [5097 6423].

¶ **Teucrium** *T. chamaedrys*, *T. fruticans*, *T. hyrcanicum*, *T. x lucidrys*, *T. pyrenaicum*

Ajuga reptans L. *Bugle*

hs 5

Damp woods, thickets, wet pastures, fens, damp heaths and ancient meadowland; common and widely distributed. The leaves are rolled by the aphid *Myzus ajugae*. Garden plants have various shades of variegated or purple foliage.

NVC: M 22,27; OV 26; W5,8,10

Silwood Park: one of the commonest wildflowers in the wet woodlands around The Lake. Great Mead, Cascade Marsh, Mann’s Copse, The Willows, Rush Meadow, Guinness’s Thicket, Farm Wood, Cheapside, Guinness’s Bridge, Weir Wood, Kissing Gate, Nash’s Copse, Water Meadow.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	1	3	14	16

Ascot: rare in grass in South Ascot churchyard with deep, purple-bronze foliage on 13 October 2007 is perhaps cultivar ‘Atropurpurea’.

East Berks: curiously patchy in its distribution; commonest in the river valleys and least frequent on the higher ground. White flowered forms noticed at Finchampstead Leas and Windsor Great Park (with rose-coloured flowers as well), and pale-blue forms at Wargrave and Cookham. 28% (1km²). Atlas 2000: all squares

West Berks: particularly fine in Moor Copse Nature Reserve [6374]. Atlas 2000: all except [69]

[**Ajuga chamaepitys** (L.) Schreb. *Ground Pine*]

• th 6

There is no sound evidence of this species from Berkshire. Druce quotes the following:

West Berks: “in the Vale of the White Horse” in *Spencer’s Complete British Traveller* (1771)

Ajuga genevensis L. *Cornish Bugle* • hp 6 †

West Berks: a fodder alien that persisted from many years in chalk grassland near Churn [508838] in 1917 (OXF). Last seen in 1950 by D. McClintock (RNG). Also at Radley College pond in 1949.

Dracocephalum parviflorum Nutt. *American Dragon-head* • hp 7 †

West Berks: a grain and bird-seed alien found as a casual on rubbish tips at Pangbourne [67] in 1958 (det. Kew) and Reading in 1958 (RNG).

Sideritis montana L. *Mountain Ironwort* • hp 7 †

West Berks: a grain casual from Newbury [46] in 1918.

¶ **Sideritis** *S. syriaca*

Nepeta cataria L. *Cat-mint* ○ hp 7 ↓

Hedges, wood margins, waysides, borders of fields, and sometimes in chalky cornfields on dry, calcareous soils in the Thames valley. Local and rather uncommon, and absent from considerable areas on the clay and heaths.

NVC: OV 16

Ascot: no records.

East Berks: first record; Sonning (1800). Near Silent Pool, Shinfield, frequent about Park Place, Stubbing’s Heath, Maidenhead, Wargrave, Hurley, Bisham. Wargrave, Hurley [813818], Bisham, Maidenhead. Extinct at many of its former sites, now entirely restricted to the chalk of the western Thames valley from Wargrave to Cookham. <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: restricted to the Thames valley and to the eastern end of the chalk ridge [58]. Absent from the Kennet valley and the western part of the interior. Ashbury and Tuckmill Meadow [28], Watchfield [29], between Hatford and Buckland, Lamb and Flag quarry and Longworth pit [39], East Hanney, Kingston Bagpuize and Marcham [49], Cumnor [40], Aston Upthorpe Downs, East Hagbourne, West Hagbourne Moor, Downs Farm wood, Streatley and Kingstanding Hill [58], Sulham and Purley [67]. Atlas 2000: [28], [29], [39], [49], [40], [57], [58], [67]

Nepeta x faassenii Bergmans ex Stearn *Garden Cat-mint* • hp 6 ↑
Nepeta x mussinii auct., non Sprengel ex Henckel

This is the common edging plant of herbaceous borders. Cats love to roll in it, and to flatten out the centre of bushes in a manner designed to maximise the irritation caused to fastidious gardeners.

Silwood Park: naturalised garden escape in the Playground at Cheapside in 1999.

East Berks: Whiteknights Park tip in 1973. Walls in Sonning. Waste ground in Earley [7571]. Recently at Sandpit Lane, Fleet Copse, Limmerhill, Childs Hall, Maiden Erleigh, Sonning, Twyford, Westcott, Bracknell, Binfield Park, Binfield Lodge, Touchen-End, Bisham Wood. 2% (1km²). Atlas 2000: [76], [77], [86], [87], [96]

West Berks: Kennington tip [50] in 1943. Waste ground by the canal in central Newbury [4767] in July 2002. Atlas 2000: [28], [36], [38], [46], [66]

¶ **Nepeta** *N. cataria*, *N. cataria* ‘Citriodora’, *N. clarkei*, *N. x faassenii*, *N. govaniana*, *N. grandiflora* ‘Dawn to Dusk’, *N. grandiflora* ‘Pool Bank’, *N. longipes*, *N. nervosa*, *N. racemosa*, *N. racemosa* ‘Snowflake’, *N. sibirica*, *N. sibirica* ‘Souvenir d’André Chaudron’, *N. ‘Six Hills Giant’*, *N. subsessilis*

Glechoma hederacea L. *Ground-ivy*
Nepeta hederacea (L.) Trev. St. Léon

hp 3

Woods, thickets, hedges, borders of fields; often in dry situations and a conspicuous feature in our spring vegetation (as *Nepeta glechoma*); abundant and generally distributed. Oak and alder woods, hedge-banks and sheltered grassland. One of the 3 ubiquitous woodland wildflowers (with *Geum urbanum* and *Geranium robertianum*). Particularly common in rabbit-grazed turf. The leaves have ‘Lighthouse’ galls of the midge *Dasyneura glechomae*.

NVC: MG 1; OV 24,25,27; S 5,26; U 1; W 6,8,10,12,13,21,24,25

Silwood Park: woodlands, hedges, grassland and wet lawns; common throughout. This is the 31st most frequent species in small quadrats and the 26th most frequent in hectare plots. Particularly abundant in Oak Mead where the grassland is overhung by trees and heavily grazed by rabbits. An abundant weed in the damp lawn between East Block and West Block of the new Biology Buildings. Highly unpalatable to rabbits, but intolerant of trampling. Because of this, it clearly picks out the edges of paths across rabbit grazed grassland (as on the Science Park side of North Block). Common in the ancient woodland fragment at Nash’s Copse. Occasional in July 2007 from the seedbank following the erection in February 2005 of the deer/rabbit enclosure behind the Tennis Court to protect the young Rhododendron Collection.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
5	7	8	19	59

East Berks: wherever there are woods or ancient hedgerows. Locally dominant (with *Fragaria vesca*) on cinder waste ground between the railway and Tesco’s Superstore at Kings Meadow in Reading [719738]. The most frequent species of Lamiaceae at 76% (1km²); the next is *Lamium album* at 72%. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Prunella vulgaris L. *Selfheal*

hs 6

Pastures, heaths, woodland rides, lawns and waste places. One of our commonest wildflowers, and found in a wide range of grassland, wetland and woodland habitats. It is locally dominant, forming large patches on poorly-managed or shaded lawns, especially in towns. Serpentine and blotch mines are formed by *Fedalmia headleyella*.

NVC: CG 2-5; M 22,24,27; MG 1,4-6,9,10; OV 21,35; U 20; W 6,8,10,24

Silwood Park: the 22nd most frequent species in 1-hectare plots, but more thinly scattered at smaller scales, and not found in any of the random 1m² quadrats. Tolerant of rabbit grazing, but never more than a minor component of total biomass in our grasslands. Occasional in July 2007 from the seedbank following the erection in February 2005 of the deer/rabbit enclosure behind the Tennis Court to protect the young *Rhododendron* Collection. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	4	8	11	66

East Berks: claret-coloured flowers were noticed in Windsor Great Park by Druce, and white flowers by the Rev V. Crawley at Wellington College. The third most frequent labiate at 70% (1km²) after *Glechoma* and *Lamium album*. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Prunella laciniata (L.) L. *Cut-leaved Selfheal* • hs 6 †

Prunella vulgaris L. var. *laciniata* L.

West Berks: one of the very few alien plants in Britain to survive in closed grassland.

Tilehurst (OXF) [67] in 1903, and on Sreatley golf course [58] in 1960. I have not been able to find it there.

¶ ***Prunella*** *P. grandiflora*, *P. grandiflora* ‘Alba’, *P. grandiflora* ‘Loveliness’, *P. grandiflora* ‘Pink Loveliness’, *P. grandiflora* ‘White Loveliness’

¶ ***Physostegia*** *P. virginiana*, *P. virginiana* ‘Alba’, *P. virginiana* ‘Crown of Snow’, *P. virginiana* subsp. *speciosa* ‘Bouquet Rose’, *P. virginiana* subsp. *speciosa* ‘Variegata’, *P. virginiana* ‘Summer Snow’, *P. virginiana* ‘Vivid’

Melissa officinalis L. *Balm* • hp 8

Druce considered this to be a “rare alien of hedge sides and woody places, as a relic of cultivation”. Bowen has it as “Roadsides and waste ground, often near rivers, in small patches”. It is now a common garden escape, found in almost every village and a long-lived relic of old gardens, but seldom spreading by seed or patch-forming. Probably just more systematically recorded, rather than substantially increased in abundance. Known at once by the lemony smell of its crushed leaves.

Silwood Park: self-sown on the cinder pot standing at The Greenhouses in June 2000. Cheapside Playing Fields, Silwood Farm, Cheapside Village. Locally abundant at the edge of Farm Road by The Lake on 31 August 2011.

East Berks: not in Druce. On the banks of the R. Thames at Sonning (RDG) in 1920. Recently at Swallowfield, Bulmershe, Whitley, Earley, Leighton Park, Sonning, Twyford, Park Place, Bray Wick, Maidenhead, Cookham, Old Windsor lock. On waste ground between Tesco and the railway in Reading [725737] in 2002, and on the derelict, dead-end part of London Road at Coppid Hill roundabout [836689] in 2003. 12% (1km²). Atlas 2000: all squares

West Berks: common on damp waste ground at Hungerford Station [36] in 2001, Kintbury [36] in 2002, Pusey pit [39], RAF Welford [47], waste ground at Kingston Bagpuize [49], Crookham Common and Holly Wood Bucklebury [56], Radley [59], Burghfield [66], Pangbourne [67], Benson

Lock [69]. Self sown in a pavement crack in Faringdon [2894] in 2004. Atlas 2000: all except [38], [48], [57], [58], [50]

¶ **Melissa** *M. officinalis* 'All Gold', *M. officinalis* 'Aurea'

¶ **Satureja** *S. hortensis*, *S. montana*, *S. spicigera*

Clinopodium ascendens (Jord.) Samp. *Common Calamint* hp 7 ↓

Calamintha montana

Calamintha ascendens Jordan

Calamintha sylvatica Bromf. subsp. *ascendens* (Jordan) P. Ball

Dry roadsides and hedge-banks with sunny exposure, usually on gravelly soil or limestone; local and in small quantity in the Thames valley. Told from *C. calamintha* by the longer teeth of the lower calyx lobes (2-3mm rather than 1-2mm) and the non-protruding hairs of the throat of the calyx. The axillary flower clusters have a common stalk (cf. *C. vulgare*).

Silwood Park: introduced during research into the volatiles involved in host-plant detection by insects; now naturalised in several locations around the Header House and Silwood Bottom. Two plants by the CABI Greenhouses 15 July 1997. Locally abundant in Ashurst Four Acre Field, common over about 10 m² in the centre of the field, in full flower 3 August 1997 following spring cultivation. There were about 100 plants close to the William Penney side of Silwood bottom on 15 September 1994. It is still a persistent weed of the Student Allotments in July 2000. Below the *Alnus cordata* at the Header House greenhouses, escaped from plant pots in 1994 and still there in 1997 but gone by July 2008 (shaded out). It came up from the seed bank when the Leyland cypress on North Gravel were felled; flowered in July 2000, but not seen since. A large plant in the southern edge of the student allotments in Silwood Bottom on 1 August 2007. It had obviously been there for at least a year, possibly more, and was certainly planted. A very curious site, forming a monoculture dominating an otherwise bare soil surface, beneath a head-high monoculture of *Cirsium arvense* in the central third of Ashurst Four Acre Field on 15 July 2008.

East Berks: Local and rather uncommon; borders of Bisham Wood at the top of the hill (1843), Park Place, Wargrave (1871). Woodley (RDG) in 1929, Bray (1922). Extinct at these native sites. Formerly restricted to the Thames valley. Now only an introduced species. <1% (1km²). Atlas 2000: [77], [96]

West Berks: rare and scattered (or extinct) in the Thames valley, with a few scattered stations in the Kennet and Pang valleys. Kingston Bagpuize (RNG) in 1967, Dry Sandford Pit, Marcham and Cothill [49], Goldfinch Bottom, Greenham Common in 2006 [5064], Greathouse Wood [57], East Hagbourne and Chilton [58], Brightwell [59], Ufton Nervet Church [66], Sulham [67], Wallingford [68], with pre-1897 records from Uffington [39], Cumnor [40], Streatley [58], Hinksey (RNG) [50] in 1893, Basildon [67]. Atlas 2000: [29], [36], [47], [49], [57], [58], [59], [66], [67], [68]

Clinopodium calamintha (L.) Stace *Lesser Calamint* hp 7 ↓

Melissa calamintha L.

Calamintha nepeta (L.) Savi

Calamintha nepeta (L.) Savi subsp. *glandulosa* (Req.) P. Ball

Dry banks and wood margins. Local and rare; only in north Berkshire. Told from *C. ascendens* by its shorter calyx teeth (1-2mm rather than 2-4mm) and its covering of shorter hairs (0.1mm rather than more than 0.2mm).

East Berks: no records.

West Berks: 20 plants in Stroud Copse [4407] in 1964, and at Daisy Bank Barrow Hills [514979] in 1963-79, with 100 plants in July 2001. There are older records from Bagley Wood [50] 1812-86 and Marcham (RDG) [4596] in 1912. Near Abbey fishponds at Abingdon [511981] in 2001. In the reserve at [512980] in 2002. Atlas 2000: [40], [59]

Clinopodium vulgare L. *Wild Basil*

hp 7

Calamintha vulgaris Hal., non Clairv.

In chalky areas on banks, bushy places, wood borders, hedgerows, roadsides and railway banks on dry, calcareous soils. Like *C. acinos*, this species has its axillary flower clusters *without* a common stalk. Told from *C. acinos* by its more flowery whorls (more than 8, rather than 6 or less).

NVC: CG 3; MG 1

Silwood Park: introduced in the Oak Mead sowing experiment in 1996 where it established on fenced, cultivated plots; flowering on 12 September 1996. Still common, even on some grazed plots in July 1998. By September 2002, it was well established in the grazed parts of Blocks C, D and E. Locally frequent on the New Chalk Plots at Ashurst; in flower on 3 August 1997, 12 July 1998, 21 May 2002, 3 September 2008 and 29 August 2010. Evidently seed-limited, but not found in any of the natural habitats (all the populations come from experimentally introduced seeds). Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003. A single plant at the rear of the CABI Polytunnel on North Gravel growing with *Picris hieracioides* in July 2003 of origin unknown; greatly increased by September 2004, but the *Picris* had gone by this time; still there on 7 July 2008. A single plant with 6 flowering stems on the eastern edge of the car park at Ashurst church on 1 July 2005; the patch had grown to 1m diameter by 28 July 2007.

Ascot: no other records.

East Berks: confined to the chalk north of 75, with a single record from Wokingham. 2% (1km²). Atlas 2000: all except [86], [97]

West Berks: widespread, but rare in the heathy districts of the extreme south-east Atlas 2000: all except [68], [69]

Clinopodium acinos (L.) Kuntze *Basil Thyme*

th 5 ↓

Thymus acinos L.

Calamintha arvensis

Calamintha acinos (L.) Clairv.

Acinos arvensis (Lam.) Dandy

Dry sandy and calcareous fields, dry banks, roadsides, bare places in calcareous grassland, fallow fields and railway cuttings; local, sporadic and usually in small quantity. Absent from south-east Berkshire.

NVC: OV 39

East Berks: once frequent in cornfields near Marlow, Starve-all Farm, Remenham, Aston Lane, Hennerton, Wargrave, Maidenhead, Bisham, Bray, Sonning Hill, Arborfield. A white flowered form was seen near High Standing Hill in Cranbourne Chase. Reading, Twyford, Remenham, Hurley,

Winter Hill. Now rare and confined to the chalk of the western Thames valley from Twyford to Cookham. 1% (1km²). Atlas 2000: [77], [88]

West Berks: extinct from many of its former stations in the interior, with most records from the east [57] and [58]; scattered elsewhere. Beckett Park [28], Inkpen [36], Shefford Woodlands and Membury airfield [37], Buckland [39], Pusey [39], Boxford [47], Wootton and Upper Seeds at Wytham [40], Hermitage, Compton, Yattendon, Hampstead Norreys and Aldworth [57], Aston Upthorpe Downs, Streatley golf course, Kingstanding Hill, The Holies and Lollingdon Hill [58], Pumney Farm [59], Sulham, west of Pangbourne Station and Basildon [67]. Atlas 2000: all except [28], [29], [47], [56], [50], [66], [68], [69]

Hyssopus officinalis L. *Hyssop* ● n 7 †

An occasional herb-garden plant, seldom found outside gardens.

West Berks: on a brick wall at Wire Lock, Denford [363681] in 1981 (det. D. McClintock).

Origanum vulgare L. *Wild Marjoram* chh 7

Dry sunny banks, chalky and limestone pastures, wood margins, and roadsides on calcareous soils. Abundant on the chalk but absent from large parts of the county.

NVC: CG 3,4; MG 1; W 21

Silwood Park: only growing where introduced, as on the old and new chalk plots, and in the seed limitation experiment in Oak Mead. Dominant on the ungrazed Chalk Plots from years 8-16 after establishment, growing above a dense carpet of bryophytes. Cut back severely in autumn 2000 to encourage the growth of other species; it had recovered its former dominance by summer 2001 and held it through July 2008. Occasional on the New Chalk Plots in Ashurst Four Acre Field in May 2002 (increased to locally abundant by June 2007). One plant with *Cruciata laevipes* by the CABI Poly tunnel on North Gravel in July 2004. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

Ascot: rare on waste ground in South Ascot (1995-2000) and at Ascot Place (1999).

East Berks: Sonning, Wargrave, Park Place, by the railway at Wellington College, Hurley, Wargrave chalk pit, Maidenhead, Bisham, and on chalk rubble near Reading. Occasional. Park Wood, Bisham. Confined to the chalk of the western Thames valley from Sonning to Cookham. Absent elsewhere. Recently at Shinfield, Newland Farm, South Reading, Ashbury Park, South Twyford, Park Place, Temple Coombe, Crazies Hill, Wellington College, Shottesbrooke, Warfield, Culham court, Hurley, Prospect Hill, Stubbings, Temple, dominating a single grave in Bisham churchyard, Bisham Abbey, Windsor Castle. 5% (1km²). Atlas 2000: all squares

West Berks: common on the eastern chalk, less common in the west. Absent from the north and the south. Rare on pavements in central Faringdon [2895] in July 2002. On abandoned allotments in Botley [40] and Grandpont [50]. Atlas 2000: all except [49], [66], [68], [69]

¶ **Origanum** *O. amanum*, *O.* 'Barbara Tingey', *O.* 'Kent Beauty', *O. laevigatum*, *O. laevigatum* 'Herrenhausen', *O. laevigatum* 'Hopleys', *O. microphyllum*, *O.* 'Rosenkuppel', *O. rotundifolium*, *O. vulgare* 'Aureum', *O. vulgare* 'Country Cream', *O. vulgare* 'Polyphant'

Thymus L. *Thymes*

Thymes are hard to tell apart. You need to pay careful attention to the distribution of the hairs over the 4 faces and the 4 angles of the stem, preferably under a microscope, rather than through a hand lens. Our two common species show reasonably clear habitat separation: *Thymus polytrichus* subsp. *britannicus* is *not* found on acid, heathy ground, while *Thymus pulegioides* will grow on acid substrates although it is not confined to them.

Thymus vulgaris L. *Garden Thyme*

• n 7

This common garden herb is occasionally found on old walls in villages, and rarely on waste ground.

East Berks: Windsor (1999), Whitley [7270] in 2003.

West Berks: on old walls in Cumnor [40] 1979-2004.

Thymus pulegioides L. *Large Thyme*

chw 7

Thymus chamaedrys Fries

Heaths, bushy places, pastures, etc.; locally common. Short acid or calcareous grassland and heaths; occasional but absent from clay soils and decreasing. This is the only species of Thyme found on heaths in our area. Most stem hairs are confined to the four angles, and it flowers 1 month later than *T. polytrichus*. Often covered in white hairy ball galls of the mite *Eriophyes thomasi*.

NVC: CG 2,3; H 2; U 1

Silwood Park: very local and rare. Eight plants on the extreme edge of the lawn overhanging the Ha Ha on 28 July 1980; 5 plants still there in 2003 and 2009, between the Stevenson Screen and the middle power point. There was only one plant left here by 24 July 2010.

East Berks: Wargrave, Sonning, Bearwood, Hurley, Bisham, Cookham, Stubbing's Heath. Bearwood churchyard, Remenham, Hurley. Finchampstead ridges, Coleman's Moor, Earley and Sandhurst. Suttons old nursery ground, Winter Hill, Maidenhead Thicket. Commonest in the western Thames valley from Reading to Cookham. Still at Crazies Hill, Cock Marsh. <1% (1km²). Atlas 2000: all except [86], [87], [97]

West Berks: occasional in the Northern Loop, uncommon on the chalk and extinct in Kennet valley. Kingstone Down, Odstone Coombes and Whitehorse Hill [28], Woodhay [36], Crog Hill and Furzewick Down [38], Cherbury Camp [39], Frilford heath [49], Cothill [49], Wytham [40], Greenham Common [46], Aston Upthorpe Down, Lowbury Hill, Aston Tirrold churchyard and Streatley (LAN) [58] in 1956, Wittenham and Didcot [59], Brimpton Common [56], Purley [67]. Atlas 2000: all except [29], [46], [47], [50], [68], [69]

Thymus polytrichus A. Kern. ex Borbás *Wild Thyme*

chw 5

Thymus polytrichus subsp. **britannicus** (Ronniger) Kerguelen

Thymus britannicus Ronn.

Thymus drucei Ronn.

Thymus serpyllum auct. non L.

Thymus praecox Opiz subsp. *britannicus* (Ronn.) Holub

Close-grazed, open grassland, pastures, commons, roadsides and chalk downs; absent from south-east Berkshire. The hairs on the lower parts of the flowering stem are confined to two opposing faces (rather than on the 4 angles of the stem).

NVC: CG 2-5; MG 1; OV 39,41

Ascot: no records.

East Berks: very local, all but restricted to chalk grassland in the north. Recently at West Emmbrook, Park Place, Temple Coombe, Lily Hill Park, Cox Green, Hurley, Temple, Maidenhead Thicket, Winter Hill, Halfway House, and slopes above Cock Marsh. 3% (1km²). Atlas 2000: [76], [77], [87], [88]

West Berks: common on the chalk from Ashbury [28] to Streatley [58], occasional on the Inkpen chalk [36] and on oolitic limestone in the Northern Loop [40] and [50], but scattered and rare elsewhere. Atlas 2000: all except [29], [68], [69]

¶ **Thymus** *T. caespititius*, *T. x citriodorus* ‘Archer’s Gold’, *T. x citriodorus* ‘Aureus’, *T. x citriodorus* ‘Bertram Anderson’, *T. x citriodorus* ‘Golden King’, *T. x citriodorus* ‘Silver Queen’, *T. ‘Coccineus’*, *T. doerfleri* ‘Bressingham’, *T. ‘Doone Valley’*, *T. ‘Hartington Silver’*, *T. herba-barona* ‘Lemon-scented’, *T. pseudolanuginosus*, *T. serpyllum* ‘Annie Hall’, *T. serpyllum* ‘Pink Chintz’, *T. vulgaris*, *T. vulgaris* ‘Silver Posie’

Lycopus europaeus L. *Gypsywort*

hel 6

Sides of rivers, canals, ponds, streams and ditches, damp woodland rides, fen carr, marshes and boggy places in woods. Common and generally distributed, but absent from the chalk. One of our commonest water-side wildflowers, found in a wide range of wet habitats. Leaves often holed by the beetle *Ceuthorrhynchus melanosticus*.

NVC: M 22; OV 26,32; S 1,3-6,8,12,14,15,25,26; W 1,5

Silwood Park: abundant in wetlands all around The Lake, both open and shaded, in both inflow streams and in the ornamental ponds around the Manor House. An important component of the vegetation of the *Scirpus sylvaticus* swamp. The oddest record is from the deep dry shade of Garden Wood in June 1985 where the plant was growing on dry leaf litter that had been spread out on the woodland floor, presumably dredged from a pond and dumped here. Abundant in the ferruginous flush at the roadside at the bottom of Farm Wood. Frequent in the small garden pond at East Lodge in June 2007. A single individual on 13 July 2007 in quite dry ground inside the Rhododendron Enclosure, close to the double gates, where *Mimulus moschatus* had grown in the two previous years. Locally dominant in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	7	15

Ascot: locally frequent in the sunny parts of Sunningwell Bog below St George’s School [929684]. Frequent at the edges of the Marist Convent pond at Frognall [941682] in September 2005. In 11 of the 29 1-km squares in [96].

East Berks: on soil and stonework on the banks of the R. Thames from Reading to Old Windsor, and all along the R. Loddon. By ponds throughout. 26% (1km²). Atlas 2000: all squares

West Berks: by rivers and ponds throughout the Thames, Kennet and Pang valleys but absent from the waterless interior. Atlas 2000: all except [48]

Mentha arvensis L. *Corn Mint*
Mentha gentilis L.

hp 5 ↓

Damp cornfields, heaths, river-sides and damp woodland rides; locally frequent but absent from much of the chalk ridge. Told from *M. pulegium* by the absence of hairs in the mouth of the calyx, and from *M. x gracilis* and *M. x smithiana* by the small (1.5-2.5mm) calyx with triangular (not subulate) teeth. NVC: OV 15,30

Ascot: local and rare. Frostfarm Plantation in 1999, Sunninghill Park in 2000. Very rare, one plant from imported topsoil used to landscape the edge of the tarmac road alongside the new Straight Mile [93338 69226] on 31 August 2005.

East Berks: occasional in the west, but absent or rare to the east of 90. Recently at California Country Park, Temple, Windsor and on the edge of the R. Thames at Aston Ferry. 1% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys and to the west of 35, but absent from the rest of the interior. Most frequent on the Golden Ridge and in the north-west corner of the county, as at Ashdown Park and Shrivenham [28], Coleshill, Buscot, Longcot and Eaton Hastings [29], Kingston Lisle [38], and Baulking, Buckland and Longworth [39], Ilsley Bottom [48], Tubney and Wytham [40]. Atlas 2000: all except [69]

Mentha x verticillata L. *Whorled Mint* = ***M. arvensis* x *M. aquatica*** • hp 8

Margins of rivers, canals, brooks, ditches and ponds, and in marshes, etc. Common and widely distributed. Woodland rides and damp places. Occasional but not often reported from calcareous soils. This is a hairy plant with a small calyx (< 3.5mm) and included stamens.

Ascot: rare. Coronation Road.

East Berks: banks of the R. Thames in Reading (**LAN**) in 1956, Leighton Park, Long Moor, Loddon Bridge, Hurst, Wellington College, Warren Row, Windsor Forest. Rare but scattered throughout. Recently at Farley Court, Eversley Bridge, Wellington College, Bracknell, Ashridge Wood, Winkfield Row, Mount Skippet, North Town. 2% (1km²). Atlas 2000: all except [78], [96]

West Berks: rare in the Thames and Pang valleys, absent or extinct elsewhere. Pucketty Farm [39], Pusey Marsh [39], Appleton Lower Common [40], Farmoor [40], Wytham [40], Wasing pits [56], Hermitage [57], Stanford Dingley [57], Ufton Nervet [66], Bradfield and Tilehurst [67]. Atlas 2000: all except [28], [29], [37], [38], [47], [48], [58], [50], [68], [69]

Mentha x smithiana R.A.Graham *Tall Mint* = ***M. arvensis* x *M. aquatica* x *M. spicata*** • hp 8

This is an almost hairless plant with a larger calyx (> 3.5mm) and exerted stamens.

Silwood Park: very rare. A single plant self sown in paving cracks outside the door to North Block; first noticed in autumn 2004. Pulled up on 16 March 2005 by an un-briefed gardener.

East Berks: waste ground, rare; Ascot in 1929 (**OXF**), Sonning (**BM**) in 1800. Atlas 2000: [77]

West Berks: Cothill pit [468996] in 1976 (**OXF**). Atlas 2000: [58]

Mentha x gracilis Sole *Bushy Mint* = ***M. arvensis* x *M. spicata*** • hp 8 ↓
Mentha x gentilis auct., non L.

Mentha x cardiaca (Gray) Baker

This sterile hybrid has very short calyx teeth (< 1mm) and a short calyx tube (less than 2 times as long as wide) lacking any hairs in the mouth.

Ascot: prostrate plants on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: a roadside in Reading in 1962 (LAN) (det. R.M. Harely). Atlas 2000: no records.

West Berks: Newbury [46] in 1891 (OXF), a building site in Tilehurst [67] in 1962 (LAN), old allotments in Didcot [59] in 1975 (OXF) and at Heath End [56] in 1988. Atlas 2000: [50]

Mentha aquatica L. *Water Mint*

hel 7

Sides of rivers, brooks, canals and ponds, wet woodlands, fens, ditches, marshes and wet waste ground in towns. Our commonest mint; widely distributed, but absent from the chalk ridge. Perhaps the most characteristic wetland plant, one of the great smells of summertime. This is a fertile plant with ovate leaves and flowers in rounded heads. Told from *M. arvensis* by its terminal flower head (rather than an axis terminated by leaves). Attacked by the leaf-holing beetles *Chrysolina polita* (bronze body and a green head) and *Cassida viridis*.

NVC: A 1,8; M 13,22,24,27; MG 9,10,13; OV 26,28,31,32,35; S 3-8,12-16,18,19,22,23,25,26,28; W 1,5,6

Silwood Park: wet woodlands, lake margins and swamps. Guinness's Thicket, The Lake, The Swamp, The Marsh, The Willows, Farm Road, Weir Wood, Nash's Copse and by the Outflow Stream at Heronsbrook. It was abundant in the new spring at the Farm (appeared January 2001) by July 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	5	9

Ascot: Tower Hill, Englemere, Woodlands Ride, Charters Road, Blacknest Park, Johnson's Pond, Frostfarm Plantation, Breakheart Hill, Ascot Place, South Forest, Hilton's Covert, Great Meadow Pond, Windsor Great Park.

East Berks: wet places generally, 24% (1km²). Atlas 2000: all squares

West Berks: widespread, save for the chalk ridge (north of 80 and south of 85). Atlas 2000: all squares

Mentha x piperita L. *Peppermint* = ***M. aquatica* x *M. spicata***

• hp 8 ↓

Mentha x citrata Ehrh.

Mentha x dumetorum auct., non Schultes

Mentha x piperita L. var. *citrata* (Ehrh.) Briq.

Mentha x piperita L. nm. *citrata* (Ehrh.) J. Boivin

Pond-sides and wet places; local and rare. This plant has distinctly petiolate leaves and glabrous leaves and calyx tube. The Eau de Cologne Mint 'Citrata' has a rather sickly, lemony scent.

Silwood Park: a large plant in the south-west corner of the student allotments in Silwood Bottom on 1 August 2007. It had obviously been there for at least a year, possibly more, and was certainly planted.

East Berks: very rare by the roadside opposite Highfield Farm Wargrave (1897), possibly a garden escape. Leighton Park (1962), near Reading bus station (1988). Forest Lodge (1999). <1% (1km²). Atlas 2000: [77], [96], [97]

West Berks: Uffington pond [38], Carswell [39], Cothill [49], Boars Hill [40], Streatley [58], Didcot [59], in ditches at Mortimer Station [66]. Atlas 2000: [29], [46], [49], [58]

Mentha spicata L. *Spear Mint*

○ hp 8 ↓

Mentha longifolia auct., non (L.) Hudson

Mentha scotica R.A. Graham

Persistent on roadsides, waste ground and rubbish tips, in small patches. This is a fertile plant with sessile, elongated (not round) leaves that smell of spearmint when crushed. It can be hairless or hairy, and is very hard to tell from its hybrids. Garden mints are infamous for their rampant rootstocks, and it is often recommended that they should be grown in buckets rather than in beds where they are liable to be invasive. Because of this habit, they are often thrown out, and are common on waste ground in towns and villages.

Silwood Park: rare on waste ground at the Cannon Crossroads in 1999.

Ascot: locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: near Twyford, Knowl Hill, Windsor. Wargrave (1918), Boulter's Lock, Odney Common. Riseley, Smallmead tip, Reading. Bracknell (1967), Cookham pit (1957). Scattered records from the Thames valley, rare or absent elsewhere. Very hairy plants on abandoned allotments between Reading West Junction and Cow Lane [702742] on 11 October 2003. 6% (1km²). Atlas 2000: all except [78]

West Berks: all but confined to the Thames and Kennet valleys. Shrivvenham, Zulu Buildings [28], Watchfield, Buscot, Longcot and Beckett Park [29], Inkpen and Kintbury [36], Childrey [38], Baulking, Longworth, Pusey and Buckland [39], Newbury tip [46], West Ilsley [48], Cothill (**OXF**) and Frilford (**OXF**) [49], Bessels Leigh [40], Radley and Sutton Courtenay [59], South Hinksey [50], Sulham, Theale and Tilehurst (**LAN**) [67] in 1962. Atlas 2000: all except [47], [48], [68], [69]

Mentha x villosa Huds. *Apple-mint* = ***M. spicata* x *M. suaveolens***

● hp 8 ↑

Mentha x niliaca auct., non A.L. Juss. ex Jacq.

Mentha x alopecuroides Hull

Mentha x cordifolia auct., ? an Opiz ex Fresen.

Mentha x scotica auct., non R.A. Graham

Mentha x villosa Hudson nm. *alopecuroides* (Hull) R. Harley, nom. inval.

Mentha x rotundifolia (L.) Hudson subsp. *alopecuroides* (Hull) Malagarr.

Mentha x villosa Hudson var. *nicholsoniana* (Strail) R. Harley

Waste places and roadsides, typically as var. *alopecuroides* (Hull) Briq., this is the common apple-mint of gardens, and makes a long-persistent garden outcast. Often near water, forming small patches, but also on quite dry ground where it is indicative of former fly-tipping of garden waste. This is a

sterile plant with rounded leaves that have spreading leaf teeth (not rolled under); the leaves are often both rugose and pubescent.

Silwood Park: naturalised in Ashurst Four Acre Field in a patch about 2m² amongst *Clinopodium ascendens* on 3 August 1997 (still there in 2004), marking the location of the former student allotments. Also in Ashurst Orchard.

Ascot: locally abundant in the fen-meadow north of the railway to the west of St George's Lane in 2002. Near the lake in Blacknest Park.

East Berks: Bracknell. Leighton Park (1968), Rapley Lakes (1986). Shaw Farm [9775] in 2003. Rare but scattered throughout. 2% (1km²). Atlas 2000: all except [87]

West Berks: scattered records from the Thames and Kennet valleys but absent from the interior. Hungerford [36], in grass at the edge of Leyatt Copse close to the road [37], Newbury [46], Botley [40], Yattendon Manor [57], Moulsoford Downs [58], Grandpont [50], Pingewood pits [66], Sulham, Pangbourne and Tilehurst [67]. Atlas 2000: all except [29], [36], [39], [56], [59], [68], [69]

Mentha x villosonervata Opiz *Sharp-toothed Mint* = ***M. spicata* x *M. longifolia*** • hp 8
Mentha x villosa auct., non Hudson

An established garden escape told from *M. spicata* and *M. x villosa* by the leaf teeth: these are acuminate and curve outwards and become patent in *M. x villosonervata* but the other two have forward-directed teeth (or the leaf shape is orbicular). Some old records of Horse Mint, *M. longifolia* (L.) Huds. are referable here. Ours is a grey-hairy plant with a very unpleasant smell.

West Berks: in a wayside at Upper Basildon [6075] on 4 August 2002.

Mentha pulegium L. *Pennyroyal* hp 8 ↑

Damp grassland, margins of ponds, wet heaths, and margins of heathy pools; very local and decreasing until recently. This is very curious indeed. Here is a plant that is considered to be so rare as a native, that it deserves its very own nature reserve near Queens Eyot at Bray [914783]. In the reserve, however, it looks exactly like it does in New Zealand; that is to say, like a pernicious alien invader of pasture land. "Pennyroyal is so abundant in some [New Zealand] pastures that they appear completely purple from a distance when it is flowering" (Webb et al., 1988). The plant is known by the hairs in the throat of the calyx, and by the slightly unequal calyx teeth (the lower 2 teeth are narrower and longer than the 3 upper teeth). It is an increasing grass seed contaminant (Stace); it may also be benefiting from climate warming.

Silwood Park: local and recently established in lawns. Japanese Garden, one small patch (20cm diameter) in the wet lawn by the *Taxodium* on 1 September 2000. It is possible that it has been there for several years and only showed itself in 2000 because of the combination of low rabbit numbers and lax mowing in that year. It survived prolonged submersion during the floods of winter 2000-01 when the Japanese Garden was flooded for many weeks; it flowered again on 6 September 2001 but not seen since. William Penney on the flat part of the lawn at the western end of the building close to the Arboretum fence, a single patch (15cm diameter) in rabbit grazed turf on 15 August 2000. Still there in 2004.

East Berks: not seen by Druce in our area. Leighton Park in Reading [7371] in 1962. In the 'Pennyroyal Reserve' SSSI at Bray [912782] it grows in wet hollows in a pasture maintained by horse

grazing. Locally frequent in the duck-grazed damp grassland next to the pond at California Country Park [785651] on 10 November 2007, where, after *Bellis perennis*, it was the most abundant herb. <1% (1km²). Atlas 2000: [96], [97]

West Berks: thought to be extinct, but recently refound (perhaps reintroduced with grass seed). Last seen on Wash Common [4564] in 1910, Mortimer (K) [6564] in 1930 and Burghfield Common [6566] in 1897, Tilehurst [6673] in 1805, and there is a 1918 record from Clay Hill [57]. Rediscovered by Susan Erskine at Shellingford [323941] in July 2000 and again at [326941] spread over a much wider area in October 2005. Atlas 2000: [39]

Mentha requienii Benth. *Corsican Mint* ● chh 6

A prostrate plant with tiny, thyme-like leaves, used for making 'fragrant paths' in gardens.

East Berks: rare on damp waste ground in towns: Windsor, Camberley (1982-2000). <1% (1km²).

¶ **Mentha** *M. longifolia* Buddleia Mint group, *M. x piperita* f. *citrata*, *M. requienii*, *M. x smithiana*, *M. spicata* 'Crispa', *M. suaveolens* 'Variegata', *M. x villosa* f. *alopecuroides* 'Bowles' Mint

Rosmarinus officinalis L. *Rosemary* ● n 4

A ubiquitous herb garden species, seeding freely and self-sown in a variety of dry sunny places like walls, banks, pavement cracks and open waste ground.

Silwood Park: in the churchyard at Ashurst, self-sown on the vertical face of the cemetery-facing wall about 30cm up from the ground. 1 January 1999. William Penney, planted abundantly on the Science Park and self-sown in brick paving.

East Berks: recently at Bisham, Upperwood Farm, Newland Farm, Coppid Hill, Rivermead, South Reading, Bulmershe Court, Whistley Park, Knowl Hill, Douglas Farm, Wokingham, Ambarrow, Owlsmoor, Jealott's Hill, Warren Row, Foliejon Park, Bray. 3% (1km²). Atlas 2000: all except [78]

West Berks: in towns and villages, but never far from houses. Atlas 2000: [29], [36], [39], [46], [49], [40], [50], [66]

¶ **Rosmarinus** *R. officinalis* var. *albiflorus*, *R. officinalis* 'McConnell's Blue', *R. officinalis* 'Miss Jessopp's Upright', *R. officinalis* 'Benenden Blue', *R. officinalis* 'Miss Jessopp's Upright', *R. officinalis* 'Primley Blue', *R. officinalis* Prostratus group, *R. officinalis* 'Roseus', *R. officinalis* 'Severn Sea', *R. officinalis* 'Sissinghurst Blue', *R. officinalis* 'Tuscan Blue'

Salvia reflexa Hornem. *Mintweed* ● th 6

East Berks: Smallmead tip (1969).

West Berks: from bird-seed in a garden at Weston [37] in 1965 and at Eastbury [37] in 1986.

Salvia officinalis L. *Garden Sage* ● n 5

Ubiquitous in herb gardens, and occasionally as a garden outcast on waste ground. Rarely self-sown on walls and in paving cracks.

Silwood Park: grown in Silwood Bottom in 1991 as part of an intercropping experiment, and still there in 1994 but gone by 1996. Rare at The Greenhouses, on the ruined base of the Cocoa Greenhouse with 1 flowering plant and 6 rosettes on 17 July 1997. On the student's allotments in June 2003.

East Berks: on a wall top at Sonning in 1966; still there in 2002. Recently at Wild's Beit, Halfway House, Maidenhead, Foliejon Park, Cookham, Bray. On waste ground by Wokingham Road, Reading [7373] in October 2004. 1% (1km²). Atlas 2000: [78], [88], [97]

West Berks: on abandoned allotments in Botley [40] and Grandpont [50] in 2002.

Salvia sclarea L. *Clary* ● hs 5

An occasional garden biennial (to 1m tall) outcast on tips and sometimes self-sown.

East Berks: a rare garden escape, on brickwork in Cookham Dean [8785] in July 2003.

West Berks: on Kennington tip [50] in 1941 and on walls at Pusey House [358967] in 1971. Kingston Bagpuize [4098] in July 2003.

Salvia pratensis L. *Meadow Clary* ● hs 6 ↓

Chalk grassland, very rare, and a rare casual in sown fields. The petals have glandular hairs (see below). It is native in chalk grasslands nearby, 10km north of the county boundary in Oxfordshire. NVC: CG 2

East Berks: no records.

West Berks: rare, and extinct at more than half its former stations. Druce knew only of a solitary specimen from a field near Carswell [3297]. Unhill Bottom [5582] from 1909-58 (OXF), and from the edge of a clover field at Hungerford [3368] in 1922 (OXF). Field records from Arlington [4671] in 1946 and Stanford Dingley [5771] in 1945. Pre-1900 records from Weston [37], Bessels Leigh (OXF) [40] in 1895, between Hermitage and Yattendon [57], Upton [58]. Atlas 2000: no records.

Salvia verbenaca L. *Wild Clary* hs 5 ↓

This is our commonest *Salvia*, found in chalk grassland and on dry banks, sides of roads, railway banks, etc. Locally common, but absent from extensive areas of the county. A common component of wildflower mixes (a poor man's Meadow Clary if you like), sown in roadside landscaping schemes and such like. The plant has few if any glandular hairs on the petals, and the clear-coloured glandular hairs on the calyx are over-topped by long, wispy, non-glandular hairs.

East Berks: near Park Place (1897), roadside to Hurley (1897), near Loddon Bridge (1897). Dry calcareous banks (as *S. horminoides*); rare and decreasing. Not seen by Bowen in our area. Extinct from its Thames-side stations. Found as a casual at Whiteknights Park in the flower bed outside Chemistry (1980). Sown in wildflower mix used to landscape the verges of the Northern Relief Road in Bracknell [865707] in 1999; the plant is still hanging on, flowering in November 2001. <1% (1km²). Atlas 2000: [77]

West Berks: confined to the Thames valley, and absent from the Kennet valley and the interior. Watchfield and Great Coxwell Church [29], Kingston Lisle [38], east of Chingham Farm [325946],

Hatford and Denchworth [39], formerly at Donnington Castle and Newbury [46], Frilford golf course, Marcham and Abingdon [49], Stroud Copse [40], Moulsoford, South Moreton Church and Blewbury [58], on the railway at Didcot, Radley and Barrow Hills [59], Hinksey [50], Tilehurst [67]. Atlas 2000: [29], [38], [39], [49], [40], [58], [59], [50]

Salvia viridis L. *Annual Clary*
Salvia horminum L.

• hs 5 ↓

East Berks: a rare casual (1958) on a rubbish tip at Cookham. Woodley tip (1971) and on a bonfire site at Whiteknights Park (1980). Atlas 2000: no records.

West Berks: Atlas 2000: [40]

Salvia nemorosa L. *Balkan Clary*
Salvia sylvestris L.

• hs 5 †

East Berks: waste places, railway sides, etc. A grain alien found by Druce on the railway at Maidenhead in 1895 (OXF).

West Berks: Near Wytham Mill (OXF) and by the railway at Didcot pre-1897.

Salvia verticillata L. *Whorled Clary*

• hs 6 ↓

A rare casual of waste places.

East Berks: on a rubbish heap in Windsor (1897), near Maidenhead (1897), near a brickyard in a field between Twyford and Ruscombe (1894). Established in small quantity on dry banks and railway sidings at Reading Station (1965). Now extinct. Atlas 2000: no records.

West Berks: Letcombe Bassett [38], Didcot Station [59]. Formerly at Cothill (OXF) and Abingdon [49], Sinodun Hills [59] and South Hinksey [50] all pre-1918. Thought to be extinct, but rediscovered at Didcot Station in 1988 near the signal box at the Great Western Centre. Atlas 2000: [59]

¶ **Salvia** *S. aethiopsis*, *S. argentea*, *S. blancoana*, *S. blepharophylla*, *S. buchananii*, *S. bulleyana*, *S. cacaliifolia*, *S. candelabrum*, *S. coccinea* 'Lady in Red', *S. confertiflora*, *S. discolor*, *S. elegans* 'Scarlet Pineapple', *S. farinacea* 'Victoria', *S. forsskaolii*, *S. fulgens*, *S. gesneriiflora*, *S. 'Glory of Stuttgart'*, *S. glutinosa*, *S. greggii* 'Peach', *S. guaranitica*, *S. guaranitica* 'Black and Blue', *S. guaranitica* 'Blue Enigma', *S. hians*, *S. 'Indigo Spires'*, *S. interrupta*, *S. involucrata*, *S. involucrata* 'Bethellii', *S. x jamensis* 'La Luna', *S. x jamensis* 'Los Lirios', *S. jurisicii*, *S. lavandulifolia*, *S. leucantha*, *S. microphylla*, *S. microphylla* var. *microphylla*, *S. microphylla* 'Pink Blush', *S. multicaulis*, *S. nemorosa* 'Amethyst', *S. nemorosa* 'Ostfriesland', *S. officinalis* 'Albiflora', *S. officinalis* 'Icterina', *S. officinalis* Purpurascens group, *S. officinalis* 'Tricolor', *S. patens*, *S. patens* 'Cambridge Blue', *S. patens* 'Chilcombe', *S. pratensis* Haematodes group, *S. sclarea*, *S. sclarea* var. *turkestanica*, *S. x superba*, *S. x sylvestris* 'Blauhügel', *S. x sylvestris* 'Blaukönigin', *S. x sylvestris* 'Mainacht', *S. x sylvestris* 'Rose Queen', *S. transsylvanica*, *S. uliginosa*, *S. verticillata* 'Purple Rain'

¶ **Monarda** *M. 'Aquarius'*, *M. 'Balance'*, *M. 'Beauty of Cobham'*, *M. 'Cambridge Scarlet'*, *M. 'Capricorn'*, *M. 'Croftway Pink'*, *M. 'Fishes'*, *M. fistulosa*, *M. 'Mahogany'*, *M. menthifolia*, *M. 'Prärenacht'*, *M. punctata*, *M. 'Sagittarius'*, *M. 'Schneewittchen'*, *M. 'Squaw'*

¶ **Ocimum** *O. basilicum*, *O. x citriodorum*

HIPPURIDACEAE

Hippuris vulgaris L. *Mare's-tail*

hyd 6 ↓

A local speciality of slow streams, canals, ponds and ditches and muddy margins of larger rivers. Local and uncommon.

NVC: A 7,8,11,21; S 4

East Berks: local in broad ditches in Sonning meadows and at Maidenhead. Not seen by Bowen, and no Atlas records. In still occurs, however, in willow-shaded ponds at Cock Marsh (1999-2004). <1% (1km²). Atlas 2000: [88]

West Berks: occasional in the Kennet valley, rare in the Thames valley and absent elsewhere. Kintbury [36], Buckland Park [39], Hamstead Marshall, Newbury and Greenham [46], Wytham and growing through *Menyanthes trifoliata* in the pond at Jarn Mound in 2002 [40], Thatcham and Woolhampton [56], Hermitage and Stanford Dingley [57], Cholsey [58], Sutton Courtenay [59], Kennington [50], in the R. Pang at Bradfield [67], Wallingford [68]. Atlas 2000: [36], [39], [46], [40], [56], [57], [58], [59], [50], [67], [68]

CALLITRICHACEAE

Callitriche L. *Water-starworts*

This is a difficult group because the plants are very variable (they often have different aquatic and terrestrial growth forms) and the flowers are very small. For accurate identification you really need to find ripe fruits, and inspect them under high power in good light.

Callitriche stagnalis Scop. *Common Water-starwort*

hyd 5

Ditches, ponds, slow streams with acid water, woodland rides, iron-rich streams in alder woods, and other wet places. It grows as an aquatic or as a terrestrial plant; common and generally distributed, but absent from the chalk and northern clays. Wing of fruit 0.12 to 0.25mm wide, stamens 2mm at anthesis. Difficult to separate from *C. platycarpa*, but more often a terrestrial plant than a submerged plant in Berkshire.

NVC: A 1,2,5,8-12,15-17,19,21,24; OV 31,32,35; S 4-6,10,12,14,23,28; W 1,5,8

Silwood Park: very local, but common at the edge of Silwood Lake, by Farm Road and below Rookery Slope.

Ascot: on damp muddy tracks in shade at Englemere in July 2002.

East Berks: occasional to the south of 70, scattered and rare to the north of 70. Atlas 2000: all squares

West Berks: frequent to the south of 70, occasional in the Thames valley and absent or rare elsewhere. Atlas 2000: all squares

Callitriche platycarpa Kutz. *Various-leaved Water-starwort*

hyd 4

Ditches, ponds and slow streams where it grows as an aquatic or as a terrestrial plant; locally frequent but absent from acid water in south-east Berkshire. Wing of fruit 0.07 to 0.10mm wide, stamens 4mm at anthesis. Difficult to separate from *C. stagnalis*, but commoner as a submerged plant in Berkshire. NVC: A 3,8,9,11,16,20,21

East Berks: occasional in the Thames valley, but rare to the east of 90. Tributaries of the R. Thames as at Aston Ferry and in the R. Thames at Remenham and Wargrave. Atlas 2000: all squares

West Berks: occasional throughout but rare between 80 and 85. Atlas 2000: all squares

Callitriche obtusangula Le Gall *Blunt-fruited Water-starwort* hyd 5 ↓

Rivers, ponds, ditches and streams; locally common. This is an aquatic plant without terrestrial forms which can be identified in the field (its fruits are unwinged). NVC: A 1,8,11,16,19,21; S 12,13,23

East Berks: rare, and much reduced. Very fine on Coleman's Moor, Winkfield, Wargrave, Cookham. Wokingham. R. Blackwater east of Sandhurst, Virginia Water. Atlas 2000: [76], [77], [86]

West Berks: occasional in the Kennet valley, rare on the Thames, absent elsewhere. Lechlade [29], Buscot [29], Hungerford, Kintbury and Shalbourne [36], R. Lambourn at Lambourn, Leverton and Great Shefford [37], Letcombe Regis and Wantage [38], Bagnor, Greenham and Hamstead Marshall [46], R. Lambourn at Boxford [47], Lockinge [48], Abingdon Racecourse, Marcham and Cothill [49], Wytham and Swinford [40], Beenham, Midgham and Thatcham [56], Hagbourne, Blewbury and Moultsford [58], Radley [59], Hinksey [50], roadside stream at Pingewood [66], R. Pang at Moor Copse, Pangbourne, Southcote and Theale [67]. Atlas 2000: [27], [36], [37], [46], [47], [40], [56], [57], [67]

Callitriche brutia Petagna *Pedunculate Water-starwort* hyd 5 †
Callitriche pedunculata DC.
Callitriche intermedia Hoffm. subsp. pedunculata (DC.) Clapham

Muddy places in woods and by ponds, in shallow water often drying out in summer. This is usually a terrestrial plant. The details of the distributions of *C. brutia* and *C. hamulata* in Berkshire have not been worked out, because they are so difficult to tell apart. Fruits with a long stalk (2-10mm).

East Berks: Ambarrow, Earley, Windsor Park, Swinley. Not in Bowen. Atlas 2000: no records.

West Berks: old clay pit at Hermitage [57] in 1966 (OXF). Atlas 2000: no records.

Callitriche hamulata Kutz. ex W.D.J. Koch *Intermediate Water-starwort* hyd 5
Callitriche intermedia Hoffm. subsp. hamulata (Kutz. ex Koch) Clapham
Callitriche brutia Petagna subsp. hamulata (Kutz. ex Koch) O. Bolòs and Vigo

Streams and ponds with acid water. It grows as an aquatic or as a terrestrial plant, typically in deeper water than *C. brutia*, which does not dry out in summer. Hard to tell from *C. brutia*. Its styles are persistent and reflexed.

NVC: A 2,11,15,19,23,24; OV 30,31,35; S 16

Ascot: local in acidic ponds from Englemere to Virginia Water.

East Berks: rare or overlooked. Local at Virginia Water and Sandhurst. Rapley Lake (1966), Sandhurst [829614] (1928, 1975). Jouldern's Ford [746634] (1977). Moor Green Lakes nature reserve [8062] in 1191 and 2001. Atlas 2000: [76], [86], [96], [97]

West Berks: in the R. Enborne at Enborne Row [451633] in 1977, in backwaters of the Thames at Streatley [596811]. Atlas 2000: [29], [36], [46], [57], [59]

PLANTAGINACEAE

Plantago arenaria Waldst. & Kit *Branched Plantain*

• th 5 †

Plantago scabra Moench nom. illeg.

Plantago indica L. nom. illeg.

Plantago psyllium L. nom. illeg.

This is commoner than, and often mistaken for, *P. indica* which has many glandular hairs on its inflorescence and peduncles. In *P. arenaria* the lower bracts are strongly differentiated from the upper bracts.

East Berks: at Reading Old University [7272] in 1973. Atlas 2000: no records.

West Berks: a bird-seed and agricultural seed alien found as a casual at Didcot Station [59] in 1897, at Cothill (OXF) [49] in 1910. Atlas 2000: no records.

Plantago coronopus L. *Buck's-horn Plantain*

hr 5 ↑

Plantago sabrinae (E.G. Baker and Cardew) Druce

Dry sandy pastures, paths on heaths, compacted ground and salty roadsides. Locally common, especially on the heaths. Generally distributed. Dry, bare places in acid grassland and by paths on heaths. Locally frequent but absent from calcareous soils. Much increased, and now one of the most characteristic urban plant species. It has found a niche for itself in the 30cm of compacted bare soil between the lip of the concrete kerb stone and the beginning of the dense grass verge. Especially common on roundabouts where salt spray is thrown further out, and on grassy verges on housing estates on the compacted ground where people pull their cars off the road to park.

NVC: OV 23,42; U 1

Silwood Park: locally frequent at the kerb-side at the Cannon Crossroads, London Road, Knight Frank, Silwood Road, Cheapside Village, in grass at Croquet Lawn and Reactor Bank, on the gravel path in front of the Manor House above the Lily Pond (28 July 1980 but not seen again until 5 May 2003, still there but rare in January 2011), on the compacted gravel in front of the storage garages on south Gravel (1 September 1980, but the site destroyed during construction of the Science Park). Massive plants in the grassy triangle at the end of Mill Lane in July 2004 following pipe work. By April 2007 the plant was abundant on the north verge of London Road to the east of South Lodge, but much less frequent on the west side of the entrance to Silwood Park (the opposite pattern to that shown by the much more recently established *Cochlearia danica*). Not found in any of the natural habitats. A new location on 6 May 2012 when a single rosette was found beneath *Cornus nuttallii* on bare ground on the CPB Lawn.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	6

Ascot: in the sanded goal mouths of South Ascot football field, and on compacted soil at the edge of the road at The Orangery, Tower Hill, Swinley, Fernbank Road, Heatherwood Hospital, Ascot Station, Coronation Road, compact bare ground at the kerb by South Ascot Church, Ascot Heath, in the car park on Ascot High Street, Sunninghill, Sunningdale, South Coworth, Johnson's Pond, compacted sandy paths by Virginia Water. In heathy ground at Frognall [939677] with *Calluna* and *Erica cinerea* on the edge of the hockey field of the Marist Convent. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006. Locally abundant in the grassy verge of Victoria Road in South Ascot on 22 January 2007. Large rosettes at Ascot Station on 28 October 2009.

East Berks: Bulmershe, Broadmoor, Holyport, Kingsride, Bearwood churchyard, Woodley, Wellington College, Sandhurst, gravel tracks through heathland on Poppy Hills. Abundant and locally dominant on Coppid Beech roundabout and its slip roads, growing with *Puccinellia distans* and *Cochlearia danica*. 28% (1km²). Atlas 2000: all except [78]

West Berks: recorded from the Northern Loop (Frilford Heath and Tubney Wood [49], Boars Hill [40]) and from the central and eastern parts of the Kennet valley (Greenham Common [46], Snelsmore Common [47], etc.). Absent to the west of 45 and north of 75. Atlas 2000: [46], [47], [49], [40], [56], [57], [66], [67], [68]

[*Plantago maritima* L. *Sea Plantain*] hr 5

No records yet, but worth looking for on salted motorway verges.

Plantago major* L. *Greater Plantain hr 5
Plantago major* subsp. *major

Pastures, waysides, waste places, margins of ponds, etc.; common and generally distributed. Short grassland, paths and waste ground; frequent but least common on very acid soils in south-east Berkshire. Told from *P. media* when not in flower by the fact that you can see the petioles (they are hidden in *P. media*). Leaves mined by *Phytomyza plantaginis*.

NVC: CG 5; MG 6,7,10; OV 4,7-10,12,13,15,16,18-24,28,29,31,33; S 18,23

Silwood Park: waste ground, trampled turf, paths, etc.; throughout, but intolerant of shade. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk. Two large plants of *Plantago major* 'Purpurea' in pavement cracks between Greenhouses 8B and 9B on 20 May 2007 (origin unknown, but wildflower mix had been grown in Greenhouse 8 in 2006). Very uncommon as a seedling recruit on the Raised Beds at Ashurst; only one plant on plot F19 on 28 August 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	4	7	11	54

East Berks: only *Trifolium repens* occurs in a higher percentage of 1km squares. The other equally frequent species are *P. lanceolata*, *Poa annua* and *Urtica dioica*. 99% (1km²). Atlas 2000: all squares.

West Berks: Atlas 2000: all squares

[*Plantago major* subsp. *intermedia* (Gilib.) Lange]
Plantago intermedia Gilib.

A smaller plant with 3-5 veins in the leaves (not 5-9) with an undulate and cuneate base (not subcordate). Not recorded from Berkshire, but worth looking for.

Plantago media L. *Hoary Plantain*

hr 5

Chalk grassland, dry meadows, pastures, roadsides, churchyards, lawns and downs. First record Sonning (1800); frequent on calcareous soils and occasional on neutral soils, but absent from very acid soils in south-east Berkshire. For a Plantain, this species is remarkably pretty when in flower, with long snowy white stamens. There is a zone of about 10mm around the outside of the rosette that is clear of vascular plants and bryophytes, suggesting that it might be allelopathic (this was particularly obvious in the short grass of Brightwalton churchyard [4279] in February 2002). NVC: CG 3,5; MG 5; OV 10,18,21; U 1

Ascot: no records.

East Berks: all but confined to the chalk. On made-up embankments flanking Westacott Way [8479] in August 2002. In meadow land at the western end of Windsor Racecourse. 4% (1km²). Atlas 2000: all except [86], [96]

West Berks: particularly abundant and attractive in mown grass in Kintbury churchyard [3866] and Cumnor churchyard [4604]. Atlas 2000: all squares

Plantago lanceolata L. *Ribwort Plantain*

hr 4

Widespread in grassland on roadsides, pastures, hedgerows, heaths, waste and cultivated soil. "Very common in the best pastures, especially such as have been meliorated by irrigation. A three-headed monstrosity was found in moist meadows close to Sandford Mill on the Loddon" (Druce). Frequent or abundant, but least common on very acid soils in south-east Berkshire. The most widespread species in Britain at the scale of 10km² (just ahead of *Trifolium repens* and *Lotus corniculatus*). Host to *Ceuthorrhynchidius troglodytes*, a brown weevil with orange legs.

NVC: CG 2-5; M 22,24; MG 1,4-7,9,10; OV 7,9,10,14,18-26,41; U 1,20; W 22,23

Silwood Park: the 25th most frequent species in 1m quadrats. Not found in shade, but in all kinds of grassy and open habitats in sun. It was the subject of a seed limitation experiment in Biodepth I in 1996-99, and was an important component of the seed mix in the Oak Mead experiment of the same date. It is often dominant for 2 or 3 years after soil disturbance, before succumbing to competition from tall grasses (e.g. in the north-west corner of Silwood Bottom in May 2003). Dominant on the Pot Standing in 2006, and still common in June 2007 following herbicide treatment of the area in late summer 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
9	13	21	23	58

East Berks: one of our most frequent species at the 1km scale (see *P. major*, above). 99% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Plantago** *P. major* 'Rosularis', *P. major* 'Rubrifolia'

Littorella uniflora (L.) Asch. *Shoreweed*

hyd 6 ↓

Littorella juncea

Plantago uniflora L.

A local speciality found on the margins and floors of shallow acid ponds in south-east Berkshire; very local and rare. “Not infrequent in the south of the county; abundant near Reading, Virginia Water (1871), near Wellington, Long Moor, Ascot” (Druce). Bowen considered it “local and decreasing”. Now just plain rare.

NVC: A 8,9,10,11,22,23; OV 31,35; S 13,19

Ascot: there is a patch in the south-east corner of Englemere Pond [9068]. This may well be the largest surviving population in Berkshire; 5 August 1996, still there in 2002.

East Berks: Kings Mere (1948), in a zone half-way along the north-east shore of Heath Lake (1961 and still there), South Lake (1965), Sandhurst (1962), Finchampstead (**LAN**) in 1956, Rapley Farm (1988). Rediscovered at 3 of these stations. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: confined to acid heaths in [56] and [66]. The only recent record is from Wokefield Pond [652662] in 1984 and 2001. Formerly at Aldermaston Decoy and Bucklebury Lower Common [56], Hermitage [57], Mortimer and Burghfield Common (**RNG**) [66]. Atlas 2000: [66]

BUDDLEJACEAE

Buddleja alternifolia Maxim. *Alternate-leaved Butterfly-bush*

• m 6

The least common of the 3 widely cultivated Buddlejias, it does not self-sow in Silwood.

East Berks: a garden outcast on Rose Kiln Lane in 1999.

Buddleja davidii Franch. *Butterfly-bush*

• m 6 ↑

Waste ground in towns, railway tracks, embankments and cuttings, mortared walls, cracks in paving and bare ground in gardens. Not recorded by Druce, Bowen (1968) had it down as “Dry banks and walls, rarely in quantity. First record Cothill pit, 1960. Increasing rapidly”, but with no mention of railways as a habitat. This is what Lousley (1976) wrote about the situation in Surrey: “Abundant on waste ground, bombed sites, walls and railway banks in the London suburbs, locally in chalk pits, in railway cuttings and on walls elsewhere. The earliest evidence we have traced for Surrey is from the wall of Kew Gardens in 1933. The period of rapid extension in London and its Surrey suburbs was from 1940 to 1950, by which time it was common in most places”. Its increase occurred much later in Berkshire. Now often completely dominant often to the exclusion of all other vegetation over vast areas of derelict urban land, on railway banks, brickwork (often seen high up on chimney stacks), pavement cracks and ruins. Photographs of railway scenes from the 1950s and 1960s show no evidence of *Buddleja* in areas that are now completely dominated by unbroken thickets of the plant. Dave Purvis, who has an outstanding collection of railway photographs, puts the date of the spectacular increase as the mid- to late-1990s, coincident “with Railtrack and a definite decrease in maintenance”. A unusually successful alien invader, but confined to bare, disturbed sites, and not invasive of natural habitats.

NVC: OV 23,42

Silwood Park: local and uncommon, not increasing markedly since 1979. Unvegetated waste ground in full sun at Ashurst, Churchyard, Church Car Park, Church Field, Playing Field, Cheapside Village, Silwood Farm, Tractor Sheds, Greenhouses, Silwood Lodge, William Penney, Science Park, Virginia Water Lodge, Cannon Crossroads, East Lodge. A large stand on South Gravel was destroyed by the construction of the Science Park in 1987. The large plant that had stood at the corner of the CABI Quarantine Greenhouse since 1990 was finally grubbed up and the area concreted over to make the apron of the new Jiff Greenhouse in summer 2000. Regenerating from seed brought in with imported topsoil on Garden Wood Bank in 1989 (these plants were removed in 1996). Not found in any of our woodlands. Very common on dry gravel on the Raised Beds at Ashurst, especially after abandonment of the weeding on 28 August 2007. On bare soil by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	19

Ascot: forming thickets on the abandoned tracks of Platforms 4 and 5 at Ascot Station; first noticed here in 1991, locally dominant in 2004. In the paved, but exquisitely weedy, front garden of Fern Place at 23 High Street in Sunninghill on 25 July 2009.

East Berks: not in Druce. Widespread and locally dominant, first record unlocalized (pre-1968). Common and locally dominant on old railway land in Reading and Maidenhead in 1995 and more abundant still by 2004. Dominant in 1998 over substantial areas of chalk woodland that were blown down in the great storm of 16 October 1987, as at Quarry Wood, Bisham. Surprisingly rare and local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 51% (1km²). Atlas 2000: all squares.

West Berks: widespread, first record Cothill pit [49] in 1960. Particularly abundant in Faringdon [2895] in July 2002. The railway-side plants between Reading and Oxford were treated with herbicide in June 2004. Dominant in former railway sidings in the deep chalk cutting west of Pangbourne station (1999-2004). Atlas 2000: all squares

Buddleja globosa Hope *Orange-ball-tree* ● m 6

This very characteristic shrub is common in hedgerows in villages, but it is always planted. It does not set seed in Berkshire.

Ascot: a single plant [924681] in the western road-side verge, just south of the railway bridge in June 2006, clearly planted.

East Berks: in wild-looking places in Hurst [7973] but no doubt planted.

West Berks: local and rare. On the roadside in Blewbury village [5285] in June 2004.

¶ **Buddleja** *B. alternifolia*, *B. auriculata*, *B. colvilei*, *B. crispa*, *B. davidii* 'Black Knight', *B. davidii* 'Dartmoor', *B. davidii* 'Royal Red', *B. davidii* 'White Profusion', *B. globosa*, *B. lindleyana*, *B. 'Lochinch'*, *B. 'Pink Delight'*, *B. salviifolia*, *B. x weyeriana* 'Sungold'

OLEACEAE

Jasminum nudiflorum Lindl. *Winter Jasmine* ● m 1

A common garden plant, producing yellow flowers right through the winter time, but rare as a garden outcast and not self-sown.

East Berks: local and rare. <1% (1km²). Atlas 2000: [88]

West Berks: on waste ground in Marcham [49] in January 2002. Also at Faringdon [29], Newbury [36], Abingdon [49] and New Hinksey [50]. Atlas 2000: [67]

Jasminum officinale L. *Summer Jasmine* ● m 7

A popular white-flowered wall-climber. Persistent relic on walls, and a rare outcast on waste ground. Much less vigorous than *Solanum jasminoides* 'Album'.

East Berks: Cookham village in autumn 2001. <1% (1km²).

West Berks: waste ground in Shrivenham in November 1998. On a fence on the industrial estate at Faringdon [2895] in July 2002.

¶ **Jasminum** *J. azoricum*, *J. beesianum*, *J. humile* 'Revolutum', *J. mesnyi*, *J. nudiflorum*, *J. officinale*, *J. officinale* 'Frojas', *J. parkeri*, *J. polyanthum*, *J. x stephanense*

Forsythia x intermedia hort. ex Zabel *Forsythia* ● m 3
Forsythia x suspensa auct., non (Thunb.) M. Vahl

In virtually every garden, often as part of a hedge; very conspicuous when in flower in early spring. Occasionally thrown out and long persistent on waste ground, but not commonly self-sown.

East Berks: Alder Moor, Brookers Row, College Town, The Bounty, White Place Farm. 1% (1km²). Atlas 2000: [77], [86], [88], [98]

West Berks: Atlas 2000: [46], [50]

¶ **Forsythia** *F.* 'Fiesta', *F. x intermedia* 'Lynwood', *F. suspensa*

Fraxinus excelsior L. *Ash* mm 4

Woods, hedges, thickets, parks and waste ground; rather common and generally distributed except on the heathy ground. The ash-oak woodlands (W8, see p. 40) are the characteristic dominant semi-natural vegetation on base-rich soil in the lowlands. Often regenerating more frequently than beech after storm damage, and hence common and locally dominant in chalk woodlands. Frequent in place names in Berkshire. It rarely forms pure stands with us, but regenerates abundantly in many places on calcareous soils. Leaves have blotch mines of *Gracilaria syringella* and serpentine mines of *Praus curticellus*, leaf margins are curled by the psyllid *Psyllopsis fraxini* and the midrib is galled by the gnat *Perrisia fraxini*. It exhibits fascinating seeding behaviour, often going several years without producing a crop, then producing a big crop of "empty" fruits in one year, and a big crop of filled seeds in the following year. The thinking is that this trick kills off the specialist seed-feeding insects, because they lay all their eggs in the empty fruits and their offspring perish, so that when the real seed crop is produced in the following year it escapes attack.

NVC: OV 27; W 4-6,8,10,12-14,21,24,25

Silwood Park: one of the least common of the native trees in Silwood Park. Widespread but uncommon, typically represented by single individuals at each site. Great Mead, Mann's Copse, Sunninghill Crossroads, Ashurst, Oak Mead, Silwood Farm, Water Meadow, Rookery Slope, Guinness's Bridge, Kissing Gate, Nash's Copse, Farm Wood, Tractor Sheds, Nuclear Reactor, William Penney, Hayes Wood. The cultivar 'Jaspidea' has bright yellow twigs contrasting with its smoky black buds, and is grown for its winter interest. In the very late spring of 2006, the ash trees were leafing at the same time as most of the oaks in May. The big, ivy-filled ash tree by the corner of Farm Road blew down in May 2008, leaving its root ball on the Lake side of the road and creating a huge pile of dead material in a new light gap in Farm Wood. Masses of seedlings in the fourth year after the erection of the fence around The Rhododendrons behind the Tennis Court in June 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	8	30

East Berks: very frequent at this larger scale. Dominant over large stretches of the former beech woodland at Bisham [8585] following the storms of 1987 and 1990. A very common hedgerow tree on clay soils. 84% (1km²). Atlas 2000: all squares

West Berks: there are some fine stands of ash woodland in on the Golden Ridge as at Lower Appleton Common. The rare 'Weeping Ash' grows at Sutton Courtenay Manor [5093]. Atlas 2000: all squares

Fraxinus angustifolia Vahl *Narrow-leaved Ash* ● mm 5

East Berks: Planted in the wilderness at Whiteknights Park (1986) and by playing fields at Kings Meadow in Reading (RNG) in 1987.

Fraxinus ornus L. *Manna Ash* ● mm 5

Occasional in gardens and rarely as a street tree in towns and on roadsides. Always planted and not self-seeding with us.

East Berks: a tree almost 20m tall in Whiteknights Park (1967).

West Berks: Bagley Wood [50] in 1919, beside the A4 at Midgham [56] in 1985.

¶ **Fraxinus** *F. americana*, *F. americana* 'Autumn Purple', *F. angustifolia* 'Raywood', *F. chinensis*, *F. excelsior* 'Jaspidea', *F. excelsior* 'Pendula', *F. excelsior* 'Westhof's Glorie', *F. ornus*, *F. pennsylvanica* 'Aucubifolia', *F. velutina*

Syringa vulgaris L. *Lilac* ● m 5

Plantations, waste ground and hedges, in small quantity but sometimes far from houses. In virtually every garden, often as part of the hedge. Common on waste ground in towns and villages, in landscaping schemes, on roadside banks, where gardens back onto railways, and in municipal developments. Leaves marked by the blotch mine of *Gracilaria syringella*.

Silwood Park: Ashurst Church, Cheapside Village, Silwood Farm, South Lodge, North Heronsbrook, South Lodge, Cannon Crossroads, Virginia Water Lodge.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
------------------	-------------------	--------------------	---------------------	-----------------------

0	0	0	0	9
---	---	---	---	---

East Berks: “A native of Persia and Hungary which has become semi-wild in a few situations, but only as a relic of cultivation; railway-side near Maidenhead” (Druce, 1897). Now widespread, especially along all of the railways. 5% (1km²). Atlas 2000: all squares

West Berks: first records Faringdon [29] and Calcot Park [67] both pre-1897. Locally abundant by the railway, a good distance from houses, at Stainswick Copse [245875] in 2003. The white-flowered plant is locally common in Tilehurst [6775] in 2004. Atlas 2000: all except [47]

¶ **Syringa** *S. x hyacinthiflora* ‘Esther Staley’, *S. x josiflexa* ‘Bellicent’, *S. x laciniata*, *S. meyeri* var. *spontanea* ‘Palibin’, *S. x persica*, *S. x prestoniae* ‘Elinor’, *S. pubescens* subsp. *microphylla* ‘Superba’, *S. pubescens* subsp. *patula* ‘Miss Kim’, *S. vulgaris* ‘Andenken an Ludwig Späth’, *S. vulgaris* ‘Charles Joly’, *S. vulgaris* ‘Katherine Havemeyer’, *S. vulgaris* ‘Madame Lemoine’, *S. vulgaris* ‘Vestale’, *Syringa vulgaris* ‘Vestale’

Ligustrum vulgare L. *Wild Privet*

m 6

Locally abundant, forming thickets in woods and hedges on the chalk. “The flowers are attractive to flies, and the odour is disagreeable” (Druce). Commonest on calcareous soils, and rare or absent on very acid soils in south-east Berkshire. Told by its densely pubescent (not glabrous) first year twigs. Away from the chalk, I suspect that this has been over-recorded for *L. ovalifolium* in the past. NVC: W 5,8,10,12-14,21

Ascot: no records; all of the local Privet plants are *L. ovalifolium*.

East Berks: locally abundant in the woods at Bisham [8585], forming dense thickets to the exclusion of all other plants. 14% (1km²). Atlas 2000: all except [96]

West Berks: locally abundant in woods on chalk, as at Blowingstone Hill [3286]. Also locally frequent in Bagley Wood [5102]. Atlas 2000: all squares

Ligustrum ovalifolium Hassk. *Garden Privet*

• m 6

This is the universal hedging plant in towns and villages throughout the county. Much the commonest Privet seen near houses and on waste ground. Seldom in shade or in woodland, and rarely self-sown. Told from *L. vulgare* by its glabrous (not minutely pubescent) young stems and panicle branches. Host plant of the Privet Hawk-moth *Sphinx ligustri*. The leaves are rolled by the aphid *Myzus ligustri* and blotch-mined by *Gracillaria syringella*.

Silwood Park: Pound Hill, Ashurst Four Acre Field, Cheapside, Old Orchard, Rookery Slope, Silwood Lodge, Cricket Wicket, Tennis Courts, Drive Lawns, almost always planted. No unequivocal evidence of natural regeneration.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	10

Ascot: the common suburban garden hedge in Ascot, Sunninghill and Sunningdale but also wild looking in more remote hedgerows and on woodland edges.

East Berks: not in Druce who says “planted in small quantity in hedges in the Thames valley” by which he must mean country hedges in arable areas (rather than garden hedges in towns and villages, where Privet has been common since Victorian times). Widespread, first recorded (not localised) between 1918 and 1968. 29% (1km²). Atlas 2000: all squares

West Berks: widespread, first recorded (not localised) between 1918 and 1968. Now in towns and villages throughout. Atlas 2000: all except [37], [57], [69]

Ligustrum lucidum W.T. Aiton

• m 6

A small garden tree occasionally producing seedlings in gardens, but typically planted where it is encountered outside gardens.

East Berks: Shepherds House Lane, Earley [749738], in a public open space (1981).

¶ **Ligustrum** *L. japonicum* ‘Rotundifolium’, *L. lucidum*, *L. lucidum* ‘Excelsum Superbum’, *L. lucidum* ‘Tricolor’, *L. ovalifolium* ‘Argenteum’, *L. ovalifolium* ‘Aureum’, *L. quihoui*, *L. sinense* ‘Variegatum’, *L.* ‘Vicaryi’

¶ **Phillyrea** *P. angustifolia*, *P. latifolia*

¶ **Osmanthus** *O. x burkwoodii*, *O. decorus*, *O. delavayi*, *O. heterophyllus*, *O. heterophyllus* ‘Aureomarginatus’, *O. heterophyllus* ‘Goshiki’, *O. heterophyllus* ‘Purpureus’, *O. heterophyllus* ‘Variegatus’, *O. yunnanensis*

SCROPHULARIACEAE

Verbascum blattaria L. *Moth Mullein*

• hs 6 ↑

Dry waysides, railway banks and waste places; very rare and sporadic. It has only 1 flower per node and the slender pedicel is much longer than calyx. There are no stalked glands on the lower parts.

Silwood Park: a single white flowered individual by the storage garages on South Gravel on 8 July 1983 from seed introduced from Oundle, Northamptonshire. Site destroyed by the construction of the Science Park. Rediscovered in July 1991 on the Garden Wood side of the main drive into the Science Park, but not seen again. Yellow-flowered plants are very local, but frequent on bare waste ground in full sun on the ruins of the Cocoa Greenhouse and on the cinder pot standing at The Greenhouses (Plate 15). Much increased since the great drought of 1995. There were 10 plants in July 1997, 5 in July 1998 but more than 60 in July 2000. In July 2002 there were 21 *V. blattaria* to 6 *V. virgatum* on the old Cocoa base.

There was one yellow flowered plant in the Herbaceous Border on 7 July 1994, then another on 7 July 1998; by 13 June 2004 this was the commonest (and the earliest) *Verbascum* around The Greenhouses. One plant on 10 July 2004 on North Gravel where the Cypress trees has stood. There were more than 100 flowering individuals on 10 June 2007 on the open ground on North Gravel where the Cypresses had stood, and the population on the foundations of the Cocoa Greenhouse was also strong in June 2007. There were 3 flowering plants under the cypresses on North Gravel on 27 June 2011 and with 3 of *V. virgatum*.

In the Chicken Run: the plants survived the demolition of the greenhouses and the depredations of the hens, and there was a superb display, with dozens of tall flowering stems, in the very hot, dry July of 2013 (growing with *V. thapsus* and *V. virgatum*).

Ascot: no further records.

East Berks: one plant at New Lock, perhaps escaped from a garden, in a piece of newly-turned ground in Park Place, in a clover field at Church Farm Remenham, Binfield (**BM**) in 1805, the pale-purple flowered form on railway-side at Twyford. Finchampstead (1938), Sonning (1964), between Wargrave and Henley (1950), Ascot (1951), Temple golf course (1984). Recently at Crazies Hill, Furze Platt, Old Windsor. <1% (1km²). Atlas 2000: all except [86], [87]

West Berks: Newbury station car-park [46], Chieveley [47], Betterton House [48], North Hinksey churchyard [40], Wasing pits [56], Bagley Wood and Grandpont [50], Basildon [67], Winterbrook [68]. Found by Neville and Mary Diserens in 1987 on newly imported soil used to fill a gravel pit at Wasing Ponds [584633]; seed from these plant was sown in his garden by Bill Helyar where they flourish today. Atlas 2000: [49], [56], [67]

Verbascum virgatum Stokes *Twigg Mullein*

● hs 6

A Silwood speciality of open waste ground, short grass, railways, forest tracks, sandpits. It is scarce as a native plant in Britain, where it is confined to Cornwall and Devon. Formerly a common escape from gardens, but now little cultivated. It has high seed production and a long-lived seed bank, so it can grow abundantly following soil disturbance, even though it was many years since the flowers were last seen at a site. Told from *V. blattaria* by the very short pedicels (shorter than the calyx), more than one flower per node, and the plant has stalked glands throughout.

Silwood Park: this is our commonest Mullein in most years. It is monocarpic (it flowers once then dies), and comes up from a large seed bank in numbers that vary greatly from year to year, depending upon the precise amount and timing of soil disturbance or removal of shade. On the compacted aggregate of the church car park at Ashurst, in rabbit grazed turf in the churchyard, and on the mossy graveyard paths (1979-2007). On dry disturbed ground around the Greenhouses and on the pot standing, South Lodge, formerly abundant in the (then) heather bed that separated the Cannon Path from the Croquet Lawn (1981-92 fluctuating widely in abundance from year to year), this population

was down to 1 plant in July 2002 after the bed had grassed-over (Plate 15). Reactor Block, Buckhurst Road Entrance, Hayes Wood, Science Park, East Lodge. An enormous plant, prostrate to the ground for the first 1m, then bent vertically for more than 1m, just west of the main entrance to North Block in summer 1990. Another plant reached 2.5m in August 1994 at the base of the wall at West Block but apparently left no progeny. There were 25 plants by the Water Tank in June 2000 coming up from disturbed soil where the fibre optic cables had been laid, but they were gone by 2001. Cocoa Greenhouses, with *V. blattaria*, in June 2000. Common as recruits that came up from the seed bank after the Leyland Cypress on North Gravel were felled in May 2000; these plants flowered and died in July 2001, with none seen since then. There were 12 plants in flower at Ashurst Warren on 1 September 2003 on dry, sunny gravel just inside the gate of the Raised Beds, and about a dozen big plants in flower plant here on 30 June 2008. A group of 6 big plants in gravel by the CABI Polytunnel in June 2004. One small plant at the base of the steps outside the Prosamo Greenhouse on 6 July 2009, growing from beneath a massive *V. thapsus*. Abundant as rosettes in July 2009 from the seed bank following soil disturbance beneath the former *Thuja occidentalis* 'Rheingold' hedge at Silwood Lodge following removal of the trees in December 2008. There were 3 flowering plants under the cypresses on North Gravel on 27 June 2011 and with 3 of *V. blattaria*.

There has been a general decline in the relative abundance of *V. virgatum* since 2010, with *V. speciosum* arriving and prospering, and *V. blattaria* staging something of a come-back. *V. thapsus* is consistently uncommon.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	13

Ascot: local and rare. On rubble of the demolished mansion at King's Beeches [934668] on 1 December 2003 growing with *Datura stramonium* and *V. thapsus*.

East Berks: not in Druce. Rare casual in dry waste places. Reading building site (RNG) in 1959, Wellington College (1962). Recently at Lines Road and Wellington College. <1% (1km²). Atlas 2000: [77], [86], [96]

West Berks: Newbury race course [46], waste ground at Abingdon [49], North Moreton [58] (OXF). On disturbed ground at Kingston Bagpuize [4098] in 2003. Atlas 2000: [58]

Verbascum phoeniceum L. *Purple Mullein* ● hs 6

An occasional self-sown garden escape, sporadic in pavement cracks and roadsides.

Ascot: self-sown in the gardens of a few houses on Coronation Road in 1995.

West Berks: locally frequent at Kingston Bagpuize [4098] in 2003.

Verbascum pyramidatum M. Bieb. *Caucasian Mullein* ● hs 6

East Berks: from gardens in South Reading. <1% (1km²). Atlas 2000: [76]

Verbascum bombyciferum Boiss. *Broussa Mullein* ● hs 6

A rare casual with lemon yellow flowers, pale orange stigmas, and dense white stigma hairs. Told from *V. phlomoides* by the two lower stamens, which have filaments that are hairy only in the lower half and small anthers (<4mm). Told from *V. thapsus* by the non-decurrent (but strongly clasping)

upper leaves which are quite shiny dark green above (the white woolly surface soon wears off). The lower leaves are petiolate and the rosette leaves are distinctly grey-coloured and have pointed tips.

West Berks: Newbury station car-park [469666] on 31 August 2003 (Malcolm Storey). Locally frequent and much commoner than *V. thapsus* in September 2005 in rough ground on the periphery of Newbury Station car park. Common on a dry bank at the western end of Newbury Station car park on 23 September 2006.

Verbascum phlomoides L. *Orange Mullein* ● hs 6

Found rarely in our region. Unlike *V. thapsus* and *V. densiflorum*, this plant has greener, non-decurrent stem leaves. Told from *V. bombyciferum* by its larger (>4mm) orange anthers and the two lower filaments without hairs in the lower half. Rosette is small and untidy.

Silwood Park: one plant flowered in the second year after the soil was dumped from the foundations of the Wind Tunnel; 25 July 1986. Not seen since.

East Berks: not in Druce. Rubbish tips, rare and sporadic. Smallmead tip (1965-73), Woodley tip (1971), Suttons old nursery grounds (1979). A single plant on School Lane in Littlewick Green [840798] in August 2002. Locally common on railway ground at Kings Meadows Reading in September 2007. 1% (1km²). Atlas 2000: [76], [77], [87], [96], [97]

West Berks: farmyard at Little Coxwell [282932], on walls at Pusey House [39], Sutton Courtenay and Barrow Hills [59], Three Firs pit [66], Tilehurst [67]. Atlas 2000: [38], [39], [59]

Verbascum x kernerii Fritsch = **V. phlomoides x V. thapsus**

West Berks: in a sandpit at Pusey [362964] in 1970 (det. R.C. Palmer).

Verbascum densiflorum Bertol. *Dense-flowered Mullein* ● hs 6
Verbascum thapsiforme Schrader

East Berks: a garden escape in South Reading. <1% (1km²). Atlas 2000: [76]

West Berks: six plants by a sandy trackside through disturbed grass-heath on Greenham Common [506644] found by Ron Porley on 8 July 2005.

Verbascum thapsus L. *Great Mullein* hs 6

Roadsides, hilly slopes, open woods, dry banks, demolition sites, railway cuttings, railway sidings, dry waste places and wall-tops; occasional, in small quantity and absent from clay soils. Transient and ephemeral, but possessed of a long-lived seed bank. Possibly increased in recent years. Often defoliated by caterpillars of Mullein Moth *Cucullia verbasci* in May. Extremely widespread as an alien plant in the New World and in Australasia; e.g. forming a virtual monoculture on the bare upper slopes of the volcano of Mona Loa on the Big Island of Hawaii.

Silwood Park: bare ground and open grassy places, not in closed turf. Gravel Pit, Silwood Lodge, Nuclear Reactor, Croquet Lawn, Manor House, Heronsbrook Meadow, M-Scan, Buckhurst Road Entrance, East Lodge. On the rockery in the Japanese Garden in 1986. On broken concrete on North Gravel on 8 July 1980. Reactor Bank, two years after the soil from the Wind Tunnel was dumped; July 1986. Common again after the soil was reworked for the Arboretum in July 1996. Just a single rosette in spring 2002, on the apron in front of the Engineering Store, and a single plant nearby below

the wall of the Impact Gym on 26 July 2007. Waste ground around the Header House in September 1979 in the flower beds of the Sirex Unit. Heather beds by the Croquet Lawn in July 1990, but not seen since. One plant from the seed bank in the new *Narcissus* collection on Wishing Well Lawn in June 2005, conspicuously attacked by Mullein Moth. Uncommon and scattered in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. There were only two plants in the perennial bed at The Greenhouses on 29 July 2007 after 20 years of neglect. There was one large plant outside the door of Greenhouse 7B on North Gravel on 25 August 2007. Two large plants at the base of the steps outside the Prosamo Greenhouse on 6 July 2009, and one (uprooted by students enjoying Silfest) at the rear of Hamilton. Rosettes were common all around the Header House and Greenhouses in October 2009. A single plant in the grassy triangle between The Farm and The Lake on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	9

Ascot: very common on the western approaches to Ascot Station in 2004 and in the station car park in October 2009.

East Berks: on chalk at Sonning, Park Place, Wargrave, Rose Hill, etc. On acid sand at Bagshot, Finchampstead, etc. Local but widely scattered. 22% (1km²). Atlas 2000: all squares

West Berks: common on roadsides, railways, old walls, and in villages throughout. Atlas 2000: all except [69]

Verbascum x semialbum Chaub. = **V. thapsus x V. nigrum** hs 6
Verbascum x collinum Schrader, non Salisb.

By far the commonest hybrid in the genus. It has the upper 3 filaments with violet hairs and the lower 2 filaments with white hairs, and all the anthers are kidney-shaped.

Silwood Park: a tall plant with massive basal leaves amongst *V. nigrum* and *Rumex obtusifolius* in the north-east corner of Silwood Bottom on 1 August 2004.

East Berks: Woodley [77] in 1936.

West Berks: Frilford [49] in 1967, Fair Mile [58] in 1949.

Verbascum nigrum L. *Dark Mullein* hs 7

Rough grasslands, sunny waysides, borders of fields, quarries etc. Local, “evinced a partiality for limestone, chalk, or sandy soil containing calcareous matter” (Druce). The basal leaves have long petioles and heart-shaped bases. This is the latest of our Mulleins into flower. Easy to identify by its dark red petioles and leaf veins.

Silwood Park: very local but long-persistent in its locations. The 3 clumps amongst *Arrhenatherum elatius* on Nash’s Slope just north of the track that runs parallel to the end of Silwood Bottom remained the same size for more than 20 years, but expanded to 8 clumps during the period 2000-02, with 65 flower spikes by 28 July 2004, and c.90 in a patch measuring 8m x 5m in August 2005 (Plate 15). Flowering well at this same site on 15 July 2008. The population has remained stable over the period 2009-2013 despite great variation in spring and summer weather.

One clump on the slope of Observatory Ridge overlooking Silwood Bottom, and another in Pond Field. Avoided by rabbits and hence conspicuous in closely grazed turf. In the north-east corner of Silwood Bottom in July 1996 following a dramatic increase over the last two years. There was mass seedling recruitment here in June 2001 from the seed bank following repeated glyphosate herbicide application in autumn 2000 and spring 2001 to eliminate perennial weeds (as part of an experimental site for disposal of sewage solids) but most of the seedlings were killed by subsequent cultivation; a few flowered on the uncultivated edge in August 2002 and there were 10 spikes in July 2004 but none in 2005 following autumn cultivation. At Gravel Pit, one individual with 2 flowering stems inside the rabbit enclosure in July 2002 on the site of the former bonfire; still just one plant in July 2003-05 and the plant had 6 flowering stems on 27 July 2007. A single plant on the gravel drive at the Tractor Sheds on 30 June 2004. One plant in brambles on the east side of the track between Silwood Bottom and Observatory Ridge on 27 August 2005; not seen in July 2008.

Ascot: no other records.

East Berks: roadsides, railway banks and waste places. Occasional on calcareous soils, rare and sporadic elsewhere; absent from clay or very acid soils. First record: Sonning (1800). Common about Bisham, frequent and not eaten by rabbits in Park Place, Henley, Coleman's Moor, Cockpole Green, Twyford, Earley, Cookham, Temple golf course, Wargrave, Shiplake, railway land in Reading, Remenham, Bear Grove. Occasional to the north and west of a line from Maidenhead [98] to Riseley [76], but rare to the east of this; particularly frequent around Cookham Dean [8785] and on roadsides at Bisham Woods [8483] in 2003. Local on railway ground at Kings Meadows Reading in September 2007. 4% (1km²). Atlas 2000: all except [86]

West Berks: occasional on the chalk and in the Northern Loop, also in the watershed of the R. Pang, but rare, absent or extinct elsewhere. Shrivenham and Kingston Down [28], Fawley [38], Buckland [39], Chapel Wood [47], East Ilsley [48], Kingston Bagpuize, Marcham Church and Dry Sandford Pit [49], Wootton, Wytham and Tubney Wood [40], Brimpton, Wasing Park and gravel pits at Aldermaston [56], Hampstead Norreys and Aldworth [57], Moulsoford, Streatley and Cholsey [58], by the lock at Sutton Courtenay [5094], Burghfield Common [66], Bradfield and Pangbourne [67]. Atlas 2000: all except [29], [37], [50], [68], [69]

Verbascum pulverulentum Vill. *Hoary Mullein* ● hs 7

A statuesque, yellow-flowered Mullein with a candelabra-branched inflorescence, and non-decurrent (but clasping) leaves that are greener (less white) than *V. thapsus*. All the stamens have terminal, kidney-shaped anthers (like the head on a nail), and all 5 filaments have white hairs. It is an alien in Berkshire (but native in East Anglia). The rosette leaves are smooth and conspicuously pointed, with a distinctive olive green colour.

Verbascum speciosum Schrad. *Hungarian Mullein* ● hs 7

This is the commonest of the big, grey-green garden plants that have a much branched (candelabra) inflorescence. All 5 of the anthers are kidney-shaped (i.e. the lower 2 are not decurrent), all the filaments are hairy, and the filament hairs are white (not purple). Told by its dense, uniform, rather ginger-coloured stellate pubescence from the otherwise very similar *V. pulverulentum* which progressively loses its whiter, mealy pubescence as it matures (the hairs rub off; they are not firmly attached as in *V. speciosum*).

Silwood Park: first recorded when rosettes were spotted in autumn 2009 in the strip of gravel between MScan and Hamilton. This plant was uprooted by workmen to make way for a new path from Hamilton to Security, but was replanted nearby, and resuscitated by frequent watering. Fenced against

further attempts at vandalism, it subsequently flowered on 17 July 2010, and went on to produce copious seeds, which gave rise to numerous offspring in the next generation. Two other plants, growing on piles of grit by the track to Southwood Halls behind the CABI Greenhouse, flowered a little later. Secondary inflorescences were blooming on 1 September 2010. Several other rosettes (e.g. 5 by the Jiff Greenhouse, 3 on gravel piles and one by MScan) had not flowered by the end of August 2010. These plants bolted in early June 2011 and were in full flower by the 15th June 2011. A further plant, in gravel behind the transformer on the north-western corner of Hamilton Building flowered with *V. thapsus* in early July 2011. There were 6 fine rosettes of non-flowering individuals by the Jiff Greenhouse on 1 September 2011, before the seeds from this year's, now skeletal, plants were dispersed. In July 2013, the population was higher, with two plants in the MScan Strip, one on concrete outside the Security Building, two massive plants in the Jiff Strip, two on the Gravel Piles and one at the rear of the Hamilton Building.

Ascot: local and rare. A small, fluctuating population of 3-10 plants persisted from 1995-2007 on the pile of road stones in the dead-end of the old road by the roundabout at The Squirrels [929731]; there were 10 plants in July 2005. On 2 September 2007 there was one flowering stem, 4 past-flowering stems and 5 rosettes on the original site, plus one massive rosette on another bare gravel pile 50m further south. Sadly, this site was destroyed in May 2008 when the whole dead-end was tidied up and all the gravel piles removed. Two new heaps were made at the northern entrance and one half way down the eastern edge of the site. There were plenty of seedlings, but no *Verbascum* rosettes survived. <1% (1km²).

East Berks: There were 12 flowering plants at the top of the eastbound exit ramp by the roundabout at J8/9 on the M4 at Maidenhead in July 2013 by [885 785].

West Berks: on waste ground by a chicken run at Kingston Bagpuize [4098] in July 2003. In the trackbed of the Great Western in the cutting at Purley between Tilehurst and Pangbourne [6576] in June 2004.

Verbascum lychnitis L. *White Mullein*

• hs 7

Casual on waysides, dry railway cuttings, waste places and walls; very rare. A typically white-flowered mullein of waste places and disturbed ground on calcareous soils (e.g. in recently felled woodland, on railway embankments, new roadside verges). Often found with other *Verbascum* spp. with which it hybridizes. Said to be biennial, but potentially a repeat-flowering perennial. It has a long-lived seed bank and was a major beneficiary of the great storm of 16 October 1987, regenerating in the disturbed soil left by uprooted trees. Told by the white flowers with white (not violet) hairs on the anther filaments, green leaves, and its long (> 6mm) pedicels.

Ascot: an old record from Sunninghill (**OXF**) in 1904. Not seen since.

East Berks: Sonning Lane, roadside near Wargrave Hill (**OXF**) in 1904 and on wall tops. Rare. On Plateau Gravels near Twyford Station (1962), by the railway at Ruscombe (**RNG**) in 1963 and 1980. <1% (1km²). Atlas 2000: [77]

West Berks: Sunningwell [40], Tilehurst [67]. Atlas 2000: [40]

¶ **Verbascum** *V. bombyciferum*, *V. bombyciferum* 'Polarsommer', *V. chaixii* 'Album', *V.* 'Cotswold Beauty', *V.* 'Cotswold Queen', *V. densiflorum*, *V. dumulosum*, *V.* 'Gainsborough', *V.* 'Helen Johnson', *V.* 'Letitia', *V. olympicum*, *V. phoeniceum*, *V.* 'Pink Domino'

¶ **Rhodochiton** *R. atrosanguineus*

¶ **Wulfenia** *W. carinthiaca*

Scrophularia nodosa L. *Common Figwort*

hp 6

Damp woods, thickets, damp grassland and hedges and on shady waste ground; common and generally distributed but rare or absent on the northern clays. The jizz is of triangular, straight-sided leaves (not rounded; see below). Although the two figworts generally occur in the same vicinity (albeit in different habitats), there is a region in West Berkshire where their distributions are almost separate (see below). *Cionis scrophulariae* is a handsome black and grey chequered weevil found on figwort. The big blotch-mines are produced by *Amauromyza verbasci*.

NVC: W 8

Silwood Park: scattered throughout in woods and on damp, shady waste ground. Locally frequent in the ancient woodland fragment at Nash's Copse. In the created woodland behind Southwood Halls. In the unkempt lawn of Virginia Water Lodge in May 2004. By the track below Reactor Bank on the way to the new Fitness Gym on 8 May 2004. Under oaks by the Church Lane Footpath near Heronsbrook. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a few plants on 27 May 2006. Rare amongst Bracken and Male Fern in Farm Wood in May 2007. Uncommon on the cinder pot standing at the Greenhouses on 26 July 2007. Common in damp grassland amongst rushes in Pond Field, flowering on 2 September 2007 after the rushes had been cut down twice in 2007. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	2	20

Ascot: rare in newly sown grassland that was part of the landscaping scheme for the new Race Course, on the corner of the junction to car parks 7, 8, and 9 on 4 June 2007.

East Berks: local and rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 35% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, but it is absent or rare to the north of 85 and south of 95 (note that *S. auriculata* is found in this zone). On dry flints in the ancient walls of Calleva Atrebatum at Silchester [6462]. Atlas 2000: all except [68], [69]

Scrophularia auriculata L. *Water Figwort*

hp 6

Scrophularia aquatica auct., non L.

Sides of rivers and brooks, wet places, damp woods, ditches and ponds; widespread, but "rare or absent in some of the parishes on the upland chalk but growing freely in chalk ballast by the railway" (Druce). Rarely in meadows. Told from *S. nodosa* by its strongly winged stem and sepals with conspicuous scarious border (more than 3mm wide). The jizz is of a plant with rounded leaves (not triangular, straight-sided). Prefers clay or alluvial soils to acid sandy soils.

NVC: M 22; OV 26; S 25; W 5

Silwood Park: new to the flora on 25 July 2009, when abundant seedlings were found in cultivated ground on the recently restored western flower bed to the north of Munro Building. Possibly

introduced with soil from plant-pots of nursery stock planted in spring 2009, but perhaps longer in the seed bank from soil imported in 1988 to make up the beds after the construction of (the then) North Block. Not seen again in this location. A second new site was revealed when a single plant was discovered in the gravel strip between the rear of the Hamilton Building and the Greenhouses on 5 November 2009. Still flourishing in July 2010 and 2011. Another new site, in the planter outside the front of Munro Building on 24 June 2010 with *Allium vineale* and *Barbarea vulgaris*. On 10 July 2011 it was gone from the planter itself, but well established in the gravel to the west of the planter. All these sites are in very dry places. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: local and rare. In wet woods and damp ditch banks in Sunningwell Bog [930680]. Rare by the stream on the edge of Wells Wood. In the damp grassland and on the ditch banks in the northern triangle of Ascot Race Course. Frequent on damp ground at the edge of the track immediately in front of the new grandstand during construction work in August 2005, and in damp topsoil by the new Straight Mile [93338 69226]. The Orangery, in the deep ditch by the dual carriageway of the Bagshot to Bracknell Road, Heatherwood Hospital. Small plants on the earthen ramp by the railway bridge [906684] at Englemere. Not in Silwood Park despite plenty of apparently suitable habitat (but see above).

East Berks: frequent by the R. Thames and its adjacent backwaters and flood-defence channels in [76], [77], [88], [98] and [97], but less common elsewhere. Ditches, pond-sides and woods around Billingbear. Rare in meadowland at Marsh Down, Shottesbrooke [8476] in 2003. On acid ground at the Royal Military Academy Sandhurst. In dry chalk woodland at Bisham. Very common in Reading town centre [717734] on the brick-lined banks of the R. Kennet. Rare in ditches in the International Horse Show in Windsor Great Park [961728] in May 2002 and at Clayhill Farm [9774] in 2003. Local and rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 20% (1km²). Atlas 2000: all squares

West Berks: widespread by the major rivers and tributaries, but absent or rare in the interior (to the north of 75 and south of 85; note that *S. nodosa* is found in this zone). Atlas 2000: all squares

Scrophularia umbrosa Dumort. *Green Figwort*

hp 7

A local speciality that is plentiful on both sides of the stream by the watercress beds of Shalbourne Stream near Standen Manor, close to the Wiltshire border (see Plate 16). This is very cunning, because a single plant population gets to contribute to the biodiversity of two different counties. Note that the modern county boundaries are different from the boundaries of v.c.22 in this corner of Hampshire, Wiltshire and Berkshire. Told from *S. auriculata* by its bifid staminode with two diverging lobes at the apex (the staminode of *S. auriculata* is entire and orbicular), serrate not crenate leaf margins, lack of paired basal leaf lobes, and by the fact that the inflorescence is interspersed with leaf-like (not narrow, scale-like) bracts.

West Berks: not in Druce. Stream banks on calcareous, nutrient-rich mud by the Shalbourne Stream; confined to [36]. On a stream bank at Shalbourne on the Wiltshire border [316636] in 1987, and at East Court [320647] (1965) and Standen Manor [325663] (1948). The edges of the old watercress beds were badly overgrown by nettles in 2001, but the plant is still found on the streamside between Shalbourne and Standen Manor [317643] (1979-2004; Plate 16). Atlas 2000: [36]

Scrophularia vernalis L. *Yellow Figwort*

• hp 4 ↓

A local speciality of heaths and bushy places that is told from all the other figworts by the absence of a staminode, and by the equal size of the corolla lobes (they are not organised into upper and lower lips). The flowers are yellow not brown.

East Berks: very rare in plantations, hedge-banks and gardens; rare and sometimes sporadic. Reading University (1953 and 1966). Bonfire site in Whiteknights Park (1978); still in Whiteknights in 2003. <1% (1km²). Atlas 2000: [77]

West Berks: very local on Bucklebury Upper Common at the boundary of [56] and [57]. Newbury [46], Woolhampton and Aldermaston Court [56], Marlston [57], and recently (1987) in a small wood north of Bucklebury next to New Barn Farm [552712] and in the hedge of Little Acres, The Slade [533700]. Locally frequent in the woodland garden and scattered in the herbaceous borders at Kingston Bagpuize House [407979] in April 2001. Atlas 2000: [56], [57], [66]

Phygelius capensis E. Mey. ex Benth. *Cape Figwort* • hp 6

An uncommon garden outcast. A big, highly distinctive plant in flower, with its long tubular red flowers, but very challenging in leaf.

East Berks: Arborfield Court, East Earley, Holyport, Larks Hill. <1% (1km²). Atlas 2000: [76], [77], [87]

West Berks: on old walls at Kingston Bagpuize [4098] in July 2003.

¶ **Phygelius** *P. aequalis*, *P. aequalis* ‘Yellow Trumpet’, *P. capensis*, *P. x rectus* ‘African Queen’, *P. x rectus* ‘Devil’s Tears’, *P. x rectus* ‘Moonraker’, *P. x rectus* ‘Salmon Leap’, *P. x rectus* ‘Winchester Fanfare’, *P.* ‘Trewidden Pink’

Mimulus moschatus Douglas ex Lindl. *Musk* • hp 7 ↓

Margins of ornamental lakes and damp rockeries; very local and rare. Usually a garden outcast with us, but there are a few populations that look more nearly naturalised. Much less widely naturalised than it is in northern and western Britain.

Silwood Park: there is a record from 1972 in the *v.c.*22 card index, but I can not find out anything more about it. In damp grass at the shallow end of the pond in the Japanese Garden in 1980, but long gone. Rediscovered on bare ground in the damp Azalea bed at the bridge end of the Japanese Garden pond on 25 June 2007 with at least 15 flowering plants, but the patch was weeded out by the contract gardeners in August 2007; there were 11 small plants in flower on 16 July 2008, scattered throughout the bed, despite the previous weeding. South Gravel: a large patch on a former bonfire site where the track to North Gravel crossed the Cannon Path by the holly stump in September 1983. The site was destroyed during construction of the Science Park in 1987. Very rare by the new gate in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. A second patch, 5.5m further into the enclosure, with two much bigger plants on 10 June 2006. No plants in either of these patches in 2007. Two plants on dry, sunny gravel just inside the gate of the Raised Beds at Ashurst on 27 August 2007; one big plant here on 30 June 2008 and two substantial patches here on 14 June 2009.

Ascot: no records other than those from Silwood Park.

East Berks: occurred in a naturalized condition in a small ditch by the railway between Sandhurst and Wellington College (1918) (RNG). There was no garden or signal box in the immediate vicinity to act as a source or origin. Leighton Park (1962), Whiteknights Park (1965). <1% (1km²). Atlas 2000: [77].

West Berks: Sandford Priory [4764] in 1971 and Benham Park [4467] in 1986 (RNG). Atlas 2000: no records.

Mimulus guttatus DC. *Monkeyflower*

• hel 7 ↓

Mimulus langsdorffii Donn

Mimulus luteus auct., non L.

Margins of unpolluted streams and marshes, thoroughly established and forming locally a conspicuous feature in our flora. Nowhere near as commonly naturalised as it is in northern and western Britain, this is still most often a garden escape with us, rather than a thoroughly naturalised species.

NVC: S 15

Silwood Park: rare and ephemeral. One plant with *Selaginella kraussiana* below the Conservatory Wall on 5 August 1990. On disturbed ground by the BP Greenhouse in September 2000. Grown in greenhouse experiments on the competitiveness of alien plants in winter 2001-02.

Ascot: no additional records.

East Berks: margin of island at Bolney Court in the Thames between Wargrave and Henley. By unpolluted streams, well established locally. Shinfield Grange [7468], Sandhurst [86], but extinct at Bolney Court. Rare in the Blackwater and Loddon valleys, absent from most of the area. Recently at Park Farm, Reading Station, Owlsmoor, Hare Hatch, West Maidenhead, Kimbersfarm. 1% (1km²). Atlas 2000: all except [78]

West Berks: commonest in the south-east [56] and [66], but absent from the Thames valley and from most of the interior. Hungerford [36], along the R. Lambourn as at Eastbury, Great Shefford water meadows and East Garston [37], Letcombe Brook and watercress beds at Letcombe Bassett [38], Greenham Common, Bagnor and Enborne [46], the Esso Reserve [48], Crookham, Hyde End Mill, Aldermaston pits, Midgham and Thatcham [56], Frilsham and Hampstead Norreys [57], Padworth, Tyle Mill Lock and Pingewood [66], Calcot, Bradfield, Burghfield Bridge and Theale pits [67]. In the small stream south of The Causeway at Steventon [4691] in July 2003, but not in the larger stream through the middle of the village allotments. Atlas 2000: [28], [29], [37], [38], [46], [47], [56], [57], [67]

¶ **Mimulus** *M.* 'Andean Nymph', *M. aurantiacus*, *M. cardinalis*, *M. cupreus* 'Whitecroft Scarlet', *M. guttatus* 'Richard Bish', *M. lewisii*, *M. luteus*, *M. ringens*

Limosella aquatica L. *Mudwort*

th 6 †

A nationally scarce species of wet sandy mud by ponds, often dried out in summer, rare and sporadic; now apparently extinct in Berkshire. It grows on exposed mud at the edges of rivers, lakes, reservoirs, pools, ditches and winter-flooded ruts in tracks and unmetalled roads, often found with *Eleocharis acicularis* (now itself very rare in Berkshire), *Gnaphalium uliginosum*, *Juncus bufonius* and *Rorippa palustris*. It germinates in early summer when the water level falls and ripens its seed before autumn. The seed bank is long-lived, and so plants can be refound after several years during which they did

not show themselves. Long known from the northern bank of the R. Thames in Port Meadow, Oxford [4806] and [5006] but these sites are just over the Oxfordshire border in v.c.23.
NVC: OV 31,35

East Berks: muddy ditches, very rare and local near Sandhurst (1896). By the railway between Sandhurst and Wellington College (1896) (**OXF**). Worth looking for in the Trilakes area on the Hampshire border.

West Berks: in mud at Wash Bridge by the R. Enborne [4560] in 1906 (**BM** and **OXF**) and 1935 on both sides of the Hampshire/Berkshire border. Found in 2009 during the *Apium repens* survey in Port Meadow.

¶ **Calceolaria** *C. integrifolia*, *C. tenella*

Antirrhinum majus L. *Snapdragon*

• hp 7

On old walls, pavement cracks and waste ground in towns and villages. A very common bedding plant and an abundantly self-seeding cottage garden plant. Often escaping and naturalising on derelict land in towns and on old walls, where the individual plants live much longer than they do under cultivation. In every town and village throughout. Beware that in leaf it could be mistaken for *Misopates orontium*.

Silwood Park: Ashurst, Cheapside Village, William Penney, Garden Wood Bank on 10 July 1989 from seed in imported topsoil. A bright, lemon-yellow and white flowered plant has self-seeded abundantly on the cinder pot stand at The Greenhouses (1995-2007). There were 10 plants, with 3 of them in (pink) flower, on 6 October 2013 at the base of the Laundry Wall in the Stable Yard of the Manor House, growing with *Conyza floribunda*.

Ascot: Sunninghill, Sunningdale, Ascot Place. In the verge of St George's Lane, opposite the school, and on Ascot High Street in 2003. On a sandy construction site on Dry Arch Road in July 2004. Very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005.

East Berks: very local when it was first recorded from Sonning in 1800, Broadmoor, the white flowered plant in Maidenhead cutting. Local and in small quantity; Reading Abbey, Shottesbrooke, Wokingham, commonest in the Thames valley. Locally frequent on the brickwork of the railway arches in Windsor [963770] in both red and white forms. Now occasional throughout suburbia. On dumped soil on derelict industrial ground off Howarth Road [8980]. 25% (1km²). Atlas 2000: all except [78]

West Berks: commonest on old walls in the oolitic limestone of the Golden Ridge from Faringdon [29] through Hinton Waldrist [39] to Cumnor [40]. Locally frequent in The Vale, as at Bourton [2386] and Shrivenham [2388]. The individual with peach-coloured flowers that grows on the limestone at the foot of the south-facing wall of Enborne Church has been there at least 10 years. Atlas 2000: all except [57]

Chaenorhinum minus (L.) Lange *Small Toadflax*

○ th 5

Linaria viscida

Antirrhinum minus L.

Microrrhinum minus (L.) Fourr.

Cultivated ground and waste places; "particularly fond of railway ballast, and frequent along the permanent way of the Great Western Railway" (Druce). Absent from much of south Berkshire.

Silwood Park: very local on gravel just inside the gate into Ashurst Warren; first recorded on 25 May 1999 of unknown origin, but possibly introduced with ballast used to fill the raised sleeper beds; still present on gravel paths at low densities in July 2004 despite all the weeding. Also in the north-west part of Nash's Field. In a single plant plot in a tray of pots of *Silene latifolia* in the Header House Greenhouse 4B on 28 June 2008.

Ascot: locally abundant at Ascot Station on ballast of the track bed and on the abandoned Platform 4. This site is some distance from the nearest other railway records further north or west. Locally abundant in cracks in concrete on the sloping western end of Platform 2 on 13 June 2004. On waste ground in Sunninghill Village and Sunningdale Park.

East Berks: cornfield near Windsor, Wargrave, Remenham, Hennerton, Henley, Sonning, Twyford, Cookham, Hurley, Bisham, Waltham, Bray, Clewer, Finchampstead, Maidenhead. Occasional to the north of 75, rare or absent to the south. Recently at Reading Station where it is large and abundant, on brickwork of the railway bridge at Loddon Mouth, locally frequent on the brickwork of the railway arches in Windsor [963770] as large plants, Crazies Hill, Martins Heron and The Goswells. Inconspicuous when not in flower and probably under recorded. 1% (1km²). Atlas 2000: all squares

West Berks: occasional to the north of 85 and to the east of 45; absent or rare elsewhere. Shrivenham [28], Hungerford and Kintbury [36], Lambourn [37], Wantage, Challow, Buckland, Longworth, Pusey and Charney [39], Newbury and Greenham [46], Langley [47], East Ilsley [48], Marcham, Steventon, Frilford and Shippon [49], Cumnor and Wytham [40], Compton and Yattendon [57], Moulsoford, Streatley, Cholsey and Hagbourne [58], Radley gravel pits and Didcot Station [59], Ferry Hinksey [50], Silchester, Mortimer and Padworth [66], Basildon, Bradfield, Tilehurst and Pangbourne [67], Wallingford [68]. Atlas 2000: all except [37], [50], [68], [69]

Misopates orontium (L.) Raf. *Lesser Snapdragon* or *Weasel's-snout* ○ th 7 ↓
Antirrhinum orontium L.

Dry, nutrient-poor arable fields, allotments and gardens. Something of a rarity with us, and seldom in quantity.

NVC: OV 4,9

Ascot: no recent records. Its absence from Silwood Park is somewhat surprising given the constant availability of suitable habitat (recently fallowed, cultivated, dry sandy soil). Druce knew the plant from Sunningdale, but I have never seen it there.

East Berks: Sonning, in the common field opposite Bisham Wood, Wargrave, Swallowfield, Finchampstead, not uncommon at Remenham, Wokingham, a single plant near the Albert Bridge in Windsor, Sandhurst, Jouldern's Ford, Loddon Bridge, Bisham, Hurley, Whistley Green, Arborfield, Waltham. Leighton Park, Hurley, Cock Marsh, Bracknell, Windsor Great Park. Aston [7833845], a weed of beds in the Botanic Garden in Whiteknights Park (1987). Recently on allotments in Bulmershe [7573], and on arable land at Crazies Hill [7980] and Arborfield Cross. Commonest in the western part of the Thames valley between Reading and Cookham, and seldom seen east of 85. <1% (1km²). Atlas 2000: [76], [77], [78], [88], [97]

West Berks: all but restricted to the extreme south-east (east of 45 and south of 75); absent, rare or extinct in most of the area. Greenham and Newbury tip [46], Curridge Common [47], on Upper Greensand at Harwell [48], Hitchcopse pit [49], Cold Ash and Woolhampton [56], Bucklebury and

Tutts Clump [57], Didcot Station and Radley [59], Silchester, Tadley Common, Mortimer West End and Pingewood tip [66], Tilehurst and Theale [67]. Atlas 2000: [47], [48], [56], [57], [59], [66], [67]

Asarina procumbens Mill. *Trailing Snapdragon* ● hp 7
Antirrhinum asarina L.

An uncommon garden plant of rockeries, stone terraces and old walls in sun. An unmistakably sticky plant.

West Berks: rarely found as a garden escape as at Faringdon in 1998.

Cymbalaria muralis P. Gaertn., B. Mey. & Scherb. *Ivy-leaved Toadflax* ● chh 5
Linaria cymbalaria (L.) Miller

Cymbalaria muralis subsp. **muralis**

One of our commonest and most widespread alien plants, found on old limestone walls, cracks in paving, on mortar in old brickwork of walled gardens, canal-sides and river-locks. It is as common in dank alleyways in towns as it is on the estate walls of grand country houses.

NVC: OV 22,23,42

Silwood Park: very local and rare, on crumbling mortar in old brickwork and on bare, compacted waste ground at The Greenhouses from 1979-2008. On the exposed stonework of the rockery in the Japanese Garden from 1980-96, but now gone. Two plants in the gravel strip below the CABI Quarantine Greenhouse on 8 June 2007. Abundant on the gravel floor of the CABI Polytunnel on 16 September 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	1

Ascot: local and uncommon; Fernbank Road, Ascot Station, Sunninghill, Charters Road, Blacknest Park, Ascot Place. On brickwork of an old well in a derelict garden in South Ascot at Coronation Road in June 2003. This species is ubiquitous at larger scales (e.g. 10km²) but is actually rather infrequent at small scales (i.e. less than 1km²).

East Berks: in all of the towns and most of the villages. On the walls of Windsor Castle (1800 and 2000) and on the ruins of Park Place (1809 and 2000). A white flowered form occurs at Shottesbrooke, Bisham and abundantly on the churchyard walls at Wokingham, forming pure populations to the exclusion of the normal-flowered form (1979-2004). Locally common on railway ground at Kings Meadows Reading in September 2007. Local on bare soil on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 16 % (1km²). Atlas 2000: all squares

West Berks: common on old walls of limestone or brick in almost every village. A form with huge leaves (to 50mm dia.) but normal-sized flowers (10mm) on old walls at Faringdon Church [2895] in 2003. Atlas 2000: all squares

[**Cymbalaria muralis** subsp. **visianii** (Kummerle ex Jav.) D.A. Webb]
Cymbalaria muralis P. Gaertner, Meyer and Scherb. forma *visianii* Kumm. ex Jav.

This plant is pubescent in all its parts. It has been naturalised just to the south of our area on waste ground at Wisley in Surrey since 1970 [51/065583] as a weed in the Royal Horticultural Society Gardens, and it should be looked for in Berkshire.

Cymbalaria pallida (Ten.) Wettst. *Italian Toadflax* ● hp 6
Antirrhinum pallidum Ten.

A pubescent garden plant with much bigger flowers than *C. muralis* (15-25mm rather than 9-15mm).

West Berks: on stonework at Benham Park [4467] in 1986 (RNG).

Kickxia elatine (L.) Dumort. *Sharp-leaved Fluellen* ○ th 7 ↓
Antirrhinum elatine L.
Linaria elatine (L.) Miller

The classic weed of arable soils on chalk, also found less commonly on sandy acid soils. Often found in the same field as *K. spuria* but almost always less common than it. “While I have found *K. spuria* without *K. elatine*, I have not found *K. elatine* growing without *K. spuria*” (Druce). Leaves pointed hastate at the base. It can tolerate neutral to mildly acid soil, so its ecological range is greater than that of *K. spuria*.

NVC: OV 15,21

Silwood Park: very rare. Only found once, by Gebre Asefa in August 1994, on recently disturbed soil following tree extraction in autumn 1993 from the Rookery edge of Rookery Slope, obviously from some long-dormant seed. Not seen since.

Ascot: very rare; a single individual on topsoil near the edge of the newly banked track [92479 69090] during construction of Ascot Racecourse on 30 August 2005.

East Berks: frequent at Park Place, Remenham, Hennerton, Culham, Wargrave, Windsor, Wellington College, Winkfield, Finchampstead, Hurley. Still sometimes found in abundance in arable land, despite all the herbicide used. Scattered throughout but absent or rare to the east of 85. 1% (1km²). Atlas 2000: all except [97]

West Berks: common in arable fields above the R. Cole at Buscot, Great Coxwell and Eaton Hastings in [29] and [39], occasional to the north of 95 and the east of 45, uncommon in the west except for the region between Wickham and Lambourn [37]. Common in arable land at Silchester [6464] in 2002 and near Paices Wood [582639] in 2003. Atlas 2000: all except [28], [68], [69]

Kickxia spuria (L.) Dumort. *Round-leaved Fluellen* ○ th 7 ↓
Antirrhinum spurium L.
Linaria spuria (L.) Miller

Arable fields on calcareous or clay soils. Locally frequent but absent from acid soils in south-east Berkshire. More common than *K. elatine*, especially on the oolitic limestone of the Northern Loop. Leaves rounded at the base and spur more strongly curved. Often growing together with *K. elatine*.

NVC: OV 15,16,36

East Berks: Remenham, Park Place, Culham, Windsor, Hurley, Winkfield, Finchampstead. In an old gravel pit at Queens Eyot [912784]. Occasional to the north of 70 and the west of 90, rare in the south and the east. 1% (1km²). Atlas 2000: all except [76], [96]

West Berks: frequent in arable land in the north-west of the county [28] and [29], and occasional to the east of a line from Shrivenham [28] to Thatcham [56], but absent from the country adjacent to the North Wiltshire border. Atlas 2000: all except [68], [69]

Linaria maroccana Hook. f. *Annual Toadflax*

• th 6

An occasional bedding annual, sold in a range of hot colours. A rare casual of disturbed soil in rough grassy places with red or orange flowers.

Silwood Park: the first sighting was on the grassy remnant of North Gravel next to the BP Greenhouse on 25 August 1989. The second was in grass close to the wall of the (then recently erected) laboratory in Drive Field in September 1989. Neither was ever seen again.

East Berks: river bank by the M4/A33 Interchange [709702] in 1999. <1% (1km²). Atlas 2000: [76], [96]

West Berks: Atlas 2000: [38]

Linaria vulgaris Mill. *Common Toadflax*

hp 7

Waste ground, pavements, railway banks, roadsides and rough grasslands. Occasional; least common on the chalk. Sometimes long persistent at a location, sometimes ephemeral. White flowered individuals are seldom found outside gardens.

NVC: OV 16

Silwood Park: long persistent in pavement cracks around the Header House 1971-2000; these sites were destroyed and concreted over during construction of the Jiff Buildings in summer 2000. In the woodland garden behind Southwood Halls, where it was introduced by Ted Green from Dinton Pastures in August 1986; gone by 1990. On the Science Park, growing through the ground cover *Juniperus* opposite the Technology Transfer Centre from 1988-2008. Sown in Oak Mead and growing well; one of the few species to spread from the area in which it was sown into adjacent areas where the seedlings had to compete with perennial grasses (it was abundant in the unsown fenced parts of Blocks A, B and C in July 2002; there was much less spread outside the rabbit fences, but spread under grazed conditions was greatest in Block E). Still spreading inside the rabbit fences in June 2007 but rare on rabbit-grazed plots (e.g. Block E (plot IIc & IIId), Block D (plot Ia & d, IIb & d), Block C (plot IIb & c and plot IIIa & b), but none on Blocks A or B). On the Biodepth II plots with *Knautia* and *Echium* on 8 July 2000; locally frequent in June 2003. Garrison Ridge on 7 September 2000 in long grass inside the rabbit fence that was erected to protect fruit trees, kept there from 1996-2000 as part of a radiation experiment. Drive Field, 10 plants inside the rabbit fence in June 2000. North Gravel in August 2002, where the Cypress trees were felled. In the deer enclosure protecting the holly tree collection on Observatory Ridge on 26 September 2002.

Ascot: local and uncommon. Ascot Heath.

East Berks: first record: Sonning (1800). "A very striking feature in our vegetation, and its bright yellow flowers are a general favourite" (Druce). Scattered, and seldom abundant. Commonest by railways as at Wokingham and Reading. Beneath the statue of Diana at Hall Place [8382]. On the Thames-side moorings in the meadows at Cookham [8985] in September 2002. On the brickwork of the railway arches in Windsor in 2004. Rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 9% (1km²). Atlas 2000: all squares

West Berks: common in towns. White-flowered individuals at New Hinksey [519041] on 28 September 2002. Atlas 2000: all squares

Linaria x sepium G.J. Allman = **L. vulgaris** x **L. repens**

This is something of a local speciality. As evidence of the hybrid origin of these plants, Druce points out that until 1890 the only plant to be found in Oxford was *L. vulgaris*. "About that date a space of ground between the Great Western and the London and North-western Railways was filled up with chalk rubble which had been brought from the chalk district of Berkshire near Upton. With the chalk, the seeds of many chalk plants were introduced. In the year 1890 the chalk was covered with a profuse growth of *Iberis amara*, *Picris hieracioides* and less plentifully with *Thymus*, *Daucus*, *Linaria repens*, *Centaurea nigra*, *Verbascum thapsus*, *Campanula glomerata*, *Festuca rubra*, *Bromopsis erecta*, etc. *Linaria vulgaris* which had previously existed in the vicinity, was also common, but no hybrids were seen that season. In the following year, however, hybrid plants occurred in great quantity [and by 1892] an almost unbroken chain of intermediates between *L. repens* and *L. vulgaris* could be found" (Druce). The corolla is typically pale yellow with violet veins and intermediate in size and shape compared with the parents. Plants are fertile and can form hybrid swarms in which plants close to either parent can be found.

East Berks: Druce knew the hybrid from south of the Thames "near Henley". Railway banks and waste places. Reading (**RNG**) in 1987. Wargrave (1963), Cookham railway (1958).

West Berks: pre-1897 records from Upton and Moulsoford Downs [58], Didcot [59], and Reading [77]. Recent records (mostly from the railway) from Enborne [46], east of Bulls Lock [56], Moulsoford and East Hagbourne [58], heaped ballast at Didcot Station [59], South Hinksey (**RNG**) and Kennington [50], Sulham (**LAN**), Nunhide Lane and Basildon [67]. Atlas 2000: no records.

Linaria dalmatica (L.) Mill. *Balkan Toadflax*

• hp 6

Antirrhinum dalmaticum L.

Linaria genistifolia (L.) Miller subsp. *dalmatica* (L.) Maire and Petitm.

Silwood Park: grown in Silwood Bottom in 1992 from seeds collected in Yugoslavia in 1991 but they never left any offspring. This is a relatively common alien weed in North America.

Linaria purpurea (L.) Mill. *Purple Toadflax*

• hp 6 ↑

Antirrhinum purpureum L.

Old walls, railways, pavements and dry waste ground. A frequent garden escape, readily establishing itself if undisturbed. Commonest in towns. Pink flowered individuals occur occasionally.

NVC: OV 22,42

Ascot: common in South Ascot and Sunninghill village. Not in Silwood Park, but occasional in Cheapside. A pale-pink-flowered plant on pavements in Victoria Road, South Ascot in June 2004. Cranbourne Roundabout [929730] on 30 August 2004. Very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005.

East Berks: Maidenhead (1897). Reading, Smallmead tip, Swallowfield, Arborfield, Woodley, Wellington College, Bracknell, Cookham, by the railway at Maidenhead. Now frequent and widespread. Rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 21% (1km²). Atlas 2000: all squares

West Berks: frequent on dry ground throughout, and particularly abundant in southern Oxford [40]. Tilehurst (**LAN**) in 1956. Common on the ruins of the Prince of Wales pub at Challow Station [3590] in 2002. Pale, almost white-flowered plants on the railway between Tilehurst and Pangbourne [6576] in June 2004. Atlas 2000: all squares

Linaria x dominii Druce = **L. purpurea** x **L. repens**

A fertile hybrid with intermediate flower colour, sometimes segregating to give hybrid swarms.

West Berks: on the railway bank at Hermitage [5173] in 1972-74 (det. Kew).

Linaria repens (L.) Mill. *Pale Toadflax*
Antirrhinum repens L.

○ hp 6 ↓

Bare chalk, calcareous arable fields, railway banks, cinder tracks, walls and dry stony ground; “locally abundant, evincing a decided preference for dry chalky soil” (the species gets nearly 3 pages in Druce who was fascinated by the hybrids with *L. vulgaris*). Occasional in the Thames valley, rare or absent elsewhere.

East Berks: Henley Hill (**HULL**) in 1851, railway between Wargrave and Henley, Park Place, Wargrave, Starve-all Farm Crowthorne, Marsh Mill, Hennerton, Windsor, on chalk ballast at Reading, Bray, between Twyford and Maidenhead. All but restricted to the Thames valley, and commoner in the west than the east (extinct in Windsor and Old Windsor). Rare to the south of 75. Recently at Culham Court and Temple Golf Course. On brickwork of the railway tunnel at Cock Marsh on 23 June 2008 by Matthew Berry. <1% (1km²). Atlas 2000: [77], [78], [87], [88]

West Berks: occasional in the Thames valley from Abingdon [49] down to Reading [67] but absent from the Northern Loop and from the upper reaches of the Thames. Rare in the extreme south-west [36] and absent elsewhere. Segsbury [38], at the railway crossing east of Moor Hill Farm [311904], golf course east of Buckland Copse [39], by the railway at Newbury [46], Ashampstead [57], Moulsoford Down, North Unhill Bank, Upton, Lollingdon Hill, Lowbury and Streatley [58], in chalk rubble by the railway at Didcot [59], Basildon, in a clay pit between Theale and Purley, Pangbourne and Sulham [67]. Atlas 2000: [28], [29], [38], [46], [48], [49], [56], [57], [58], [59], [50], [66], [67]

Linaria incarnata (Vent.) Sprengel
Linaria bipartita auct., non (Vent.) Willd.

● hp 6 †

East Berks: on disturbed soil on the new roundabout at Burchett’s Green [841821] in 1963 (det. C.C. Townsend).

West Berks: on an in-filled pit at Frilford [442962] in 1971.

¶ **Linaria** *L. alpina*, *L. anticaria* ‘Antique Silver’, *L. dalmatica*, *L. x dominii* ‘Carnforth’, *L. purpurea* ‘Canon Went’, *L. purpurea* ‘Springside White’, *L. purpurea* ‘Winifrid’s Delight’, *L. triornithophora*, *L. tristis* var. *lurida* ‘Toubkal’

Nemesia versicolor E. Meyer ex Benth. *Cape-jewels*

● th 7

The blue and white hanging-basket cultivar is typically ‘Blue Bird’

Ascot: two plants, in flower on 24 October 2006 (a very late autumn, following the warmest May, June, July, August and September on record) in the crack between the pavement and the playground wall on School Road, Sunninghill [936678], on the opposite side of the road from the nearest hanging basket (by the Library door).

Nemesia strumosa Benth. *Cape-jewels*

• th 7

The red-flowered bedding annual, very rare as a relic of former cultivation, probably from a seed bank.

Ascot: very local and rare, on 16 September 2003, on bare ground on the demolition site at Kingswick in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. A pink-flowered plant on pavements in Victoria Road, South Ascot in June 2004.

¶ **Nemesia** *N. caerulea*, *N. denticulata*, *N. 'Fragrant Cloud'*, *N. 'Innocence'*

Digitalis purpurea L. *Foxglove*

hs 6

Heaths, dry open woods, commons and bushy places on acid soils. Locally common, but evincing a decided preference for sandy or gravelly soil. Absent from the chalk and northern clays. White flowered forms are rare. Monocarpic, but possessed of a long-lived seed bank. Avoided by rabbits and hence conspicuous in heavily grazed areas, and regenerating from seed in rabbit-disturbed open soil. The leaf miner *Napomyza scrophulariae* is sometimes found. The commonest aphid is *Aphis armata*. NVC: OV 27; U 20; W 6,8,10,14,16,22-25

Silwood Park: common for a year or two following soil disturbance in grassy places in light shade, but local and ephemeral. Very abundant in Mann's Copse in 1985 following felling to make way for the new coppice with standards plantation. There was a mass flowering in June 1993 inside a rabbit fence on ground cultivated in autumn 1991 by the Cannon Path. Good flowering in Water Meadow in June 2000 on the site of the bonfire created during tree clearance in winter 1998-99. In the young Scots pine plantation rabbit fence on the Cannon Path in September 1979. The biggest Foxglove I have ever seen grew next to the Croquet Lawn in August 1990; when it finished flowering it was well over 2m tall. Uncommon in 2003, but present at Sunninghill Crossroads. White flowered plants are very rare in Silwood; one record from Garrison Ridge overlooking Silwood Bottom on 18 June 1984, and a single plant in the 2-year old post-fallow community in north-west corner of Silwood Bottom in May 2003. Abundant on bare banks at the newly-completed redevelopment of Heronsbrook in May 2004. Occasional beneath walls between The Greenhouses and Herbaceous Border in May 2004. Occasional in all the gardens of Silwood Close adjacent to Mann's Copse on 15 June 2009. The commonest seedling from the seed bank of the lawn at Silwood Lodge adjacent to the main drive on 19 July 2009, growing with *Verbascum virgatum* and *Papaver somniferum*. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	5	16	32

Ascot: spectacularly abundant in South Ascot at Coronation Road, in a derelict garden in June 2003.

East Berks: Bowsey Hill Wood, Wargrave, Remenham Wood, Surrells Wood, Wokingham, Ambarrow, Knowl Hill, Bracknell, Ascot, Windsor Great Park, on ditch banks in pine plantations at Penny Hill. 66% (1km²). Atlas 2000: all squares

West Berks: found everywhere in the Kennet and Thames valleys (north of 95 and south of 75) but absent or rare on the chalk and clay of the interior. Very local at RAF Welford [4175]. Atlas 2000: all squares

Digitalis parviflora Jacq. *Brown-flowered Foxglove* ● hs 6

A curious garden perennial with a slender, orchid-like spike of tiny brown flowers. Very rare as an escape or outcast.

West Berks: self-sown in untended beds at Kingston Bagpuize House [4098] in July 2003.

¶ **Digitalis** *D. ciliata*, *D. davisiana*, *D. dubia*, *D. ferruginea*, *D. grandiflora*, *D. laevigata*, *D. lanata*, *D. lutea*, *D. x mertonensis*, *D. obscura*, *D. sibirica*, *D. thapsi*, *D. torjana*, *D. viridiflora*

Penstemon Schmidel. cultivars ● h 6

Popular herbaceous border perennials with opposite leaves and colourful foxglove-like flowers. Uncommon as garden escapes, but sometimes persisting as relics of cultivation. The most frequent cultivars are the wine-red 'Garnet' and the purple-mauve 'Sour Grapes', and these are the only ones that have been seen outside gardens.

East Berks: recent records from Whitley, Coppid Hill, Earley, Twyford, and Arlington Square, Woodlands Park and Savernake Park in Bracknell, Cookham Dean, Sunninghill and East Maidenhead. 2% (1km²).

West Berks: wayside close to allotments in central Newbury [4767] and on waste ground in Abingdon [4997] in July 2002.

¶ **Penstemon** *P.* 'Alice Hindley', *P.* 'Andenken an Friedrich Hahn', *P.* 'Apple Blossom', *P. barbatus*, *P.* 'Blackbird', *P.* 'Catherine de la Mare', *P.* 'Chester Scarlet', *P. digitalis* 'Husker's Red', *P.* 'Evelyn', *P. glaber*, *P. hartwegii*, *P. heterophyllus*, *P.* 'Hidcote Pink', *P.* 'King George V', *P.* 'Sour Grapes', *P.* 'Osprey', *P.* 'Pennington Gem', *P. pinifolius*, *P. pinifolius* 'Mersea Yellow', *P.* 'Rich Ruby', *P.* 'Schoenholzeri', *P.* 'Stapleford Gem', *P.* 'Thorn', *P.* 'White Bedder'

¶ **Synthyris** *S. reniformis*, *S. stellata*

Erinus alpinus L. *Fairy Foxglove* ● chh 5

A common rockery plant, sometimes thrown out and surviving on open stony waste ground and occasionally self-seeding on old walls.

Not in Druce. On the walls of Windsor Castle [9777] in 1929 and 1977. Scotlands [8080] in 1999. <1% (1km²). Atlas 2000: [88], [97]

West Berks: Beckett Park [2595] in 1981. Atlas 2000: [28]

Diascia barberae Hook. *Twinspur* ● chh 5

Mat-forming perennials used in border-edge and rock garden plantings. Rare as outcasts.

East Berks: on waste ground next to Wokingham Road in Earley [7571] in August 2002. <1% (1km²).

West Berks: Faringdon [2895] and Newbury [4767] in July 2002.

¶ **Diascia** *D. barberae* 'Blackthorn Apricot', *D. barberae* 'Fisher's Flora', *D. barberae* 'Ruby Field', *D.* 'Heibel' Coral Belle, *D. fetcaniensis*, *D. integerrima*, *D.* 'Joyce's Choice', *D.* 'Lilac Belle', *D.* 'Red Start', *D. rigescens*, *D.* 'Salmon Supreme', *D.* 'Twinkle', *D. vigilis*

Veronica serpyllifolia L. *Thyme-leaved Speedwell*

chh 3

Veronica serpyllifolia subsp. **serpyllifolia**

Damp waste ground, compacted places in sun or partial shade, trampled lawns, cultivated ground, wet pastures, woodland rides and paths, water meadows, moist heaths, roadsides; frequent almost everywhere, but absent from the chalk ridge.

NVC: most surprisingly, there are no data in Rodwell (this is a common native without a home).

Silwood Park: very common in lawns, compacted paths, bare soil, woodland rides, heathy places and damp waste ground throughout. In the cultivation-timing experiment at Pound Hill, it is commonest on the May-cultivated plots, flowering in September and again in May just before cultivation. On imported topsoil at Ashurst Lysimeters on 10 July 2004, but not much increased by 15 May 2008. In the lawn at CABI opposite MScan (1989-2008).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	5	8	25	35

Ascot: a curious record in open parts of the set-aside (formerly maize) east of the racecourse [925700] in May 2003, where most of the field was dominated by tall, dense tussock grasses.

East Berks: particularly common on compacted sunny ground, as on the rides through the chalk woodlands at Bisham [8585]. Common on railway ground at Kings Meadows Reading in September 2007. 28% (1km²). Atlas 2000: all squares

West Berks: common everywhere, except the chalk ridge from Ashbury [28] to Streatley [58]. Atlas 2000: all squares

Veronica officinalis L. *Heath Speedwell*

chh 5

Heaths, dry woods, and grassland on compacted acid soil. Locally abundant, especially in the heathy districts, but absent from the northern clays and rare on the chalk.

NVC: OV 21; U 20; W 23

Silwood Park: common in short heathy grassland, immune from rabbit grazing, on Ashurst Path, Silwood Lodge, The Elms, Tennis Court, Drive Lawns, on the path through South Lodge Wood (with *V. serpyllifolia*), Japanese Garden, Manor House, William Penney lawns, The Heath, Science Park, East Lodge. The best sites were on South Gravel, but these were destroyed during construction of the Science Park in 1987; their successors survive in the strip of undisturbed heathy grass between Buckhurst Road and the back of the Science Park Units C-F. Abundant on Reactor Bank in 2002 following scrub clearance in 2001, and on heathy ground in the wood between the Science Park and Buckhurst Road in 2002. Very rare in the second year after the erection of the deer/rabbit fence at the

back of the Tennis Court with a single plant on 27 May 2006. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	11	11

Ascot: locally frequent in the fen-meadow [926683] north of the railway line to the west of St George's Lane in 2002.

East Berks: common in heathy turf, but also locally abundant under beech on compacted ground in chalk woodland at Bisham [8585]. 14% (1km²). Atlas 2000: all squares

West Berks: common in the south-east, but rare or absent north of 85 and west of 40. There are outlying stations around Inkpen and on the western reaches of the Thames from Lechlade to the Northern Loop. It grows on top of the chalk hills west of Pangbourne [617767], where the higher ground is capped by acid substrates. Atlas 2000: all except [28], [37], [68], [69]

Veronica chamaedrys L. *Germander Speedwell* chh 4

Acid grassland, hedge-banks, borders of woods, waste ground, roadsides; common and widely distributed. The hairy-ball galls, so abundant on shoot tips in many years, are caused by the gnat *Papilla veronica*. Easy to recognize by the distinct, single line of hairs on its lower stem.

NVC: CG 2-4; MG 1,5,6; OV 10,18,24; U 1,20; W 8,10,12,22-24

Silwood Park: one of our commonest wildflower species; many of the grasslands are unbroken blue with its flowers in mid May. The fifth commonest herb and the ninth commonest species overall in small quadrats. Only *Stellaria graminea*, *Senecio jacobaea*, *Rubus fruticosus* and *Rumex acetosa* are more frequent herbs at a scale of 1m². It was one of the species to show the best evidence of competitor release when parts of the grassland in Nash's Field were sprayed with selective, grass-killing herbicide in June 1989, and in June 2001 after the experiment was repeated in Oak Mead. Very common in the churchyard at Ashurst. The mite galls of *Jaapiella* (= *Papilla*) were particularly abundant in July 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
22	30	49	47	78

East Berks: 62% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Veronica montana L. *Wood Speedwell* chh 4

This relatively uncommon species is an indicator of ancient oak, beech, ash and alder woods on nutrient-rich soils. Occasional, but absent from the northern clays and from very acid soils in south-east Berkshire. The stems are hairy all round (not in 2 lines) and the petioles are longer than 6mm.

NVC: W 6,8

Ascot: a single record from Blacknest Park in June 2001, but I have not seen it there, and there was no specimen. Not in Silwood Park or anywhere else in [96].

East Berks: Bisham Wood and in most of the moist woods in the neighbourhood, Remenham Wood, Wargrave, Park Place, Ashley Hill, Bowsey Hill, Quarry Wood. Throughout the west and north of the area, but absent or rare to the south and east of a line from Maidenhead to Arborfield. An outlying station in ancient woodland at Wykery Copse in Bracknell. 4% (1km²). Atlas 2000: all squares.

West Berks: throughout the south, but uncommon to the north of 80, save for an outlying population in the Northern Loop at Wytham Wood, Saddle Copse and Hid's Copse [40]. Common in Moor Copse Nature Reserve [67]. Atlas 2000: all except [49], [68], [69]

Veronica scutellata L. *Marsh Speedwell*

hel 6 ↓

Peaty and marshy places, grassy hollows and ditches on heaths, and pond margins on acid soils. "Locally common but absent from considerable areas" in Druce's time, but "local and decreasing" in Bowen. Now local and uncommon. Racemes only 1 per node. Told at once by its narrow, Epilobium-like leaves and pale pink flowers.

NVC: S 23

Ascot: in Druce, but no recent records (there is an Atlas record from South Ascot [9267]).

East Berks: Winter Hill, Hennerton, pools and ditches in the water meadows near Henley, Warren Row, Wellington College, Virginia Water, Windsor Great Park, Bearwood, Coleman's Moor, Twyford, Whistley Green, Sindlesham, Sandhurst, Finchampstead, Ruscombe, Long Moor. Bowen has no records from our area, but there are several Atlas records. Great Lea Pond [7065], Reading, Wellington College, throughout the species-rich parts of Cock Marsh (1997-2008) [881868], Sandford Mill [7570], Coleman's Moor [7772], Shinfield [7468]. Extinct at about two thirds of its former sites, and now confined to water meadows on the 3 margins of the area: the Thames from Reading to Cookham, the Surrey border from Virginia Water to Bagshot and the Hampshire border along the R. Blackwater and R. Loddon.

<1% (1km²). Atlas 2000: all except [87], [96]

West Berks: commonest in the Kennet valley. Kintbury [36], Donnington Grove Lake [46], Appleton Upper Common and Cothill [49], Newbridge [40], Paices Wood [56], Thrupp House [59], Enborne Row, between Theale and Aldermaston and Welshman's Pond [66], Sulham Hill [649743]. Most of Druce's sites on the Northern Loop are extinct but the plant is still at Wytham Meads Ditches [4609]. Atlas 2000: [46], [40], [56], [59], [66], [67]

Veronica beccabunga L. *Brooklime*

hel 5

Ditches, muddy margins of ponds, shallow streams and a wide range of wet places in full sun. Frequent and generally distributed, but rare or absent on the chalk ridge. Leaves with a short petiole. The blue beetle *Prasocuris junci* causes shotgun holes in the leaves.

NVC: A 8,17; M 22; OV 26,32; S 7,14,23

Silwood Park: a single record from muddy runnels in a clearing on the western edge of The Lake in 1980. Not seen since, and probably shaded out.

Ascot: boggy ground on Charters Road, on the edge of the lake at Ascot Place. Dominant in the sluggish stream through the Northern Triangle at Ascot Race Course on Friday 13 July 2007.

East Berks: widespread, but rare in the extreme south-east. On dry chalk in Bisham Woods [8585] in 2002. 10% (1km²). Atlas 2000: all squares

West Berks: occasional throughout, but absent from the ridge of the chalk (north of 80 and south of 85). Dominating the edges of the Physic Well at Bablock Hythe [4404]. Frequent along the R. Lambourn and R. Kennet. Atlas 2000: all except [69]

Veronica anagallis-aquatica L. *Blue Water-Speedwell*

hel 6

Margins of rivers, streams, ponds and ditches on nutrient-rich mud. Occasional, but absent from acid habitats in south-east Berkshire, and rare on the chalk. Upper leaves sessile.

Ascot: no records.

East Berks: Thatcher's Ford, Jouldern's Ford, Sandhurst, Swallowfield, Arborfield, Bisham, Wargrave, Coleman's Moor, Sindlesham, Ruscombe, Waltham, Sonning, Cookham, Bray, Clewer, Frogmore. In the channels of the flood defences in East Maidenhead. Confined to the Thames valley, west of Cookham. <1% (1km²). Atlas 2000: all except [86], [96]

West Berks: occasional in the Kennet and Thames valleys, but rare and scattered in the interior. Commonest in the Thames-side meadows from Lechlade [29] down to Oxford [40]. In Reading's Lake District [6969]. In the R. Kennet at [3568], [5265] and [5666] in 2006 (D. Broughton). Atlas 2000: all except [50], [68], [69]

Veronica x lackschewitzii J.B. Keller = **V. anagallis-aquatica** x **V. catenata**

Often more robust with longer racemes than either parent, and partially fertile. Occurs in places where *V. catenata* grows with *V. anagallis-aquatica*.

East Berks: Odney Common [8585] in 1958 (det. Kew).

West Berks: by the R. Kennet at Denford Manor Farm [351681], by the R. Lambourn at East Garston [361769], [379755] and Speen [458686], by the canal at Newbury [46], and Rack Marsh [453693], by the R. Enborne at Bishops Green [453693], and by the R. Kennet at [520656] and [572667], all post-1978. Recently on Abingdon Common [472962] in 2002.

Veronica catenata Pennell *Pink Water-Speedwell*

hel 6 ↓

Veronica aquatica Bernh., non Gray

Veronica anagallis-aquatica L. subsp. *aquatica* Nyman

Margins of rivers, streams and ponds on nutrient-rich mud, in small quantity. Occasional, but absent from the chalk ridge and from acid habitats in south-east Berkshire. Like *V. beccabunga* but corolla pinkish with patent pedicels in fruit. It grows with *V. anagallis-aquatica* but is much less common. NVC: OV 32; S 23

East Berks: rare in the western reaches of the R. Thames from Sonning to Cookham. Locally frequent at Cock Marsh. In an acid pond at South Lake [755722] in 1972. <1% (1km²).

West Berks: rare along the whole length of the Thames from Lechlade [29] to Reading [67] and in the south-eastern parts of the Kennet valley. Rare and scattered in the interior. Recently, by the R. Cole west of Snowswick Farm [214962], Shellingford [323941], on wet ground south of Shrivensham cemetery [243883], by the R. Lambourn [475683] and by the R. Thames at Wytham Meads Ditches

[4609]. Little Wittenham [59]. Gravel pit at Aldermaston (LAN) in 1960, and by the canal between Theale and Aldermaston [66] in 1982.

Veronica triphyllos L. *Fingered Speedwell*

○ th 4 †

West Berks: in a garden at Tutts Clump [5570] in 1922 (OXF).

Veronica arvensis L. *Wall Speedwell*

th 3

Heaths, walls, cultivated ground, dry banks, open grassland and turfy ground. Common and generally distributed. A small simple-stemmed plant occurs on heaths at Sandhurst, Swinley, Windsor. Told from *V. agrestis* by the form of the inflorescence: the flowers are in terminal racemes (not solitary in leaf axils) and are therefore subtended by bracts rather than by leaves (compare leaf and bract shape). The tiny flowers are the deepest shade of blue.

NVC: OV 1,3,4,9,10,12,22-24,39; U 1

Silwood Park: this is the common Speedwell of lawns, arable land and open sandy ground (not “Walls” at all really). This is one of the most curious frequency distributions, equally frequent at 0.1ha and 1ha but no records at all in quadrats smaller than this. Particularly common in the Croquet Lawn in 1991 following the successive severe droughts of 1989 and 1990 which debilitated the perennial grasses and allowed mass recruitment of many of the annuals. It prefers thin turf with grasses like *Vulpia bromoides* and *Aira praecox*. In its nominate habitat on the brick wall of the churchyard at Ashurst in April 2003. Planted as one of the 7 species in the Ashurst raised beds experiment, first sown in September 2002. Common on imported topsoil at Ashurst lysimeters in May 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	31	30

East Berks: frequent and locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 38% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Veronica peregrina L. *American Speedwell*

● th 4

An alien unintentionally distributed by the horticulture trade as a weed in plant pots: locally common in nurseries and garden centres, and spread about in containerised plants. Usually found as a garden weed on gravel paths or on compacted ground.

West Berks: an uncommon garden weed at Chieveley [476741] in 1972.

Veronica agrestis L. *Green Field-speedwell*

○ th 1 ↓

Cornfields, garden-ground, waste places, heaths, wall-tops. To Druce this was “common and generally distributed”, but Bowen says “once common, now rare and only seen in gardens and on rubbish tips”. More tolerant of acid soils than *V. polita*. Greatly reduced in distribution and abundance as a result of heavy use of herbicides and fertilisers. Flowers solitary in leaf axils; the fruit is covered in sparse, long, patent glandular hairs (there are no non-glandular hairs; c.f. *V. polita*). The flowers are usually white: the “Green” of the English name refers to the leaves.

NVC: OV 4,13; U 1

Silwood Park: local and rare. Drive Lawns and West Observatory Ridge. Formerly on compacted ground on North Gravel in June 1984 and on beech roots on South Gravel on 5 May 1981. Very rare from the seedbank in Garden Wood in August 2005 after fencing to exclude deer and rabbits. Rediscovered on 24 May 2012: a single plant on the concrete base of the recently demolished CABI Quarantine Greenhouses.

Ascot: Englemere, South Ascot, Ascot Station, Ascot Heath.

East Berks: Rare, Leighton Park (1949), Reading tip (1961), Harcourt Drive Reading [735710] (1981), Wokingham [8065] (1981). 2% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: uncommon; Ashbury, Fognam Down, Odstone Down, Ridgeway [28], Badbury Hill, Great Coxwell [29], Hungerford [36], Hungerford Newtown [37], Shellingford [39], Upper Seeds Wytham, Bablockhythe, Cumnor and Eynsham Lock [40], Padworth Common [66], Wallingford [68]. Atlas 2000: [29], [37], [38], [46], [49], [40], [59], [66]

Veronica polita Fr. *Grey Field-speedwell*

• th 1 ↓

Veronica didyma

Cultivated ground in arable fields, gardens, rubbish tips and on walls; “common and widely distributed” according to Druce, but “once common, now rare” in Bowen. Absent from acid soils in south-east Berkshire. Declined through widespread herbicide use. Flowers solitary in leaf axils; the face of the capsule is covered with hooked bristles as well as patent glandular hairs.

NVC: OV 7,10,13,15,16,19; U 1

Silwood Park: rare on disturbed ground on the Science Park on 1 May 2000. On compacted cinder paths around the Manor House 1979-2000. On bare ground below the entrance sign to the Science Park on 17 May 2002.

Ascot: no further records.

East Berks: Swallowfield; uncommon to the west of 85, rare to the east of this. 1% (1km²). Atlas 2000: all except [78], [88]

West Berks: occasional in the western Thames valley from Lechlade [29] to Wytham [40]. Absent or rare elsewhere, and most likely to be found on the chalk. In the churchyard at Bucklebury [5570]. Atlas 2000: all except [47], [50], [66], [69]

Veronica persica Poir. *Common Field-speedwell*

• th 1

Veronica tournefortii Gmel.

Veronica buxbaumii Tenore

Much the commonest Speedwell of cultivated and waste ground; a hugely successful alien invader. First record 1825 (in error as *V. filiformis*); first correctly published record 1854.

NVC: OV 1,3,7-10,12,14-16,18,19,33

Silwood Park: in all of the arable fallows at Pound Hill Field, Ashurst Four Acre Field, and Silwood Bottom, and on open waste ground at Ashurst Church, Old Orchard, Ashurst Warren, Ashurst Path, Tractor Sheds, Greenhouses, Merton’s Acres, Heronsbrook, Science Park, East Lodge. Note,

however, that it is not sufficiently frequent as to turn up in the smaller, random quadrats; because it is so conspicuous in flower, we tend to over-estimate its abundance. Capable of producing a mass flowering in September on ground that was cultivated in early summer, as in Silwood Bottom after the wet summer of 2002. Very abundant on 21 April 2007 in Silwood Bottom to the south of the central grass track on ground that had been cultivated in late May 2006. On Royal Wedding Day 29 April 2011 the plant was common on the autumn-cultivated part of Ashurst Four Acre Field, in a year when *Arabidopsis* was dominant.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	14	16

East Berks: abundant in the allotments at Bulmershe. Frequent and locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 37% (1km²). Atlas 2000: all squares

West Berks: common in set-aside, even on the chalk. Atlas 2000: all squares

Veronica filiformis Sm. *Slender Speedwell*

• chh 4

Lawns, roadsides, river banks and churchyards, preferring calcareous soils. Locally abundant but absent from much of east Berkshire. Increasing. This common lawn weed seldom if ever sets seeds. It is dispersed as shoot fragments which root on contact with the soil, and is spread on footwear and on shared lawn mowers. It has the distinction of being one of the only alien plants to have a joke made about it: Sinker (1985) alleges that he was told that in Shropshire the plant was called "Sin" because it was so attractive and so prevalent.

Silwood Park: reported from the oak collection at the western end of Drive Field in July 2009 (the first record), but no specimen seen. Remains to be confirmed.

Ascot: local and rare, not widely established on these acid sands. Heatherwood Hospital, Blacknest Park, Johnson's Pond. Never found in Silwood Park despite repeated searches, but common in the lawns of many of the adjacent properties. Its absence is a complete mystery.

East Berks: not in Druce. Common in all the lawns around Windsor Castle and Frogmore. In shade in the northern block of Maidenhead Thicket at Pinkneys Green. Common in mown grass on the islands at Hurley Lock. Towns and villages throughout, but never seen in semi-natural habitats. 8% (1km²). Atlas 2000: all squares

West Berks: dominant, with *Rhynchospora squarrosus* in mown grass at North Hinksey churchyard (K) [4905] in 2001. Recently at Buscot Church, Little Coxwell and Grove Copse [29], Welford [37], Stanford-in-the-Vale [39], Farnborough and West Ilsley [48], Sunningwell [40], Compton [57], Moulsoford [58], Sulham (LAN) in 1956, Pangbourne [67]. Atlas 2000: all except [69]

Veronica hederifolia L. *Ivy-leaved Speedwell*

Cochlidiosperma hederifolia (L.) Opiz

Veronica hederifolia subsp. **hederifolia**

○ th 3

Waste and cultivated ground, especially in light, sandy fields, hedge-banks and garden soil. Locally abundant and widely distributed, least common on the very acid soils in south-east Berkshire. This is the common subspecies, and has short pedicels (2 to 4 times the length of the calyx), the anthers are

blue, and the plant grows in full sun. The leaves have dumpy apical lobes (the terminal lobe is wider than long).

NVC: OV 24

Silwood Park: on waste ground on the Science Park, growing with subsp. *lucorum* on 13 May 1990. Cultivated ground at Ashurst in 1996. In flower beds around the Manor House. On the rockery in the Japanese Garden. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk.

East Berks: 22% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Veronica hederifolia subsp. **lucorum** (Klett and Richt.) Hartl ○ th 3
Veronica hederifolia L. var. *lucorum* Klett and H. Richter
Veronica sublobata M. Fischer

This subspecies is much less common, and grows in shade (e.g. in damp woods on nutrient-rich soils). It has long pedicels (3.5 to 7 times the length of the calyx), and the anthers are whitish (not blue). The apical lobe of the leaf is longer than wide.

Silwood Park: on imported topsoil on the Science Park in May 1990. North Block, under the shrubbery of *Viburnum*, *Cornus* and *Rosa* in May 1996.

East Berks: 1% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares except [37], [48], [68]

Veronica longifolia L. *Garden Speedwell* ● hs 6

This is the common herbaceous border plant. Under-recorded because of confusion with *V. spicata*. They are told apart by the leaves which are widest in the basal third in *V. longifolia* and have sharply serrated edges, but widest in the middle third with crenate edges and obtuse teeth in *V. spicata*. An occasional garden outcast.

Silwood Park: planted below the wall of the churchyard, facing the graveyard in 1998-2004, but looking wild now that the bed has become overgrown.

East Berks: a persistent garden escape found on Reading tip (LAN) in 1960. 1% (1km²). Atlas 2000: all except [78], [96]

West Berks: on a roadside on Burghfield Common [6566] in 1964. Waste ground in Faringdon [2895] in 2002. On cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Kingston Bagpuize [4098] in July 2003. Under recorded. Atlas 2000: [46].

Veronica austriaca subsp. **teucrium** (L.) D. Webb *Large Speedwell* ● hs 6

East Berks: a persistent garden escape, found on a roadside at Ascot in 1924 (OXF) (det. C.C. Townsend), and on the old nursery grounds at Suttons [733737] in Reading (1979).

¶ **Veronica** *V. austriaca* 'Ionian Skies', *V. austriaca* subsp. *teucrium* 'Crater Lake Blue', *V. x cantiana* 'Kentish Pink', *V. cinerea*, *V. exaltata*, *V. gentianoides*, *V. gentianoides* 'Tissington White',

V. longifolia, *V. pectinata* ‘Rosea’, *V. peduncularis* ‘Georgia Blue’, *V. prostrata*, *V. prostrata* ‘Trehane’, *V. ‘Shirley Blue’*, *V. spicata* ‘Heidekind’, *V. spicata* subsp. *incana*, *V. wormskjoldii*

¶ **Veronicastrum** *V. virginicum album*

Hebe Comm. ex Juss *Hedge Veronicas*

Extremely popular evergreen garden shrubs from New Zealand and southern South America. In contrast to south-west Britain (Devon, Cornwall, Isles of Scilly, Isle of Man, etc.), *Hebe* does not really naturalise in Berkshire, but they do sometimes survive for a long time as garden outcasts on waste ground, or in places where they were planted in hedgerows or on banks. In the old days, most *Hebe* outside gardens were recorded as *H. x lewisii*, whatever they actually were. Of the 36 taxa grown in Silwood (below) the 5 most commonly seen outside gardens, ranked from largest (chest high) to smallest (ankle high) are these: *H. ‘Midsummer Beauty’* is a large plant with very long racemes of lilac-purple flowers and long willow-like leaves, *H. x franciscana* ‘Blue Gem’ is the classic hedging veronica with shorter, rounded leaves and racemes not much longer than the leaves (this is the only one that might be said to be “close to naturalised” with us), *H. brachysiphon* ‘White Gem’ is our only common large, white-flowered bush, *H. ‘Red Edge’* is a low-growing plant, easy to identify from its short (2cm) grey leaves with red edges, and *H. pinguifolia* ‘Pagei’ is a prostrate, grey-leaved carpeting plant with small white flowers, used as ground cover in landscaped business parks in towns.

Hebe x franciscana (Eastw.) Souster *Hedge Veronica*

• n 7

Veronica x franciscana Eastw.

Hebe x speciosa auct., non (R. Cunn. ex Cunn.) Cockayne and Allan

On waste ground in towns and occasionally planted on banks in villages.

Ascot: rare as a garden escape, self-sown on pavements and the base of walls in Ascot, Sunninghill and Sunningdale (1982-2000).

East Berks: <1% (1km²). Atlas 2000: [77], [96]

West Berks: no records, but certainly under-recorded.

¶ **Hebe** *H. albicans*, *H. ‘Amy’*, *H. armstrongii*, *H. ‘Autumn Glory’*, *H. ‘Blue Clouds’*, *H. buxifolia*, *H. ‘Caledonia’*, *H. ‘County Park’*, *H. cupressoides* ‘Boughton Dome’, *H. ‘Emerald Green’*, *H. epacridea*, *H. x franciscana* ‘Blue Gem’, *H. x franciscana* ‘Variegata’, *H. ‘Great Orme’*, *H. ‘Hagley Park’*, *H. hulkeana*, *H. ‘Loganioides’*, *H. macrantha*, *H. ‘Margret’*, *H. ‘Marjorie’*, *H. ‘Midsummer Beauty’*, *H. ‘Mrs Winder’*, *H. ‘Nicola’s Blush’*, *H. ochracea* ‘James Stirling’, *H. ‘Pewter Dome’*, *H. pimeleoides* ‘Quicksilver’, *H. pinguifolia* ‘Pagei’, *H. rakaiensis*, *H. recurva*, *H. ‘Red Edge’*, *H. ‘Simon Delaux’*, *H. speciosa* ‘La Seduisante’, *H. topiaria*, *H. vernicosa*, *H. ‘Wiri Charm’*, *H. ‘Youngii’*

Parahebe catarractae (Forst. f.) W. Oliv.

• chh 6

An uncommon rockery plant, rarely found outside gardens.

Ascot: very local and rare but long persistent on a shady grave at the southern end of South Ascot churchyard (1989-2006).

West Berks: very rare. Self-sown in cracks in paving on a housing estate in Didcot [5289] in 1999.

¶ **Parahebe** *P. catarractae*, *P. catarractae* ‘Delight’, *P. lyallii*, *P. perfoliata*

Melampyrum pratense L. *Common Cow-wheat*

th 5

Melampyrum pratense subsp. **pratense**

Ancient oak woods on dry, acid soils in bushy places and sometimes in open, heathy ground exposed to the sun. “Locally frequent but apparently decreasing” (Bowen); absent from many areas. Below the bracts, the uppermost leaves are 2-8cm x 2-10mm, about 7-15 times as long as wide (much longer and thinner than subsp. *commutatum*).

NVC: M 19; W 10,15

Ascot: no records.

East Berks: “It is curious that in so wooded a country ... so common a plant as *M. pratense* does not appear to grow” (Mill, 1843 in Druce). Maidenhead, Wargrave, Remenham, Warren Row, Crazy Hill, Arborfield, Bagshot, Sandhurst, Blackwater, Finchampstead, Farley Hill, Spencer’s Wood Common, Bracknell, Binfield, Bowsey Hill. Wellington College, Ashley Hill, Bracknell, Shepperlands Wood [76], Fleet Copse [76], Westland’s Copse [752655], Riggs Copse [844687]. Occasional in the south-west (around Wokingham [8065]), largely extinct in the north-west (there is one surviving station at Ashley Hill [8080]). Not recorded to the east of 90. 2% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: scattered throughout the Kennet valley, formerly quite frequent in the Northern Loop, but absent from all of the interior. Inkpen Common and Kintbury [36], Cleeve Hill [37], Redhill Wood, Hamstead Marshall and Greenham Common [46], Snelsmore Common [47], Cothill [49], Besselsleigh, Tubney, Hen and Youlbury Woods, Chilswell Copse [40], Bucklebury Upper and Lower Commons and Brimpton [56], Fence Wood, Oare Wood and Clay Hill [57], Bagley Wood [50], Tadley and Silchester Common [66], Bradfield and Tilehurst [67]. Most of the modern records are from the eastern Kennet [56], [57] and [66]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: [36], [46], [47], [40], [56], [57], [50], [66], [67]

[**Melampyrum pratense** subsp. **commutatum** (Tausch ex A. Kern.) C.E. Britton]

Melampyrum commutatum Tausch ex A. Kerner

Below the bracts, the uppermost leaves are 4-7cm x 8-20mm, about 3-8 times as long as wide. On calcareous soils. Not recorded from Berkshire, but worth looking for. Druce recorded what he called var. *latifolium* as “not unfrequent in shady woods in the Pang district, (and from) Tidmarsh [67], Tilehurst [67], College Wood Bucklebury [57], Hamstead Marshall [46], Templeton [36] and Hodcott in the Kennet district”.

Euphrasia L. *Eyebrights*

Although eyebrights are a very difficult group in Scotland, they are relatively easy in Berkshire, because we have only 4 species. *E. anglica* is uncommon and is our only species with stalked glandular hairs on its middle and upper leaves. *E. micrantha* is a very slender heathland plant with dark purple stems and leaves. The other two are told apart by their bracts: the teeth of the bracts of *E. nemorosa* are pointed (acute or acuminate), but not drawn out into a needle-like projection (aristate) as in *E. pseudokernerii*. Capsule length can also help: in *E. nemorosa* the capsule is slightly longer than the calyx, but in *E. pseudokernerii* the capsule is much shorter than the calyx.

Euphrasia anglica Pugsley

th 5

Euphrasia hirtella auct., non Jordan ex Reuter
Euphrasia officinalis L. subsp. *anglica* (Pugsley) Silverside

Golf courses, rides in pine plantations, lawns and grassland on acid, sandy soils. Middle and upper leaves with long-stalked glandular hairs, stems flexuous, lowest flower at node 5-8. The first eyebright into flower each year.

East Berks: not in Druce. Confined to East Berkshire, where it is locally frequent on the acid sands. Coleman's Moor (**OXF**) in 1903. Bearwood Church, Wokingham, Heath Lake, Rapley Lake, Tower Hill, Windsor Great Park, Woodside (all det. P.F. Yeo). The are old records from Maidenhead Thicket, but the area was searched thoroughly in August 2003 by Alan Showler without finding the plant. Local, on the heaths and golf courses along the Surrey border from Sandhurst to Virginia Water. Commonest in untrampled rides in Bracknell Forest as at Penny Hill, Upper Star Post and Hut Hill in May 2004. <1% (1km²). Atlas 2000: [76], [86], [97]

West Berks: no records.

Euphrasia anglica* x *nemorosa

Euphrasia x *glanduligera* auct., non Wettst.

East Berks: recorded once from Wellington College in 1913 (**RNG**), but worth looking for in East Berkshire where the parents grow together.

[*Euphrasia anglica* x *micrantha*]

Not recorded from Berkshire, but worth looking for in the heathy parts of East Berkshire where the parents grow together.

Euphrasia anglica* x *confusa

East Berks: there is an undated record in Stace (1975) (det. P.F. Yeo) from Windsor Great Park (no specimen).

Euphrasia arctica* ssp. *borealis (F. Towns) Yeo th 7

West Berks: there is an Atlas 2000 record from [46] but it is not supported by a specimen.

Euphrasia confusa Pugsley

West Berks: there is an Atlas 2000 record from [36] but it is not supported by a specimen.

Euphrasia nemorosa (Pers.) Wallr. th 7

Euphrasia officinalis L. var. *nemorosa* Pers.

Euphrasia curta (Fries) Wettst.

Heaths, pastures, roadsides, chalk downs, woodland rides, calcareous or acid grassland, and fens; locally frequent, especially on the chalk, but rare or absent in south Berkshire. Middle leaves without long-stalked glands. This is our commonest eyebright, and is found in all sorts of grassy habitats.

NVC: CG 2-5

Silwood Park: the only Eyebright in the Ascot district. The plants have flowers 6.5mm, calyx 5mm, bracts with forward (rather than outward) pointing teeth. The leaves are 5mm long, and have no

glandular hairs. Internodes are *c.*9mm long, with the first flowers in node number 10 or 11 (counted from the rootstock upwards; don't forget to count the leaf scars from which older leaves may have fallen). The capsule is long-hairy, and is longer than the calyx tube but shorter than the calyx teeth. Reactor Bank, long grass on the steep grassy bank facing the Reactor. The site was severely damaged in 1987 by the construction of an exposed soil profile for the study of radioactive isotope movement. The scar was still not repaired in autumn 1989. Densely overgrown with thistles and nettles in 1991-95; cleared in 1996 but not seen here since 1985. William Penney, occasional in short grassland on the compacted ground on Garrison Ridge just below the building; plants dwarfed by severe rabbit grazing during the exceptionally dry summers of 1989 and 1990. Massive flowering in July 1992. Virtually absent in summer 1994, and not seen since. A new population, on top of the bank at the western end of William Penney, was discovered in August 2000 when rabbit numbers were low and mowing had been lax. There were about 20 plants in a single cluster next to the *Mentha pulegium* (q.v.); this population was still strong in August 2003, having re-flowered on multi-branched stems after mowing. Ashurst Warren; uncommon in pots of sand used to grow *Blackstonia* on 27 July 2000; the pots were tidied away in early 2002.

East Berks: Long Moor, Bearwood, Bracknell, Broadmoor, Loddon Bridge, Windsor Great Park, Stubbing's Heath. Winter Hill. Recently at Bearwood College, Broadmoor Hospital, Upper Star Post, Wishmoor Bottom, Winter Hill, Maidenhead Thicket [851812]. 1% (1km²). Atlas 2000: all except [77]

West Berks: Idstone [28], Faringdon [29], Hungerford [36], Lambourn [37], Whitehorse Hill, Letcombe and Wantage [38], Farnborough [48], Tubney and Cothill [49], Boars Hill and Wytham meadows [40], Ashampstead and Compton [57], Moulsoford [58], Wittenham and Radley [59], Mortimer [66]. Atlas 2000: all except [49], [68], [69]

Euphrasia nemorosa x pseudokernereri

Not recorded from East Berkshire, but worth looking for in chalk grasslands where the parents grow together.

West Berks: Inkpen Downs [36] in 1965 (det. P.F. Yeo).

[Euphrasia nemorosa x micrantha]

Euphrasia ? x areschougii Wettst.

Not recorded from Berkshire, but worth looking for where the parents grow together.

Euphrasia pseudokernereri Pugsley

th 8

A very local lowland plant of grazed, well-drained, herb-rich turf on chalk, often on higher slopes than *E. nemorosa* (with which, confusingly, it hybridises). Does not normally flower before August or even September. Middle leaves without long-stalked glands, but differing from *E. nemorosa* in its capsule much shorter than the calyx, and teeth of bracts aristate (rather than acuminate). The lowest flowers occur high up on the stem (nodes 10-16). Confined to chalk grassland.

NVC: CG 2

East Berks: not in Druce. Short chalk grassland on shallow soils; local and uncommon. Still in the chalk grassland (National Trust) above Cock Marsh in 1999-2004 [885867]. Older records from Winter Hill and Cookham Down probably refer to this same site. <1% (1km²). Atlas 2000: [88]

West Berks: chalk downs above Inkpen [36], Stubbs Wood [37], Nutwood [38], Streatley golf course [58] (all det. P.F. Yeo). Whitehorse Hill and Dragon Hill [38]. Atlas 2000: [28], [36], [37], [38], [48], [58]

Euphrasia micrantha Rchb.
Euphrasia gracilis (Fries) Drejer
Euphrasia ? rhumica Pugsley

th 7 ↓

This slender, erect, dark purple coloured plant occurs in open places on acid, sandy heaths. It has flowers 6.5mm in length, tiny leaves, long internodes, and the calyx teeth exceed the fruit.

East Berks: Wellington College (**RNG**) (1918-27). Locally frequent in open roadside heathy vegetation south-west of Lower Star Post (1970-2004) and on gravel tracks on the firing ranges at Poppy Hills (2002). <1% (1km²). Atlas 2000: [86]

West Berks: uncommon on heathy ground. Found in Greenham Common [46] and [56] in 1835 (**BM**) and still frequent there in 2001-05. At Three Firs Common [66] in 1926 (**RNG**). Atlas 2000: [56]

Odontites jaubertianus (Boreau) D. Dietr. ex Walp. *French Bartsia*
Euphrasia jaubertiana Boreau
Odontites luteus sensu Bowen, non (L.) Clairv.
Odontites jaubertianus subsp. **chrysanthus** (Boreau) P. Fourn.
Odontites chrysanthus Boreau

• th 6

A local speciality of short heathy turf. These are its only British stations.

West Berks: long established on a gravelly heath at AWRE Aldermaston [584629] (**RNG**) but it is not known how the plant got there. It was abundant in the 1960s but is now much reduced (down to 16 plants in 1988 at [600645]). A single plant was found by Wasing Wood [584629] in 1983. Also known from a lay-by on Burys Bank Road by Bowdown House north of Greenham Common [501653] (**RNG**) between 1970 and 1976, but not seen since. All these sites were searched in August 2005, but the plant was not found.

Odontites vernus (Bellardi) Dumort. *Red Bartsia*
Euphrasia verna Bellardi

th 7

Both subspecies are widespread, but subsp. *vernus* is much less common than subsp. *serotinus*.

Odontites vernus subsp. **vernus**

th 5

Found “chiefly in cornfields, where it is not infrequent amongst the stubble” (Druce), pastures, waysides, woodland rides and grass tracks (as *Bartsia odontites*); common and generally distributed except on ground that has never been cultivated. Branches few (up to 4 pairs), less spreading (less than 50 degrees to the stem), spring flowering.

East Berks: Riseley, Wargrave, Bisham, Windsor, Wokingham, Sandhurst (as *O. verna*); much less common than subsp. *serotinus*. Not in Silwood Park. Atlas 2000: no records.

West Berks: Shrivenham [28], Faringdon [29], Hungerford, Woodhay and Kintbury [36], Uffington and Wantage [38], Lockinge [48], Cothill [49], Wootton, Wytham and Eaton Hastings [40], Appleford and Radley [59], Ferry Hinksey [50], Mortimer and Padworth [66], Bradfield, Purley, Sulham, Tilehurst, Southcote, Englefield and Theale [67]. Atlas 2000: no records.

Odontites vernus subsp. **serotinus** (Syme) Corb.

th 7

Bartsia odontites (L.) Hudson var. *serotina* Syme

Odontites ruber Gilib., nom. inval.

Odontites vernus (Bellardi) Dumort. subsp. *pumilus* (Nordst.) A. Pedersen

Odontites vulgaris Moench subsp. *pumilus* (Nordst.) Soó

Gateways and grassy banks; frequent along roadsides, especially in cold, stiff soils. Unpalatable to rabbits, so conspicuous in rabbit-grazed turf. Branches numerous (up to 8 pairs) and more spreading (50 or more degrees to the stem, often almost at right angles); late flowering.

NVC: OV 15,21

Silwood Park: Garrison Ridge, on bare compacted ground immediately below William Penney; 4 August 1980. Abundant in taller grass 14 August 1982. Much less common 1989 and rare in 1990 and 1992. Not seen again until September 2002, when it was locally frequent. Reactor Bank, on the side of the track to the Wind Tunnel. In small quantity every year since 1979. Not seen in 1990. Several good patches on the top of the pile on 28 July 1992. Pile levelled during landscaping of the arboretum. An excellent year, with hundreds of plants in flower on 2 September 1998, then scarce in 1999-2000. The plant has shown a resurgence, 20 September 2001, following scrub clearance on Reactor Bank during winter 2000-01, it was still common in August 2003, and positively abundant by September 2004, following a very wet summer after an unusually dry spring. Frequent on Reactor Bank on 1 October 2006, prior to major scrub clearance. Locally frequent on gravel near the CABI Polytunnel on 4 September 2004.

East Berks: plentiful at Cock Marsh, Bracknell, Wargrave, Ruscombe, Waltham, Windsor, Swallowfield. Woodland rides, grass tracks and arable fields; occasional but absent from very acid soils in south-east Berkshire. Maidenhead Thicket. Queens Eyot. Much commoner than subsp. *vernus*. 3% (1km²). Atlas 2000: all squares

West Berks: Coleshill [29], Little Coxwell [295932], Eastbury [3478], Hungerford and Kintbury [36], Uffington and Segsbury Camp [38], Denchworth and Longworth [39], Ilsley and Catmore [48], Marcham and Cothill [49], Cumnor and Boars Hill [40], Midgham [56], Hampstead Norreys and Bucklebury [57], Cholsey, Moulsoford and Compton [58], Didcot and Radley Stations [59], Kennington and South Hinksey [50], Mortimer and Sulhamstead [66], Tilehurst, The Lake District and Theale [67]. The white flowered variety has been found in Lower Seeds at Wytham in 1977 (RNG). Atlas 2000: all except [68], [69]

Parentucellia viscosa (L.) Caruel *Yellow Bartsia*

th 6 ↓

Bartsia viscosa L.

Hemiparasitic annual of damp grassy places on sandy soils including tracksides and heavily grazed patches reclaimed from heath. Typically found with *Aira caryophyllea*, *Centaurium erythraea* and *Vulpia bromoides*. Very rare, and probably introduced.

East Berks: not in Druce or Bowen. Atlas record [98] was probably introduced or in v.c.24. Atlas 2000: no records.

West Berks: a single early record from wet grassland at Yattendon [5574] in 1969. John Killick discovered the plant by a ditch on the (then) new Didcot link road [5090] in 1982. Found in a field on the outskirts of Faringdon [298951] by Susan Erskine on 12 August 2001 (there were about 50

flowering plants on 13 June 2005 by a gate in the fence on the southern edge), and in set-aside on Frilford Heath [445975] by John Killick in 2001. Atlas 2000: no records.

Rhinanthus minor L. *Yellow-rattle*

th 5 ↓

Rhinanthus minor subsp. **minor**

Meadows, pastures, heaths (as *R. crista-galli*); abundant. Hemiparasitic on the roots of grasses, and in dry seasons much retards the growth of grass crops; it is erratic in its occurrence, being abundant in a field one season and rare or absent from it in the next, and one field may be full while the adjoining one may be free. Meadows on wet or dry soils. Locally abundant on calcareous soils, rare or absent in south-east Berkshire. This is a hay meadow plant which sets its seeds before the first hay cut in June. Intercalary leaves mostly 0; lowest flower at node 6-9; leaves parallel-sided. Spring-flowering. NVC: CG 2,3,5; M 22; MG 1,4,-6

Silwood Park: introduced with chalk from Maidenhead Thicket when the Chalk Plots were constructed; there were 10 plants in June 1984, several hundred in June 1987, only a few in June 1989, and only one in June 1993. The population showed something of a comeback in 1994 but was not seen for many years subsequently. The plots were raked free of thatch in winter 2000-01 and fresh plants sprang up to flower in May 2002 (more than 50 on Plot 5, 20 on Plot 6, 80 on Plot 7, and 30 on Plot 8). By May 2003 there were literally thousands of plants on Plots 5 – 8; a veritable outbreak. In the places where the Rattle was commonest (e.g. on Plot 5) there was no grass at all; the only small patches of *Festuca rubra* were in places where the Rattle was absent. Still abundant on Plots 5-8 and locally frequent with *Calluna* on Plot 4 in May 2004, but uncommon by June 2005 and still uncommon in June 2006 (commonest on Plot 4). The control plot (never cultivated) was dominated by *Holcus mollis* and *Rumex acetosella*; this plot was virtually uninvasible; there were only 2 Yellow-rattle in 9m² in 2004. On 26 June 2007 the population was very low, with a maximum of 25 plants on Plot 7. The plots were raked free of a deep thatch of moss on 15 February 2008, but there was a low population of adult plants on 7 July 2008. Seeds from the earliest of these plants were enthusiastically spread about Silwood by Ted Green in the late 1980s. A vigorous population became established in 1987 in grassland on the edge of Upper Pond Field next to the point where the track past Heronsbrook Meadow enters the trees on The Elms. This population thrived until 1996, then went abruptly extinct. The population reappeared with 40+ stems in a single small patch in June 2002. The plants sown in the Conservation Mixture in May 1983 opposite Southwood Halls on North Gravel formed a virtual monoculture by June 1985 following the demise of the Ox-eye Daisy which had dominated in June 1984. The grassland was destroyed for the construction of Flowers Halls, but not before seeds had spread north onto a surviving fragment of grassland where they prospered from 1985-88. This site, in turn, was destroyed in 1989 for the construction of the Colditz hostel block (John Smith Hall). Heronsbrook Meadow, 10 plants in the north-west corner of the field on 11 June 1987, but not seen since. Ashurst Warren, rare on the gravel beds on 25 July 2000. The seeds sown in the Nash's Field experiment in October 1991 never appeared.

Ascot: rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: a rarity of ancient meadows which is absent from the whole of the interior, with scattered records from the Thames valley at Hurley and Cookham, from the Surrey border at Virginia Water and Caesars Camp, and from the Blackwater meadows at Sandhurst. Recently from the Fritillary Meadow at Stanford End, the meadow at the western end of Windsor Racecourse, and Bray Meads. 1% (1km²). Atlas 2000: all except [77], [78]

West Berks: occasional on the chalk from Ashbury [28] to Streatley [58], and on the oolitic limestones in the Northern Loop, with scattered records from the extreme south-west [36] and [46] but rare or absent elsewhere. Atlas 2000: all except [68], [69]

[*Rhinanthus minor* subsp. *stenophyllus* (Schur) O. Schwarz]

Rhinanthus minor L. var. *stenophyllus* Schur

Rhinanthus stenophyllus (Schur) Druce

Not recorded from Berkshire, but worth looking for in damp grassland and fens. Druce collected what he called var. *angustifolius* from “near Newbury and other places” (perhaps these were subsp. *calcareus*; see below). Intercalary leaves in 1 to 2 pairs; lowest flower at node 8-13, leaves tapering from the base. Autumn flowering.

***Rhinanthus minor* subsp. *calcareus* (Wilmott) E.F. Warb.**

Rhinanthus calcareus Wilm.

In chalk grassland. Under-recorded in Berkshire, and worth looking for. Intercalary leaves in 3 to 6 pairs; lowest flower above node 14. The leaves are linear, almost parallel-sided, very short (10-25mm) and narrow (1.5-3mm).

West Berks: on the Downs above Compton Beauchamp [2887], on Whitehorse Hill [38] and almost certainly elsewhere. Frequent on open, chalky banks in the cutting where the B4001 passes under the M4 between Chilton Foliat and Lambourn Woodlands [327748] on 27 June 2004.

Pedicularis palustris* L. *Marsh Lousewort

th 5 ↓

Fens, peat bogs, marshes and wet meadows on nutrient-rich soils. Once frequent, now on the verge of extinction. One of our great losses, and a real shame. Strenuous efforts ought to be made to reinstate a number of the wet Thames-side meadows. Decreasing under agricultural improvement of meadows (drainage and fertilisers). Single erect stem, corolla with one terminal and two pairs of lateral teeth. NVC: M 13,15,22; S 25

Ascot: very few recent records. Druce knew the plant from Sunningdale (although this may have been Sunningwell Bog). There is a single surviving station at Swinley Brick Pits where it was last seen in 1988.

East Berks: “Locally abundant in the Thames meadows, but absent from considerable areas. The meadows near Hurley I have seen quite crimson from the profusion of this semi-parasitic plant. Hennerton, Warren Row, very fine in marshy meadows to the left of the first lane leading from the Henley Road to Sir W. Clayton’s” (Druce). Sonning meadows, Coleman’s Moor, Riseley, Ambarrow, Finchampstead, Long Moor, Wokingham, Bagshot, Easthampstead, Old Windsor, Windsor Great Park, Bracknell. Not seen by Bowen in any of these sites. Evidently extinct at all its Thames-side stations. <1% (1km²). Atlas 2000: [86], [96]

West Berks: extinct at all but a handful of its former stations: surviving in the Northern Loop and the western Kennet valley [36]. Hungerford and Kintbury meads [36], Barrow Farm Fen, Gozzards Ford, Frilford and Cothill fen [49], Parsonage Moor with 10 plants on 7 September 2008 [460998], Lashford Lane, Wootton fen and Wytham water meadows [40]. Pre-1950 records exist for Radley meads [59] and by the canal at Thatcham [56]. Before the turn of the century, there were ‘luxuriant’ populations from Kennington [50] and Abingdon [49], downstream to Pangbourne [67] and throughout the eastern parts of the Kennet valley [56] and [66]. In July 2005, Jill Butler found three

colonies in Freeman's Marsh (part of Hungerford Meads) at [32836 68635], [32799 68619] and [32761 68672]. Atlas 2000: [36], [49], [40], [59]

Pedicularis sylvatica L. *Lousewort*

hp 4

Damp heaths, dry pastures, grassy rides in woods on acid soils. Locally common in the heathy districts, but absent from the chalk and northern clays. Several stems, corolla with one terminal and one pair of lateral teeth.

NVC: H 3; M 16,24

Ascot: local and uncommon on heathy firebreaks and ditch sides on the Crown Estates in Bracknell Forest, Buttersteep, Englemere, Swinley, Coronation Road. Locally frequent in heathy rough at the northern end of Ascot Heath golf course [922697], where the flowers are uniformly pale fleshy-pink. Not in Silwood Park.

East Berks: occasional on wet heaths in the extreme south-east (east of 80 and south of 70), but extinct at its stations to the west and north (e.g. Warren Row, Crazies Hill, Knowl Hill, Bowsey Hill). Recently at Bulmarsh, Virginia Water, Wellington College, Butter Bottom [858640], Crowthorne Woods Bog [856649], Warren Row, Crazy Hill, Knowl Hill, Bagshot Heath, Easthampstead, Stubbing's Heath, Sandhurst, Wildmoor, Ambarrow, Jouldern's Ford, Bracknell, Bowsey Hill, Windsor Great Park. The white flowered form is rare in Bracknell and Windsor Great Park. Caesar's Camp, New Lodge, Virginia Water, Wokingham, Owlsmoor, Wellington College, heathy rides in Bracknell Forest, Windsor Great Park. 2% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: Inkpen Common, Woodhay and Kintbury [36], Crockham Heath, Morewood House, Greenham Common and Newbury golf course [46], Snelsmore Common and Hunts Green Meadow [47], Tubney and Cothill [49], Anthill Reserve at Wytham [40], Crookham Common, Cold Ash and Brimpton [56], Fence Wood [57], Silchester Common, Burnt Common and Three Firs pond [66]. Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [66], [67]

Orthocarpus erianthus Benth. *Butter-and-eggs*

• th 6 †

An alien hemi-parasite from California, USA, which has not been recorded in Britain since 1930.

West Berks: collected by Druce from a lucerne field at Frilford [4595] in 1923 (OXF).

OROBANCHACEAE

Lathraea squamaria L. *Toothwort*

grh 4 ↓

A charismatic, ghost-white plant of shady, damp woods. Parasitic on the roots of *Corylus* and *Ulmus* in steep woods.

East Berks: no records in Druce or Bowen. Atlas 2000: [77]

West Berks: rare in two centres: on the Northern Loop and in the western Kennet valley. Long Copse close to Cumnor Hill [40] in 1820 and 1964, near Pusey and Buckland [39] in 1860 (now extinct), Irish Hill Wood Kintbury [47] in 1896 and 1960, Hungerford [36] in 1930, Rivar Copse [36] in 1955, Yattendon Court [57] in 1959, Foxley Court [36] in 1963, Cake Wood [36] in 1966, White Shute Hill [37] in 1984, Wytham [40] in 1987. Atlas 2000: [36], [37], [46], [40], [57]

Lathraea clandestina L. *Purple Toothwort*

• grh 4

A wonderfully bizarre garden plant. Parasitic on *Corylus* and *Salix* in damp, shady places; very local but increasingly popular. Introduced in damp grass beneath willows on some of the larger estates.

Ascot: naturalized in damp grass in gardens in Ascot (Wells Lane) and Sunningdale under weeping willow.

East Berks: not in Druce or Bowen for our area.

West Berks: Newbury [46] in 1961, Crookham Green [56] in 1966, Prospect Park in Reading (RDG) [67] 1959-63 and 1995-99, Tilehurst (LAN) [67] in 1956, and by the R. Enborne at Brimpton [5663] in 1984-87. Atlas 2000: all except [46], [56]

Orobanche rapum-genistae Thuill. *Greater Broomrape*

p 5 †

Parasitic on *Cytisus scoparius* on dry heaths. Long extinct (no twentieth century records).

East Berks: the is a record from Wargrave pre-1897. Atlas 2000: no records.

West Berks: nineteenth century records from Weston [37], Snelsmore and Curridge Commons [47] in 1896 (OXF), and from Long Lane in Hermitage [57] in 1839. Atlas 2000: no records.

Orobanche elatior Sutton *Knapweed Broomrape*

p 6 ↓

Orobanche major L.

Parasitic on *Centaurea scabiosa* in calcareous grassland and by roadsides usually in small quantity. Local and absent from east Berkshire. This is our only really big Broomrape.

NVC: CG 3

East Berks: a single record from Reading, now extinct. Atlas 2000: no records.

West Berks: over 1000 plants at Wayland's Smithy [28] in 1962, Odstone Coombes, Knighton Coombe and Shrivenham [28], by the path from Old Stone Hill to Ashbury [275856], Faringdon pits [285942], below Walbury Hill, Prosperous, Hungerford and West Woodhay [36], Wether Down Lambourn [323815], on the Ridgeway at Whitehorse Hill [3086], Bowling Green Farm [304950], Pusey [39], East Ilsley and East Hendred Downs [48], Wootton and Wytham [40], by the railway at Hermitage, Aldworth (LAN) and Hampstead Norreys [57], Streatley and Churn rifle range [58], Radley pit [59], near Wick Hall [515982], Nunhide Lane and Sulham [67]. Atlas 2000: all except [47], [49], [56], [50], [66], [68], [69]

Orobanche crenata Forssk. *Bean Broomrape*

• p 6 †

West Berks: on *Pelargonium* in the garden of Cholsey Hospital [5886] in 1938 (OXF).

Orobanche hederæ Duby *Ivy Broomrape*

• p 6 ↓

East Berks: on ivy in the Library Beds at Whiteknights Park in 1985 (RNG), but gone by 1986.

West Berks: on ivy in the front garden of 17b Park Crescent Abingdon [490974] in 2002.

Orobanche minor Sm. *Common Broomrape*

p 6 ↓

Orobanche amethystea auct., non Thuill.

Orobanche trifolii-pratensis F. Schultz

Orobanche apiculata Wallr.

Orobanche maritima Pugsley

Orobanche minor Smith var. maritima (Pugsley) Rumsey and Jury

This is our only common small broomrape (cf. *O. elatior*). Parasitic on *Trifolium pratense* and *Medicago lupulina*. Locally frequent but sporadic. The var. *compositarum* is parasitic on *Hypochaeris radicata* and other Asteraceae on the chalk. It has corollas 3.5 to 5mm wide, subglabrous, sub-erect and appressed to the stem rather than erecto-patent, 5 to 8mm, and glabrous to glandular pubescent in var. *minor*.

Silwood Park: very rare and sporadic. Refectory, a single spike found by A. Sheppard on *Crepis capillaris* in grass by the path between the Machinery Centre and The Huts on 27 June 1983. The site has been searched each year since then, but without success. In July 2005, Peter Wilkinson found 6 plants growing amongst *Pentaglottis sempervirens* at the end of the equipment shed at The Greenhouses [9451 6853]; the first Silwood sighting for over 20 years. There were 50 plants in this population on 6 July 2006. Many fewer in 2007 and only one spike on 25 June 2008.

East Berks: in a clover field near Cookham through which the footpath leads to Great Marlow, in the common field opposite Bisham Wood, common about Park Place, Wellington College, Windsor, Bisham, Maidenhead, Wargrave, Hurley, Sonning railway cutting (1913), Arborfield, Barkham, Suttons grounds Reading (1920). Mostly in the Thames valley and absent from south-east Berkshire. Much declined. Sonning (RDG) in 1913, Sutton's grounds at Reading (RDG) in 1920. Once scattered throughout the area to the north and west of a line from Maidenhead to Arborfield, but always rare. Recent records only from Queens Eyot [9178] in 1988. 1% (1km²). Atlas 2000: all except [86]

West Berks: once found throughout the Thames valley and from scattered stations in the Kennet valley. Recent records include Shrivenham [28], Watchfield, Little Coxwell and Faringdon [29], Eastbury [3578], Hungerford Newtown [37], Buckland Warren, Hatfield, Southmoor and Pusey [39], East Ilsley [48], Fyfield Wick, on clover at Dry Sandford Pit [469996], Courtfield House, Frilford Heath, Abingdon cemetery and Kingston Bagpuize [49], Cumnor [40], Ashampstead [57], Blewburton Hill and Moulsoford [58], Didcot Power Station, Radley railway station, Little Wittenham Wood and Pumney Farm [59], AWRE Aldermaston [66], Basildon [67], Wallingford [68]. There were about 30 plants on the line of the former runway at Greenham Common in 2001. Still present in Cold Ash churchyard [57] in summer 2002. Uncommon at the top of chalky banks in the cutting where the B4001 passes under the M4 between Chilton Foliat and Lambourn Woodlands [327748] on 27 June 2004. Atlas 2000: all except [68], [69]

GESNERIACEAE

¶ **Ramonda** *R. myconi*

¶ **Sarmienta** *S. repens*

¶ **Sinningia** *S.* 'Mont Blanc'

¶ **Streptocarpus** *S. saxorum*

ACANTHACEAE

Acanthus mollis L. *Bear's-breech*

• hs 6

This is a statuesque herbaceous border plant which is long-lived as an outcast on dry waste ground or in hedgerows; it will not survive over winter in wet soil.

Silwood Park: the plants in the perennial bed at The Greenhouses are still common in July 2007 after 20 years of neglect.

Ascot: no records.

East Berks: Spencer's Wood, near Oxford Road in West Reading, Childs Hall, waste ground at Arlington Square in Bracknell during construction work in 1999, Lee Lane. 1% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: on the railway bank between Cholsey and Moulsoford [589852] in 1978. Waste ground in Newbury [4767], Maidenhead [9081] and central Abingdon [4997] in July 2002. Atlas 2000: [29], [68]

Acanthus spinosus L. *Spiny Bear's-breech*

• hs 6

Grown less commonly than *A. mollis* and found outside gardens much less frequently.

East Berks: Whiteknights, Alder Moor, Warren Row, Holloway, Cookham, Maidenhead. <1% (1km²). Atlas 2000: [77], [88]

West Berks: Atlas 2000: [46], [67]

¶ **Strobilanthes** *S. atropurpureus*

BIGNONIACEAE

¶ **Pyrostegia** *P. venusta*

Catalpa bignonioides Scop. *Indian Bean-tree*

• mm 6

An occasional street tree or park tree in towns, often hung with a heavy crop of long thin 'bean pods'. Sowing itself rather uncommonly.

East Berks: self-sown in Windsor, Maidenhead and Reading (1999). <1% (1km²).

West Berks: by the lake in Buckland Park [39] in 1970.

¶ **Incarvillea** *I. arguta*, *I. delavayi*, *I. mairei*, *I.* 'Snowtop'

¶ **Tecoma** *T. capensis*

¶ **Campsis** *C. radicans*

¶ **Eccremocarpus** *E. scaber*

LENTIBULARIACEAE

Pinguicula vulgaris L. *Common Butterwort* hr 5 ↓

Peaty bogs. Very local; “apparently absent from The Pang, Kennet and Loddon districts, but it is difficult to suggest a reason for its not occurring in the extensive bogs which are to be found in them” (Druce). Old peat cuttings and fens. Very local and confined to north Berkshire.

NVC: M 13

East Berks: no records.

West Berks: recently at Snelsmore Common [47], Frilford Heath golf course, with 6 flowering on 4 June 2008 [442986] and Cothill fen [49], Parsonage Moor with 23 plants on 7 September 2008 [460998], and Wootton fen [40]. Formerly (pre-1897) at Tubney [49], Boars Hill [40], West Hagbourne [58], Kennington [50].

Utricularia vulgaris L. *Greater Bladderwort* hyd 7 ↓

Slow streams, ditches, ponds, and canals preferring stagnant water. Nutrient-rich ditches and ponds in the Thames valley. Locally frequent but uncommon and flowering sporadically. Extinct at most of its former sites.

East Berks: rare or extinct in the western Thames from Reading down to Cookham. Dunstan Green Sonning, pond at the foot of Cookham Down, near Wargrave, Hurley, by the Thames in a marsh near Old Windsor, in good flower (1895). Sonning (**BM**) in 1800. Extinct in Old Windsor (last seen 1974). Littlejohns Farm at Reading (**LAN**) in 1957. Most recently at Cock Marsh (1999). <1% (1km²).

West Berks: scattered in the Thames valley from Wytham down to Pangbourne, and in the western reaches of the Kennet valley. Kintbury and Newbury [36], Hamstead Marshall [46], Wytham and Bablockhythe [40] (**OXF**), Thrupp [59], Kennington pits, Iffley Lasher (**OXF**) [50], Burghfield pit [66], Pangbourne and Basildon [67]. Atlas 2000: no records.

Utricularia australis R. Br. *Bladderwort* hyd 7 †

Utricularia vulgaris auct., non L.

Utricularia major auct., non Schmidel

Utricularia neglecta Lehm.

East Berks: Druce knew the plant from Sandhurst Royal Military Academy in 1897 (no specimen).

West Berks: recorded by Druce from Cothill fen (**OXF**) [4595] in 1893, 1895 and 1896 (det. P.M. Hall). Last reported from Barrow Farm Fen [469977] in 1971. There are some more recent field records, but in the absence of specimens these are best treated as doubtful. Probably extinct.

[Utricularia minor L. *Lesser Bladderwort*]

Utricularia bremii auct., non Heer

No reliable records or specimens.

CAMPANULACEAE

Campanula patula L. *Spreading Bellflower* hs 7 †

Casual in fields recently laid down to grass. Dry banks, very local and rare.

West Berks: Mortimer [66] in 1896, on Plateau Gravel near Bucklebury (OXF) [57] in 1925-30, Yattendon [57] in 1931, and Marlston [537710] in 1956-68 (LAN).

Campanula rapunculus L. *Rampion Bellflower* o hs 7 ↓

Dry grassland; very rare and decreasing.

East Berks: near Wokingham (1865), and in a grass field between Ascot and Binfield (Chavey Down, (OXF) in 1895). Extinct at these sites according to Bowen.

West Berks: only one post-1960 record from Bucklebury Church [553709]. There were 19th century records from Newbury [46], Bessels Leigh (OXF) [40], Bagley Wood [50]. Atlas 2000: [40]

Campanula lactiflora M. Bieb. *Milky Bellflower* ● hs 6
Gadellia lactiflora (M. Bieb.) T.V. Schul'kina

East Berks: this enormous plant (up to 2m tall) self-seeds freely in gardens, but is rather uncommon as a garden escape. On rough ground and banks in villages; Sunninghill (1998). <1% (1km²).

Campanula persicifolia L. *Peach-leaved Bellflower* ● hs 6

An essential component of the cottage garden plant community. Abundantly self-seeded and often found outside gardens on pavements, beneath walls and on open bare ground in villages. Dramatically increased or previously under-recorded.

Silwood Park: on Garden Wood Bank from imported topsoil in both blue- and white-flowered varieties in June 1991. Ashurst Church, several places in Cheapside Village, Old Orchard, Drive Lawns.

Ascot: Fernbank Road, Coronation Road, Ascot Station, South Ascot, Sunninghill, Upper Village Road, Charters Road, Locks Ride.

East Berks: not in Druce. In most of the villages and all of the towns. In Sonning [7575], people mow around these plants when they cut the grassy banks. Rare between Windsor and Winkfield. At the rear of 3M on Cain Road Bracknell on 2 September 2007. 24% (1km²). Atlas 2000: all except [78]

West Berks: common on dry ground in Sutton Courtenay [59] in 1998 and in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: all except [29], [36], [47], [48], [57], [58], [69]

Campanula medium L. *Canterbury-bells* ● hs 5

A cottage garden plant, occasionally self-seeding on waste ground. There are 3 types: single with an upright green calyx, cup-and-saucer (also known as 'Calycanthema') with the calyx held horizontally and concolorous with the bell, and double with petaloid stamens.

East Berks: not in Druce. Rare casual at Cookham Dean pit (1959). On bulldozed gravel at Reading Bridge [718739] and in the old nursery grounds at Suttons [733737] in 1979. Bulmershe [7573] in 2002. 1% (1km²). Atlas 2000: all except [78], [96]

West Berks: Seven Barrows [38] in 1963, Cainfield quarry [39] in 1965. Atlas 2000: [46]

Campanula alliariifolia Willd. *Cornish Bellflower* • hs 6

East Berks: a garden escape most commonly seen on railway embankments. Sunningdale (1994).

Campanula glomerata L. *Clustered Bellflower* hs 5

Chalk downs, calcareous pastures and dry banks. Also, occasionally as a garden escape on waste ground.

NVC: CG 2-5; U1

Silwood Park: it was sown in the Nash's Field experiment in 1991 but never appeared.

East Berks: meadows by Marlow and Bisham, Windsor, Wargrave, Hurley. Short chalk grassland; occasional. A rare casual elsewhere. Park Place, Hurley pit, Maidenhead Thicket, Quarry Woods. Confined to the northernmost reaches of the Thames chalk from Remenham to Cookham, with an outlying record (presumably a garden escape) from the Devil's Highway at Crowthorne [8362]. <1% (1km²). Atlas 2000: [78], [88]

West Berks: all but confined to the chalk (north of 75 and south of 90) as a native plant, and absent from the oolitic limestones of the Northern Loop, but there are scattered records of garden escapes elsewhere. Farncombe Down [27], Uffington Castle, Kingstone Coombes, Odstone Coombes, Fognam Down, above Compton Beauchamp [28], garden escape at Buscot Weir [29], Coombe Gibbet and Walbury Camp [36], Inholmes, Coppington Down and Heath Hanger Copse [37], Segsbury Camp, Hackpen Hill, Seven Barrows, Kingston Warren Down, Castle Hill, Dragon Hill and Whitehorse Hill [38], Hemley Copse [47], Chilton, Farnborough Downs and Knollend Down [48], Hurdle Shaw [57], Lowbury Hill, Blewbury, Aston Upthorpe Downs, Blewburton Camp, Streatley golf course, Unhill Bottom, Oven Bottom, Moulsoford Downs and Thurle Down [58], Pangbourne [67]. Atlas 2000: all except [29], [39], [47], [49], [40], [56], [50], [66], [68], [69]

Campanula pyramidalis L. *Chimney Bellflower* • h 5

East Berks: called Chimney Bellflower because the plant was used in fireplace flower arrangements in August when the fire was not needed. Self-seeds on walls where, like *Antirrhinum*s, it can become quite long-lived. Windsor Castle, 1997. <1% (1km²).

Campanula portenschlagiana Schult. *Adria Bellflower* • h 5

Garden walls. People have great difficulty remembering which is which amongst the two commonly naturalised Bellflowers that grow on garden walls. It is best, perhaps, to think of them as "Posh" and "Port". Port has deep, bell-shaped, flowers, while Posh has flat, star-shaped flowers, and is much more abundant. Port is deep dark Oxford blue, while Posh is pale Cambridge blue.

Ascot: locally common on walls in villages. Ascot Station, Sunninghill (1999), rare on graves in Sunningdale churchyard (2001).

East Berks: not in Druce or Bowen. 11% (1km²). Atlas 2000: all except [78]

West Berks: particularly common in Faringdon [2895] in July 2002. Atlas 2000: [28], [29], [37], [38], [46], [49], [40], [50], [66], [68]

Campanula poscharskyana Degen *Trailing Bellflower*

• h 3

A very popular, but rampant, rockery and wall plant; found in almost every cottage garden. One of the pair: “Posh” and “Port”, this (“Posh”) is the really common species of garden walls and pavements; it has flat star-shaped flowers with pale blue petals (see above). It is a frequent garden escape, found on walls and pavements in every village throughout the region. Much increased in abundance since Bowen’s time, but now apparently stable.

Silwood Park: wherever there are cottages; Sunninghill Crossroads, Cheapside Village, Silwood Lodge. Self-sown in brick pavement at the western entrance to the Centre for Population Biology on 24 May 2004, a long way from any parent plants. Reappeared in exactly the same spot after a long absence on 23 June 2013.

Ascot: locally dominant on stone walls of gardens, less common on brick. Never seen far from houses. Fernbank Road, Coronation Road, Victoria Road, South Ascot, Ascot Station, Kings Beeches, Sunninghill, Bridge Road, Charters Road, Sunningdale Park.

East Berks: in Reading (**RDG**) in 1931, but not in Druce or Bowen. Now common, widespread and sometimes locally abundant. 33% (1km²). Atlas 2000: all squares

West Berks: common in villages throughout. Atlas 2000: all except [39], [69]

Campanula latifolia L. *Giant Bellflower*

hs 7

This tall plant seeds itself freely in gardens and escapes quite often on waste ground and pathsides in villages. Calyx teeth erect or erecto-patent; middle stem leaves sessile with cuneate bases. NVC: W 8

East Berks: not in Druce. Whiteknights Park (1849) and again in the Wilderness in 1984. <1% (1km²). Atlas 2000: [77]

West Berks: Pusey House [39], Snelsmore East Common and Curridge [47], Frilford [49] and planted at Jarn Mound [40]. Atlas 2000: [40], [57]

Campanula trachelium L. *Nettle-leaved Bellflower*

hs 7

Old oak woods, thickets and hedges on nutrient-rich soils. Occasional but absent from very acid soils in south-east Berkshire, also found as garden escapes. Calyx teeth erect or erecto-patent; middle stem leaves petiolate and caudate. There is a story, possibly apocryphal, that when the publishers of the *Flora of the British Isles* insisted that every plant had to have an English name, the authors Clapham, Tutin and Warburg decided, mischievously, to play a trick on them by making up an obviously silly name for this (at the time) nameless plant. The name they came up with was *Bats in the belfry* (meaning “mad”); a not-so-thinly-veiled comment on their publisher’s foolishness. Needless to say, the name has stuck.

Silwood Park: rare on the Cannon Path on 12 July 1998, two plants in the rabbit enclosure opposite TTC, 4 years after the fence was erected (origin unknown); not seen since. Scattered plants on disturbed ground around The Greenhouses in July 2000; not seen again.

Ascot: locally frequent in the grounds of Magnolia House opposite the Civil Service College.

East Berks: frequent in woods about Marlow, Park Place, Arborfield, Wargrave, Ashley Hill, Cookham. All but restricted to the western part of the Thames valley from Twyford to Cookham, with outlying records from Arborfield. Garden escapes elsewhere as at Earley Station, Whiteknights, Downshire, Shottesbrooke, Newell Green, Warren Row, Inkydown Wood, Old Windsor. 1% (1km²). Atlas 2000: all except [76], [87]

West Berks: commonest in the Northern Loop and in [57] but scattered throughout. Inkpen, Cake Wood and Riever Wood [36], Great Ridge Wood, Little Ashridge Wood and Beedon Wood [47], Wytham, Appleton, Tubney Wood and Marley Woods [40], Little Ridge Copse, Longcroft and Long Park Copse, around Ashampstead and Hampstead Norreys [57], Unhill and Ham Woods [58], Bagley Wood [50], Mortimer and Padworth [66], Sulham, Tilehurst, Pangbourne and Tidmarsh [67]. Atlas 2000: all except [59], [66], [68], [69]

Campanula rapunculoides L. *Creeping Bellflower*

• hs 7

Dry woods, banks, hedges, plantations, gardens and waste ground near houses. Rare but persistent garden escape. A patch-forming plant with calyx-teeth patent or reflexed. A beautiful but terrifying weed, spreading both by underground runners and self-sowing.

Silwood Park: several patches around The Greenhouses; 7 July 1994 and still there in 2000. In several spots in Cheapside Village.

Ascot: local and rare in the grounds of Heatherwood Hospital.

East Berks: on the slopes of Windsor Castle, quite naturalized. Frogmore. One plant from near Wellington College. On a bank of the Blackwater in a wild-looking locality. Swallowfield churchyard, Sonning, Wargrave. Commonest in the Thames and Blackwater valleys. 1% (1km²). Atlas 2000: all except [78], [87], [88]

West Berks: scattered records to the north of 85 and from Hamstead Marshall [46]. Beckett Park and Shrivvenham [28], between Pusey and Hatford [39], Lockinge [48], Grove [49], Youlbury [40], railway near Abingdon [49], Boars Hill [4802], Oven Bottom [58], and formerly in a wood near Wallingford [68]. Atlas 2000: [28], [39], [47], [48], [49], [58], [59], [50], [67], [68]

Campanula rotundifolia L. *Harebell*

hs 7

Campanula giesekiana auct., non Vest

Heaths, commons, dry sandy fields, etc. Grassland, calcareous or acid, on dry soils. Occasional but absent from clay soils. Druce considered it to be "common and widely distributed" but it is definitely less common nowadays, perhaps as a result of fertiliser pollution and acid rain.

NVC: CG 2-5; MG 1; OV 29; U 1,20; W 23

Silwood Park: in acid grassland adjacent to the path from the Conservatory Steps to the Plane Tree, opposite the Wishing Well. It shows itself by flowering in August if the grass mowing is relaxed; non-flowering individuals, known by the roundness of their tiny basal leaves, are common in mossy turf around the *Liriodendron*, by the Monkey Puzzle, but I have never seen these plants in flower (one flower was found on 29 August 2005). In two places on Wishing Well Walk on 9 September 2007, inside rabbit fences around the base of young trees protected from mowing and grazing; 5 flowering stems beneath *Acer griseum* and one flowering stem beneath *Betula albosinensis* F19505. On 2

September 2008 there were masses of flowering stems in the rabbit guard around the *Acer* but only one beneath the *Betula*. In September 2009 there were 3 plants inside the *Betula* fence and 5 plants inside the *Acer* fence. In late July 2010 both fenced populations were in very good shape, following the driest growing season in memory. Also on West Observatory Ridge. Sown on the Chalk Plots and seen from 1984 to 1990 but not seen again until September 2004, when it was occasional on Plots 4 and 5; in late August 2005 there were 3 plants on Plot 5 and 1 plant on Plot 7, all close to the central path. There were 10 flowering stems on Plot 5 on 3 September 2008 close to the boundary with Plot 1, but none on any of the other plots (and none on the New Chalk Plots at Ashurst). Absent from most of the grasslands where you might expect it to be (e.g. Nash's Field, Gravel Pit). In the grassland between the Chalk Plots and the mown expanse of Silwood Bottom by the Suction Trap in September 2000; this population is very shy of flowering. A single individual in the upper half of Block H of the Tilman Plots (sown October 1991) but not recorded until 13 July 2004. There were 5 plants on Plot 5 of the Chalk Plots and 1 on the boundary of Plots 4 and 7 on 29 August 2010.

Ascot: local and rare in ancient meadowland in Windsor Great Park.

East Berks: occasional in chalk grasslands in the northern Thames valley from Remenham to Maidenhead Thicket, but rare or absent elsewhere. Locally frequent on railway-side banks at Martins Heron [8868] in September 2002. The disjoint distribution suggests that there might be different chalk and acid ecotypes; the plant is certainly quite variable in morphology and often lacks the really round basal leaves for which the species is named. 3% (1km²). Atlas 2000: all squares

West Berks: occasional throughout, especially in old chalk grasslands along the Ridgeway, but rare on clay soils. Curiously, it is absent or rare to the south of Reading (to the east of 60). Common in the churchyards of St Nicholas Newbury [46] and St Mark Cold Ash [57]. Atlas 2000: all except [68], [69]

¶ **Campanula** *C. alliariifolia*, *C. arvatica*, *C. betulifolia*, *C.* 'Birch Hybrid', *C.* 'Burghaltii', *C. carpatica* 'Blaue Clips', *C. cochleariifolia*, *C. cochleariifolia* 'Elizabeth Oliver', *C.* 'E.K. Toogood', *C.* 'Elizabeth', *C. garganica*, *C. glomerata* var. *alba*, *C. glomerata* 'Superba', *C. x haylodgensis* 'Plena', *C. incurva*, *C.* 'Kent Belle', *C. lactiflora*, *C. lactiflora* 'Loddon Anna', *C. lactiflora* 'Pouffe', *C. lactiflora* 'Prichard's Variety', *C. lactiflora* 'White Pouffe', *C. latifolia*, *C. latifolia* 'Brantwood', *C. latifolia* var. *macrantha*, *C. latiloba* 'Alba', *C. latiloba* 'Hidcote Amethyst', *C. latiloba* 'Highcliffe Variety', *C. latiloba* 'Percy Piper', *C. ochroleuca*, *C. persicifolia alba*, *C. persicifolia* 'Boule de Neige', *C. persicifolia* 'Chettle Charm', *C. persicifolia* 'Fleur de Neige', *C. persicifolia* 'Gawen', *C. persicifolia* 'Pride of Exmouth', *C. persicifolia* 'Telham Beauty', *C. persicifolia* 'Wortham Belle', *C. primulifolia*, *C. pulla*, *C. pulla alba*, *C. punctata*, *C. punctata* 'Rubriflora', *C. raddeana*, *C. rainieri*, *C. takesimana*, *C. trachelium* 'Alba Flore Pleno', *C. trachelium* 'Bernice'

¶ **Symphyandra** *S. armena*, *S. wanneri*, *S. zanzegura*

¶ **Trachelium** *T. caeruleum*

Legousia hybrida (L.) Delarbre *Venus's-looking-glass*

o th 5 ↓

Campanula hybrida L.

Specularia hybrida (L.) A. DC.

Cornfields on calcareous soil; absent from south-east Berkshire. Much decreased through the universal use of herbicides in arable crops. Occasional on set-aside land.

NVC: OV 15

East Berks: formerly an arable weed in the north of the area at Remenham, Windsor, Wargrave, Twyford, Waltham, Arborfield. Now virtually extinct and known from only one site at Crazies Hill and another at Hurley. <1% (1km²). Atlas 2000: [78], [88]

West Berks: occasional to the north of 75, absent or rare to the south of this. Kingstone Down and Wayland's Smithy [28], by the track from Great Coxwell to Collymore Farm [260939], Sheepdrove Farm and Coppington Down [37], Britchcombe Farm, Letcombe Bowers Farm, Crog Hill and Whitehorse Hill [38], Stanford-in-the-Vale, Buckland, Hatford and Pusey [39], Chieveley, Chaddleworth, Lilley, Beedon Hill and Peasemore [47], East Ilsley and Willsley [48], Frilford, Cothill and Marcham [49], Wootton, Wytham and a sandy field on Boars Hill [40], Thatcham Marsh [56], Aston Upthorpe Downs, Aston Tirrold, Lollingdon Hill, Compton, Blewbury, Streatley, Moulsoford and Cholsey [58], Radley and Pumney Farm [59], South Hinksey [50], Sulham and Basildon [67]. Atlas 2000: all except [46], [66], [68], [69]

Wahlenbergia hederacea (L.) Rchb. *Ivy-leaved Bellflower* chh 7 †
Cervicina hederacea Delile
Campanula hederacea L.

Shady, boggy places in acid woodland rides. Very local and rare. Possibly introduced.

West Berks: in Bagley wood on each side of the Abingdon road [5002]. First recorded here by Merrett in 1666 and mentioned by T. Lawson in a letter to John Ray dated 9 April 1688. Last recorded in 1956. There is a second record from Wootton Heath [50] in 1865, but this was never seen again.

¶ **Wahlenbergia** *W. gloriosa*

¶ **Phyteuma** *P. scheuchzeri*

Jasione montana L. *Sheep's-bit* hs 5 ↓

Dry wood margins, heaths, banks and railway cuttings on acid soils. Rare and decreasing.
NVC: W 23

East Berks: railway cutting at Wellington College, Bearwood, Arborfield, Ambarrow, plentiful on the railway-side at Sandhurst (all pre-1897). Ambarrow Hill (1950), by the railway at Sandhurst Lodge (1961) and Queens Mere (1964), Warren Row (1966), Ascot (1951). Warren Row [8180]. <1% (1km²). Atlas 2000: [86], [88]

West Berks: extinct in the Northern Loop and known only from Cold Ash [56] and Beenham [66] in Bowen's time. There are nineteenth century records from Boars Hill [40], Tubney [49], Hermitage and Fence Wood [57]. Atlas 2000: no records.

Lobelia erinus L. *Garden Lobelia* • th 5 ↑

One of the most frequent hanging basket and window box escapes in towns and villages. Common in cracks in paving stones and at the base of walls, often immediately below a hanging basket. Especially frequent outside public houses that have automated irrigation systems, as these keep the pavements moist throughout the summer months. Also on waste ground and railway lines.

Silwood Park: cracks in pavements at the Refectory; cultivated as a tub plant in several cultivars, and the dark blue 'Oxford' form is naturalized and persistent in cracks in the patio pavement; August 1979 (with *Aubrieta deltoidea*). Still there in 2000. Southwood Halls, rare on compacted ground, where two plants were self-sown in the gravel roadway at the rear on 7 September 1983. Not persistent. Garden Wood Bank on imported topsoil in the first year after planting; 2 pale blue 'Cambridge' forms 25 August 1989. Manor House, self-sown on lawn edges on the Lily Pond side in June 2000. Disturbed soil at the bottom of Ashurst churchyard in August 2002, and below the new boundary fence at The Cedars in September 2002. Locally frequent in the gateway in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005, with very rare white-flowered individuals amongst the Oxford-blue. Dark blue plants in the lawn on the line of the removed conifer hedge at Silwood Lodge on 26 July 2009. A single plant by the new road to the renovated Silwood Farm on 29 August 2011. Probably imported with topsoil used for landscaping the banks close to the gate onto Buckhurst Road.

Ascot: paving cracks on Ascot High Street, Upper Village Road in Sunninghill on tarmac at the Dog and Partridge and the Carpenters Arms, outside The Swinley in South Ascot. Locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road on 29 August 2004. Locally frequent on ruins during construction work on the new Grandstand at Ascot Racecourse in August 2005; the Oxford-blue form was frequent, Cambridge-blue form occasional and the white form very rare. On the edge of new grass by the Ascot United road on 16 September 2006. A single dark-blue flowered plant growing from the lowest course of bricks above the drive of 86a Upper Village Road Sunninghill on 25 June 2008, more than 10m from the nearest of last year's hanging baskets.

East Berks: not in Druce. Rare casual on rubbish tips at Reading (1962). Now occasional on pavements and waste ground in Reading, Windsor, Wokingham, Bracknell, Cookham and Maidenhead. Often self-sown by lock-keepers cottages on the Thames, as at Old Windsor Lock. 11% (1km²). Atlas 2000: all squares

West Berks: much commoner on the pavements of Faringdon [2895] than either Newbury [4767] or Abingdon [4997] in July 2002. Atlas 2000: all except [39], [47], [48], [57], [58], [67], [69]

¶ **Lobelia** *L.* 'Butterfly Blue', *L.* 'Butterfly Rose', *L. cardinalis*, *L.* 'Dark Crusader', *L.* 'Eulalia Berridge', *L.* 'Fan Tiefrot', *L.* 'Fan Zinnoberrosa', *L. x gerardii* 'Vedrariensis', *L.* 'Kompliment Blau', *L.* 'Kompliment Scharlach', *L. laxiflora* var. *angustifolia*, *L.* 'Pink Elephant', *L.* 'Pink Flamingo', *L.* 'Queen Victoria', *L.* 'Russian Princess', *L.* 'Sandy's Pink', *L. sessilifolia*, *L. siphilitica*, *L. siphilitica* 'Alba', *L.* 'Tania', *L. tupa*

¶ **Pratia** *P. pedunculata* 'County Park'

¶ **Platycodon** *P. grandiflorus*, *P. grandiflorus albus*, *P. grandiflorus* 'Apoyama', *P. grandiflorus* 'Fuji Pink', *P. grandiflorus* 'Hakone', *P. grandiflorus* 'Mariesii'

¶ **Downingia** *D. elegans*

GOODENIACEAE

¶ **Scaevola** *S. aemula* 'Blue Fan'

RUBIACEAE

Sherardia arvensis L. *Field Madder*

th 5 ↓

Short calcareous grassland, arable land, roadsides, dry lawns and waste ground in towns. Druce thought it was “very common in all suitable locations and generally distributed”, while Bowen had it down as “occasional, but absent from very acid soils in south-east Berks”. These days, it is distinctly uncommon in most places.

NVC: OV 9,15

Silwood Park: local and rare on cinder paths at the pot standing by The Greenhouses on 25 April 2000. This is certainly a recent arrival and would not have been missed in this position. It will be interesting to see if it persists (see also *Galium parisiense*).

Ascot: rare on Coronation Road in 1998. Very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005.

East Berks: all but confined to the western parts of the Thames valley from Reading to Cookham. Absent or rare elsewhere but for outlying records from Jealott’s Hill [8673] and Wellington College [8363]. Recently at Bulmershe, Hurst, North Twyford, in lawns at Bisham, Temple Coombe, Road Research Lab at Crowthorne, Waltham St Lawrence, Warfield Park, Temple golf course, Pinkneys Green, Bray Meads, Sheephouse Farm, Brookside, Ham Island. 3% (1km²). Atlas 2000: all squares

West Berks: occasional throughout the interior, but rare to the south of 70 and on the northern clay (north of 90 and south of 95). In arable land at Silchester [6464] in 2002. Locally common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all except [68], [69]

Phuopsis stylosa (Trin.) Benth. & Hook.f. ex B.D. Jacks. *Caucasian Crosswort*
Crucianella stylosa Trin.

• th 6

An uncommon garden plant that looks like a big, red-flowered *Sherardia*.

West Berks: in a plantation at Lockinge [4387] in 1964. Abingdon cemetery [487973] in 2002. Self-sown in the Old Rectory at Burghfield [6668] and in pavement cracks at Coleshill [2393] in June 2004.

¶ **Phuopsis** *P. stylosa*, *P. stylosa* ‘Purpurea’

Asperula arvensis L. *Blue Woodruff*

• th 6 †

A bird-seed and grain alien, sometimes confused with *A. orientalis* (see below).

East Berks: collected by Melville at Hurst Grove [7972] in 1897. Found in a garden in Tilehurst [76] in 1968.

West Berks: there are nineteenth century records from Wickham [37], Newbury [46], Cothill [49] and Didcot [59], mostly from the railway.

[**Asperula orientalis** Boiss. & Hohen. *Blue Woodruff*]
Asperula azurea Jaub. & Spach

• th 6

This is the other blue woodruff. It has a much longer corolla than *A. arvensis* (7-14mm rather than 5-6.5mm) and has not yet been recorded outside gardens in Berkshire. It is grown as one of the few garden annuals that will thrive in slightly shaded, moist places like stream banks.

Asperula cynanchica L. *Squinancywort*
Asperula cynanchica subsp. ***cynanchica***

hp 6

Grassy chalk downs, of which it is a frequent and characteristic plant. Absent from the clays and Bagshot Sands.
NVC: CG 2-5

East Berks: confined to the chalk of the western Thames valley from Wargrave to Cookham. Bank of the road from Maidenhead to Henley, foot of Winter Hill, Park Place, Wargrave, Cookham. Still at Remenham, Crazies Hill, Hurley pit, Winter Hill, Cookham Down. <1% (1km²). Atlas 2000: [78], [88]

West Berks: occasional on both the chalk and the oolitic limestone. In a band north of 80 and south of 90 al the way from Kingstone Down to Streatley, as at Odstone Coombes and Weathercock Down [28], Whitehorse Hill, Pigtrough Bottom, Uffington East Coombe, Castle Hill, Crog Hill and Hackpen Hill [38], Ilsley Bottom, Knollend Down, Chilton Down and East Ardington Down [48], Aston Upthorpe Downs, Oven Bottom, Churn Rifle Range, Blewburton Hill, The Fair Mile and Moulsoford Downs [58], with outlying stations at Wytham [40] in the north and on the downs above Inkpen [36] in the south. Atlas 2000: all except [29], [39], [47], [49], [50], [66], [68], [69]

¶ ***Asperula*** *A. orientalis*, *A. sintenisii*

Galium odoratum (L.) Scop. *Woodruff*
Asperula odorata L.

hp 5

Oak, beech and ash woods on dry soils. Locally abundant in some of the better woods on the chalk downs, but less frequent in the heathy woods of the south. Commonly planted in woodland on the larger estates, and sometimes found as an obvious garden escape. The seeds often take more than a year to germinate.

NVC: W 8,10,12,14

Ascot: no records.

East Berks: woods about Bisham and Marlow, common about Park Place, Rose Hill, Wargrave, Ashley Hill, above the Dewdrop Inn, Bowsey Hill, Cookham, Culham Woods near Hurley, Windsor Great Park. Quarry Wood. Restricted to the chalk of the western Thames valley from Park Place to Cookham. Absent from the interior (south of 80) except for outlying records from Riseley and Finchampstead on the Hampshire border. Recently at Farley Court, The Leas, Rivermead, The Mount, Remenham Wood, Culham Court, Crazies Hill, Rosehill Wood, Heath Pond, Scotlands, Hurley, Burchett's Green, Temple, Inkydown Wood, in the northern block of Maidenhead Thicket at Pinkneys Green, Cookham Dean, Quarry Wood, Bisham, Dial Close, Winter Hill. 4% (1km²). Atlas 2000: all except [96]

West Berks: occasional throughout the Kennet and Lambourn valleys, but rare or absent from the Thames valley and the chalk. The Sutton Courtenay Manor population [5093] is impressive, but almost certainly planted. Frequent in the ash woodlands as at Lynch Wood at Lambourn [3279] and on RAF Welford [4175]. Atlas 2000: all except [49], [66], [68], [69]

Galium uliginosum L. *Fen Bedstraw*

hel 7

Fens, marshes, among rushes at the borders of ponds, water meadows, rarely in dry woods. Rare and decreasing in south Berkshire; absent from the chalk. Told from *G. palustre* by its mucronate (not rounded) leaf tips, and leaves in whorls of 5 to 8 (not 4 to 6).

NVC: M 13,22,24,27; OV 26; S 4,18,25,26; W 1,4,6

Ascot: local and uncommon in wet grassland by Johnson’s Pond, South Forest, Leiper Hill and Hilton’s Covert. Not in Silwood Park. Uncommon on the last of the soil piles by New Mile Road, following racecourse construction in September 2006.

East Berks: Swallowfield, Marlow, Maiden Earley, Park Place, Bagshot, Sandhurst, Blackwater, Long Moor, Coleman’s Moor, Ambarrow. Rare to the west of 80, with an outlying stations at Eversley Bridge, Heath Lake and wet grassland to the west of Virginia Water in Windsor Great Park (1979-2000). Moor Green Lakes nature reserve [8062] in 2001. Waste ground in Bracknell [8868] in October 2003. 1% (1km²). Atlas 2000: all except [78]

West Berks: in the Thames and Kennet valleys but absent from the interior: Beckett Park and Tuckmill Meadow [28], Furze Hills [29], Carswell [39], Rack Marsh, Bagnor, Sandleford, Newbury Wash, Enborne, Hamstead Marshall and Greenham Common [46], Snelsmore Common and Boxford [47], Frilford Heath, Cothill, Tubney and Marcham [49], Wytham, Hinksey and Chilswell [40], Crookham Heath, Turners Green, Aldermaston and Beenham [56], Fence Wood and Hermitage [57], Rippon Hall [59], Bagley and South Hinksey [50], Mortimer, Burghfield, Silchester and Padworth [66]. Atlas 2000: all except [38], [48], [66], [68], [69]

Galium palustre L.

hel 6

Meadows, marshes, wet woodlands, ditches, pond-sides and by rivers; common and widely distributed in many habitats. Told from *G. uliginosum* by the rounded leaf tips (not mucronate) and leaves in whorls of 4 to 6 (not 5 to 8).

NVC: M 13,22,24,27; OV 26,28,35; S 3-8,10,12,14-16,18,19,22,25,26,28; W 1,4-6,8

Silwood Park: common in swampy woodlands around The Lake and in wet grasslands like Pond Field and Rush Meadow. Also at Farm Road, Guinness’s Bridge, The Marsh, Wood Bank, Water Meadow, Nash’s Copse, South Lodge. By the ferruginous flush at the bottom of Farm Wood in 2007. Rare in damp grass by the Japanese Garden gate into the Rhododendron Planting behind the tennis court on 4 June 2007 in the third year after fencing. Grew well in the wet summer of 2007, especially in Pond Field following cutting of the rushes in the very dry April 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	13	18

Ascot: common on the southern shore of Virginia Water, in Sunningwell Bog and South Ascot Bog.

East Berks: locally frequent throughout. Abundant in the Wish Stream. 16% (1km²). Atlas 2000: all squares

West Berks: common in the north and the south, flowering profusely in dry summers; absent or rare in the interior (north of 75 and south of 85).

The distribution of the two subspecies has not been worked out in detail in Berkshire, but they may be ecologically distinct and would certainly repay further study.

Galium palustre subsp. **palustre** *Common Marsh-bedstraw* hel 6
Galium witheringii Smith
Galium palustre L. subsp. *tetraploideum* Clapham

Most of the leaves are short (< 20mm) and the inflorescence is narrow and cylindrical, with pedicels less than 4mm at flowering and small flowers (the corolla is 2-3.5mm across). This is a more delicate plant than subsp. *elongatum*.

East Berks: Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Galium palustre subsp. **elongatum** (C. Presl) Arcang. *Great Marsh-bedstraw* hel 6
Galium elongatum C. Presl

Most of the leaves are long (> 20mm) and the inflorescence is broadly conical, with pedicels mostly more than 4mm at flowering and larger flowers (the corolla is 3-4.5 mm across). This is a more robust plant than subsp. *palustre*.

East Berks: Jouldern's Ford, Thatcher's Ford, Old Windsor, etc. Atlas 2000: [76], [86], [88]

West Berks: by the R. Kennet at Marsh Benham [4266] in July 2006 (D. Broughton). Atlas 2000: [36], [40], [56], [57], [58], [67], [68]

Galium verum L. *Lady's Bedstraw* hp 7

Dry pastures, field borders, chalk grasslands, hay meadows and roadsides "not only in dry sandy places but sometimes in clayey meadows. Frequent and a considerable factor in the colour effect of our meadows and pastures" (Druce). Locally frequent on calcareous soils, but rare or absent on very acid soils in south-east Berkshire. Red-tip gall is caused by the midge *Dasyneura gallicola*.
 NVC: CG 2-5; M 24; MG 1,4,5,9; U 1,20

Silwood Park: in the more nutrient-rich, dry grasslands at Nursery Field, Ashurst churchyard, Oak Mead, The Oaks, Biodepth, Church Lane, Ashurst Path, Chalk Plots, Hill Field, local in Nash's Field and commonest on Nash's Ridge, Tilman Plots (especially in the fences of Block J), The Elms, frequent on the exposed lip of the Ha Ha, Nuclear Reactor, Heronsbrook, local beneath the Met Tower. Locally abundant in large patches inside the deer and rabbit enclosure in Oak Mead and in the New Chalk Plots at Ashurst in 2002-07. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	17

East Berks: occasional throughout, but more abundant on the chalk. In a very unusual habitat, growing on the stonework of the south-facing walls of Wokingham Church in September 2004. 18% (1km²). Atlas 2000: all squares

West Berks: abundant in old chalk grasslands, as at Whitehorse Hill [2986] and on the ramparts of Segsbury Camp [3884]. Atlas 2000: all squares

Galium x pomeranicum Retz. = **G. verum** x **G. mollugo**

West Berks: at Bagley Wood [50] in 1888 (**OXF**), on the railway bank at Compton [5279] in 1960 (**LAN**), Fair Mile [560833] in 1962 (det. C.J. Cadbury).

Galium mollugo L. *Hedge Bedstraw* hp 6

Hedges, railway-embankments, thickets, woodland rides, chalk grasslands and roadsides on nutrient-rich soils. "A great ornament to our hedgerows when in flower" (Druce). Occasional but absent from very acid soils in south-east Berkshire. Spherical galls on shoots are caused by *Geocrypta galii*.
NVC: CG 3-5, MG 1; W 12,25

The distributions of the two subspecies are imperfectly known in Berkshire, but they are of doubtful utility given the degree of variability encountered.

Galium mollugo subsp. **mollugo** hp 6

The corolla is small (2-3mm across), the leaves are broad and the inflorescence branches at 45°. The plant is found in grassy hedge-banks.

Silwood Park: thriving where it was sown in 1996 in the Oak Mead experiment inside the rabbit fences, with flowers up to 1.5m, overtopping even the tallest grasses on 1 July 2000. Commonest in Block D in both fenced and unfenced plots in July 2002. A spectacular population covering one entire side of the bird netting cage erected over the Water Hyacinth aquaria behind the CABI Quarantine Greenhouses on 18 June 2002; origin unknown. This population had crossed the road and was abundant amongst Brambles on the Southwood Halls side by November 2004. Not known from natural habitats, and probably always introduced.

Ascot: no other records.

East Berks: recently at Rivermead, Rose Kiln Lane, Twyford, Sheeplands, Wargrave, Furze Covert, Loddon Mouth, Wargrave, Highfield Park, Remenham, Aston, Culham Court, Crazies Hill, Rosehill, Billingbear, Wildridings, Bill Hill, Ashridgewood, Broad Common, Charity Wood, Waltham St Lawrence, Burdows Farm, Pudding Hill, Hurley, Prospect Hill, Temple, Dungrovehill, Maidenhead Thicket, Winter Hill, North Town, Cookham, Sutherland, Windsor Castle. 8% (1km²). Atlas 2000: all squares

West Berks: on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37]. Atlas 2000: all squares

Galium mollugo subsp. **erectum** Syme hp 6

Galium album Miller

Galium erectum Hudson (1778), non Hudson (1762)

Galium mollugo L. subsp. *album* (Miller) Clapham, nom. inval.

The corolla is large (2.5-5mm across), the leaves are narrow and the inflorescence is dense with its branches at less than 45°. More typically found on dry chalky soils.

East Berks: meadows and pastures; very local and rather rare. Abundant in a field on the Berkshire side just below Albert Bridge at Old Windsor, Bray meadow, in a field recently laid to grass at Cookham. More of a colonist than a native in our area.

Galium pumilum Murray *Slender Bedstraw*

hp 6 ↓

Galium sylvestre Poll.

Galium apserum Schreb.

A local speciality of herb-rich chalk grassland, thriving at sites where the turf is grazed, mown or kept short and thin by exposure. Associates include *Cirsium acaule*, *Gymnadenia conopsea*, *Helianthemum nummularium*, *Hippocrepis comosa* and *Polygala calcarea*. Destruction of chalk grassland for arable agriculture and cessation of grazing on what little grassland remains has undoubtedly caused considerable losses. Told from *G. sternerii* (not a Berkshire plant) by the surface of the fruit which has minute, low-domed or rounded tubercles (not high-domed, sub-acute tubercles). Told from *G. saxatile* (an extremely common Berkshire plant) by the leaf margins. The prickles are all forward directed in *G. saxatile* but at least some of the prickles are backward directed in *G. pumilum*. The leaves on the flowering shoots are also different shapes: fatter (oblanceolate) in *G. saxatile* and more slender (linear to linear elliptic) in *G. pumilum*. The overall jizz is distinctive, too, because *G. pumilum* is an upright (not creeping) plant.

East Berks: very local on the chalk at Hurley pit (1965) (det. R.S.R. Fitter). Old Windsor (**HULL**) in 1879. Atlas 2000: no records.

West Berks: very local near Sulham [67]. Found by Mr. Tufnail on “a grassy slope on which the prevailing vegetation consists of *Galium mollugo*, *Gentianella amarella*, *Asperula cynanchica*, *Campanula glomerata*, *Bromopsis erecta*, *Helictotrichon pubescens*, etc. A few larches have been planted in the vicinity, and there is a patch of *Euphorbia cyparissias* on the same slope, but it is not very near to the *Galium*, which I am disposed to think may be a native species here” (Druce 1897). Frilford Heath golf course (**OXF**) [49] in 1912, Sulham [67] again in 1954 (see above), in calcareous grassland on Wytham Hill [40] in 1961. There are no specimens of most of these. Atlas 2000: [38], [40]

Galium saxatile L. *Heath Bedstraw*

hp 6

Galium hercynicum Weigel

Galium rupicola Bertol.

Short acid grasslands, heathland, open woods and rides through pine plantations; locally abundant and a conspicuous feature in the heathy districts when in flower. Absent from large tracts of chalk and clay soils.

NVC: M 15,19; OV 27; U 1,2,4,20; W 4,10,16,23,25

Silwood Park: locally abundant in short acid grassland and in clearings in woods (as on Rookery Slope). A pronounced increaser under heavy rabbit grazing in Nash’s Field, often with *Rumex acetosella*. In the rabbit enclosure on Gunness’s Hill it benefits from competitor release in years when the aphid *Holcaphis holci* is abundant, because the insect reduces the vigour of the Bedstraw’s principal competitor, the grass *Holcus mollis*. It was particularly abundant in 1996 after the great drought of 1995 had set back the perennial grasses. It has recovered well on The Heath (Cannon Path) by July 2002, following the erection of a rabbit fence in 2001. Very local in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a few scattered plants in otherwise bare ground on 27 May 2006; there were three dense patches (each more than 1m diameter) on 4 June 2007 in otherwise bare leaf litter close to the fence next to the Pinetum.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
8	9	17	19	35

Ascot: Rapley Lake, Thornhill, Blane's Allotment, Swinley Park, Whitmoor Bog, Tower Hill, Englemere, Fernbank Road, Kingsride, Woodlands Ride, North Ascot, Coronation Road, Ascot Heath, Charters Road, Blacknest Park, Windsor Great Park. Locally frequent in heathy ground by the hockey pitch in Frognall [939677] in September 2005.

East Berks: common on heathy rides in Bracknell Forest. Generally distributed to the south of 75 and the east of 90, but absent or rare in the western Thames valley and on chalk or clay soils. 15% (1km²). Atlas 2000: all squares

West Berks: throughout the Kennet valley, occasional in the Northern Loop but absent from the whole of the interior (north of 75 and south of 00). Atlas 2000: all except [28], [37], [48], [58], [59], [68], [69]

Galium aparine L. *Cleavers*

th 6 ↑

Hedgerows, waste places, cultivated ground, thickets, etc. Very common in a wide range of habitats, except on uncultivated chalk downs and the acid heaths. Much increased in abundance with eutrophication of hedgerows by fertiliser drift. One of the few annual plants capable of competing with rank grasses and umbellifers. Leaf roll galls are caused by the mite *Eriophyes galii*.

NVC: M 27; MG 1; OV 3,7-8,10,13,15,16,18,23-27,33,41; S 3-7,18,25,26,28;

W 1,5,6,8,10,12,21,22,24,25

Silwood Park: nettle beds, bramble thickets, woods, cultivated ground and rough grassland. The 18th most frequent species in Silwood in the one hectare plots. Common on imported topsoil at Ashurst lysimeters in May 2004. Locally abundant amongst nettles by year 3 after fencing in the Tennis Court Rhododendron Plantation on 4 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
3	7	5	47	73

East Berks: 92% (1km²); only 2 other annuals are more frequent than this, *Poa annua* (99%) and *Sonchus asper* (93%). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Galium spurium L. *False Cleavers*

th 7 †

Galium vaillantii DC.

Galium spurium L. forma *vaillantii* (DC.) R.M. Moore

East Berks: Reading (1918).

West Berks: on the railway at Didcot [59] and on rubbish at Grandpont [50] in 1897 but only for one season, and at Cothill [49] in 1908 (no specimens). Not an established native arable weed with us.

Galium tricornutum Dandy *Corn Cleavers*

th 6 ↓

A *Red Data Book* species, once a widespread weed of autumn-cultivated arable fields in south-east England. Generally thought to be a poor competitor compared to *G. aparine*, it is usually confined to field margins and other places where the crop is thin. Its numbers are highly variable from year to year and it does not appear to have a large, long-lived seed bank. Told from *G. aparine* by the lack of any hooked bristles on the fruits of *G. tricornutum*.

East Berks: not seen by Druce. No recent records but collected once at Arborfield (RDG) in 1960.

West Berks: in Wytham Upper Seeds with other arable weeds like *Ranunculus parviflorus*, *Sherardia arvensis* and *Vicia tenuissima*, but not seen recently. Older records (1960s) from Fair Mile (LAN) [5583] and Wayland's Smithy [284854]. There are nineteenth century records from Marcham [49] (OXF) and Wootton [58] (RNG). Atlas 2000: [28], [46], [40]. There is a plan (early 2013) to reintroduce the plant to The Triangle at Upper Seeds at Wytham, using seeds from the Rothamstead population.

Galium parisiense L. *Wall Bedstraw*

th 6 ↑

A small annual plant of ancient walls and bare places, typically growing with *Arenaria serpyllifolia* subsp. *leptocladus*, *Catapodium rigidum*, *Erophila verna*, *Sagina apetala*, *Saxifraga tridactylites*, etc. Autumn germinated plants are likely to be killed by frost, and spring germinated plants are extremely sensitive to competition from more vigorous perennials, especially under nutrient enrichment. Told from other bedstraws by its slender stature, smooth fruits and leaf margins with forward directed prickles. Probably extinct as a native, but persists as a casual introduction, and appears to be undergoing something of a renaissance.

Silwood Park: a fine plant, growing on its own in dry bare soil at the base of the wall of the Centre for Population Biology between the brickwork and the edge of the lawn on 29 June 2000. Origin unknown. Opposite the *Cornus nuttallii* at the North Block end of the CPB building [9471 6865]. More than 30 plants in June 2001, the offspring of which germinated in September 2001; they survived the frosty winter of 2001-02, and the population was in good shape in June 2002, having spread around the corner of the building into cracks between the brick paving stones. By May 2004, the whole corner was dominated by a monoculture of *G. parisiense*, there having been no serious frosts, and equally abundant in April 2005. Cut down while in flower by an untutored gardener in July 2006, but it survived and seedlings were common after late August rains on 25 August 2006. The population was very sparse on 26 August 2007 with only a few plants germinated, and much bare ground, but a reasonable seed crop had been set in July 2007. Very little to be seen in December 2007, and only a sparse coverage of young plants in April 2008, but by fruiting on 19 June 2008 there was about 50% cover of rather spindly plants.

East Berks: Silwood Park, new to v.c.22 in 2000. <1% (1km²).

West Berks: there is a pre-1970 record from [57] in the Scarce Plant Atlas, but I can not find any details of it. Found by Bill Helyar in June 2001 on a topsoil dump on Tadley Common [605626].

¶ **Galium** *G. odoratum*

Cruciata laevipes Opiz *Crosswort*

hp 5 ↓

Galium cruciata (L.) Scop.

Cruciata chersonensis auct., non (Willd.) Ehrend.

Hedges, woods, thickets, roadsides and rough grasslands; locally abundant but absent from considerable areas, and avoiding acid soils. "A conspicuous feature in the vegetation of the lanes in the central part of the county" (Druce); you certainly would not write that nowadays, when it is local and uncommon. A victim of fertilizer pollution and other kinds of eutrophication. This species has an extremely odd distribution within Berkshire.

NVC: CG 3,4; MG 1; W 24

Silwood Park: recently imported; very local and rare. Locally abundant by the door of the bird-cage at the end of the CABI Polytunnel on North Gravel, amongst *Galium mollugo* on 8 May 2003. Still there, and spreading to c. 5m length of road frontage on 10 May 2004. Still thriving, but not spread much further by 10 May 2007. It is not clear how the plant was introduced, but it is certainly not native in Silwood Park.

Ascot: no other records; the Silwood record for [96] in 2003 was the first for the district.

East Berks: Bisham Wood, Shinfield, Arborfield, Hurst, Loddon Bridge, Ashley Hill, Cookham. Occasional, but with a puzzling distribution pattern centred on Reading. Scattered, not recorded to the east of 90 or the south of 65. On the chalk, very local in longer grass just below the car park on the crest of Winter Hill. Great Copse, Dinton Pastures [783718]. A single isolated clump in long grass on a lane-side near Moor Copse [743665] in June 2003. <1% (1km²). Atlas 2000: [76], [77], [87], [88]

West Berks: commonest in the south-east [57], [66] and [67], but occasional in the western reaches of the Thames valley from Swinley Down, Fognam Down, Ashdown Park and Kingston Down [28], Coleshill, Badbury Hill, and Buscot [29], Buckland, Hinton Waldrist and Pusey [39] down to Cumnor and Wytham [40], Marcham and Tubney [49], with outlying stations in Hungerford, Inkpen and Riever Wood [36]. The main distribution is around Aldermaston and Chapel Row [56], Yattendon, Ashampstead, Aldworth and Bucklebury [57], Mortimer and Burghfield (LAN) [66], Basildon, Southcote, Bradfield, Tilehurst and Pangbourne [67]. Atlas 2000: all except [37], [46], [47], [59], [50], [68], [69]

CAPRIFOLIACEAE

Sambucus racemosa L. *Red-berried Elder*

• m 4 ↓

Sambucus pubens Michaux

Sambucus sieboldiana (Michaux) Graebner

Not properly naturalized in Berkshire as it is in eastern Scotland and the Cheviot Hills of northern England.

East Berks: no records.

West Berks: a rare introduction or garden escape found in a hedge at Quicks Green [57] in 1962 and near the Education Centre at Wytham [40] in 1982. Atlas 2000: no records.

Sambucus nigra L. *Elder*

m 6

Common and generally distributed in woods, hedges, old pits and waste ground on nutrient-rich soils. "Birds eat the berries and seeds are thus disseminated and grow on pollarded willows and wall tops" (Druce). The large, blackish aphids clustered on young shoots in spring are *Aphis sambuci*; they migrate in summer to other host plants like Apiaceae and Polygonaceae.

NVC: OV 27; W 6,8,10,12-14,21,24,25

Silwood Park: common in the rabbit grazed understorey of naturally regenerated woods like Merten's Acres, and abundant in canopy gaps in Hayes Wood. In both wet and dry woodland, rabbit grazed pasture and waste ground. The 19th most frequent species in Silwood in 1 hectare plots, but only 38th most frequent at 1000 m². Mysteriously, all of the Elder around Wellingtonia Lawn (behind the Japanese Garden) and at the far end of Drive Field died during 2006 and fell over in the winter of 2006-07 with substantial losses to the epiphytic communities of lichens and bryophytes. A substantial bush at the base of the trunk of oak Tree 1009 next to William Penney Hall, thriving after the canopy of the veteran tree has died back almost to nothing by August 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
6	9	19	25	72

East Berks: of the woody plants, only *Quercus robur* and *Crataegus monogyna* are more frequent. Extraordinarily abundant beside the railway between Winnersh and Winnersh Triangle. 86% (1km²). The cultivar 'Laciniata' was very local and rare on an embankment at Coppid Beech roundabout [836689] in June 2003. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Sambucus ebulus L. *Dwarf Elder* or *Danewort* ○ hp 7 ↓

Very local and rare in our area. Hedges, ditches, roadsides and waste places, in small patches. Local and mostly on calcareous soils.

East Berks: not seen by Druce. Park Place in 1965 but not there now. Atlas 2000: no records.

West Berks: still in a roadside hedgerow at Woolstone [295874], roadside ditches near Coleshill [2392] (but commoner on the Wiltshire side of the R. Cole), Hermitage [57] and Kennington [527014] in 2004. Older, pre-1920 records from Kintbury [36], in abundance (as *Danewort*), at Seacourt below Wytham Castle [40] "being testimonies embraced by most, of the effusion of men's blood (and particularly Dane's blood) wheresoever great quantities of it grows" (Anthony Wood, 1666). The Danes are known to have besieged Wytham Castle "standing upon the hill not above halfe a mile from Seckworth" (Hearne, 1777). Aldermaston [56], Cholsey Church [58]. Atlas 2000: [28], [29], [36], [38], [57], [58], [50], [66]

¶ **Sambucus** *S. nigra* 'Aurea', *S. nigra* 'Guincho Purple', *S. nigra* f. *laciniata*, *S. nigra* 'Marginata', *S. racemosa* 'Plumosa Aurea', *S. racemosa* 'Sutherland Gold'

Viburnum opulus L. *Guelder-rose* m 6

In damp woods and by streams, much less common in dry woods. Widely distributed except in the heathy tracts. "A most beautiful shrub, whether in flower, or in fruit, or showing its rich crimson and purple foliage in the autumn. It luxuriates in moist spinneys in low-lying situations" (Druce). Garden shrubs are defoliated repeatedly, year after year, by the Viburnum Beetle, *Pyrrhalta viburni*, reducing the leaves to skeletons, causing death of branches and occasionally of whole plants; the bushes refoliate partially by late summer, but seldom look happy. The adult beetles are clay brown and the larvae are black. Primary host (along with Spindle) to the black bean aphid, *Aphis fabae*.

NVC: W 5,6,8,10,12

Silwood Park: Church Lane Footpath, just north of the Kissing Gate on the Nash's Field side. Southwood Halls, common in the planted woodland. Silwood Farm, Nash's copse, seedlings in Nash's Field, a single, long-established plant in the fence of Heronsbrook Meadow adjacent to Pond Field, M-Scan, Science Park, Buckhurst Road Entrance. Seedlings in the bee-hive corner of the derelict pot standing at the greenhouses on 29 July 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	9

Ascot: Englemere, Swinley Brick Pits, South Ascot, Ascot Station, Kings Beeches, Blacknest Park, Cranbourne Tower, Forest Park.

East Berks: forming thickets in woods to the west of Wokingham [7868] and [7466] and common in hedges on the gravel workings at Whistley Park [7873]. Locally abundant on the banks of the Thames in woods on Windsor Racecourse. 16% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [68], [69]

Viburnum lantana L. *Wayfaring-tree* m 5

Hedges, thickets, and woods on chalky or limestone soils, rare in the heathy districts; its distribution is almost the opposite of the preceding species as this prefers dry uplands on calcareous soil. Leaves are often dotted with pin galls of the mite *Eriophyes viburni*. Many of the recent records are of individuals planted as part of landscaping schemes using native species.
NVC: W 8,10,12,21

Silwood Park: planted in the woodland garden behind Southwood Halls. Attacked by *Viburnum* Beetle, but much less severely than is *V. opulus* (see above).

Ascot: no records.

East Berks: Bisham Wood, common on the chalk about Park Place, Stubbing's Heath, Wargrave, Billingbear, Cookham, Hurley, Maidenhead, Sonning, Waltham, Bray, Frogmore. 6% (1km²). Atlas 2000: all except [86]

West Berks: Atlas 2000: all except [68]

Viburnum tinus L. *Laurustinus* • m 1

One of the commonest shrubby plants. An evergreen making a useful visual screen, with the added benefit of reliable winter flowering. Occasionally found as a garden outcast on waste ground but seldom, if ever, self-sowing with us. Some individuals are defoliated by the *Viburnum* Beetle, *Pyrrhalta viburni*, reducing the leaves to skeletons, causing death of branches and occasionally of whole plants while other bushes, right next door, appear to be immune to the beetle.

Silwood Park: common in the shrub beds. Two particular bushes, one beneath the Drive Cedars, and one beneath the oak opposite the Reactor Centre, have been the subject of long term studies by Dick Southwood, Trish Reader and Mike Hassell on population regulation in the alien *Viburnum* Whitefly *Aleurotrachelus jelinekii* (see p. 229). Wild looking plants occur in the Old Orchard, Silwood Lodge, William Penney.

East Berks: not in Druce. Rare in plantations at Arborfield Grange (1965). Recently at Swallowfield, The Mount, South Reading, Sonning, Twyford. On waste ground by Wokingham Road, Reading [7373] in October 2004. 1% (1km²). Atlas 2000: [77], [96]

West Berks: Purley Park (RNG) [67] in 1961, in a wood margin at Tilehurst (LAN) [6676] in 1962, Mortimer [66] in 1966, St John's Cemetery in Newbury [4767] in 1981, Aldworth Church [554794] in 1986. Waste ground in Newbury [4767] in 2002. Atlas 2000: [36], [40], [66]

Viburnum rhytidophyllum Hemsl. *Wrinkled Viburnum*

• m 6

One of the duller of all the shrubby species; this is the kind of plant that gets shrubberies such a bad name. A grey-green evergreen that occasionally self-seeds (as on railway sidings) but more normally found as an outcast on waste ground in towns and villages, and is often a long-lived remnant of old garden or estate woodland plantings.

Silwood Park: self sown in shady beds to the north of North Block in September 2005, close to the parents.

East Berks: Park Place, Shottesbrooke, Winkfield Row, Harvest Hill [8879]. Locally frequent seedling regeneration on abandoned railway tracks between the station and Tesco's Superstore at Kings Meadow in Reading [719738] on 11 October 2003; the parent plants were in the shrubbery surrounding the new Thames Water offices. <1% (1km²). Atlas 2000: [77], [78], [87]

West Berks: on a roadside in Sutton Courtenay [59] in 1965 but not there in 1987. Atlas 2000: [56]

¶ **Viburnum** *V. acerifolium*, *V. x bodnantense* 'Charles Lamont', *V. x bodnantense* 'Dawn', *V. x bodnantense* 'Deben', *V. bracteatum*, *V. x burkwoodii* 'Anne Russell', *V. x burkwoodii* 'Fulbrook', *V. x burkwoodii* 'Park Farm Hybrid', *V. x carlcephalum*, *V. carlesii* 'Aurora', *V. cinnamomifolium*, *V. davidii*, *V. farreri*, *V. foetidum*, *V. furcatum*, *V. x globosum* 'Jermyns Globe', *V. grandiflorum*, *V. henryi*, *V. x hillieri* 'Winton', *V. x juddii*, *V. lantana* 'Xanthocarpum', *V. macrocephalum*, *V. nudum* 'Pink Beauty', *V. opulus* 'Compactum', *V. opulus* 'Flore Pleno', *V. opulus* 'Notcutt's Variety', *V. opulus* 'Roseum', *V. opulus* 'Xanthocarpum', *V. plicatum* 'Grandiflorum', *V. plicatum* 'Lanarth', *V. plicatum* 'Mariesii', *V. plicatum* 'Rowallane', *V. rhytidophyllum*, *V. sargentii* 'Onondaga', *V. sieboldii*, *V. tinus* 'Eve Price', *V. tinus* 'Gwenllian', *V. trilobum*, *V. utile*, *V. veitchii*, *V. wrightii*

Symphoricarpos albus (L.) S.F. Blake *Snowberry*

• n 6

Vaccinium album L.

Symphoricarpos racemosus Michaux

Symphoricarpos rivularis Suksd.

Extensively planted in ornamental grounds; plantations, hedges, parks, roadsides and waste ground, forming small thickets. Rarely in quantity. Particularly conspicuous in January and February when its sparse white berries are the only colour in the shrubbery or hedgerow.

Silwood Park: local, forming dense thickets in open woodland; Mann's Copse, South Lodge.

Ascot: Fernbank Road, Heatherwood Hospital, Coronation Road, South Ascot, Ascot Station, Sunninghill, Charters Road, Sunningdale, South Coworth, Ascot Place, Polo Club, Brookside, Winkfield Lodge. Locally abundant by the Marist Convent Lake [941682].

East Berks: Druce knew the plant from Arborfield, Park Place, Finchampstead, Windsor Park, Maidenhead and Warren Row (it is still to be found in all these places). Now very frequent and widespread in woodlands and shady roadsides throughout. 44% (1km²). Atlas 2000: all squares

West Berks: forming thickets in remote woodlands, as at Grove Wood Faringdon and Taylor's Hill Buscot [29]. Atlas 2000: all squares

Symphoricarpos orbiculatus Moench *Coralberry* ● n 6

West Berks: at the edge of a field at Wash Hill [4564] in 1988 (RNG).

Symphoricarpos x chenaultii Rehder *Hybrid Coralberry* ● n 5 ↑

One of the commonest plants in late 20th century urban landscaping schemes, particularly on industrial developments. A good ground cover and weed suppressor forming dense, waist-deep mats, and producing copious pale berries, flushed pinkish-purple on one side. Not self-seeding with us, but thicket-forming, and hence quite invasive.

Silwood Park: common and locally dominant around the new Biology Buildings and on the Science Park. Spreading but always originally planted.

East Berks: common in all the larger towns: Bracknell, Windsor, Maidenhead, Reading, Wokingham and many of the villages (Swallowfield, Holyport, Cookham, etc.), on waste ground in gravel workings at Whistley Park, and in landscaping schemes as at Stubbings. Common on railway ground at Kings Meadows Reading in September 2007. 9% (1km²). Atlas 2000: all except [78]

West Berks: waste ground in Drayton [4894], Wytham [4708] and Newbury [4767] in 2002. Self sown in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [36], [46], [40], [56], [50], [66]

¶ **Symphoricarpos** *S. x doorenbosii* 'Mother of Pearl', *S. orbiculatus* 'Foliis Variegatis'

Linnaea borealis L. *Twinflower* ● chw 6 †

Planted, along with other completely inappropriate native species, on Jarn Mound [4802] and reported by A. Evans (1933). Not there now. His ambition was to grow the entire native British flora in his garden at Jarn Mound (see p. 123).

Leycesteria formosa Wall. *Himalayan Honeysuckle* ● n 1 ↑
Leycesteria crocothyrso auct., non Airy Shaw

Common bird-sown garden escape. Forming dense clumps of green canes with exotic-looking pendulous clusters of dark purple flowers.

Silwood Park: commonly bird-sown in slightly shady, out-of-the-way, moist places like electricity substations and the brickwork of basement windows. Manor House, locally common on damp brickwork in the sunken basement windows. Phase One, in dense shade by the covered walkway from the Stable Yard (1979-2008). West Block, on the gravel inside the fence of the electricity substation. Bird-sown in the shrubbery below the Stable Block flats, facing West Block. Several plants growing as epiphytes on the bigger of the two Cedars of Lebanon by the Lily Pond in September 2005, where it was bird-sown in crevices in the trunk. A single individual on 13 July 2007 inside the

Rhododendron Exclosure, close to the double gates; this plant was growing vigorously on 5 July 2008. A massive increase in recent years around Munro, Lees and Hamilton Buildings; every bird perch is now lost in a dense thicket of the plant (15 December 2012).

Ascot: shady waste ground on Coronation Road and in South Ascot. Self-sown in hedges in Woodby Drive Sunningdale. Old gardens of Froggnall [940681] on ruined walls.

East Berks: not in Druce or Bowen. First recorded from cracks in paving outside the Chemistry Department on Whiteknights Park [7371] in 1979. Recently at Bulmershe, Bisham, Whitley, Coppid Hill, Finchampstead, Lower Earley, Woodley, The Throat, College Town, Waltham St Lawrence, Warren Row, Maidenhead, The Bounty, Fifield, Shaw Farm. 3% (1km²). Atlas 2000: all except [78]

West Berks: first record from waste ground in London Road Newbury [4767] in 1982. Self-sown on rough ground in Hermitage [5173] and New Hinksey [5204] in 2002. In shade at Kingston Bagpuize [4097] and Cumnor [4604] in 2004. Atlas 2000: [29], [46], [48], [49], [50], [66], [67]

Lonicera pileata Oliv. *Box-leaved Honeysuckle* ● n 6

A popular landscaping plant used as weed suppressing ground cover, much planted on industrial estates and business parks. Bird-sown on waste ground in town and villages. The leaves are larger (to 32mm) and forwards-pointing.

Silwood Park: Ashurst, Churchyard, Silwood Farm, Cheapside Village, M-Scan, Science Park, Buckhurst Road Entrance, Student Residences.

Ascot: South Coworth.

East Berks: on waste ground in Binfield [8370], and common in all the larger towns that have modern industrial estates: Maidenhead, Reading, Wokingham, Bracknell and Windsor. Lane banks at Scarlett's Wood [8177]. 6% (1km²). Atlas 2000: all except [78], [97]

West Berks: self-sown on old brick walls at Aldermaston Court [5964] in June 2002. Atlas 2000: [48], [56], [50], [67], [68]

Lonicera nitida E.H. Wilson *Wilson's Honeysuckle* ● n 6

Planted in hedges and chalk grassland. A very common garden plant used for edging perennial beds, for fronting shrubberies and occasionally as a hedge. Often outcast and growing in ditches, on banks and in hedgerows in almost every village. The leaves are smaller (to 16mm), spreading at right-angles or backwards-pointing, and the stem hairs are of two distinctly different lengths.

Silwood Park: Ashurst Four Acre Field, Cheapside, Drive Lawns, Machinery Centre, East Lodge.

Ascot: on waste ground in South Ascot where fly tipping had been done.

East Berks: not in Druce. First recorded from Ashley Hill [88] in 1966; Hurst, still common in 2002, between the cottages at Ladye Place and Appletree. Swallowfield, Bulmershe. 18% (1km²). Atlas 2000: all squares

West Berks: first record Aston Tirrold [58] in 1954 (**OXF**). Very common in village hedgerows, as at Boxford [47]. Locally dominant on derelict land by the railway at Colthrop [5366] in October 2004. Atlas 2000: all except [37], [39], [47], [56], [57], [66], [69]

Lonicera xylosteum L. *Fly Honeysuckle*

• n 5 †

Hedges and shrubberies; very rare. Planted in many situations

East Berks: it had a semi-wild appearance in a hedge near Ambarrow in 1892 (**OXF**). Not seen by Bowen. Atlas 2000: no records.

West Berks: Radley [59] before 1897. Atlas 2000: no records.

Lonicera henryi Hemsl. *Henry's Honeysuckle*

• n 6

Commonly grown evergreen climber, escaping through bird dispersal of its berries and found as a garden outcast on rough ground and in hedgerows in villages and towns. See *L. japonica* for details.

East Berks: Windsor, on waste ground near the river in 1998.

Lonicera japonica Thunb. *Japanese Honeysuckle*

• n 5 ↑

A non-twining, semi-evergreen climber much grown in gardens. Most abundant on railway banks next to gardens. Bird-sown into relatively wild-looking places some distance from the nearest garden. Told from the other non-twining evergreen, *L. henryi*, by the fact that the flowering nodes are not clustered at the apex of the branches, and the bracts beneath each pair of flowers are leaf-like (in *L. henryi* the bracts are tiny and not at all leaf like (they are narrow and tapered to a fine point). A pernicious alien invader in other parts of the world, where it overgrows and eventually kills whole trees.

Silwood Park: naturalised on the Science Park from plantings made in 1988 as part of the landscaping. In the boundary fence at Ascot Four Acre Field, Cheapside, The Playground, William Penney, East Lodge.

East Berks: in an old garden at Bearwood in 1982-83 (**RNG**). Now frequent in hedgerows near houses. Particularly common in West Reading, Whitley, Winnersh, Earley, Bulmershe, Holyport, Binfield, Broadmoor, White Waltham, Sonning and Bisham. 11% (1km²). Atlas 2000: all squares

West Berks: on the roadside near the Barley Mow at Wittenham [5495] in 1987 and Didcot [59] in 1987. On the industrial estate at Faringdon [2895] and waste ground in Newbury [4767] and Abingdon [4997] in July 2002 and at Steventon [4691] and South Hinksey [5104] in 2003. Atlas 2000: [28], [29], [36], [46], [49], [40], [56], [57], [59], [50], [67], [68]

Lonicera periclymenum L. *Honeysuckle*

m 6

Woods, thickets, hedges, pine plantations, heathy rides etc. Common and widely distributed. Locally frequent in most oak woods, less common in hedges. Absent from much of the northern clays. It tends to be abundant in woods where *Clematis vitalba* is absent. The conspicuous leaf mines are *Chromatomyia lonicerae* and *Phyllonorycter emberizaepenella* while the aphid forming colonies in spring is *Hyadaphis foeniculi*. Host plant of the White Admiral butterfly *Ladoga camilla*.

NVC: W 1,4-6,8,10,12,14-16,21,22,25

Silwood Park: an important component of the vegetation of wet woodlands as in Nash's Copse, Great Mead, Mann's Copse and Cascade Marsh. In all the boundary fences and hedgerows. Particularly

common growing through the canopies of young oak trees in the eastern clearing of Water Meadow in September 2002.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	5	7	13	25

East Berks: particularly abundant in the woods to the north and west of Wokingham, where other woodland plants are notably scarce or absent (e.g. *Arum maculatum*, *Glechoma hederacea* and *Ranunculus ficaria*), such as Beech Wood near Billingbear. Rare in the wet heaths, but locally common on the banks of heathy ditches in pine plantation in Bracknell Forest. In a very curious habitat on the banks of the Wish Brook in Wishmoor Bottom where honeysuckle is locally dominant for substantial stretches, growing with *Molinia* and *Carex* species. 54% (1km²). Atlas 2000: all squares

West Berks: widespread, but rather sparse on the clays to the north of 85 and south of 95. Atlas 2000: all squares

Lonicera periclymenum ‘Belgica’ *Garden Honeysuckle* • m 6

A popular garden plant, with purple-white-and-yellow flowers, is long-lived and persistent in wild looking places, sometimes a long way from houses.

Silwood Park: by the gate into Pound Hill Field below the Met Tower, by the ramp of the Balloon Store, where it has grown since before 1972. Still there in June 2002, but gone by 2004.

East Berks: by a sunny trackside, towards the top of the chalk woodland at Bisham [863855], in hedgerows in Hurst [794733], and on waste ground by the R. Thames in Sonning [755757], all in June 2002. <1% (1km²).

West Berks: on waste ground at Faringdon [2895] in 2002.

Lonicera caprifolium L. *Perfoliate Honeysuckle* • m 5 ↓

Woods and hedges, very rare as an introduction in plantations, and as a long-lived survivor in garden hedges.

East Berks: Wargrave (1963).

West Berks: Tilehurst [67] in 1897, Pusey [39] in 1918, Bagley Wood [50] in 1945 (OXF), Basildon [67] in 1963, Lockinge [4387] in 1964, Sulham [67] in 1967. Atlas 2000: [50], [67]

¶ **Lonicera** *L. x americana*, *L. x brownii* ‘Dropmore Scarlet’, *L. caprifolium*, *L. caprifolium* ‘Anna Fletcher’, *L. etrusca* ‘Donald Waterer’, *L. etrusca* ‘Michael Rosse’, *L. etrusca* ‘Superba’, *L. fragrantissima*, *L. x heckrottii*, *L. x heckrottii* ‘Gold Flame’, *L. henryi*, *L. involucrata*, *L. involucrata* var. *ledebourii*, *L. x italica*, *L. x italica* ‘Harlequin’, *L. japonica*, *L. japonica* ‘Aureoreticulata’, *L. japonica* ‘Halliana’, *L. japonica* ‘Hall’s Prolific’, *L. japonica* ‘Horwood Gem’, *L. japonica* var. *repens*, *L. korolkowii*, *L. nitida* ‘Baggesen’s Gold’, *L. nitida* ‘Silver Beauty’, *L. periclymenum* ‘Belgica’, *L. periclymenum* ‘Graham Thomas’, *L. periclymenum* ‘Red Gables’, *L. periclymenum* ‘Serotina’, *L. pileata* ‘Moss Green’, *L. x purpusii*, *L. x purpusii* ‘Winter Beauty’, *L. rupicola* var.

syringantha, *L. similis* var. *delavayi*, *L. standishii*, *L. tatarica* 'Arnold's Red', *L. x tellmanniana*, *L. x tellmanniana* 'Joan Sayer', *L. tragophylla*

¶ **Abelia** *A. x grandifolora*

¶ **Kolkwitzia** *K. amabilis* 'Pink Cloud'

¶ **Weigela** *W.* 'Olympiade Briant Rubidor', *W.* 'Bristol Ruby', *W. florida* 'Foliis Purpureis', *W.* 'Florida Variegata', *W. middendorffiana*, *W.* 'Praecox Variegata', *W.* 'Victoria'

ADOXACEAE

Adoxa moschatellina *L. Moschatel*

grh 4

Oak woods, often near streams, hedges and shady places on sandy soil. Locally common but absent from large areas. A charismatic native plant which flowers early in leafless woodland and always gives a wonderful sense of spring flowers yet to come. The only species in the entire family; also known as *Town Hall Clock* for the clock faces on each of the four faces of the inflorescence. There is a curious, 4-petalled flower facing skywards from the top of the tower.

NVC: W 8

Silwood Park: introduced; very local and rare [94190 69177]. Weir Wood, beneath ash saplings, amongst nettles. A single individual collected in beech woods at Hambleden [7786] was planted in April 1981. The plant has been seen every year since, and is spreading slowly but steadily. It covered about 1m² in May 1987, but was badly overgrown by nettles in 1990. There was a good patch of 2m x 2m in 1991, despite the nettles. The patch had contracted somewhat to 1m x 1m in April 1994, but recovered to 2m x 2m, with outliers up to 2m away from each edge, on 6 April 1995 (a good year for flowering). Patch measured 2.5m x 3m on 21 April 1996 (a very late spring) and had expanded to 4m x 5m with plenty of flowers on 22 March 1999. The patch formed an equilateral triangle with 5m sides in March 2000. In April 2001 it was 5m x 6m in extent, and locally dominant, and by 2002 was 7m x 7m x 5m. In 2004 it was 8m x 8m x 5m and in 2007 it measured 9m x 7m. By April 2008 the triangular patch was 9m across the base (along the edge of the fallen tree trunk, and not having spread to the lake side of this obstacle) and 9m on its longest axis. On 30 March 2011 the long axis (along the fallen tree trunk) measured 11m and the other axis 9m; there were still no plants on the lake side of the fallen log. Note that a new drain was installed in February 2011 under the Farm Road, discharging from the slope just above the *Adoxa*, where iron-rich bacteria were already accumulating. In the late spring of April 2013, the plant had spread to fill the entire non-black area between the log and the Farm Road (the black areas were more boggy than ever, as a result of the increased surface-flow from the new drain). The occupied area is now triangular; 8m along the log, and 10m at right angles to the log. A few plants have crossed the black bog in the direction of Farm Lawn.

The plant appears to reduce the density and size of *Mercurialis perennis* below which it grows, perhaps by allelopathy? Planted in the Walled Garden, unintentionally imported from a threatened chalk pit in Kent attached to a clump of *Anemone nemorosa* in 1981. Most of the Kentish material was finally planted out in the woodland garden behind Southwood Hall in 1983, but *Town Hall Clock* never took in that site, and was soon extinct both there and in the Walled Garden. The Weir Wood site is the only current (2013) location in Silwood.

Ascot: no other records.

East Berks: Blackwater, Sandhurst, Crazy Hill, Arborfield, Wargrave. Occasional to the west of 80 and in the Thames valley as far downstream as Cookham. Absent to the east of 80 and south of 80. Recently at Dinton Pastures, Lodge Wood, Crazies Hill, Shepherd Meadow. 1% (1km²). Atlas 2000: all except [78], [97]

West Berks: particularly abundant in the woodlands on chalk around Woodlands St Mary [37] to the south of Lambourn, in Welford Park [47], also at Foxcombe, Tubney and Cumnor [40], and in Pusey Woods [39]. Black Bushes Wood and Ginge Brook [48]. It is found throughout the Northern Loop and to the south of 80, as at Snelsmore and Ashridge Wood [47]. The woodlands along the Hampshire border at West Woodhay [36] and around Tadley [56] are particularly good for *Adoxa*. Absent from the interior to the north of 80 and south of 95. Atlas 2000: all except [68], [69]

VALERIANACEAE

The species of the genus *Valerianella* are very hard to tell apart, and you really must have ripe fruits if you are to have any hope of success. You need to determine whether the fruit is round (*V. locusta*), cylindrical (*V. carinata*), smooth onion-shaped (*V. rimosa*), or ridged onion-shaped (*V. dentata*). More details are given under each species.

Valerianella locusta (L.) Laterr. *Common Cornsalad* th 4
Valeriana locusta L.
Valerianella olitoria Pollich

This is our common species, found on dry waste ground, sandy arable land, railway cuttings, dry hedge-banks, walls and cornfields; locally frequent in the drier parts of the county but absent from the acid soils in south-east Berkshire. Calyx in fruit absent or vestigial, fruit two times as thick as wide, with a shallow groove on the abaxial face.
NVC: OV 3,27,42

Silwood Park: frequent on the cinder pot stand at The Greenhouses, in the Old Orchard, and in the fallow at Ashurst Four Acre Field. Not a common arable weed, more a plant of open waste land. It was abundant in May 2003 on the pot stand, benefiting from competitor release, following herbicide treatment of the perennials in summer 2002. Locally abundant on 2 June 2006 when spring barley was sown in Ashurst Four Acre Field after a failed crop of winter wheat was replaced.

East Berks: scattered throughout. Frequent on Windsor Racecourse and at Queen's Eyot. 4% (1km²). Atlas 2000: all squares

West Berks: common in the Thames valley, scattered in the Kennet valley but absent from the interior. Atlas 2000: all squares

Valerianella carinata Loisel. *Keeled-fruited Cornsalad* o th 4

Gardens and disturbed ground on dry soils, gravel paths and walls; local and sporadic. Calyx in fruit absent or vestigial, fruit with a deep groove on the abaxial face.

East Berks: not seen by Druce. Knowl Hill in 1963, in a nursery at Hare Hatch in 1962 (OXF). <1% (1km²). Atlas 2000: [77], [87]

West Berks: Faringdon pits and in a popular plantation at Lyde Copse [29], Stock Cross Common [46], Didcot [49], Abingdon [4896] and [4997], Boars Hill [40], Sutton Courtenay Manor [501942], South Hinksey [50], between Bradfield and Tidmarsh [67]. Atlas 2000: [29], [38], [40], [59], [50]

Valerianella rimosa Bastard *Broad-fruited Cornsalad* ○ th 7 ↓

Arable fields on the chalk; very local. Calyx in fruit distinct, main tooth not, or scarcely, toothed.

East Berks: a single record from a ditch near Lord Downshire's gate-entrance to Easthampstead Park (1897). Not seen by Bowen. Atlas 2000: no records.

West Berks: Aston Tirrold [5485], Kingstanding Hill [5783], on bare chalk in arable land at Aston Upton Downs [5483]. Nineteenth century records from Cumnor [40], Compton [58], Basildon [67]. Atlas 2000: no records.

Valerianella dentata (L.) Pollich *Narrow-fruited Cornsalad* ○ th 6
Valeriana locusta L. var. *dentata* L.

Corners of dry arable fields. A cornfield weed of lighter calcareous arable land, doing best in spring-sown cereals, once frequent, now occasional on the drier parts of the chalk and rare elsewhere. It is susceptible to both herbicides and fertilizers. Known from other cornsalads by the calyx, which is distinct and persistent in fruit, with fewer than 6 teeth, the main tooth with 2 or more distinct teeth and fruits with 2 abaxial ridges.

NVC: OV 15,16

Ascot: no records.

East Berks: Windsor, Wargrave, Remenham, near Lord Downshire's gate-entrance to Easthampstead Park, Bowsey Hill, Earley, Hurst, Maidenhead, Bisham, Cookham, Sonning. Woodley, Park Place, Hurley, Jealott's Hill. 2% (1km²). Atlas 2000: [77], [78], [87], [88]

West Berks: centred on the eastern chalk at [58], absent or rare elsewhere. Newbury [46], East Ilsley [48], Frilford Heath [49], Appleton Lower Common, Wootton, between Hen Wood and North Hinksey (OXF) and Boars Hill [40], Sugworth [50], Lowbury Hill, Aston Tirrold, Kingstanding Hill and Fair Mile [58], Sulham Hill (RNG) and Pangbourne [67]. Atlas 2000: [36], [46], [48], [49], [40], [58], [50], [67]

Valeriana officinalis L. *Common Valerian* hs 6

Valeriana sambucifolia J.C. Mikan ex Pohl

Valeriana officinalis L. subsp. *sambucifolia* (J.C. Mikan ex Pohl) Hayw.

Valeriana officinalis L. subsp. *collina* Nyman

Wood margins chiefly on chalky or limestone soil, often on fairly dry soils, and in damp grassland by rivers, streams and ditches. Also a cottage garden plant, so some of the records may be garden escapes or outcasts. Common on the banks of the R. Thames.

NVC: M 13,22,27; OV 26; S 6,7,25,26; W 1,4,5

Ascot: no records. Not in Silwood Park.

East Berks: Bisham Wood, Wargrave, Park Place, Cookham. Occasional in the Thames Valley from Reading as far downstream as Maidenhead, and in the south-west [76] and [77]. Absent from the

interior [87] and rare in the south-east [86] and [96]. Recently at Wargrave, Remenham, Old Malt House, The Odney Club in Cookham, Cock Marsh, Wykery Copse in Bracknell. Locally abundant in grass by the Thames-side path from Old Windsor Lock down to Runnymede Island [9974] in September 2002. 1% (1km²). Atlas 2000: all squares

West Berks: occasional along the length of the Thames from Lechlade [29] to Reading [67], the Pang from Bucklebury down to Pangbourne [67], and the Kennet from Hungerford [36] to Reading [67], but rare or absent from most of the interior. There is a cluster of records from the country around Compton Beauchamp [28] and [38]. Conspicuous on relatively dry ground at the top of Rivar Copse [3562]. Locally frequent in the dry valley on the southern slope of the chalk grassland at Weathercock Hill [2882]. Frequent in Sutton Courtenay Manor [5093] and by the railway at Radley [5298]. Atlas 2000: all squares

Valeriana dioica L. *Marsh Valerian*

hs 5 ↓

Marshes, bogs and wet meadows. Locally common and widely distributed. Alder woods, marshes, fens and damp pastures, rarely in sheltered chalk grassland (e.g. at Cookham Down). Occasional, but rare or absent from northern clays and acid soils in south-east Berkshire.

NVC: M 13,22,24; MG 13; S 25; W 5

East Berks: Aston, Warren Row, Sandford Mill, Hurst, Sonning meadows, Shinfield, Crazy Hill, Coleman's Moor, Long Moor, Hurley, Wokingham, Easthampstead, Sandhurst. Extinct at most of the sites listed by Druce. Now very rare and entirely confined to the western reaches of the Thames valley around Hurley, except for an outlying station in Shepherd Meadow at Camberley. <1% (1km²). Atlas 2000: [77], [86]

West Berks: occasional in the Northern Loop, scattered in the Kennet valley, but absent from most of the interior. Shrivenham [29], Watchfield [239898], Coleshill, Watchfield, Badbury and Longcot [29], Kennet meadows near Kintbury [36], Shefford [37], Uffington, Challow and Wantage [38], Buckland Warren [335959] and Carswell [39], Enborne, Bagnor, Newbury and Greenham Common [46], Snelmore Common and Boxford [47], Steventon, Frilford, Marcham and Cothill [49], Frilford Heath golf course [442986], Wootton, Wytham and Boars Hill [40], Beenham, Thatcham, Midgham and Aldermaston (**RDG**) [56], Stanford Dingley [57], Blewbury, Cholsey and Moulsoford [58], Appleford, Didcot and Radley [59], Kennington [50], Silchester [66], Bradfield, Pangbourne (**RDG**), Sulham (**LAN**) and Theale [67]. Atlas 2000: all except [48], [68], [69]

¶ **Valeriana** *V. phu* 'Aurea'

Centranthus ruber (L.) DC. *Red Valerian*

• hp 6 ↑

Centranthus ruber
Valeriana rubra L.

Dry, sunny banks and limestone walls. Druce considered it to be "a rare alien on railway banks, walls, etc." and Bowen described it as being "in small quantity". Enormously increased, and now very common in the west of the county on the limestones, but found everywhere in towns and villages on mortared walls, pavements and waste ground. White-flowered forms are widespread but much less common than red.

Silwood Park: extinct. Formerly very local on the walls of the raised rockery at Ashurst. Site destroyed during construction work in 1988.

Ascot: very local and rare, in the grounds of Heatherwood Hospital and at Sunningdale Park. In pavement cracks at the northern end of New Road in North Ascot; locally abundant on 1 May 2007 in front of the derelict shops opposite the dentist's surgery.

East Berks: "plentiful in the railway cutting at Cookham Rise where it is associated with *Lathyrus latifolius* and *Sedum rupestre* (Druce). "Most frequent in villages and on railway banks east of Reading, where a white flowered form occurs" (Bowen). Recently at Spencer's Wood, Three Mile Cross, Swallowfield, Shinfield, Arborfield, Barkham, Coppid Hill, both white and red flowers at Finchampstead Church, Reading, Whitley, Coley, Earley, Woodley, Sonning, Charvil, Wargrave, Twyford, Ruscombe, Marsh Mills, Crazies Hill, Wokingham, Wokingham Station, Ambarrow, Chapel Green, Westcott, Edgebarrow, Pine Wood, Hanworth, Bracknell, The Holt, West End, Shurlock Row, Littlewick Green, Binfield Park, Altmore, Jealott's Hill, Newell Green, Touchen End, Cox Green, Warfield Park, Winkfield Row, Maidens Green, Scotlands, Warren Row, Hurley, Lee Lane, Bisham, Maidenhead, Pinkneys Green, Dial Close, Furze Platt, Winter Hill, Cookham, Summerleaze Lakes, Winkfield, Foliejon Park, Fifield, Bray, Brookside, West Dedworth, Clewer, Dedworth, Hog Common, Windsor, The Goswells, Park Place, Old Windsor and on the cliffs below Windsor Castle. 25% (1km²). Atlas 2000: all squares

West Berks: especially common on the Golden Ridge where it dominates old limestone walls in places like Shrivvenham [2388], Buckland [3598], Wytham [4708] and Fyfield [4298]. Also abundant on old walls in Wantage [38], Harwell [48], Marcham [49], East and West Hagbourne [58] and Sutton Courtenay [59]. White flowered plants are locally frequent on old limestone walls in Wytham [4780] and in the grounds of the Old Rectory at Burghfield [6668]. Atlas 2000: all except [69]

¶ **Centranthus** *C. ruber* 'Albus', *C. ruber* var. *coccineus*

DIPSACACEAE

Dipsacus fullonum L. *Wild Teasel*

hs 7 ↑

Dipsacus sylvestris Hudson

Dipsacus fullonum L. subsp. *sylvestris* (Hudson) P. Fourn.

Roadsides, wood margins, hedge-banks, stream banks and grassy waste ground. Common on clayey soils throughout the county but absent from the chalk ridge and from very acid soils in south-east Berkshire. A real beneficiary of motorway construction. Very common in extensive patches on grassy motorway verges and banks. It will be interesting to see how long they persist once the perennial grasses attain complete dominance. Also abundant on wet waste ground in former gravel workings and abandoned railway sidings. The grass-green aphid is *Aphis confusa*.
NVC: OV 25; S 26

Silwood Park: rare and sporadic. Two plants by the gatehouse to Ashurst Lodge on 1 September 1980. A single plant in the north-east corner of Silwood Bottom in September 1984, perhaps brought in with imported *Heracleum* rootstocks. Two plants in cracked paving at the American Canteen on 1 June 1985. A group of 7 plants beneath the *Buddleja* at the Header House of which 5 flowered in July 1993. No further sightings until November 2001, when 3 plants were found on the grassy triangle at the Cheapside end of Mill Lane, following pipe-laying work the previous winter. There were 3 plants on the sewage-treatment plots in north-western Silwood Bottom in August 2002. A single plant on imported topsoil in the rabbit fence at Ashurst Lysimeters in July 2004 and another in July 2005, with a bigger plant in rabbit-grazed turf in the Orchard on the opposite side of the road on 10 July 2005. There were c. 20 rosettes on 21 April 2007 inside the rabbit fence of the Ashurst Lysimeters before the herbicide was applied, and a clump of 15 plants by the roadside just outside the rabbit fence.

There was a clump of 20 plants in the grass towards the Ashurst Enclosure on 24 May 2007, but the roe deer ate all the flower heads during July. The regrowth flowers looked like *Eryngium* on 15 September 2007. Grew very well after the dry spring of 2007 as one of the species that was planted to create hosts for herbivorous insects to attract parasitoids within deer/rabbit fences all over Silwood Park from 2006 onwards.

Ascot: Heatherwood Hospital, Ascot Heath, Charters Road, Locks Ride, Brook Farm, Winkfield Lodge, Kingsmead, Martins Heron, The Tip, Cranbourne Roundabout [929730]. No records from the construction site for the new Race Course (2005-07). Frequent around the edges of the re-worked surface of the playing fields at South Ascot in August 2007.

East Berks: common except along the Surrey and Hampshire borders in the extreme east and south. Abundant on the verges of the M4 and A329M motorways. Huge plants (more than 2.2m tall) with *Impatiens glandulifera* on the banks of the R. Loddon at Whistely Park [7873] in July 2002. Abundant on new verges of Cain Road Bracknell in July 2005 and 2007. Common on railway ground at Kings Meadows Reading in September 2007 and at Bray Gravel Pits in January 2008. Abundant and locally dominant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 35% (1km²). Atlas 2000: all squares

West Berks: common everywhere except in an east-west band along the chalk ridge (north of 75 and south of 85). Abundant on disturbed ground at Day's Lock [567935] in 2004. Common in the Reading Lake District [67]. Common on the verges of the M4 and the A34 where it has increased dramatically in abundance during this study. Frequent at Newbury Railway Station car park [4666] on 23 September 2006. Atlas 2000: all squares

Dipsacus pilosus L. *Small Teasel*

hs 8 ↓

Damp woods, rides, clearings and hedgerows, shady banks and sides of streams; local and rather rare.

East Berks: Sonning Lane, White Waltham Church, Windsor (1833), Ruscombe. Ruscombe girder bridge [804764] (1963), Sonning (1800, 1909, 1963 and 1987) by the banks of the Thames [752753] (**RDG** and **LAN**), Cookham [8985] (1954). Recently found on the northern bank of the R. Loddon [719650] in a tall-herb community with *D. fullonum* and *Impatiens glandulifera* on 14 August 2001. <1% (1km²). Atlas 2000: [77]

West Berks: Coleshill and Faringdon [29], Shefford, Beedon Wood and Weston [37], Stanmore [47], Marcham [49], Wytham and Tubney Wood [40], Inwood Copse [559633], Unhill Wood [58] (**OXF**), Silchester [6262], Pingewood [66], Burghfield Bridge [6870] in 1982. Atlas 2000: [29], [49], [40], [66], [67]

Dipsacus laciniatus L. *Cut-leaved Teasel*

• hs 7

East Berks: not in Druce or Bowen. On waste ground in towns; rare but possibly increasing. Windsor (1996), Maidenhead (1999).

West Berks: first recorded from Greenham Common [50701 64371] by Ron Porley on 8 July 2005 growing on stony ground with *Eryngium giganteum* and *Echium vulgare*.

Cephalaria gigantea (Ledeb.) Bobrov *Giant Scabious*

• hs 7

Scabiosa gigantea Ledeb.

Cephalaria elata (Hornem.) Schrader

Roadsides and waste ground near houses. Rare, but established and likely to spread. This is the *C. tatarica* of gardens, the common, very tall, pale-yellow-flowered scabious, which forms a magnificent clump of leaves, dark green and divided.

Silwood Park: long persistent in old beds by The Greenhouses (1971-2004).

East Berks: in an old garden at Bisham Wood [8584] in 1966. Atlas 2000: no records.

West Berks: hedgerows south of Abingdon [485960] from 1956-67 and at East Garson [3676] in 1963. Kingston Bagpuize [4098] in July 2003. Atlas 2000: [29], [36]

¶ **Cephalaria** *C. gigantea*

Knautia arvensis (L.) Coult. *Field Scabious*
Scabiosa arvensis L.

hs 7

Chalk grassland, limestone grassland, meadows on freely drained soils, and grassy roadsides and waste ground. Occasional, but rare or absent from acid soils in south-east Berkshire. It decreases under grassland “improvement”, being intolerant of both herbicide treatment and nitrogen fertilization.

NVC: CG 3-5; MG 1,5

Silwood Park: the seed sown in Nash’s Field in October 1991 produced no plants. A single plant on 14 September 2002 in the rodent enclosures in upper Nash’s Field (origin unknown, but at least 100m from where the seed was sown). Sown in the Oak Mead Experiment in 1996 but with recruitment confined to the plots where competition had been reduced by both cultivation and methyl bromide application; still present in May 2003 in 2 places inside the rabbit fence of Block E. There was one plant in flower on fenced Block E on 2 October 2009. Sown in the Biodepth II plots and producing large plants on 8 July 2000; still there in 2003. A single enormous plant growing amongst potted beech trees on the cinder pot standing at The Greenhouses in summer 2005 and 2006; there were 4 plants here by July 2007 and 8 by July 2008.

Ascot: no records.

East Berks: common on the chalk to the north of 75, occasional around Cranbourne [97] but absent elsewhere. Recently at The Leas, Earley, Kennet Mouth, Thames Valley Park, Woodley, Sheeplands Farm, Remenham, Crazies Hill, Culham House, Moor Green, Bill Hill, Braywoodside, Culham Court, Pudding Hill, Hurley, Prospect Hill, Temple golf course, on railway banks north of White Waltham airfield, Maidenhead, Bray, Ham Island, Old Windsor Lock. On the verges of the new northern relief road at Quelm Park in Bracknell, where it was sown in the wildflower mix in 1999; still present, but rare, in October 2001. Surviving from the wildflower mixture sown around the lakes at Moor Green Lakes nature reserve [806626] in 2002. 4% (1km²). Atlas 2000: [78], [86], [87], [88], [97]

West Berks: common in old chalk grasslands, all along the Ridgeway, by the ancient trackway up Cholsey Downs [5685] and along the Fair Mile [5482]. In cuttings near Radley Station [5298]. On recently sown roadsides on housing developments in Watchfield [2590] in September 2004. Atlas 2000: all except [68], [69]

¶ **Knautia** *K. macedonica*

¶ **Pterocephalus** *P. perennis*

Succisa pratensis Moench *Devil's-bit Scabious*
Scabiosa succisa L.

hs 6

Pastures, moist woods, damp grassy heaths on acid soils including clays. Locally frequent in south Berkshire but rare or absent on calcareous clays.

NVC: CG 2-5; M 13,16,21,22,24,27; MG 4,5,9; W 4

Silwood Park: local and rare. In the southern part of Water Meadow, close to the Betony on 4 August 1982; none seen following the scrub clearance of March 2002. Evidently, the betony responded much better to scrub clearance than did the scabious. There was a single patch (with betony) on the western edge of Water Meadow on 20 September 2005, prior to scrub clearance in winter 2005-06. A single clump in flower on 28 August 2006. The seed sown in Nash's Field in 1991 never took. Locally frequent inside the rabbit fence on Nadia Waloff's former broom plot in Nash's Field on 6 September 2002 and 15 September 2005.

Ascot: locally abundant in various places on Ascot Heath, as in the outfield of the Cricket Pitch, in the northern triangle, and at Brook Farm, Winkfield.

East Berks: recently at Stanford End fritillary meadow, West Emmbrook, Ravenswood, Heath Lake, Shepherd Meadow, Camberley Superstores, Chawridge Bank, Wishmoor Bottom, Cock Marsh, heathy rides in pine plantations at Bracknell forest, Larges Lane Cemetery in Bracknell, Windsor Great Park. Still common in the ancient grassland (MG5c) nature reserve at Chawridge Bank [894738] in 2008, where it thrives in co-dominance with *Genista tinctoria* on the field that was stripped of its topsoil for construction of the dog-racing track next door. 2% (1km²). Atlas 2000: all except [78]

West Berks: common throughout the Kennet valley and in the Northern Loop (as at Cothill Fen [49]) but less common on the clays of the interior. In the water meadow at Boxford [4271], chalk grassland at Seven Barrows [3282], grassland at Cleeve Hill [332764], and on downland at Whitehorse Hill [28] and [38] and Aston Upthorpe Downs [58]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: all except [68], [69]

Scabiosa columbaria L. *Small Scabious*

hs 7

Dry calcareous pastures, chalk downs, railway banks, old quarries and pits. Frequent on the chalk but absent from clays and acid soils in south-east Berkshire.

NVC: CG 2-5; MG 1; OV 39,41

Silwood Park: sown in the Chalk Plots in 1983 and frequent on plots 5, 6, 7 and 8 on 10 August 1986. Still there, but sparingly, on 2 August 1991. Not seen for 10 years, until one large plant was found in July 2001 on Plot 8, following removal of the thatch of bryophytes and dead organic matter in the winter of 2000-01. It is not obvious whether the plant came from the seed bank or from the release of a small, suppressed vegetative individual. Still 1 plant in July 2002 and 2003. On 7 July 2006 there was one plant on Plot 7 and one on Plot 8 and in 2008 there was a single plant on Plot 8. It never showed from the seed sown in the Nash's Field experiment in October 1991. In Oak Mead, however, the seed sown in 1996 did take, even though the plots were not limed, and plants survived even on the grazed parts of Block A on 3 July 1998. The population was strong on 29 August 2010 with 8 plants on the boundary of Plots 4 and 7 and 2 on Plot 8.

Ascot: no records.

East Berks: Sonning (1800), frequent about Park Place, Remenham, Bisham, Quarry Wood, chalk pit at Wargrave, meadows near Hurley, on gravel near Maidenhead and Bray. Rare and confined to the chalk on the western reaches of the Thames valley from Wargrave to Cookham. There are outlying stations on the grassy banks of Windsor Castle above the outer wall [9676] and on the roadside between Sandhurst and Wokingham [86]. 1% (1km²). Atlas 2000: [77], [78], [88], [97]

West Berks: all but confined to the chalk (north of 75 and south of 90, and in [36]), with outlying stations in the Northern Loop and at AWRE Aldermaston [593627]. Atlas 2000: all except [29], [46], [49], [66], [68], [69]

Scabiosa atropurpurea L. *Sweet Scabious* ● th 5 ↓
Sixalix atropurpurea (L.) Greuter and Burdet

East Berks: on the old nursery ground of Sutton's Seeds in Reading (RNG) [7473] in 1978.

¶ **Scabiosa** *S. atropurpurea*, *S. 'Butterfly Blue'*, *S. caucasica*, *S. caucasica* 'Clive Greaves', *S. caucasica* 'Miss Willmott', *S. columbaria* var. *ochroleuca*, *S. lucida*

MORINACEAE

¶ **Morina** *M. longifolia*

ASTERACEAE

¶ **Urospermum** *U. delachampii*

Carthamus tinctorius L. *Safflower* ● th 6

A rather uncommon garden annual; a thistle-like plant up to 1m tall with bright orange flowers (the English name 'False Saffron' refers to the former use of the petals as a source of orange dye).

East Berks: Reading in 1918 and again on Smallmead tip in 1971. Very common in late summer 1999 during the construction work of the new road network adjacent to the M4/A33 interchange [7169], when the old Smallmead tip site was churned up (see p. 67 for other aliens growing with it). The site was bulldozed and seeded to grass during the tidying up and subsequent landscaping operations; not seen in 2001. <1% (1km²).

West Berks: at Abingdon Racecourse [49] in 1913-17 (OXF). Botley 1916-17, Kennington [50] in c.1920 (OXF).

¶ **Vernonia** *V. crinita*

¶ **Waldsteinia** *W. ternata* (this is an invasive alien in other parts of the world, but very tame with us, and not spreading from its planted position beneath the window of Silwood Manor bar).

Tagetes erecta L. *African Marigold* ● th 6

East Berks: Woodley tip in 1969, Smallmead tip in 1971, Maidenhead and Sonning in 2002. <1% (1km²).

West Berks: old tip at Sutton Courtenay [59] in 1980. Newbury [4767] and Botley [4906] in July 2002.

Tagetes patula L. *French Marigold*

Used in organic gardening for pest control, and widely planted on allotments, where it occasionally persists as an outcast. It is alleged to repel whitefly and soil nematodes when grown amongst tomatoes and other crops. Weed suppressing (allelopathic) chemicals from the roots are believed to control bindweed, ground elder and couch grass. I have not seen the evidence on which these beliefs are based.

Ascot: on graves in South Ascot churchyard on 13 October 2007, red and orange hybrid cultivars resembling 'Little Hero Fire'.

East Berks: a casual on roadworks in south Reading in 1999. Pavement cracks in Whitley in 2003. Sown with *Centaurea cyanus* on the Cable and Wireless roundabout in Bracknell in 2004 and still there in 2005. <1% (1km²). Atlas 2000: [76]

West Berks: from spilled seed on pavements in suburban parts of Faringdon [29], Newbury [46] and Abingdon in July 2002. Common on allotments throughout, as at Newbury [46], Botley [40] and Grandpont [50].

¶ **Tagetes** *T.* 'Antigua Series', *T.* 'Boy Series', *T.* 'Gem Series', *T.* 'Lemon Gem', *T.* 'Tangerine Gem', *T.* 'Naughty Marietta', *T.* 'Solar Series', *T.* 'Vanilla'

¶ **Stokesia** *S. laevis*

Callistephus chinensis (L.) Nees *China Aster*

• th 6

East Berks: Reading tip (1962-65), Smallmead tip (1971), Woodley tip (1974).

West Berks: Mortimer Common [66] in 1930 (OXF), Newbury tip [46] in 1958, Pingewood tip [66] in 1986.

Echinops L. *Globe Thistles*

Common garden plants that are much misidentified as garden escapes, tending all to be lumped together as either *E. sphaerocephalus* or *E. bannaticus* depending on the observer. Named after the Greek for sea-urchin or hedgehog. In fact there are 3 escaped taxa, and they are easily distinguished by their involucre bracts: *E. sphaerocephalus* has its phyllaries erect at the tip, with abundant glandular hairs, *E. bannaticus* has its phyllaries erect at the tip, without glandular hairs, while *E. exaltatus* has its phyllaries strongly recurved at the tip, without glandular hairs, and whitish rather than blue-grey flowerheads. Two more compact species, *E. ritro* (heads 3.5-4.5cm dia.) and *E. ruthenicus* (heads 4.5cm dia.) are less often seen as garden escapes.

The distributions of the 3 taxa in West Berkshire have not been worked out in detail, but *E. bannaticus* is much the commonest species as a garden outcast on waste ground by railways and in villages.

Echinops bannaticus Rochel ex Schrad. *Blue Globe-thistle*

• h 7

Echinops ritro auct., non L.

The most commonly naturalised species: blue-grey heads 2.5-5cm dia. & bracts without glandular hairs.

Silwood Park: common around The Greenhouses, on waste ground in Cheapside Village, Silwood Lodge, Drive Lawns. The plants in the perennial bed at The Greenhouses are still common in July 2007 after 20 years of neglect.

East Berks: first recorded from Burchett's Green in 1955. Recently at Newland Farm, Langley Common, Earley, Barkham Ride, Sonning, Heath Ride, The Throat, Owlsmoor, Arlington Square, Binfield, Warren Row, Lee Lane, Furze Platt, Old Windsor. 2% (1km²). Atlas 2000: all except [78]

West Berks: first recorded on the railway crossing at Compton Hill [57] in 1919. Drayton [468955] in 1996. Waste ground at Faringdon [2895], Newbury [4767] in 2002. Atlas 2000: [28], [29], [46], [59], [68]

Echinops sphaerocephalus L. *Glandular Globe-thistle* ● h 6

The least commonly naturalised of the three; heads 3-6cm dia. grey or white, bracts with glandular hairs.

East Berks: Riseley, Winnersh, Old Malt House, Newell Green. <1% (1km²).

West Berks: Sutton Courtenay (OXF) [5193] in 1977-86 and Appleford Church [5393] in 1987.

Echinops exaltatus Schrad. *Globe-thistle* ● h 6
Echinops sphaerocephalus auct., non L.
Echinops commutatus Juratzka

Occasionally naturalised, heads 3.5-6cm dia. & bracts with strongly recurved tips.

East Berks: Prospect Hill, Maidenhead, Reading, Windsor. <1% (1km²).

West Berks: in an old garden at Benham Park [4467] in 1986.

¶ **Echinops** *E. bannaticus* 'Blue Globe', *E. bannaticus* 'Taplow Blue', *E.* 'Nivalis', *E. ritro* subsp. *ruthenicus*, *E. sphaerocephalus* 'Arctic Glow'

Carlina vulgaris L. *Carlina Thistle* h 7

Chalk downland, dry pastures, open heaths and downs. Occasional but local on calcareous soils, and rare and in small quantity on acid soils. Monocarpic, it dies after flowering.
NVC: CG 2-5; OV 27,39,41

Silwood Park: unintentionally introduced. On sand in Ashurst Warren, a single plant growing with other chalk plants like *Blackstonia* on 26 July 2000; not seen since.

Ascot: rare in the sand pit at Swinley [8967] in 1972 and Tower Hill [9067] in 1974. Now gone.

East Berks: Park Place, Easthampstead Park, Stubbing's Heath, Maidenhead, Sandhurst, Wellington College. Park Place [8583] in 1983, Hurley pit in 1999. Rare on the chalk of the Thames valley from Park Place to Maidenhead Thicket, but absent from the interior.
<1 % (1km²). Atlas 2000: all except [76], [96]

West Berks: all but confined to the chalk (north of 80 and south of 90), but there are outlying stations on the oolitic limestone of the Northern Loop, and on the sands of the Kennet valley. Kingstone Down and Compton Beauchamp [28], Anville's Copse and Walbury Camp [36], Segsbury Camp and Whitehorse Hill [38], Greenham Common [46], Catmore and East Hendred Down [48], Cothill pit [49], Chilswell Farm and Wytham [40], Wasing Estate, Brimpton Common and Great Wood [56], Hurdle Shaw [57], Cholsey Downs, Streatley, Lollingdon Hill and Lowbury Hill [58], near Didcot Power Station and Sinodun Hills [59], Basildon [67]. Abundant in great swathes on freshly disturbed gravel near the cattle grid on the northern margin of Greenham Common [50244 65342] on 28 August 2005 (many thousands of plants). Atlas 2000: all except [29], [39], [47], [50], [66], [68], [69]

Arctium L. Burdocks

Berkshire records of Burdocks suffer, as elsewhere, from changes of fashion in botanical nomenclature and from a lack of attention to detail. The two main groups of species are easy to tell apart: *A. lappa* has a flat topped inflorescence which results from the fact that the burs inserted lowest on the stem have the longest peduncles (a corymbose inflorescence), whereas *A. minus* and *A. nemorosum* have more or less sessile burs in a spike-like raceme. Separation of *A. minus* and *A. nemorosum* takes more experience. You need to check with a lens whether the corolla is hairy or glabrous, and to measure the width of the middle involucral bracts (phyllaries) to the nearest 0.1mm (see below). In the field in winter, after the burs are fully mature, *A. minus* can be told from *A. nemorosum* by keeping an old railway ticket in your pocket. The black magnetic strip on the back of the ticket is the difference in diameter across the tips of the burs. *A. minus* is the width of the white strip on one side, while *A. nemorosum* is the width of the white strip plus the magnetic strip. To confirm identification you need to measure the width of the middle interior bracts, preferably under a microscope (less than, or more than, 1.7mm respectively). The young stems often bear dense colonies of the bronzy-black aphid *Uroleucon*. & the leaves bear serpentine mines of *Phytomyza lappae*.

Arctium lappa L. Greater Burdock

o h 7

Roadsides, copses, hedges, canal banks, field corners and waste ground on moist, nutrient rich soils. Locally dominant in urban areas, by farms and near rivers or canals. Commonest on the clay, less common in open country, and in small quantity and rare or absent on nutrient-poor soils on the chalk and in south-east Berkshire. The petiole of basal leaves is solid at the base. The lowest burs are on long peduncles (> 2.5cm, not sessile), creating a flat-topped corymb (rather than racemose clusters of burs). The leaves are mined by *Ophiomyia lappivora*.

Silwood Park: very local, but dominant where it grows at the boggy northern end of the Walled Garden (since 1984); the population had declined to just 3 individuals by September 2005, the ground by that time being dominated by *Urtica dioica* and *Cirsium arvense*. The origin of the plants is unknown, but seeds could have been brought in unintentionally with plant material imported from Kent in 1979. There were 6 plants at the western end of the bonfire site at Ashurst, and 2 on the shady track behind Southwood Halls on 14 July 2003. By 26 August 2007 there were 4 plants by the back door of Southwood 1. A single plant, by the *Chimonanthus praecox* at the Lily Pond Entrance to the Manor House on 22 July 2010 when the property was essentially empty, but still not formally moth-balled.

Ascot: uncommon, in the verge of Cranbourne Roundabout [929730] on 30 August 2004. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: Shinfield, Sonning, by the R. Thames at Hurley, Wellington, Long Moor, Sandhurst, Park Place, White Waltham, Holyport, Bray, Windsor Park, Swinley. Common in the west but rare or

absent to the east of 90. Billingbear golf course. Locally frequent in ditch sides at Maidenhead sewage works [8980], by the R. Loddon on Whistly Green [7873], by the confluence of the Rivers Kennet and Thames in Reading [730740], in a ditch at Braywood Orchard [874750], roadside ditches between Fifield and Bray [9177], and at Old Windsor Lock [9974] in 2001. Common at Bray Gravel Pits in January 2008. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 11% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley as at Appleton, scattered in the Kennet valley getting progressively commoner as one approaches Reading, but rare in the interior (north of 70 and south of 95). On the edge of set-aside fields near the Victoria Tavern [237876] by the Great Western Railway south of Shrivenham in September 2004. By the old canal at Wantage [48] and in Cholsey Marsh [68]. On the ruins of the Prince of Wales pub at Challow Station [3590]. Conspicuous in Dry Sandford Pit [4699]. By the ancient trackway up Cholsey Downs [5685]. Common in Reading's Lake District [66] and [67] in 2002. Atlas 2000: all except [69]

[*Arctium x nothum* (Ruhmer) J. Weiss = *A. lappa* x *A. minus*]

Lappa x *notha* Ruhmer

Arctium x *debrayi* Senay

No Berkshire records but worth looking for. It is likely to be found where the parents grow together (e.g. by canals in towns). The hybrids combine the corymbose inflorescence of *A. lappa* with the hollow petiole of *A. minus*. The corolla is roughly equal to the involucre bracts and achene fertility is low.

***Arctium minus* (Hill) Bernh. Lesser Burdock**

h 7

Lappa minor Hill

Arctium vulgare auct., non (Hill) Druce

Arctium pubens Bab.

Arctium minus (Hill) Bernh. subsp. *pubens* (Bab.) P. Fourn.

Wayside, woods, hedges, woodland rides, roadsides and waste ground; common and generally distributed. Most frequent on the chalk. The petiole of basal leaves is hollow near the base, and the middle phyllaries are narrow (< 1.7mm). Note, however, that a problem can arise if the phyllaries are somewhat wider: if they are 1.7 to 1.8mm broad, then the corolla equalling or exceeding the phyllaries, or the corolla pubescent, or both, is *A. minus* not *A. nemorosum*. Stace's treatment lumps *A. minus* and *A. pubens* together. Previously, *A. pubens* was distinguished by having bigger heads (2-3cm in diameter vs. 1.5-2.2cm) that were open at the top in fruit, and borne on peduncles up to 15cm in length (there are no Berkshire records of *A. pubens*). Commoner in shade than *A. nemorosum* which (despite its English name) is more often found in full sun in Berkshire.

NVC: CG 3; OV 10,13,24,25,32; W8,12,21

Silwood Park: uncommon, typically as isolated individuals. The uppermost burs (22mm diameter across the tips of the hooks) are on peduncles of 6mm. The middle bracts are only 1.3mm wide. Easy to tell from Silwood *A. nemorosum* on bur diameter and colour (smaller and paler). Buckhurst Road Entrance, in the open woodland below the road to Southwood Halls in 1998-9. By the Nuclear Reactor, on the roadside down to Silwood Bottom (1979-2004). In the new coppice with standards by Mann's Copse, Cheapside, Ashurst, Four Acre Field, Ashurst Orchard, The Rookery, Silwood Lodge, North Heronsbrook, opposite Cheapside Pumping Station, Silwood Road, The Heath, East Lodge. From the seedbank in July 2005, following the erection of the deer and rabbit enclosure in South Lodge Wood. Common in the abandoned shady track on both sides of the locked gate between the Engineering Store and Silwood Bottom on 27 August 2005. A single plant in short grass by the track between William Penney and the Machinery Centre by Oak 1009 on 10 December 2006.

Ascot: Blane's Allotment, Swinley Brick Pits, heathy spots at Englemere, Fernbank Road, Coronation Road, Heatherwood Hospital, South Ascot, Ascot Heath, Kings Beeches, Charters Road, Sunningdale, Blacknest Park, South Coworth, Frostfarm Plantation, Brookside, Winkfield Lodge, Sunninghill Park, New Mile Road, Home Farm, South Forest, Hiltons Covert, Great Meadow Pond, Spring Hill. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road [933691] in September 2005. Locally frequent in March 2010 on open ground with *Urtica dioica* in several places in Sunninghill Park by roadsides and in plantation woodlands.

East Berks: common on the chalk slope below Windsor Castle, on the edge of Cock Marsh, Quarry Wood at Bisham, by the R. Thames at Hurley (with *A. lappa*), and in the chalk pit at Hurley. On sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 11 October 2003, 2 September 2007 and 6 September 2008 (with *A. nemorosum*). 40% (1km²). Atlas 2000: all squares

West Berks: frequent throughout, and much commoner than *A. nemorosum*. Abundant on the burial mounds at Seven Barrows [3282] and in the eutrophic woodland at Grove Copse [2392]. On the Berkshire/Hampshire border at Newtown Pond [477640] in 2004. Growing with *A. lappa* near Bourton [2386] in 2004. Atlas 2000: all squares

Arctium nemorosum Lej. *Wood Burdock*

h 7

Arctium minus (Hill) Bernh. subsp. *nemorosum* (Lej.) Syme

Arctium vulgare auct., non (Hill) Druce

Roadsides, hedges, thickets, etc.; local. The petiole of basal leaves is hollow near the base, the middle phyllaries are broad (1.7-2.5mm), the phyllaries exceed the corolla by 1.2-6mm, and the corolla is glabrous. Mature burs are sessile and broad (30-40mm). Leaves have blotch mines of *Pegomya genupuncta* and serpentine mines of *Phytomyza lappae*.

Silwood Park: uncommon, always as isolated individuals. Silwood Farm, on the north side of the track to the Kissing Gate, on the edge of the woodland, from 1980-2004, seldom more than one plant but seldom absent. Common in shade by the fence on the public footpath to Cheapside. Mass seedling recruitment in March 1984 in grassy verge next to the Engineering Store on South Gravel. Site destroyed during construction of the Science Park. The Engineering Store was dismantled and moved to a site below the Reactor Centre Wind Tunnel, but the plant was not there until October 1999 when a single individual was recorded from the Reactor Bank, on the edge of the birch trees. The Refectory, a dozen large plants in full flower on 13 August 1990 (a mass flowering by Silwood standards) around the edge of the old concrete base where the caravan used to stand behind Hut 4 adjacent next to the ramp at the rear of the Machinery Centre. On waste ground near the Walled Garden. Oak Mead, one plant in nettles by the Guinness's Thicket fence and another by the Biodepth shed at the top of the field by the Church Lane footpath in April 2000. Satellite Pad, Ashurst Warren, Playing Field, Ashurst Warren, South Lodge, behind the Japanese Garden, Cannon Crossroads. There were 3 large plants by the passing place on Ashurst Road on 28 August 2002. One plant in the lawn by the pond in the Japanese Garden in July 2003. The uppermost burs (32mm diameter across the tips of the hooks) are sessile. The middle bracts are 1.9mm wide. Easy to tell from Silwood *A. minus* on bur diameter and colour (larger and darker). A single individual on 13 July 2007 in dry shade inside the Rhododendron Exclosure, about 15m from the double gates.

Ascot: much less frequent than *A. minus*. Englemere, Johnson's Pond, Breakheart Hill, Locks Ride, North Ascot, Ascot Place, Windsor Great Park.

East Berks: Finchampstead, Winkfield but localities very incomplete. Sandhurst, near the Thames at Bray, White Waltham, Littlewick Green, Finchampstead. Industrial waste ground in full sun on Cain Road Bracknell. On sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 6 September 2008 (with *A. minus*). 27% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames valley but rare or absent in the Kennet valley and seldom reported from the south of the chalk ridge (i.e. south of 80). By the ancient trackway up Cholsey Downs [5685] with *A. lappa*. Atlas 2000: all except [47]

Carduus tenuiflorus Curtis *Slender Thistle*

• h 6

Carduus pycnocephalus L. var. *tenuiflorus* (Curtis) Ball

Waysides and dry banks in north Berkshire: rare and sporadic. Decreasing or formerly mistaken for *C. crispus*. The capitula are small (< 14mm) and roughly cylindrical (not round or bell shaped), and the corolla lobes are all the same size (rather than with one lobe more deeply delimited than the others).

East Berks: Earley [7472] (1982) and the motorway bridge over the R. Loddon [766713] in 1984. <1% (1km²). Atlas 2000: [77]

West Berks: very rare at Dry Sandford and Cothill in 1893 but not in 1896. Motorway bridge at Shippon (OXF) [4798] in 1977, Abingdon, Cothill and Marcham [49], Wootton [40] (OXF) in 1882, Radley and Didcot [59] (OXF) in 1927. At Larkmead, Abingdon [4896] in 1988 and Thrupp gravel pit [59] in 1990. Atlas 2000: [49], [59], [50]

Carduus crispus L. *Wetted Thistle*

h 6

Carduus crispus subsp. **multiflorus** (Gaudin) Grelli

Carduus multiflorus Gaudin

Carduus acanthoides auct., non L.

Carduus crispus L. subsp. *occidentalis* Chassagne and Arènes

Hedges, open woods, waysides and waste places; frequent, but absent from very acid soils in south-east Berkshire. The genus *Carduus* is distinguished from *Cirsium* on the pappus hairs: simple in *Carduus*, feathery-branched in *Cirsium*. Told from *Cirsium palustre* by its involucre bracts, which are pale green and spreading (not purple and tightly appressed).

NVC: OV 25

Silwood Park: first recorded on 10 July 2005, a single plant with seven stout stems, inside the rabbit fence, on topsoil imported in 2003 to landscape the lysimeters at Ashurst growing amongst *Cirsium vulgare* and *Cirsium arvense* but taller than them. Not seen since, but there was a veritable outbreak following a no-cultivation year in 2009, so that on 24 June 2010 the plant was as abundant as *Cirsium vulgare*, and locally frequent over all of the fenced area of the Lysimeters. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

Ascot: rare by the car park at the northern end of Ascot Heath in 1999. Kingsmead, Martins Heron, Peanut Roundabout.

East Berks: occasional to the north and west of a line from Maidenhead to Arborfield, but absent or rare on the Hampshire and Surrey borders on the acid sands of the south and east. Very rare by a gravel track through heathland on Poppy Hills in August 2002. Particularly common in Bisham [8585] and Sonning [7575]. 8% (1km²). Atlas 2000: all squares

West Berks: seldom more frequent than our fourth commonest thistle, after *Cirsium arvense*, *C. vulgare* and *C. palustre*, but locally abundant, as at RAF Welford [47] and on the ruins of the Prince of Wales pub at Challow Station [3590]. On the ruined walls of Godstow Nunnery [4809] in 2002. Atlas 2000: all squares

Carduus x stangii H. Buek ex Nyman = **C. crispus x C. nutans**

Carduus x dubius auct., ? an Balbis

Carduus x polyacanthus Schleicher, non Lam.

Carduus x orthocephalus auct., non Wallr. nec Curtis

Berkshire botanists have been enthusiastic about recording this hybrid: it is partially fertile and found with the parents. It is intermediate in the attributes of the capitulum (about 25-30mm across the top of the bracts (excluding the flowers) and bracts neither lanceolate nor linear subulate.

East Berks: Reading in 1906 (OXF), Twyford (1897).

West Berks: Ashdown Park [28], Hungerford in 1897 and Combe Gibbet in 1977 [36], Letcombe [38], Buckland Warren (RNG) in 1977 and Cherbury Camp (OXF) in 1913 [39], Greenham Common [46], West Ilsley [48], Milton [488936] and [488984] in 1980, Newbridge and Cumnor [40] (BM, OXF).

Carduus nutans L. *Musk Thistle*

h 5

Waysides, common on chalk downs, calcareous pastures, etc., “evincing a partiality for calcareous soils but not absolutely confined to them” (Druce). Now on dry grassland, roadsides, railway banks and waste ground, almost always on calcareous soil. Occasional, but rare or absent in south-east Berkshire. Much less abundant than in adjacent counties (e.g. just across the Buckinghamshire border in Dorney Common [97] it dominates large areas of Thames-side meadow land).

NVC: CG 2,3; MG 1; OV 25

Silwood Park: very rare, and almost certainly from introduced material, but increasing steadily since 1999. A single individual on compacted ground in front of the Engineering Store at the Nuclear Reactor on 25 June 2000, with 3 in July 2003 and just 1 in 2004, and none in 2005, 2006, 2007 or 2008. Perhaps the 2000 plant was the offspring of plants grown during a biocontrol project (on genotypic variation in pasture weeds) in the centre of Silwood Bottom from 1995-98. These flowered magnificently in July 1997 but had not spread beyond the area where they were planted by September 1998. By July 2000 the population was reduced to a paltry 2 plants, both right on the edge of the original planting; the rest had all succumbed to competition from *Holcus lanatus*. There was a mass resurgence, however, and by 29 June 2001 there were 53 plants by the central grass track across Silwood Bottom (20m away from the site of introduction). One plant grew inside the deer-fenced willow plot. In 2002 the plant was concentrated in the fallow by the woodland succession plots in the north-west corner of Silwood Bottom, but there were just 8 plants here in July 2005. In July 2003 there were 30 individuals on the original site (where it was planted with *Echium vulgare* and *Lythrum salicaria* in 1995) inside the new deer fence following late spring cultivation. In July 2004, the population of c.40 plants was entirely confined to a narrow strip on the northern edge of the grassy track across Silwood Bottom, down to 20 plants in July 2005. Scattered individuals survived in the margins, but annual cultivation inside the deer fence kills the rosettes before flowering (there were several non-flowering rosettes on 3 September 2005; see also *Echium vulgare*). Scattered and uncommon in Silwood Bottom in July 2006. A strong population of c. 80 rosettes on the uncultivated ground that had been put down to grass as part of the sewage sludge disposal project; the other ground around this plot to the north of the grass track through Silwood Bottom had been cultivated in

October 2006 and had no plants. In July 2008 the plant was common only on the right hand edge of the grassy track across Silwood Bottom (and gone from the north-west corner and the original planted site). On North Gravel, a single plant came up from the seed bank where the Leyland Cypress had been felled; this individual was in full flower on 6 December 2000. It is impossible to say whether this seed came from the introduced plants; it was gone by 2002. The strip between the deer fence and the grass track across Silwood Bottom was left uncultivated and there was a superb population just starting to flower on 10 June 2007. A second patch bloomed two weeks later on the edge of the sludge-disposal plot half-way between the central grass track and Southwood's Succession Plot on Friday 13 July 2007. In Silwood Bottom on 25 June 2008 the plant was confined to the uncultivated strip around the edge of the lawn created in 2007 for the sludge disposal experiments. It had gone from the top right of Silwood Bottom. A single plant in the student allotments on 25 August 2008. A single massive rosette growing in the centre of the concrete entrance to the gate into Silwood Bottom on 22 September 2009, and scattered rosettes throughout the ground on either side of the grass track. Substantially reduced in August 2010 in Silwood Bottom, restricted to a few locations on the Deer Fence on the southern half of the field.

Ascot: no other records.

East Berks: Winter Hill, Cookham Down, Sonning, Lower Culham, Stubbing's Heath, Wargrave, Hurley, Bisham, Maidenhead, Bray, Waltham. Recently at Highlands, California Country Park, Kennet Mouth, Wild's Beit, Broadmoor, West Hanworth, Wishmoor Cross, Waltham St Lawrence, Binfield, Braywoodside, Hurley chalk pit, Prospect Hill, Maidenhead Thicket, Winter Hill, frequent in the chalk grasslands above Cock Marsh (1979-2008), Widbrook Common, Clewer, and by the new road from Bracknell to Sandhurst, where it crosses Nine Mile Ride (2 individuals in 1998 but gone by 1999). Local, by a gravel track through heathland on Poppy Hills in August 2002, growing with *Carduus crispus*. In a sown sheep pasture dominated by *Hordeum murinum* at Shottesbrooke [8476] in July 2003. 3% (1km²). Atlas 2000: all squares

West Berks: occasional throughout, commonest in old chalk grasslands along the Ridgeway, but rare in the Kennet valley (to the south of 75; e.g. at Turners Green [5268] in 1988 and Pingewood pits [6869] in 1987). In sheep-grazed chalk grassland at the foot of Weathercock Hill [2981]. Common in chalk grassland on top of Blewburton Hill [5486] in 1999-2004, and in the reseeded grassland between Beedon and Ashridge on 1 July 2001. Frequent in *Cynosurus cristatus* grasslands on both sides of the burial mound on top of Combe Gibbet [3662], on West Woodhay Down [3861], and in Dry Sandford Pit [4699], locally abundant along stretches of the ancient drovers road of The Fair Mile [5583] in 2002. Rare in arable at Silchester [6362] in 2002. Local and uncommon on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Increasing in abundance in the under-grazed grasslands on Whitehorse Hill [298863] on 24 June 2007; symptomatic of the improper grazing management that is ruining this once magnificent site. Atlas 2000: all except [50], [68], [69]

Cirsium eriophorum (L.) Scop. *Woolly Thistle*

h 7 ↓

Cnicus eriophorius Roth

Carduus eriophorus L.

Cirsium eriophorum (L.) Scop. subsp. *britannicum* Petrak

An attractive thistle of dry pastures and roadsides on coralline oolite or chalk, usually in small quantity and sporadic. The leaves are highly distinctive with their regular, comb-like lobes. Declined through herbicide spraying of pasture land.

NVC: CG 2,3,5

East Berks: not seen by Druce or Bowen on the northern chalk, and probably just a casual in east Berkshire; Rapley Farm [8965] in 1979, waste ground in Whiteknights Park [7271] in 1981. Atlas 2000: no records.

West Berks: centred on the coralline oolite of the Northern Loop, locally frequent on the chalk downs, but absent, rare or extinct elsewhere. Odstone Coombes [28], Walbury Camp [3762], Letcombe, Knighton Bushes, Wantage, Crog Hill and Uffington [38], Duxford, Buckland and Pusey [39], Ashridge [47], Didcot, Abingdon, Tubney, Cothill, Hitchcopses pit [453997], Dry Sandford pit [465996], Shippon and Frilford [49], Wootton, Boars Hill, Cumnor, Harcourt Hill, Bessels Leigh and Upper Seeds at Wytham [40], Beenham [56], in the lime-enriched short heathland along the length of the former runway on Greenham Common [56] in 1999, by the ancient trackway up Cholsey Downs [5685], old railway at Hagbourne, Little Moulsoford and Streatley [58], Wittenham [59], Ferry Hinksey [50]. A single plant in the central section of Greenham Common [502646] on 23 June 2007 on the occasion of the BSBI visit. Atlas 2000: all except [46], [47], [48], [50], [66], [68], [69]

Cirsium vulgare (Savi) Ten. *Spear Thistle*

h 7

Carduus vulgaris Savi

Cirsium lanceolatum (L.) Scop., non Hill

Cnicus lanceolatus Willd.

Hedges, pastures, roadsides, waste places, newly cleared or open woods; very common and generally distributed. With *C. arvense*, our commonest thistles, then come *C. palustre* and *Carduus crispus*. Overgrazed pastures, arable fields and waste places. Frequent. A seed bank species, often sporadic and impermanent above ground, but producing massive, thicket-forming populations following soil disturbance. Because it is monocarpic, it is seldom found in the same location for more than one generation unless there is repeated soil disturbance; its seedlings can not establish in competition with perennial grasses.

NVC: CG 2,4; MG 1,6,7,9; OV 4,10,13,15,19,22,23,25,27,33; U 20; W 24

Silwood Park: frequent on disturbed ground, occasional or rare in grasslands, but seldom found in shade. Highly variable in abundance from year to year, depending on the weather and the disturbance regime. South Gravel, frequent on compacted ground around the storage garages, but extinct following the construction of the Science Park. Geophysics, on the roadside. Locally abundant opposite the Nuclear Reactor. A thick line of thistles appeared where the trench was dug to install the Optical Fibre Link to the Met Tower Satellite Dish in 1989, and these flowered profusely in 1991. Locally frequent in lawns and borders around the Manor House in summer 1990 following the drought of 1989. Rare in Silwood Bottom in grassy field boundary on 10 July 1980. Common at the Header House on grassy waste ground behind the BP Greenhouse where Phil Green had the study population for his PhD on thistle-head insects from 1993-5. Many of the rosettes were lifted up by mole hills in April 1994. These were likely the parents of the seed bank recruits that sprang up so abundantly on the bare ground left behind when the Leyland cypress trees were felled in 1999; these plants flowered profusely and died in summer 2001; there were no rosettes at all by 2002. Locally dominant on Reactor Bank in July 2002 following site clearance in autumn 2001. Very common in the seedbank beneath old grassland at Nursery Field in April 2004 following cultivation in 2003, but only in the rabbit-fenced plots (evidently, the seedlings are highly palatable to rabbits). It does not persist in intact grassland without some form of soil disturbance; for instance, it is frequent on the rabbit-grazed plots of Block K in Nash's Field that have been limed (weakening the dominant, acid-loving grasses) and fertilized with nitrogen (this attracts the rabbits, whose digs and scrapes are ideal for thistle seedling establishment). Frequent in rabbit-grazed turf in the graveyard at Ashurst in July 2005. Abundant in the older parts of the graveyard at Ashurst on 27 July 2007 after a very dry April and a very wet summer. On 15 June 2009, there were many plants on a soil pile created in spring 2009 by the construction firm carrying out the building work at Silwood Farm stripping the topsoil

from part of the ground inside the security fence at the Met Tower. Occasional on the abandoned gravel beds at Ashurst on 9 July 2009. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	16	17	25	51

East Berks: 95% (1km²); slightly less frequent than *C. arvense* (98%) but much more frequent than *C. palustre* (37%). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Cirsium dissectum (L.) Hill *Meadow Thistle*

hel 6 ↓

Carduus dissectus L.

Cnicus pratensis Willd.

A local speciality of fens, bogs, peaty commons, moist meadows and wet heaths where there is some horizontal water movement, often growing with *Molinia* and *Carex panicea*. The lower stem leaves are unlobed, and chalky white-felted on the underside. A serious decreaser as a result of drainage of bogs and wet heaths. Absent from the chalk and northern clays.

NVC: M 13,16,21,22,24

Ascot: thought to be extinct in Sunningwell Bog and Ascot. Rediscovered on 28 June 2001 on the edge of Sole's Pond in the woodland just east of Ascot Station, a single plant on the bank opposite the island.

East Berks: Earley Heath, Bulmarsh, Bagshot Common, boggy ground in Windsor Great Park, near Caesar's Camp, Wellington College, Ambarrow, Long Moor, Sandhurst, Crowthorne, Wokingham, near Bracknell, Riseley, Finchampstead, Blackwater. Wellington College (1916), Queens Mere, Owlsmoor. Extinct at most of its former stations, but still at Edgebarrow, Wellington College Bog, Shepherd Meadow [8460], Wishmoor Cross [8763], Crowthorne [8463], water meadows in v.c.22 opposite Blackwater Station [8559], near Mill Pond [8865], and on Whitmoor bog [8968]. 1% (1km²). Atlas 2000: [86]

West Berks: Fernham meadows and Grafton Lock meadows [29], Alfred's Hill [2990], Inkpen Common and Woodhay [36], Newhouse Covert [39], Enborne and Greenham Common [46], Snelsmore Common [47], Frilford, Tubney, Tubworth Barn meadow, Barrow Farm fen and Cothill Fen [49], Wytham and Hen Wood [40], wet meadow at Aldermaston [5970 6269] and Cold Ash Common [56], Oare Common and Bucklebury [57], Hagbourne Marsh [58], Iffley meadows, Bagley Wood and Kennington [50], Ufton Nervet, Burghfield and Mortimer [66]. The population on Inkpen Common is particularly strong, and grows amongst abundant *Narthecium ossifragum*. Atlas 2000: [29], [36], [39], [46], [47], [49], [40], [56], [57], [59], [50], [66]

Cirsium x forsteri (Sm.) Loudon = ***C. dissectum* x *C. palustre***

Cnicus x forsteri Smith

This is the commonest hybrid thistle and is found wherever *C. dissectum* grows. It has discontinuous spiny-winged, cottony pubescent stems and intermediate capitula and leaves.

East Berks: Wellington College [86] from 1963-65, Long Moor [76] in 1897.

West Berks: Cothill [49] in 1918.

Cirsium acaule (L.) Scop. *Dwarf Thistle*

hr 7

Carduus acaulos L.

Cnicus acaulis Willd.

Cirsium acaulon (L.) Scop.

Chalk grassland, downs, commons, dry heaths, and roadsides on calcareous soil; locally abundant on chalk but absent from large areas of clays and Bagshot Sands. Infamous for its impact on otherwise idyllic picnic sites. Note that its stem frequently elongates when growing in longer grass, in which case there is always one or more well developed leaf near the top of the stem.

NVC: CG 2-5

East Berks: occasional on the chalk of the western Thames valley from Remenham to Cookham and Maidenhead Thicket, but absent everywhere else (i.e. south of 80). Recently at Hurley chalk pit, Temple Park, Temple golf course, Dial Close, west of Remenham Wood, Winter Hill and on the chalk slopes above Cock Marsh. 1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: occasional on the chalk from Ashbury [28] to Streatley [58] and on the oolitic limestone of the Northern Loop, rare in the western Kennet on the downs above Inkpen, but absent from the south-east. AWRE Aldermaston [5963]. On the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands. Present in a very strange habitat amongst heather, in lime-enriched heathland, next to the former main runway on Greenham Common in 2001-04 [505647]. Atlas 2000: all except [50], [68], [69]

Cirsium palustre (L.) Scop. *Marsh Thistle*

h 7

Carduus palustris L.,

Cnicus palustris Willd.

Meadows, marshes, damp woods, hedge-banks; common and generally distributed. White-flowered forms are by no means uncommon. Damp woodland rides, marshes and damp grassland. Frequent. Very variable in numbers from year to year; populations move rapidly from place to place with changes in soil moisture. Monocarpic, it almost always dies after flowering.

NVC: CG 2; M 13,22,24; MG 4,9,10; OV 26,27; S 3,5,6,7,15,18,25,26,28; W 1,4,5,6,24

Silwood Park: wet grasslands and wet woodlands, even in quite deep shade. The population in Pond Field and Herons Brook Meadow was the subject of a long-term study into the capitulum-feeding insects and their parasitoids, carried out by Hefin Jones and colleagues from 1989 onwards. The thistle population showed bizarre behaviour, and when the study finished in 1991, the population of many hundreds of plants moved out of the damp, lower part of the field and up onto the drier Upper Pond Field below The Elms. The original population in Pond Field was virtually extinct in 1996, and recolonised only slowly to about 50 plants in July 2000, then declined again to just 10 plants in May 2004. In the meantime, the population on Upper Pond Field has disappeared. Very abundant in Rush Meadow in 2002, but scarce in 2003 (the plants are monocarpic, and die after flowering). Water Meadow West, dominant on 27 June 2007 over the whole area where the brambles had been cleared in winter two and a half years earlier. Very common on the abandoned gravel beds at Ashurst on 9 July 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	2	7	22	43

Ascot: abundant with *Deschampsia cespitosa* and *Juncus effusus* in Sunningwell Bog below St George's School.

East Berks: much less frequent at this scale than the 2 commonest thistles, *C. arvense* and *C. vulgare*. 37% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Cirsium arvense (L.) Scop. *Creeping Thistle*

gr 7

Serratula arvensis L.,

Cnicus arvensis Willd.

Badly managed pastures, arable fields and waste places; frequent or locally abundant in an extraordinary range of grassy and open habitats. White-flowered forms are found occasionally. The stems are often swollen by the galls of the fly *Urophora cardui*, leaves have blotch mines of *Pegomya* spp. & corridor mines of *Liriomyza* spp., and you may find the beetle *Cassida rubiginosa* (this has been released as a biocontrol agent against Creeping Thistle (without much success) in many parts of the world where the plant is an invasive alien). Host to the black aphid *Uroleucon cirsii*.

NVC: CG 2-4; M 22,24,27; MG 1,4-7,9,10,13; OV 3,4,5,7-10,13-16,19-29,31-33,41;

S 5,6,18,23,26,28; U 20; W 21,24,25

Silwood Park: the nineteenth most frequent species in small quadrats in Silwood, found in all sorts of grassland habitats, and as a serious weed of arable land. Not found in shade. It is much less abundant in arable land following autumn cultivation than after spring cultivation (as at Ashurst Four Acre Field in June 2004). It was very uncommon in the Pound Hill Cultivation Timing Experiment in July 2007 (less than 1% cover) following a very dry April then the wettest ever May, June and July. Particularly abundant in July 2008 after a very odd, cool spring, especially in Silwood Bottom and Ashurst Four Acre Field (where it was confined to the central third of the field, but here well over head high in a monoculture, with a very unusual monoculture of *Clinopodium ascendens* as the ground layer beneath). Persistent and locally abundant on the abandoned gravel beds at Ashurst on 9 July 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
10	21	42	44	76

East Berks: the most frequent of all the thistles. Only *Trifolium repens*, *Dactylis glomerata*, *Plantago lanceolata*, *P. major* and *Poa annua* are more widespread in East Berkshire. 98% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Onopordum acanthium L. *Cotton Thistle*

o h 7

A statuesque and ghostly garden plant, often over 2m tall, with white-wooly leaves, self-sowing freely in herbaceous borders and on waste ground near houses. Roadsides, dry hedge-banks and waste places in the Thames valley; never in quantity and mostly sporadic.

Silwood Park: self-sowing itself freely in and around The Greenhouses, but not spreading beyond the disturbed ground around the buildings. In earlier days (1980-89), about 5 plants were allowed to flower in any year, the gardeners weeding out the rosettes down to the number required for horticultural purposes. Recently, this system has broken down and large numbers of thistles flower in

some years (more than 20 plants were allowed to flower in 1994 and 1996 and more than 50 in 1999 and 2000), but all of the rosettes are dug up in other years, the plant persisting as dormant seeds in the soil seed bank. Hundreds of seedlings in October 2003 after the invasive *Solidago canadensis* was dug out, reaching densities greater than 100 per square metre in parts of the central bed. The bed had grassed over so that by 2006 there were no plants, and none seen since. Common as rosettes in flowerbeds and disturbed lawns around Silwood Lodge in autumn 2009 following building work on the house.

East Berks: Hurley, Earley, Sonning, Twyford (**LAN**) in 1956, Maidenhead, Long Moor. Reading, Coleman's Moor, Windsor. Sandford Mill (**RNG**) in 1932, Twyford (1956), Arborfield (1977). 2% (1km²). Atlas 2000: [76], [77], [78], [96]

West Berks: Watchfield [29], Pusey and Buckland Copse [39], Enborne [46], Chieveley at the M4/A34 intersection in 2001 and 2002 [47], AERE Harwell [48], Frilford Heath, Cothill and Marcham [49], side of the M4 Motorway near Yattendon, Lollingdon Hill [58], Thrupp gravel pit, Sutton Courtenay, Sotwell Hill, Barrow Hills and Sinodun Hills [59], Brocas Lands Farm [6563], railway near Basildon and Tilehurst [67], Wallingford [68]. Locally abundant just south of the railway at Steventon [4791] in July 2003. Atlas 2000: all except [28], [40], [56], [50], [66], [69]. Subsequently, found by D. Broughton on a farm tip at Coldborough Hill, East Garston [365777].

¶ **Onopordum** *O. acanthium*, *O. nervosum*

Silybum marianum (L.) Gaertn. *Milk Thistle* ○ h 6 ↓
Carduus marianus L.,
Mariana mariana Hill

Roadsides, dry waste ground and tips; rare and sporadic in very small quantity.

East Berks: first record Wargrave (1897). Christchurch Road, Reading (1957), Maidenhead (1962), on a bonfire site at Whiteknights Park (1980-85). Recently only at Dinton Pastures. Three patches, each of about 10 plants, in full flower on the western limb of the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. <1% (1km²). Atlas 2000: [77]

West Berks: pre-1900 records from Longworth [39], Newbury [46], Bessels Leigh [40], Upton [58] and Didcot [59] in 1945, Abingdon [49] in 1949, Kingston Bagpuize [49] in 1965, Tilehurst [67] in 1967, between Bucklebury and Hermitage [543709] in 1984. Recently at Hackpen Hill in a disused pit, where garden waste had been fly-tipped [351853]. Atlas 2000: no records.

Galactites tomentosa *Thistle* ● h 6

An elegant Mediterranean thistle with narrow, milk-veined leaves and delicate purple flowers; uncommon in gardens, and very rare as an escape, self-sown on gravel paths.

East Berks: a single plant on waste ground north of Oxford Road in Reading [7073] in July 2002.

West Berks: very local and rare on waste ground in Faringdon [2895] in July 2002

Serratula tinctoria L. *Saw-wort* h 7 ↓

Woods, thickets, heathy places, hedgerows, coarse grassland, drier parts of fens, on a wide range of soils. Local and decreasing. The curious distribution of *Serratula* is beautifully illustrated by the

juxtaposition of two records in Bowen's old card index of the flora: Whitehorse Hill [2986] and Whitmoor Bog [8968]. Never were two habitats more different than this: one a dry chalk grassland and the other a wet acid bog. The East and West Berkshire distributions also tell contrasting stories: In East Berkshire it is found on the acid sands and is absent from the chalk, while in West Berkshire it is commonest on the chalk and rare on the acid sands. Perhaps two different genotypes are involved? NVC: CG 2,5; M 13,16,24; MG 4

Ascot: abundant by the railway between Ascot and Bracknell in Druce's time (as at Englemere, where it still occurs), in the central rough of the golf course on Ascot Racecourse [9169] in 2002, Ascot Heath [9269] in 1972, Whitmoor Bog (1977) at Martins Heron [8968].

East Berks: Wellington College, Easthampstead, Earley Heath, Sandhurst, Bracknell, Bagshot, Riseley, Finchampstead Leas, Crowthorne, Wokingham, Stanlake Park, Bracknell, Nuptown Farm. Rare to the east of a line from Maidenhead to Arborfield, absent or extinct to the north and west of this. 1% (1km²). Atlas 2000: [76], [86], [87], [96], [97]

West Berks: uncommon on the chalk [28], [38], [48] and [58] and on the oolitic limestone of the Northern Loop [40], but rare in the south, with an outlying population on Inkpen Common [36]. Weathercock Hill [296825], Alfred's Hill [2990], Ashdown Park [28], Fernham meadows and Longcot [29], very fine by the canal at Uffington, Letcombe Castle, Seven Barrows and Hackpen Hill [38], Buckland [39], Hamstead Marshall [46], Langley Wood [47], Grimm's Ditch, Chilton and Farnborough Downs [48], Cothill Fen and Grove [49], Wootton, Lashford Lane, Boars Hill, Wytham, in Cumnor meadow in great abundance, Bushy Leaze Copse and Swinford [40], Aldermaston [56], AWRE Aldermaston [596628], Grims Ditch, Hermitage, Oare and Compton [57], by the railway at Didcot [5190], Aston Upthorpe Downs, Compton Downs and Lowbury Hill [5583], Radley [59], Bagley Wood [50], Mortimer, Burghfield, Ufton Nervet and Silchester [66]. Atlas 2000: all except [46], [47], [56], [67], [68], [69]

¶ **Serratula** *S. seoanei*

Centaurea diluta Aiton *Lesser Star-thistle*

East Berks: A bird-seed alien at Cookham tip (1959), Smallmead tip (1971), Woodley tip (1975).

West Berks: Newbury tip [46] in 1958 (OXF), South Hinksey tip in 1961-62.

Centaurea melitensis L. *Maltese Star-thistle*

• th 7 †

West Berks: Druce found it at Abingdon [49] in 1926 (OXF).

Centaurea scabiosa L. *Greater Knapweed*

hs 7

Acrocentron scabiosa (L.) Å. Löve and D. Löve

Colymbada scabiosa (L.) Holub

Chalk grasslands, roadsides, cornfields, field-borders, hedge-sides; locally frequent on calcareous soils but rare or absent from south-east Berkshire. There is an interesting contrast in the distribution of this species and the ray-flowered form of *C. nigra* which looks superficially so similar (but it has entire rather than pinnately divided leaves); on the chalky lane sides leading up to Coombe Gibbet above Inkpen the banks are dominated by *C. scabiosa*, while on the summit, the burial mounds are dominated by ray-flowered *C. nigra*.

NVC: CG 2-5; MG 1; OV 25,39,41

Silwood Park: sown in the Oak Mead experiment in 1996 and recruited on fenced, cultivated plots. It flowered for the first time in September 1996, and persisted in low numbers on Block B in July 2000, but not seen since. The seeds sown in the Nash's Field experiment in 1991 came to nothing. In the Tilman Plots, a single individual survived in the strip of Block H nearest Silwood Manor in June 2003-04.

Ascot: no records.

East Berks: very local and uncommon. Confined to the chalk of the western Thames, extending east and south only as far as Maidenhead; absent or very rare to the south of 75. On a lane side at Loddon Mouth. Hurley chalk pit. 3%(1km²). Atlas 2000: all except [97]

West Berks: occasional throughout, except in the far south (i.e. rare or absent to the south of 70). One of the most attractive species of the Ridgeway. Particularly good on the chalk around Inkpen [36], where it occurs with its wonderful parasite *Orobanche elatior*, and the superficially similar, ray-flowered forms of *C. nigra*. Abundant in Chilton railway cutting [4985] from 1995-2004. Common on roadsides in the high Downs between East Ilsley and Stanmore [4780], and by the footpath between Aston Upthorpe and Blewbury [5485] in 2002. On waste ground in Faringdon [2895] on 13 July 2002. Frequent by the railway at Radley Station [5298]. Atlas 2000: all squares

Centaurea montana L. *Perennial Cornflower*

• h 5

A quintessential cottage garden plant. A common garden escape or outcast in virtually every town and village.

Silwood Park: naturalised in grass at the foot of the wall below the Header House from 1983-86, but now gone.

Ascot: rare on waste ground on Victoria Road, South Ascot (2003-04).

East Berks: frequent throughout, but most frequent in [76] and [87]. Waste ground in Sonning, and on a verge a long way from houses in Kingsbridge Hill [7164] in May 2002. 17% (1km²). Atlas 2000: all except [78]

West Berks: first recorded at Grandpont (1897) as a garden outcast on waste ground, then at Boars Hill [50] and Basildon [67] in 1963. Buscot Weir [2298], in the churchyard at Bucklebury [5570] and on verges at Peasmore [4577], Kingston Bagpuize [4098], Mutton Copse [5879] and East and West Hagbourne [5187] in 2002. By the Thames at Donnington Bridge [5204] in September 2002. Atlas 2000: all except [39], [48], [49], [59], [66], [69]

Centaurea cyanus L. *Cornflower*

○ th 6 ↓ & • th 6 ↑

Cornfields, especially on light sandy soils. Formerly a common weed of arable land on sandy rather acid soils growing with *Chrysanthemum segetum*. Now usually garden escapes or introduced with wildflower mixtures. Susceptible to herbicides and uncompetitive with perennial crops and grass leys. Godwin (1975) thought that the natural habitat was scree slopes and alluvial deposits in late glacial tundra. Very common in cottage gardens, as a summer-flowering pot plant and in bedding schemes, self-seeding all over the place.

Silwood Park: extraordinarily successful in the first year of the Nash's Field experiment. Seeds sown inside the rabbit fences in October 1991 formed a virtual monoculture, 1.2m tall in June 1992, studded red with poppies. None were found on the grazed plots. Numbers declined dramatically in the

second year as herbaceous perennials like *Tanacetum vulgare* began to bulk up. Seen again 15 June 1996 in several of the plots following the great drought of 1995. Not seen since. Cornflower never spread to the adjacent plots that had been sown originally with grasses (*Alopecurus*, *Arrhenatherum*, *Anthoxanthum* and *Festuca rubra*). On the student allotments in June 2003, but rare by July 2005. A garden escape on pavements in Cheapside Village in 1999. Scattered throughout the north-west corner of Silwood Bottom in June 2006 on autumn-cultivated ground in places where Ruth Star-Kettle had grown the plant in 2005 as part of her pollination experiments. There were about 20 plants remaining in this population in July 2007. A single plant, growing with other rare annuals like *Agrostemma githago*, in the bed between the Header House and CABI Quarantine Greenhouse in July 2006. The abandoned sand bench in the eastern compartment of Greenhouse 8A by the Header House had 20 or so plants on 1 September 2006, only one of which was sufficiently advanced to be in flower. Common on the sand bench in Greenhouse 9C on 25 January 2007 (with *Agrostemma githago*), but only three plants flowering here on 9 July 2009 with *Chrysanthemum segetum*.

East Berks: Cookham Down, common on gravelly soil about Park Place, Windsor, Sonning, Hurst, Arborfield, Bray, Twyford, Wargrave, Loddon Bridge, Farley Hill, Earley, Wokingham, Barkham, Bracknell, Old Windsor, Binfield, Finchampstead, Crowthorne. Dry arable fields, once frequent but now rare. Occasional on tips. Smallmead tip, Holyport, Cookham. Widespread as a garden escape, and therefore impossible to define as native in any of its current sites. Bowen considered the plant to be extinct as an arable weed at all but one or two of its former sites in East Berkshire (see Druce's list, above). A garden escape in Holyport and Altmore in 2002. Sown with *Tagetes patula* on a roundabout opposite Cable and Wireless in the Western Industrial Area of Bracknell in 2004 and still there in July 2005, but much overgrown with *Chenopodium album*. Local and rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 5% (1km²). Atlas 2000: all squares.

West Berks: as a native weed of arable agriculture, it is rare in the Thames valley, extinct or rare in the Kennet valley, absent from the interior. A garden escape, however, it is common in villages throughout, and appears as a seed-bank casual from dormant seed in tipped soil. There was a roadside display of rare arable weeds, presumably planted, at Upper Lambourn [3180] in July 2003. Used as a floral display in the centre of Newbury in May 2004, where it was planted over the A4 roundabout. Atlas 2000: [29], [48], [49], [56], [58], [50], [66], [67]

Centaurea calcitrapa L. *Red Star-thistle* ● h 7 †

East Berks: on the railway at Reading [7070] in 1911 (OXF).

Centaurea solstitialis L. *Yellow Star-thistle* ● th 7 †
Leucantha solstitialis (L.) Á. Löve and D. Löve

Cornfields and waste ground, sporadic and rare.

East Berks: by the river near the Albert Bridge, Windsor (1897). Fields sown with lucerne and other crops; rare and casual. Reading (1956), Remenham (1956). Lucerne fields at Basingstoke Road, Reading [7168], Whitley (LAN) [7168] in 1956, Remenham in 1956 and Strand Castle in 1959.

West Berks: Newbury [46], West Hagbourne [58], Basildon [67] and Radley [59] in 1897 (OXF), Boars Hill [40] in 1910 (OXF), Cherbury [39] pre-1918, in lucerne at Pingewood (RDG) [69] in 1924

Centaurea nigra L. *Common Knapweed* h 6
Centaurea nemoralis Jordan
Centaurea nigra L. subsp. *nemoralis* (Jordan) Gremlí

Jacea nemoralis (Jordan) Soják

Centaurea debeauxii Gren. & Godron subsp. *nemoralis* (Jordan) Dostál

Grassland, railway banks, heaths, pastures, chalk downs and roadsides. Frequent and locally abundant. The various forms get two whole pages of coverage in Druce. Formerly the species was split into two: the attractive one, *C. nemoralis*, has pale purplish-red (rather than dark red) flowers, often with enlarged marginal florets, reminiscent of *C. scabiosa*. It has narrow leaves, slender branches, smaller flower heads not swollen below the heads, with the black apical tip of the bracts divided to more than three quarters of its length by the comb-like teeth, and a short or absent pappus. It grows on lighter, more calcareous soils. The species was sunk because of the existence of a complete spectrum of intermediate phenotypes, and Stace does not retain it even as a subspecies. Clapham, Tutin and Warburg, considered that there were two sub-species *nigra* and *nemoralis* and they felt that these were geographically and ecologically distinct. There is an interesting separation between *C. nigra* subsp. *nemoralis* and *C. scabiosa* on the chalk downs south of Inkpen: the lanesides on the slope of the Downs have abundant *C. scabiosa*, while the barrows on top of the down have abundant *C. nigra* with large ray florets. Host to the common black aphid *Uroleucon jaceae* and the celebrated Knapweed Gallfly, *Urophora jaceana*, on which pioneering work in ecological entomology and population dynamics was carried out by George Varley at Oxford in the 1940s and 50s.

NVC: CG 2-5; M 13,22,24,27; MG 1,4-6,9; OV 23,24; W 24

Silwood Park: local and rare, except where sown. The native plants do not have enlarged marginal florets, and grow in damp meadows and ancient grasslands, as in the western part of Water Meadow and on North Gravel. Also at Ashurst churchyard, The Oaks, Ha Ha, Heronsbrook Meadow, Reactor Block, Buckhurst Road Entrance. A weed of plant pots on the pot standing at The Greenhouses on 26 May 2004. This is one of the few grassland species in Silwood that is demonstrably seed-limited. That is to say, if extra seeds are sown into undisturbed grassland, then extra plants will grow and set seed in due course (fewer than 5% of grassland species tested in the Nash's Field and Oak Mead experiments proved to be seed limited). It is much more frequently seed limited on the unfertilized plots than on those receiving N, P and K (in contrast with *Heracleum sphondylium*; see p. 238). This means that the insect herbivores that reduce Knapweed seed production (like the capitulum galling fly *Urophora jaceana*) actually depress mature plant population size. Nash's Field, in wet grass by the Kissing Gate and below Block K. It increased during the first year on several of the minus-grass herbicide treatments in 1992. Locally common in some blocks in June 1995 and still common on the originally sown plots in July 2002. It is interesting that despite setting copious seed each year in the plots where it was sown, it has not spread into the adjacent unsown plots, presumably because of intense competition from the grasses which had established in the meantime. Dominant (or co-dominant with *Leucanthemum vulgare*) where sown on the fenced, cultivated plots at Oak Mead. Still abundant in July 2002, but not spreading into the adjacent unsown plots that are now dominated by perennial grasses. Very rare in the Tilman Experiment (sown October 1991) with one plant in the upper half of Block H, and one in the near half of Block J in July 2004. In July 2007 there was 1 plant in Block H (bottom). Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003. There were unusually high levels of insect herbivory on leaves of the plants in the rabbit enclosure of Block N in Nash's Field on 1 July 2008.

Plants with conspicuous marginal ray florets (with flower heads resembling *C. scabiosa*) were locally frequent on Blocks A-E of the Oak Mead experiment in July 2003, inside the rabbit fences on ground that had been cultivated at the time of seed sowing. They coexist with normal-flowered forms, and were introduced with the original seed mix. The ray-flowered plant, *C. nemoralis*, was frequent in the grazing enclosure on Rookery Slope on 16 July 2008: the branches were less than 2mm wide, ray florets 25mm long, involucre 14mm wide, leaves 9mm wide, and the apical teeth on the involucre bracts were divided to more than $\frac{3}{4}$ of the way to the midrib.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	7	13

East Berks: common throughout. Plants with large ray-florets were common around Holyport, Bray, Swallowfield and Ryeish Green in August 2002. 52% (1km²). Atlas 2000: all squares

West Berks: ray-flowered forms seem to exhibit niche differences from *C. scabiosa* on the chalk, as at Inkpen (see above). Atlas 2000: all squares

Centaurea x moncktonii C.E. Britton *Hybrid Knapweed* = **C. jacea x C. nigra** h 4
Centaurea x jacea auct., non L.
Centaurea x surrejana C. Britton
Centaurea x drucei C. Britton

A very interesting hybrid that persists long after one of its parents (*C. jacea*) has gone extinct (it was formerly an alien of grassy places). According to Stace (1997) the Berkshire plants approach *C. jacea* very closely. Differs from *C. nigra* in its involucre bracts (phyllaries) which are pale brown and irregularly jagged at the apex, rather like the palms and fingers of several waving hands (instead of the dark brown or black, regular comb-like teeth of *C. nigra*; see Figs 8, 9, and 10 on p 682 of Stace 1977).

East Berks: Wellington College (1913-20) (RNG). Found by Chris Bucke by the Foundry Brook between Bennet Road and Island Road in Reading in April 2003.

West Berks: Thatcham [56] and Fence Wood [57] in 1965. No specimens. On an old railway, 400m north-east of Upton Station [5187] from 1978-80 (OXF). In the same location [513873] in September 1994 and July 2001. Paul Green found "many plants in grass on the west-bound Reading Services" by the M4 [6769] on 6 August 2006.

Centaurea macrocephala Muss. Puschk. ex Willd. *Giant Knapweed* • h 7

An occasional herbaceous border plant with massive yellow flower heads. A rare garden outcast.

Silwood Park: long persistent by The Greenhouses, in rough grass.

West Berks: on waste ground in Faringdon [2895] in July 2002.

¶ **Centaurea** *C. bella*, *C. dealbata*, *C. dealbata* 'Steenbergii', *C. hypoleuca* 'John Coutts', *C. macrocephala*, *C. montana*, *C. montana alba*, *C. pulcherrima*, *C. simplicicaulis*.

Cichorium endiva L. *Endive* • th 7

East Berks: occasionally grown as a salad crop and found on rubbish dumps on allotments, and rarely as a bird-seed alien. Reading, Maidenhead. <1% (1km²).

Cichorium intybus L. *Chicory* o h 7

Waysides, cultivated fields, borders of fields; abundant on the chalk and widely distributed except in the forest and heathy tracts. Sown fields, roadsides and railway banks; locally frequent on the chalk, occasional elsewhere and absent from acid soils in south-east Berkshire. A distinctive roadside plant,

its powder blue flowers are conspicuous on roundabouts and slip roads by motorways in mid and late summer. Host to the black aphid *Uroleucon cichorii*.

NVC: OV 23

Silwood Park: no early records. Sown in the Nash's Field experiment in October 1991 but it did not take. One plant on waste ground between the back of the Header House and CABI Quarantine Greenhouse on 26 July 2006, growing with other uncommon aliens like *Celosia*, *Agrostemma* and *Eruca*. Origin unknown.

Ascot: very uncommon, but locally frequent close to The Squirrels at the Drift Road end of the old road at Cranbourne Roundabout [929730] in August 2003-04, but not seen on 2 September 2007. On the south-western verge of the A322 near Rapley Farm [8965] on 1 October 2005.

East Berks: occasional in the west and centre of the district but rare in the south and absent to the east of 90. Bulmershe, M4/A33 interchange, Sonning, Loddon Mouth, Dinton Pastures, North Twyford, M4/A329 interchange, Brookers Row, Amen Corner, Shottesbrooke, Lillibrooke Manor, Prospect Hill, Chalkpit House, frequent by the footpath from Altmore to Littlewick Green, Knowl Hill, Burchett's Green, Pinkneys Green, Kingsmead, Flemish Farm, Depot Road in south-east Maidenhead, Bray Meads, Old Windsor. 3% (1km²). Atlas 2000: all except [96]

West Berks: commonest in the Thames valley from Drayton and Abingdon [49] down to Reading [67]. Common in south Oxford, as at Botley [4806] and Cumnor [4603] in 2004. Scattered throughout, but there are few records from the chalk and it is rare in the Kennet valley. On Sheepdrove organic farm at Lambourn [3482] in 2000. Common by the footpath between Aston Upton and Blewbury [5485] in 2002. Atlas 2000: all except [28], [68], [69]

Arnoseris minima (L.) Schweigg. & Korte *Lamb's Succory*
Hyoseris minima L.

th 6 †

East Berks: on arable land at Crowthorne (now there's a laugh!) in 1891 (**OXF**), and in a sandy rhubarb field west of Easthampstead Park (**OXF**) in 1965. Worth searching for between Newlands and Sutton Court Farm in the vicinity of [838665] where there is still some open country.

West Berks: no records.

Lapsana communis L. *Nipplewort*
Lapsana communis subsp. **communis**

Hedges, waysides, cultivated ground, open woods, plantations, wood margins, arable fields and gardens; very common and generally distributed. One of the commonest, late-season roadside composites.

NVC: OV 8-10,12,15,19,23,33; W 8,24

Silwood Park: locally dominant on some of the roadside verges as at Sunninghill Crossroads, Buckhurst Road and Cannon Crossroads. Ashurst and in the carpark of Sunninghill Parish Church, Gravel Pit (especially inside the rabbit fence erected in 1998), Four Acre Field, Cheapside, Old Orchard, The Rookery, Tractor Sheds, Silwood Bottom, South Lodge, Science Park, East Lodge. Very common on the gravel pot standing inside the Walled Garden in June 2003. On imported topsoil at the Ashurst lysimeter site in May 2004, very common by May 2006. Frequent in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006, and occasional by 4 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	8	23

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 78% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

[**Lapsana communis** subsp. **intermedia** (M. Bieb.) Hayek]
Lapsana intermedia M. Bieb.

• h 6

Told by its much greater stature and larger flower-heads (2.5-3cm rather than 1.5-2cm diameter). The leaves are much less strongly toothed. Well worth looking for, especially in rough grass on chalk or limestone.

Hypochaeris radicata L. *Cat's-ear*

hr 6

Grassland, pastures, meadows, heaths, paths, ditches and waste places; very common and generally distributed, least common on the chalk. In other parts of the world, this one of the most widespread alien plant species, found on the upper slopes of Mona Loa in Hawaii to the volcanoes of Costa Rica and La Reunion, the fynbos of South Africa, sunny California and from Japan to New Zealand. The plant is known at once by its fleshy leaves with short, rounded lobes and unforked hairs. Confirmation requires that the capitulum be opened up; in addition to achenes with their pappus, you will find tissue-paper-like fragments of chaffy membrane separating the achenes from one another (these are the "receptacular scales" possessed by *Hypochaeris* but not by *Leontodon* or *Crepis*).

NVC: CG 2-4; MG 1,4-7; OV 23,27; U 1; W 23,24

Silwood Park: common in all the grasslands and on waste ground, but rather rare as an arable weed. Commoner than *Leontodon autumnalis*, but less common than *Crepis capillaris*. Frequent as massive plants in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
4	6	12	25	53

East Berks: 83% (1km²) the most frequent of the low-growing yellow composites. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Hypochaeris glabra L. *Smooth Cat's-ear*

th 6 ↓

A local speciality of open sunny spots on sandy and gravelly heaths. Very local and rare. The marginal achenes are not beaked, the capitula are small (1.0-1.5cm across rather than 2-4cm), and the ligules are dumpy (only 2 times as long as wide, not 4 times as in *H. radicata*).

Ascot: extinct. Formerly at Englemere, by the railway between Bracknell and Ascot.

East Berks: extinct. No post-1920 records; last recorded from the Berkshire side of Virginia Water in 1918. Wellington College, Ambarrow, Whitmoor Bog, Bracknell, Virginia Water. The Atlas shows post-1930 records from [76], [96] and [97]. The [76] record is from North Hampshire (v.c.12) just south of the Berkshire border from a cornfield by the ford at Riseley in 1957 (Brewis, Bowman and Rose, 1996). The two eastern records are from adjacent tetrads on the Surrey border [9668] and [9670] and may in fact be just a single site on the eastern side of Virginia Water. Well worth searching for, because it is easy to overlook it as a small *H. radicata*. Atlas 2000: no records.

West Berks: one of our native rarities, at Buckland [39], sandy waste ground at Frilford pit [4497], on the eastern practice ground at Frilford Heath Golf Course, with 30 plants in a 10m square on 4 June 2008 [4481 9851], sandy arable land at Cothill [4699], in short turf on sandy ground on the hill top at Cumnor Hurst [4704]. Atlas 2000: [39], [49], [40]

Leontodon autumnalis L. *Autumn Hawkbit* hr 6
Leontodon autumnalis subsp. **autumnalis**

Short, dry grassland, meadows, pastures, waysides, chalk downs, wall-tops, etc. Abundant throughout, and the commonest species of its genus. Frequent on most soils but least common on chalk. The underside of the ray florets (ligules) are reddish (not greyish), and the leaves have unforked hairs (the leaf hairs are forked in *L. saxatilis*). The leaf lobes are long and thin, and rather well separated (cf. *Crepis capillaris*).

NVC: CG 2; MG 4-7,9,13; OV 21; S 19

Silwood Park: much the commonest *Leontodon*, and locally more abundant than *Hypochaeris radicata* in some of the grasslands. Massive plants on recently disturbed ground at Mill Lane Triangle in July 2004. Common in the seed bank beneath the fenced cultivated plot in Block E in Nash's Field on 28 July 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	3	5	13	34

East Berks: common everywhere. 50% (1km²). Atlas 2000: all squares

West Berks: all but ubiquitous, but rare or absent on the chalk ridge. Atlas 2000: all squares

Leontodon hispidus L. *Rough Hawkbit* hr 6
Leontodon hispidum L.

Grassland, roadsides and railway banks. Locally frequent on calcareous soils, occasional elsewhere and absent from very acid soils in south-east Berkshire. Unmistakable with its roughly hairy flower stalks. Confirmation of the distinction from *L. saxatilis* requires a close examination to ensure that the pappus of the outermost achenes consists of hairs (in *L. saxatilis* the outermost pappus is reduced to a scaly ring).

NVC: CG 2-5; M 26; MG 1,4,5; U 1

Silwood Park: rare as a native, occasional from sown seed. Water Meadow, one plant just off the well trodden path up to Cheapside on 7 July 1983. Drive Field, 10 July 2000, a single plant in compacted ground inside the rabbit fence, presumably introduced unintentionally with chalk grassland plants during an air pollution experiment. Sown in the Nash's Field experiment in October 1991, but never seen subsequently. A single plant in flower on the gravel bench in Greenhouse 5B on 2 September 2009, no doubt from introduced seed.

Ascot: uncommon at The Orangery, A322/A332 Roundabout, Sunningdale Park, Kingsmead.

East Berks: "A very large form occurs in calcareous meadow at Hurley" (Druce). Occasional on the chalk of the Thames valley north of 75, but absent from the interior and the south of the area. In Stag Meadow and on the ramparts of Windsor Castle. 7% (1km²). Atlas 2000: all squares

West Berks: frequent in chalk grassland from Ashbury [28] to Streatley [58] and around Walbury Camp [36]. Abundant in Coleshill churchyard [29]. Occasional throughout, but rare or absent from the acid soils of the eastern Kennet valley. Atlas 2000: all except [68]

Leontodon hispidus x saxatilis

Less than 1% fertile and intermediate in habit and pubescence. It has the pappus type of *L. saxatilis*.

West Berks: in a hilltop pit at Wytham [40] in 1962 (**OXF**) (det. R.A. Finch).

Leontodon saxatilis Lam. *Lesser Hawkbit*

hr 6

Leontodon taraxacoides (Villars) M, rat, nom. illegit.

Leontodon leysseri (Wallr.) G. Beck

Leontodon hirtum L.

Colobium taraxacoides (Villars) Holub

Hyoseris taraxacoides Villars

Sandy and gravelly pastures, heaths and compacted ground by roadsides; locally common throughout our area. Short, dry grassland, mostly pasture, on moderately acid soils; occasional or locally frequent, but absent from calcareous soils. Typically smaller than the other common yellow composites, with ligules grey-violet beneath, leaves with forked hairs, and the outer achenes with a pappus that is a "scaly ring". Flowers well into the autumn, long after the others have set seed.

NVC: CG 2,3; M 13,24; U 1

Silwood Park: uncommon in short grassland, lawns and on compacted waste ground. Ashurst, churchyard, on the edge of the church car park, in trampled turf by the track through Nash's Field on the crest of the hill looking down to the Kissing Gate, Drive Lawns, Merton's Acres. On the edge of the Croquet Lawn by the multi-trunked beech tree above the Lily Pond. On the edges of the lawn between East, West and North Blocks in the very hot dry summer of 2003. On imported topsoil at Ashurst Lysimeters on 10 July 2004; just a single plant left by 27 August 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	6

Ascot: Martins Heron, The Tip, The Orangery, Tower Hill, Fernbank Road, Heatherwood Hospital, Coronation Road, Ascot Heath, South Ascot, Ascot Station, Charters Road, Frostfarm Plantation, Ascot Place, Cranbourne, Kingsmead, South Forest, Sunninghill Park. One of the most abundant species on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: occasional throughout, often with *L. autumnalis*, *Crepis capillaris* and *Hypochaeris radicata*. Common on pavements and waste ground in Bracknell in October 2003. Under-recorded, 21% (1km²). Atlas 2000: all squares

West Berks: occasional in the Thames and Kennet valleys and in the Northern Loop, but absent or rare from most of the interior (north of 75 and south of 90). Atlas 2000: all except [69]

Picris echioides L. *Bristly Oxtongue*
Helminthotheca echioides (L.) Holub

o h 6 ↑

Building rubble, arable land, roadsides and disturbed ground on clay soils (cf. *P. hieracioides*, below); locally abundant, but absent from most of south Berkshire. Much increased with motorway construction and climate warming. Leaves marked by the blotch mine of *Agromyza rufipes*.
NVC: OV 19,23

Silwood Park: local and rare. Header House, cracks in the pavement by the Sirex Unit from 1980-82; still at the Header House but rare in June 2002. Reactor Bank, on the soil heap from the Wind Tunnel; 10 August 1985. Garden Wood Bank, from imported topsoil, one large plant just outside the side door of North Block, September 1991, beneath the *Lonicera involucrata*. Hundreds of offspring of this one plant in August 1992, rosettes stretch in a solid strip for about 5m away from the parent. Up to 10m away by April 1993. Herbicided by zealous gardeners in May 1993 and never seen again. North Block shrubbery, a single, massive rosette over the winter of 1994-95 flowered in summer 1995 but there were no offspring in 1996. A single plant on the edge of the Science Park car park at East Lodge on 10 June 2000. On soil piles on London Road in July 2001 following work on the water mains. Frequent following soil disturbance caused by cable-laying contractors across the grassy triangle at the Cheapside end of Mill Lane in November 2001; down to one plant by 2002. Several plants on imported topsoil at the Lysimeters at Ashurst in June 2004, but just one in July 2005, two in June 2006 and four in September 2008. A tall, multi-stemmed individual at the base of the wall, next to the workshop door in the Stable Yard of Silwood Manor House on 10 June 2007. Very uncommon on dry gravel on plot A19 in the Raised Beds at Ashurst on 28 August 2007. Occasional from the seed bank at Ashurst Lysimeters on 29 July 2009, following herbicide treatment in spring 2009 and cultivation in mid June.

Ascot: The Tip, South Ascot, in the corner of the car park at Ascot Station, Sunninghill, Charters Road, Sunningdale Park, Sunningdale, Blacknest Park, South Coworth, Ascot Place, Brookside, Winkfield Lodge, Kingsmead, Cranbourne Tower. Scattered and uncommon on the earthworks and landscaping associated with the new Race Course (2005-07). Frequent in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007.

East Berks: Swallowfield, Sonning, Crazy Hill, Shinfield, Billingbear, Ashley Hill, Stubbing's Heath, Braywoodside, Waltham, Ruscombe, Twyford, Winnersh, Bray. Locally frequent by the M4 Motorway, and locally dominant at Maidenhead sewage works [8980] in 2001. Locally abundant on the waste ground left after development of the new car parks for Dell Computers at Amen Corner [8469] in September 2004. Abundant at the rear of 3M on Cain Road Bracknell on 2 September 2007. 30% (1km²). Common on compacted cleared ground destined for factory development at Green Park, Reading [7069] on 2 September 2007. Common on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Atlas 2000: all squares

West Berks: occasional to the north of 85 and the east of 55 but rare in the interior and the south-west. On the ruins of the Prince of Wales pub at Challow Station [3590] in July 2002. Atlas 2000: all squares

Picris hieracioides L. *Hawkweed Oxtongue*
Picris spinulosa sensu C. Britton, non Bertol. ex Guss.

h 7

Grassland, arable field margins, wood margins, roadsides, railway banks and grassy waste ground. Local and uncommon, mainly in the drier parts along the Thames valley, on calcareous or sandy soils (cf. *P. echioides*, above).

NVC: CG 2,3,5; OV 19

Silwood Park: rare and sporadic; seldom in one place for more than 2 years or so. A single magnificent specimen, 2m tall and with 5 flowering branches, grew in the 1996 fallow of Silwood Bottom, just west of the *Lythrum salicaria* plot. It was in full, metallic lemon-yellow flower on 13 September 1998, but was never seen again. Very rare by the CABI Greenhouses, a single plant in long grass on 28 June 2000. One plant with chalk aliens on the Ashurst Plots by the gate, flowering on 1 December 2001; never seen again. A huge, multi-stemmed plant on North Gravel, just outside the entrance of the ruined CABI Polytunnel on 14 July 2002 and 6 July 2003; this area was tidied up in November 2003 and it will be interesting to see if the plant survives. It was not there on 4 September 2004, but a single, large plant was in full flower inside the newly re-roofed Polytunnel, in complete dryness, on 20 July 2005. A single plant in exactly the same spot inside the Polytunnel on 20 July 2006 and one small plant outside the tunnel in grass by the rabbit fence, and another single plant inside the tunnel on August 2007 despite the lack of water. A single plant on 15 June 2012 at the MScan end of the Jiff Greenhouse Strip on gravel, growing with 3 large *Verbascum speciosum*.

East Berks: rare, scattered and sporadic. Wellington College, Remenham, Wargrave, Loddon Bridge, Maidenhead, Hurley, Clewer, Waltham, Twyford. Reading, Wargrave, Park Place, Waltham St Lawrence, Warren Row, Hare Hatch, Heywood Park, Winter Hill, Woodley. Recently from the M4 at Lower Earley, Dinton Pastures, frequent on railway banks near Maidenhead Office Park [850790], Crazies Hill, Warfield House, Hurley chalk pit. 1% (1km²). Atlas 2000: all except [97]

West Berks: Odstone Coombes [28], on the old airfield at Membury [37], Whitehorse Hill [38], Denchworth [39], Newbury [46], Chilton railway cutting [48], casual in an old pit at Caldecott [49], Wytham [40], Thatcham [56], Hermitage and Greathouse Wood [57], Hagbourne railway, Blewburton Hill, Upton Lodge and west side of Lollingdon Hill [58], Didcot and Radley [59], Kennington [50], Sulham [67], between Upper and Lower Basildon [67], Tilehurst [67], Purley [67]. Atlas 2000: all squares except [36], [47], [68]

Tragopogon pratensis L. *Goat's-beard*

h 6

Tragopogon pratensis subsp. **minor** (Mill.) Wahlenb.

Tragopogon minor Miller

Meadows, waysides, railway banks, long grass, damp meadows and roadsides; occasional, but rare on very acid soils in south-east Berkshire. Subject to occasional devastating attack by the pathogenic smut fungus *Ustilago tragopogonis-pratensis*.

NVC: CG 2-5; MG 5; OV 23

Silwood Park: uncommon and sporadic, perhaps somewhat declined. Silwood Bottom, in the grass verge along the eastern boundary, below Observatory Ridge on 14 June 1980 and 13 June 1983. On the bank below the Water Tank; 28 July 1980. Geophysics, on waste ground at the base of the hut wall, close to the derelict telescope dome; 10 June 1980. Sown in the Nash's Field experiment in October 1991 but never took. Frequent inside the rabbit-fenced PROSAMO Plot H at Pound Hill Field, Cheapside (1999-2004). Scattered through the Tilman Plots, and still locally frequent in June 2003, but rare in 2004 (one plant in the lower half of Block G, and one in the upper half of Block H); it was very abundant in the upper half of Block G in June 2005 and on 20 May 2006. Occasional in the Pound Hill Exclosure in fruit on 10 June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	4

Ascot: Blane's Allotment, Heatherwood Hospital, Ascot Station, High Street car park, Sunninghill, Charters Road, Brook Farm, Winkfield Lodge. In a dank alleyway between the shops in South Ascot in May 2004.

East Berks: Park Place, Wokingham, Twyford, Sonning, Billingsbear, Maidenhead, Bourne End, Cookham, Wargrave, Hurley, Bisham, Waltham, Bracknell, Martin's Heron, Bray, old meadows at Windsor Racecourse, Windsor, Old Windsor Lock. 26% (1km²). Atlas 2000: all squares

West Berks: scattered throughout. Particularly fine on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37]. Atlas 2000: all squares

Tragopogon pratensis subsp. **pratensis** *Goat's-beard* • h 6

A very rare alien, told from the common subspecies by its shorter involucre bracts (they are the same length or shorter than the ligules).

East Berks: in lane-side grass by the ornamental meadow on Long Lane at [883763] on 30 May 2002. <1% (1km²).

Tragopogon porrifolius L. *Salsify* • h 6

A rare alien, casual on waste ground and rubbish tips. The flowers are deep purple and the pappus hairs are a distinctive dirty brown (not white).

Silwood Park: in the shady shrub bed at the Cannon end of the TTC building, origin unknown. One fine plant about 1.5m tall in full flower on 13 May 1990. Not seen again.

East Berks: on the side of the railway line near Blackwater in 1874. Binfield (1938), Shinfield (**RNG**) in 1950, Reading (**RDG**) in 1921, St Patrick's hilltop in Reading (**RNG**) in 1953. Recently at Bulmershe Court and Woodley. A single plant on waste ground near The Squirrels [9373] in July 2002. <1% (1km²). Atlas 2000: [76], [77], [86], [87], [96], [97]

West Berks: Cockney Hill Tilehurst [67] in 1960. Abingdon Common [472962] in 2001. Atlas 2000: [28], [49], [67]

¶ **Tragopogon** *T. porrifolius*

Sonchus arvensis L. *Perennial Sow-thistle* h 7
Sonchus arvensis L. subsp. *uliginosus* auct., non (M. Bieb.) Nyman

Roadsides, hedge-banks, by motorways, banks of rivers, etc.; common and generally distributed. "One of our handsomest species, from its elegant leaves and showy flowers affording a beautiful sight when growing, for instance, in a field of ripe beans, the rich dark brown pods of which contrast very effectively with the golden flowers and glossy leaves of the *Sonchus*" (Druce).
 NVC: OV 8,9,13,16,19; S 4,18,26

Silwood Park: uncommon and sporadic. Silwood Bottom, as a weed of wheat, especially in the north-east corner on 7 July 1980, and in the south-east corner on 8 July 2001. Particularly abundant inside

the newly erected deer fence in July 2003 and 2004, following late spring cultivation; much less common, and only locally frequent in late August 2005, after a very dry spring and early summer, and restricted to a narrow strip in the centre of the plot in August 2006 following very late May cultivation (the last job that Ted did before he took the early retirement package). There were no flowers in July or August 2007 after a very dry April and a very wet summer, coupled with very late cultivation of the deer-fenced plot (July). In July 2008 there were no plants in the centre of the enclosure and only a few on the interior of the fence along the western edge; a scattering of flowering stems later on 6 September 2008. Plenty of rosettes, but very few flowering plants, on 22 September 2009, following very late cultivation in July 2009. Ashurst Four Acre Field, very common in late-cultivated ground along the boundary fence with The Orchard on 5 September 1994. Sandyridge, on cultivated ground. Pound Hill Field, in the fallow that had been planted with Brussels sprouts in 1989, on 15 June 1990. Reactor Bank, on soil from the foundations of the Wind Tunnel on 16 August 1985. Garrison Ridge, by the Reactor track through Hill Copse; 22 August 1983. Succession Plots, rare in the zero-year-old plot of 1980 on 12 July 1980. Cannon Crossroads, on the grassy triangle where Silwood Road joins the main London Road on 10 August 1980. Recently at The Rookery, Tractor Sheds, William Penney, South Lodge, Buckhurst Road Entrance, East Lodge. Common in the newly planted shrub bed on the edge of the Science Park car park by East Lodge in July 2002. One plant at The Farm, below the wall opposite the barn in July 2002; more numerous here by 28 June 2007. On the student's allotments in Silwood Bottom in June 2003 and August 2007. There was a single tall plant in tarmac next to the rear entrance to the CABI building, opposite the Header House, on 1 August 2007. Three plants in the shady verge of Buckhurst Road just north of the Main Entrance on 20 July 2009. Uncommon in Silwood Bottom Deer Fence in August 2010. A single plant in the grassy triangle between The Farm and The Lake on 29 August 2011. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	4	9

Ascot: locally frequent at the Drift Road end of the old road at Cranbourne Roundabout [929730] and on the new verges next to the roundabout in August 2003; still like this in September 2007.

East Berks: particularly common around Holyport and Paley Street in 2002. 36% (1km²). Atlas 2000: all squares

West Berks: roadsides throughout. By the R. Enborne at Aldern Bridge [4963]. Atlas 2000: all squares

Sonchus oleraceus L. *Smooth Sow-thistle*

b 6

Cultivated ground and waste places. Abundant throughout the county, but not found in any semi-natural habitats. Host to the aphids *Hyperomyzus lactucae* and *Uroleucon sonchi*. The leaves often show conspicuous silver-coloured serpentine mines, tunnelled out by larvae of the fly *Chromatomyia syngenesiae*.

NVC: OV 3,7,8,10,13,14,19,22,23,25

Silwood Park: occasional, much less common than *S. asper* on waste ground. Reactor Bank, waste ground on soil from the wind tunnel; 10 August 1985. North Gravel, in the grass verge opposite M-Scan; 5 November 1984. Header House, waste ground. Drive Field, disturbed soil around the new pollution pad on 13 August 1989. An invasive weed of the Ashurst Warren raised bed experiment in 1996-2004 (but nothing like as serious as *S. asper*). Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	24

Ascot: common on soil piles and bare ground during construction of Ascot Racecourse in August 2005, and noticeably more frequent here than *S. asper*.

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 86% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Sonchus asper (L.) Hill *Prickly Sow-thistle*

th 6

Sonchus oleraceus L. var. *asper* L.

Sonchus asper (L.) Hill subsp. *glaucescens* (Jordan) Ball

Cultivated ground and waste places. Common and widely distributed. Arable land and disturbed ground; frequent but not as common as *S. oleraceus* in Druce's time. There has been a dramatic reversal of relative abundance; *S. asper* now much commoner than *S. oleraceus*. One of the earliest arrivals on ground bared by cultivation or fumigation; extremely effective wind dispersal and seedling establishment. Red leaf galls are caused by the midge *Cystiphora sonchi*. The unripe seed-heads are eaten avidly by roe deer.

NVC: MG 1; OV 3,4,7-10,12,13,15,16,18,19,21,23,25,33,41,42; S 23

Silwood Park: on disturbed waste ground, gravel, rabbit exclosures around young trees, arable soil throughout. The most serious weed of the gravel beds experiment at Ashurst Warren. The first colonist to arrive on the bare, methyl bromide treated plots in the Oak Mead and Biodepth experiments. There was mass recruitment from the seed bank when the avenue of Leyland Cypress between Southwood Halls and the BP Greenhouse was felled in June 2000; by October 2000, the formerly bare ground was dominated by *S. asper* that germinated from buried seed that was at least 18 years old. Common on the disturbed ground at the foot of Ashurst churchyard in August 2002 where the grassland had been dug up during installation of the rabbit fence in spring 2002. Frequent in partial shade on Rookery Tip amongst nettles in September 2004. Very abundant in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006. Occasional in the damp grassland of Pond Field in September 2007, following two cuts of the rushes in early 2007. On 15 June 2009, there were many plants on a soil pile created in spring 2009 by the construction firm carrying out the building work at Silwood Farm stripping the topsoil from part of the ground inside the security fence at the Met Tower. Abundant in the Lysimeters at Ashurst on 20 September 2009 following herbicide treatment and late-summer cultivation, where roe deer had eaten-off most of the flower heads. In the grassy triangle between The Farm and The Lake on 29 August 2011. Occasional on bare ash at the bonfire site by the Walled Garden on 12 September 2011, growing with *Senecio inaequidens*, *Anagallis arvensis*, *Solanum nigrum* and *Stellaria media*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	3	17	43

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 93% (1km²); one of the most frequent of the composites. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lactuca sativa L. *Garden Lettuce*

• hs 6

Leaves are commonly found on tips and compost heaps from culinary waste, but the rooted plants are seldom found outside gardens. Soon disappears after abandonment of cultivation and is very rare on old allotments.

Silwood Park: Silwood Bottom on the student allotments (2000).

East Berks: Reading tip (1961), Woodley tip (1975).

Lactuca serriola L. *Prickly Lettuce*

○ b 7 ↑

Lactuca scariola L.

Motorways, railway banks, waste ground, derelict building sites and rubbish tips, often locally abundant. Much increased since Bowen's time, perhaps as a result of consistently warmer winters. The ripe achenes are small (3 to 4mm) and greyish. The bruised leaves smell of lettuce (rather than opium poppy). Also known as "Compass Plant" because it holds its leaves at right angles to the vertical, allegedly pointing them face-on to the low, distant sun. In many places, it fills the pavement-crack and wall-base niche of *Conyza sumatrensis*; whether it excludes the alien, or whether the alien takes over from *Lactuca* once it becomes established, remains to be seen.

NVC: OV 19,22

Silwood Park: much more frequent in the 1990s than in the early 1980s. Silwood Bottom, on cultivated ground, an infrequent weed in the early succession plots and still rare in 2005. Reactor Bank, a few plants on the spoil created during the construction of the Wind Tunnel on 5 August 1985. Pound Hill Field, cultivated ground. Header House, on waste ground, first recorded here in June 1990. A few plants on the gravel pot-stand in July 1994. Garden Wood Bank, on bare imported topsoil, the commonest Asteraceae in July 1992 but scarce by 1996. Recently at Ashurst, Churchyard, Buckhurst Road, Cannon Crossroads. The cut-leaf form was represented by 3 plants at the Header House on 6 July 1999. Uncommon on imported topsoil at Ashurst lysimeters in May 2004. Very common (second only to *Sonchus asper*) in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006. Locally frequent on the edge of the October-cultivated plot of Block D at Pound Hill on 6 July 2007. Very local and rare on dry gravel in the Raised Beds at Ashurst on 28 August 2007. Very abundant and locally dominant on bare gravel in raised beds at the Seed Bank Enclosure by the Met Tower on 4 July 2008 after weeding stopped in 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	7

Ascot: common on disturbed ground associated with the building of the new Race Course (2005-06) and the subsequent landscaping work (May 2007).

East Berks: first recorded from Burghfield, Smallmead tip, Reading, Hurley, Coleman's Moor, Bracknell, Bray Court pits, Maidenhead, Cookham, North Ascot, north end of Windsor Great Park. Recently much increased, frequent and widespread in towns and villages throughout. Frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 60% (1km²). Atlas 2000: all squares

West Berks: towns and villages throughout, especially common in the Vale of the White Horse. Abundant on the railway at Didcot [5290]. On the ruins of the Prince of Wales pub at Challow Station [3590] in July 2002. Dominant over large areas on building sites in Watchfield [2590] in September 2004. Atlas 2000: all squares

Lactuca virosa L. *Great Lettuce*

• b 7 ↑

Waste ground, roadsides and railway banks. Much less common than *L. serriola* but still greatly increased in abundance with recent warmer winters. The entry in Bowen's card index is annotated "Doubtful! All records probably *L. serriola* ?", which shows just how recent has been the dramatic increase of this species. Told from *L. serriola* by its ripe achenes which are larger (4-5mm not 3-4mm) and black or purplish (not greyish). The crushed leaves smell of opium poppy (not of lettuce), and the stems and petioles are dull red (not pale green).

Silwood Park: very rare and sporadic. A single large plant on CABI's pot stand by the Header House in July 1997. At two places in Cheapside Village in 1999. No plants in Silwood from 2000-05. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single huge plant on 27 May 2006 dispersing its copious seeds on 22 July 2006 (2.2m tall). A single, much smaller individual in dry, open ground in the fourth year on 4 July 2008 close to where the giant parent plant had grown.

Ascot: still very rare. Martins Heron, Winkfield, Cranbourne. Locally frequent on the abandoned track bed at Platform 4 on Ascot Station on 24 June 2001, but gone by 2002.

East Berks: not in Druce. First record, Southcote Road, Reading in 1925 (**RDG**). Bowen knew it from Leighton Park, Twyford, Bracknell, and Maidenhead. Recently at Beech Hill Coverts, Lambs Lane, Shinfield Court, Whitley Wood, Hall Farm, Lower Earley, by the M4 south of Reading, Fobney, Rose Kiln Lane, Coley, Bulmershe Court, Woodley, Temple Coombe, common on soil heaps at Billingbear, East Heath, Heath Pond, west Wokingham, Coppid Beech Roundabout, Bracknell Western Industrial Estate, Caesar's Camp, Bill Hill, Hintonhatch, The Holt, Bowsey Hill, Broad Common, Haines Hill, West End, Burdows Farm, Shurlock Row, frequent in Waltham St Lawrence, White Waltham, on railway banks north of White Waltham Airfield, Nuptown, Lillibrooke Manor, Mount Skippet, Hurley, Prospect Hill, Chalkpit House, Holloway, Temple, Bisham, Lee Lane, Long Lane, North Town, Halfway House, Cookham, Cookham Dean, Foliejon Park, Fifield, Holyport, Bray Court, St Leonard's, West Dedworth, Ham Island sewage works. On the banks of the dual carriageway up to the Thames crossing at Clewer in 2000 and by the A33 south of Reading in 2002. Very common on earthen banks at Bray Lakes [911791] and on a derelict plot on Crowthorne High Street [841639] in 2003. There were two plants in the Hawthorn thicket east of the road at Review Ground in Windsor Great Park [962743] in June 2003. Locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. A single plant on chalk by the track down from Winter Hill to Cock Marsh on 19 June 2008. 12% (1km²). Atlas 2000: all squares

West Berks: first record Wytham [40] in 1858. Most early records were clustered around Abingdon and Drayton [49]. Rare to the south of 85. South of Shrivenham cemetery [243883] in 2000. On the northern verge of the M4 at Pingewood [685696] and by the old railway between Upton and Chilton [505865] in 2002. Local and rare on cinder in railway sidings at Didcot Parkway Station [5290] in 2003 where *L. serriola* is common. Occasional on the extensive railway sidings west of Reading Station [6974] and at Tilehurst [6775] in 2004. Atlas 2000: all except [37], [38], [46], [57], [69]

Cicerbita macrophylla (Willd.) Wallr. *Common Blue-sow-thistle*
Sonchus macrophyllus Willd.

• h 7

Mulgedium macrophyllum (Willd.) DC.
Mulgedium uralense Rouy

Roadsides and waste places near houses; rare, but established and increasing. An established garden escape, well naturalised on rough ground and in waste places, often in partial shade (e.g. at the base of damp hedgerows or where direct sunlight penetrates the woodland edge).

Silwood Park: in damp shade between the corner of The Farm and Cheapside Footpath in 2002-04, but shy of flowering.

Ascot: in the hedge of St George's Lane, leading from London Road down to St George's School, Ascot (1984-2004), and at Ascot Station.

East Berks: not in Druce. Cookham (1957), St Leonard's Hill (1963), Remenham (1965), Ashley Hill (1971), Windsor (1974). Recently at Crazies Hill, in central Bracknell, Woodlands, Stag Meadow. 1% (1km²). Atlas 2000: all except [76]

West Berks: Streatley [58] in 1962-88, Chieveley [47] in 1963-80, Inkpen [36] and Bucklebury [56] in 1966, Aston Tirrold [58] in 1968, Uffington [28] in 1970, Newbury [46] in 1971, Gozzards Ford [49] in 1972, Sutton Courtenay [59] in 1977 and 2001, Ashampstead [57] in 1978, Wallingford [68] in 1980, at the shady edge of the car park on Snelsmore Common [47] in 1982-2004, on the eastern bank of the Wantage road (A338) where it descends from the Ridgeway, just below the junction with the Letcombe road [396853] in July 2002-04. Atlas 2000: [28], [36], [47], [49], [56], [57], [58], [68]

Cicerbita bourgaei (Boiss.) Beauverd *Pontic Blue-sow-thistle* • h 7
Mulgedium bourgaei Boiss., *Lactuca bourgaei* (Boissier) Meyer

A tall (2m) blue-flowered garden plant, with ovate-rhombic terminal leaf lobes. Rarely planted in or near wild gardens because it has such a fierce reputation.

East Berks: not in Druce. Whiteknights Park (1965).

West Berks: Poughley (RNG) [3473] in 1968, Boars Hill [40] in 1963. The best (if that is the right word for so pernicious an invader) population is in the woodland garden at Kingston Bagpuize House [4097] in 2000-04.

¶ **Cicerbita** *C. alpina*, *C. plumieri*

Mycelis muralis (L.) Dumort. *Wall Lettuce* hp 7 ↑
Prenanthes muralis L.
Lactuca muralis (L.) Gaertner

Beech and oak woodlands, dry, shady hedge-banks, and on old walls; commonest on calcareous soils, but not restricted to them. Increasing. Now found in urban habitats as well, including damp, shaded alleyways and derelict buildings.

NVC: W 8,12

Silwood Park: below the young holly hedge at East Lodge where it has persisted at low density since 1971. Much increased in the last 9 years (1995-2004). Ashurst churchyard in partial shade on 1 July 1998. Locally abundant in the shaded, water-splashed verge of Buckhurst Road, opposite the Science Park on 3 July 1998, and much commoner in August 1999. The Wells, one plant in the grass on the

corner of Cheapside Road where the *Hirschfeldia* used to grow, on 6 June 1999. By the Spraying Machinery Centre in one of the chicken wire fences protecting the young conifer trees on 10 July 2000. Between Hut 4 and the Machinery Centre in 2002, and on the concrete apron at the back of the Machinery Centre in September 2004. Locally abundant on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at The Cedars in September 2002. Also at Sunninghill Crossroads, Silwood Road, Mill Lane, Cannon Crossroads, Science Park. On the brickwork of the shaded road-bridge that crosses the Outflow Stream at Heronsbrook in April 2004. A single individual in one of the 250 gravel raised beds at Ashurst in September 2004; the seed must have travelled at least 300m to get there. Rare, in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006 and just one plant seen in the third year on 4 June 2007. On 5 July 2008 there were several groups of plants, the largest patch with 10 flowering individuals. Scattered at the base of walls all around the CABI building and the Header House in June 2006 and 2007. Increased in recent years, so that on 1 July 2010, the plant was by the rear door to Hamilton, outside Greenhouse 2B, with two by Greenhouse 3A.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	13

Ascot: local and uncommon. The Orangery, A322/A332 Roundabout, Fernbank Road, Heatherwood Hospital, Sunninghill, Kings Beeches, Charters Road, Sunningdale Park, South Coworth, North Ascot, Forest Lodge. In the verge of St George's Lane, opposite the school.

East Berks: Finchampstead, Bisham Wood, Park Place, Rose Hill, Sindlesham, Farley Hill, Swallowfield, Winkfield, very fine on Windsor Castle north terraces, about the Grotto at Frogmore, Barkham, Easthampstead, Culham Wood, old walls at Hurley, Bisham, Cookham, under bushes on the banks of the R. Thames at The Odney Club, Wargrave, Long Moor, Sonning, East Maidenhead. Occasional in the western reaches of the Thames from Reading to Maidenhead, and rare in the Blackwater valley. Shady places on buildings as at *The Compleat Angler* by Marlow Bridge. On brickwork by the R. Kennet in the heart of Reading. Absent from the interior. 11% (1km²). Atlas 2000: all squares

West Berks: occasional in the Kennet valley, but rare in the Thames valley and absent from the interior. Local in down-town Abingdon [4997], growing in the roof gutter of a derelict building in July 2002. Shrivenham [28], Taylor's Hill [29], Buckland [39]. Particularly common on the ancient brick walls of Aldermaston Court [5964] in June 2002. Frequent in sidings west of Reading Station [6974] in 2004. Atlas 2000: all except [48], [49]

Taraxacum officinale *Dandelion*

hr 4

Meadows, waste ground, roadsides, chalk downs, cultivated fields, etc. Abundant and generally distributed. Damp grassland, roadsides, disturbed ground, fallow fields, gardens and tips. Frequent but least common on the chalk ridge and very acid soils in south-east Berkshire. Host to the black aphid *Uroleucon taraxaci* and the blotch-forming leaf miner *Liriomyza taraxaci*. The plant is a poor competitor for potassium, and is rare or absent on soils that are potassium deficient; it is spectacularly abundant in April on the plots of the Park Grass Experiment at Rothamsted (v.c.20) that receive potassium fertilizer.

The Dandelions are almost all apomictic; they produce seeds by asexual reproduction. Some dandelions need to be pollinated before this can happen, but the seeds are genetically identical to their mothers, and no genes from the pollen are incorporated in the genome of the offspring.

All of the Berkshire records come from the database of the late A.A. Dudman and A.J. Richards (up to January 2000). Good collections were made by A.J. Richards in April 1968, and by H. Illgaard and C.C. Haworth in April 1984. The areas around the Universities at Oxford and Reading are reasonably well worked, but there remains a great deal of work to be done.

The Berkshire Dandelions are divided into Sections as follows (after Dudman and Richards 1997):

- 1. Small delicate plants (outer row of bracts usually less than 7mm, capitula usually less than 3cm across), with violet purple or reddish achenes and leaves with few (6 or fewer) lateral lobes; achenes with a cylindrical cone c. 1mm long **Erythrosperma**
- 1. Medium to robust plants, outer row of bracts usually more than 7mm, capitula usually more than 3cm across..... 2
- 2. Leaves very narrow, usually scarcely lobed. Outer row of exterior bracts appressed, ovate with a broad scarious border **Palustria**
- 2. Leaves broad, distinctly lobed. Outer row of exterior bracts various..... 3
- 3. Achene large (> 4.5mm including the cone but excluding the beak) and cylindrical, no pollen, ligules red-striped beneath, outer bracts erect to appressed **Spectabilia**
- 3. Achene smaller (< 4.5mm) narrowly top-shaped (not cylindrical), pollen present or not, outer row of bracts seldom appressed, ligules seldom red-striped beneath (but often striped in other colours) 4
- 4. Dark spots or blotches covering more than 10% of the surface area of the leaves ... **Naevosa**
- 4. Dark spots or blotches absent or covering less than 10% of the leaf surface 5
- 5. Upper surface of petiole and midrib green or solid (not minutely striped; use a lens) red or purple, outer row of bracts usually more than 10mm, not very dark on the underside, often recurved, leaves often lobed and folded in 3 dimensions..... **Ruderalia**
- 5. Upper surface of petiole and midrib minutely striped red or purple (use a lens), outer row of bracts seldom more than 10mm, usually dark on the underside, patent or erect, leaves flat and simply lobed 6
- 6. Weedy plants of disturbed (often man-made) habitats; lateral leaf lobes hamate (hooked, with the distal margin convex and the proximal margin concave), often in 4 pairs, exterior row of bracts often arched, bract tips not acute (subobtusate) **Hamata**
- 6. Plants of damp natural habitats like riversides, wood margins and hedgerows; lateral leaf lobes not hamate, often in 5-6 pairs; exterior row of bracts erect to recurved, bract tips acute...
..... **Celtica**

Section Erythrosperma

Dry sandy or calcareous soils; small plants with red or purple achenes. As a Section there are records from:

East Berks: Twyford, Earley, Wokingham, Sandhurst, Bracknell, Ascot, Bray, Windsor Great Park, Cookham Dean.

West Berks: Snelsmore, Wickham, Kintbury, Crookham, Bessels Leigh, Tubney, Faringdon, Wytham, Tubney, Frilford, Cumnor, Wittenham, Basildon, Padworth, Mortimer, Theale, Frilsham, Bucklebury, Sulham, Tidmarsh.

- Taraxacum acutum** A.J. Richards. hr 4
West Berks: south of Mapledurham [6776] in 1984.
- Taraxacum argutum** Dahlst. hr 4
East Berks: Frogmore in 1932.
- Taraxacum brachyglossum** (Dahlst.) Raunk. hr 4
Taraxacum erythrospermum Andr. ex Besser subsp. brachyglossum Dahlst.
Taraxacum vachelliae Dahlst.
Taraxacum hispanicum sensu A. Richards, non Lindb.f.
Common in short turf on acid soils. Told from *T. lacistophyllum* by its dark, unbordered purplish exterior bracts and short ligules with purple stripes.
Silwood Park: short turf in lawns, occasional.
East Berks: Frogmore in 1932.
West Berks: Frilford [4497] in 1929 and 1972, Tubney [4498] in 1909, Abingdon [59] in 1929.
- Taraxacum commixtum** G.E. Haglund hr 4
Taraxacum commutatum Dahlst., non Jordan
West Berks: Frilford [49] in Druce.
- Taraxacum fulviforme** Dahlst. hr 4
Taraxacum simile sensu A. Richards, non Raunk.
West Berks: south of Mapledurham [6776] in 1984.
- Taraxacum fulvum** Raunk. hr 4
East Berks: Reading in 1981.
West Berks: Longworth [39].
- Taraxacum glauciniforme** Dahlst. hr 4
West Berks: south of Mapledurham [6776] in 1984, Pangbourne [67] in 1985.
- Taraxacum lacistophyllum** (Dahlst.) Raunk. hr 4
Taraxacum erythrospermum Andr. ex Besser subsp. lacistophyllum Dahlst.
Frequent on light, neutral to calcareous soils, often with *T. brachyglossum* (see above).
Silwood Park: short turf in lawns, occasional.
East Berks: Reading [7373] in 1984, Bracknell in 1897.

West Berks: Rivar [36] in 1897, Sheepstead 7 Tubney [49] in 1909, Didcot [58] in 1897, Hinksey [50] in 1929, Purley [67] in 1897, south of Mapledurham in 1984.

Taraxacum oxoniense Dahlst. hr 4
Taraxacum helvicarpum Dahlst.

East Berks: Bracknell in Druce (1897).

West Berks: Burghfield [66] in 1897, south of Mapledurham [6776] in 1984.

Taraxacum parnassicum Dahlst. hr 4
Taraxacum silesiacum Dahlst. ex Hagl.

West Berks: Abingdon in Druce (1897).

Taraxacum retzii Soest hr 4

East Berks: near Bagshot in v.c.22 in 1921.

Taraxacum rubicundum (Dahlst.) Dahlst. hr 4
Taraxacum erythrospermum Andr. ex Besser subsp. *rubicundum* Dahlst.

West Berks: in [38] in 1980, Wytham [40] in 1968.

Taraxacum scoticum A.J. Richards hr 4

West Berks: south of Mapledurham [6776] in 1984.

Section Palustria

Marshes and water meadows, occasional but overlooked. Records for the Section from:

East Berks: Earley, Long Moor, bog in Windsor Great Park, Sunningdale.

West Berks: Wytham meadows, Cothill, Frilford, Marcham, Radley, Moulsoford, Fence Wood, Snelsmore, Greenham Common, Aldermaston.

Taraxacum anglicum Dahlst. hr 4

West Berks: Wytham [40] in 1921 and 1968, Swinford [4408] in 1973, Farmoor [450062] in 1968.

Taraxacum palustre (Lyons) Symons hr 4
Leontodon palustre Lyons
Taraxacum limnanthes Hagl. subsp. *limnanthoides* Soest
Taraxacum pollichii Soest

West Berks: Cumnor in 1964, Foxmoor Wytham and Farmoor, all [40] in 1968, Hagbourne [58] in 1976.

Section Spectabilia

Small to medium Dandelions of damp places on acid soils.

Taraxacum faeroense (Dahlst.) Dahlst. hr 4
Taraxacum spectabile Dahlst. var. faeroense Dahlst.
Taraxacum eximium auct., non Dahlst.
Taraxacum cimbricum Wiinst.
Taraxacum reclinatum sensu A. Richards et auct., non M. Christiansen
Taraxacum spectabile sensu A. Richards, non Dahlst.

East Berks: Crowthorne in 1947, Sandhurst in 1926.

West Berks: Wytham [40] in 1929, Pangbourne [6376] in 1963.

Section *Naevosa*

Rare Dandelions with black spotted leaves over more than 10% of the surface area.

Taraxacum euryphyllum (Dahlst.) Hjelt hr 4
Taraxacum maculigerum Lindb.f. subsp. euryphyllum Dahlst.

East Berks: Bracknell in 1929.

Taraxacum richardsianum C.C. Haw. hr 4

West Berks: Hagbourne [46] in 1976.

Section *Celtica*

Water meadows and damp pastures; occasional but overlooked.

Taraxacum bracteatum Dahlst. hr 4

East Berks: Spencer's Wood [7166] in 1984.

West Berks: Moulsoford [58] in 1915.

Taraxacum duplidentifrons Dahlst. hr 4
Taraxacum raunkiaeri Wiinst.

West Berks: Farmoor [4407] in 1968.

Taraxacum fulgidum G.E. Haglund hr 4

East Berks: Reading in 1981.

West Berks: Swinford [4408] in 1973.

Taraxacum gelertii Raunk. hr 4
Taraxacum adamii sensu A. Richards, non Claire

West Berks: Appleton [40] in 1965, Greenham Common [56] in 1972, near Stratfield Saye [66] in 1953.

Taraxacum haematicum G.E. Haglund ex H. Øllg. & Wittzell hr 4
Taraxacum haematopus Dahlst., non Lindb.f.

East Berks: Spencer's Wood [7066] in 1984.

Taraxacum hesperium C.C. Haw. hr 4

East Berks: Reading [7274] in 1984, Spencer's Wood [7066] in 1984.

Taraxacum nordstedtii Dahlst. hr 4
Taraxacum cambriense A. Richards

East Berks: Swallowfield in 1897, Finchampstead in 1938.

West Berks: Appleford [5293] in 1965, Bucklebury [5570] in 1934.

Section Hamata

Medium to large plants of roadsides and waste ground with hamate leaf lobes, and characteristic midrib with interwoven purple and green strands visible through a lens.

Taraxacum boeckmanii Borgv. hr 4

East Berks: Reading, Wokingham and Henley in 1984.

West Berks: an unlocalized record by Richards from [67] in 1981.

Taraxacum hamatiforme Dahlst. hr 4

East Berks: Spencer's Wood [7166] and [7066] in 1984, and from Reading, Wokingham and Henley in 1984.

Taraxacum hamatum Raunk. hr 4

One of the few woodland Dandelions, also on roadsides and waste ground.

Silwood Park: at the Cannon crossroads.

East Berks: Sunningdale in 1897.

West Berks: Rivar [36] in 1929, Appleton [40] in 1965, Aston [58] in 1976, Bagley [50] in 1897, Pangbourne [67] in 1984.

Taraxacum hamiferum Dahlst. hr 4
Taraxacum atrovirens auct., non Dahlst.

East Berks: Reading in 1984.

West Berks: Didcot [59] in 1928.

Taraxacum lamprophyllum M.P. Christ. hr 4

West Berks: Marcham [4596] in 1920.

Taraxacum marklundii Palmgr. hr 4

East Berks: Spencer's Wood [7166] and [7066] in 1984.

Taraxacum pseudohamatum Dahlst. hr 4

One of the biggest and earliest of the common roadside Dandelions. Told by its very large flower heads (50-55mm diameter) and broad bracts (3.5-5mm), dark green beneath.

Silwood Park: common on roadsides in early spring, as at Sunninghill and Cannon Crossroads.

East Berks: Spencer's Wood, Reading, Wokingham, Henley, etc.

West Berks: under-recorded. Recent records from [48] and [67].

Taraxacum quadrans H. Øllg. hr 4

East Berks: Spencer's Wood [7166] in 1984, Reading, Wokingham and Henley in 1984.

West Berks: near Stratfield Saye [66] in 1984.

Taraxacum subhamatum M.P. Christ. hr 4

West Berks: an unlocalized record from [68] in 1982.

Section Ruderalia

This section includes many of the commonest Dandelions of waste and disturbed ground.

Taraxacum acroglossum Dahlst. hr 4

Taraxacum praeradians Dahlst.

West Berks: Tubney [436993] in 1983.

Taraxacum adiantifrons E. Ekman ex Dahlst.

Taraxacum hemicyclum Hagl.

East Berks: Reading [7767] in 1981 and 1984, Spencer's Wood [7166] in 1984.

Taraxacum aequilobum Dahlst. hr 4

West Berks: an unlocalized record by Richards from [67] in 1981.

Taraxacum alatium H. Lindb. hr 4

Taraxacum semiprivum Dahlst.

Widespread in grassy places, told by its long, green, narrowly winged, entire petioles.

Silwood Park: roadsides at Sunninghill crossroads and beside London Road.

East Berks: Reading, Wokingham and Henley in 1984.

West Berks: Shefford [3673] in 1929, Caldecott [484965] in 1979, Blewbury [5385] in 1915, south of Mapledurham [6776] in 1984.

Taraxacum ancistrolobum Dahlst. hr 4

East Berks: Reading in 1981.

West Berks: an unlocalized record by Richards from [67] in 1981.

Taraxacum aurosulum H. Lindb. hr 4

East Berks: Reading in 1981.

West Berks: Wytham [40] in 1968.

Taraxacum chloroticum Dahlst. hr 4

East Berks: Reading [7274] in 1984.

Taraxacum cophocentrum Dahlst. hr 4

Widespread and common in grassy places, told by its small (45mm diameter) flower heads, large, rounded, usually entire terminal leaflet, and ligules striped with brown-purple.

Silwood Park: occasional in wood margins and scrub as at Ashurst by the church. In compacted ground, with *Plantago coronopus*, in the verge of London Road by the telephone kiosk.

East Berks: Reading [7274] in 1984.

West Berks: [3278] in 1932, Cothill [4699] in 1928, Kingston Bagpuize [4098] in 1926, Swinford [4408] in 1973, Didcot [59] in 1928, unlocalized [67] in 1981.

Taraxacum cordatum Palmgr. hr 4

East Berks: Reading [736763] in 1974, Spencer's Wood [7166] in 1984.

West Berks: Wytham [4708] and Farmoor [4407] both in 1968, unlocalized [67] in 1981.

Taraxacum croceiflorum Dahlst. hr 4

East Berks: Reading, Wokingham, Henley in 1984, Spencer's Wood [7166] in 1984.

West Berks: Upton [5186] in 1973, south of Mapledurham [6776] in 1984.

Taraxacum curtifrons H. Øllg. hr 4

West Berks: Pingewood [6969] in 1981.

Taraxacum cyanolepis Dahlst. hr 4

East Berks: Sandhurst [8361] in 1926.

West Berks: Cholsey [586868] in 1983.

Taraxacum dahlstedtii H. Lindb. hr 4

East Berks: Reading in 1984.

West Berks: Frilford [4497] in 1928, Tubney [4498] in 1929, Farmoor [4407] in 1968, unlocalized [67] in 1981.

Taraxacum densilobum Dahlst. hr 4

Taraxacum percrispum M. Christiansen

East Berks: Reading [7373] in 1984.

West Berks: unlocalized [69] in 1982.

Taraxacum ekmanii Dahlst. hr 4

Taraxacum connexum Dahlst.

Widespread and common weed. The pale, lettuce-coloured leaves are very variable on the same individual (heterophyllous), with large (55mm diameter) deep yellow flowerheads.

Silwood Park: the commonest big Dandelion of man-made habitats, as at Header House on 4 April 2001.

East Berks: Reading, Wokingham and Henley in 1984.

West Berks: Faringdon [29] in 2001, Kingston Bagpuize [49] in 1928, Farmoor [4407] in 1968, Eynsham and Botley [40] in 1968, Burghfield [6668] in 1897, near Stratfield [6961] in 1953.

Taraxacum exacutum Markl. hr 4

Taraxacum spilophyllum sensu A. Richards, pro parte, non Dahlst.

West Berks: an unlocalized record by Richards from [67] in 1981.

Taraxacum expallidiforme Dahlst. hr 4

Taraxacum oncolobum Dahlst.

East Berks: Reading in 1981.

West Berks: Aston Tirrold and Blewbury [58] in 1976, Abingdon [503986] in 1979, unlocalized [66] in 1984.

Taraxacum exsertum Hagend., Soest and Zevenb. hr 4

West Berks: Abingdon [503986] in 1979, unlocalized [67] in 1981.

- Taraxacum fagerstroemii** Sältin hr 4
Taraxacum sublacerifolium Hagend., Soest and Zevenb.
 West Berks: on the Berkshire side of Benson weir [613911] in 1981.
- Taraxacum fasciatum** Dahlst. hr 4
Taraxacum sublatissimum Dahlst.
 East Berks: Reading [7373] in 1984.
 West Berks: Frilford [4497] in 1928, Tubney [4498] in 1919, Marcham [4596] in 1920, Blewbury [5385] in 1915, New Hinksey [522043] in 1979.
- Taraxacum hexhamense** A.J. Richards hr 4
 East Berks: Reading [7373] in 1984.
- Taraxacum horridifrons** Rail. hr 4
 East Berks: Spencer's Wood [7166] in 1984.
 West Berks: south of Mapledurham [6776] in 1984.
- Taraxacum huelphersianum** Dahlst. hr 4
 East Berks: Reading in 1981.
- Taraxacum incisum** H. Øllg. hr 4
 East Berks: Reading [7373] in 1984.
 West Berks: Tubney [436993] in 1983.
- Taraxacum insigne** E. Ekman ex M.P. Christ. & Wiinst. hr 4
Taraxacum ordinatum Hagend., Soest and Zevenb.
 West Berks: Moulsoford [5984] in 1915, south of Mapledurham [6776] in 1984.
- Taraxacum lacinosifrons** Wiinst. hr 4
 East Berks: Spencer's Wood [7066] and [7166], Reading [7373] both in 1984.
- Taraxacum laticordatum** Markl. hr 4
Taraxacum uncosum auct., non Hagl.
 East Berks: Reading [7274] and [7373] in 1984.
- Taraxacum latissimum** Palmgr. hr 4
 East Berks: Reading [7373] in 1984.
 West Berks: Iffley [521035] in 1984.

Taraxacum leucopodium G.E. Haglund

hr 4

East Berks: Reading [7274] in 1984.

Taraxacum lingulatum Markl.

Taraxacum aequatum Dahlst.

Taraxacum subpalleescens Dahlst.

One of the commonest Dandelions of roadsides and grassy places. Told by its long, strongly recurved bracts and the narrow, blunt, elongated process at the tip of the terminal leaf lobe.

Silwood Park: waste ground at the Header House and on the Science Park.

East Berks: Spencer's Wood [7166] and Reading [7373] both in 1984.

West Berks: Longworth [3999] in 1910, Harwell and Kingston Bagpuize [49] both in 1928, Didcot [538900] in 1983, Marcham [4596] in 1897, unlocalized [67] in 1981.

Taraxacum longisquameum H. Lindb.

hr 4

Taraxacum latispina Dahlst.

Taraxacum adsimile Dahlst.

Taraxacum mucronatum sensu A. Richards et auct., non Lindb.f.

East Berks: Reading [7373] in 1984.

West Berks: Didcot [58] in 1928.

Taraxacum melanthoides Dahlst. ex M.P. Christ. & Wiinst.

hr 4

West Berks: Didcot [538900] in 1983.

Taraxacum multicolorans Hagend., Soest and Zevenb.

hr 4

East Berks: Spencer's Wood [7166] in 1984.

Taraxacum obliquilobum Dahlst.

hr 4

Taraxacum similatum Dahlst.

East Berks: Cookham [8785] in 1906.

West Berks: Abingdon [4997] in 1928.

Taraxacum oblongatum Dahlst.

hr 4

Taraxacum perhamatum Dahlst.

Fertile, damp pastures and other grassy places; widespread and locally common. Told by its small (30-40mm diameter) rounded flower heads with narrow (2-3mm) recurved bracts.

Silwood Park: in grass by The Farm and at Ashurst.

East Berks: Reading [7373] and Spencer's Wood [7166] both in 1984.

West Berks: Marcham [49] in 1929, Boars Hill [4802] in 1929, Beech Wood [66] in 1984, south of Mapledurham [6776] in 1984.

Taraxacum obtusifrons Markl. hr 4

East Berks: Reading [7373] in 1984.

Taraxacum pachymerum G.E. Haglund hr 4

East Berks: Reading [7373] in 1984.

Taraxacum pallidipes Markl. hr 4

East Berks: Spencer's Wood [7166] in 1984.

Taraxacum pannucium Dahlst. hr 4

East Berks: Spencer's Wood [7166], Reading [7373] both in 1984.

West Berks: Didcot [543898] in 1983, Iffley [521035] in 1984.

Taraxacum pectinatiforme H. Lindb. hr 4

East Berks: Reading [7373] in 1984.

Taraxacum piceatum Dahlst. hr 4

East Berks: Spencer's Wood [7166] and Reading [7373], Wokingham and Henley, all in 1984.

West Berks: Didcot [538900] in 1983, Beech Wood [66] in 1984, unlocalized [67] in 1981.

Taraxacum polyodon Dahlst. hr 4

Taraxacum naeviferum Dahlst.

Taraxacum ardisodon Dahlst.

One of the commonest Dandelions of roadsides and other grassy places. Told by its strongly dentate leaves, coloured petiole and dark-blotched interlobes, and the characteristic untidy, wispy, claw-shaped exterior bracts.

Silwood Park: London Road, Buckhurst Road and Cheapside. Also at Ashurst and Sunninghill Crossroads.

East Berks: Reading, Wokingham and Henley in 1984.

West Berks: Letcombe [3785] in 1969, Wytham [4708] in 1969, Didcot [59] in 1977, south of Mapledurham [6776] in 1984.

Taraxacum procerisquameum H. Øllg. hr 4

Taraxacum procerum sensu A. Richards et auct., non Hagl.

West Berks: Tubney [436993] in 1983.

Taraxacum pulchrifolium Markl. hr 4

West Berks: Beech Wood [6967] in 1984.

Taraxacum rhamphodes G.E. Haglund hr 4

East Berks: Spencer's Wood [7166] and Reading [7373], both in 1984, Bisham [847847] in 1982.

West Berks: south of Mapledurham [6776] in 1984.

Taraxacum sagittipotens Dahlst. & R. Ohlsen ex G.E. Haglund hr 4

West Berks: unlocalized record by Richards [67] in 1981.

Taraxacum scotiniforme Dahlst. ex G.E. Haglund hr 4

Taraxacum obscuratum Hagl.

East Berks: Spencer's Wood [7066] and [7166] in 1984.

Taraxacum sellandii Dahlst. hr 4

East Berks: Spencer's Wood [7166] in 1984, Reading in 1981.

West Berks: Tubney [436993] in 1983.

Taraxacum sinuatum Dahlst. hr 4

East Berks: Spencer's Wood [7066] and [7166] in 1984.

Taraxacum stenacrum Dahlst. hr 4

East Berks: Reading in 1981.

West Berks: Otney and Didcot [59], both in 1976.

Taraxacum stereodes Ekman ex G.E. Haglund hr 4

East Berks: Reading [7373] in 1984.

West Berks: Iffley [521035] in 1984.

Taraxacum subcyanolepis M.P. Christ. hr 4

West Berks: Greenham Common [46] in 1972.

Taraxacum subexpallidum Dahlst. hr 4

Taraxacum linguatum Dahlst. ex M. Christiansen and Wiinst.

Taraxacum sublaciniosum sensu A. Richards et auct., non Dahlst.

Locally common and widespread on roadsides and waste ground. The tips of the terminal leaflets are distinctive (rounded and narrowly lingulate).

Silwood Park: on waste ground by the Header House.

East Berks: Reading [7272] in 1968, [756758] in 1975, Sunningdale [9567] in 1926.

West Berks: Faringdon [2895] in 1921, Cothill [4699] and Sunningwell [4900] both in 1897, Wytham [4708] in 1969, Iffley [521035] in 1984.

Taraxacum sublaeticolor Dahlst. hr 4

East Berks: Caversham [6876] in 1984, probably v.c.23 Oxfordshire.

Taraxacum subundulatum Dahlst. hr 4

Taraxacum hemipolyodon Dahlst.

Taraxacum similitum Dahlst.

Taraxacum amphiodon Dahlst. ex Hagl.

East Berks: Spencer's Wood [7166] in 1984.

West Berks: Cothill [49] in 1928, Abingdon [59] in 1928, Cumnor [50] in 1969, south of Mapledurham [6776] in 1984.

Taraxacum subxanthostigma M.P. Christ. ex H. Øllg. hr 4

West Berks: Iffley [521035] in 1984.

Taraxacum tanyphyllum Dahlst. hr 4

West Berks: Tilehurst [6673] in 1954.

Taraxacum undulatiflorum M.P. Christ. hr 4

Common on roadsides and waste ground. Not a characterful species, best told by its dull, rather dark green coloured leaves, blotched blackish, some of which have large hastate terminal lobes.

Silwood Park: by the Manor House and at Ashurst.

East Berks: Spencer's Wood [7166], Reading [7373] in 1984, Bisham [804836] in 1982, Wokingham and Henley in 1984.

West Berks: Abingdon [49] in 1976, south of Mapledurham [6776] in 1984.

Taraxacum valens Markl. hr 4

East Berks: Spencer's Wood [7166] and Reading [7373] in 1984.

Taraxacum vastisectum Markl. ex Puol. hr 4

East Berks: Spencer's Wood [7166] in 1984.

Taraxacum xanthostigma H. Lindb. hr 4

East Berks: Reading in 1968 and 1981.

West Berks: Bagley [5102] in 1969.

[*Crepis tectorum* L. *Narrow-leaved Hawk's-beard*]

Reseeded verges and disturbed ground. Worth looking for this species, but not in Druce or Bowen. Phyllaries pubescent on their inner surface; achenes 3-4mm, 10-ribbed

***Crepis nicaeensis* Balb. *French Hawk's-beard* ● b 6 †**

East Berks: local and rare. Near Ascot, by the side of the railway. Druce thought this was an error. Worth looking for. Like *C. tectorum*, found on reseeded verges. Phyllaries glabrous on their inner surface; achenes 10-ribbed, 2.5-3.8mm, receptacle pits fringed by lacinate membranes.

West Berks: Wytham [40] in 1893 (**OXF**) (det. J.B. Marsahll).

***Crepis biennis* L. *Rough Hawk's-beard* b 6 ↓**

Cultivated fields, calcareous grassland, roadsides and railway banks; sporadic. "Rare but gradually spreading, and more frequent in hot dry years as in 1895-96" (Druce). "Uncommon and local" (Bowen). Still uncommon. Phyllaries pubescent on their inner surface; achenes 4-7.5mm, 20-ribbed and un-beaked. The basal leaves are broad and look a bit like *Sonchus asper* while the big flowers (4.5cm diameter) resemble untidy, less golden versions of *Sonchus arvensis*.

Silwood Park: Cannon Gate, one plant inside a rabbit fence, 1 June 1995. Sunninghill Parish Church, Ashurst, one plant on the edge of the car park, 4 June 1995. Oak Mead, one plant following cultivation of the whole of the top part of the field for the Biodepth experiment; inside the rabbit fence, 20 June 1996, the plant fully 1m tall. A single plant in the rose bed opposite TTC on 16 June 2001. Very local and rare in the Ashurst Enclosure: a single multi-stemmed plant, 1.5m tall, in Plot A18 on 14 June 2009.

Ascot: very rare and sporadic in Sunninghill Village (on 4 occasions between 1971 and 2000). In the dog-shitting grassy patch in front of the Telephone Exchange on Upper Village Road in Sunninghill; 13 June 2001. On gravel at Ascot Station in June 2003.

East Berks: local and rare. Maidenhead, Sonning, Hurst, Hurley. Extinct at 3 of its 4 former stations, but still at Hurley (Bowen). Occasional in Windsor and at Legoland in June 2003. <1% (1km²). Atlas 2000: [96]

West Berks: confined to the central Thames valley, centred on [48] and [58] and absent to the west of 40 (extinct at Shrivenham [28]). Frilsham and Ashridge Farm [47], Chilton, East and West Hendred [48], Hitchcose pit, Marcham and Frilford [49], Eaton Weir [40] (**OXF**), Hagbourne (**OXF**), Blewburton Hill (**RNG**) and Lowbury Hill [58], north of Didcot and Radley pit [59], Bagley Wood [50]. Atlas 2000: [29], [36], [39], [47], [48], [49], [40], [57], [58], [59], [50]

***Crepis capillaris* (L.) Wallr. *Smooth Hawk's-beard* th 6**
Crepis virens
Lapsana capillaris L.

Grassland, lawns, waste ground and cultivated fields, meadows, dry banks, sides of roads, and heaths; very common and widely distributed. Druce separated 4 varieties, but these are not distinguished here.

NVC: CG 2-4; MG 5; OV 4,9,18,19,23,27,42; W 23

Silwood Park: in all the grasslands, fallows, and an abundant member of the seed bank ruderal community of disturbed waste ground. The 16th most frequent species in 100 m² quadrats, but only the 29th most frequent in small quadrats. Commonest in arable fallow after later spring (rather than autumn or early spring) cultivation. A rapid decreaser under rabbit grazing in the Nash's Field experiment. Frequent on imported topsoil at Ashurst Lysimeters on 10 July 2004. Very common in the October-cultivated part of Silwood Bottom north-west of the wooded succession plot in July 2005. Very abundant in the Pound Hill Disturbance Timing Experiment, on the October-cultivated plots in all Blocks on 28 July 2007 following the driest April on record then the wettest May, June and July, amongst dead *Anisantha sterilis*. Also very abundant on the same date in the fenced cultivated plots of the Nash's Field Experiment. Dominant in the southern part of Silwood Bottom on 26 August 2007 after the traditionally May-cultivated ground was left uncultivated in spring or summer 2007. Abundant on 15 July 2008 in the year after abandonment of the sown lawn made in Silwood Bottom to test sewage sludge effects on grassland; the grass had been unmown since summer 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
6	18	35	45	74

East Berks: 54% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Crepis vesicaria L. *Beaked Hawk's-beard*

Crepis vesicaria subsp. **taraxacifolia** (Thuill.) Thell. ex Schinz and R. Keller

• b 5

Crepis taraxacifolia Thuill.

Crepis polymorpha Pourret

Crepis vesicaria L. subsp. *haenseleri* (Boiss. ex DC.) Sell

Roadsides, railway banks, disturbed ground and gardens. Originally recorded from cornfields and grass crops, so presumably first introduced as a seed contaminant. Locally common and rapidly increasing and likely to become permanently naturalised. Occasional but absent from very acid soils. Now the commonest of the tall, early, yellow-flowered composites.

NVC: OV 22,23

Silwood Park: rare and sporadic. Header House, imported with potted trees, behind the Sirex Unit on 10 June 1980. The offspring of these plants were frequent on the gravel pot base in 1981. Garden Wood Bank, one plant; 8 May 1992, probably from imported topsoil. Immunology, shrub beds; these plants, in flower 11 May 1983, may have originated from seed blown over from the original introduction at the Sirex Unit. Silwood Bottom, two plants in the cultivated corner below William Penney; 23 May 1994 and one on 5 June 1999. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006.

Ascot: Thornhill, The Tip, The Orangery, Heatherwood Hospital, South Ascot, Ascot Station, Ascot Heath, Charters Road, Sunningdale Park, Sunninghill Park.

East Berks: first record Maidenhead (1881). Now locally frequent throughout, as at Sonning, Windsor, Bisham, Knowl Hill, Hurley, Wargrave, Twyford, Bray, Old Windsor, Cockpole Green, Park Place, Ruscombe. 38% (1km²). Atlas 2000: all squares

West Berks: widespread in Isis, Ock, Pang and Kennet before 1897. Frequent throughout in 2001. Very common and locally dominant on the bare gravel formed by the removal of the former runway on Greenham Common [4964] and on the ancient Roman walls at Silchester [6462] in May 2004. Atlas 2000: all squares

Crepis foetida L. *Stinking Hawk's-beard*
Barkhausia foetida (L.) F.W. Schmidt

b 6 †

Woods and rough ground; very rare. The root smells of bitter almonds. Contrasting achenes; inner slender-beaked, outer with short or no beak.

East Berks: long extinct. "No longer in Bisham Wood but in waste ground north of the Great Western Railway at Maidenhead" (Druce). Formerly in Reading (1847) (BM), Maidenhead (1847) (K) and Bisham Wood (1843). Atlas 2000: no records.

West Berks: no records.

Pilosella officinarum F.W. Schultz and Sch.Bip. *Mouse-ear-hawkweed*
Hieracium pilosella L.

h 5

Heaths, dry banks, pastures and churchyards; rather common and widely distributed, preferring sandy or gravelly soils. Short, dry grassland, dry banks and walls on acid or calcareous soils. Frequent. NVC: CG 2-6; OV 39; U 1

Silwood Park: short grassland and heathy ground throughout. Particularly abundant in the rabbit-fenced U1 grassland in the Gravel Pit, dry banks by Farm Road, seed-limited in Nash's Field, in the fenced part of Block K in (9 plots) with 14 plots in the unfenced part of K and Block P (2 fenced and 3 unfenced plots), and in the edge of the lawn at the Ha Ha. There is a 4m x 3m patch of short rabbit-turf amongst the otherwise tall *Dactylis/Arrhenatherum* sward on Nash's Slope at the southern end of The Elms. Locally dominant on certain graves in the churchyard at Ashurst. Increased rapidly following erection of the rabbit fence in Gravel Pit in 1997, and dominant over large areas by July 2004. Flowering freely on 20 May 2007 where deer and rabbit fences had been erected in 2005 on lawns around Silwood. Locally frequent in the thin turf at the edge of the Ha Ha; still common in May 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	10	23

Ascot: common on the steep sloping banks of the raised reservoir on Truss Hill Road in Sunninghill [935676] growing with *Calluna*, *Anthoxanthum*, *Rumex acetosella* and *Plantago lanceolata*.

East Berks: "Between Wokingham and Long Moor a form occurs which is very near *P. peleteriana*" (Druce). Locally abundant in churchyards throughout. 21% (1km²). Atlas 2000: all squares

West Berks: it is favoured by the mowing regime in many of the churchyards, and on the former air base at Greenham Common. Very common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase had been taken up [5064]. Atlas 2000: all squares

- Pilosella praealta** (Vill. ex Gochnat) F.W. Schultz and Sch.Bip. • h 6
 Hieracium praealtum Villars ex Gochnat
 Hieracium myaricum Naeg. & Peter subsp. thaumasium Peter
 Hieracium arvorum (Naegel and Peter) Pugsley
 Hieracium spraguei Pugsley
 Hieracium praealtum Villars ex Gochnat subsp. thaumasium (Peter) Sell
 Pilosella thaumasia (Peter) Dostál
Pilosella praealta subsp. **thaumasia** (Peter) P.D. Sell *Tall Mouse-ear-hawkweed* • h 6

A local speciality. Still in the location where it was first recorded as new to Britain in 1918 by Mr C.P. Hurst (see below, and p. 83). It is very distinctive with its tall stems, long stolons, multiple small flower heads, and leaves with sparse but very long, dark, stiff hairs on their upper surface.

West Berks: introduced on a tall, north-facing brick wall on the railway at Hungerford [338686], just east of the High Street, where it has been known from 1918 onwards (**BM** and **OXF**). It is not clear whether it was introduced accidentally or intentionally. At its peak, about 1000 plants grew here at one of its few British localities. The plant is still frequent (c. 100 plants) on the shady brickwork of the high wall facing the supermarket car park (1979-2004); see photo on rear cover. On 23 September 2006 the plant was much reduced, even though other rarities like *Adiantum* were frequent all along the wall. The *Pilosella praealta* had gone from the vertical face of the wall, and was now restricted to the brick ledge, 1.5m below the top. I fear that the *Buddleja* is becoming so abundant that the whole wall will be stripped of its plants when the *Buddleja* is removed.

- Pilosella caespitosa** (Dumort.) P.D. Sell & C. West *Yellow Fox-and-cubs* • h 6
Pilosella caespitosa subsp. **colliniformis** (Peter) P.D. Sell & C. West
 Hieracium collinum subsp. colliniformis Peter

A rare garden plant, like a yellow-flowered version of *H. aurantiaca*.

East Berks: no records

West Berks: found by Susan Erskine (det. MJC) on the wall of the railway bridge at Ruffinwick Farm west of Shrivenham [264884] on 23 May 2007.

- Pilosella aurantiaca** (L.) F.W. Schultz and Sch.Bip. *Fox-and-cubs* • h 6
 Hieracium aurantiacum L.
 Hieracium aurantiacum L. subsp. carpathicola Naeg. & Peter
 Hieracium brunneocroceum Pugsley
 Pilosella aurantiaca (L.) F. Schultz and Schultz-Bip. subsp. brunneocrocea (Pugsley) Sell and C. West

- Pilosella aurantiaca** subsp. **carpathicola** (Nageli and Peter) Soják • h 6

Woodland rides, lawns, urban waste land or roadsides near houses and gardens; local but increasing. In heathland at Wildmoor Heath. The stolons are mostly above ground, and basal leaves small (mostly 6-10cm rather than 10-20cm as in subsp. *aurantiaca*).

Silwood Park: Ashurst Four Acre Field, a single plant in cultivated ground on 6 September 1985. Since then, it has spread all along the inside of the rabbit fence on the Marist Convent side of the plot. Frequent, in full flower on Ladies' Day, 20 June 1996, in tall grass on the uncultivated headland. Still frequent in 2000 but much declined inside the fence by 2002, but it had spread from there into the rabbit-grazed, grassy strip between the fence and London Road, where it was locally abundant in June

2003. No flowers seen since then, but leaves were conspicuous every year 2004-07. There were 10 flowering stems here on Ladies Day 19 June 2008 and 3 on 16 June 2009. Southwood Halls, 50 rosettes were planted by Ted Green in his Introductions Bed behind Block One in 1986; they thrived for a year or two but were then shaded out by the vigorous growth of the *Frangula alnus*. South Gravel, in short grassland; Ted Green saw it here, but there has been no record since 1979, and the site was destroyed by the construction of the Science Park. A new site added on Elm Slope when a single flowering stem was seen on 19 June 2008 inside an enclosure that was in its third growing season of protection from rabbits and deer.

Ascot: uncommon in the district, but frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Very local in the verge of the Peanut Roundabout, at the southern end of the Peanut, on the interior (island) verge facing the Ascot (A332) entrance [935716] flowering on 2 September 2007.

East Berks: Earley, Oxford Road in West Reading, Farley Hill, Hurley, Whitmoor Bog, Broadmoor, grassy banks in the town centre of Bracknell, Amen Corner, Tower Hill, Windsor Forest. Smiths Lawn, High Standing Hill. Recently at The Leas, Barkham Manor, California Country Park, Kiln Ride, Pine Wood, College Town, Kiln Green, Bray Court. 2% (1km²). Atlas 2000: all except [78]

West Berks: Buscot Weir [2298], Faringdon [29], particularly abundant in lawns in Kintbury [36], Shefford [37], Peasmore [47], Harwell [48], Steventon, Drayton, Frilford Heath and Kingston Bagpuize [49], Appleton, Boars Hill and Chilswell Farm [40], Tadley and Old Mill, Aldermaston [56], Hawkridge Wood and Upper Basildon [57], Bagley Wood [50], Bradfield, Prospect Park and Tilehurst [67]. Atlas 2000: all except [58], [50], [66], [68], [69]

Hieracium L. Hawkweeds

This genus is comprised of countless apomictic species that produce asexual seeds, each of which has a carbon copy of its mother's genotype. The Hawkweed flora of Berkshire is relatively straightforward, however, because we have only a few common species, and they are quite distinct from one another. No doubt more detailed study would uncover a greater variety, particularly of alien taxa.

Garden plants with heavily purple-blotched leaves are *H. scotostictum*, *H. spilophaeum* or *H. rionii* (distinguished by the absence of glandular hairs on the involucre bracts of *H. rionii* and the absence of multiple stem leaves in *H. scotostictum*).

- 1. Plants stoloniferous..... **Pilosella** spp. (above)
- 1. Plants not stoloniferous..... **Hieracium** spp 2
- 2. Stem leaves 8-many, rosette leaves absent at flowering..... 3
- 2. Stem leaves 0-8..... 5
- 3. Leaves sessile, linear, with inrolled margins, bracts with recurved tips **Hieracioides**
- 3. Lower leaves petiolate, broader, flat margins 4
- 4. Stem leaves crowded, > 15, upper leaves with broad rounded bases **Sabauda**
- 4. Stem leaves not crowded, < 15, upper leaves narrowed to base..... **Tridentata**
- 5. Numerous petiolate basal leaves, but only 0 to 2 stem leaves **Hieracium**
- 5. No rosette leaves and few basal leaves by flowering time; 2 to 8 stem leaves..... **Vulgata**

All of the Berkshire specimens referred to here have been checked by P.D. Sell and R.G. West. Note that the *Hieracium* records in Druce are unreliable.

Section Sabauda

Stem leaves more than 15, the upper leaves with broad rounded (but not clasping) bases. No rosette leaves at flowering.

Hieracium sabaudum L.

h 6

Hieracium boreale Fries

Hieracium obliquum Jordan

Hieracium perpropinquum (Zahn) Druce

Hieracium bladonii Pugsley

Hieracium argutifolium Pugsley

Hieracium eminentiforme Pugsley

Dry woods, heaths, hedge-banks, roadsides and railway banks on acid soils; absent from calcareous soils. The bracts have a mixture of numerous long, flexuous, whitish pilose hairs (chiefly below), and short, fine glandular hairs.

Silwood Park: much the commonest of Silwood's big hawkweeds. South Lodge, frequent at the pathside on the London Road; 20 August 1980. Elm Slope heathland, two plants amongst *Erica cinerea*; 1 September 1980. Silwood Bottom, on the western boundary, near the Guinness's Hill plants on 26 August 1980. Nash's Slope, seen for the first time in 1990, inside rabbit fences erected as part of the ragwort study, close to The Elms. Obviously been there for many years but prevented from flowering by rabbit grazing. Buckhurst Road, on the roadside verge opposite the main entrance, a large patch against the fence 25 August 1989. These plants had stems with long spreading hairs; peduncle floccose, hairy and glandular; involucre bracts appressed, glandular and hairy; stigmas dark; leaves petiolate. Recently at Sunninghill Crossroads, Tractor Sheds, South Lodge, East Lodge. Locally abundant in the shaded verge of Cheapside Road between Watersplash Lane and Silwood Farm road in the shade of *Castanea sativa* on the Crown Estates side of the road. A single plant of the form *blaydonii* inside a rabbit enclosure on Nash's Slope, growing in the shade of *Cytisus scoparius* on 6 September 2007.

Ascot: locally common on heathy banks and steep, dry ditch-sides in Bracknell Forest and elsewhere. On Ascot High Street, below the hedge opposite the shops, and in the garden of Styles on Charters Road in Sunningdale. Swinley Park, Tower Hill, Englemere, Heatherwood Hospital, Coronation Road, South Ascot, Ascot Heath, Kings Beeches, Sunninghill, Blacknest Park, Frostfarm Plantation, North Ascot, Brookside, Cranbourne Tower, Sunninghill Park, Windsor Great Park. In heathy ground on the edge of the hockey field at Froggnall [939677] in the grounds of the Marist Convent.

East Berks: between Henley and Twyford, Winkfield, Bowsey Hill, Wargrave, Maidenhead, Bearwood, Loddon Bridge, Wokingham, Earley, Bagshot, Bracknell, Wellington College, Sandhurst, Riseley, Long Moor, Ascot, Sunningdale. Spencer's Wood, Leighton Park, Reading, Finchampstead, Bearwood, Earley, Warfield, Virginia Water, Crowthorne, Broadmoor, in Bracken on elevated banks in Wishmoor Bottom, Wokingham. Ancient woodland in Windsor Great Park, locally frequent by the railway at Wokingham, Little Sandhurst and Ambarrow. Atlas 2000: all except [77], [78]

West Berks: occasional on acid soils in the Kennet valley, but absent or rare north of 75. Sanham Green, Inkpen Common, Oaken Copse and Eddington [36], Stibbs Wood [37], Greenham Common,

Holtwood and Hamstead Park [46], Sole Common and Snelsmore Common [47], Colliers Copse, Tubney Wood, Youlbury, Cumnor Hurst, Jarn Mound and Boars Hill [40], Goldfinch Bottom, Heath End and Bucklebury (RDG) [56], Frilsham (RDG), Grim's Ditch, Hurdle Shaw, Cold Ash churchyard and Coombe Wood [57], by the railway between Cholsey and Moulsoford [58], Didcot sidings [59], Bagley Wood [50], Pingewood (RDG) [66], Tilehurst (LAN) [67]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: [29], [36], [46], [47], [56], [58], [66]

Hieracium virgultorum Jord.

h 7

Told from *H. sabaudum* by its involucre bracts, which are almost hairless and almost all of the hairs are glandular (i.e. it lacks pilose and non-glandular hairs). Often inconspicuous, because roe deer eat the flowering stems, even inside rabbit fences.

Silwood Park: a local speciality, discovered on "Heaths in Silwood Park, rare" by Tony Dixon (1956) (OXF). He can not remember the exact location, but two clumps of plants were found on Guinness's Hill, in *Holcus mollis* grassland, close to the grass track up to Nash's Field, near to the large, spreading oak (tree number 11) on 10 August 1980. Disappeared from this location, but reappeared after a 9 year absence 25 August 1989, 15m further up the slope, inside the rabbit fence erected as part of V.K. Brown's insecticide experiment. Especially good flowering in 1990, when the rabbit-protected plants flowered in about 20 clumps within the fence. There were 5 plants in 2002 and 6 in 2004 from regrowth shoots. These plants are 1m tall, typically in clumps of 5 shoots; stem almost glabrous, eglandular, even below; 16 leaves below the first flowering branch; 15 major flowering branches, each with 5 heads; leaves with 2-4 prominent linear teeth at the base, hairy only on the veins beneath; involucre 12mm, olive green, almost glabrous but with a central line of sparse, glandular black-based hairs; styles discoloured; heads up to 35mm diameter; peduncles with dense stellate hairs but no glands; all leaves short stalked to sessile with lobed bases; ligules glabrous. Locally frequent in September 2002 in several places in the western parts of Silwood Bottom, where tall grassland had developed following cultivation in 1998; these plants had 38 leaves below the first flowering branch. Two plants on 10 September 2005 inside a small new grazing enclosure, erected in spring 2003, to the southwest of the main Guinness's Slope enclosure.

Ascot: on banks near the cricket pavilion on Ascot Heath in 2002.

East Berks: no other records but worth searching for in long grass in later summer.

West Berks: between Tilehurst and Sulham (RDG) [67].

Hieracium vagum Jord.

h 7

Told by its broad, more or less erect foliage, usually compact panicle and blackish, glabrescent bracts, generally lacking both pilose and glandular hairs (Pugsley, 1948).

East Berks: no records

West Berks: by Didcot Station [59] in 1966 (det. P.D. Sell).

Section Hieracoides

Stem leaves many, all sessile (but not clasping) and of the same shape, with recurved margins. The involucre bracts have recurved tips.

Heaths, heathy grasslands, and hedge-banks in heathy places, on sandy or gravelly soil; locally common. Stems often distorted by galls. Easy to identify with its numerous narrow stem leaves with inrolled margins.

NVC: U1

Silwood Park: Croquet Lawn, one plant in the south-west corner of the western heather patch; 24 August 1980. Still there on 15 August 1985, but gone by 1988 and not seen since. Gravel Pit, 5 plants inside the rabbit fence (erected 1997) on 20 July 2000, up to 8 by July 2002 and more than 25 in 2004, clearly benefiting from rabbit exclusion. These plants seldom flower on their primary shoots because the buds are so attractive to roe deer, which jump the rabbit fence to get at them; the regrowth stems flower in September. A deer fence was erected in February 2006 to protect the plants from browsing, and this had an immediate effect, with more than 80 flowering stems inside the Gravel Pit deer fence on 28 August 2006, and excellent seed set by 16 September 2006. There were 30 flowering stems on 2 September 2007 after a very dry April then the wettest summer on record, and only about a dozen plants in August 2008.

Ascot: on Ascot Heath, near the cricket pavilion, Coronation Road, by the gasometers in Sunninghill, Windsor Great Park and in the garden of Styles on Charters Road in Sunningdale. Also locally abundant nearby, on the heaths of Chobham Common National Nature Reserve, just south of the A30 in v.c.17 Surrey.

East Berks: Wellington College, Bowsey Hill, Park Place, heathy wood at Virginia Water (1974), ancient woodland in Windsor Great Park (1974), Bracknell, Bagshot, Ascot, Sunningdale. Wood margins and railway banks or tracks, on acid soils. Absent from chalk. Finchampstead, Leighton Park, Wellington College, Binfield, Knowl Hill, Sandhurst, Earlywood. Barkham Common, Bracknell, on the railway at Little Sandhurst [828623]. Occasional on acid soils to the south and east of a line from Bray to Arborfield, but uncommon to the north and west of this. Atlas 2000: [86], [87], [96], [97]

West Berks: restricted to the Northern Loop and the heaths of the south-east. Absent from the whole of the interior. Wash Common [46], Park Road Abingdon (**OXF**) [49], Tubney Wood and Wootton [40], Crookham Common, Bucklebury Common cemetery and Brimpton [56], Hermitage [57], Didcot Station [59], Aldermaston Soke [66], Tilehurst (**RDG**) [67]. Atlas 2000: [66]

Section *Tridentata*

More than 7 but fewer than 15 stem leaves, the lower petiolate, the upper sessile but non-clasping. Leaf margins flat. No rosette leaves at flowering.

Hieracium trichocaulon (Dahlst.) Johanss.

h 6

Hieracium rigidum Hartman subsp. *trichocaulon* Dahlst.

Hieracium tridentatum auct., non Fries

Hieracium acrifolium auct., non Dahlst.

Hieracium scabrescens auct., non (Johansson ex Dahlst.) W.K. Martin and G.T. Fraser

One of our commonest Hawkweeds, on grassy heaths, open woods, shady banks, railway embankments, churchyards and roadsides on acid soils. Common on acid soils, less so on chalk, mostly on superficial soils. One of the first Hawkweeds to flower (early June, about a month earlier than most of the others). It has fewer than 15 stem leaves (often 8 or so), each with 3 prominent teeth on either side (hence the old name, *tridentatum*). The heads are smaller, and the leaves broader than

other taxa in this Section. The hairs on the bracts consist mainly of non-glandular, black based hairs with sparse arachnoid hairs beneath (glandular hairs and long white non-glandular hairs are absent on our plants).

Silwood Park: South Lodge Wood, a few plants in grass by the path between the Hemlock tree and the tennis court; 12 July 1980 and 5 August 1982. Styles dirty yellow; involucre with no glandular or stellate hairs, but with sparse, dark-based simple hairs; achenes dark; leaves 11, not crowded at the base, with 2 or 3 large, up-curved teeth in the lower half, margin plane, leaves glabrous above; peduncles with no glandular hairs, but dense stellate hairs.

Ascot: common in the hedge-bottom facing the shops on Ascot High Street; these plants have no basal leaves, 11 stems leaves decreasing in size upwards from a basal size of 100mm long by 28mm wide, uniform purple beneath, olive green and almost hairless above, with 7 small (25mm diameter) flower-heads, styles grey and lacking pollen, involucre (10mm x 5mm) with a few short glandular hairs but no stellate or pilose hairs, peduncle with dense white stellate hairs a few pilose hairs, and no glandular hairs. In the hedge-bottom at the start of the Old Mile; these plants are much taller (more than 1m) and have bigger leaves with much bigger teeth, that are green (not purple) beneath. Fernbank Road, Tower Hill, Johnson's Pond, Breakheart Hill, South Forest, Windsor Great Park, Ascot, Sunninghill and by Sole's Pond to the east of Ascot Station. Locally frequent in South Ascot graveyard.

East Berks: Bracknell, Wellington College (1965), St Sebastian (**RNG**) [8065] Whiteknights lake (**RNG**), Bagshot Heath, Bulmarsh, on brickwork of the railway bridge at Loddon Mouth, Sindlesham, Winkfield, Finchampstead, Bracknell, Long Moor, Farley Hill, Sandhurst, Crowthorne, Broadmoor, Wokingham, Upper Star Post. Locally frequent on gravelly tracks through heathland near Lower Star Post and on Poppy Hills in 2002. Atlas 2000: [86], [96], [97]

West Berks: on acid soils to the east of 50 with outliers in the Northern Loop at Boars Hill and Tubney Wood [40]. Bucklebury (**RDG**), Heath End and Brimpton (**OXF**) [56], Hermitage [57], Didcot Station [59], Mortimer West End, Ufton Nervet (**RDG**) and between Aldermaston and Burghfield (**OXF**) [66], Tilehurst (**RDG**) and Pangbourne [67]. Atlas 2000: [46], [40], [57]

Hieracium calcaricola (F. Hanb.) Roffey

h 6

Hieracium rigidum Hartman var. *calcaricola* F. Hanb.

Hieracium tridentatum auct., non Fries

Hieracium scabrescens auct., non (Johansson ex Dahlst.) W.K. Martin and G.T. Fraser

Acid banks, and railway embankments; rare. Told from *H. trichocaulon* by its broader blackish green (not olive green) involucre bracts, and larger flower heads.

East Berks: Sandhurst (1915) (**RNG**). By the railway at Waltham St Lawrence in 1966.

West Berks: Hamstead Marshall [46] in 1931 (**OXF**).

Section *Vulgata*

No rosette leaves and few basal leaves by flowering time; 2 to 8 stem leaves.

1. Basal leaves with conspicuous purple-brown spots **H. maculatum**
1. Basal leaves unspotted 2

- 2. Stems leaves glabrescent on upper surface **H. diaphanum**
- 2. Stem leaves pilose on upper surface 3
- 3. Glandular hairs dense and strong, heads medium, 10-20 **H. acuminatum**
- 3. Glandular hairs short and fine, heads small, 5-15 **H. cheriense**

Hieracium acuminatum Jord. *Tall Hawkweed* h 6
 Hieracium lachenalii auct., non C. Gmelin
 Hieracium chlorophyllum auct., non Jordan ex Boreau
 Hieracium strumosum (Ley ex W.R. Linton) Ley

Woods and railway banks on acid soils; uncommon. Basal leaves are ovate and long petiolate, often withering early. There are 6 or more stem leaves, pilose on both surfaces and the margins. Flower-heads 10 or more per stem. The base of the involucre is rounded (not truncate).

East Berks: roadsides, railways and the edges of woods, commonest on the chalk. Reading Station, Whiteknights Park, Twyford, Wick Hill, Crowthorne, Wellington College. Bear Wood, Shottesbrooke, between Wargrave and Henley (RDG). California, Woodley, Twyford. Atlas 2000: [76]

West Berks: Inkpen [36], by the railway at Grove [39] and [49], Milton [49], Appleford and Didcot sidings [59], Brimpton Common and Crookham Common [56], Streatley [58], Kennington and Bagley Wood [50], Mortimer West End, Mortimer Common (RDG) and Aldermaston Soke [66], between Bradfield and Pangbourne (RDG) [67]. Atlas 2000: [46], [56]

Hieracium argillaceum Jord. *Southern Hawkweed* h 6

Grassy banks, hedgerows and waste places. Told from *H. acuminatum* by leaves dentate (but teeth not long, and certainly never incised-dentate, up to 15mm). Some or even most of the records above might be referable to this taxon.

Ascot: locally frequent in short acid grassland in the graveyard of South Ascot church in June 2007.

Hieracium cheriense Jord. ex Boreau *Cher Hawkweed* h 6
 Hieracium porrigens auct., non W.R. Linton
 Hieracium lachenalii C. Gmelin var. pseudoporrigenes Pugsley
 Hieracium tunbridgense Pugsley

Stem leaves 4-6 with coarse, sharp teeth. Flower-heads 5-15, small, on long, slender, erect peduncles. The dark glandular hairs on the involucre are short and fine.

East Berks: shady, acid soil at Wellington College (1965).

Hieracium diaphanum Fr. *Dark-leaved Hawkweed* h 6
 Hieracium scotophyllum auct., non Vukot.
 Hieracium diphanoides auct., non Lindeb.
 Hieracium irriguum auct., non (Fries) Dahlst.
 Hieracium cacuminatum auct., non Dahlst.
 Hieracium scytophyllum auct., non Omang
 Hieracium barbareaefolium auct., non K. Lonnr. ex Dahlst.
 Hieracium ornatum sensu Ley, non Dahlst.
 Hieracium scanicum sensu Ley, non Dahlst.

Hieracium daedalolepioides (Zahn) Roffey
Hieracium anglorum (Ley) Pugsley

Acid grassland, rare. Stem leaves 2-3, glabrescent (not pilose) on the upper surface. Flower heads 3-10, not floccose, but with numerous unequal dark glandular hairs.

East Berks: by the railway in Twyford (1965), Wellington College (1916) (RNG).

West Berks: Boars Hill [40] in 1948, old brickwork at Didcot Station [59] in 1980 (OXF). Atlas 2000: [59]

Hieracium maculatum Sm. • h 7

This alien is a handsome dark-spotted plant, and may well be of local hortical origin, but railways have played a large part in its distribution. It has been found in gardens, on old walls, railways, roadside banks and plantations (Brewis, Bowman and Rose, 1996). This plant has 3-5 stem leaves with us (cf. *H. scotostictum* which is another spotted garden plant, but with just 1 stem leaf).

West Berks: woods in north Berkshire, rare. Buckland [39] in 1860 (OXF), on the railway bank at Hermitage [57] in 1967, Bagley Wood [50] in 1963 (OXF) Atlas 2000: [57], [59], [68]

Section *Hieracium*

Numerous petiolate basal leaves, but only 0 to 2 stem leaves.

Hieracium scotostictum Hyl. • h 5
Hieracium praecox auct., non Schultz-Bip.

Grown in gardens and sometimes found on railways and old walls. The spotted leaves are mostly basal and are more than half-covered in purple-brown blotches. There is only 1 stem leaf or none at all. The involucre have a mixture of black glandular and black non-glandular hairs. Very early flowering for a Hawkweed, as indicated by its former specific name.

West Berks: abundant on gravel paths and walls in the garden of Sutton Courtenay Manor [5094] in May. It has grown here for as long as anyone can remember, and is still there in 2005.

Hieracium exotericum aggregate h 6

Widespread as an aggregate, generally on the chalk, where it grows on shady lanes, railway banks and in dry beech woods; on calcareous or acid soils. Occasional. Note that there are no Berkshire records of *H. exotericum* Jord. ex Boreau.

Hieracium sublepistoides (Zahn) Druce h 6
Hieracium murorum L. subsp. *sublepistoides* Zahn
Hieracium exotericum Jordan ex Boreau var. *sublepistoides* (Zahn) Pugsley

Common on hedgebanks, railways and shady roadsides. Basal leaves green, unspotted. Styles yellow; stem leaves 1 or 2; involucre with dense glandular and stellate hairs and sparse simple hairs; basal leaves pale green or slightly purple tinged below; long petioles (4cm) with dense subplumose hairs; stems densely stellate, with occasional glandular and few simple hairs; peduncles densely glandular

and stellate hairy; basal leaves up to 13cm (including a 4-5cm petiole) x 5cm with or without strong cordate teeth at base.

Silwood Park: Ashurst Lodge, in 1981, a good patch of plants beneath the massive *Pinus nigra* by the main drive, where Charles David was in the habit of parking his 2CV. South Lodge Wood, in a clearing near the Wellingtonia in 1990.

Ascot: common in shady grass behind the beech hedge in the garden of Styles on Charters Road 1979-2004. These plants have 1 small, petiolate stem leaf (25mm x 5mm) and 10 truncate to subcordate basal leaves (blade 5cm x 3cm, petiole 2.5cm), light grass-green with sparse pilose hairs above, paler but unmarked beneath with midrib pilose hairy, leaf margins with 6 elongated-tipped teeth on each margin, flower-heads 4, 3.5cm diameter, styles bright yellow, involucre with dense black glandular hairs, lines of stellate hairs, but few pilose hairs, and peduncles with moderately dense black glandular hairs, a sparse covering of stellate hairs and no pilose hairs.

East Berks: Cox's Wood Crowthorne (**RNG**) in 1916. Easthampstead Park. The great H.W. Pugsley who wrote *A Prodromus of the British Hieracia* collected the plant in v.c.22 near Henley pre-1947. Wellington College (1965), Frogmore. Bisham Wood (1966-88). On 4 June 2002 the Bisham Wood plants were locally abundant on sunny roadsides where the road snakes down from Quarry Wood; they had stem leaves 1, basal leaves 8, with white-shaggy petioles 3cm long, and blades 7cm x 3cm. The leaves had sparse white hairs on the bright green upper surface, and similar but denser hairs on the pale green under surface. Flower heads 8, ray florets with non-glandular tips. Involucral bracts with a dense covering of black glandular hairs with sparse, wispy, clear, non-glandular hairs amongst them, and dense stellate hairs on the margins. The black glandular hairs had unusually long stalks, and similar hairs were also present on the peduncle. Atlas 2000: [86], [96]

West Berks: on an old garden wall at Wasing Park [5764], Grims Ditch near Hurdle Shaw [5979], in the railway cutting at Chilton [58], Sulham Wood [6477] (**RDG**) in 1916, chalk slope at Lower Basildon [6078] (**LAN**) in 1960. Also at Forbury Grove [36], Hen Wood [40], Lower Basildon [67]. Here is a description of the plants from Chilton railway cutting [4985] on 11 June 2004 (Plate 3): stem 45 cm tall, heads 6 with involucre 11mm long; stem leaf 1 measuring 20mm x 10mm and basal leaves 9, the biggest with pink-based, villous petiole 45mm long, and blade 65mm x 30mm, with 8 indistinct, red-tipped teeth on each margin, the base truncate or slightly cordate, pale grass green above and dull pale green beneath with no hint of purple, very sparse long white wispy hairs above, slightly denser below and quite dense on the midrib. Petals 15mm long with hairless tips, styles bright yellow. Involucre with dense, long, black glandular hairs, all roughly the same length, rather sparse, appressed white stellate hairs and very sparse long white wispy hairs. Peduncle with similar kinds of hairs, but the black glandular hairs thin out rapidly down-stem. Atlas 2000: [48], [40], [56], [58]

Gazania rigens (L.) Gaertn. *Treasureflower*

• th 5

Othonna rigens L.

Gazania uniflora (L.f.) Sims

Gazania splendens hort. ex Henderson and A. Henderson

Gazania rigens (L.) Gaertner var. *uniflora* (L.f.) Roessler

Silwood Park: a rare garden outcast near The Greenhouses in 1999-2002.

Ascot: very rare on graves on 13 October 2007 in South Ascot churchyard.

East Berks: rare casual on piles of sewage solids at Maidenhead sewage works [8980] in 2001.

Filago vulgaris Lam. *Common Cudweed*

th 7

Gnaphalium germanicum L., nom. inval.
Filago germanica L., non Hudson

Dry, acid grassland, sandy arable land on acid soils, bare places on heaths and railway banks. Druce thought it “too common to need a detailed list of localities” but Bowen thought it “uncommon and absent from the chalk and northern clay”. It is clearly much reduced since Druce’s time, but perhaps its decline has stabilised. Capitula many (20 to 40) in each cluster, the most apical leaves do not overtop the capitula.

Ascot: no records.

East Berks: Farley Hill, Finchampstead, Coleman’s Moor, Park Place, Wellington College, Owlsmoor, Maidenhead, Heywood Park. Rare in the Thames valley and along the Blackwater River, but absent from the whole of the interior. Dinton Pastures, Wishmoor Cross. <1% (1km²). Atlas 2000: all except [96]

West Berks: occasional in the Northern Loop, rarer in the Kennet valley and absent from the whole of the interior. “On Boars Hill [40] it was so abundant in the late autumn of 1894 as to be noticeable from a considerable distance” (Druce). Buckland Warren [39], Greenham Common [46], Boxford Common and Snelsmore Common [47], Frilford Heath, Dry Sandford Pit and Cothill [49], Black Horse Field [468979], Youlbury and in a field north of the sandstone pit at Tubney [40], Radley pits [59], heath edge to the north of Greenham Common [501653], Crookham Common and Bucklebury Upper Common [56], Sulham [67]. Atlas 2000: [29], [39], [46], [47], [49], [40], [56], [57].

Filago lutescens Jord. *Red-tipped Cudweed*

th 7 †

Filago germanica auct., non L. nec Hudson

Filago apiculata G.E. Smith ex Bab.

Gifola apiculata Chrtek and Holub, nom. illegit.

A former local speciality, now extinct. Dry sandy fields, bare places in dry, acid grassland, and railway banks on sandy soil. Always very rare in Berkshire. A *Red Data Book* species of light, open, sandy soils of low fertility on ground with sporadic rather than regular disturbance (e.g. from rabbit scrapes). Formerly quite common on the edges of arable fields, growing with *Filago minima*, *F. vulgaris*, *Geranium pusillum* and *Spergula arvensis*, but declined dramatically since the 1950s from more than 200 sites and now known from just 16 sites in 12 hectads in the whole of England. The decline is due to a shift from over-winter stubble and spring planting to autumn planting of winter wheat, coupled with increased herbicide and fertiliser use. Capitula many (10 to 40) in each cluster, the capitula overtopped by 1 or 2 apical leaves; the whole plant is yellowish woolly, and the tips of the bracts are reddish and erect (not recurved and yellowish).

East Berks: extinct. Wargrave (**K**) in 1871, Sonning cutting (**BM**) in 1890. Twyford (1890-96) (**OXF**). On the road from Hare Hatch to Crazy Hill near Wargrave (1897). Near Maidenhead (**BM**) in 1908, and Cookham Dean (**OXF**). Sonning Cutting (**RNG**) growing with *F. minima* and *F. vulgaris*. Ambarrow (1897), Finchampstead (1891 and 1892) (both **OXF**). Between Loddon Bridge and Woodley in 1950 but no specimen. All of the Berkshire sites are thought to be extinct, but there is a post-1970 record in the *Red Data Book* from [77] that I can not trace. The Twyford [77] record was late nineteenth century, and the unsupported Woodley [77] record is from 1950. It could be that this is the Oxford station at ‘Flowing Spring’ (Sonning Eye chalk pit at [7476]), but if so, it is probably an error for *F. pyramidata* (see below).

West Berks: extinct. Formerly in the Northern Loop at Frilford [49] in 1912 (**BM** and **OXF**) and Cothill [49] and Bessels Leigh [40] in 1918 with an outlying station in the south-east at Padworth [66]

in 1892 (**OXF**). The most recent authenticated records were from a cornfield at Cothill on 12 July 1940 (**RNG**) and a barley field at Cothill (**K**) in 1944.

Filago pyramidata L. *Broad-leaved Cudweed* ○ th 7 ↓
Filago spathulata auct., non C. Presl

Another *Red Data Book* species of arable land and other habitats that have a long history of disturbance, formerly known from more than 100 hectads in Britain. Of the 8 surviving English sites, 3 are on arable land growing with *Filago minima* and *F. vulgaris*, 3 are in chalk quarries growing with *Cerastium pumilum* and *Iberis amara*, and 2 are on chalk spoil by railway lines (see *F. lutescens*, above). The *Red Data Book* records all our Berkshire populations as extinct. The extant record for [77] is from Sonning Eye chalk pit in Oxfordshire (v.c.23) [7476] where the plant has been collected repeatedly since 1870 (Killick, Perry and Woodell, 1998). Note, however, that several reintroduction programmes are currently under way in Berkshire, so this position may change. The plant has many (10-40) capitula in each cluster, and the capitula are overtopped by 2-5 apical leaves; the whole plant is white woolly (not yellowish) and the tips of the bracts recurved and yellowish (not reddish and erect).

NVC: OV 15

East Berks: extinct. Pre-1900 records from Wargrave, Coleman's Moor, Stubbings Heath, Knowl Hill, and Maidenhead Thicket. Formerly known from 4 sites on the chalk in the north-west, and from Maidenhead Thicket, but not seen this century. The Sonning site (392 tiny plants in 2012) is in Oxfordshire. Atlas 2000: no records.

West Berks: close to extinction but reintroductions are under way. Formerly in the Northern Loop at Cothill [4699] in October 1922 (**OXF** and **RNG**), and between Cothill and Frilford [4598] in 1954. Seeds were sown experimentally in Dry Sandford Pit in autumn 2000 but came to nothing. There used to be two outlying stations. At Pusey [341959] in 1961, at Buckland Warren [39] in 1966, and again from the corner of a sandy arable field [333962] in 1977. When the golf course was built, this piece of ground was kept under cultivation in an attempt to ensure the survival of the Cudweed (it was made an SSSI in 1992). There were 12 plants in 2007, 6 on 27 June 2008, just 2 in 2009, 8 in 2011 and 10 plants in 2012 (counted by Susan Erskine), amongst hundreds of individuals of *F. vulgaris*. There is a record of the plant growing with *Lathyrus aphaca* between Moulsoford and Streatley [580833] in 1962, but this record is not supported by a specimen. It was found in paving by the pond in Susan Erskine's garden in November 2009, presumably imported on footwear from the Sonning site. The Sonning site is north of the Thames in v.c. 23. Atlas 2000: [39]

Filago minima (Sm.) Pers. *Small Cudweed* th 6 ↓
Gnaphalium minimum Smith
Logfia minima (Smith) Dumort.

Dry places on sandy commons and heaths in sunny places. In Druce's time it was "locally abundant, and common on all the sandy ground" but by Bowen's time it was "occasional but decreasing". Now it is local and uncommon. Capitula few (2-7), with the apical leaves not overtopping capitula.

NVC: U 1

Silwood Park: on sand and gravel on the easternmost plots at Ashurst Warren; origin unknown, but probably imported as dormant seeds in the ballast used to fill the raised beds (1998-2000).

Ascot: on open sandy heathland by the railway at Englemere in 2000. Formerly at Sunninghill and Sunningdale. Locally frequent on the edge of the new sandpit at Manor Hill in Windsor Great Park [956696] on 24 May 2006.

East Berks: Marlow, Wellington College, Sandhurst, Ambarrow, Bagshot, Bracknell, Binfield, Bearwood, Windsor Great Park, Riseley, Twyford, Sonning. Bearwood, Coleman's Moor, Bulmershe, Woodley (LAN) in 1957, Wellington College, Crowthorne, Owlsmoor, Kings Mere. Woodley pit. Extinct at many of its former sites, and now confined to the southern heaths (south of 70), with outlying stations from eastern Reading to Twyford. Locally frequent on gravel tracks through heathland near Lower Star Post, Wishmoor Bottom, and on Poppy Hills in 2002. With *Trifolium arvense*, *Erigeron acer* and *Rumex acetosella* in the old sandpit at Cookham Dean [874858] in July 2003. <1% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [96]

West Berks: occasional in the Northern Loop and on the heaths of the south-east in [56], but absent from the whole of the interior to the north of 75 and the south of 95. On sandy arable land at Buckland Common [333963], Greenham Common [46], Snelsmore Common [47], Frilford Heath [4698], Youlbury [40], Crookham Common, Cold Ash, Brimpton and Woolhampton Common [56], Hermitage [57]. Atlas 2000: [39], [46], [47], [49], [40], [56], [57]

Anaphalis margaritacea (L.) Benth. *Pearly Everlasting* ● h 8
Gnaphalium margaritaceum L.

An occasional garden plant from perennial borders, rather rare as a garden escape or throw-out. On heathy waste ground and waysides.

Ascot: a rare garden escape in Course Road, Ascot, in November 2001.

East Berks: not in Druce or Bowen. Recently at Alder Moors, Ambarrow, Road Research Lab at Crowthorne, Wishmoor Bottom, Wishmoor Cross, Ashley Hill, March House. 1% (1km²). Atlas 2000: [77], [86], [88]

West Berks: first recorded from a roadside south of Letcombe Bassett [38] in 1947. In several spots in Appleton [4401] in September 2002. Kingston Bagpuize [4098] in July 2003. Atlas 2000: no records.

Gnaphalium sylvaticum L. *Heath Cudweed* h 7 ↓
Omalothea sylvatica (L.) Schultz-Bip. & F. Schultz

Bare dry ground on tracks in woods, heaths and commons. A short-lived perennial of dry open woods and sandy heaths on the acid Bagshot sands, often found with *Veronica officinalis*. Absent from the chalk and probably decreasing.

East Berks: Bulmarsh, Warren Row Common, Ambarrow, abundant on Bagshot Heath, Farley Hill, Virginia Water. Park Place, Queens Mere, Sandhurst, Bracknell, Ascot, Windsor Forest, Deer Rock Hill on the Berkshire side of the boundary stream. Occasional on heathy ground to the south of 70, but rare or extinct to the north of this. Between Lower Star Post and Wishmoor Bottom on sandy tracks in full sun (1971-2000). 1% (1km²). Atlas 2000: [76], [86], [97]

West Berks: in two centres, on the Northern Loop and the south-eastern heaths. On the northern edge of the heath on Greenham Common [46], Snelsmore Common [47], Frilford Heath and Cothill [49], Youlbury and Boars Hill [40], Crookham Common, Bucklebury Upper Common and Wasing Wood

[56], Greathouse Wood and Fence Wood [57], Bagley Wood [50], Padworth Common [66], Sulham and Beal's Copse, Tilehurst (LAN) [67] in 1962. There were more than 200 plants in an open wood close to Padworth Church [661611] in August 2003. Atlas 2000: [37], [47], [49], [40], [56], [57], [50], [66], [67]

Gnaphalium uliginosum L. *Marsh Cudweed*
Filaginella uliginosa (L.) Opiz

th 7

Damp arable land, gateways, market gardens, roadsides, rutted tracks, pond sides, and places where water has stagnated; common and generally distributed but absent from the chalk and clays.
 NVC: OV 4,9,19-21,28,30,31,33,35; S 15; U 1

Silwood Park: especially abundant in 1983 in the Rabbit Enclosure at Ashurst, an increaser under rabbit grazing, but this site was covered by plastic mulch and gravelled-over in 1992 when Sea Beet genotypes were cultivated here. This, in turn, was re-mulched and gravelled in 1995 to make way for the sleeper beds. Common in July 1990 from the seed bank after the dense wet grassland in Rush Meadow was cultivated for the PROSAMO experiment in 1990. Church Field, Silwood Farm, Ashurst Path, Silwood Lodge, Science Park, East Lodge. Staged a dramatic comeback in Silwood Bottom in June 2001, after the perennial plants had been exterminated by repeated glyphosate application, but much reduced by September 2002. Locally frequent on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. Locally abundant on a soil pile close to the Met Tower phone fence on 23 June 2006. Rare, from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	7

Ascot: locally frequent in the sunny parts of Sunningwell Bog below St George's School [929684]. In the rushy communities to the north of the road in Windsor Great Park [963694].

East Berks: scattered throughout, as at Kenney's Farm [7466]. 9% (1km²). Atlas 2000: all squares

West Berks: common in the Kennet valley, occasional in the Thames valley and absent or rare in the interior (north of 75 and south of 90). Atlas 2000: all except [68], [69]

Helichrysum petiolare Hilliard and B.L. Burt *Liquorice Plant*

• h 7

An essential component of the hanging basket flora, used for its spreading, silvery leaves. Very rare as an outcast, and seldom self-seeding.

East Berks: on waste ground near Oxford Road in West Reading in July 2002. On steps on Cookham high street [8985] in September 2002. <1% (1km²).

West Berks: self-sown on damp steps on the edge of the market place in Faringdon [2895] in July 2002.

Helichrysum italicum (Roth) G Don. *Curry Plant*

• h 7

A silver leaved garden plant whose leaves smell strongly of curry when crushed. A rare garden outcast.

East Berks: waste ground in Earley [7571], South Twyford [7975], Summerleaze Lakes [8982] and by the R. Thames in Maidenhead [9081] in July 2002. <1% (1km²).

¶ **Helichrysum** *H. bellidioides*, *H. italicum*, *H. milfordiae*, *H. petiolare*, *H. 'Schwefellicht'*, *H. splendidum*

¶ **Ozothamnus** *O. 'County Park Silver'*, *O. ledifolius*, *O. rosmarinifolius*, *O. rosmarinifolius 'Silver Jubilee'*, *O. 'Sussex Silver'*

Inula helenium L. *Elecampane* o h 7

Pastures, plantations and hedge-sides; local, but sometimes well established. A statuesque plant (up to 2m tall) with alternate leaves that clasp the stem with conspicuous rounded lobes.

East Berks: Rare in the Thames valley and around Reading (**RDG**) in 1933. Shinfield horticultural station (1960), Park Place (1965), Bowsey Hill (1965), Redstone Farm [8774] (1966). A group of 20 flowering stems in the verge opposite Lock's House [834677], and a thriving population in the southern ditch of the Drift Road at Braywood Orchard [874750] in July 2003. 1% (1km²). Atlas 2000: [76], [78], [86], [87], [88]

West Berks: "Elecampane grows plentifully on a dry pasture close, upon Botley Hills, also upon Mr Tudball's house, beyond Hinksey" (Lyle, 1660) but extinct there by 1897. Rare, scattered throughout, but absent from large areas of the interior (north of 70 and south of 85). Recent records from Eaton Hastings [29], Denford [36], West Challow [38], Shellingford [39], Kingston Bagpuize and Tubney [49], planted at Boars Hill [40] by Sir Arthur Evans in 1933, Wytham (**RNG**) [40], Greenham Common [506638] and [509642], Theale (**RDG**) [6471] in 1923. Atlas 2000: [29], [38], [39], [40], [56], [58]

Inula conyzae (Griess.) Meikle *Ploughman's-spikenard* h 7 ↓
Aster conyzae Griess.
Inula conyza DC.

Wood margins, grassland, roadsides, railways and hedge-banks, heathy places, preferring calcareous sandy ground, rarely on walls, in small quantity; local and decreasing. The young plant bears much resemblance to foxglove.
NVC: CG 2,4,5; W 13

East Berks: Marlow New Lock, common on the chalk about Park Place, Loddon Bridge, Cookham, Wellington College Station, Stubbings Heath, Hurley, Maidenhead, Quarry Wood. Recently at Park Place [8583], Cookham Down, by the railway east of Shottesbrooke Farm [850789], Heywood Park [8579], St Leonard's [9374]. 1% (1km²). Atlas 2000: [77], [78], [87], [88], [97]

West Berks: occasional on the eastern chalk [58] and in the Northern Loop. Extinct at most of its former sites elsewhere. Recent records from Inkpen [36], Dry Sandford Pit [49], Chilswell, Hurst Hill and Upper Seeds at Wytham [40], Hampstead Norreys, Burnt Hill and Hurdle Shaw [57], Lollingdon Hill, Aston Upthorpe Down, Cholsey, on the old railway between Chilton and Upton and on Streatley Hill [58], Didcot [59], Pangbourne [67], Purley [67]. Atlas 2000: [36], [39], [47], [49], [40], [56], [57], [58], [50], [67]

¶ **Inula** *I. ensifolia*, *I. helenium*, *I. hookeri*, *I. magnifica*, *I. orientalis*, *I. racemosa*

Damp waste ground, wet grassland, marshes, lake- and pond-sides, wet ditches, flooded gravel pits, cracks in pavements, damp woodland rides and the sides of roads. Locally frequent, but absent from the chalk and rare on the very acid soils in south-east Berkshire.

NVC: M 22,24,27; MG 1,9,10; OV 3; S 26

Silwood Park: can be extremely tenacious of its territory; a clump has monopolised the same crack in the concrete path outside the Header House for more than 30 years (1979-2009). Reactor Bank, at the foot of the western slope by the track to the Engineering Store, beneath *Salix aurita* opposite the Wind Tunnel; seen every year from 1979 to 2000, but not in 2001 (by which time the *Salix aurita* had also gone); there were only 2 plants in July 2002. The population moved to the opposite side of the track in 2002, and was flourishing below the wall of the Wind Tunnel, about 4m from its previous location; by 2004 the plant was common again in its former sites on the western side, and increased on the eastern side of the track. The Reactor Bank population was thriving in late August 2005, with a big patch of plants at the edge of the *Pentaglottis*, then a gap where the grass is more closely cropped, then the original population occupying a strip 11m long opposite the glass house; the population on the northern side of the track, by the Gym and the Engineering Store is completely gone. There was further expansion on Reactor Bank, and no return of the population by the Fitness Gym, in August 2006. Garrison Ridge succession plots; locally abundant in 1983, and forming large patches, up to 5m across in 1990. Gone, following landscaping of the arboretum in 1994, but back again in the same place in August 2000, following erection of the rabbit fence in 1996. Still there, despite the grass cutting in 2002, but non-flowering. Refectory, one plant by the apron at the rear of the Machinery Centre; 20 August 1989. Rare in the arable fallow on Silwood Bottom in 1999, but locally frequent inside the deer fence surrounding the student allotments by August 2002. Drive Field, a single plant by the new air pollution pad on 13 August 1989. Immunology, a single plant; in shrub beds on 20 August 1989. Not seen again at any of the last 4 sites. There was a new population in grass by the end of the Pot-Store Shed on North Gravel on 27 August 2007. The main population, outside Greenhouse 5C, did very well in the exceptionally dry growing season of June-July 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	4

Ascot: Blane's Allotment, Martins Heron, The Orangery, A322/A332 Roundabout, Swinley brick pits, Swinley golf course, Kingsride, Heatherwood Hospital, in the car park at Ascot Station, Sunningwell Bog, very common and locally dominant in the northern triangle of Ascot Heath, Kings Beeches, Sunningdale, Frostfarm Plantation, Locks Ride, Ascot Place, Brookside, Cranbourne, Kingsmead, Windsor Great Park. Very rare on ruins [929689] during construction of the new Ascot Racecourse in August 2005. Frequent in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007.

East Berks: widespread in ditches and meadows, but least common in the east along the Surrey border. Abundant in patches in wet grassland at Marsh Down, Shottesbrooke [8476]. A frequent component of the reservoir-edge community, dry in summer but submerged in winter. Common at Moor Green Lakes [8062]. Also on damp roadsides as at Braywoodside roundabout and Paley Street. Abundant on waste ground at Amen Corner Bracknell in July 2005. 23% (1km²). Atlas 2000: all squares

West Berks: common in the north and the south and along the whole length of the Thames from Lechlade to Reading, but absent from a large part of the interior (north of 75 and south of 90).

Frequent on the margins of the lake at Benham Park [4367]. Common by the railway from Hungerford [36] to Newbury [46]. Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all except [69]

Pulicaria vulgaris Gaertn. *Small Fleabane*

th 8 †

This *Red Data Book* species is probably extinct in Berkshire. It is an annual plant of winter-flooded hollows in grassy places like village greens and cart tracks that were well hoofed, well grazed and fertilised by animals. Its stronghold is in the New Forest, in hollows in pony-grazed lawns growing with *Alopecurus geniculatus*, *Bidens tripartita*, *Gnaphalium uliginosum*, *Lythrum portula*, *Polygonum aviculare*, *Persicaria hydropiper*, *Potentilla anserina* and *Senecio aquaticus*. It flowers in August and September, and possesses a long-lived seed bank. Recorded from two of our squares in the *Red Data Book*, [56] and [76], but both these sites are in North Hampshire (v.c.12): at Springwater Farm, Bramshill [7462] where there were 59 plants in 1982-83, and Ashford Hill Meadows [5662] where they were last seen in 1988. The original population at Springwater Farm was by a small pond that was lost to road widening, although plants were moved to near Riseley Mill [7362] by the river, later refound at Springwater Farm in two nearby fields (Brewis, Bowman and Rose, 1996). It would be worth searching the Berkshire part of the streambank, where the R. Whitewater flows into the Blackwater River [742636] and downstream from here towards Swallowfield Park.

East Berks: formerly at Bulmarsh Heath (**BM**) in 1800, Shinfield (1830) and Wokingham, between Bray and Holyport (**OXF**) in 1891 and Sandford Mill (1897), but now extinct.

West Berks: extinct. Planted at Trash Green [6569] and Wokefield Common [6566] in 1966. Formerly between Mortimer and Three Firs [66] in 1918, and at Burghfield [66] in 1799.

Telekia speciosa (Schreb.) Baumg. *Yellow Oxeye*
Buphthalmum speciosum Schreber

• h 7

A statuesque garden plant of moist grassy places, often planted near water features. The feathery involucre bracts are characteristic.

Silwood Park: one patch 3m wide, long persistent (1979-2007) despite being surrounded by taller *Solidago canadensis* on waste ground near The Greenhouses.

East Berks: no other records.

West Berks: in a pit in a wood at Pusey [353964] in 1966 and in a wild garden at Pusey [358967] in 1971.

¶ **Telekia** *T. speciosa*

¶ **Buphthalmum** *B. salicifolium*

Grindelia squarrosa (Pursh) Danal

• th 7 †

East Berks: not in Druce. An alien at Twyford Mill in 1914 (**OXF**). Thought extinct by Bowen.

Solidago virgaurea L. *Goldenrod*
Solidago angustifolia Miller

h 7 ↓

Woods, thickets and heaths on acid sandy soils; absent from calcareous soils. Declining, perhaps as a result of eutrophication from atmospheric nitrogen and/or fertiliser drift from adjacent farmland.
NVC: W 10,12,16,24

Silwood Park: formerly on Church Lane Footpath, in heathy ground on the edge of the path growing with *Teucrium*; five or so plants in the grass below overhanging beech tress, at the gate from Herons Brook Meadow; 17 September 1980. Still there in the same numbers in 1989, but not seen since 1994 although the *Teucrium* is still there. Thought to be extinct but rediscovered on 28 August 2004, when a single individual, 80 cm tall, was found just inside the fence growing with *Stellaria holostea*, 2m east of the concrete gate post of the track from Herons Brook Meadow onto Church Lane. Not seen in 2006. Lily Pond, on heathy ground to the south-west of the pond in 1959, but gone before 1979.

Ascot: very local and rare on the Berkshire side of Virginia Water, and on Ascot Heath race course. A single plant in gravel on the grave of John W.E. Howey (*d.* 1924) in South Ascot churchyard in August 2004.

East Berks: Bulmarsh, Wellington College, Ambarrow, Finchampstead, Sandhurst, Long Moor, Bagshot, Easthampstead, Sunningdale, Sunninghill, Windsor Great Park, Farley Hill. Occasional on the heaths to the south of 70, but rare or absent to the north of this. Finchampstead, Wellington College, Easthampstead, New Lodge, Ashley Hill, Coleman's Moor, Virginia Water, Farley Hill [7564]. 1% (1km²). Atlas 2000: all except [78], [87]

West Berks: probably extinct in the Northern Loop (formerly in Hitchcopse pit [453997] and Dry Sandford pit [465996]) and now confined to the heaths of the south and south-east: Inkpen Common [36], Enborne Street and Greenham Common [46], Snelsmore Common [47], Brimpton [56], Bucklebury Upper Common [56], Coombe Wood, Yattendon, Frilsham and Great House Wood [57], Padworth Common [66], Bradfield [67]. Locally frequent on grassy rides through Fence Wood [5171] in 2002. Atlas 2000: [36], [46], [56], [57], [59], [66], [67],

Solidago canadensis L. *Canadian Goldenrod*
Solidago altissima L.

• h 8

A rampantly invasive garden plant, notoriously greedy as a coloniser and seeder, soon outgrows its welcome in the herbaceous border. Rhizomes are dug up in large quantities and thrown out onto waste ground and found growing wherever garden waste and compost are thrown out. Forms large monospecific stands on waste ground by railways and on derelict industrial land in towns. It occurs in every village, and sometimes a long way from houses, especially on remote unadopted lanes where fly-tipping occurs. Host to the black aphid *Uroleucon solidaginis*. Told from *S. gigantea* by its stems which are pubescent in the top half, and leaves which have scabrid pubescence on the upper surface.

Silwood Park: on the Succession Plots in Silwood Bottom; a single clump in a four-year-old plot in August 1980. Spread neither far nor fast by 2000 when the area was herbicided to make way for a biodegradation experiment. Geophysics, a small clump of shoots on the edge of birch woodland in October 1979. Ashurst Four Acre Field, a single plant in the ground beyond the New Chalk Plots in October 1994. In the churchyard and around the car park at Ashurst, Cheapside Village, Silwood Lodge, The Greenhouses where it is rampant in the herbaceous border despite savage attack each autumn by gardeners, Cannon Crossroads. Locally frequent close to the main gate in the Rhododendron enclosure behind the Tennis Court in its second year in August 2006; still there in 2008. Common in the bee-hive corner of the derelict pot standing at the greenhouses on 29 July 2007 and amongst the potted beech trees closer to the glass house.

Ascot: dominant on the corner of Sunninghill Library by The Terrace leading to Bowden Road [936678] on 1 September 2006.

East Berks: not in Druce. Waste ground in the drier parts of Berkshire, in small clumps. Swallowfield, Shinfield, Twyford, Ruscombe Lake, Woodley, Holyport, Maidenhead. 15% (1km²). Atlas 2000: all except [78]

West Berks: very common by the railway from Hungerford [36] to Newbury [46] and in roadside ditches by Bourton [28] (still there in September 2006). Atlas 2000: all except [48], [56], [57], [69]

Solidago gigantea Aiton *Early Goldenrod*

Solidago gigantea subsp. **serotina** (O. Kuntze) McNeill

• h 8

Solidago serotina Aiton, non Retz.

Aster latissimifolius Kuntze var. *serotinus* Kuntze

Railway banks, roadsides and waste ground in the drier parts of Berkshire., in small clumps. Told from the much commoner *S. canadensis* by its glabrous upper stems, and leaves that are hairless except on the veins beneath.

Silwood Park: uncommon on the edge of the carpark at Ashurst churchyard in July 2005.

Ascot: locally frequent on a stone pile at Cranbourne Roundabout [929730] on 30 August 2004.

East Berks: not in Druce. Smallmead tip, Reading Station, Winnersh, Wellington College, Sandhurst, Heywood Park, Maidenhead, Bray Pits, South Ascot, Windsor. Commonest in built up areas like Reading (**LAN** and **RNG**), Maidenhead and Camberley. <1 % (1km²). Atlas 2000: [86], [88], [97]

West Berks: rare throughout the Thames valley, but absent from the interior and the Kennet valley. Abingdon Common (**RNG**) [4997] in 1962. Waste ground near the church in Cumnor [4604] in 2004. Atlas 2000: [38], [40], [58], [59], [50]

¶ **Solidago** *S.* ‘Cloth of Gold’, *S.* ‘Crown of Rays’, *S. cutleri*, *S. flexicaulis* ‘Variegata’, *S.* ‘Goldenmosa’, *S.* ‘Goldkind’

¶ X **Solidaster** X *S. luteus*, X *S. luteus* ‘Lemore’

Aster *L. Michaelmas-daisies*

These were all recorded as *A. novi-belgii* in the past. In fact, this is one of the least common of the garden escapes. In order of abundance, the Berkshire plants are *A. x salignus*, *A. lanceolatus*, *A. x versicolor* and *A. novi-belgii* then *A. novae-angliae*. The key feature is the shape, relative size, and degree of appressedness of the involucre bracts (phyllaries). Are they widest below the middle and neatly appressed (as in the common *A. x salignus*), or are they widest at or above the middle and spreading untidily (as in *A. novi-belgii*)? Another important point is the extent to which the leaf base clasps the stem: is the clasping conspicuous (as in *A. x versicolor*) or is the leaf base definitively non-clasping (as in *A. lanceolatus*). The most popular garden plant these days is the short-stemmed *A. x frikartii* ‘Mönch’ but this is not naturalised and is seldom found as an outcast. Other details are given separately for each taxon. The hunting season for these plants is September to November, peak activity time for alien plant enthusiasts.

Aster novae-angliae *L. Hairy Michaelmas-daisy*

• h 8

Roadsides and waste ground, temporarily established, but rare. Upper parts of plant with abundant long patent hairs; glandular hairs on the involucre. No longer common as a garden plant.

Silwood Park: local, but long-lived, on disturbed ground by The Greenhouses. A large clump survived the building works in the garden of East Lodge after the extension was completed in September 2008. On 22 September 2009, after several plants appeared on the cinder pot-standing at The Greenhouses after the chickens were introduced.

East Berks: not in Druce. Reading tip, Bearwood, Woodley tip. <1 % (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: Inkpen [36], Newbury [46], Botley [4906], Bucklebury Upper Common [56], Radley pit [59], South Hinksey and Grandpont [50]. Atlas 2000: [29], [36], [39], [46], [50]

Aster x versicolor Willd. *Late Michaelmas-daisy* = **A. laevis x A. novi-belgii** • h 8
Aster x laevigatus auct., non Lam.
Aster novi-belgii L. subsp. laevigatus auct., non (Lam.) Thell.

Rare casual of waste ground. Tall plants (up to 2m), with relatively broad, short stem leaves (less than 5 times as long as wide) with conspicuously clasping leaf bases, and outer phyllaries much shorter (50-75%) than the inner ones. The bracts have wide white borders from about ¼ of the length below the tip, leaving a narrow green strip down the centre of the base of the bract.

Silwood Park: rare, by the Header House in 1982. Not seen since.

Ascot: by the derelict house at the bottom of Bridge Road in Sunninghill on 16 September 2008.

East Berks: Park Place (1800) (**BM**); Smallmead tip (1965), Ascot (1929) (**OXF**). 1 % (1km²). Atlas 2000: [86], [96], [97]

West Berks: Atlas 2000: [46], [58]

Aster novi-belgii L. *Confused Michaelmas-daisy* • h 8
Aster longifolius auct., non Lam.
Aster floribundus auct., ? an Willd.
Aster brumalis Nees, nom. illegit.
Aster novi-belgii L. subsp. floribundus (Willd.) Thell.

Found as a garden escape in waste places near Reading. Locally established by the Thames, occasional on waste ground elsewhere, in small quantity. Stem leaves narrowly clasping, outer phyllaries widest at or just above the middle, about same length as inner ones, and not neatly appressed to the capitulum.

Silwood Park: by The Greenhouses in small quantity.

East Berks: Scattered throughout, but perhaps over-recorded for *A. x salignus* and *A. x versicolor*. Maidenhead. <1 % (1km²). Atlas 2000: all except [78], [87]

West Berks: all along the Thames valley, and scattered in the Kennet valley, but absent from the interior. Locally frequent on sunny waste ground in New Botley [4906] in September 2004. Atlas 2000: [46], [40], [50]

Aster x salignus Willd. *Common Michaelmas-daisy* = **A. novi-belgii x A. lanceolatus** • h 8
Aster x lanceolatus auct., non Willd.
Aster x longifolius sensu Clapham et auct., non Lam.

Easily the commonest naturalized Michaelmas daisy in Britain (Stace, 1997). This is the conspicuous railway-side taxon. Almost never seen in gardens these days, so it is evidently long-persistent as an outcast. Like *A. novi-belgii* but the outer phyllaries are widest *below* the middle, and are rather neatly appressed to the capitulum (not spreading or recurved).

Silwood Park: below the churchyard wall at Ashurst 1979-2007. By the Weeping Willow at the entrance to The Farm 1979-2007.

East Berks: not in Druce. Waste ground, Ascot (1930). Sandhurst, Maidenhead, Windsor. 3% (1km²). Atlas 2000: [86], [96], [97]

West Berks: Mortimer [66] in 1930 (**OXF**), Didcot [59] in 1987. Locally dominant in large patches in the unmown water meadows by the R. Thames north of Donnington Bridge [5204] in 2002. On waste ground in Botley [40] and Grandpont [50] in 2002. Atlas 2000: [46], [40], [58]

Aster lanceolatus Willd. *Narrow-leaved Michaelmas-daisy* • h 8
Aster tradescantii auct., non L.
Aster paniculatus auct., non Lam.
Aster lamarckianus auct., non Nees

Occasional in damp places on the banks of the R. Thames, growing with *Angelica sylvestris* and *Rumex hydrolapathum*, in semi-natural vegetation. Much the most naturalized-looking of the alien *Aster* spp.

This is the second commonest of the Michaelmas-daisies with us, and has relatively small, dirty white flowers. Plant lacking abundant long patent hairs. Leaves narrow (mostly less than 10mm), upper leaves tapering to the base and not clasping. White flowers, fading to pale mauve. Bordered bracts, the outer ones half the length of the inner bracts. Locally frequent in roadside ditches and on waste ground.

Ascot: waste ground, Ascot (1929) (**OXF**). Recently at South Ascot, on the track to Sunningwell Bog below St Georges School; 28 October 1995. In the eastern verge of Charters Road close to the boundary bridge beyond Styles (1982-2004). On waste ground near The Carpenters Arms on Upper Village Road in Sunninghill in October 2002.

East Berks: not in Druce. Occasional on the banks of the R. Thames, with isolated individual;s scattered from Remenham in the west to Cookham Reach in the east. Wokingham. Locally frequent at Fifield [908761], in the ditch of the road leading up to New Lodge in September 2002. 1 % (1km²). Atlas 2000: [86], [96], [97]. Recent records from

West Berks: Cothill [49] in 1918, South Hinksey [50] in 1897. Atlas 2000: [40]

¶ **Aster** *A. alpinus*, *A. amellus* 'Brilliant', *A. amellus* 'King George', *A. amellus* 'Rosa Erfüllung', *A. amellus* 'Rudolph Goethe', *A. amellus* 'Sonia', *A. amellus* 'Veilchenkönigin', *A.* 'Coombe Fishacre', *A. divaricatus*, *A. ericoides* 'Erlkönig', *A. ericoides* 'Esther', *A. ericoides* 'Pink Cloud', *A. ericoides* 'White Heather', *A. x frikartii* 'Mönch', *A. x frikartii* 'Wunder von Stäfa', *A. laevis* 'Calliope', *A. lateriflorus* 'Horizontalis', *A. lateriflorus* 'Prince', *A.* 'Little Carlow', *A. macrophyllus* 'Twilight', *A. novae-angliae* 'Barr's Pink', *A. novae-angliae* 'Harrington's Pink', *A. novae-angliae* 'Purple Dome',

A. novae-angliae 'Septemberrubin', *A. novi-belgii* 'Alice Haslam', *A. novi-belgii* 'Audrey', *A. novi-belgii* 'Carnival', *A. novi-belgii* 'Eventide', *A. novi-belgii* 'Fellowship', *A. novi-belgii* 'Jenny', *A. novi-belgii* 'Kristina', *A. novi-belgii* 'Lady in Blue', *A. novi-belgii* 'Little Pink Beauty', *A. novi-belgii* 'Marie Ballard', *A. novi-belgii* 'Schneekissen', *A. novi-belgii* 'Winston S. Churchill', *A. 'Ochtendgloren'*, *A. pringlei* 'Monte Cassino', *A. pyrenaicus* 'Lutetia', *A. sedifolius* 'Nanus', *A. tongolensis* 'Berggarten'

Felicia amelloides (L.) Voss. *Blue Marguerite*

• h 5

A hanging basket and conservatory flower, grown for late season colour. Shrubby plants usually treated as annuals. Rare as a self-sown escape. Told from *F. bergeriana* by its glabrous (not hairy) fruits.

East Berks: on the main village street of Cookham [8985] in September 2002. <1 % (1km²).

¶ **Felicia** *F. amelloides*, *F. amoena*, *F. bergeriana*, *F. petiolata*, *F. rosulata*, *F. uliginosa*

Erigeron glaucus Ker Gawl. *Seaside Daisy*

• h 5

A very common garden plant grown in rockeries and on walls. It is occasional as a garden outcast but is seldom self-sown outside gardens. This is the common perennial 'daisy' with purple ligules, dull yellow centres, and fleshy, grey-green leaves. The commonest commercial cultivars are 'Charity' and 'Elstead Pink'.

Silwood Park: in the churchyard at Ashurst and on waste ground at Cheapside.

Ascot: local and rare on broken concrete on Victoria Road, South Ascot in June 2004.

East Berks: villages and towns throughout. 15% (1km²). Atlas 2000: all squares

West Berks: first record from the railway near Tilehurst Station [6874] in 1975. In towns like Newbury [4767], Thatcham [5267] and Kennington [50] and villages like Kintbury [3866] and Kingston Bagpuize [4098] in 2003. Atlas 2000: [36], [38], [46], [40], [56], [50], [68]

Erigeron karvinskianus DC. *Mexican Fleabane*

• ch 7

Erigeron mucronatus DC.

This common rockery and garden wall plant is locally naturalised on brick and stonework, but never found far away from houses; often long persistent on old walls and bridges.

NVC: OV 42

Silwood Park: self sown and locally frequent (from hanging baskets grown in 2005) all around the edges of the paved patio outside the Refectory and the Summer Room in June-October 2006. Present as leafy stems, but never came into flower in the cool damp summer of 2008.

Ascot: local and uncommon. In alleyways between Ascot High Street and the Race Course (1979-2004). Coronation Road, Sunninghill. Not found in Silwood Park until 2006. A single plant in tarmac outside The Dog and Partridge on Upper Village Road Sunninghill on 4 September 2010.

East Berks: not in Druce or Bowen. First recorded from the fine brickwork of the Thames bridge at Sonning in 1986. On the old Abbey walls at Sonning. Recently at Riseley, Swallowfield Church, Farley Court, Earley, Bulmershe, Alder Moors, Ashenbury Park, Bisham, Ruscombe, Wokingham,

Chapel Green, several places in Maidenhead, riverside stonework at Boulter's Lock, Halfway House. Oddly, there are no records from Windsor. 4% (1km²). Atlas 2000: [76], [77], [86], [88], [96]

West Berks: first recorded in Abingdon (**OXF**) on stonework by the Thames (including the central piers of the bridge) [499969] in 1926, and still there in 2001. On piers of the Thames bridge at Wallingford [610894] 1980-2004 (Plate 5). On ancient brickwork of the canal bridge in Hungerford; locally frequent in 2001-04. On walls in Sutton Courtenay [59] and by The Bull at Streatley [58] from 1963-2000. Rare in the car park at Lambourn [3278] but locally frequent on dry ground in Faringdon [2894] and Shrivenham [2388] in September 2004. Atlas 2000: [29], [36], [37], [49], [58], [59], [68]

Erigeron annuus (L.) Pers. *Tall Fleabane*

• th 5 ↓

Aster annuus L.

Erigeron strigosus Muhlenb. ex Willd.

Erigeron annuus (L.) Pers. subsp. *strigosus* (Muhlenb. ex Willd.) Wagenitz

Phalacrocoma annuum (L.) Dumort. subsp. *strigosum* (Muhlenb. ex Willd.) Adema

Roadsides and rubbish tips, "rare but likely to spread" (Bowen). This plant is very common in familiar-looking urban and waste-ground habitats in northern France, and it is interesting that despite the predictions, Tall Fleabane has not yet spread, even with climate warming and massive soil disturbance associated with Channel Tunnel construction and such like.

East Berks: not in Druce. Reading tip (1960) and Sutton's seeds nursery in Reading (1961) (**RNG**). Atlas 2000: no records.

West Berks: Crookham Common [56] in 1965, Cothill (**K**) [49] in 1966, Greenham Common [501653] in 1988 (**RNG**). Atlas 2000: [56]

Erigeron acer L. *Blue Fleabane*

th 7 ↓

Dry pastures on both acid and calcareous soils, railway-banks, and sometimes on wall-tops; locally frequent but absent from considerable tracts of the county.

NVC: CG 6

Silwood Park: very local and rare. A single plant in trampled grass in front of the Furniture Store on the edge of the CABI car park on 10 September 1998. Nothing was seen in 1999, but there was a single plant in the same place in August 2000. It was decapitated by rabbits before it could flower. Seed sown in the conservation mixture on North Gravel in front of Southwood Halls in May 1983 produced the first flowers in August 1985 when 20 stems were counted. The site was destroyed by the construction of Flowers Halls. There were 12 plants on Garden Wood Bank on 28 June 2007, but all had had their heads bitten off by rabbits (the population surrounded by abundant *Centaureum erythraea*). None seen here in 2008 or 2009.

Ascot: no other records, but it was "abundant on the railway bank between Ascot and Bracknell" (presumably at Englemere) and "Ascot specimens 2 feet high" in Druce's time.

East Berks: Sonning, Remenham, Rose Hill, Sandhurst, Wargrave, Wellington College, Park Place, walls of Windsor Castle, Binfield, plentiful in Sonning cutting, White Waltham, Earley, Ruscombe, Arborfield, Bisham. Scattered throughout but more frequent in the south than the north. On the derelict site of the former Grassland Research Institute at Hurley before redevelopment began in 1999. Locally abundant on waste ground at Tesco superstore on redeveloped land by the railway in Reading in 1999-2007. Near the railway at Maidenhead Office Park in 2001 [8578]. Locally frequent

on gravelly tracks through heathland near Lower Star Post and on Poppy Hills [8763] in 2002, and in the old sandpit at Cookham Dean [874858] in July 2003. Occasional on sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 6 September 2008. 1% (1km²). Atlas 2000: all squares.

West Berks: occasional throughout the Thames valley, the Pang valley and the eastern Kennet valley. Absent or rare from the interior to the west of 50. By the railway south of Shrivenham [28], Woolstone [28], on waste ground by the railway in Hungerford [36], Uffington [38], Drayton [49], AWRE Aldermaston [56], Bucklebury [57], Sulham [67]. Local on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Abundant on tipped soil near the Victoria Tavern [237876] by the Great Western Railway south of Shrivenham (still common there in September 2006, but in the meantime the pub has become an eatery called "The Fat Dog") and on waste ground in Colthrop [5366] in September 2004. Common on freshly disturbed gravel on the northern margin of Greenham Common [502653] in August 2005, and still abundant in short but closed turf near the eastern boundary of Greenham Common [521646] on 29 September 2009. Atlas 2000: all except [48], [50], [68], [69]

¶ **Erigeron** *E.* 'Azurfee', *E.* 'Dignity', *E.* 'Dunkelste Aller', *E.* 'Quakeress', *E.* 'Rosa Juwel', *E.* 'Schneewittchen'

X Conyzigeron huelsenii (Vatke) Rauschert = **Erigeron acer x Conyza canadensis**

Erigeron x huelsenii Vatke

X Conygeron huelsenii (Vatke) Holub

Looks rather like *Conyza bonariensis* but with broader leaves, longer hairs and a proportion of aborted capitulae.

East Berks: Wellington College [88] in 1915.

West Berks: in a pit near Oakley House [453996] in 1965.

Conyza L.

We have 4 alien *Conyza* species that are readily distinguished in the field:

- 1. Involucral bracts conspicuously hairy2
- 1. Involucral bracts all but hairless 3

- 2. Plants olive green, to 2m tall, broad-leaved, with barrel-shaped capitulae....
..... **C. sumatrensis**
- 2. Plants blue-grey, to 1m tall, narrow-leaved, with onion-shaped capitulae
with purple tips to bracts.....**C. bonariensis**

- 3. Hairs on leaf margins patent, plant yellow-green**C. canadensis**
- 3. Hairs on leaf margins bent forward, plant dark green with red-streaked,
bristly stems **C. floribunda**

Conyza canadensis (L.) Cronquist *Canadian Fleabane*

• th 8

Erigeron canadensis L.

Originally a casual of waste ground, railway ballast and gravel pits, but now widespread and naturalized on cultivated ground. This is a dull, yellow-green plant with hairless involucral bracts.

First record 1893 “from gravel pits near the railway near Maidenhead, whence it will probably spread rapidly” (Druce). How right he was. By Bowen’s time it was “local but widespread in the drier parts”. Now it is locally dominant on urban waste ground and is common as an arable weed on acid sandy soils. It is being replaced as the dominant on some urban sites by the recently arrived *C. sumatrensis* (see below), but is still (2013) the only *Conyza* species found on cultivated ground. The disc florets have 4 lobes.

NVC: OV 7,19,42

Silwood Park: in some years, one of our commonest annual weeds, more abundant in Silwood Bottom than in Pound Hill Field or Ashurst Four Acre Field. Abundant on cinder paths and hard-standings. Still in 2005 the commonest pavement-crack Fleabane, despite the establishment of *C. sumatrensis* and *C. floribunda* (see below). Very abundant in paved areas and shrub beds on the Science Park in 1990 (it was the cause of complaints that the maintenance work was not being carried out sufficiently assiduously, and this was to mark the end of our contract to look after the Science Park). A campaign of uprooting all the plants prior to seed set was instigated, more out of resignation than in the expectation of success (the plant has a long-lived seed bank). Plant succession soon did the job properly, and the plant was gone by 1993. Very abundant on the cinder pot standing at The Greenhouses in July 2002, after the ground had been left to stand unweeded for 18 months. By September 2002 there was no *C. sumatrensis* in the fallow ground at Silwood Bottom, but *C. canadensis* was still locally abundant. On imported topsoil at Ashurst Lysimeters and Mill Lane Triangle on 10 July 2004. One of the commonest long-distance immigrant species on the Ashurst Gravel Beds 2002-04 (along with *Sonchus asper*, *Epilobium ciliatum* and *E. parviflorum*). In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. The weedy populations in arable land in Silwood Bottom are highly variable from year to year despite relatively consistent timing of cultivation (May on the south of the central track, October to the north), but peak numbers were observed in the northern plot in summer 2002 following October cultivation. In the cultivation-timing experiment at Pound Hill, it was common on 2 September 2007 on the C and D plots cultivated in October 2006. On 6 September 2008 the Ashurst Rabbit Enclosure experiment had the plant (often abundantly) on 235 out of 250 raised beds (just 18 plots had *C. sumatrensis* and 3 had *C. bilbaosana*). Very abundant on the abandoned gravel beds at Ashurst on 9 July 2009, much the commonest of the genus here. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011. On 9 September 2013 the plant was scarce enough to be hard to find on the October-cultivated half of Silwood Bottom and in flower, but uncommon, on the May-cultivated half. The plant has disappeared from the brick paving around the CPB Building, having been replaced first by *C. sumatrensis* then in turn by *C. floribunda*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	11	26

Ascot: large plants, locally abundant on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Huge plants in the flowerbed of the dentist’s opposite Haslers on Upper Village Road in Sunninghill, where the gardener had meticulously removed all the weeds to leave only the *C. canadensis* rosettes; by the time the mistake was realized, a massive seed crop had been set. Common on soil piles and bare ground during construction of Ascot Racecourse in August 2005. In the paved, but exquisitely weedy, front garden of Fern Place at 23 High Street in Sunninghill on 25 July 2009. Frequent with the other two common *Conyza* species on 3 September 2009 in gaps between brick pavements in front of an empty house at 8 New Road, North Ascot.

East Berks: first record Maidenhead in 1893. Locally abundant on landfill sites and gravel workings at Whitley Park [7873]. Riverside stonework at Boulter's Lock. Very abundant in the gravel of the car park of the Hospital at the Royal Military Academy at Sandhurst on 1 August 2002. Still very abundant in Maidenhead in 2004, especially in cracks in asphalt on derelict industrial estates around Stafferton Way [8980] where it grows with abundant *C. sumatrensis* and scarce *C. bilbaoana*. As abundant as *C. sumatrensis* in Wokingham town centre in 2004. 39% (1km²). Atlas 2000: all squares

West Berks: first record Marcham [49] about 1876, and still common nearby on Frilford Heath [4498]. Uncommon in the interior but frequent in both the north and the south. Still common in Hungerford [36] in 2001 in the same railway side habitats that are dominated by *C. bilbaoana* in nearby Newbury [46]; on the famous Hungerford railway wall (see *Pilosella praealta*) [338686], it is the only *Conyza* species (1972-2004). The only common *Conyza* in Faringdon [29] and Abingdon [49] in 2004. On damp sand in Tubney pit [447006] (the only *Conyza*) on 23 September 2006. Atlas 2000: all squares

Conyza sumatrensis (Retz.) E. Walker *Guernsey Fleabane*

• th 8 ↑

Erigeron sumatrensis Retz.

Erigeron bonariensis auct., non L.

Conyza albida Willd. ex Sprengel

Conyza bonariensis auct., non (L.) Cronq.

Widespread and locally abundant. This is a dull, olive green plant with hairy involucre bracts. Usually a single stem (not branched from the base), with the flowering branches originating from the top third of the stem (sometimes as low down as half-way) to form a diamond-shaped inflorescence of relatively large flower heads. One of the most recent additions to the naturalised British flora, whose arrival and spread in Berkshire coincided with the present project. Naturalized in London since 1983 (see *BSBI News* 65: 34-38), and locally abundant on urban waste land in the capital since 1990. Much less of an arable weed than *Conyza canadensis* and more a plant of open waste ground. In West Berkshire, its niche appears to be filled by *Lactuca serriola*.

Silwood Park: it was fortunate that Christophe Thebaud, who had studied the northward spread of the alien *Conyza* species through France for his PhD (Thebaud et al. (1996), *Ecology* 77,791-804), was based in Silwood at the time that the plant became established in East Berkshire. The course of events was as follows. A single plant was discovered by Christophe Thebaud on 15 September 1994 in brambles below the churchyard wall opposite the graveyard at Ashurst. The following week, Christophe, Mark Rees and I went on one of Brian Wurzell's excellent "Aliens of London" plant tours, and came back with finely tuned *Conyza*-hunting antennae. I immediately found the plant growing in my own lawn in Oliver Road, South Ascot, and on brickwork of the houses opposite. The following year, a single plant was recorded on 10 October 1995, flowering amongst other aliens, in the Sea Beet strip between the 2 greenhouses at the Header House. The original Ashurst population had increased to 3 plants by 28 October 1995; there was 1 below the front wall of the church with 7 stems, 1 on the graveyard side of the road with 4 stems, and 1 small plant in brambles (there were still 4 plants growing from the vertical face of the south-facing brick wall of the churchyard in August 2002 and 25 plants in August 2004). By 1 September 1996 there was a single, large plant growing in the cold frames at The Greenhouses. After a slow start, this population built up rapidly, so that by October 2000 this plant dominated the waste ground around the cold frames (but not, interestingly, the ruined foundations of the Cocoa Greenhouse on the opposite side of the track, which looked like perfect habitat). Population densities were much reduced in 2001, and by July 2002 *Conyza* spp. were gone, replaced by perennials like *Solidago canadensis* which dominated the cinderly ground. Occasional on the cinder pot standing at The Greenhouses in July 2002, after the ground had been let to stand unweeded for 18 months. There were no plants in the Cold Frames in August 2006 (and C.

bilbaoana was also much reduced in abundance). Cheryl Case sowed seeds in April 1996 as part of her PhD experiments in Ashurst Four Acre Field and in Oak Mead. By spring 1997 there were masses of seedlings on ground that had remained bare on the rabbit-grazed parts of the cultivated and methyl bromide treated plots, but these plants produced no progeny once succession had produced a dense grass sward; plants have not been seen at either introduction site since 1999. In Ashurst Warren, the plant became a serious nuisance on the raised gravel bed experiments. It was weeded out on 15 September 1998, and four times each year subsequently; it was still the most frequent species in mid- and late-summer weedings of the beds in 2003-04. Plants grew in and around the derelict CABI Polytunnel in 1998, and their offspring still persist there. At M-Scan, on the gravel at the end of the CABI greenhouse in the vegetation where the Portakabin had been standing for several years, there was a large multi-branched plant in full flower on 13 October 1998. This was repeatedly browsed by deer and still fruiting freely on 15 November 1998. The site was destroyed by the construction of the Jiff Greenhouses in May 2000. There were 2 plants in the grassy triangle opposite Little Chef on 20 December 1998 following trenching work in spring, and 2 plants in August 1999 but none in 2000-02; there were 30 plants in September 2003 following further soil disturbance, but none in 2004. Plenty of plants came up on the Oak Mead plots that were cultivated in spring 1998 but by 15 October 1998 the roe deer (who treat the rabbit fences with total disdain) had browsed off all the flower heads. There was a single plant on Sunninghill Crossroads on 6 December 1999. There were 2 plants in the verge of the London Road at the South Lodge entrance on 26 April 2000, and a large population further down London Road by the entrance to Titness Park (40 large individuals in a gateway), and more at the entrance to Whitmore Lane in October 2000. A single plant by the entrance road to the Science Park in June 2000. Frequent in cracks of the new concrete outside the Jiff Greenhouses in July 2002-04 (Plate 14). Common in paving cracks at The Farm in August 2004. Locally frequent on gravel near the CABI Polytunnel on 4 September 2004. Several of the plants on the churchyard wall at Ashurst were in flower on 5 May 2005. There were two individuals in the fenced cultivated ground of the Ashurst Lysimeters in late August 2005 (the second year since top-soiling). The plant has become completely naturalised during the period 1994-2004, forming self replacing populations, but it is an early successional ruderal, so most of these populations are transient, and the plant is not invasive of any natural habitats. Very common all around the Header House Greenhouses on 25 August 2006 but almost absent in September 2008. At the seed bank gravel plots at Pound Hill there were 10 big plants amongst *Lactuca serriola* and *Senecio inaequidens* on 28 September 2008 (bunt only 5 *C. canadensis* and no *C. bilbaoana*). Clearly declined in abundance throughout Silwood since 2006, but abundant (with *C. canadensis*) on the abandoned gravel beds at Ashurst, and in the gravel strip down the MScan edge of the Jiff Greenhouse on 9 September 2009 (it was less common than *C. floribunda* around the Header House and CABI Greenhouses on the same date). Common with *C. floribunda* on brick pavements around the CPB on 30 August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	4	12

Ascot: the populations in South Ascot and Sunninghill took off most rapidly after 1994, and have remained the most abundant. The biggest plants (well over 2m tall) were at the entrance to the village car park in Sunninghill [936676] in 1995; these persisted to 2002 but were destroyed in August 2002 when the area was turned into a shrubbery during a concerted tidying-up operation. Abundant in 1995 in the alleyway behind the news-agents on South Ascot High Street (Plate 11) [924679] until 2001 when the area was tidied up, but still there in 2004. There were 3 large plants in Nell Gwyn Close in Sunninghill, lurking behind a garden shed [938682] on 12 December 1998, and a large population by the gasometers [937675] in August 2002. Heatherwood Hospital, Ascot Station, Sunningdale in 1999. Ascot High Street in the hedge opposite the shops [924687] in October 2000. By 2002 it was common in all sorts of open ground and as a lawn weed, where the grass thins out next to the pavement. In the verge of St George's Lane, opposite the school in 2003. In alleyways off Bridge Road Sunninghill

[936676] in 2003. Locally abundant at the Drift Road end of the old road at Cranbourne Roundabout [929730] in August 2003. Under yew trees in South Ascot churchyard [923679] in September 2003. Common on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Abundant in Niven Court off Sunninghill High Street in August 2004 [935677]. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road [933691] on 29 August 2004. Very abundant in October 2004 on the steep slopes of the spoil heaps at Short's Skips south of Ascot High Street [926685]. Common on ruins, soil piles and bare ground during construction of Ascot Racecourse in August 2005 [920689]. Frequent on waste ground at the gasworks at the eastern end of Bridge Road in Sunninghill [937675] in September 2005. Abundant, more than 2m tall, on the ruined terrace of the derelict bungalow next to Sunninghill Lodge on New Mile Road [933691] on 10 September 2005. Uncommon at Froggnall [940681] in September 2005. Very abundant in September 2006 on ground yet to be grassed-over at the corner of New Mile Road [926690] following work on the new Grandstand. The corner of New Mile Road was eventually landscaped and top-soiled for re-seeding in mid October 2006 when the *Conyza* were ploughed under. By November 2008, the plant had gone from the well-grassed areas, but was still locally abundant in a line inside the fence on the corner of New Mile Road. Locally dominant on cleared ground at Blacknest Park [956685] in October 2006, where the house-building had still not yet begun (still not started at the end of 2009). Locally dominant outside the derelict shops [919708] at the northern end of New Road opposite Ascot Place (2005-2007), growing with the less abundant *C. bilbaoana* on 10 September 2007. Much reduced in abundance in September 2008. In the paved, but exquisitely weedy, front garden of Fern Place at 23 High Street in Sunninghill on 25 July 2009; subsequently tidied up during rebuilding work. Frequent with the other two common *Conyza* species on 3 September 2009 in gaps between brick pavours in front of an empty house at 8 New Road, North Ascot.

East Berks: first recorded from South Ascot in 1994, only locally abundant in 2002 and still absent from many suitable habitats. Recorded since 1997 at Newland Farm, Langley Common, Reading Station, Cattle Market, College Road, Coley, Oxford Road in West Reading, Twyford Church, the Berkshire side of the river at Henley, Sandhurst, Crowthorne, Broadmoor, Wokingham town centre, Big Wood, Coppid Beech roundabout, Popeswood, Quelm Park, central Bracknell, Bracknell Western Industrial Estate, Amen Corner, Cabbage Hill, West End, Warfield House, Prospect Hill, Bisham Wood, behind the church at Cookham, Maidenhead, especially in the sewage works and on the industrial estate at Depot Road [8980], West Dedworth, Hog Common, waste ground near The Squirrels [9373], on the old Drift Road at Cranbourne roundabout, Dedworth, Windsor, The Goswells, Frogmore, Ham Island and on paving by the Thames at The Moorings [991737]. on the brickwork of the railway arches in Windsor [9677] in 2000. Uncommon in the verge of the A329(M) between Bracknell and Reading in autumn 2001 [8170]. Locally abundant in set-aside land at Ryeish Green [7267], growing with *Artemisia vulgaris*, *Senecio jacobaea* and *Tripleurospermum inodorum* in August 2002. An extraordinary record of early flowering by the R. Kennet in the centre of Reading [719734], when 2 plants were in full flower on 18 May 2002 surrounded by a large population of completely normal, late-summer-flowering rosettes. It is surprising that in 2004 the plant still does not grow on the former railway land at Kingsmead, where other aliens abound between Tesco's superstore and Reading Station, whereas it is locally abundant around Reading Station and in south-west Reading on the yet-to-be-landscaped parts of Green Park (2004-2009). Locally abundant on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. Reduced in abundance around 3M in Bracknell at the Cain Road Roundabout [8469] in September 2008. 7% (1km²). Atlas 2000: all squares. On 15 December 2012, the plant was locally frequent in Windsor and Old Windsor (much commoner than either *C. canadensis* or *C. floribunda*).

West Berks: first recorded from Faringdon and Lambourn in 1998. The plant was common in Oxford, and grew south of the R. Thames in v.c.22 at Botley [40] and New Hinksey [50] in 2000. First discovered in Newbury [4767] in July 2002. Still far from common, and many suitable habitats had

not been colonised by September 2006 (e.g. the railways at Kennington, Radley and Hungerford were free of the plant). By September 2004 it was locally frequent within the town of Oxford on the v.c.22 side of the Thames, as at Osney, Binsey, Littlemead Business Park and New Botley, but had spread no further west along the Golden Ridge than Appleton, where it was locally frequent in Church Road [4401] at the base of old walls with many of the plants more than 2m tall (there was no sign of the plant on 4 September 2004 in Longworth, Buckland or Faringdon). By September 2004 there were still no records from Newbury, Kintbury or Hungerford in the Kennet Valley, nor from Ashbury or Shrivvenham in the far west, and places like Lambourn and Faringdon which had the plant in 1998 provided no records of it in 2004. A small clump of 10 plants on bare chalk, growing with *Erigeron acer*, on the northern section of the roundabout at the Hungerford Junction of the M4 [360729] on 23 September 2006. Atlas 2000: [29], [38], [40], [50], [67], [68]

Conyza bonariensis (L.) Cronquist *Argentine Fleabane*
Erigeron bonariensis L.

• th 8 ↑

Casual on pavements and waste ground near buildings. This is a dull, blue-grey plant with very narrow leaves and hairy bracts. A recently arrived, and still very rare alien ruderal. Often a plant-pot weed (as it is in New Zealand and Japan), and moved around with potted plants. Told from *C. sumatrensis* by its much narrower, blue-grey (not yellowish), crisped leaves, and by the purple tips to the bracts of its much fatter, rather onion-shaped, greyish involucre.

Silwood Park: the plant was imported unintentionally as a rare weed of plant pots containing small spruce trees in August 1996; the origin of the spruce plants is not known for certain, but they may have come from Alice Holt in Hampshire. The offspring of these colonists self-seeded into pavement cracks around the Header House, close to where the plant pots had been standing. Still common in plant pots containing *Picea abies* in 1999 and 2000 but not since then. A plant became rooted in the concrete steps leading up to the PROSAMO greenhouse and grew to enormous size (1.2m tall with 5 stems); it flowered all through the summer and autumn of 2000, dispersing copious seed. It was not felled by frost until mid January 2001. The offspring of this plant continued to fruit throughout a protracted cold spell from December 2001-January 2002. Established in bare soil around the BP Greenhouse. By 3 September 2001 it was thoroughly established by concrete paths and in pavement cracks all around the Header House and on the main greenhouse steps (still there in 2002, despite thorough weeding in 2001). The species did poorly in 2003, with many of the young plants dying in the extreme heat and drought of August 2003; there was just one tiny plant in the sliding door of Greenhouse 6B by 6 September 2003. By 2004 it had come back from the verge of extinction, with a single plant in the same greenhouse door-slide, but there were 4 plants in asphalt cracks by the Header House Door and 3 in gravel behind CABI on 25 August 2004 (Plate 14). A new site was discovered on 16 September 2003 on the Science Park, in the roadside bed opposite the Technology Transfer Centre, where one large, multi-stemmed plant was growing through lavender that had been planted when the bed was refurbished in May 2003. Evidently introduced in the pot with the lavender, and not found amongst rosemary planted nearby at the same time, but not there in August 2004 or subsequently. In a further new site, when a single plant was discovered on the cinder pot standing at The Greenhouses, growing with abundant *Conyza canadensis* on 14 October 2003, but never seen here subsequently. There were two plants at the end of the grassy strip between the Jiff Greenhouses and M-Scan on 4 September 2004, and one in September 2005. There were rather few plants out of doors in summer 2005 (e.g. a tiny plant in the door-slide of the PROSAMO Greenhouse, and a few small individuals at the eastern end of the CABI building gravel), but there were two huge individuals which flowered inside the derelict Horticultural Greenhouse on 31 July 2005 where the *Narcissus* bulbs had been stored. There were two huge plants in the same indoor location in August 2006. There was something of a resurgence in numbers out of doors in summer 2006, when there were 9 plants on the right of the Header House door and 1 plant on the left, with other plants in the gravel at the north

end of the CABI building, between Greenhouses 4A and 5A, by the Quarantine Greenhouse and, as usual, in the door-slide of the PROSAMO Greenhouse. The plant was further increased on 27 July 2007 with populations in tarmac outside the Header House door, in gravel behind the CABI building, and most numerous in cracks on the concrete by the door of Greenhouse 9A with other aliens like *Diplotaxis tenuifolia* and *Senecio inaequidens*. August 2007 saw the population in good heart: there were two tiny plants in the door-slide of Greenhouse 6B, nine big plants by the door of the Header House, several very large plants by the door of 8A and five large plants on the CABI-facing side of Greenhouse 8A (growing with large *C. sumatrensis* and *C. canadensis*), but none on the cinder pot standing at The Greenhouses. There were no plants at all in Silwood in from September to December 2008 and it will be interesting to see if this is local extinction after 12 years, or whether the plant persists as a seed bank and stages a come-back. There was a single tiny plant in full flower in a crack in the tarmac, just to the right of the door to the Header House on 1 October 2009, still fruiting on 7 November 2009, but this was the only plant in Silwood Park in that year. There were no plants at all in summer 2010. Miraculous recovery from extinction ! A single plant in the original location in the metal door-slide of the Prosamo Greenhouse (6B) in fruit on 29 August 2010. Hallelujah. There were two plants on Christmas Day 2011; an individual in full flower to the left of the greenhouse door and another, vegetative individual, to the right of the door.

East Berks: first record from Silwood Park in outcast soil from imported plant pots in August 1996. No other records. <1 % (1km²).

West Berks: no records.

***Conyza floribunda* Kunth** *Southampton Fleabane*

• th 8 ↑

Conyza bilbaoana J. Remy

Conyza sumatrensis (Retz.) E. Walker var. *floribunda* (Kunth) J. Marshall

Local and still rare in 2006. Increased in 2007 but not in 2008. Increased dramatically in 2009 and subsequently. Recently established, but already locally common in a few places on dry disturbed ground and stonework in some of the towns, particularly in East Berkshire. This is a shiny, dark green plant with hairless involucre bracts. It has the stature of *C. sumatrensis* but with small hairless involucre reminiscent of *C. canadensis*. It has stout, red-streaked, densely long-hispid stems that are often branched from the base (10 flowering stems is not uncommon) bearing round-topped cymes of numerous tiny flower-heads. The leaves are dark, somewhat glossy-green (rather than matt, olive-green in *C. sumatrensis*) and the leaf margins have bent, forward pointing hairs (like *C. sumatrensis* but unlike *C. canadensis* which has straight, spreading hairs on the leaf margin). The disc florets have 5 lobes (not 4 lobes as in *C. canadensis*). The marginal teeth towards the base of the leaf are enlarged into forward-pointing lobes, 5-8mm long and 2mm wide. Towards the base of the leaf the under-surface of the midrib bears long, 8-10-segmented transparent hairs. The pale, yellowish-green flower heads are small (4mm long and 3mm wide) and are held in terminal groups of 3-5 on long slender inflorescence branches. The outer bracts are about half the length of the involucre. The achenes have sparse, spiky hairs, especially towards the top. First described from Southampton in 1992. It is odd that this plant, which spread northwards through France so much more quickly than *C. sumatrensis*, and attained higher densities in many places (Thebaud, *Ecology*, 1996) should have crossed the Channel so much later and spread so much less rapidly in Britain.

Silwood Park: initially a very rare escape from cultivation, now occasional but fluctuating in abundance. It was grown by Cheryl Case in the Header House greenhouse from seed imported from France by Christophe Thebaud in spring 1997 in order to prepare herbarium specimens. One large plant, presumably from escaped seed, grew from a crack in the concrete at the corner of the CABI Quarantine Greenhouse in August 1999. A second plant, much further away, grew on the ruins of the

Cocoa Greenhouse and flowered in September 1999. No plants were found anywhere in Silwood in 2000. A large individual was discovered on 29 September 2001 in the cold frame beds at the Greenhouses, growing amongst a dense colony of *C. sumatrensis*. This plant set copious seed before toppling over in early December 2001. The plant was not seen again at the Cold Frames until September 2005, when there were scores of plants behind and on both sides of the frames, and no *C. sumatrensis* at all. By August 2006, there were just two tiny plants, struggling through the brambles (*C. sumatrensis* had completely disappeared from this site). The plant was back in substantial numbers in the southern part of the Cold Frames in September 2007 (still no *C. sumatrensis*) and the plant was abundant in the Cold Frames on 22 September 2009. There were 2 huge individuals (the largest with 15 flowering stems) amongst abundant *C. canadensis* on the cinder pot standing at the Greenhouses on 30 July 2002 (Plate 14), and 3 much smaller individuals in the dry year of August 2003. There was a massive, 10-branched individual, more than 1.5m tall, and one much smaller single-stemmed plant, at the base of the east-facing greenhouse wall on the Pot Standing on 31 August 2004, apparently the only plants in the district. None here in 2006. There were 2 plants on the grassy triangle at the Cheapside end of Mill Lane on 5 November 2001, following cable-laying operations, but none in 2002-09. There were 4 large individuals inside the (unwatered) derelict Horticultural Greenhouses on 31 July 2005 with *C. bonariensis*, *C. canadensis* and *C. sumatrensis*. A single, large plant with 18 basal branches at the base of the wall on the CABI side of Greenhouse 8A on 25 August 2006. Two plants outside the north door of West Block growing in gravel on 30 September 2006. There was a large, multi-stemmed plant in brick paving at the base of the dry, sunny, south-facing wall of the Centre for Population Biology on 28 July 2007 after the wettest ever May, June and July (there was a tall *C. sumatrensis* in the adjacent bay), and another unbranched plant next to the main CPB entrance on the eastern wall. Two other big plants on the same date next to the CABI Quarantine Greenhouse, the first in the bed behind the Header House, the other in the gravel strip adjacent to the other CABI Greenhouses. Still much less common than *C. sumatrensis* in 2007. Several large plants on gravel inside the security fence around the phone installations at the base of the Met Tower on 24 August 2007. Rosettes on two of the Ashurst Exclosure gravel beds on 14 September 2007, after weeding had stopped in June 2007. Much reduced in numbers throughout Silwood in September 2008. Only 3 of the 250 raised beds at Ashurst had the plant on 6 September 2008 (18 plots had *C. sumatrensis* and 234 had *C. canadensis*). There were 11 large plants in a group standing well proud of the top of the fence at the church end of the graveyard at Ashurst on 16 September 2008. On 10 June 2009 there were no plants at all on the graveyard fence, but the skeletons of last year's big plants were still clearly recognizable. There were three flowering plants on top of the churchyard brick wall opposite this site on 1 October 2009, and three small plants on the brickwork on 11 September 2010 after a very dry summer. There were only three plants on the abandoned gravel beds at Ashurst on 9 July 2009, when there were hundreds of *C. sumatrensis* and *C. canadensis*. There was one 5-stemmed plant in a crack in the concrete at the end of the Header House opposite the greenhouses, and the plant was common around the CABI Greenhouses on 25 October 2009 (but it was replaced by *C. sumatrensis* around the adjacent Jiff Greenhouses on this date). Common with *C. sumatrensis* on brick pavements around the CPB on 30 August 2010. There were more than 50 large plants (and no *C. sumatrensis*) on the gravel strip between the CABI Greenhouses and CABI Quarantine on 6 September 2010. This strip was dominated by perennial plants by September 2013, and the *Coryza* was much reduced. Frequent at the base of the brickwork on all four sides of the Stable Yard in the Manor House on 6 October 2013, growing with *Antirrhinum majus*.

Ascot: uncommon on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003 and built over in early 2004. No records from 2004. Rare on ruins during construction of the new grandstand at Ascot Racecourse on 30 August 2005, with 3 plants at [92446 68960], [92110 68972] and [91886 68865] amongst hundreds of *C. sumatrensis* and thousands of *C. canadensis*. A single individual on a topsoil pile by the new Straight Mile [92786 69087] and another in the grassy quadrangle to the east of Course Road [924688] on 31 August 2005 and one at the rear of the

administration buildings [922689] on 22 October 2005. A single plant amongst hundreds of dense *C. sumatrensis* on the corner of New Mile Road [926690] on 16 September 2006, where the landscaping of the new racecourse had yet to be completed. There were no plants here in September 2007 following grass-sowing and mowing of the entire corner. A single plant beneath the south-facing wall on the edge of the southern-side car park at Ascot Station on 25 August 2007. Occasional in front of derelict shops [919708] at the northern end of New Road opposite Ascot Place on 12 September 2007 growing with, but less numerous than, *C. sumatrensis*. In Sunninghill, close to the railway on Bridge Road amongst *Ulex europaeus* on 18 September 2007; still common here in October 2012 when there were no *C. sumatrensis* nearby. The rosettes were dominant, with a few small plants in flower, on the bank outside The Sunninghill Club that should have been a lawn but wasn't, on 28 October 2007; this was the largest population ever seen locally. In the paved, but exquisitely weedy, front garden of Fern Place at 23 High Street in Sunninghill on 25 July 2009. Frequent with the other two common *Conyza* species on 3 September 2009 in gaps between brick pavements in front of an empty house at 8 New Road, North Ascot. Occasional in the car park at Ascot Station on 28 October 2009, growing with *C. sumatrensis*.

East Berks: first recorded on 5 November 2000 in Windsor, where it was locally abundant in a grassy strip between the hedge and the road to the car park [971773], by the railway just north of the Riverside Station, overlooking the Home Park Recreation Grounds. Still common at this site in September 2001, but the plants were much smaller because the site had been mown, earlier in the summer. Heavily mown and not spread any further by 2002, and locally extinct by September 2003 (not there in 2004-06). A single individual in the gravel of the Hospital car park at the Royal Military Academy at Sandhurst on 1 August 2002. Locally frequent on stonework by the R. Thames in Windsor and on the stone piers of the Thames bridge (c.20 large plants), where it crosses from downtown Windsor into Eton on 6 September 2003 (also present on the v.c.24 side of the bridge), still there in 2004-06. On sunny waste ground between the railway and Tesco's Superstore at Kings Meadow in Reading [719738] on 11 October 2003, but not in September 2004. Uncommon amongst abundant *C. sumatrensis* and *C. canadensis* on derelict industrial land off Howarth Road near the railway in south-east Maidenhead [8980] on 11 September 2004. Local and very uncommon on waste ground by the railway in the Carnival carpark at Wokingham [807683] on 18 September 2004. Much the commonest *Conyza* in derelict industrial premises on Western Road, Bracknell [8589], opposite Cable and Wireless in September 2004-2007; demolition and site clearance finally under way here on 1 September 2007 and the half-completed building site was *Conyza*-free in September 2008. At the rear of 3M on Cain Road Bracknell on 2 September 2007 but only two plants on 6 September 2008. <1 % (1km²). In Windsor on 15 December 2012, the plant was much less common than *C. sumatrensis*, found only at Bexley Street [96133 76729] in front of terraced houses.

West Berks: first recorded as locally dominant at the base of the car park wall at Newbury Station [472667] on 29 September 2001. It looked like a corymbose version of *C. canadensis*, with the same hairless involucre, but much commoner here than *C. canadensis*. Still there in September 2002, but less abundant. The area had been allowed to become overgrown by 3 September 2004, and *C. bilbaoana* was much reduced through competition from *Solidago canadensis*, *Urtica*, *Artemisia*, *Ballota*, *Plantago lanceolata* and *Senecio squalidus*. There was no *C. sumatrensis* in the vicinity, and *C. canadensis* was restricted to the trackbed of the railway on the quiet platform on the opposite side of the road. Many of the Newbury plants lacked any red streaking at the base of the stem, and most plants were not branched from the base; all, however, had hairless involucre and leaves with teeth extended into small, forward-pointing lobes. This was still its only West Berkshire location in 2005, when numbers were even further reduced by competition from *Solidago*. The population had recovered by 23 September 2006 to its former abundance and the *Solidago* was somewhat reduced (still no *C. sumatrensis* in Newbury in 2006).

Olearia solandri Hook f.

• n 6

An uncommon golden-leaved shrub with needle-like leaves, that looks more like Ericaceae than Asteraceae. Very rarely naturalised in Cornwall, and self-sown in Silwood Park.

Silwood Park: a single plant self-sown in brick paviours below the wall by the eastern entrance to the Centre for Population Biology. The plant was 3 years old and 30cm tall when it was first noticed in February 2003. The likely parent plant was c.15m away, in the shrub bed on the south-facing front of North Block, where it was planted in 1988. The plant was killed on 29 August 2003, uprooted by vandals and cast aside when it was 45cm tall.

¶ **Olearia** *O. x haastii*, *O. ilicifolia*, *O. macrodonta*, *O. x mollis* ‘Zennorensis’, *O. nummulariifolia*, *O. paniculata*, *O. phlogopappa* ‘Comber’s Pink’, *O. x scilloniensis* ‘Master Michael’, *O. solandri*, *O. stellulata*, *O. traversii*, *O. ‘Waikariensis’*

Bellis perennis L. *Daisy*

hr 3

Fields, lawns, grasslands and waste ground; common and widely distributed, but less frequent on very acid soils. Escaped or persistent garden cultivars with double or semi-double flowers are encountered occasionally.

NVC: CG 2-5; MG 4-7; OV 4,21-23

Silwood Park: although this species is ubiquitous at larger scales, it is rare or absent at smaller scales in many of Silwood’s habitats. It is occasional in lawns, but uncommon in grasslands and absent in woodlands and wetlands. Seldom found far from buildings. Ashurst churchyard, Cheapside, Silwood Farm, Drive Lawns, Tractor Sheds, Silwood Lodge, Science Park and in lawns all around the Manor House, verges of London Road. A large-flowered, semi-double cultivar with pink-edged, white ray florets and a yellow centre was occasional in South Lodge Wood in August 2005 after fencing to exclude deer and rabbits.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	26

East Berks: 88% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

¶ **Bellis** *B. perennis* ‘Dresden China’, *B. perennis* ‘Miss Mason’, *B. rotundifolia* ‘Caerulescens’

Tanacetum parthenium (L.) Sch.Bip. *Feverfew*

o h 7

Matricaria parthenium L.

Chrysanthemum parthenium (L.) Bernh.

Hedge-banks, walls, paving cracks, gardens and waste places; widespread but frequent only near buildings. Druce thought otherwise, writing that in “some parts it has the appearance of being native since it is found in old hedges in considerable quantity, often far-removed from gardens or houses”. I have not seen any locations that would fit that description in Berkshire (though there are plenty in Scotland and Northern England). Stems, leaves and flowers are galled by the fly *Rhopalomyia tanaceticola*. Host plant of the beetle *Galeruca tanacetii*.

NVC: OV 42

Silwood Park: local and uncommon. Sunninghill Crossroads, Ashurst Church, Cheapside Village, Silwood Bottom, East Lodge. Casual from imported topsoil in the first year after the construction of Garden Wood Bank on 25 August 1989. The white, double-flowered form grows beneath the wall of the churchyard, facing the graveyard at Ashurst in 1999. Occasional in the New Chalk Plots in Ashurst Four Acre Field in 2002.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	6

Ascot: occasional garden escape in villages. Paving cracks in Sunninghill, South Ascot, etc. The Tip, Fernbank Road, Coronation Road, Ascot Station, Charters Road, Blacknest Park, Johnson's Pond, Locks Ride, Winkfield, North Ascot, Ascot Place, Brookside, Winkfield Lodge, Cranbourne, Sunninghill Park. Locally abundant by the Marist Convent Lake [941682].

East Berks: Crazy Hill, Reading, Coley, Holly Cross, Finchampstead, Wargrave, particularly common near the R. Thames in Maidenhead, riverside stonework at Boulter's Lock, Cookham, Twyford, White Waltham, Hurley, Aston, Arborfield, Jouldern's Ford, Swallowfield, Farley Hill, Whistler's Green, Hurst, Barkham, Riseley, Thatcher's Ford. Records of the white 'Flore Pleno' cultivars are common as garden escapes (see below). Surprisingly rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 41% (1km²). Atlas 2000: all squares

West Berks: in almost every village, often in the churchyard. Atlas 2000: all except [69]

Tanacetum parthenium cultivars *White Feverfew*

• h 7

The commonest cultivars found as escapes are the all-white pompom Feverfews 'Plenum' and 'Snowball' (the latter is bigger and more spherical). The semi-double 'White Bonnet' is the popular bedding plant. Occasional on waste ground in towns.

East Berks: cultivar 'Plenum' is recorded from Reading, Bulmershe, Maidenhead, Windsor, Wokingham, Bracknell and Sandhurst, and 'White Bonnet' from Coley. 1% (1km²).

West Berks: 'Snowball' was near the canal in central Newbury [4767] in July 2002.

Tanacetum vulgare L. *Tansy*

h 7

Chrysanthemum vulgare (L.) Bernh., non (Lam.) Gaterau

Roadsides, hedges, and river-banks, heathy fields. Margins of rivers, roadsides, railway banks and grassy waste ground, in small quantity; absent from the chalk and northern clays. The common black aphid is *Uroleucon tanaceti*.

NVC: OV 41

Silwood Park: very local but sometimes abundant, especially on more fertile soils. The Tip, a single plant; 15 May 1983. At the rear of Southwood Halls, in Ted Green's "Introductions Bed", next to the gate on the track by Buckhurst Road; introduced from Dinton Pastures, Reading, in 1986; locally abundant on 25 August 1989 but virtually gone (shaded out by *Frangula alnus*) by July 1994. Silwood Bottom, grown as part of an intercropping experiment in 1991 but it spread rapidly to become locally dominant in the southern part of the field; by 2001 it had become a pestilential weed and spread to the adjacent Student Allotments (see below) and was common in the southern field-margins in 2005. Nash's Field, the one really successfully established herb of the Tilman Plots experiment. Dominates most of the originally species-rich, non-grass sown plots. Sown in October

1991, first flowered in 1993, and still abundant in 2004 despite spreading little or no distance from where it was originally sown. Ashurst Four Acre Field, fallow, a single plant on the abandoned student allotments in 20 June 1996. The Tilman experiment in Nash's Field demonstrated clearly that Tansy is seed-limited in Silwood. It thrives following introduction, especially on nitrogen-rich (fertilized) soil, but does not spread far (or often) by seed, because its seedlings are incapable of establishment in a closed sward. The edges of the 3m x 3m plots sown with Tansy in 1991 were still clear and sharp 10 years later. In July 2004 it was still common on all 6 plots in all 3 Blocks where it was originally sown. Oak Mead, Biodepth II, Gravel Pit, The Oaks, on the edge of the carpark at Ashurst churchyard, Silwood Farm, locally dominant in Silwood Bottom, especially in the abandoned parts of the Student Allotments (where it is one of the main contributors to abandonment, no doubt). Header House, a group of plants by the Pot Store below the concrete lip of the greenhouses in July 1994. One clump by the garden gate of East Lodge in 2002. One plant on the old bonfire site inside the rabbit enclosure in Gravel Pit in July 2002; increased slightly to 5 stems by August 2005. In one place on the New Chalk Plots in May 2003; still there but not spread in May 2007. Locally frequent in the lower part of the Biodepth deer enclosure in Oak Mead in June 2003. Just outside the fallen garden wall at The Farm and in the bed next to the front door in September 2006; both sites destroyed during building work in summer 2009. A small clump of plants in long grass on the edge of the oldest part of the graveyard at Ashurst, next to St Michael's car park on 28 July 2007. Very local but abundant on the New Chalk Plots at Ashurst on 29 August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	4	13

Ascot: locally frequent at the Drift Road end of the old road at Cranbourne Roundabout [929730] and on the new verges next to the roundabout in August 2003; still like this in September 2007.

East Berks: banks of the Blackwater, Twyford, Arborfield, Loddon Bridge, Whistley Mill, Hurst Green, Bulmershe, Coleman's Moor, Finchampstead, Long Moor. Occasional to the south of Reading, as around Swallowfield, rare in the Thames valley, but absent from the interior and rare to the east of 80. Perhaps imported with topsoil used in landscaping the new Braywoodside roundabout, June 2002. Locally common by the Thames at Old Windsor Lock in September 2002. 10% (1km²). Atlas 2000: all squares

West Berks: uncommon in the Thames and Kennet valleys, but absent from much of the interior (north of 75 and south of 95). Atlas 2000: all except [48], [69]

Tanacetum balsamita L. *Costmary*

• h 7

Balsamita major Desf.

Chrysanthemum balsamita (L.) Baillon, non L.

An uncommon herb-garden plant, very rare as an outcast and never found self-seeded in Berkshire.

East Berks: Woodley allotments in 1998. <1% (1km²).

¶ **Tanacetum** *T. balsamita*, *T. coccineum* 'James Kelway', *T. coccineum* 'Robinson's Red', *T. densum* subsp. *amani*, *T. parthenium* 'Aureum', *T. vulgare* var. *crispum*

¶ **Seriphidium** *S. maritimum*, *S. vallesiacum*

Artemisia dracunculus L. *Tarragon*

• h 7

Uncommon as a herb-garden plant, and rare as an outcast on tips.

East Berks: Shinfield, Three Mile Cross, Camberley. <1% (1km²).

Artemisia vulgaris L. *Mugwort*

○ hp 7

Hedges, field-borders, etc. Common and generally distributed. Dry roadsides and waste ground, usually in small quantity and ephemeral; increasing briefly after soil disturbance. Most frequent on the calcareous grit, least common on very acid soils. Leaves are often marked by blotch mines of *Trypeta artemisiae*.

NVC: MG 1; OV 3,4,9,14,18,19,21,23-25

Silwood Park: local and seldom abundant. North Gravel, common in 1985 on the soil heap made from the topsoil excavated during the construction of Southwood Halls. This soil was spread over the concrete base of wartime Nissen huts (named, you just might be interested to know after Lt.-Col. Peter Norman Nissen (1871–1930), the British inventor of these tunnel-shaped huts made of corrugated iron with a cement floor) in an abortive attempt to create an interesting new habitat. Now planted with pine, and overgrown with long grass. Southwood Halls, 10 plants at the side of the new gravel road at the rear in September 1983, but gone by 1989. Lodge Field, on cultivated ground; extinct following the construction of the Tractor Sheds. Reactor Bank, a few plants on the bank facing the Reactor fence in August 1980. Locally dominant following the dumping of soil from the foundations of the Wind Tunnel in August 1985. Still common in 1990, but rare by 2000. Pound Hill, Cheapside, Ashurst Warren, Churchyard, Church Field, Silwood Bottom. Pound Hill Field, in the fallow at the edge of the cultivated plot on 16 August 2000. Common in 2002 on bare ground at the grassy triangle where Mill Lane meets Buckhurst Road after pipe-laying work in 2001. It is locally frequent on just one of the cultivation timing plots at Pound Hill (March cultivation in Block 1) 2001-05. Occasional on 3 August 2005 when the May-cultivated plot B had only just greened-up after late July rains had broken the long spring and early summer drought. After the very dry April but very wet summer of 2007 it was common on all the March-cultivated plots at Pound Hill, reaching 35% cover in Block A on 28 July 2007. On 2 September 2007 it occupied 4% on the May-cultivated plot B. Occasional on the Ashurst Lysimeters in August 2004 from imported topsoil; the population was down to a single large plant at the Orchard end of the Lysimeter on 12 September 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	8

East Berks: particularly common on chalky ground by the Thames. 75% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Artemisia verlotiorum Lamotte *Chinese Mugwort*

● hp 10

An interesting example of an alien invasion by range extension across Europe. Thoroughly, but very locally naturalised on roadsides and waste ground. Like *A. vulgaris* but rhizomatous (stand-forming), with narrow stem pith is narrow (the white portion of the pith makes up 30% (not 80%) of the diameter). Told by the long, finger-like, untoothed lobes of its stem leaves, and by its lime-green (not blue-green) colour.

East Berks: very local at Thornhill in 1998 but gone by 2000. Locally dominant on waste ground near Farley Moor Lake on Bracknell Industrial Estate [8569] in November 2002. <1% (1km²). Atlas 2000: [86]

West Berks: Didcot railway sidings [524906] in 1966 and 1988. The Great Western Centre has been tidied up and most of the good aliens that used to grow there had been lost by 2000. Atlas 2000: [59]

Artemisia absinthium L. *Wormwood* ○ h 7 ↓

Dry hedge-banks, railway banks and waste ground, in very small quantity. Often sporadic.

Silwood Park: a large plant in the south-west corner of the student allotments in Silwood Bottom on 1 August 2007. It had obviously been there for at least a year, possibly more, and was certainly planted.

East Berks: on the high bank south of Maidenhead Station with other casuals. On the borders of Messrs. Sutton's trial farm. Reading (1931-47), Woodley (1935), Earley (1950), Heywood Park. <1% (1km²). Atlas 2000: no records.

West Berks: commonest in the Northern Loop and absent from most of the interior. Inkpen [36], Newbury tip [46], Harwell [48], Cothill, Hitchcopse pit, Grove tip, Kingston Bagpuize House and Frilford [49], Bessels Leigh and Dry Sandford [40], Sutton Courtenay [59], Kennington and South Hinksey [50], Theale [67] (RNG) in 1946. Atlas 2000: [49]

Artemisia spp. as garden outcasts and escapes

This is a difficult group of aliens because they are so seldom in flower at the time they are found, and this makes them impossible to key out in the normal way. All of them have more or less silver leaves, but there is tremendous variation in leaf shape. Two taxa have entire upper leaves: the pot herb *A. dracunculus* has green leaves, and the ground cover perennial *A. ludoviciana* has silver leaves. Of the taxa with divided leaves, one is a carpeting, ground-cover perennial (*A. stelleriana*) and the rest are more or less upright. Of the upright ones, most have silvery-white leaves but *A. abrotanum* is green (albeit sage-green). The most frequent (and hardy) of the filigree-leaved silver plants is *A.* 'Powis Castle', the one with the finest leaves is *A. alba* 'Canescens', and the most woody is *A. abrotanum*. For flowering specimens, there is a key to 53 garden taxa of *Artemisia* on p. 243 of Vol 1 of the RHS Dictionary of Gardening.

Artemisia stelleriana Besser *Hoary Mugwort* ● h 7

Known to gardeners as *Dusty Miller*, it produces a dense carpet of broad, deeply fingered, grey-white leaves that are more reliably hardy than *Senecio cineraria*. Occasional garden plant grown at the front of the herbaceous border or to soften the edges of paths. The underleaves are more densely white-woolly (white-lanate) than in *A. ludoviciana* (white-tomentose, undivided leaves).

Silwood Park: locally abundant by The Greenhouses on waste ground since 1979.

East Berks: Three Mile Cross in 1998. <1% (1km²). Atlas 2000: [76], [87], [96]

West Berks: naturalized in the grounds of the Old Rectory at Burghfield [6668] in 2004.

Artemisia ludoviciana Nutt. *Western Mugwort* ● h 7

A rhizomatous clump forming perennial with willow-like, downy silvery white entire leaves (not to be confused with *A. stelleriana*, which has divided leaves; see above).

East Berks: Binfield in 1999. <1% (1km²). Atlas 2000: [87]

Artemisia pontica L. *Roman Wormwood* ● h 7

Reminiscent of *A. maritima* or a smaller version of *A. abrotanum*, but this is a rapid, dense, invasive colonizer, bearing feathery sage-green foliage in slender, erect, narrow sprays. Rare as a garden escape.

East Berks: Reading in 1989. <1% (1km²).

Artemisia ‘Powis Castle’ ● n 7

This is the *A. arborescens* of gardens, and has the most finely divided leaves of the silver-leaved shrubby mugworts. Common in gardens, but rare as an outcast.

East Berks: Maidenhead in 1997. <1% (1km²).

West Berks: Newbury in 1998 and 2000.

Artemisia abrotanum L. *Southernwood* ● n 7

A shrubby garden plant with very feathery sage-green (i.e. not silvery), strongly aromatic foliage. The stems are woody right to the top, and the plant seldom flowers.

East Berks: Windsor on waste ground by the station in 1996. <1% (1km²).

West Berks: Rockley Copse pit [451021] in 1965 and in an abandoned garden at Hyde End Mill [5663] in 1987. On waste ground in Botley [4906] in October 2002.

Artemisia biennis Willd. *Slender Mugwort* ● h 7 †

West Berks: Abingdon [49] (OXF) and Moulsoford [58] (OXF) both in 1925 by different collectors, suggesting that a batch of contaminated seed was imported in 1923 or 1924.

¶ **Artemisia** *A. abrotanum*, *A. absinthium* ‘Lambrook Mist’, *A. absinthium* ‘Lambrook Silver’, *A. alba* ‘Canescens’, *A. arborescens*, *A. caucasica*, *A. dracunculus*, *A. lactiflora*, *A. ludoviciana*, *A. ludoviciana* ‘Silver Queen’, *A. ludoviciana* ‘Valerie Finnis’, *A. pontica*, *A. ‘Powis Castle’*, *A. schmidtiana* ‘Nana’, *A. stelleriana* ‘Boughton Silver’.

Santolina chamaecyparissus L. *Lavender-cotton* ● n 7

Commonly grown with other grey-foliaged plants in Mediterranean beds; occasionally found as an outcast on waste ground and rarely as self-sown plants in paving cracks and on walls.

Silwood Park: much planted on the Science Park, and self-sown on brick paths in 1995. Also at Ashurst Church, and Drive Lawns.

East Berks: waste ground in Earley [7571] and by the R. Thames in Maidenhead [9081] in July 2002. Outcast in Cookham Dean [8785] in 2003. 3% (1km²).

West Berks: suburban roadside in Cumnor [40] in 1952 (gone by 1980). On bridleway banks between Blewbury and Upper Chance Farm [5284] in 1978. On waste ground in Faringdon [2895] in July 2002.

¶ **Santolina** *S. chamaecyparissus*, *S. chamaecyparissus* ‘Lambrook Silver’, *S. chamaecyparissus* ‘Lemon Queen’, *S. pinnata* subsp. *neapolitana*, *S. pinnata* subsp. *neapolitana* ‘Edward Bowles’, *S. rosmarinifolia* subsp. *rosmarinifolia*, *S. rosmarinifolia* subsp. *rosmarinifolia* ‘Primrose Gem’

Achillea ptarmica L. *Sneezewort*

h 7

River-sides, damp meadows, bushy places, and marshes by the Thames and Blackwater. Locally frequent but absent from the chalk and northern clays. The double-flowered cultivars ‘The Pearl’ and ‘Boule de Neige’ are found occasionally as garden escapes.

NVC: M 22,24,27; MG 9

Silwood Park: Water Meadow, occasional in wet grassland in 1980, but not seen recently. Drive Field, locally frequent in the wetter parts, following topsoil clearance, and the construction of the pollution pad in 1987. Still there, especially along fence lines, in 2 separate populations in August 2002. It is possible that the plants were introduced with turves used in air pollution experiments.

Ascot: damp places in rough ground on Ascot Heath, especially in the northern triangle, Frostfarm Plantation, Brook Farm, Berkshire Polo Club, Cranbourne, Sunninghill Park, by the Berkshire part of Virginia Water. ‘The Pearl’ is a persistent garden escape in Sunningdale, and opposite the derelict shops on New Road on 13 September 2007.

East Berks: Marlow, Wellington, Loddon Bridge, Sindlesham, Bagshot, Finchampstead, Swallowfield, Wokingham, Ascot, Binfield, Windsor Great Park, Frogmore, Bray, Cookham, Stubbings Heath, Wargrave, Earley. Winkfield [911721]. Occasional to the south and east of a line from Maidenhead to Arborfield, and in the Thames valley from Twyford to Hurley, but rare or absent elsewhere. Good populations by Lavell’s Lake [782731] in 2002. Garden escapes of ‘Boule de Neige’ at Bulmershe [7573] and Whistley Green [7873] in 2002 and ‘The Pearl’ at Whitley [7270], Cookham Dean [8785] and Frogmore [9776] in June 2003. At The Grove Shinfield Park [730690] on 29 June 2010 (Jan Haseler). 5% (1km²). Atlas 2000: all except [78], [88]

West Berks: occasional in the Thames and Kennet valleys, but absent from most of the interior (north of 75 and south of 00). Bourton [28], Fernham, Faringdon, Lechlade, Watchfield and Buscot [29], Kintbury [36], Woodhay Common [36], Lambourn, Membury airfield and Chilton Foliat [37], Wantage [38], Longworth [39], Sandleford, Enborne Row and Newbury [46], Lockinge [48], Otney Pasture, Steventon, Marcham and Abingdon [49], Bablockhythe, Cumnor, Appleton and Wytham [40], wet meadows at Aldermaston, Cold Ash Common, Beenham and Thatcham [56], Fence Wood and Hampstead Norreys [57], Moulsoford and Blewbury [58], Radley gravel pits, Didcot, Wittenham and Appleford [59], South Hinksey and Kennington [50], Pingewood pits [66], Pangbourne, Purley, Southcote and Theale [67], Wallingford [68]. Still locally frequent on grassy rides through Fence Wood [5171] in 2002. Double flowered escapes at Drayton [4692] in 1998. Atlas 2000: all except [47], [69]

Achillea millefolium L. *Yarrow*

chh 6

Lawns, grasslands, pastures, meadows, roadsides, chalk downs and waste ground in towns; very common and generally distributed. Highly drought tolerant; very conspicuous in the droughts of 1995 and 1996, when it was one of the only grassland plants to stay green throughout those baking

summers. Leaves have red axillary galls of the midge *Rhopalomyia millefolii*; host plant of *Galeruca tanacetii*, a stout, all-black beetle. Host to the black aphid *Uroleucon achillae*.
 NVC: CG 2-5; MG 1,4-7,9; OV 3,5,10,19,22-27,33,42; S 18; U 1,20; W 22-24

Silwood Park: grassy places throughout, but seldom in shade. The 12th most frequent herb, and the 17th most frequent species in small quadrats. A significant increaser when competition from grasses was experimentally reduced by the application of grass-selective herbicides to the Nash's Field experiment in 1992. Particularly abundant in the Pound Hill Disturbance Timing Experiment on 3 August 2005 when the May-cultivated plots had only just greened-up after late July rains had broken the long spring and early summer drought. Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
13	20	22	38	65

Ascot: abundant and locally dominant on soil piles and bare ground during construction of Ascot Racecourse in August 2005; much the commonest perennial in these places.

East Berks: the form with deep red flowers occurs at Sonning. 90% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Achillea decolorans Schrader *Scented Yarrow* ● h 7 †

West Berks: a garden escape found by the Thames at Streatley [58] by J. Woods in 1813 (no specimen).

Achillea nobilis L. ● h 7 †

East Berks: Cookham pit (1958) (det. A. Melderis). Old nursery ground of Sutton's seeds at Reading (1979).

West Berks: on waste ground at Kennington (RNG) [519033] in 1977.

Chamaemelum nobile (L.) All. *Chamomile* h 6 ↓
Anthemis nobilis L.

In the short turf of heathy commons and in lawns; local and rare in south-east Berkshire. Scarce in Britain in herb rich closely grazed moderately acidic, unfertilized lowland grassland and sports grounds on dry sandy or gleyed soils that are baked hard in summer; often found with *Plantago coronopus*. The main cause of its decline is thought to be cessation of grazing on heaths. An aromatic perennial with finely divided leaves told from the other similar genera like *Matricaria* with white rays and yellow disc florets by the presence of receptacular scales, and from *Anthemis* by the small pouch at the base of the corolla which hides the top of the ovary in one plane.

Ascot: no recent records.

East Berks: Wellington College (RNG) in 1915, Virginia Water, Knowl Hill, Windsor, Earley, Hurst, Riseley Common, Bracknell, Stubbing's Heath, plentiful and luxuriant near the brickyards at Twyford. Much reduced by Bowen's time. Fifield (1954), Coleman's Moor (RNG) in 1956. Formerly

scattered throughout, but extinct at most of its stations. Leighton Park (1982) and South Hill Park [8766] in 1985. It has the distribution of an alien these days. 1% (1km²). Atlas 2000: [77], [86]

West Berks: very local and rare. Grazeley, Mortimer (RNG) and Padworth Common [66]. Atlas 2000: [46]

Anthemis punctata subsp. **cupaniana** (Tod. ex Nyman) R. Fern. • hp 5
Anthemis cupaniana Tod. ex Nyman

A common rockery and wall perennial with yellow-eyed, white daisy flowers. Occasionally escaping on stony waste ground and ruined walls.

Ascot: on pavements in Sunninghill in 1997.

East Berks: Three Mile Cross, Binfield Park, Warren Row, several sites in Maidenhead, Bray Court. 1% (1km²). Atlas 2000: [76], [87], [88], [96], [97], [98]

West Berks: on bare waste ground and pavements in Abingdon [4997] in July 2002. Atlas 2000: [49], [68]

Anthemis arvensis L. *Corn Chamomile* ○ th 6 ↓

Dry arable fields, locally frequent on the chalk. The leaves are sweet scented when crushed. The receptacular scales have a single slender tip and the achenes are strongly ribbed. It might be confused with *Matricaria recutita* or *Tripleurospermum inodorum* but these have no receptacular scales, and much finer, greener leaf segments.

NVC: OV 3

Silwood Park: in the student's allotments in Silwood Bottom in June 2003, apparently sown with other corn field weeds like *Centaurea cyanus* and *Agrostemma githago*.

Ascot: near Ascot Racecourse (Druce), but no recent records and no likely habitat.

East Berks: Sonning, Maidenhead, Bray, Windsor, Hurley, Bisham, Wargrave, Twyford, Finchampstead. Occasional in the arable areas, but absent from the Surrey border on the east and the Hampshire border on the south. Recently at Brooklands, Yates Farm, Waltham St Lawrence, and grown in Lily Hill Park as part of an "old arable weeds" demonstration in 1998. 1% (1km²). Atlas 2000: [77], [86], [87], [88]

West Berks: frequent in the Thames valley, occasional on the chalk and rare in the south. By the railway bridge between Uffington and Watchfield [28], Camden Farm, Radcot, fields by the Thames [29], Devil's Punchbowl [38], Buckland and Hyde Farm [39], Frilford Heath [447981]. There was a roadside display of rare arable weeds, presumably planted, at Upper Lambourn [3180] in July 2003. Growing with *Papaver somniferum* cultivars on dumped soil in Chilton railway cutting [4985] on 12 June 2004. Two flowering plants at Carswell Golf Club [333963] on 30 June 2006 (Susan Erskine). Atlas 2000: all except [37], [47], [58], [59], [50], [68], [69]

Anthemis cotula L. *Stinking Chamomile* ○ th 7 ↓

Cultivated fields and waste places, "generally distributed and too abundant in many of our cornfields. The plant is detested by workers since it often produces annoying blisters" (Druce). By Bowen's time

the plant was much less common “locally frequent in arable fields on the chalk; rare or absent in east Berkshire”. Now it is uncommon everywhere. The receptacular scales are restricted to the central (upper) part of the receptacle and are linear subulate (not lanceolate). The achenes are tuberculate on the ribs and the leaves are foul smelling when crushed.

NVC: OV 1,8,10,15,19,33

East Berks: scattered throughout, but absent to the east of 90. Recently only from Hurley and the M4/A33 Interchange [709702] in August 1999. <1% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: occasional throughout the Kennet valley and on the chalk (south of 85), but rare to the north of 85 save for populations in the Northern Loop and at Kingston Down and Knighton Barn [28], Badbury and Eaton Hastings [29]. Atlas 2000: all except [37], [49], [50], [66], [68], [69]

Anthemis tinctoria L. *Yellow Chamomile*

• h 7 ↓

East Berks: casual alien, very rare in waste places; by the railway near Maidenhead (1897). Not seen by Bowen. These days an occasional garden escape, as at Spencer’s Wood, Three Mile Cross, Woodley, Twyford. 1% (1km²). Atlas 2000: [76], [77]

West Berks: on the railway at Didcot [59] in 1893, at Boars Hill [40] in 1903 (OXF). on waste ground at Kennington (RNG) [519033] in 1975-77. Atlas 2000: [50]

X Tripleurothemis maleolens (P. Fourn.) Stace = **A. cotula** x **T. inodorum**

X *Anthemimatricaria maleolens* P. Fourn.

X *Anthemimatricaria celakovskiyi* Geisenh. ex Domin, nom. inval.

A local speciality with intermediate rib development on the achenes and irregular presence of *Anthemis*-like receptacular scales. One of only 2 British records.

West Berks: Collected by Q.O.N. Kay at Moulsoford [5983] in 1966 (Stace, 1975).

Chrysanthemum coronarium L. *Crown Daisy*

• th 6

West Berks: very local and rare. In allotments on the Berkshire bank of the Thames at Osney in 1999. Atlas 2000: [50]

Chrysanthemum segetum L. *Corn Marigold*

○ th 6 ↓

Arable fields and disturbed ground on moderately acid soils. Locally frequent but absent from the chalk; decreasing through herbicide use. Used by some farmers for land-art (Plate 16).

NVC: OV 1,4,9

Silwood Park: long-lived in the seed bank, but short-lived above ground, soon succumbing to competition from grasses in the second or third year after soil disturbance. Not spreading far or quickly, even when fallow land is managed specifically for its benefit, as in Ashurst Four Acre Field. Garrison Ridge, abundant on soil dumped during the construction of the Wind Tunnel in June 1985. Possibly from buried seed, but I suspect that Ted Green may have scattered seed on the disturbed ground. By the second year there were only 2 flowers, and none in 1987-92. Not seen following the soil disturbance associated with the landscaping for the new arboretum in 1994. Ashurst Four Acre Field, frequent in the winter wheat in 16 September 1980. Abundant in a patch measuring 12m x 5m adjacent to the New Chalk Plots in 1997. Much less common in 1998, but frequent again in 2000

when plants appeared at low density in other parts of the field as well; only 2 individuals on 14 July 2002. The patch had expanded to 25m x 9m on 28 June 2003, when there were more than 200 individuals in flower; on July 1 2004 there were c. 2000 flowering stems in this patch, following cultivation in October 2003 and a dry growing season in May-June 2004. There were only 3 plants on 25 June 2005 following autumn cultivation and a very dry spring. This spot was very poor again in July 2006, but a new population had sprung up following spring cultivation in the middle third of the northern half of the field. There were only about 12 plants in the main, autumn-cultivated population in the south-west corner of Four Acre Field on 29 June 2007 following an exceptionally dry April and May. However, the plants were occasional to locally frequent on the strip of ground around the spring-cultivated, north-east corner of Four Acre Field on land that had not been herbicided. There were no plants at all in any part of Four Acre Field in June or July 2008 or in 2009 after the Rain-Out Shelter experiment was erected in early 2008 and cultivation of the western end of the field was curtailed. New Chalk Plots, plots established in summer 1994, in flower on 5 September 1994. Not seen since then. Oak Mead in the seed bank below the grassland that was ploughed in spring 1996, flowering on 5 September 1996. Very curious; growing through a bush of *Buddleja alternifolia*, and giving the appearance of being the flowers of that shrub (vide M.P. Hassell) on 5 November 1989 in the small south-facing flower bed behind the transformer in the new car park in front of Phase One, presumably brought in with imported topsoil. Garden Wood Laboratories, bare ground on imported topsoil in June 1990. Sown as part of the Nash's Field experiment in Blocks G, H and J in October 1991; a few flowering plants in 1992 and subsequently, but not seen since 1996. On the student's allotments in Silwood Bottom, apparently sown with other cornfield weeds in June 2003. Three plants on the gravel bench in Greenhouse 9A on 26 July 2009. In the June-cultivated part of Silwood Bottom there were 18 plants in flower on 22 September 2009 outside the enclosure in the ground around the *Miscanthus* patch. No plants were seen in Silwood Bottom in August 2010. Locally abundant in the central part of Four Acre Field at Ashurst (where the Student Allotments had been) in August 2010 following October 2009 cultivation; rarer in the classic location at the western end of the field. It was a very poor year in Ashurst Four Acre Field in July 2011.

Ascot: rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: "A most luxuriant weed in the fields on the Henley and Maidenhead Road, near Hurley" (Druce). Windsor, Wargrave, locally abundant at Park Place, Bisham, Clewer, Bray, Finchampstead, Jouldern's Ford, Farley Hill, Barkham, Binfield, Winkfield, Wellington College. Druce considered the flowers to be "amongst the handsomest of our British Composites". Remenham, Arborfield, Hurley. Recently at Moor Green, The Throat, Woodcraze Cottages, Lily Hill Park (in the "old arable weeds" demonstration plot), Bell Farm, Warfield Church, Braywoodside in roadworks associated with the new mini-roundabout. 2% (1km²). Atlas 2000: all except [97]

West Berks: frequent in the Northern Loop (e.g. Little Coxwell, Kingston Bagpuize, Barrow Farm, Tubney Wood), occasional in the Kennet valley, but absent or rare in most of the interior (north of 75 and south of 95). Abundant in arable at Silchester [6464] and on fallow ground at Tadley [601625] in 2002. Dominant in broad, autumn-cultivated stripes in a fallow field north-east of Stockcross [440690] on 6 July 2004, along with spring-cultivated stripes (dominated by *Chenopodium album*) and uncultivated ground (stubble from 2003). Atlas 2000: all except [28], [36], [37], [48], [68], [69]

¶ **Chrysanthemum** C. 'Anastasia', C. 'Bronze Elegance', C. 'Clara Curtis', C. 'Duchess of Edinburgh', C. 'Emperor of China', C. 'Innocence', C. 'Madeleine', C. 'Mary Stoker', C. 'Mei-kyo', C. 'Mrs Jessie Cooper', C. 'Nantyberry Sunshine', C. 'Wedding Day', C. *weyrichii*, C. *yezoense*,

Ismelia carinata (Schousboe) Schultz-Bip. *Tricolor Chrysanthemum*

• th 6 †

West Berks: a garden outcast on Abingdon tip [59] in 1954.

Leucanthemella serotina (L.) Tzvelev *Autumn Oxeye* ● h 6 †
Chrysanthemum serotinum L.
Chrysanthemum uliginosum (Waldst. & Kit. ex Willd.) Pers.

West Berks: damp waste ground near houses: not in Druce, rare but formerly well established.
Abingdon [49] in 1918, Frilford [442975] from 1954-59 (RNG), Appleford Pool [525935] in 1965.

¶ **Leucanthemella** *L. serotina*

Leucanthemum vulgare Lam. *Oxeye Daisy* h 6
Chrysanthemum leucanthemum L.

Motorway verges, grass fields, railway banks, grassy downs, churchyards, old brick walls and disturbed ground; abundant and generally distributed. "One of the most prominent features in our grass fields, and is especially frequent in the less marshy meadows of the Thames" (Druce). Still present in big, clearly defined patches on motorway embankments, but less common than formerly. One of the great disappointments of wildflower mixtures. Superb in the first year, then rapidly declining, and often extinct by year 5. Not competitive with grasses, especially under intense mowing or grazing. Not found on any of the long-term plots in the Park Grass Experiment at Rothamsted, suggesting that it really is a transient, early successional species in grassland rather than an equilibrium component of it. Host to *Mantura chrysanthemii*, a coppery coloured beetle.
NVC: CG 2-5; MG 1,4,9; OV 10,23,25,41

Silwood Park: very local and rare as a native, mostly planted and then typically impermanent. In the grass outside The Barn at Silwood Farm (1979-2007). Possibly native in mesic grassland by Farm Road and in Nash's Field, but always uncommon in both these sites. On the corner of the track to the BP Greenhouse beneath the pines; seldom more than 10 stems (1990-2004) and just one plant on 4 June 2007. Scattered and uncommon in the long grass of the southern (older) part of the graveyard at Ashurst. There was a single clump on the bank of the London Road, opposite the South Lodge entrance gate on 5 May 1997. Occasional in Silwood Bottom, at the edge of the cultivated field below William Penney on 23 May 1994. Rare in the cultivation timing experiment at Pound Hill, where 1 clump was found in the uncultivated strip inside the rabbit fence at the Cheapside end of the plot on 13 June 1997. Sown into the Chalk Plots in May 1983. Persisting, but nowhere near as abundant as in the first summer after planting (June 1984). Particularly good in June 1996 after the great drought of 1995, but plants confined mainly to the paths rather than to the chalk plots themselves. Only a handful of plants on Plots 5-8 in May 2002 and fewer than 10 per plot in May 2004. Very abundant in June 2006 after a very dry winter on Plots 5 – 8, but down to 2 or 3 plants per plot by 7 July 2008. Sown into the Oak Mead experiment in 1996, and dominant on most of the fenced, cultivated plots from then to 2002, persisting much better here than in other Silwood Sites. Much declined by May 2004. Sown in the conservation mixture on North Gravel in 1983, giving a magnificent show in June 1984. By 1985 the cover had declined dramatically, and by 1986 the plant was scarce, confined to soil piles and disturbed ground at the trackside. The site was destroyed during the construction of Flowers Halls in 1987, but there is still a small patch in the lawn of Flowers Hall in June 2004. Sown in the Tilman Plots in Nash's Field in Blocks G, H and J in October 1991, but it never showed in the early years. There was one small patch in Block G in June 2003. The fragment of North Gravel between the Header House and Southwood Halls has a scattering of plants in June 2001. Sown into the New Chalk Plots in Ashurst Four Acre Field, where they were abundant initially but had declined and were scarce in 2002-04. There was something of a come-back so that by 6 June 2007 they were occasional throughout the New Chalk Plots. A weed of plant pots on the pot standing at The Greenhouses on 26 May 2004. In plants pots between the Header House greenhouses in 2005 (still there in June 2007

with the pots never having been tidied away). Locally frequent in the New Chalk Plots at Ashurst in August 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	1	12

Ascot: locally common on the verge of the dual carriageway from Bagshot to Bracknell at The Orangery and the A322/A332 roundabout, Thornhill, Martins Heron, The Tip, Swinley golf course, Kingsride, Coronation road, frequent in South Ascot churchyard, Ascot Station, in the northern triangle of Ascot Heath, Sunninghill, Charters Road, Sunningdale Park, Sunningdale churchyard, Johnson's Pond, Brook Farm, Winkfield, Berkshire Polo Club, Brookside, Cranbourne, Kingsmead. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006, and occasional throughout the sown grasslands created during landscaping work for the new Race Course in May 2007, as at [925984].

East Berks: plentiful on walls at Sonning and Reading Abbey. In the ancient meadows at Review Ground in Windsor Great Park it is very local, confined to small patches where *Ranunculus acris* is absent. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 55% (1km²). Atlas 2000: all squares

West Berks: on old brick walls at Aldermaston Court [5964] in June 2002. Locally common all the way along the M4 motorway and on the A34 Newbury to Oxford road. Completely dominant, forming a solid carpet of flowers on the steep, west-facing bank of the slip-road to Newbury off the new Newbury bypass [472708], but absent from all of the adjacent roadside banks in June 2002. This patch was much thinner in June 2003 and had been replaced by the red flowers of *Onobrychis viciifolia* by May 2004. Still dominant on the new roundabout built to service the recently completed Vodafone Headquarters [4769] in May 2004. Abundant on a long stretch of the eastern side of the railway at Radley [5298] in June 2004. Atlas 2000: all squares

Leucanthemum x superbum (Bergmans ex J.W. Ingram) D.H. Kent *Shasta Daisy* ● h 6
= **L. lacustre x L. maximum**

A popular cottage garden plant, long-persistent garden outcast, occasional on roadsides, waste ground and hedge-banks in most of the villages and towns. Never far from houses, and not naturalised.

Silwood Park: Sunninghill Church (1988) at Ashurst. Cheapside Village on waste ground and by the Playground. A garden relic at Virginia Water Lodge in 2003. The plants in the perennial bed at The Greenhouses are still common in July 2007 after 20 years of neglect.

Ascot: on the railway near Whitmoor Bog [8968] in 1977. Swinley Brick Pits in 1999. In the old garden at Frognall [940681] in September 2005.

East Berks: not in Druce. Smallmead, Reading, Bisham Wood. Woodley tip (1971). Recently at Swallowfield, Lamb's Lane, Mill House, Shinfield, Newlands Farm, Langley Court, Coppid Hill, Barkham Ride, Doles Hill, Emmbrook, West Whitley, South Reading, Earley, South Charvil, North Twyford, Ruscombe, Wargrave, Marsh Mills, Culham House, Kiln Ride, Wokingham, Simons Wood, Chapel Green, Ravenswood, Holme Green, Westcott, Brookers Row, Popeswood, College Town, Great Hollands, North Hanworth, Wildridings, Cain Road and Amen Corner Bracknell, Savernake Park, Ashridgewood, Wiltshire Farm, Old Malt House, West End, Woodlands Park, Lillibrooke Manor, Newell Green, Stud Green, Warfield Park, Winkfield Row, Warren Row, Shepherds Lane,

Lee Lane, Hurley, Maidenhead, Furze Platt, Halfway House, Chawridge Bank, Bray, Windsor. 14% (1km²). Atlas 2000: all squares

West Berks: Hungerford and Inkpen [36], on the bank of the R. Kennet at Avington [372676], Grove tip [4090], Farmoor [4406], Steventon [4791], Wootton [4701], Wasing and Aldermaston [5862], Sutton Courtenay [5093], Theale tip [6471], Wallingford [6089]. Atlas 2000: [36], [49], [40], [59], [67], [68]

¶ **Leucanthemum** *L. x superbum* hybrids: ‘Aglaiia’, ‘Esther Read’, ‘Horace Read’, ‘Phyllis Smith’, ‘Snowcap’, ‘Sonnenschein’, ‘Wirral Supreme’

Dendranthema x grandiflorum Group Kitam. *Florist’s Chrysanthemums* ● h 8

Common on tips and rubbish dumps in churchyards as discarded cut plants, but never seen as naturalised garden escapes.

East Berks: Smallmead tip (1969) and Woodley tip (1975) both in Reading.

West Berks: on Didcot tip [59] in 1965.

Matricaria recutita *L. Scented Mayweed* ○ th 6

Matricaria chamomilla L., pro parte

Chamomilla recutita (L.) Rauschert

Matricaria chamomilla L. var. *recutita* (L.) Grierson

Cultivated fields, waste ground, gardens, etc. Generally distributed and locally common. This is our only common scented mayweed; other genera like *Anthemis* and *Cotula* are all much rarer and more local in their distributions. Told from them by the absence of receptacular scales. Told from *Tripleurospermum inodorum* by the distinctive smell of the crushed flower heads and by the hollow (not solid) receptacle. It is a smaller, more yellowish-green, earlier flowering plant.

NVC: OV 8,10,30,33

Silwood Park: all sorts of cultivated and disturbed ground. Locally dominant in arable fallow at Pound Hill Field, Ashurst Four Acre Field and Silwood Bottom. Tractor Sheds, South Lodge, Nuclear Reactor, Cannon Crossroads. Pound Hill Field, commoner in the October-cultivated than the March- or May-cultivated plots; mass flowering in June 1994 and 1996. Lodge Field, a weed of brussels sprouts in September 1980; the site was destroyed during construction of the Tractor Sheds in 1986, but the plant persists (above). Typically the dominant weed in autumn following early summer cultivation. Common on imported topsoil at Ashurst lysimeters in May 2004, but rare by July 2007. On 2 June 2011 following the driest March, April and May in memory (see *Raphanus raphanistrum*) there was a bumper crop of flowers on Ashurst Four Acre Field, particularly on the ground adjoining the New Chalk Plots, that had been cultivated in October 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	2	5	10	18

Ascot: scattered and uncommon on the earthworks and landscaping associated with the new Race Course (2005-07).

East Berks: occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 36% (1km²). Atlas 2000: all squares

West Berks: frequent on the chalk ridge, occasional in the Thames valley and around Reading, but rare in the western Kennet valley. Atlas 2000: all except [69]

Matricaria discoidea DC. *Pineappleweed*

• th 6

Matricaria matricarioides (Less.) Porter, pro parte, nom. illegit.
Chamomilla suaveolens (Pursh) Rydb.

Disturbed ground, paths, arable fields and gardens (as *M. matricarioides*). Locally frequent and resistant to trampling. First record between Twyford and Hurst (1900). The plant was first recorded in Britain in 1871. It is probably a native of north-east Asia, but it may well have been introduced from the western USA where it is extensively naturalised. There were several records in England, Scotland and Ireland prior to 1900 but it was during the next 25 years that its spectacular invasion occurred. The seeds are dispersed in mud, and it was the atrocious muddy state of Britain's roads at the dawn of the era of mass motoring that is thought to have been responsible. Before the widespread introduction of tarmac in the 1920s the roads were mud baths in winter and dustbowls in summer; ideal conditions for the growth and seed dissemination of Pineappleweed. The extraordinarily flexibility of its stems means that the plant highly tolerant of crushing and trampling.
 NVC: MG 7; OV 1,3,4,7-10,12-14,16,18,20-23,28,33; S 23

Silwood Park: very local and uncommon, much more frequent on the periphery of the estate than in the Park itself. Occasional on the compacted gravel of the car park at Ashurst Church on 1 July 2000 and rare here on 27 July 2007. Rare or absent from most of the arable fallows, although there is a patch in the seed bank of Silwood Bottom below William Penney. Several places in Cheapside, South Lodge, Silwood Road, Cannon Crossroads. Locally frequent on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. Very rare on imported topsoil at Ashurst lysimeters in May 2004. Occasional on compacted hardcore in the Church car park at Ashurst on 27 July 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	8

Ascot: frequent at the eastern end of the car park at Ascot Station, but generally uncommon in the district. Fernbank Road, Heatherwood, South Ascot, Ascot Heath, Sunninghill, Sunningdale, South Coworth. Locally common on soil piles and bare ground during construction of Ascot Racecourse in August 2005.

East Berks: not in Druce. Widespread but curiously patchy in its distribution and absent from extensive areas. Common in horse-trampled gateways at Swallowfield. On the dump at Devil's Pond, and in the car parks at Sandhurst. Local and uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008 50% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Matricaria decipiens (Fischer and C. Meyer) K. Koch

• th 7 †

East Berks: a grain alien found of Reading tip in 1964 (RNG) (det. J.E. Lousley).

Tripleurospermum inodorum (L.) Sch.Bip. *Scentless Mayweed*

○ th 7

Matricaria inodora L.

Matricaria perforata Mérat

Matricaria maritima L. subsp. *inodora* (L.) Soó

Tripleurospermum maritimum (L.) Koch subsp. *inodorum* (L.) N. Hylander ex Vaar.

Arable fields, waysides, and waste places. By far the commonest non-scented mayweed (cf. *Matricaria recutita*) both in arable fields and on waste ground. The receptacle is solid (not hollow) and there are no receptacular scales. It is a larger, darker green and later-flowering plant than *M. recutita*.

NVC: OV 1,3-5,7-10,13-16,19,33

Silwood Park: Satellite Pad, Nursery Field, Pound Hill, an important component of the fallow vegetation (especially after early spring cultivation) in Ashurst Four Acre Field and Silwood Bottom, Silwood Farm, Nuclear Reactor, Science Park, Cannon Crossroads. Germinating from the seed bank in 1990 in the cultivated plots in the PROSAMO experiments in the wet grassland of Rush Meadow and in the rabbit grazing enclosure studies in Nash's Field. The dominant plant species following autumn cultivation of the Pound Hill plots (*Chenopodium album* dominates after spring cultivation of the same seedbank). On imported topsoil at Ashurst Lysimeters on 10 July 2004. In Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Dominant with *Apera spica-venti* in the central part of eastern Silwood Bottom in July 2006. Uncommon at Pound Hill and rare in cultivated plots in Nash's Field on 27 July 2007 after the very dry April of 2007, followed by the wettest ever May, June and July. The only Mayweed in flower on the March-cultivated plots at the Pound Hill Cultivation Timing Experiment on 15 July 2008. Common in Silwood Bottom on 16 July 2008 when there was no *Matricaria recutita*. Dominant on Block A of the October-cultivated plots at Pound Hill on 7 July 2009 but less abundant on the other replicates. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	3	1	6	13

East Berks: common on railway ground at Kings Meadows Reading in September 2007. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 41% (1km²). Atlas 2000: all squares

West Berks: on the ruins of the Prince of Wales pub at Challow Station [3590]. Atlas 2000: all squares

Cotula coronopifolia L. *Buttonweed*

• h 7 †

insert from Reading Naturalist

[**Cotula dioica** (Hook.f.) Hook.f. *Hairless Leptinella*]
Leptinella dioica J.D. Hook.

• h 7

An increasingly common lawn weed, often not flowering and hence likely to be overlooked. Told from *C. squalida* by leaf shape: its lobes are oblong triangular with abruptly apiculate teeth, whereas *C. squalida* has its leaves divided almost to the midrib with acute or acuminate (but not apiculate) teeth to the lobes. No Berkshire records yet, but well worth looking for.

Cotula squalida (Hook.f.) Hook.f. *Leptinella*
Leptinella squalida J.D. Hook.

• h 7 †

East Berks: not in Druce. Lawn weed at Wellington College from 1961-63 (RNG). In a lawn at Leighton Park [7371] in 1968.

Senecio cineraria DC. *Silver Ragwort*

• ch 6

Senecio bicolor (Willd.) Tod.

Senecio bicolor (Willd.) Tod. subsp. *cineraria* (DC.) Chater

In virtually every window box, half-barrel and hanging basket in the county. Also used as a bedding and edging plant. It is by far the commonest silver leaved garden escape, and can be found in villages and towns throughout the region on walls, pavement cracks, tracksides and open waste ground. Never seen far from houses, and in no sense naturalised.

Silwood Park: Ashurst, Churchyard, Old Orchard, several places in Cheapside Village.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	6

Ascot: uncommon garden escape on Fernbank Road and at Ascot Station in 1999. Rare on pavements in Victoria Road, South Ascot [927678] in June 2004.

East Berks: first recorded on a river wall in Reading [716735] in 1982. Now occasional in villages, churchyards and towns throughout. At the rear of 3M by the Cain Road Roundabout [8469] in September 2004. 15% (1km²). Atlas 2000: all squares

West Berks: outcasts at Faringdon [29], Hungerford [36], Newbury [46], Abingdon [49] in 2002. Atlas 2000: all except [37], [56], [57], [58], [59], [66], [69]

Senecio x albescens Burb. & Colgan = **S. cineraria x S. jacobaea**

East Berks: Carol Hora's front garden in Eastern Avenue, Reading in 1996.

West Berks: on a roadside bank in Hungerford Newtown [3571] in 1980 (det. H.J.M. Bowen).

Senecio inaequidens DC. *Narrow-leaved Ragwort*

• hs 7

Senecio lautus auct., non Sol. ex Willd.

There has been rapid range expansion of this South African plant in Germany and France since 1980, and it has become a serious pest of pastures in South America. It is frequent in East London and may well spread in Britain in due course, but it has not yet done so (to 2006). It is known by its very narrow, dark green, long, willow-like leaves which are sparsely toothed rather than lobed, and by its broad, rather delicate flowerheads with long golden ray florets. In leaf it looks like a green version of *Conyza bonariensis*, and in flower it could be mistaken for a narrow-leaved *Senecio squalidus*.

Silwood Park: about 400 individuals were planted out by Christoph Scherber in June 2002 in new experiments in Nursery Field and at the far end of Pound Hill Field, beyond the Cultivation Timing Experiment. There was plus-and-minus rabbit fencing, and plus-and-minus soil cultivation, crossed with insecticide and molluscicide application. He was interested in working out which of the native herbivores (rabbits, cinnabar moth and flea beetles) might prevent the establishment and spread of this potentially invasive species. By 1 October 2002 the survivors of these planted individuals were flowering freely on the fenced, cultivated plots, but had gone from grazed uncultivated plots. Evidently, freedom from competition was more important than protection from rabbit grazing,

because there were a few flowering individuals on the cultivated grazed plots; many of these were flowering on regrowth shoots, after grazing by rabbits. It appears that Cinnabar Moth can not develop to pupation if force-fed on this plant, and the caterpillars reject the plant in choice tests when offered *Senecio jacobaea* (in the Cinnabar Moth defoliation year of 2004 the plants in Pound Hill were unscathed). Adult flea beetles, *Longitarsus jacobaeae*, do eat the leaves, and it will be interesting to discover whether flea beetle larvae can undergo complete development on *S. inaequidens*; if so, feeding by this specialist insect herbivore might prove an important barrier to invasion of this alien plant. An interesting difference from Ragwort is that the stem does not die down to the base after flowering, but remains leafy in its lower half throughout the winter becoming progressively woody as the years go by. In cases where the old stem is cut back by frost, then new stems shoot up from the base in April. Many plants survived the cold and (relatively) snowy winter of 2002-03 on both fenced and unfenced plots (but they were much smaller on the grazed plots), refoliating from the highest parts of last year's stem to survive the cold. Most of the originally established plants were still flowering inside the rabbit fences at Pound Hill and Nursery Field in December 2003; there had been little if any mortality during the second year, but no recruitment from seed either. Several of the original plants were still alive in May 2004 inside the rabbit fences at Pound Hill and six on the eastern-most grazed plot (still flowering in November 2004), but only one survived in the corner of the rabbit enclosure in Nursery Field (this plant had 3 woody, much-branched stems). There were two rather small flowering plants in the middle of the Nursery Field Enclosure on 15 July 2008, and none in the matched grazed plot. Maria Alvarez set up new experiments including cunning fences that excluded deer but allowed access to rabbits (they were made of broad-gauge pig wire), excluded rabbits but not deer (1m high 2cm chicken mesh; the roe deer leap over these with distain), both rabbits and deer (2m high chicken wire) as well as grazed plots; she introduced *S. inaequidens* to these new plots with and without cultivation in Heronsbrook Meadow, Nursery Field and Ashurst Orchard in summer 2003. She put out more seedlings in spring 2006 and these had produced masses of large flowering plants inside the rabbit fences by 16 September 2006. By August 2006 there was only one plant left in the original 2002 Pound Hill enclosure and two plants on the adjacent rabbit-grazed plot, while there were two plants in the Nursery Field enclosure and none on the grazed plot. In pots on the Pot Standing and in the Cold Frames at the Greenhouses, flowering from May - November 2004. Flowering abundantly in a dustbin where potted plants had been thrown out at The Greenhouses on 29 August 2005. The original potted population in the Cold Frames was still there in September 2006, flowering freely, but there had been no recruitment from these plants and no escapes at this site. The plant was found on 30 out of 250 raised gravel beds at Ashurst on 6 September 2008. Several clumps at the edge of the concrete apron between the Jiff Greenhouse and CABI Quarantine on 29 July 2010, with *Mercurialis annua* and *Festuca gigantea*.

The first record of a self-sown plant, away from the introduction sites, was found on 4 October 2005 when a single flowering individual was found at The Farm end of the landward side of the path along the top of The Dam at Silwood Lake [941692]. This plant was never seen again. Escapes from Greenhouse 8A where Maria Alvarez was still growing potted plants were flourishing with *Senecio viscosus* at the edge of concrete paths on 25 August 2006: there were two plants in the alleyway between Greenhouses 8A and 9A and one in the doorway of 9A opposite the Header House. These sites were cleared in December 2007. The plant had recovered and was occasional on concrete around the Header House Greenhouses on 15 May 2008; there were 9 plants on the side of Greenhouse 9A.

There were 24 big, self-sown plants in full flower on the open gravel in the Seed Bank Enclosure in Nursery Field on 28 June 2007 that had obviously originated from Christoph's adjacent fenced plot. There were no plants in the intact grassland within the enclosure. On 24 June 2008, this population consisted of 9 plants on and between the raised sleeper beds, and 25 plants on the bare gravel towards the gate. The first immigrant to the Pound Hill Cultivation Timing Experiment was recorded on 2 September 2007; a single plant flowering on the edge of the May-cultivated replicate in Block A. It is not clear whether this plant came from seed produced in Pound Hill Field or in Nursery Field, being

roughly equidistant between the two sites. Two plants on Ashurst Lysimeters on 10 June 2008 about 15m away from Maria Alvarez's fenced plot by the Concrete Experiment where the plant still thrives despite intense competition, and 7 plants on 1 September 2009 following herbicide treatment and late-spring cultivation in 2009.

Self sown through the broken windows, flowering inside the derelict greenhouses on 28 July 2007; the source of these seeds was no doubt the potted plants growing in the overgrown cold frames outside the greenhouse. The cold frames were cleared out in January 2008, but the plants were back again flowering freely on 1 September 2009. Locally frequent on gravel and in cracks in concrete around the Header House and Hamilton Building on 1 September 2011.

There were 5 plants on raised gravel beds at Ashurst on 22 February 2008, and 10 more in May 2008, with dozens of plants by September 2009, evidently from seed produced by Maria Alvarez's plants in the deer and rabbit enclosure 30m away but more recently from locally matured seed. The plant persists, but at lower densities than formerly, in Maria's rabbit enclosure opposite. There were 5 flowering plants in the Lysimeters on 20 September 2009 following herbicide treatment and summer cultivation in 2009. On 25 July 2010 the plant was dominant at the base of the walls of the Header House, and most of the larger greenhouses, growing with *Oenothera cambrica*, *Reseda lutea*, *Sonchus asper*, *Rumex crispus*, *Epilobium parviflorum* and *Cardamine hirsuta*.

A single plant by the new road to the renovated Silwood Farm on 29 August 2011, probably an immigrant from parent plants in Nursery Field, about 150m away to the west. Dominant on bare ash at the bonfire site by the Walled Garden on 12 September 2011, growing with *Sonchus asper*, *Anagallis arvensis*, *Solanum nigrum* and *Stellaria media*. The seeds probably originated from parent plants growing amongst the young Willows at the Ashurst Rabbit Enclosure, because Maria's original plantings in The Orchard have largely died out now.

Ascot: no other records to September 2009.

East Berks: as an escape from the Botanic Gardens in Whiteknights Park [7371] in 1988 (RNG).

West Berks: at Abingdon [49] in 1917 (OXF). Again at Abingdon [4896], flowering in December 1999 (OXF). Abundantly naturalized on derelict railway sidings and on bare ground on the approaches to the railway bridge at Baulking [31068 90545] on 27 July 2012.

Senecio fluviatilis Wallr. *Broad-leaved Ragwort*

• hel 7

Senecio sarracenicus sensu L.(1754) et auct., non L.(1753)

This is the big, entire leaved ragwort that is quite commonly naturalized in damp grass in Scotland and Northern England. It is uncommon nowadays, presumably because it is less often grown as a garden plant and hence less often thrown out.

West Berks: in a field margin near Lodge Hill, Abingdon [5099] in 1980 (OXF).

Senecio jacobaea L. *Common Ragwort*

hs 6

Pastures, roadsides, heaths, and grassy waste places; locally abundant and generally distributed, especially in overgrazed pastures. Rabbits eat it, but not until other vegetation is scanty. In Windsor Great Park there are extensive areas occupied by it. Many of the horse pastures in East Berkshire are dominated by it: horses know how to avoid the plant when it is fresh, but they can not detect it in contaminated hay. It is essential, therefore, that ragwort is not incorporated into hay that might be fed

to horses. Host to Cinnabar Moth, the arctiid moth *Tyria jacobaeae*, one of the most colourful and conspicuous of all British insects. The leaves are mined by *Chromatomyia syngenesiae* and *Euribia zoe*, and the roots are eaten by the flea beetle *Longitarsus jacobaeae* (unlike Cinnabar Moth, this insect has been a successful biocontrol agent against Ragwort in Oregon, USA, and elsewhere). NVC: CG 2-5; MG 1,5,9; OV 10,19-21,25,27; S 23; U 1,20; W 10,23,24

Silwood Park: populations fluctuate wildly from year to year, reflecting recruitment conditions 2 years earlier (see p. 234). Sometimes it behaves as a monocarpic biennial, dying after flowering in its second summer (and occasionally as an annual, flowering and dying within one year of germination). Other times it behaves as a repeat-flowering perennial. Depending on summer weather, it can produce regrowth flowers in late summer after it has been stripped of its first crop of flowers by Cinnabar Moth caterpillars in July. Seedlings require open conditions like rabbit-scrapes for recruitment, and fencing to exclude rabbits leads to the extinction of ragwort within 4 years (often more quickly). Very abundant in April 2004, from the seed bank in Heronsbrook Meadow, following bush-hogging in 2003. Nash's Slope, a big ephemeral population following bush-hogging of the brambles; plants grew in 1991 and mass-flowered in 1992. There was high mortality of flowering shoots 1992-93. On Rookery Slope, a massive outbreak of ragwort was caused by clearance of the aspen thicket and sycamore woodland in the winter of 1992-3; mass flowering here in July 1994 was studied by Rosemary Setchfield during her PhD study of *Longitarsus*. In Nash's Field, there was mass-flowering in 1997, after a peak of seedling recruitment following the drought of summer 1995 which had impaired the competitive ability of the dominant perennial grasses; ragwort formed solid stands on the plots that were rabbit grazed, limed and sprayed with insecticide. Rabbit grazing produces the open conditions essential for seedling recruitment, lime reduces the competitive ability of the dominant, acid-loving grasses, while insecticide eliminates the root-feeding beetle *Longitarsus jacobaeae* and hence increased the survival of young rosettes. This experiment shows how simple it is to get rid of ragwort: just erect a fence to exclude the rabbits, and the ragwort will be gone within 4 years. In Oak Mead, the second cultivation in the experiment, begun in spring 1998, produced an extraordinary outbreak of Ragwort (Plate 15). Over the winter of 1998-99 the ground was completely covered by cabbage-sized Ragwort rosettes. There was mass flowering in summer 1999, followed by the death of all but a few of this cohort of Ragwort (Cinnabar Moth numbers were much too low in 1999 to make any sort of inroad to a population of this size). After the Ragwort died, the ground was completely carpeted by *Ranunculus repens*. Grasses did not begin to invade until summer 2000. Very abundant in Nursery Field and Pound Hill field in July 2002, but uncommon that year in Nash's Field and Heronsbrook Meadow. There population was generally very low in 2005, but there was a dense thicket of plants at the western end of Ashurst Four Acre Field (these were used in an experiment of tainting of honey, with 4 bee hives placed there in July – August 2005) and ragwort was locally frequent in the graveyard at Ashurst. In July 2006, ragwort was at high densities in about 30-50% of sites, but defoliation rates by cinnabar moth were very low, except at Four Acre Field where the few mature plants were completely defoliated. Summer 2007 saw ragwort at very low densities everywhere except at Ashurst Four Acre Field (where it was very dense), and cinnabar numbers were at their lowest ever. Only 4 species (*Agrostis capillaris*, *Holcus mollis*, *H. lanatus* and *Stellaria graminea*) are more frequent in small quadrats in Silwood Park. Plant numbers were very high in summer 2008 in many of the grasslands (e.g. Pond Field and Rookery Slope), but flowering was very late (fewer than half the plants were out by 1 July 2008), and cinnabar numbers were exceptionally low. The population in 2008 was patchy, however, with rather low populations of ragwort at Pound Hill, Nursery Field, Ashurst Four Acre Field and Heronsbrook Meadow (where numbers can exceed 15 plants m⁻² in peak years) and very high populations in Church Field, Pond Field, Nash's Slope and Gunness's Hill. In Silwood Bottom in 2008, the plant was abundant only to the left of the grass track (everywhere except the cultivated enclosure) and in the north-west corner, on ground that had not been cultivated since May 2006. A single fasciated stem amongst many normal plants on the remaining fragment of grassland on North Gravel on 1 October 2008. We were reported under the Weeds Act in August 2008 for the infestation in Lower Church Field, perhaps aggravated by the

erection of the new security fence along both sides of the public footpath. We were required to cut the ragwort in a 100m wide zone from the boundary fence in summer 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
27	45	59	58	82

East Berks: only 12 species are more frequent at this scale. 93% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Senecio aquaticus Hill *Marsh Ragwort*

hs 7 ↓

Senecio erraticus sensu Drabble et auct., non Bertol.

Marshes, water meadows, damp roadsides; rather common in low-lying districts, but absent from the chalk and very acid soils in south-east Berkshire. The dramatic decline in distribution and abundance has been caused by drainage of wet meadows, re-seeding and fertilizing.

NVC: M 23,24,27; MG 9,10

Ascot: no records.

East Berks: occasional in the western reaches of the Thames valley from Sonning to Remenham, but rare or absent downstream of Hurley. Rare in the Blackwater valley as at Farley Hill [7564] and in the region from Bracknell to Waltham. Not found to the east of 90. 1% (1km²). Atlas 2000: all except [96], [97]

West Berks: occasional in the Thames and Kennet valleys but absent from the interior north of 75. Shrivvenham [28], Grafton Lock [29], Denford Mill [3568]. Chimney Meadow and Buckland Marsh [30], Lockinge Park lake [48], Marcham salt spring and Otney pasture [49], Lashford Lane [40], Kennington [50], Cholsey [68]. Atlas 2000: all except [38], [39], [69]

Senecio erucifolius L. *Hoary Ragwort*

hs 7

Waysides, field borders, hedges, etc. Locally abundant and characteristic of clay soils, but absent from the chalk and from very acid soils in south and east Berkshire. Often associated with *Sison amomum* and other clay-loving plants on grassy roadsides. A frequent component of some imported wildflower mixtures used in roadside landscaping schemes.

NVC: MG 1; OV 23

Silwood Park: formerly very local, then long-thought extinct. Reactor Bank, one plant with 6 stems in long *Arrhenatherum* grassland flowered 27 July 1986 and again in 1987 but not seen since. There was nothing to suggest that the appearance of the plant had anything to do with the construction of the wind tunnel, and it could have gone unrecorded for several years. The site was destroyed when the ground was levelled for the new Arboretum. The plant was rediscovered on 16 September 2012 when two large plants were discovered in flower on gravel in the angle between the Engineering Store and the Wind Tunnel (now the Impetus Gym) [94551 68857]. There was no sign of the plants here on 9 September 2013

A second site was discovered on 20 September 2009, when two plants were found in flower in Ashurst Four Acre Field, in un-cut grass on the edge of a mown path on the south-west corner of the Rain-Out Experiment at the end of its second year. It is unclear whether or not the plants were

introduced with the experiment, or if they had been present in adjacent grassland all along. Not seen subsequently.

A third site was discovered on 9 September 2013, when 10 plants were found in flower on the October-cultivated plot in Block A of the Pound Hill Cultivation Experiment. They were close to the edge of the plot, where it borders the May-cultivated strip.

Ascot: common to locally abundant in the wet fen-meadow to the north of the railway line, in the western part of what used to be Sunningwell Bog, growing with *Carex otrubae* and *C. hirta*. Also frequent in the damp grassland in the northern triangle of Ascot Race Course, near Cranbourne Roundabout [929730] and at Virginia Water. On dry ground at South Ascot playing fields on 24 August 2007. In re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: on the bank of the A33 [7064], Bisham Wood quarry, Park Place, Shinfield, on waste ground in Whitley, Sonning, Coppid Beech roundabout, very common in sown grass around the pond at Cable and Wireless in Bracknell [8569], Holyport, Twyford, Ashley Hill, Whitley Green, Waltham St Lawrence, White Waltham, on made-up embankments flanking Westacott Way [8479], Winkfield, Braywoodside roundabout, Paley Street, Holyport, borders of Windsor Forest, Hurley, Earley. Bracknell northern relief road, rare in the verge at Quelm Park in October 2001, probably introduced unintentionally as part of the wildflower mix used to landscape the banks of the road, when it was completed in 1999 (much increased by August 2002). Locally frequent on gravelly tracks through heathland on the Firing Range at Poppy Hills [8663] in 2002. Very common in the ancient grassland west of Sheet Street Road at the Review Ground in Windsor Great Park in 2003, growing with *Hordeum secalinum* and *Ranunculus acris*. Rare as an arable weed, as in the market garden at West End, Warfield, in August 2003. Abundant with *Daucus carota* on new verges of Cain Road Bracknell near the 3M Building in July 2005 and September 2007. 23% (1km²). Atlas 2000: all squares.

West Berks: locally frequent throughout, especially common on the chalky road cutting where Ermin Street passes under the M4 Motorway south-west of Shefford Woodlands [37]. Common in the Reading Lake District [67]. Atlas 2000: all except [68], [69]

Senecio squalidus L. *Oxford Ragwort*
Senecio rupestris Waldst. & Kit.

• h 5

Railway-banks and ballast, dry waste ground, roadsides and occasionally on walls; “increasing rapidly along the permanent way of the Great Western Railway System” (Druce). Now, a very conspicuous feature of the vegetation of the banks and verges of our motorways, growing in a zone just above the gravel soak-away and flowering right through the winter. This native of Sicily originated on the volcanic ash of Mount Etna, which pre-adapted it to a life on British railway ballast and London bomb sites. The plant was grown in Oxford Botanic Garden in the eighteenth century and became naturalised on the old limestone walls. Dillenius sent a specimen from this population to Linnaeus for naming (see the L., above). By the time of Walker’s *Flora of Oxfordshire* in 1833 the plant was already plentiful. It was first recorded from Berkshire in 1833 and was found further afield in short order (North Devon in 1835, Worcestershire in 1836, West Suffolk in 1849, East Kent in 1875, Buckinghamshire in 1897 and West Sussex in 1898). It was first noticed on the Great Western Railway at Oxford Station in 1830 and Druce recounts a train journey in the company of its seeds: they drifted into his carriage in Oxford, and floated out again at Tilehurst in Berkshire.

NVC: OV 10,19,22,23

Silwood Park: local, sporadic and rare. First recorded in 1980 on the cinder pot-standing at The Greenhouses, and still there but rare in 2000 (gone by 2001). Garden Wood, one plant from imported topsoil in the new bed between the lab and the Croquet Lawn in May 1990. On gravel below the walls of the Header House in 1995; gone by 1999. Oak Mead, a single plant in the 1998-cultivated fenced fallow on 12 September 1998 (the ray florets of this plant were very large (12mm excluding the claw) and the leaves had wide (11mm) parallel sided lobes). Biodepth II, locally frequent on cultivated, methyl bromide treated plots on 8 July 2000, obviously arrived as immigrant seed because it would not have survived the fumigation; not seen since. There were no plants in 2002-04.

Ascot: abundant on the track bed at Ascot and Sunningdale Stations in years like 1998 and 2004 when the herbicide is not applied in time to kill it before flowering. Also on waste ground and old walls around Ascot Station. Sunninghill Village, South Coworth, Kingsmead, Forest Lodge. In the central reservation of the A322 between Bracknell and Bagshot. In the car park at Ascot Station on 28 October 2009.

East Berks: locally common, especially in towns, and seldom found far from people. Very abundant in the central reservation of the A33 between Reading and Riseley, by the M4 at Billingbear, and by the western section of the A423(M) Maidenhead bypass. Riverside stonework at Boulter's Lock and on the brickwork of the railway arches in Windsor. On railway ballast at Martins Heron, Bracknell, Wokingham, Winnersh, Earley and Reading. Uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 23% (1km²). Atlas 2000: all squares

West Berks: first recorded from Wytham [40] in 1833. It was known pre-1897 from waste ground at Grandpont [50], on a wall in Abingdon [49], plentiful on railway ballast at Didcot [59], and the railway bank at Tilehurst [67]. Now throughout the region but least common in the interior (north of 70 and south of 85). Frequent in Faringdon [2895], and by the railway from Hungerford [36] to Newbury [46], on the ruins of the Prince of Wales pub at Challow Station [3590], in down-town Newbury [4767], on the Newbury bypass [4771], and on the ruined walls of Godstow Nunnery [4809]. Common on the railway between West Reading and Pangbourne [67] and rough ground on the periphery of Newbury Station car park [469666] on 24 September 2005. Very abundant in the central reservation of the dual carriageway of the Newbury spur road to the A34 [4769] on 23 September 2006. Atlas 2000: all except [69]

Senecio x baxteri Druce = **S. squalidus x S. vulgaris**

Highly sterile triploid which is intermediate in leaf shape and capitulum, but possibly over-recorded for radiate forms of *S. vulgaris*. The fertile tetraploid species *Senecio eboracensis* may arise as a result of this same cross (Lowe and Abbott (2003) *Watsonia* 24,375). Druce used the illegitimate name *Senecio advena* to describe any puzzling hybrids he found; there is a **BM** specimen from Didcot in 1929.

West Berks: Grandpont (**OXF**) [50] in 1884, Didcot [49] in 1897 and Farmoor [40] in 1964.

Senecio x subnebrodensis Simonk. = **S. squalidus x S. viscosus**

Senecio x londinensis Lousley

Highly sterile and intermediate in leaf-shape, pubescence and shape of the capitulum.

East Berks: on the railway to the east of Reading Station in 1969.

West Berks: by the railway at South Hinksey [50] in 1950, Barrow Hills [59] in 1963, Didcot [59] in 1966. By the railway at Didcot [5290] in 1995.

Senecio vulgaris L. *Groundsel*

th 1

Senecio vulgaris L. subsp. denticulatus (Mueller) Sell

Cultivated ground, waste places; widespread except on the heaths and grassy tracts of the chalk downs. "One of the first species to appear on newly broken ground. One of our commonest species and in flower the whole year" (Druce). Dry arable fields, gardens and disturbed ground. Locally abundant. Sometimes the dominant plant on short-term set-aside on chalk soils. Swollen flower heads are galled by the midge *Contarinia jacobaeae*.

NVC: OV 1,3,4,7-10,13,14,16,18-25,28,33,41,42; U 1

Silwood Park: uncommon and rather local. Nursery Field, Pound Hill Field, Ashurst Church, Oak Mead, Church Field, Ashurst Warren, Silwood Farm, Cheapside, Silwood Bottom, on the cinder pot stand at The Greenhouses, Reactor Bank, Residences, Buckhurst Road Entrance, Cannon Crossroads. Uncommon in the seedbanks beneath old grasslands at Heronsbrook Meadow, Nursery Field and Ashurst Orchard in April 2004 following cultivation in 2003, with *c.*1 plant in 20m². Abundant from the seed bank at Ashurst Lysimeters on 29 July 2009, following herbicide treatment in spring 2009 and cultivation in mid June.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	10	18

Ascot: abundant over large areas of disturbed soil and abundant on soil piles on the construction site of Ascot Racecourse [9268] in August 2005, and all along the edge of the new tarmac road parallel with the Straight Mile [9269] and [9369].

East Berks: 64% (1km²). Atlas 2000: all squares

West Berks: it was completely dominant on the thin, chalky soil in set-aside land on the top of Weathercock Hill [2882] in May 2002. Atlas 2000: all squares

Senecio vulgaris var. **hibernicus** Syme

th 1

Like var. *vulgaris* and often growing with it, but capitula with conspicuous ray florets (ligulate), often curled back into rolls. This taxon may have arisen through introgression from *S. squalidus*.

Silwood: probably a greenhouse escape from experimental work carried out by Christophe Thebaud in 1994. Persisted for 3 years on the gravel pot stand between the Header House and the greenhouse. The last 2 plants were seen on 5 May 1997. Site destroyed by building work for new Jiff Greenhouses in May 2000.

East Berks: in dry ground at the Military Academy Sandhurst on 21 April 2002.

Senecio vernalis Waldst. & Kit. *Eastern Groundsel*

• th 7

Increasing rapidly in continental Europe, this species is still rare with us. Told from *S. squalidus* by its webby-pubescent (not glabrous) leaves with their short lateral lobes (the leaves are often very like those of *S. vulgaris*). The ray florets are the same size (8-10mm) as in *S. squalidus*.

East Berks: no records.

West Berks: on Frilford Heath [4496] in May 1996 (**OXF**). Not seen since.

Senecio sylvaticus L. *Heath Groundsel*

th 7

Heaths, commons, wood margins, and bare ground or dry acid soils. Locally common, but absent from the chalk and northern clays. Apparently possessed of a very long-lived seed bank and springing up in abundance following soil disturbance or tree-felling.

Silwood Park: on broken concrete bases of old Nissen huts on North Gravel in 1980, in the grassland fertiliser experiment on the edge of Elm Hill on 12 July 1980, in short grass by Farm Road, in Nash's Field, in the cultivated parts of Block F next to the former broom plot. The population in Water Meadow was given a tremendous boost following scrub and tree clearance during the winter of 1997-98. Many recruits from the seed bank on the upper slope towards Cheapside, especially on ground that was bare from having been shaded by an oak canopy; July 1998. Pound Hill, Gravel Pit, Chalk Plots, The Elms, Science Park. On the bare ground below the felled Leyland Cypresses on North Gravel, still there in June 2002. Local and rare, from the seedbank of the broom plot in Nash's Field in May 2004. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Frequent inside the rabbit fence on Guinness's Hill in July 2006, following soil disturbance in the previous winter. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	2	6

Ascot: Blane's Allotment, Swinley Park, The Tip, Coronation Road, Heatherwood Hospital, Ascot Heath, Kings Beeches, Sunninghill, Johnson's Pond, South Coworth, Cranbourne, Sunningdale, Kingsmead, South Forest, Leiper Hill, by Virginia Water on the Berkshire bank.

East Berks: Wellington College, frequent on gravelly soil near Park Place, Ambarrow, Finchampstead, locally abundant on the grassy hill top at Whitley, Earley, Sonning, Riseley, Farley Hill, Bagshot, Sandhurst, Binfield, Bracknell, Windsor Great Park. Frequent on gravelly ground by Park Place. Commonest on the heathy soils to the south-east of a line from Windsor to Arborfield. Rare or absent elsewhere. 8% (1km²). Atlas 2000: all except [78]

West Berks: very local: scattered along the Thames, and occasional on the heathy ground of the south-east (east of 45 and south of 75). Pusey and Buckland [39], Newbury Wash Common and Greenham Common [46], Snelsmore Common [47], Frilford and Tubney [49], Besselsleigh, Wytham, Wootton and Boars Hill [40], Cold Ash Common, Aldermaston, Crookham Common and Bucklebury [56], Hermitage and Oare Common [57], Upton [58], Wittenham [59], Burghfield, Padworth and Mortimer [66]. Atlas 2000: all except [28], [38], [48], [68], [69]

Senecio viscosus L. *Sticky Groundsel*

• th 7

Railway ballast, cinder tracks and compacted waste ground in towns. It has all the behavioural traits of an alien species with us (ephemeralness, restriction to bare and disturbed ground, proximity to human activity), including an indescribable spatial distribution. The only place that I know where this species looks like a native element of the flora is on dry river gravels in the Cheviot Hills in Northumberland (v.c.68), where it coexists with, but is much more abundant than, *S. sylvaticus*. Told from *S. sylvaticus* by its spreading (not appressed) lower bracts and glabrous (not hairy) achenes. In fruit, the black achenes contrast starkly with the snowy white pappus.

NVC: OV 7

Silwood Park: an uncommon seed bank ruderal. Dominant on the Chalk Plots in the first year after they were constructed. Introduced unintentionally, presumably with the chalk from Maidenhead Thicket, and completely dominating the chalky plots on 10 September 1983. The plant was rapidly replaced by the sown species, and had disappeared by June 1985. It set seed copiously in 1983, however, and probably laid down a large seed bank. Header House, on the base of a ruined greenhouse in 28 September 1980; frequent in 1993 and especially abundant in 1994, but just 1 plant in August 2002. Following construction of the IIBC extension during the winter of 1995-96, it was very common in disturbed soil on the M-Scan boundary of the car park; Ladies' Day, 20 June 1996 and 5 plants on 7 July 1998. In grass at the end of the American Canteen, behind Tree Physiology on 29 August 1983. Both buildings were demolished to make way for the CABI Library and its western car park. Southwood Halls, in the beds of the woodland garden, behind the halls on 4 September 1985, but not seen since. There were 8 plants in the gravel strip behind the CABI building on 4 September 2004; all set good seed crops despite heavy mildew attack. Frequent in August 2005 around the Jiff Greenhouse and the CABI Polytunnel after a very dry spring and early summer followed by heavy late July and August rains. The Greenhouses, in a cold frame on the pot standing on 20 July 1987, but not seen since. Six large plants (more than 1m tall) in clearings in the birch wood of the central car park on the Science Park on 1 September 2000. Highly patchy in its spatial distribution; for instance it made up 35% of the total cover on the second replicate of the April cultivation treatment at Pound Hill in September 2001, but only 5% on the first replicate and nothing at all on the other two replicates. Very local and rare in Garden Wood on 27 August 2005, from the seed bank, following clearance of the Lawson Cypress in November 2004 and fencing to exclude deer and rabbits in February 2005. Frequent inside the Telecom Fence at the Met Tower on 3 September 2005 and again in August 2006, locally dominant by August 2007. An outstanding year in July 2006, when the plant was very abundant at the bases of walls all around the CABI Building, the Header House and the adjacent greenhouses. There were abundant plants in August 2007 and 2008 all around the CABI Building and the Header House, in what by 2008 were the greatest numbers ever seen at Silwood. From the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	2

Ascot: on the railway tracks at Ascot Station and on sunny waste ground nearby. Sunningdale, Blacknest Park, South Coworth, Ascot Place.

East Berks: not in Druce, first recorded from Reading in 1906, Cookham in 1952. Woodley, Twyford, Wellington College, on the railway between Waltham and Haywood Park, on the track-bed at Wargrave Station, Maidenhead, Ascot Station, Bray. Recent records from Whiteknights Park, Woodley tip, Amen Corner Bracknell, Cookham Dean [8785], and Sandhurst [8660]. Commoner to the north of 70 than to the south. On the ramparts of Windsor Castle in 1999. 4% (1km²). Atlas 2000: all except [78]

West Berks: scattered records, almost all to the east of 45. Didcot [59] in 1927, Lambourn [37] in 1932. Recent records from East Ilsley [48], Milton and Drayton [49], Ashampstead Common [57], Aldermaston and Turners Green [56], Cholsey [58], Didcot Power Station [59], Theale [67]. By the railway at Hungerford [36], but not at Newbury [46], in September 2001 and 2006. Locally frequent on cinder in railway sidings at Didcot Parkway Station [5290] in 2003. Atlas 2000: all except [38], [40], [68], [69]

¶ **Senecio** *S. cineraria* 'White Diamond', *S. doria*, *S. pulcher*, *S. scandens*, *S. viravira*,

¶ **Pericallis** *P. lanata*

Tephroseris integrifolia (L.) Holub *Field Fleawort*

hs 6 ↓

Othonna integrifolia L.

Senecio integrifolius (L.) Clairv.

Tephroseris integrifolia subsp. **integrifolia**

Senecio campestris (Retz.) DC.

One of the real rarities of our Berkshire chalk grassland. *Tephroseris* is told from *Senecio* by its involucre bracts. Both have a single row of phyllaries, but *Senecio* has supplementary smaller bracts at the bottom of the capitulum, and these are absent in *Tephroseris*. Field fleawort is an erect, densely pubescent, short-lived rosette-forming species that flowers in June and July. It has leaves that look more like Houndstongue than Ragwort or Groundsel. Typical ancient grassland associates include *Asperula cynanchica*, *Helianthemum nummularium*, *Helictotrichon pratense*, *Hippocrepis comosa*, *Koeleria macrantha* and *Polygala calcarea*. Found in warm dry sites on south-facing slopes in chalk grassland, often associated with the banks of ancient trackways or earthworks. Very variable in numbers from year to year, reflecting the vagaries of seedling recruitment. It has declined as a result of reduced sheep grazing, grassland fertilisation, re-seeding and scrub incursion.

NVC: CG 2,3

East Berks: no records from any of our chalk grasslands.

West Berks: first record from Streatley (Lightfoot, 1780). Strictly confined to the chalk, north of 80 and south of 90; probably extinct on the Hampshire border chalk. Kingstone Down [2882] and Whitehorse Hill (100 plants in 1977 but 500 in 1978, and 100 in 2000) [297863], Seven Barrows [3282], possibly extinct at Hungerford Down [36], East Hendred Down [48], Grims Dyke at Chilton [468848], Aston Upthorpe Down (10 plants in 1983 but not seen recently, and the site now severely overgrazed by rabbits) [5483], Oven Bottom, The Fair Mile, Streatley Hill (**RNG**) and Moulsoford Downs [58]. Atlas 2000: [28], [38], [48], [58]

Brachyglottis ‘Sunshine’ C. Jeffrey *Shrub Ragwort*

• n 6

Senecio x *greyii* hort., non J.D. Hook.

Senecio x *compactus* hort., non Kirk

Brachyglottis x *greyii* hort., non (J.D. Hook.) R. Nordenstam

Brachyglottis x *compacta* hort., non (Kirk) R. Nordenstam

This is one of the commonest silver-leaved shrubs used in landscaping schemes in towns and industrial estates. It can be long persistent as a throw-out but it does not self-seed. Conspicuous in yellow flower in late June; it is pruned by purist gardeners to stop it flowering (the flowers are thought to clash with the silver foliage).

Silwood Park: co-dominant with lavenders and santolina on the main drive into the Science Park. Also at The Greenhouses and on the remains of the rockery at Ashurst. In the churchyard at Ashurst and in Cheapside Village.

Ascot: on waste ground in South Ascot and Sunningdale in 2003.

East Berks: commonly planted on industrial estates in Bracknell, Reading and Maidenhead in the late twentieth century. Rare as an escape, as on Oxford Road in West Reading [7073] and Whitley [7270] in July 2002. <1% (1km²). Atlas 2000: [76], [77], [96]

West Berks: Newbury [4767], Abingdon [4997] and Aldermaston [5963] in 2002, as an outcast or relic of cultivation. Not self-sown.

Sinacalia tangutica (Maxim.) B. Nord. *Chinese Ragwort* ● hs 6
Senecio tanguticus Maxim.

West Berks: by the R. Kennet in Newbury [473672] from 1942-59. Near Newbury bus station [4767] in 1956 (det. D. McClintock) (RNG).

¶ **Sinacalia** *S. tangutica*

Ligularia dentata (A. Gray) H. Hara *Leopardplant* ● hs 6 ↓
Erythrochaete dentata A. Gray
Senecio clivorum (Maxim.) Maxim.
Ligularia clivorum Maxim.

East Berks: at the lakeside near Foxhill in Whiteknights Park in 1965.

West Berks: at Steventon [4691] and Kingston Bagpuize [4098] in July 2003.

¶ **Ligularia** *L. dentata*, *L. dentata* ‘Desdemona’, *L. dentata* ‘Othello’, *L. ‘Gregynog Gold’*, *L. hodgsonii*, *L. x palmatiloba*, *L. przewalskii*, *L. ‘The Rocket’*, *L. veitchiana*, *L. wilsoniana*

Doronicum pardalianches L. *Leopard’s-bane* ● hs 5

Plantations, very local. Told from the next two hybrid taxa by the possession of long, flexuous or spreading hairs (> 1mm) on the petioles of its basal leaves, and by having more flower heads per stem (3-8 rather than 1-3).

Ascot: no records.

East Berks: no records in Druce or Bowen. <1% (1km²). Atlas 2000: [78], [88], [97]

West Berks: plentiful in the plantation near Buscot ornamental water [2496] in 1892 (still there in 1963), and near Bessels Leigh in a wooded part of the park, and evidently the remains of a garden (1897). More widespread by Bowen’s time and recorded from Hermitage [57] and Chapel Row [56] in 1955, Faringdon [29] in 1962, Brightwell [59] in 1963, Lockinge [48], Wytham Wood [40], and Bagley Wood [50] in 1964, on the roadside east of the A417 by Streatley [5880] in 1968 and 1977, and from a wild garden in Stanford Dingley [576715] in 1980. Tilehurst (RDG) [6874] in 1916. Atlas 2000: [29], [38], [46], [47], [48], [49], [56], [57], [59], [50]

Doronicum x willdenowii (Rouy) A.W. Hill *Willdenow’s Leopard’s-bane* ● hs 4
Doronicum plantagineum L. forma willdenowii Rouy

There are two common garden Doronicums much grown for their early spring display and occasionally found as throw-outs on waste ground. They are distinguished by their leaves: *D. x willdenowii* has less prominent leaf teeth (less than 2mm long) and rounded or truncate (not heart-shaped) leaf bases. In Berkshire, this is much less common as a garden escape.

East Berks: recently at Heriots. <1% (1km²). Atlas 2000: [87]

Doronicum x excelsum (N.E. Br.) Stace *Harpur-Crewe's Leopard's-bane* ● hs 4
Doronicum plantagineum L. var. *excelsum* N.E. Br.
Doronicum x draytonense hort.
Doronicum x hybridum hort.

D. x excelsum has more prominent leaf teeth (more than 2mm long) and a shallowly heart-shaped (cordate) leaf base. This is much the commoner of the two early-flowering hybrids as a garden escape.

East Berks: recently at Finchampstead, The Mount, Suttons, Sindlesham Mill, Woodley, by the railway at Winnersh Triangle, Woodley Green, Littlewick Green, Dial Close, Halfway House, Pinkneys Green, Cookham Rise, East Maidenhead, Old Windsor. 1% (1km²). Atlas 2000: [76], [77], [87], [88], [97]

West Berks: in rocks by the path side at Buscot weir [230980] in April 2001-04. On the steep wooded bank beneath the railway between two of The Seven Deadly Sins at Pangbourne [627769] in April 2004. Atlas 2000: [36], [49]

Doronicum plantagineum L. *Plantain-leaved Leopard's-bane* ● hs 6 †

Relic of cultivation, very rare. Told from the other *Doronicum* taxa by the fact that its basal leaves are all tapered gradually into their petioles (cuneate) rather than rounded, truncate or heart-shaped (cordate).

West Berks: First record was collected by Sir Joseph Banks from Bessels Leigh [40] in 1770 (BM). Hermitage [57] in 1955, from an island in the Thames near Farmoor [40] in 1964 and Frilford [49] in 1965. Atlas 2000: no records.

¶ **Doronicum** *D. austriacum*, *D. columnae*, *D. x excelsum* 'Harpur Crewe', *D.* 'Finesse', *D.* 'Frühlingspracht', *D. grandiflorum*, *D.* 'Miss Mason', *D. orientale*, *D. orientale* 'Magnificum'

Tussilago farfara L. *Colt's-foot* grh 3

Roadsides, riversides, railway banks, damp arable fields, waste ground and woodland rides. Abundant on clayey soil throughout the county. One of our earliest spring flowers, the blooms appear before the leaves in early March. Leaves marked by blotch mines of *Euleia cognata*. It is an occasional host to the migrating caterpillars of Cinnabar Moth, but I have never seen the females lay eggs on it. NVC: OV 9,10,19,22-24

Silwood Park: local and uncommon. Header House, on gravel pot stands and waste ground; 19 March 1981. Frequent on the Reactor Bank, on waste ground 6 May 1986. Japanese Garden, a weed of the main pond-side bed; 30 March 1980. Garrison Ridge, amongst long grass on the bank facing Silwood Bottom. In mown grass by the Nuclear Reactor below North Gravel; 4 March 1983. In the rabbit enclosure at Ashurst. On waste ground opposite the Cricket Wicket. Local in Silwood Bottom. Extinct at several of these sites, presently local and rare. Locally dominant on the vacant lot, south of London Road opposite Ashurst Four Acre Field 2001-03. Locally common as a weed in the Student Allotments on Silwood Bottom in 2002. Very rare on the Raised Beds at Ashurst as on plot F1 on 28 August 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	3

Ascot: in most of the 1km squares, but typically uncommon and seldom forming patches larger than a few square metres. Commonest after roadworks have exposed damp bare ground. A few large patches in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: frequent in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 31% (1km²). Atlas 2000: all squares

West Berks: particularly common in 2004 on freshly exposed gravel where the runway of Greenham Common airbase was taken up [5064]. Atlas 2000: all squares

Petasites hybridus (L.) P. Gaertn., B. Mey. & Scherb. *Butterbur* g 3
Petasites officinalis
Tussilago hybrida L.

Sides of rivers, brooks and canals and in wet places by springs; occasional but absent from large areas. This is 'Giant Rhubarb' of children's botany (although *Gunnera* is even more of a Giant, of course). Flowering before the leaves in late winter, when the rest of the riverbank is still firmly asleep. Many of the populations are male-only clones, planted long ago as a source of pollen for honey bees.

Ascot: no records.

East Berks: Shiplake weir near Harleyford, Sonning, Wargrave, Bisham, Bray, Wokingham, Cookham, Windsor. Occasional close to the R. Thames from Wargrave to Windsor, but absent from the rest of the area. Recently at Loddon Court, Popeswood. <1 % (1km²). Atlas 2000: all except [96]

West Berks: frequent in the Kennet valley, and a conspicuous feature of its riverside vegetation, but rare or absent from the Thames valley (cf. East Berkshire). There are scattered records from the interior. Beckett Park [28], Buscot [29], Kintbury and Hungerford [36], Chilton [48], Abingdon, Cothill and Marcham [49], Hen Wood, Youlbury Wood, Wytham and Appleton [40], Midgham, Thatcham, Aldermaston and Bucklebury [56], Frilsham [57], Streatley and Blewbury [58], Shillingford, Radley, Wittenham and Sutton Courtenay [59], Kennington [50], in Reading's Lake District [6969], Pangbourne, Tidmarsh, Southcote and abundant at Theale [67], Wallingford [68]. Atlas 2000: all except [69]

Petasites japonicus (Siebold and Zucc.) Maxim. *Giant Butterbur* • g 2
Nardosmia japonica Siebold and Zucc.
Petasites japonicus (Siebold and Zucc.) Maxim. subsp. giganteus Kitam.

Big creamy white and greenish flowers protruding self-consciously from the wintry ground. The bracts are broad (> 1cm) and pale lime green. The flowers are followed by enormous, rhubarb-like leaves 80cm (sometimes reaching 1.5m) in diameter.

Ascot: very local and rare. In the western verge of the Windsor road, north of the Peanut Roundabout at Cranbourne [935724], growing with *Smyrniolum olusatrum*, since 1995 (Plate 15). The patch is expanding steadily, and by 16 March 2003 it covered 16m of verge and ditch, with 80 flower stems. It has been mown down more frequently in recent years, especially the 1m strip closest to the road, but is hanging on at this site in 2009.

East Berks: not in Druce or Bowen. Known only from the Cranbourne site, above. <1 % (1km²). Atlas 2000: [97]

West Berks: on the stream bank at Welford Park [47] in 1959 (LAN). Locally dominant at Old Hungerford fishery [318680] in 1966 and Sandleford [4764] in 1972. In wild gardens at Stanford Dingley [576715] in 1980 and Padworth College [6265] in 1987. By the pond in the Old Rectory at Burghfield in April 2001 [66], and at Sutton Courtenay Manor [59]. Locally abundant in the roadside verge opposite the ornamental pond at West Woodhay House [386633] and in Letcombe Regis [3886] in 2002-04. Very abundant on the south-western shores of the lake in Benham Park [436674] in 2002. Atlas 2000: [46], [47]

Petasites fragrans (Vill.) C. Presl *Winter Heliotrope* • g 1
Tussilago fragrans Villars
Petasites ? pyrenaicus (L.) G. López

Plantations, banks and roadsides near houses, forming dense patches. Local and mainly in the Thames valley, but spreading (Bowen). Flowering in January and February; delightfully fragrant.

Ascot: local and rare on roadsides; on the west side of Ascot Racecourse [919697] in 1988 and at Brookside Farm in 2002 [923704]. Not in Silwood Park.

East Berks: “grows in the woods at Park Place, and on the banks of a stream at Knowl Hill, opposite the Post Office. In a hedge near Haines Hill not far from Wokingham” (Druce). Recently from Lower Earley near the M4, The Mount, Woodley, College Town, Queen’s Arbor, still at Knowl Hill, Binfield Park, Waltham St Lawrence, Fifield, Windsor, Clewer. Locally dominant at the top of the chalk slope below the ramparts of Windsor Castle. 1 % (1km²). Atlas 2000: all squares

West Berks: first record from a hedge between Southcote and Calcot Park [67] before 1897. Pond Lane Hermitage [5072] in 1981, Jarn Mound [4802] in 1982, Welford Park [4072] in 1984, Turners Green [5268] in 1988, Wytham [476086], Cumnor Hurst [4704], Hoe Benham [409696] and Denman College in Marcham [452969], verge between Woolhampton and Douai Abbey [5767] in 2002. Locally dominant in the churchyard at Radley [523995] and on roadsides at Boars Hill [504027] in January 2002. Atlas 2000: all except [38], [46], [66], [69]

¶ **Petasites** *P. japonicus* var. *giganteus*, *P. japonicus* var. *giganteus* ‘Variegatus’

Calendula officinalis L. *Pot Marigold* • th 9

A classic cottage garden plant found in every town and village as a garden escape on rough ground and roadsides and in bare, stony places. A conspicuous feature of the winter vegetation along the M4 motorway, growing in mown grass close to the elevated section in west London, flowering right into December.

Silwood Park: escapes found in two places in Cheapside Village in 1999. Commonly planted on the student allotments in Silwood Bottom 2001-07 in a vain attempt to deter pests; in full flower 13 October 2007.

Ascot: an impermanent garden escape on Fernbank Road, Sunninghill Village, Locks Ride, Winkfield, Cranbourne, Sunninghill Park.

East Berks: a garden escape in Windsor, and casual on rubbish tips; Smallmead tip, Reading tip, Sonning. These days, one of the most frequently seen escapes in towns and villages throughout. Very

rare on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 24% (1km²). Atlas 2000: all squares

West Berks: particularly common in Newbury [46] in 2001. Marcham [49], Botley [40], Cholsey [58] and Grandpont [50] in 2002. Atlas 2000: all except [36], [47], [57], [69]

Calendula arvensis L. *Field Marigold* ● th 4

East Berks: in a garden in Sidmouth Street, Reading [7272] in 1970 (possible error, no specimen).

Osteospermum hybrids, usually recorded as **O. jucundum** (Phillips) Norlindh ● hs 5
Dimorphotheca barberae hort.

These are common rockery, wall and edging plants that are sometimes found as garden outcasts. They are seldom self-sown. The most characteristic cultivars are 'Whirlygig' with white spoon-shaped ray florets and purple centres, and 'Buttermilk' which is a beautiful creamy yellow with a dark 'eye'. Most of the plants seen as garden escapes, however, have pinky-purple ray florets, which are bronzy purple on the underside.

Silwood Park: below the wall facing the graveyard at Ashurst Church.

Ascot: on pavements and waste ground in Sunninghill village and in Sunningdale.

East Berks: Recently at Lambs Lane, Three Mile Cross, Riseley, Mill House, Rowes Farm, Shinfield, Upperwood Farm, Lower Earley, Newlands Farm, Langley Common, Coppid Hill, Finchampstead, West Whitley, Coley, The Mount, Whitley, Earley, Bulmershe, Bulmershe Court, Woodley, Whistley Green, Winnersh, Alder Moors, South Charvil, Cockpole Green, Wokingham, Wescott, Sandhurst, Brookers Row, Popeswood, College Town, Great Hollands, Hanworth, Arlington Square, Heriots, The Holt, West End, Carters Hill, Old Malt House, Binfield Park, Woodlands Park, Newell's Green, Shepherds Lane, Furze Platt, Halfway House, West Dedworth, Cookham, Maidenhead. 11% (1km²). Atlas 2000: all squares

West Berks: Faringdon [2895], Newbury [4767], Abingdon [4997], New Hinksey [5104] in July 2002, and at Steventon [4691] and Kingston Bagpuize [4098] in July 2003, in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [28], [36], [38], [49], [68]

¶ **Osteospermum** *O.* 'Buttermilk', *O.* 'Cannington Roy', *O. ecklonis*, *O. jucundum*, *O.* 'Lady Leitrim', *O.* 'Pink Whirls', *O.* 'Silver Sparkler', *O.* 'Whirlygig', *O.* 'White Pim'

Ambrosia trifida L. *Giant Ragweed* ● th 8 †

East Berks: rare casual at Twyford Mill [7875] in 1925 (OXF).

Ambrosia artemisiifolia L. *Ragweed* ● th 8
Ambrosia elatior L.

An important invasive alien plant in eastern Europe, but still rare in Britain.

Silwood Park: first recorded in full flower on Christmas Day 2011. A single plant in the south-facing Bed of Southwood 2. The origin of the plant is unknown.

Ascot: no other records

East Berks: not in Druce. Rare, probably extinct, casual. Shinfield (1918), Reading (**OXF**) in 1917, Bearwood (1918), Smallmead tip (1969). Occasional grain alien and in bird-seed.

West Berks: Wytham Mill [40] in 1918. A large plant (**OXF**) at the end of the cornfield near Harwell Church [495890], probably a bird-seed alien, growing with *Setaria pumila* in 1995.

Xanthium strumarium L. *Rough Cocklebur* ● th 7 †

East Berks: Maidenhead in 1918.

West Berks: Abingdon [49] in 1918.

Xanthium spinosum L. *Spiny Cocklebur* ● th 7

Silwood Park: very local and rare. A single individual on 26 July 2009 from the seed bank following cultivation of the old orchard at the rear of Silwood Lodge, close to the site of the huge bird-feeder run for many years by Vicky Taylor and Mike Hassell, amongst abundant *Datura stramonium*.

Ascot: very local and rare. A single individual on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. The site was built over in early 2004, destroying the habitat.

East Berks: Waltham in 1898.

West Berks: Abingdon (**OXF**) [49] in 1917 and Wytham [40] in 1918.

Guizotia abyssinica (L. f.) Cass. *Niger* ● th 7

East Berks: not in Druce. Casual on rubbish tips; Reading (**OXF**) in 1920, Smallmead tip, Reading tip (1961-62), Woodley tip [777745] in 1969-71, in a garden bed at Whiteknights Park (1987). In disturbed topsoil at the roadworks near the M4/A33 interchange in 1999. <1% (1km²). Atlas 2000: [76], [77]

West Berks: Newbury tip [46] from 1959-68 (**OXF**), Thatcham tip in 1961 [56], Didcot tip in 1961 [59], South Hinksey tip in 1965 [50]. Atlas 2000: no records.

Sigesbeckia serrata DC. *Western St Paul's-wort* ● th 7

A rare and sporadic grain alien.

East Berks: very rare; 3 small plants on roadside bank adjacent to the north-west extremity of Reading Gate car park [709700] on 31 October 1999. Found by Tony Mundell and Dorothy Brookman (det. Eric Clement).

Key to the conspicuous perennial Sunflowers

There are several large, mostly yellow-flowered garden escapes that can be lumped together as 'Sunflowers' but it is not always obvious what genus they belong to, and hence identification can be rather hit and miss. This key starts on the assumption that you have a large (taller than 50cm), yellow-

flowered garden escape that is a member of the Asteraceae. It is *not* intended to work for Daisy-flowered composites with white ray florets and yellow eyes.

- 1. Pappus of hairs..... **Inula**
- 1. Pappus not of hairs (absent, scaly or a papery ring)..... 2
- 2. Lower leaves opposite 3
- 2. All leaves alternate..... 4
- 3. All leaves opposite, pappus absent **Heliopsis**
- 3. Upper leaves alternate, pappus of scales **Helianthus**
- 4. Receptacle lacking scales **Helenium**
- 4. Receptacle with scales 5
- 5. Ray flowers sterile, receptacle highly conic or cylindrical..... **Rudbeckia**
- 5. Ray flowers producing achenes, receptacle merely convex 6
- 6. Anthers bearded at the base, achenes all alike..... **Telekia**
- 6. Anthers not bearded, achenes dimorphic (ray 3-angled, disk many-angled)...**Buphthalmum**

Rudbeckia hirta L. *Black-eyed-Susan* • h 7
Rudbeckia serotina Nutt., non Sweet

A bristly or roughly pubescent plant with strongly 3-veined, entire leaves. The black achenes are interspersed with abundant clear, receptacular scales.

Silwood Park: long persistent garden relics near The Greenhouses on 15 September 1998; still there in October 2002.

East Berks: on waste land in Reading (**RNG**) [7073] in 1964 and [7372] in 2004. Recently at Old Malt House, Coronation Road. Abundant in gardens at Cookham, and self sown near the church [8985] in September 2004. <1% (1km²). Atlas 2000: [87], [88], [96]

West Berks: a rare garden escape. Atlas 2000: [50]

Rudbeckia fulgida Ait. *Black-eyed-Susan* • h 7

Told from *R. hirta* by its non-bristly leaves, and its orange yellow (not pale to golden yellow) ray florets.

West Berks: on abandoned allotments at Botley [40] and Grandpont [50] in 2002.

Rudbeckia laciniata L. *Coneflower* • h 7

Told by its deeply divided ternate stem leaves and pinnate basal leaves.

East Berks: waste ground in Maidenhead and Reading in 1998. <1% (1km²).

West Berks: on abandoned allotments at Botley [40] and Grandpont [50] in 2002.

¶ **Rudbeckia** *R. fulgida* var. *deamii*, *R. fulgida* var. *speciosa*, *R. fulgida* var. *sullivantii* ‘Goldsturm’, *R. ‘Goldquelle’*, *R. ‘Herbstsonne’*, *R. laciniata*, *R. maxima*, *R. occidentalis* ‘Green Wizard’, *R. subtomentosa*

Helianthus petiolaris Nutt. *Lesser Sunflower* • th 8

East Berks: Reading tip in 1962, Smallmead tip in 1969, in the central reservation of the M4 motorway south of Reading [7468] in 1987. <1% (1km²).

Helianthus annuus L. *Sunflower* • th 8

An increasingly common crop in the 1990s and in every bird-seed mix. Grown each year in gardens and allotments for ‘tallest plant in the parish’ competitions.

Silwood Park: cultivated as a crop 1988 to 1990 in Ashurst Warren as part of a plant disease study. Volunteers came up in 1991 but none seen since 1992 when the area was covered in plastic mulch to accommodate the sea beet collection. The Greenhouses, not grown since 1990. Grown in the Student Allotments in Silwood Bottom 4 September 1996, and one plant in July 2002 and 4 plants on 6 October 2013 (the last year of the original allotment site).

Ascot: locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003.

East Berks: not in Druce. Casual on rubbish tips; Woodley, Smallmead, Reading, Cookham. Recently at West Reading, Whitley, Bulmershe, Dowlesgreen, College Town, Jock’s Copse, West End, Warfield Church, Cookham. 1% (1km²). Atlas 2000: all except [78], [97]

West Berks: Kennington tip [50] in 1951, Cothill pit [49] in 1963, in a wheat field at Buscot [29] in 1965, South Hinksey tip [50] in 1965, Didcot [59] in 1969, Tadley [56] in 1970, Pingewood [66] in 1986, Thrupp pits [59] in 1987, Steventon [49] in 2003. Common on allotments throughout in 2002. Atlas 2000: [38], [49], [40], [59], [50], [66]

Helianthus tuberosus L. *Jerusalem Artichoke* • gr 9

Occurs as a casual on rubbish heaps and occasionally by roadsides. Long persistent in abandoned allotments and on waste ground. Known by the leaves which are alternate above, becoming opposite lower down the stem, its blackish (not green) involucre bracts, and by its swollen (edible) tubers.

Silwood Park: survives annual ploughing in Ashurst Four Acre Field without any reduction in population; it was planted when the student allotments were on this site in 1992. In most years the site is ploughed before the plants have flowered, but they did flower spectacularly in September 1998 after a very wet summer. The population survived herbicide application in spring 2006 when a late wheat crop was planted in the northern half of the field. No plants seen in July 2011. Locally frequent in the student allotments in Silwood Bottom 2000-2013 on the western side by the track to Nashs Field; flowering on 13 October 2007, when England beat France in the semi-final of the Rugby World Cup. By 6 October 2013 the plant was restricted to the opposite side of the allotments, by the open part of Silwood Bottom. Also a relic of cultivation at Silwood Farm. A single plant, flowering in the roof gutter, high above the entrance to the Tractor Shed on 15 September 2005.

Ascot: locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in

early 2003. A single plant by the side of the drive of the late Micky Morris' house at 80 Upper Village Road on 1 September 2006: he always insisted that he was not spelled "Mickey".

East Berks: Reading (1962). Smallmead tip (1982). Waste ground in Swallowfield. Abandoned allotments at Bulmershe in 2002 and between Reading West Junction and Cow Lane [702742] on 11 October 2003. 1% (1km²). Atlas 2000: all except [78], [97]

West Berks: Ferry Hinksey [40] in 1897, Aston [78] in 1897, Cothill [49] in 1963, Didcot tip [59] in 1969, old tip at Sutton Courtenay [59] in 1980. By the Kennet and Avon Canal at Theale Lakes where Hanger Road crosses the swing bridge at Sheffield Bottom Lock in August 2005. Common on allotments in towns in 2002. Atlas 2000: [36], [38], [49], [40], [59], [50]

Helianthus x laetiflorus Pers. *Perennial Sunflower* ● hp 8
Helianthus x scaberrimus Elliott
Helianthus decapetalus L.

This is the common garden plant, frequent in herbaceous borders and thrown out on waste land from time to time. Told from *H. tuberosus* by its shorter stature (less than 2m tall) and closely appressed involucre bracts. It has rhizomes rather than tubers, but you probably did not want to know that.

East Berks: Ascot [9268] in 1929 (OXF), Cookham tip in 1958, Reading tip in 1962, Woodley tip in 1975. <1% (1km²). Atlas 2000: [76], [77], [88]

West Berks: Abingdon [49] in 1918, Chilton tip [48] in 1953, Didcot tip [59] in 1962-65, South Hinksey tip [50] in 1965, Aldermaston tip [56] in 1965, Thrupp pits [59] in 1987. Atlas 2000: [59], [50]

¶ **Helianthus** *H. 'Capenoch Star'*, *H. decapetalus* 'Triomphe de Gand', *H. 'Lemon Queen'*, *H. 'Loddon Gold'*, *H. salicifolius*, *H. tuberosus*,

Galinsoga parviflora Cav. *Gallant Soldier* ● th 5

Gardens and waste ground on non-calcareous soils. It spread rapidly following naturalization, but has become less common recently and, in places like London, it is now substantially less frequent than *G. quadriradiata*. Told from the latter by the receptacular scales which are 3-fid (not simple), and the pappus scales lacking a fine terminal projection beyond the divided (fimbriate) edges. The peduncle is much less shaggy than in *G. quadriradiata* but there are abundant glandular hairs. This is now the plant of arable and cultivated garden ground, while *G. quadriradiata* is the plant of pavements.

NVC: OV 14

Silwood Park: arable land in Silwood Bottom, particularly common at the southern end, and following spring or early-summer cultivation (1979-2013). Oak Mead, from the seed bank, a single plant on 20 June 1996 in the first year following cultivation of the grassland in spring 1996. Ashurst Four Acre field, very common below spring-sown oilseed rape on 5 September 1994. In the cultivated plot by the Met Tower in 2000. Very rare from the seedbank in Garden Wood in August 2005 after fencing to exclude deer and rabbits. In the Pound Hill Cultivation Timing Experiment, it is abundant only in the May-cultivated plots, and here it varies greatly from block to block: on 17 September 2006 there was Block A 50%, Block B 15%, Block C 5% and Block D 35% cover. Very common in July-cultivated ground in Silwood Bottom on 22 September 2009 (when no plants of *G. quadriradiata* were found). Locally abundant in Four Acre Field at Ashurst in August 2010 following October 2009 cultivation. Very abundant, and locally dominant on all four Blocks of the Pound Hill Cultivation

Experiment on the May-cultivated plots when assessed on 9 September 2013, growing with *Erodium cicutarium*, *Spergula arvensis* and *Chenopodium album*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	4

Ascot: South Ascot allotments (1965), Silwood Park (1980), Charters Road, Ascot Station.

East Berks: not in Druce. First record from Sutton's nursery in Reading (1948) (RNG), Hurst nursery (1962), Wellington College (1963), Windsor (1966). Erleigh (1975), Swallowfield (1984). Recently at Great Hollands, Jock's Copse, Maidenhead, Cookham village. 2% (1km²). Atlas 2000: all except [78].

West Berks: Mortimer Station [66] in 1957, Pen Barn [59] in 1963, Snelsmore [47] in 1963, South Hinksey [50] in 1963, AWRE Aldermaston [66] in 1986, Kingston Bagpuize House and Abingdon [49] in 2002. Atlas 2000: [38], [39], [47], [49], [40], [56], [59], [50], [66], [67]

Galinsoga quadriradiata Ruiz and Pav. *Shaggy Soldier* ● th 5
Galinsoga parviflora auct., non Cav.
Galinsoga ciliata (Raf.) S.F. Blake

In similar habitats, but much less frequent than *G. parviflora*. Told from it by the receptacular scales which are slender and simple (not 3-lobed), and by the pappus scales which have a long, fine terminal projection. The glandular hairs on the peduncle are twice as long (0.5mm) as in *G. parviflora*. Bowen considered this plant to be "local but spreading rapidly", but its advance has evidently run out of steam.

Silwood Park: local and rare until 2000. One record from a cinder path near the Tennis Court in 1999 and another from the foot of the graveyard at Ashurst in August 2002 following soil disturbance associated with erection of the rabbit fence in spring 2002. Frequent in the fallow at Silwood Bottom in September 2002 following late spring cultivation, but not seen subsequently.

Ascot: no other records.

East Berks: not in Druce. Maidenhead tip (1959), Sunninghill Park (1960), Reading (RNG) in 1960, Whiteknights Park (1962), Remenham (1964), Wellington College (1963), Shinfield Grange (RNG) in 1962, Bears Rails in Windsor Great Park [9572] (1974). Locally common disturbed waste ground in Bracknell [8569] in October 2003. 1% (1km²). Atlas 2000: all except [87]

West Berks: Tilehurst [67] in 1962, Kingston Bagpuize [49] in 1964, Wash Common [46] in 1974, on a path on Crookham Common [519642] in 1985. Common in Abingdon [490969] in 2001. On allotments in Botley [4906] in September 2002. Frequent on waste ground in Wantage [3988] in October 2004. Atlas 2000: [38], [46], [48], [49], [40], [56], [50], [67]

Hemizonia pungens Torrey and Gray *Common Spikeweed* ● th 7 †

West Berks: a grain alien in a chicken run at Moulsoford [58] in 1921 (OXF) and at Didcot [59] in 1927.

Bidens cernua L. *Nodding Bur-marigold* th 7 ↓

Pond-sides, stream-sides and wet places, in small quantity. Told from *B. tripartita* by the leaves tapered but not petiolate, strongly serrate but unlobed. Declining because of pond filling and drainage.

Ascot: no records.

East Berks: Wellington College, Remenham and Aston, Sonning meadows, Arborfield, Coleman's Moor, Blackwater, Sandhurst, between Loddon Bridge and Wokingham, Winkfield, Holyport, Easthampstead, Riseley, Finchampstead, Thatcher's Ford, Hurst Green, Wokingham, Earley, Wargrave, Ruscombe, Windsor, Shottesbrooke. Local, and mostly around Reading in Druce's time. Bowen knew the plant from Riseley, Leighton Park, Whiteknights Park, Finchampstead, Coleman's Moor, Wellington College [8364], Knowl Hill, Bracknell, Winkfield, Virginia Water, Windsor Great Park, Sindlesham [758697], Cookham and Cock Marsh. Commonest to the south of Reading, and rare to the east of 90 or north of 80. Recently it is recorded from Dinton Pastures, Moor Green Lakes nature reserve [8062] in 2001, Cock Marsh [88003 86747], Cookham, Widbrook Common. Four plants near Field Farm on the southern shore of Theale Lakes [66979 70314] found by Bill Helyar on 20 August 2005. 1% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: a distinctly southern distribution, very local in [66] and [67] to the south of Reading, and rare in the Kennet valley, but absent from the whole length of the Thames valley from Lechlade [29] to Reading [67], and from the interior. Hungerford and Inkpen [36], Irish Hill [46], gravel pits at Aldermaston (LAN) and Brimpton [56], Sulhamstead, Stratfield Mortimer and Grazeley [66], Theale (RNG) and Tilehurst [67]. Atlas 2000: [36], [46], [56], [66], [67]

Bidens tripartita L. *Trifid Bur-marigold*

th 7 ↓

Marshy places, pond-sides, ditches and riversides; occasional all along the Thames, but rare elsewhere. Told from *B. cernua* by the lower leaves being distinctly petiolate, with at least one pair of obvious lobes. Declining through drainage of riverside land, and hardworking of river banks. NVC: A 1; OV 29-32; S 23

Ascot: very rare by the lake in Ascot Place in 1998.

East Berks: Aston, Windsor, Sonning, Winkfield, Hurst Green, Waltham, Twyford, Coleman's Moor, Holyport, Bray, Shinford Green, Swinley, Windsor Great Park. Occasional throughout but absent or rare to the east of 90 (as in the old gravel pit at Queens Eyot [912784] and by Virginia Water). Recently at Ascot, Crazies Hill, Frogmill, Shepherds Lane, Hurley Meads, Cookham. In the dry streambed of the flood control channels in East Maidenhead. Moor Green Lakes nature reserve [8062] in 2001. With *B. cernua* near Field Farm [66979 70314] found by Bill Helyar on 20 August 2005. 2% (1km²). Atlas 2000: all except [96]

West Berks: this is the *Bidens* of the Thames valley (cf. *B. cernua*, above), but is also common in [66] and [67] to the south of Reading. Scattered in the Kennet valley, as at Enborne Street [46], Brimpton pit [567652] and by the canal at Theale [6369]. Commonest in the north-west by the R. Cole [29] and by the R. Ock [39]. Atlas 2000: all except [28], [37], [38], [39], [47], [49], [57]

Bidens ferulifolia (Jacq.) DC

• th 6

A popular hanging-basket plant, rarely self-sown on pavements, typically near pubs.

Ascot: on Upper Village Road in Sunninghill, in cracks in the tarmac of the carpark of the council flats (1992-2004).

East Berks: rare on the pavement on the main street of Cookham in September 2002, probably the village most heavily bedecked with hanging baskets in all of Berkshire. <1% (1km²).

West Berks: on waste ground in Shrivenham [2388] in September 2004.

¶ **Bidens** *B. ferulifolia*

Coreopsis grandiflora Hogg ex Sweet *Large-flowered Tickseed* ● th 6 †

East Berks: on the old nursery grounds of Sutton Seeds [733737] in 1979.

Cosmos bipinnatus Cav. *Mexican Aster* ● th 6
Bidens formosa E. Greene

A common garden annual sometimes found as a casual grown from spilled seed. Often grown on allotments in towns. Rather uncommon as an escape, and not naturalised anywhere in Berkshire. A very common alien weed in many warm temperate regions of the world (e.g. forming a solid carpet of mixed colours on roadsides in south-eastern Africa) which may increase in this niche in Britain (see *Verbena bonariensis*).

Silwood Park: on the rubbish dump by the old Orchard in 1999. One plant in the bed between the back of the Header House and the CABI Quarantine Greenhouse on 25 August 2006, growing with other rare annuals like *Agrostemma githago* (origin unknown).

Ascot: pavements near the Duke's Head on Upper Village Road in Sunninghill in October 2003.

East Berks: not in Druce. Casual on rubbish tips and near houses; Reading tip (1962-65). Smallmead tip [7169] in 1971. Recently at Bulmershe, Pine Wood, Bracknell, Old Malt House, Warfield Park, Shepherds Lane, Maidenhead, Cookham village. Self sown on Mellor Walk in Windsor [967767] on 1 October 2005. 1% (1km²). Atlas 2000: all except [78], [97]

West Berks: East Hanney [49] in 1963, South Hinksey tip [50] in 1965. Botley [4906] and Cow Mead allotments [5104] in 2002. Waste ground near the church in Cumnor [4604] and in Shrivenham [2388] in 2004. Atlas 2000: [46], [40], [50]

¶ **Dahlia** *D.* 'Arabian Night', *D.* 'Bednall Beauty', *D.* 'Bishop of Llandaff', *D.* 'David Howard', *D. merckii*, *D.* 'Moonfire', *D.* 'Roxy', *D.* 'Yellow Hammer'

Gaillardia x grandiflora hort. ex Van Houtte *Blanketflower* ● th 6

Silwood Park: long persistent in open ground by The Greenhouses (1971-2004).

East Berks: on the cinder-bed of an old railway at Salisbury Road, Reading [703741] from 1973-80 (OXF). On waste ground at Earley [7571] in August 2002. <1% (1km²).

¶ **Gaillardia** *G.* 'Burgunder', *G.* 'Dazzler', *G.* 'Kobold',

Helenium autumnale L. *Sneezeweed* ● hs 7

Ascot: next to the Chinese take-away on Upper Village Road in Sunninghill in 1971.

East Berks: a rare garden outcast in Langley Common in 1998. Locally abundant on waste ground in Swallowfield [7264] in August 2002. <1% (1km²).

¶ **Helenium** *H.* ‘Butterpat’, *H.* ‘Chipperfield Orange’, *H. hoopesii*, *H.* ‘Moerheim Beauty’, *H.* ‘The Bishop’, *H.* ‘Waldtraut’, *H.* ‘Wyndley’

¶ **Zinnia** *Z. grandiflora*

Eupatorium cannabinum L. *Hemp-agrimony* h 7

Marshes, wet woods, stream-sides, especially in the wooded portion of the Thames valley. Woodland rides, hedge-banks and ditches, on damp soil. Absent from the chalk ridge and from very acid soils in south-east Berkshire. Often locally abundant on canal banks.

Silwood Park: local and rare, with several of its former sites having been shaded out. Pond Field, beneath the willows by the pond in 1980; not seen since. Gunness’s Thicket, uncommon in wet grassland at the lakeside in 1985; not seen since. Cascade Marsh, one clump of 5 stems, just upstream from Cascade Bridge close to the stream-side, growing with *Impatiens capensis*, *Lycopus* and *Scutellaria*; in bud 4 July 1993; still there in 2002. The Lake, on the edge by Silwood Farm, a single plant amongst *Iris* in August 2000. In the electricity sub-station, growing with profuse *Leycesteria formosa* in the car park next to West Block on 20 September 2001. A single large plant by the CABI Poly tunnel in July 2002, and a seedling on a soil heap on the opposite side of the road to Southwood Halls in October 2002.

Ascot: uncommon on Charters Road, Sunningdale Village, Ascot Place, Forest Lodge. On the earth ramp by the railway bridge [906684] at Englemere from 1998-2004.

East Berks: frequent on the banks of the R. Thames all the way from Reading down to Old Windsor, occasional on the chalk in the north, and scattered throughout the Thames valley, but rare in most of the interior, and absent from the Surrey and Hampshire borders in the east and south. Locally abundant in the chalk woods at Bisham. Common on old railway land by Tesco’s superstore in Reading 2000-04. Local and rare on damp roadsides in Bracknell Forest [885663] in 2004. Common on railway ground at Kings Meadows Reading in September 2007 and 2008. 11% (1km²). Atlas 2000: all squares

West Berks: frequent in the Thames valley, occasional in the Kennet valley, but absent from the interior (north of 75 and south of 90). By the R. Pang in Moor Copse Reserve [6373] and common around Pangbourne [67]. Frequent by the railway from Hungerford [36] to Newbury [46]. In the fringing vegetation of the lake in Benham Park [4367]. In the wet parts of Dry Sandford Pit [4699]. Frequent in Reading’s Lake District [66] and [67]. Common on damp waste ground near the railway in Colthrop [5366] in September 2004, and Newbury station car-park [469666] on 24 September August 2005. Atlas 2000: all except [48], [68], [69]

¶ **Eupatorium** *E. ligustrinum*, *E. purpureum* subsp. *maculatum* ‘Atropurpureum’, *E. rugosum*

Cynara cardunculus L. *Globe Artichoke* ● h 6
Cynara scolymus L.

Silwood Park: a remnant of cultivation on the old student allotments in Ashurst Four Acre field and in Silwood Bottom.

East Berks: recently at Barkham Ride, West Whitley, Bulmershe Court, Woodley, Twyford, Wargrave, Altmere. Massive plants, more than 2m tall, on abandoned allotments at Bulmershe in July 2002. 1% (1km²). Atlas 2000: [76], [77], [87]

West Berks: on allotments throughout, as at Botley, Cow Mead, Steventon and Grandpont. Waste ground at Kingston Bagpuize [4098] in July 2003. Atlas 2000: [28], [40], [50]

¶ **Cynara** *C. cardunculus*

¶ **Euryops** *E. acraeus*, *E. pectinatus*

¶ **Liatrix** *L. pycnostachya*, *L. spicata*, *L. spicata* ‘Floristan Weiss’, *L. spicata* ‘Kobold’

Ageratum houstonianum Mill. *Flossflower* ● th 6

This the common blue “powder puff” annual used for edging borders and in municipal bedding schemes. It is occasionally found on waste ground and self-sown in cracks in paving. Another species that is very common as a roadside alien in warm temperate parts of the world (see also *Cosmos bipinnatus* and *Verbena bonariensis*) which might increase with climate warming.

Ascot: Sunninghill Village on pavements (1998-2005). Very rare, five plants from imported topsoil used to landscape the edge of the tarmac road alongside the new Straight Mile [93338 69226] on 31 August 2005.

East Berks: casual on Reading tip (1961). Winnersh, Twyford, College Town, Owlsmoor, Old Malt House, Shottesbrooke. 1% (1km²). Atlas 2000: [77], [86], [87], [96]

West Berks: Atlas 2000: no records, but doubtless under-recorded.

MONOCOTYLEDONS

BUTOMACEAE

Butomus umbellatus L. *Flowering-rush* hel 7 ↓

Margins of rivers and ponds, in small quantity. Local and decreasing. “Leaves of this most elegant aquatic are intermediate between *Sparganium* and *Glyceria*; lighter green and shorter and narrower than *Sparganium*, more yellowish green than *Glyceria maxima*” (Druce). Often planted these days in pond reconstruction projects.

NVC: S 14

Ascot: no records.

East Berks: Loddon, Cookham Down, Quarry Wood, Wargrave, Hurley, Sonning meadows, Albert Bridge Windsor, Bisham, Bray, Arborfield. Wargrave, Cookham Moor. Scattered and rare to the north and west of a line from Maidenhead to Arborfield. Commonest in and by the R. Thames, but absent from the area along the Surrey border in the east and the Hampshire border in the south. Recently at Wargrave, Kennet Mouth, Hurst, Knowl Hill, Temple, Cock Marsh, Widbrook Common. In the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003. Abundant in the

water of the only surviving open pond at Cock Marsh [882868] on 17 June 2008. 1% (1km²). Atlas 2000: all except [78], [96]

West Berks: commonest to the south-west of Reading in [66] and [67], and in the Thames from Wytham down to Pangbourne, but extinct in many of its former stations. By the railway crossing of the R. Cole west of Bourton [215872], by the R. Cole at Coleshill [232938], Wytham ditches [40], Woolhampton [56], Streatley [58], Thrupp, Clifton Hampden and Shillingford [59], Sandford and Kennington Pool [50], Aldermaston Station [66], Burghfield Lock, Calcot, Theale, Pangbourne and Sulham [67]. Atlas 2000: [28], [29], [39], [46], [40], [56], [58], [59], [66], [67], [68]

ALISMATACEAE

Sagittaria sagittifolia L. *Arrowhead*

hyd 7

Slow-flowing stretches of the River Thames and Blackwater River, canals and ponds, and common on muddy beds of streams in the lower valleys. Host to the beetle *Donacia dentata*.

NVC: A 5,6,8,16

Ascot: no records.

East Berks: Reading canal, Sonning, Sandford Mill, Remenham, Cookham, Strand Water. Trilakes, Swallowfield, Loddon Bridge, Arborfield. Rare in the western reaches of the Thames from Reading down to Cookham and in the Blackwater River downstream of Sandhurst. Recently at Wargrave, Henley, Remenham, Loddon Court, Crazies Hill, Shepherd Meadow, Blackwater Station, Widbrook Common, Windsor Castle. In the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003. 1% (1km²). Atlas 2000: all except [96]

West Berks: most records are from the Thames from Wytham down to Reading, and along the Kennet canal. Also in the R. Cole at Coleshill [29], R. Ock at Stanford [39], Newbury [46], east of Abingdon [49], Harts Weir and Wytham meads [40], Thatcham, in the canal at Aldermaston (**LAN**) and Woolhampton [56], Streatley [58], Sutton Courtenay and Long Wittenham [59], Kennington and South Hinksey [50], Ufton Nervet and Sulhamstead [66], in the R. Kennet at Southcote (**RDG**) in 1920, Theale canal, Calcot, Purley and Pangbourne [67]. Atlas 2000: all except [28], [37], [47], [48], [57], [68], [69]

Sagittaria graminea Michaux *Grass-leaved Arrowhead*

• hyd 7

Sagittaria platyphylla (Engelm.) J.G. Smith

A garden plant with small flowers (1.2cm dia.) in 5-7 whorls; female flowers distinctly pedicellate with sepals reflexed. A very rare outcast.

East Berks: by an old gravel pit at Trilakes near Sandhurst (**RNG**) [829614] in its only British station. First recorded in 1975. <1% (1km²).

HYDROCHARITACEAE

Baldellia ranunculoides (L.) Parl. *Lesser Water-plantain*

hel 5 †

Echinodorus ranunculoides

Alisma ranunculoides L.

On mud in ditches and by ponds. Long extinct.
NVC: A 22

East Berks: very rare. Hurst Green (**BM**) in 1873, Grazeley (1915).

West Berks: Newbury [46] in 1809, Cothill fen [49] from 1897 to 1978.

Alisma plantago-aquatica L. *Water-plantain*

hyd 6

Sides of rivers, streams, ponds, canals, ditches and wet places. Common throughout. Shallow ponds, ditches and margins of rivers and canals, on nutrient-rich mud. Occasional, but absent from the chalk. Host to the beetle *Hydronomus alismatis*.

NVC: A 2,9,20; OV 30,31,35; S 5,8,10,12-15,18,19,22

Silwood Park: The Lake, in the muddy delta of the southern inflow stream. Cascade Marsh, locally frequent in the shade or the alder woodland. Guinness's Thicket, in the inflow streams. The Swamp, a few plants on mud at the lake edge beneath alder in 1980 and 1989. By the Outflow Stream at Heronsbrook Cottage. Japanese Garden, in the open water of the pond; one plant in June 1980, but hundreds by the time they were dredged out in winter 2000-01. The Willows, Farm Road. After the water level in the Fire Tank fell, it quickly became established (June 2001), but had gone once the water level rose again (May 2003).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	4

Ascot: Swinley brick pits, Kings Beeches, Charters Road, Sunningdale Park, Frostfarm Plantation, North Ascot, Ascot Place, Blacknest Park, South Forest, Leiper Hill, scattered on the southern shore of Virginia Water.

East Berks: wetlands throughout; abundant on the edges of Strand Water [892844]. Frequent over much of the species-rich wet ground at Cock Marsh [881868]. 15% (1km²). Atlas 2000: all squares

West Berks: occasional throughout the Thames and Kennet valleys but absent from the whole of the interior (north of 70 and south of 90). Common in Reading's Lake District [66] and [67]. Atlas 2000: all except [48], [69]

Alisma lanceolatum With. *Narrow-leaved Water-plantain*

hyd 6 ↓

Sides of rivers, streams, ponds, and canals, ditches and wet places on nutrient-rich mud; scattered throughout. Told from *A. plantago-aquatica* by its leaves which are linear with cuneate bases (not elliptic with subcordate or rounded bases). Close inspection will show that the styles arise in the upper half of the fruit (not half way up).

Ascot: no records.

East Berks: between Wokingham and Sandford Mill, Hurst, Winkfield, Ambarrow, Clewer, Bracknell, Windsor Great Park. Reading, Riseley, Winkfield. Grazeley, on the Surrey side of Virginia Water. Found only to the south of 75, and extinct at most of its former sites. Recently at Coley, Stanlake Park, Waltham St Lawrence [835766], East Maidenhead. < 1% (1km²). Atlas 2000: [76], [77], [87], [97]

West Berks: scattered in the north, and also to the south of Reading, but absent over most of the area. By the R. Cole [28], Letcombe Bassett [38], Pucketty Farm [39], Grove [49], Longworth [39], Appleton, east of Whitley Copse (**OXF**) in 1965 and Wytham meads [40], Heath End [583629], South Hinksey [50], Burghfield (**RDG**) [67] in 1919. Atlas 2000: [28], [38], [39], [46], [49], [40], [56], [59], [50], [66], [67]

Damasonium alisma Mill. *Starfruit*
Alisma damasonium L.

hyd 6 †

Extinct. Formerly on margins of acid ponds in still or stagnant water on the London Clay.

East Berks: native on Winkfield Plain [9273] in 1800 and Bracknell [8769] in 1834. “Many of the ponds are too much visited by geese to allow much vegetation. At Bracknell, the large pond shown on the Ordnance Map, is now drained. I still have hopes of finding this plant in Berkshire” (Druce). Long extinct according to Bowen.

West Berks: Southcote [6971] in 1809. There are plans to introduce the plant to the ponds newly created (1999) at Greenham Common [56]. On 26 November 2006, staff from Kew Gardens, Wakehurst Place, Plantlife International, Natural England and West Berks County Council sowed 300 seeds from the Millennium Seed Bank and planted 60 seedling plugs (geminated and grown on at Wakehurst from Seed Bank stocks) into 5 ponds; two ponds received seeds only, two received plugs only and one got both seeds and seedlings. Two plants were found in 2007 but none subsequently.

Hydrocharis morsus-ranae L. *Frogbit*

hyd 7 ↓

Ditches, ponds, slow stagnant streams near the R. Thames; “locally common” according to Druce, but “very local and decreasing” by Bowen’s time. Now rare, and extinct at many of its former stations. NVC: A 1,3,11; S 8,14,16

Ascot: no records.

East Berks: Sonning, Cock Marsh at the foot of Winter Hill, Wargrave, Windsor (**E**) in 1897, Windsor Great Park, Hennerton [7880], Remenham, Hurley, Marlow, in the moat at Whitley Park, Bulmarsh, Twyford, Bisham, Bray, Ruscombe, Old Windsor. Henley reach (1951), Strand Castle mere (1959). Formerly along the whole length of the Thames from Reading to Old Windsor, but now extinct at all but a handful of locations. < 1 % (1km²). Atlas 2000: [77], [78], [88]

West Berks: formerly in the Thames from Wytham to Abingdon and from Pangbourne to Reading, but extinct at most of its former stations. Abingdon [49], Wytham [40], Moulsoford [58], Radley and Thrupp [59], South Hinksey and Kennington [50], in ditches on Littlejohns Farm (**LAN**) in 1957, Pangbourne and Southcote [67]. Last recorded at Littlejohns Farm [6974] in 1982 (**RNG**). It is recorded from the Oxfordshire bank of the Thames at [4808], [5006], [5007] and [5008]. Atlas 2000: [49], [59], [67]

Stratiotes aloides L. *Water-soldier*

● hyd 6 ↓

Small streams, ditches and ornamental lakes, very local and rare. NVC: A 11

Ascot: no records.

East Berks: Whiteknights Park lake, probably planted (1964). Old brickpits at Pinkneys Green [862830] in 1984. Recently at Dinton Pastures, Pine Wood. < 1 % (1km²). Atlas 2000: [77], [88]

West Berks: in a ditch opposite Nuneham Park [59] in 1860 (**OXF**), Aldermaston Park [66] in 1897, Abingdon [49] in 1899 (**OXF**) and 1955, planted at Jarn Mound (1933), Thrupp [5197] in 1949, Little Wittenham reserve [59] in 1988, Kennington pits [50] in 1973, in a former swimming pool at Foxcombe Wood [489018] in 1990. Atlas 2000: [29], [49], [40], [59], [50]

APONOGETONACEAE

Elodea canadensis Michx. *Canadian Waterweed*

• hyd 5 ↓

Anacharis alsinastrum Bab.

Anacharis canadensis (Michaux) Planchon

Ponds, streams and ditches, even in shade. Locally abundant, especially in south Berkshire. “Less common in our larger streams than formerly, reaching maximum abundance in the period 1866-1874”. Druce thought the decline due “probably from the absence of the male plant”. Introduced to the Oxford Botanic Garden in 1849. By 1859 “it has already rendered the Thames in some parts almost impassable”. This species is still declining in the 21st century as *E. nuttallii* is increasing, but the mechanism is unknown.

NVC: A 1,3,5,7-12,15,17,19,20,23; S 8,13,22

Silwood Park: Japanese Garden, occasional in the pond in 1980, but much less abundant than *Ceratophyllum*. In the small pond outside the Refectory 1985-95 but gone following pond cleaning.

Ascot: local and rare. In a small pond on Coronation Road.

East Berks: common to the south the Thames at Reading, but rare elsewhere and absent from large areas of the interior. In the Blackwater River at Finchampstead [797623] and Farley Hill [746634] and a gravel pit at Charvil [7875]. 1% (1km²). Atlas 2000: all except [78]

West Berks: first recorded from the Thames south of Oxford in 1853. Commonest in the Kennet valley from Hungerford [36] to Reading [67], and in the Northern Loop. Absent or rare in the interior (north of 75 and south of 95). Atlas 2000: all except [48], [68], [69]

Elodea nuttallii (Planch.) H. St. John *Nuttall's Waterweed*

• hyd 5 ↑

Anacharis nuttallii Planchon

Hydrilla lithuanica Dandy, pro parte

Our most abundant aquatic plant in 2002. First recorded in Oxfordshire in 1966. “Another aquarists’ introduction from N America, especially into fishing lakes. It is increasing rapidly, colonizing many ponds, streams and stretches of some rivers and appears likely to undo *E. canadensis*. In ponds it can oust many more ecologically desirable and attractive plants” (Brewis *et al.* 1996). Told from *E. canadensis* by the leaf tips: they are more pointy in *E. nuttallii* (acute to acuminate, rather than obtuse to subacute in *E. canadensis*). The leaves are also narrower just (0.5mm) behind the apex (0.2-0.7mm wide rather than 0.8-2.3mm). The jizz is of narrow, finger-like stems (not chubby fingers) with recurved leaves. Told from *E. callitrichoides* by the larger marginal teeth (0.1-0.15mm rather than 0.05-0.1mm) and larger sepals (3-4.3mm rather than 1.6-2.5mm) of the latter.

NVC: A 5,11,12,23

Silwood Park: in the pond of the Japanese Garden in 2002, having replaced *E. canadensis*, but it is still much less abundant there than *Ceratophyllum demersum*.

Ascot: locally common in Englemere Pond and Sole's Pond in 2002.

East Berks: not separated by Druce or Bowen. In a gravel pit at Lands End Twyford [781749] in 1970 (RNG), and a gravel pit at Sandhurst [8361] in 1987. Common in Heath Lake [829653] in 1995. Now the commonest aquatic plant in the R. Thames. In the outflow stream of Lower Lake at Sandhurst. 3% (1km²). Atlas 2000: all squares

West Berks: Hinksey Park [4902] in 1975 (RNG), gravel pits at Thrupp [5297] in 1987 (RNG), and at Radley [521972] in 1990. Frequent in old gravel pits in Reading's Lake District [66] and [67] in 2002. Atlas 2000: [59], [66], [67]

[Elodea callitrichoides (Rich.) Casp. *South American Waterweed* ● hyd 5
Anacharis callitrichoides Rich.
Elodea ernstiae H. St. John

No Berkshire records, but worth looking for in places where people empty out their overgrown aquaria (soon to become an illegal act under the revised Wildlife and Countryside Act as "the intentional introduction of an alien species into the wild"). See *E. nuttallii*, above.

Lagarosiphon major (Ridl.) Moss ex V.A. Wager *Curly Waterweed* ● hyd 5
Lagarosiphon muscoides Harvey var. major Ridley
Elodea crispa hort.

"A commonly used aquarists' weed which can dominate a small pond, but does not seem to colonise streams" (Brewis *et al.* 1996). Our plants are all females, spread by vegetative means.

Ascot: planted in the ornamental pond [9268] in the woodland to the east of Ascot Station (OXF) in 1975. Still there in Sole's Pond in 1999.

East Berks: locally frequent in the inflow stream to Heath Lake [829653] in 1994. In new ponds on the golf course south of Knowl Hill [825786] in July 2003.

West Berks: Hitchcopse pit [49], Abbey Fishponds [59], in disused gravel pits at Radley [521972] from 1990-2004, [5096] in 1991 and [5296] in 1994. Drayton Millennium Pond [4894] in 2001.

Aponogeton distachyos L.f. *Cape-pondweed* ● hyd 5

Very rare garden ornamental, sometimes planted in wild-looking places.

Ascot: one clump, long-persistent in the shady eastern limb of Sole's Pond at the bottom of the hill, east of Ascot Station. There in 1979, and still there, flowering on 27 June 2001 and 28 May 2002.

East Berks: introduced to a pond (1967) in the Queen's garden at Frogmore [9775]; still there in 2003.

SCHEUCHZERIACEAE

Triglochin palustre L. *Marsh Arrowgrass*

hel 6 ↓

Marshes, fens and wet meadows, mostly in the Thames valley. Much reduced in distribution and abundance through drainage.

NVC: M 13,22; MG 13

Ascot: no records.

East Berks: Bisham, Wargrave, very fine in Sonning meadows, Coleman's Moor. Hurley, Cock Marsh. Now confined to the western reaches of the Thames from Reading (**LAN**) downstream to Cock Marsh and Shepherd Meadow at Camberley. < 1 % (1km²). Atlas 2000: [86], [88]

West Berks: commonest in the Northern Loop as in Wytham Meads, and extinct at several of its former stations in the Thames Valley. Very local in the extreme western parts of the Kennet valley as at Freeman's Marsh [3368], Rack Marsh and Hungerford Park [372673], Buckland Marsh [3300] in 2002. Still in an ancient wet pasture at Didcot [512910], Wytham Meads Ditches [4609] and on Frilford Heath golf course, north of the fen with 5 flowering on 7 September 2008 [4417 9847]. Atlas 2000: [36], [37], [39], [49], [40], [59], [50], [67]

POTAMOGETONACEAE

Potamogeton natans L. *Broad-leaved Pondweed*

hyd 5

Ponds, lakes and gravel pits, in nutrient-rich and often calcareous water; common and generally distributed except over the heathy tracts, where it is replaced by *P. polygonifolius*. Occasional but absent from most of the chalk and northern clays. The floating leaves have an unmistakable hinge-like joint at junction of petiole.

NVC: A 2,7,8,9,10,11,15,19,20,24; S 4,8,13,14,15,19

Silwood Park: on the open water of The Lake, and in the ornamental ponds in the Japanese Garden and the Lily Pond.

East Berks: plentiful in Virginia Water, Bracknell, etc., and abundant in the Thames. Binfield (**BM**) in 1817. In Lower Lake at Sandhurst [8660] in the v.c.22 part. Moor Green Lakes nature reserve [8062] in 2001. 6% (1km²). Atlas 2000: [76], [77], [86], [88], [96]

West Berks: plentiful in the heathy parts of the Kennet valley and in the Northern Loop but absent from the interior (north on 75 and south of 90). Atlas 2000: [28], [29], [36], [46], [49], [40], [56], [57], [59], [50], [66]

Potamogeton polygonifolius Pourr. *Bog Pondweed*

hyd 5

On wet heathland, in acid ponds, streams, ditches, wet sphagnum bogs and pools; abundant where it is found. Occasional in south Berkshire, and decreasing. Leaves opaque and mostly floating with cordate or rounded bases. Told from *P. natans* by the lack of that species' distinct hinge-like joint at the junction with the petiole.

NVC: A 7,11,24; M 21; S 4,8,12,19

Ascot: locally common on the margin of Englemere Pond and at Swinley brick pits in ferruginous, acid seeps and drains. In the ditch at the northern end of Ascot Racecourse. Not in Silwood Park.

East Berks: Cookham (**BM**) in 1840, Wokingham, Loddon river, Virginia Water, Bulmarsh, Bearwood, and all over the heaths. Long Moor, Earley, Wellington College, Owlsmoor, Lower Star Post, Mill Pond, dominating stretches of the Wish Stream through Wishmoor Bottom, Tower Hill, Heath Pool, Finchampstead [8163]. 1% (1km²). Atlas 2000: [86], [96], [97]

West Berks: restricted to the acid, south-eastern heaths; extinct in the Northern Loop (formerly near South Hinksey [50]). Inkpen Common [387642], Greenham Common and Hamstead Marshall [46], Snelsmore Common and Hermitage [47], Crookham Common, Aldermaston, Heath End and Bucklebury Common [56], Ufton Park and Burghfield [66]. Atlas 2000: [28], [36], [47], [56], [66]

Potamogeton coloratus Hornem. *Fen Pondweed* hyd 6

A local speciality of shallow pools in base-rich but nutrient poor pools (its headquarters are in the fens of East Anglia). Susceptible to atmospheric eutrophication, even in nature reserves like Cothill Fen. Grows with *Chara hispida* and *Utricularia neglecta* (the Cothill record for the latter species is unconfirmed, but well worth looking for).

NVC: A 5; M 13

East Berks: no records.

West Berks: pools of stagnant water in boggy places in calcareous fens, very local. Cothill fen (**RNG**) [4698] and Cothill pit [466995], Barrow Farm Fen [469977] and the pond in Dry Sandford Pit [467966]. Atlas 2000: [49]

Potamogeton nodosus Poir. *Loddon Pondweed* hyd 8 ↓

A local speciality and *Red Data Book* species that grows in calcareous and moderately eutrophic rivers in both shallow and relatively deep water, where the flow is relatively rapid and the water is well aerated (e.g. downstream of weirs and sluices). Associated species include *Elodea nuttallii*, *Lemna minor*, *Myriophyllum spicatum*, *Nuphar lutea*, *Potamogeton crispus*, *P. pectinatus*, *Sagittaria sagittifolia*, *Schoenoplectus lacustris* and *Sparganium emersum*. Most leaves submerged with petiole at least half as long as blade, floating leaves cuneate (not rounded or cordate).

NVC: S 4

East Berks: discovered as new to Britain by Druce in 1893. Locally frequent in R. Loddon, occasional in the lower Thames. All the way from Stanford End to Wargrave, Hurley, Bisham, Cliveden reach (**BIRM**) in 1930, Hurley Lock (**BM**) and Bisham (**BM**) in 1940. It is also known pre-1940s from the R. Thames at Shiplake Station, Hurley, Bisham, Cliveden reach (**OXF**). Not seen since 1941 in the Thames, presumably as a result of eutrophication and boat traffic. Still at several stations in [76] and [77] along the eponymous R. Loddon, including Stanford End Mill (**LAN**), Swallowfield, Kings Bridge [716648], Moor Copse Arborfield, Shinfield (**OXF**), Earley, Sindlesham Mill (**RNG**), Winnersh, Woodley (**RNG**), Sandford Mill, Whistley Mill (**OXF**) and Chervil Farm. Found in July 2002 in the R. Thames at Wargrave [779797], but the detached leaf could easily have floated down from the nearby Loddon Mouth. < 1 % (1km²). Atlas 2000: [76], [77]

West Berks: no records.

Potamogeton lucens L. *Shining Pondweed* hyd 6 ↓

Rivers, canals and ponds, in flowing calcareous water. Once abundant, as Druce reports: “abundant and generally distributed in our larger streams”, but “only locally frequent in clear water” by Bowen’s time. All leaves petiolate, and more than 12cm, petiole unwinged near base.
NVC: A 2,11,15; S 8

East Berks: Woodley (**LAN**) in 1959, Swallowfield, Sandford Mill, Loddon, Maidenhead, Cliveden reach. Rare in the R. Loddon (**OXF** and **BM**) and extinct in the R. Thames north of Maidenhead (**BM**, last seen in 1949). J. E. Dandy made many collections from the Thames between 1932 and 1940 (**BM**). < 1 % (1km²). Atlas 2000: [76], [88]

West Berks: occasional in the R. Kennet and the Kennet and Avon canal from Hungerford [36] (**BM**) down to Reading [67], and in the Thames from Wytham [40] to Abingdon [59]. St John’s Lock at Buscot (**BM**) [2298] in 1965, West Hagbourne Moor [58] in 1992, Ufton Bridge (**BM**) [6168] in 1940, Basildon (**BM**) [6179] in 1938. Atlas 2000: [46], [40], [56], [50]

Potamogeton x salicifolius Wulfg. *Willow-leaved Pondweed* = **P. lucens x P. perfoliatus**

East Berks: from the Thames in Reading (**RNG**) in 1921, but not seen since.

West Berks: in the Kennet and Avon canal at Hungerford [36], Newbury [46], Sulhamstead [66] and Burghfield and Theale [67], and from the R. Kennet at Ufton Bridge [6168] all with specimens (**BM**) from the 1940s but not seen recently.

Potamogeton alpinus Balb. *Red Pondweed* hyd 6 ↓

Slow rivers and lakes, uncommon. Streams, pools and ponds; rare and local. Leaves narrowed, not clasping; stem round, all leaves with more than 7 veins.
NVC: A 11

East Berks: Before 1900 it was found in the R. Loddon from Stratfield Saye (**OXF**) [7062], past Shinfield (**OXF**) [7468], Sandford Mill (**OXF**) [7873] to Loddon Bridge at Twyford (**BM**) [7876], Virginia Water (**OXF**) in 1893. Last seen at Shinfield in 1933.

West Berks: where the R. Cole meets the R. Thames at King’s Bridge, Buscot [2397] (**OXF** and **BM**) in 1947 but not seen since then.

Potamogeton praelongus Wulfen *Long-stalked Pondweed* hyd 5 ↓
Potamogeton salicifolius auct., non Wulfg.

A local speciality, growing in rivers and canals in water at least 1m deep (it can be dominant at depths below 1.5-3m), often found with *P. perfoliatus*. Declined dramatically since 1950, probably as a result of eutrophication. Some leaves rounded, more or less clasping, stipules conspicuous (>1cm), leaves > 10cm.
NVC: A 11

East Berks: in the Thames at Bisham (**BM**) in 1873, Aston Ferry, Hurley, Bray. “R. Thames and its backwaters; local and decreasing” (**BM**) (Druce). Extinct in the R. Thames, last seen at Wargrave in 1944 (**RNG**). Never recorded from the other river systems.

West Berks: at Appleton Lower Common, Wytham meads, South Hinksey (**BM**) and Kennington. Extinct in the Thames from Abingdon [59] down to Reading [67], and at its two former stations in the

interior from the Wiltshire and Berkshire canal at Wantage [48] (**OXF**) and Uffington [38] where it was known before 1900; Abingdon (**K**) [49] in 1882. Never recorded from the Kennet valley. Last seen at Kennington [5203] in 1973.

Potamogeton perfoliatus L. *Perfoliate Pondweed* hyd 6 ↓

Ponds, rivers, ditches, canals and streams in clear calcareous water; “common and widely distributed” in Druce’s time but “now much reduced” (Bowen). Stipules inconspicuous, stem round, leaves more than 2cm wide.

NVC: A 8,10,11,12,15,23; S 8

East Berks: Cookham Reach (**BM**) in 1899, Reading, Whistley Mill. Only ever recorded from the vicinity of Reading. Last noted from a eutrophic stream at Smallmead (1972). < 1 % (1km²). Atlas 2000: [76]

West Berks: in the R. Cole [204976], Inglesham [29], the canal at Hungerford (**BM**) [36], Enborne and Newbury [46], in the R. Lambourn at Hunts Green south of Boxford [434702], in the Wiltshire and Berkshire canal at Abingdon (**OXF**) [49] in 1892, Newbridge [40], canal at Aldermaston [56] (**LAN**), Streatley (**BM**) [58], Radley [59], South Hinksey [50], Burghfield (**BM**), Aldermaston Wharf and Sulhamstead [66], Pangbourne, Theale, Calcot, Purley and Basildon [67]. Atlas 2000: [29], [46], [47], [40], [56], [50]

Potamogeton friesii Rupr. *Flat-stalked Pondweed* hyd 6 ↓

Ponds, canals and shallow streams with calcareous water; local. Still or slow moving water, growing with *Ceratophyllum demersum*, *P. crispus*, *P. pectinatus*, *P. perfoliatus*, *P. pusillus* and *Ranunculus circinatus*. Worth looking for as a colonist of flooded gravel pits. Stems not fan-like; leaves less than 3.5mm wide, entire and mucronate.

NVC: A 11

East Berks: extinct; only ever known from a single station at Cookham (**OXF**) in 1901. Atlas 2000: no records.

West Berks: the canal at Hungerford [3368] (**OXF**) (last seen 1946) and Newbury [46] (**BM**), Abingdon (**BM**) [49], Moulsoford (**BM**) [58], a pool by the railway at South Hinksey [50] (**BM**) (last seen here (**OXF**) in 1975). Atlas 2000: [46], [50]

Potamogeton pusillus L. *Lesser Pondweed* hyd 6

Potamogeton trichoides auct., non Cham. & Schldl.

Potamogeton panormitanus Biv.

Potamogeton friesii auct., non Rupr.

The commonest pondweed in disused gravel pits, also found in rivers, ditches, ponds, where it is found of slow-running or stagnant water. Uncommon but probably overlooked and likely to be mis-recorded for *P. berchtoldii* (see below). In *P. pusillus* the stipule is fused into a tube, not merely wrapped round the adjacent leaf base. Leaves abruptly mucronate, between 1.0mm and 1.8mm wide, not rigid.

NVC: A 8,11

East Berks: Wargrave, Windsor, Bray, Haines Hill, Haws Hill. Woodley pit (**BM**), Twyford pit (**BM**), Cookham Moor, Thames at Cliveden (**BM**) in the 1960s. In the old gravel pits at Trilakes west of Sandhurst [829614] in 1975 (**OXF**). Colebrook Lake North [8062] in 1991. Still occasional in Heath

Lake [829652] (but see *P. berchtoldii* below), Lower Lake at Sandhurst [8660] (but in the v.c.17 part), and in a backwater of the Thames at Hurley [824841] in 2002. 1 % (1km²). Atlas 2000: [86], [88]

West Berks: Stanford-in-the-vale pit [327940]. Wytham [40], Westfield [539925] (all **BM**). Recent records from Theale (**BM**) [67] Pingewood [66] gravel pits, and in Reading's Lake District [6870] and [6970] in 2002. Atlas 2000: [59], [50], [67]

Potamogeton obtusifolius Mert. & W.D.J. Koch *Blunt-leaved Pondweed* hyd 6 ↓

Lakes and gravel pits with acid water; locally frequent in east Berkshire. Broad, grass-like leaves forming fan-like sprays; stipules not fused into a tube around the stem.
NVC: A 7,8,10,11,13,23,24

East Berks: Druce had trouble with the Bulmarsh site, writing: "I have not seen the plant, as the owner of the property refused me permission to go over his estate", rather common in some parts of Virginia Water. Bearwood (1962-73), Woodley pits (1962), Bulmarsh (1965), South Lake (**BM**) 1965-72, Wokingham (1966), Virginia Water (**BM** and **OXF**) 1893-1931. Stud Green [884776] in 1966, Titness Park [9568] in 1974, east of Yateley Bridge (**OXF**) [828613] in 1975, gravel pits at Sandhurst [828613] in 1975, Wellington College [8364] in 1986. Still occurs at low density in Heath Lake [829652] mixed with *Elodea nuttallii*. In Upper and Lower Lakes at Sandhurst (in both v.c.17 and v.c.22) [8660] in July 2002. Locally plentiful in one place on the west side of Colebrook South Lake [8062] in Moor Green Lakes nature reserve in 2002. 1 % (1km²). Atlas 2000: [76], [86], [87]

West Berks: Atlas 2000: [46]

Potamogeton berchtoldii Fieber *Small Pondweed* hyd 6
Potamogeton pusillus auct., non L.
Potamogeton friesii auct., non Rupr.
Potamogeton trinervius sensu Dandy, pro parte, non G. Fischer

Lakes, reservoirs, ponds, rivers, streams, canals, ditches and disused mineral workings in a variety of base-rich or base-poor mesotrophic or eutrophic water. Locally frequent in the Thames valley. Stipules not fused into a tube but forming a kind of long, clasping ligule, wrapped around the leaf base but open right to the base, leaves more than 1mm wide (often closer to 2mm), fruits not warty near base. Under-recorded in the past, being taken for *P. pusillus* where the base of the ligule is fused into a closed tube.
NVC: A 7,8,11,23,24

Ascot: locally frequent in the Marist Convent pond at Frognall [941682] in shallow water about 4m out from the shading birch trees. Known from 1971 to 2005 but never recorded across the road in Silwood Park.

East Berks: Woodley pit (**BM**), Sonning meads, Cliveden Reach (**BM**), Virginia Water. Rare in the Thames valley, with two records from the Blackwater River at Swallowfield [734645] and the 'Bathing Pool' at Sandhurst [867613]. Still in Lower Lake, Sandhurst [8660] in July 2002, but commonest in the Surrey (v.c.17) part. Moor Green Lakes nature reserve [8062] in 2001. Locally abundant in the shallows all around Heath Lake [829653] and washed up like seaweed on the shore in October 2005. 1 % (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: occasional in the Kennet valley, much less common in the Thames valley. In the R. Cole below Friars Hill (**BM**) [2290] in 1947. In the canal at Hungerford (**BM**) [36], Newbury (**BM**) and Hamstead Marshall [46], Frilford Heath golf course (**BM**) and Abingdon Common [49], Lashford Lane, Swinford Bridge and Eynsham (**OXF**) [40], Heath End, Thatcham pits and Aldermaston (**LAN**) [56], Sutton Courtenay (**BM**), Didcot, Pumney gravel pit (**OXF**) and Radley pit [59], Kennington (**OXF**) [50], Burghfield (**BM**) and Sulhamstead [66]. Atlas 2000: [36], [46], [49], [40], [59]

Potamogeton trichoides Cham. & Schltl. *Hairlike Pondweed* hyd 6 ↓

A local speciality of still, shallow water over soft inorganic substrates. It grows alone, mixed with *P. pusillus*, or in dense vegetation like *Elodea nuttallii*. Stipules not fused into a tube, leaves less than 1mm wide, fruits warty near base.

NVC: A 11

East Berks: not in Druce. Strand Ditch in 1938-40 [8985] (**BM**) and White Brook in 1939 [9083] (**BM**) at Cookham. Moor Green Lakes [807625] in 2001.

West Berks: gravel pit at Brimpton [567652] in 1986, and in Reading's Lake District [6970] in 2002.

Potamogeton compressus L. *Grass-wrack Pondweed* hyd 6 †

Extinct. Formerly in rivers and canals; locally common in Druce's time. Leaves mucronate with 5 main veins (2 submarginal); difficult to separate from *P. friesii*. Intolerant of shade and of disturbance by boat traffic.

NVC: A 11

East Berks: near Sonning, Bray, Windsor. R. Thames and its backwaters; rare and decreasing. Last seen at Wargrave [7878] (**RNG**) in 1944, Cliveden Reach [9085] (**BM**) in 1940. Not seen since then.

West Berks: formerly in several sites along the R Thames between Oxford and Reading; Abingdon (**RNG** and **OXF**) [4996] in 1882, in the old canal at Wantage (**OXF**) [3987] in 1894, Sandford Lasher (**OXF**) in 1885, Culham pool (**RNG**) [59] in 1935 and Iffley Lock (**BM**) [5203] in 1943, a backwater at Basildon (**BM**) [6178] in 1939. Not seen since. Extinct at its other 5 19th century stations in the Thames valley. Never recorded from the Kennet valley.

Potamogeton crispus L. *Curled Pondweed* hyd 5

Streams, ponds and gravel pits with nutrient-rich water; rather common. One of the few pondweeds with plenty of recent records, presumably because it is more tolerant of water pollution than the other species (and, no doubt, because it is easy to identify). It can survive virtual burial by a blanket of *Lemna minor* and *L. gibba*. Its unmistakable leaves are undulate and minutely serrate.

NVC: A 3,8,11,15,17,23

Ascot: no records.

East Berks: Loddon, Windsor, Wargrave, Shurlock Row, Shottesbrooke, Virginia Water, Spencer's Wood Common, Winkfield, Arborfield, Sandhurst. Ambarrow, Wokingham, Winkfield, White Brook on Cookham Moor (**BM**) in 1939, Windsor Great Park, Bearwood. Common in the outflows of the lakes on Billingbear golf course [8272] in April 2003. 2 % (1km²). Atlas 2000: [76], [86], [87]

West Berks: occasional in the Thames and Kennet valleys but absent from the interior. Atlas 2000: [28], [38], [39], [46], [47], [49], [40], [56], [58], [59], [66]

Potamogeton pectinatus L. *Fennel Pondweed*

hyd 5

Rivers, ponds, canals and lakes, in slow-moving, nutrient-rich water. Locally frequent or abundant. It tolerates disturbance in navigable waterways and is a frequent colonist of disused gravel pits, growing with *Elodea nuttallii*, *Myriophyllum spicatum*, *P. crispus*, *P. pusillus* and *Zannichellia palustris*. This is the only other pondweed with plenty of recent records (see *P. crispus*, above). It has a grass-like sheath and blade (the stipules are fused into a tube around the stem).

NVC: A 1,2,5,8,11,12,15,16,17,19,21; S 13

East Berks: in the Thames at Windsor, Cliveden Reach (**BM**) in 1938, and the Loddon at Sandford Mill. Occasional in the south and west of the area but it is not found in most of the Thames valley (it is very rare to the north of 80) or to the east of 90. Near Norfolk Farm in Windsor Great Park (**RNG**) in 1931. Recent records from Stanford End Mill [7063], Sindlesham Mill [771705] and St Patrick's stream on the R. Loddon [773774] and from Jouldern's Ford [746634] on the Blackwater River. In a backwater at Hurley [825842] in July 2002. 1 % (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: occasional in the Thames and Kennet valleys but absent from the interior. Commonest in the Thames from Lechlade down to Abingdon; e.g. Tadpole Bridge (**OXF**) [39]. In the R. Cole [2090] and [2094]. Little Wittenham [59]. In Reading's Lake District [6870] in July 2002. Atlas 2000: [29], [36], [46], [49], [40], [56], [58], [59], [50], [66], [67]

Groenlandia densa (L.) Fourr. *Opposite-leaved Pondweed*

hyd 5 ↓

Potamogeton densus L.

Shallow ditches in fens and water meadows, canals and streams; "locally common" in Druce's time but "uncommon and decreasing" in Bowen's. Known at once by its opposite (not alternate) leaves.

NVC: A 12; S 14

East Berks: Sonning Meadows (**RDG**) in 1931, Shurlock Row, Wargrave, Virginia Water (1897), Bisham, in the White Brook on Cookham Moor (**BM**) in 1939 and 1958. Rare in the western reaches of the Thames valley, absent or extinct elsewhere. < 1 % (1km²). Atlas 2000: [77]

West Berks: now found scattered in the Kennet valley and in the Thames valley between Abingdon and Pangbourne. Extinct at Ashbury, Bishopstone mill pond and Acorn Bridge, South Marston [28] where it was last seen in 1932. Recent records from the R. Cole [2086], Inglesham [29], Hungerford meads (**BM**) and Kintbury (**K**) [36], the canal at Newbury and Hamstead Marshall [46], in the R. Lambourn at Boxford [429708], canal at Thatcham [5265], Hagbourne Moor [533875] (**BM**), shallow pits at Pumney [5397], in the R. Pang at Bradfield [6072]. It is extinct at 9 of the stations cited by Druce, mostly from the interior. Atlas 2000: [28], [29], [36], [46], [58], [59]

ZANNICHELLIACEAE

Zannichellia palustris L. *Horned Pondweed*

hyd 5 ↓

Zannichellia pedunculata Reichb.

Zannichellia gibberosa Reichb.

Rivers, streams, pools and gravel pits; locally frequent, decreasing or overlooked. An inconspicuous, grass-like aquatic plant of wide distribution.

NVC: A 1,3,8,11,12,21

East Berks: in the Thames, sparingly from Reading, through Hurley and Bisham, down to Old Windsor. Ponds at Windsor, roadside pond near the paper mill at Wokingham, Shottesbrooke, Whistley Green, pond near Knowl Hill. Shinfield, Whiteknights Park, Cookham Moor. Sandhurst [829614], Bearwood [7768]. 2 % (1km²). Atlas 2000: [76], [77], [86], [88], [97]

West Berks: in the R. Cole near Lowerfield Wood [218879], Coleshill [29], East Court and Hungerford meads [36], Leverton [37], Letcombe Brook [38], in the R. Lambourn at Hunts Green [436701] and Shaw [475683], Caldecot, Steventon and Cothill [49], Newbridge, Bablockhythe and Filchampstead [40], Turners Green [533689], Hagbourne Moor and a pond at Fulscot Copse [58], in a railway ditch near Didcot Station, Wittenham pits and Pumney pits [59], and in Reading's Lake District [6969] in July 2002. In the R. Kennet at [3568] and [4266] in 2006 (D. Broughton). Atlas 2000: all except [39], [48], [57], [50], [66], [67], [68], [69]

ARECACEAE

¶ **Trachycarpus** *T. fortunei*

Phoenix dactylifera L. *Date Palm*

• mm 5

A casual on rubbish tips, the date stones having been thrown out with food waste.

East Berks: Reading tip (1961).

West Berks: Abingdon tip [49] in 1916, South Hinksey tip [50] in 1965.

ARACEAE

Acorus calamus L. *Sweet-flag*

• hel 5

Margins of rivers and ornamental lakes; locally common. Its leaves are light, lime green and crinkled, and are spicy-fragrant when crushed. The British plant is a sterile triploid that never sets seed and spreads entirely by rhizome fragments.

NVC: S 12,15

Ascot: frequent and locally dominant in shallow water by the Berkshire banks of Virginia Water in Windsor Great Park. Also at Englemere Pond, Johnson's Pond, Frostfarm Plantation, Breakheart Hill. Never seen on Silwood Lake, despite the fact that the rest of the fringing vegetation is similar to *Acorus* habitat on Virginia Water.

East Berks: Swallowfield, on the Berkshire bank of Virginia Water to the west of the cascade, Bisham, Henley, Park Place, Loddon Bridge, Arborfield, Wargrave, Bray, Frogmore, Binfield. Swallowfield, Sindlesham. Throughout the Thames valley from Reading to Windsor, and in the Loddon valley south of Reading. Recently at Bearwood Lake, Kennet mouth, Reading Marina,

Sonning Lock, Aston, Crazies Hill, Billingbear ponds, Chapel Green, Shepherds Lane, Hurley Meads, Cookham, Widbrook Common, Cock Marsh, Foliejon Park, Maidenhead Court, Maidenhead, Windsor Racecourse, Old Windsor. 5% (1km²). Atlas 2000: all squares

West Berks: in the eastern reaches of the Thames from Oxford down to Reading, but rare in the Kennet valley (e.g. AWRE Aldermaston and Thatcham Station [56], Burghfield Bridge [67]) and absent from the interior. Common in the Thames at Cholsey Marsh nature reserve [5886], Little Wittenham [59] and Kennington [5202], and in ponds at Radley gravel pits [59]. Atlas 2000: [29], [49], [40], [56], [58], [59], [50], [66], [67], [68], [69]

¶ **Pistia** *P. stratiotes*

Lysichiton americanus Hulten and H. St.John *American Skunk-cabbage* ● hel 4

Muddy willow swamps, willow holts, alder carr and other wet woods along streams. Naturalized plentifully in a few places downstream from water gardens.

Silwood Park: one of our most spectacular alien plants (Plate 13). Locally abundant, sometimes dominant, on wet ferruginous mud in The Swamp on the south-western inflow to The Lake (the Red Stream). Not found on the clear, south-eastern inflow. Great Mead, Cascade Bridge, Cascade Marsh, Guinness's Thicket, The Willows. It has increased dramatically in the last 20 years. There were just 5 plants, all just below Cascade Bridge in 1980, more than 20 in 1994 and more than 50 in spring 2000. The first rosettes appeared on the western shore of The Lake opposite The Farm in 2002. One plant on the lakeside midway between the Outflow Sluice and The Farm on 20 April 2004.

Ascot: local and uncommon on the southern and northern shores of Virginia Water (1984-2008). Particularly abundant in the stream that runs under the railway by Sunningdale Station and borders the Broomhall recreation ground, where Skunk-cabbage grows with other aliens like *Impatiens glandulifera* and garden escaped natives like *Carex pendula*. A single clump at the side of Sole's Pond to the east of Ascot Station (1979-2008). Sunningdale, on the island in the lake at Blacknest Park, Titness, Johnson's Pond. Locally dominant in the ferruginous swamp parallel with Whitmore Lane at Blacknest Park opposite Sunningdale Bowling Club below Tittenhurst Park.

East Berks: first record from Riseley [7263] in 1969; still there in 2001 in the roadside pond north of the village. Recently at Scotlands. 1 % (1km²). Atlas 2000: [88], [96]

West Berks: first recorded from an old bog garden at Youlbury [4803] in 1964. Local and uncommon. Atlas 2000: [46], [40]

Lysichiton camtschaticensis (L.) Schott *Asian Skunk-cabbage* ● hel 5
Dracontium camtschaticense L.

In Windsor Great Park, in wet grass and muddy lakesides. This is the white-spated Skunk-cabbage, much rarer than *L. americanus*, and more light demanding.

Silwood Park: just outside the boundary of the Park on the Outflow Stream, by the pond at Herons Brook Cottage in April 2003-04.

Ascot: very rare except where planted in Valley and Saville Gardens. Johnson's Pond in 1999.

East Berks: not in Druce or Bowen. Recently at Scotlands. < 1 % (1km²). Atlas 2000: [88], [96]

West Berks: no records.

¶ **Lysichiton** *L. camtschatcensis*

Calla palustris *L. Bog Arum*

• hr 6 †

Ascot: planted in an ornamental pool in woodland east of Ascot Station (**OXF**) in 1975. Not in Sole's Pond since 1979.

Amorphophallus rivieri Durieu *Umbrella Arum*

West Berks: introduced in an orchard at Folly Farm, Harwell [4988] in 1965. (**OXF** Forestry).

¶ **Zantedeschia aethiopica** (L.) Spreng. *Altar-lily*
Calla aethiopica L.

• g 5

This is the lily you see in Beardsley prints of Oscar Wilde. The species is a seriously invasive weed of wetlands in warm temperate regions of New Zealand, South Africa and La Reunion. With us, it is no more than a short-persistent garden outcast.

East Berks: recently at West Whitley, Woodley, Marsh Mills, Chapel Green, College Town, Halfway House, East Maidenhead, Bray. 1% (1km²). Atlas 2000: [77], [78], [86], [88], [97]

West Berks: no records

¶ **Zantedeschia** *Z. aethiopica* 'Crowborough'

Arum maculatum *L. Lords-and-Ladies*

gt 4

In the bottom of almost every hedge and thicket; widespread and abundant. Also in woods on nutrient-rich soils. The form with unspotted leaves is also frequent. Most conspicuous in late summer when the bright red berries are at their peak.

NVC: W 8,12-14,21,24,25

Silwood Park: under the holly hedge at Ashurst Church, in the border woodland at Four Acre Field opposite the Marist Convent, in the Old Orchard, Silwood Farm, in The Rookery, by Virginia Water Lodge. Planted in the woodland garden behind Southwood Hall in 1984. Dominant in the ground flora beneath beech and sycamore at the gate into Four Acre Field opposite the Marist Convent on 30 April 2004. Locally abundant at the edge of Farm Road by The Lake on 31 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	6

Ascot: rather local. Charters Road, Blacknest Park, South Coworth, Frostfarm Plantation, Locks Ride, Brooks Farm, Winkfield, Polo Club, Peanut Roundabout, Kingsmead, Cranbourne, Windsor Great Park.

East Berks: wherever there are trees or ancient hedgerows. 50% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Arum italicum Mill. *Italian Lords-and-Ladies*
Arum italicum subsp. **italicum**

• gt 5

This is the garden escape with white-veined leaves and divergent basal lobes.

Silwood Park: local and rare. A relic of cultivation at Silwood Farm (1979-2004), very conspicuous in early spring when its white-veined leaves are fresh. On the old rubbish dump in the woodland south-east of The farm growing with other outcasts like *Narcissus* 'Peeping Tom' in 2002.

East Berks: recently at Randall's Farm, Gardener's Green, Park Place Windsor. Common in the roadside verge on the edge of the woodland at Ashley Hill between Ladyeplace and Appletree cottages. <1% (1km²). Atlas 2000: [76], [86], [87], [96]

West Berks: on a streambank at Woolhampton [5766] in 1959 (**LAN**), in a garden at Tidmarsh [6374] in 1986, on banks in East Hagbourne [5388] in 2002, in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [29], [46], [56], [58], [67]

Dracunculus vulgaris Schott *Dragon Arum*

• gt 5

A very rare garden outcast, found in scrub on waste ground. Unless it is hidden from view it will inevitably be knocked down by small boys with sticks, long before it reaches its full splendour. This behaviour is no doubt profoundly Freudian.

East Berks: 3 clumps under oak on waste ground in suburban housing where the Devil's Highway enters Crowthorne [844643], close to Broadmoor Hospital from the Criminally Insane from 1998-2004. Also at Brookers Row, not far away, in 1999. <1% (1km²).

West Berks: no records.

LEMNACEAE

Spirodela polyrhiza (L.) Schleid. *Greater Duckweed*
Lemna polyrhiza L.

hyd 7

This is a conspicuously bigger plant than our other Duckweeds (up to 10mm dia.), and is typically found growing with *Lemna minor* and *L. minuta* in slow rivers, or in ponds and ditches with stagnant, nutrient-rich water. Occasional in river valleys, decreasing and now confined to the Thames and the Loddon. Each frond has a cluster of 7 to 16 (not 0 or 1) roots.

NVC: A 1,3,8,15; S 8,16

Silwood Park: there is an unattributed record from a "garden pond at Silwood Park in 1986". Local and rare in the Lily Pond, where a small patch was growing in the shade of the fox escape ramp on 11 September 2002.

East Berks: occasional in the Thames valley, scattered elsewhere. St Patrick's Reading, Hurst Green, ditches in Remenham Lane, Home Park Windsor, Bray, Arborfield, Ruscombe, Shottesbrooke, Winkfield, Wargrave, Wokingham. Leighton Park, Bulmershe, Sonning, Hurley, Cookham. Locally frequent with other Duckweeds in the R. Loddon at Whistley Park [7873] in 2002. 1% (1km²). Atlas 2000: all except [78], [86]

West Berks: uncommon in the Thames valley near Abingdon [49] but absent or extinct elsewhere. Esso reserve at Steventon [48], shady fen at Cothill [49], east of Chapel Row [56], in the R. Thames at Sandford Lock and Iffley Lock [50], Sulham Ponds and Tilehurst [67], Cleeve Lock [68]. Atlas 2000: [37], [49], [58], [59], [50], [67]

Lemna gibba L. *Fat Duckweed*

hyd 6 ↓

Ponds, ditches and lakes. Once fairly frequent in the Thames, now local and decreasing. Fronds swollen on the lower side, almost hemispherical with 4 to 5 veins originating from one point. NVC: A 1-3,5,12,15,19,20,21; OV 32; S 8,14,23

Ascot: no records.

East Berks: Sonning meadows, Loddon Bridge, Wargrave, Hurst, Coleman's Moor, Waltham, Arborfield, Windsor. Finchampstead Leas, Bulmershe, Ruscombe Lake, Bracknell, Binfield Manor, Cookham Moor. Scattered and rare, recently at Widbrook Common. 1% (1km²). Atlas 2000: all except [78], [96]

West Berks: extinct at many of its former stations and now all but confined to the Thames valley around Abingdon and the Kennet south-west of Reading: Sutton Wick and the manor pond at Milton [49], canal at Thatcham [56], ditches north of Didcot Station [59], backwater at Kennington [50], canal at Theale and Scrase's Farm, Pangbourne [67]. Atlas 2000: [49], [40], [56], [59], [66], [67]

Lemna minor L. *Common Duckweed*

hyd 6

Slow rivers, lakes, ponds and ditches, in nutrient-rich water. Locally abundant, but absent from the chalk ridge and rare in acid water. Fronds 2 to 5mm long with 3 veins. Often growing with *L. minuta*. NVC: A 1-3,5,7-12,15,16-18,20,21; M 22; OV 26,29; S 3-5,7,8,10,12-16,22,23; W 1

Silwood Park: often dominant on the Japanese Garden pond in midsummer, Farm Road, in the tanks at the Cricket Wicket, Lily Pond. in the small garden pond at East Lodge in June 2007.

Ascot: Sunninghill, Sunningdale Park, Charters Road, Ascot Place, Kingsmead, Hiltons Covert.

East Berks: standing and running water everywhere. 14% (1km²). Atlas 2000: all squares

West Berks: common everywhere except on the chalk ridge. Atlas 2000: all squares

Lemna trisulca L. *Ivy-leaved Duckweed*

hyd 5

Ponds, ditches, principally of stagnant water, often in shade; not uncommon in low situations. In branched chains of 3 to 50, fronds narrowed to a stalk. NVC: A 1-3,5,8,9,11,12,15,19,20; S 12,13,14,16,23

Ascot: local and rare. In the pond of Blacknest Park in June 2001. Not in Silwood Park.

East Berks: Park Place, abundant in all the ditches in Sonning meadows, Winkfield, Bray, Coleman's Moor, Ruscombe, Bisham, Virginia Water, Frogmore, Windsor Great Park. Bearwood. Occasional in the western part of the Thames valley from Reading to Cookham, and scattered in the interior, but absent over large areas. 1% (1km²). Atlas 2000: all except [96]

West Berks: common in the Northern Loop but uncommon along most of the rest of the R. Thames, scattered in the Kennet valley, but absent from the interior. Locally frequent in Reading's Lake District [66] and [67]. Atlas 2000: all except [47], [48], [68], [69]

Lemna minuta Kunth *Least Duckweed*

• hyd 6 ↑

Lemna valdiviana auct., non Philippi

Lemna minuscula Herter, nom. illegit.

A recently arrived alien, new to Britain in 1977, first found in Berkshire in 1982, and in Hampshire and Oxford in 1991, by which time it was already common in many of the rivers, and including the Blackwater and the Thames. Shade tolerant, and often abundant on water overhung by trees. Increasing rapidly, and locally abundant. The leaves are 0.8-3mm long with 1 vein (not 3). The larger air spaces are less than 0.25mm dia. It is a sterile tetraploid in Britain.

Silwood Park: on the Japanese Garden pond in July 2000; it was the only Duckweed on the Japanese Garden Pond on 9 September 2007. Abundant in the small garden pond at East Lodge in June 2007. With *L. minor* on October 20 2009 in both Lily Pond and Japanese Garden.

Ascot: frequent at the edges of the Marist Convent pond at Frognall [941682] in September 2005, as the only Duckweed present.

East Berks: not in Druce or Bowen. Gravel pits at Dinton Pastures (**RNG**) in 1988, by the Loddon at Arborfield Bridge [744678] in 1988. Co-dominant with *L. minor* on Strand Water [8984] in 2000. In the ponds on Holyport Green, Ryeish Green, Hurley, Sandhurst, Long Lane, Cookham and Shurlock Row. Ditches on Hall Farm [7468] in 2001. One bay of Colebrook South Lake at Moor Green Lakes nature reserve [8062] in 2001. Ditches by the Thames in urban Maidenhead [9081] in July 2002. 2% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [98]

West Berks: between Theale and Sulhamstead [6369] in 1982, in the canal at Thatcham [5066] in 1984, Little Wittenham [59] in 1988, and in the R. Thames at Sandford Lock [531013] and Iffley Lock [525036] in 1991. Drayton [4694] in 2000. By the A34 at [474960] from 2000-02. Completely covering the surface of the small pond at the northern corner of the Roman Wall at Silchester [638629] in February 2002. Abundant on Kennington Pond [519033], and frequent in Reading's Lake District [66] and [67] in summer 2002. Common in the pond in the orchard at the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [29], [38], [46], [49], [56], [59], [50], [66], [67]

COMMELINACEA

Tradescantia virginiana L. *Spiderwort*

• hs 5

Tradescantia x andersoniana W. Ludw. & Rohw., nom. inval.

A frequent garden plant in perennial borders and at the edge of shrubberies. A frequent outcast, often seen on banks and rough waste ground in villages.

Silwood Park: naturalised in grass in the graveyard at Ashurst, Cheapside Village, Silwood Lodge, Drive Lawns. The plants in the perennial bed at The Greenhouses are still locally common in July 2007 after 20 years of neglect.

Ascot: first recorded as an alien on waste ground in South Ascot (1965). Still on waste ground on Victoria Road, South Ascot (1988-2004).

East Berks: not in Druce. Swallowfield, Farley Castle, Barkham Ride, Doles Hill, West Reading, Lower Earley, Sheeplands Farm, South Twyford, Chapel Green, North Hanworth, Shurlock Row, Holyport, Paley Street, Maidenhead, Cookham Dean, Furze Platt, Old Windsor. 3% (1km²). Atlas 2000: all except [78]

West Berks: at Kingston Bagpuize [4098] in 2003; under-recorded. Atlas 2000: [68]

Tradescantia fluminensis Vell. *Wandering-jew* ● hs 5
Tradescantia albiflora hort., ? an Kunth

Perhaps the commonest houseplant and the most tolerant of total neglect. Often thrown out on tips but seldom surviving the winter.

West Berks: occasionally a glasshouse weed as at Wyld Court [5476] in 1986.

Tradescantia pallida (Rose) Hunt *Purple-heart*

East Berks: a casual greenhouse escape found under a tree at Reading sewage works in 1973.

¶ **Tradescantia** *T. x andersoniana* 'Innocence', *T. x andersoniana* 'Isis', *T. x andersoniana* 'Osprey', *T. virginiana* 'Caerulea Plena'

JUNCACEAE

Juncus squarrosus L. *Heath Rush* hr 6

Damp or seasonally damp acid heaths in south-east Berkshire, especially on compacted ground and by paths. Absent from chalk and clay soils. The objects like ants' eggs on the flowers are cases of the seed-mining moth *Coleophora alticolella*.

NVC: M 16,21; U 2

Silwood Park: very local and rare. A single clump in heathy grassland next to the Cannon Path, in the Beech Clearing by the sun dial on 30 May 2002.

Ascot: in 2003 it was still present at Rapley Lakes, Martins Heron, The Orangery, A322/A332 Roundabout, Tower Hill, Swinley brick pits, Buttersteep, Englemere, Swinley golf course, Kingsride, Coronation Road, in the short rough on the golf course on Ascot Heath, Windsor Great Park by the Berkshire bank of Virginia Water.

East Berks: Ascot, Bulmarsh, Warren Row, Knowl Hill, Wellington College, Sandhurst, Poppy Hills, Ambarrow, Bearwood, Long Moor, Finchampstead, Sunninghill, Sunningdale, Whitemoor Bog, Bagshot Heath, Riseley, Earley Heath, Windsor Great Park. Restricted to the Bagshot sands to the south of 70. 6% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: confined to the heaths of the south-east Kennet valley with an outlying station in the Northern Loop at Boars Hill [4802]. Atlas 2000: [46], [47], [40], [56], [57], [66]

Juncus tenuis Willd. ● hs 6
Juncus macer Gray
Juncus dudleyi Wieg.

Juncus tenuis Willd. var. *dudleyi* (Wieg.) F.J. Herm.

Tracks, paths, forest rides and roadsides on compacted acid soils. Associated with military training areas in Hampshire, where it was first recorded in 1941, perhaps introduced on American army vehicles during the Second World War. Rides in pine plantations and on tracks between the fairways of heathy golf courses.

Silwood Park: a recent arrival, still very local. Two plants in the grass track at the junction of Herons Brook Meadow and Pond Field on 23 June 2001. Probably introduced unintentionally (seeds on boots?) from Sunningdale golf course or Swinley where it is common on the heathy rides between the fairways. There were 6 tussocks in May 2004. This population survived the pipe-laying traffic in winter 2005-06 and was flourishing in June 2006. There were about 20 plants in summer 2009, stretching along the grass track from the gate at Heronsbrook Meadow for about 20m towards Silwood. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Not seen subsequently.

Ascot: common on grass tracks and in the short rough on Ascot Heath golf course, Whitmoor Bog, Kingsride, Buttersteep Hill, Blane's Allotment, Englemere, Rapley Lakes, Martins Heron, The Orangery, A322/A332 Roundabout, Tower Hill, Swinley brick pits, Swinley golf course, Coronation Road, Ascot Heath, Frostfarm Plantation, Windsor Great Park by the Berkshire bank of Virginia Water, Spring Hill.

East Berks: not in Druce. First recorded in 1915 at Wellington College. Leighton Park (1953), Easthampstead Park (1944), Kings Mere (1955), Warren Row (1966), Owlsmoor (1961), Virginia Water (1961), Wishmoor Bottom, Heath Pond and Finchampstead (1979), Englemere Pond (1980), Long Moor (1983), east of Caesars Camp (1987). Restricted to the Bagshot sands to the south of 70. Now widespread and locally abundant, as on Poppy Hills [8663], Wildmoor Heath [8463] and by Lower Star Post [8764]. 6% (1km²). Atlas 2000: [76], [77], [86], [88], [96], [97]

West Berks: confined to the heaths of the south-east Kennet valley with outlying stations in the Northern Loop, as at Frilford Heath golf course [49] and Boars Hill [4802]. Sutton Courtenay gravel pits [59]. Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [59], [66]

Juncus compressus Jacq. *Round-fruited Rush*

grh 6 ↓

Water meadows by the R Thames and occasional by ponds and gravel pits elsewhere; local and uncommon. The outer 3 tepals are rounded, and the anthers are 0.5-1mm long, less than 2 times as long as the filaments

East Berks: Long Walk in Windsor Great Park, plentiful by the pond near Shottesbrooke Church (where Druce, on first seeing the plant in the vegetative state, thought it was *J. tenuis*), in meadows at Old Windsor. Shottesbrooke Pond, Cock Marsh, Cookham Common, Bray. Confined to meadows on the banks of the R. Thames. 1% (1km²). Atlas 2000: [87], [97]

West Berks: all but confined to Thames-side meadows in the Northern Loop [39] and [40], with outlying stations to the south of Reading [66] and [67]. Charney Bassett [39], Rushy Weir [30], Bablockhythe [435043], North Hinksey (**OXF**) in 1970, Harts Weir, Appleton and Filchampstead [40], Thrupp pits (**RNG**) in 1987, Radley pits and Sutton Courtenay [59], South Hinksey [50], Burghfield pits [66], Cranemoor Lake [67]. Most recently at Manor Farm Marcham [453960] in 2001, and from wet ground to the east of Buckland Warren at [343963]. The site in Radley gravel pits [520970] in 2000 (**OXF**) has been destroyed. Atlas 2000: [36], [39], [49], [40], [56], [59], [50], [67]

Juncus gerardii Loisel. *Saltmarsh Rush*

grh 6 †

Saline marshy meadows, extinct. Also a rare member of the roadside salt-advective community, not yet recorded from this habitat in Berkshire but well worth searching for. Told from *J. compressus* by the longer style (0.5-0.8mm rather than 0.1-0.3) and bigger anthers (1-2mm rather than 0.5-1mm).
NVC: MG 13; S 4,19

West Berks: found by Druce in 1892 at Manor Farm, Marcham [454961] in the celebrated saline spring where it grew with other maritime plants (see p. 116). Last seen in 1954, when there were about 100 plants. The site was destroyed during so-called 'agricultural improvements'.

Juncus bufonius L. *Toad Rush*

th 5

Juncus minutulus V. Krecz. & Gontch.

Disturbed ground, moist arable land, fields, tracks, woodland rides and muddy margins of ponds and other places where water has stood in winter. Common and widely distributed but rare or absent from the chalk ridge.

NVC: MG 13; OV 9,19-21,30,31,35; S 15,18,23

Silwood Park: Rush Meadow, in arable fallow at Ashurst Four Acre Field and Silwood Bottom, Tractor Sheds, Silwood Lodge, Observatory Ridge, Science Park. Locally frequent on disturbed soil in the grassy triangle at the Cheapside end of Mill Lane in July 2003. Common on imported topsoil at Ashurst lysimeters in May 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	11	7

Ascot: Rapley Lakes, Martins Heron, The Orangery, A322/A332 Roundabout, Tower Hill, Swinley brick pits, Englemere, Swinley golf course, Kingsride, Coronation Road, Heatherwood Hospital, Kings Beeches, South Ascot, Ascot Heath, Charters Road, Sunningdale, Dry Arch Road, South Coworth, Frostfarm Plantation, Windsor Great Park by the Berkshire bank of Virginia Water, Spring Hill, Sunninghill Park, South Forest, Forest Lodge, Leiper Hill, Hiltons Covert.

East Berks: 17% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Juncus ambiguus Guss. *Frog Rush*

th 5

J. bufonius var. *fasciculatus* Koch

Juncus ranarius Nees ex Songeon and E.P. Perrier

Very close to *J. bufonius*, told from it by a somewhat capitate inflorescence, with several flowers appearing in fascicles (not solitary), and by the rounded, mucronate (not acute) inner tepals which are only marginally longer (not much longer) than the truncate (not subacute) fruit. Inland, it is found on damp brackish ground or on lime waste. Only one 19th century record, but worth looking out for amongst *J. bufonius*.

West Berks: collected by Prof J.S. Henslow of Cambridge in June 1833, from damp ground at Cholsey [5985]. The herbarium sheet (E) shows a mixed gathering with *J. bufonius* (det. D.R.

McKean in 2002). Druce had records of *J. bufonius* var. *fasciculatus* from Snelsmore, Greenham, Burghfield, Sandhurst and Theale, but these are not supported by specimens.

Juncus subnodulosus Schrank *Blunt-flowered Rush* hs 7 ↓
Juncus obtusiflorus Ehrh. ex Hoffm.

Fens, marshes, wet bogs and sides of canals; very local and declining. Told from *J. bulbosus* by the fact that *J. subnodulosus* has rhizomes and lacks a swollen stem base, and by the shape of the tepals which are obtuse rather than acute.

NVC: M 13,22,24,27; OV 26; S 4,25,26

East Berks: not in Druce or Bowen. Found in tall wet meadows [8560] north of the Blackwater River to the west of the A321 in 1987. <1% (1km²). Atlas 2000: [86]

West Berks: occasional in the western reaches of the R. Thames and in the Northern Loop, but rare or extinct in the Kennet valley and absent from the interior (north of 70 and south of 95). Royal Military College, Shrivenham [28], by the R. Cole south of Coleshill and west of Faringdon [29], Kintbury [36], Hatford, Buckland Warren and Pusey Common Wood [39], Snelsmore Common [47], Frilford Heath, Frilford Fen, Fyfield, Tubney, Hitchcopsie pit [453997], Dry Sandford pit [465996], Gozzards Ford fen, Cothill fen and Barrow Farm fen [49], Lashford Lane bog, Wytham Wood, Hinksey and Wootton fen [40], Crookham Common [56], West Hagbourne Moor [58], Barrow Hills, Thrupp House Wood and Abbey Fishponds [59], Kennington and South Hinksey [50]. Atlas 2000: [28], [29], [47], [49], [40], [56], [58], [59], [50]

Juncus articulatus L. *Jointed Rush* hs 6
Juncus lampocarpus Ehrh. ex Hoffm.

Wet meadows, pond-sides, ditches, margins of streams, wet heaths, etc; common in all the districts. Frequent, but absent from the chalk. Tepals obtuse or shortly acuminate, the outer with erect apical points. The inflorescence looks black (rather than straw-coloured) from a distance.

NVC: A 22; M 13,22,24,27; MG 4,5,9,10,13; OV 26,29,30,32,35; S 4,12,14,19,22,23

Ascot: uncommon in undrained grassland at Englemere, South Forest, Forest Lodge, Leiper Hill, Hiltons Covert, Spring Hill and Frostfarm Plantation. Not in Silwood Park.

East Berks: recently at California Country Park, Dinton Pastures, Billingbear, Ravensworth, Sandhurst, Cock Marsh, Sandhurst, viviparous by Virginia Water. 3% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet valleys but absent from the interior (north of 75 and south of 90). Atlas 2000: all except [38], [68], [69]

Juncus x surrejanus Druce ex Stace and Lambinon = **J. articulatus** x **J. acutiflorus**

In some places, this hybrid is commoner than either of the parents. Intermediate in tepal size and shape, and of low fertility. The two parent species have 80 and 40 chromosomes, respectively.

West Berks: by Hagley pool (OXF) [4709] in 1946. This plant has 80 chromosomes rather than the usual 60.

Juncus acutiflorus Ehrh. ex Hoffm. *Sharp-flowered Rush* hs 7

Moist woods, wet meadows, ditches in heathy districts (as *J. sylvaticus*); common on the Bagshot Sands. First record: Bulmarsh Heath (1800). Woodland rides, marshes, damp heaths and bogs. Locally frequent, but absent from calcareous soils. Tepals acuminate, the outer with recurved, then slightly hooked apical points. The inflorescence looks straw-coloured (rather than black) from a distance.

NVC: M 13,16,21,24,27; MG 13; S 1,6,8,12,18,19; W 1,4

Silwood Park: locally dominant and patch-forming; the commonest jointed rush in wet grasslands like Rush Meadow and Pond Field. In Heronsbrook Meadow the plant forms 5 discrete, isolated clumps about 3-5m in diameter, marking out the wetter patches within the field (in a few cases growing with *Dactylorhiza praetermissa*). Occasional in wet grasslands at Mann's Copse, Guinness's Bridge, The Swamp, Kissing Gate, South Lodge. The rushes in Pond Field were cut in winter 2006-07 and again in the very dry April 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	1	3	8

East Berks: Billingbear, etc. Occasional on the acid soils throughout the east and south along the Surrey and Hampshire borders, but rare or absent in the north and the interior. 8% (1km²). Atlas 2000: all except [78]

West Berks: frequent in the Northern Loop but uncommon in the rest of the Thames valley, scattered throughout the Kennet valley, but absent from the interior (north of 75 and south of 95). Atlas 2000: all except [38], [48], [68], [69]

Juncus bulbosus L. *Bulbous Rush*

hs 6

Juncus supinus Moench

Juncus kochii F. Schultz

Juncus bulbosus L. subsp. *kochii* (F. Schultz) Reichg.

An aquatic plant of moist heaths, boggy places, rutted tracks, ditches and peaty ponds in heathy situations, often submerged; locally abundant on the Bagshot Sands, especially in drains where the peat has been disturbed.

NVC: A 7,8,9,11,22,23,24; S 4,8,18,19

Ascot: Rapley Lakes, Martins Heron, The Orangery, A322/A332 Roundabout, Tower Hill, Swinley brick pits, Englemere, Swinley golf course, Kingsride, Coronation Road, Heatherwood Hospital, Kings Beeches, Ascot Heath, Sunninghill, Charters Road, Sunningdale, South Coworth, Frostfarm Plantation, Windsor Great Park by the Berkshire bank of Virginia Water, Spring Hill. Locally abundant under water in the shallow parts of Englemere Pond. Not in Silwood.

East Berks: first record: grows in great plenty in the peat-bog near Sunninghill in Berkshire (Dr Lightfoot, 1780). Farley Hill, Finchampstead Leas, Long Moor, Wellington College, Kings Mere, South Lake, Owlsmoor, Caesar's Camp, Lower Star Post, Tower Hill. All but confined to the heaths south of 70 with outlying stations at Pinkneys Green [8582] and White Waltham [8577].

6% (1km²). Atlas 2000: all except [78], [88]

West Berks: confined to the heathy, eastern parts of the Kennet valley and now rare or extinct in the Northern Loop. Inkpen Common and Freeman's Marsh at Hungerford [36], Greenham Common [46], Snelsmore Common [47], Frilford Heath golf course [49], Boars Hill [40], Crookham Common and

Harts Hill [56], Radley [59], Ufton Park and Burghfield [66]. Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [59], [66]

Juncus inflexus L. *Hard Rush*

hs 6

Juncus glaucus Sibth.

Wet meadows, pond-sides, river-sides, roadsides, commons, especially addicted to stiff clay soils. This is the blue-grey, narrow-leaved rush of wet meadows, riverbanks and rough waste ground. First record: Sonning (1800). Plentiful in lowlands, often marking the juncture of a pervious with an impervious stratum. Damp grassland and marshes. Locally frequent, but absent from the chalk ridge, and uncommon on very acid soils in south-east Berkshire.

NVC: M 22,27; MG 4,5,7,9,10; OV 26,32; S 7,14,23

Silwood Park: very local and rare on South Gravel. There used to be one clump on compacted ground at the Buckhurst Road end of the Storage Garages, possibly on imported clay; 7 July 1983. Extinct, following construction of the Science Park in 1987. A single small plant on the grassy triangle at the Cheapside end of Mill Lane on 18 September 2002 following earthworks associated with cable-laying; still there in August 2003. There were 8 small non-flowering individuals here in July 2007.

Ascot: marks out the junction of the clay (where it is common and locally abundant) and the acid sands (where it is absent or rare). Locally dominant in wet grassland in South Ascot on what used to be Sunningwell Bog, and in the northern triangle of Ascot Heath Race Course. The Tip, The Orangery, Swinley brick pits, Swinley golf course, Kingsride, Englemere, Heatherwood Hospital, Kings Beeches, Ascot Heath, Sunninghill, edge of Frognall pond, Charters Road, Sunningdale, Brook Farm, Polo Club, Forest Lodge, Leiper Hill, Windsor Great Park by the Berkshire bank of Virginia Water, Spring Hill. Locally frequent in the re-worked surface of the playing fields at South Ascot in August 2007. Frequent in the dead end section of the Drift Road near The Squirrels Roundabout at Cranbourne [929730] on 2 September 2007.

East Berks: common on the clay. Dominant and massive in the wet meadow at Marsh Down, Shottesbrooke [8476] in 2003. 21% (1km²). Atlas 2000: all squares

West Berks: common everywhere except on the chalk ridge (north of 75 and south of 85). On the ruins of the Prince of Wales pub at Challow Station [3590]. Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all squares

Juncus x diffusus Hoppe = **J. inflexus** x **J. effusus**

The stems are not glaucous (as in *J. inflexus*) and they have continuous pith (as in *J. effusus*), but they have an inflorescence that looks like *J. inflexus*. Surely under-recorded.

East Berks: Loddon Bridge [7671] in 1897.

West Berks: Chilswell Farm [4903] in 1861 (OXF).

Juncus effusus L. *Soft-rush*

hs 6

Marshes, wet ditches, damp grassland, soggy woodland rides, moist heaths, roadsides and woods; common and generally distributed in a very wide range of habitats, preferring neutral or acid soils, and rare on the chalk. Told from *J. conglomeratus* by the stem which is shiny and smooth (not ribbed) below the inflorescence.

NVC: M 16,21,22,24,27; MG 5,6,9,10,13; OV 26-28,30,32,35; S 4-8,12-15,18,19,23,26,28;

U 2; W 1,4-6,8,10,21

Silwood Park: this is the only common large rush, found on all sorts of wet ground in sun and shade. Locally dominant in wet grasslands like the eponymous Rush Meadow and in Pond Field, and in swampy woodland such as Great Mead and Cascade Marsh.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
2	5	10	28	43

East Berks: absent from large areas of well drained land. 46% (1km²). Atlas 2000: all squares

West Berks: ubiquitous, but least common on the chalk. Atlas 2000: all squares

Juncus conglomeratus L. *Compact Rush*

hs 5

Juncus subuliflorus Drejer

Damp waste ground, wet fields, ditches, heaths, woodland rides and marshes on acid soils; common and generally distributed, but absent from the chalk. Told from *J. effusus* by the stem which is dull and ribbed (not smooth) below the inflorescence.

NVC: M 15,24,27; OV 27; S 8; W 4,8

Silwood Park: Cheapside Playing Fields, Guinness's Bridge, Rookery slope, Water Meadow, Nash's Field, Heronsbrook Meadow, South Lodge, Merten's Acres, in a new planting of rhododendrons and azaleas in the eastern part of the Japanese Garden in 1990, possibly imported with potted shrubs.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	5	4	9

East Berks: in drier, less acidic places than *J. effusus*. 19% (1km²). Atlas 2000: all except [78]

West Berks: in the Thames valley down to Abingdon [59], and throughout the Kennet but becoming more frequent downstream. Absent from most of the interior (north of 75 and south of 95). Atlas 2000: all except [48], [68], [69]

Luzula forsteri (Sm.) DC. *Southern Wood-rush*

hs 4 ↓

Juncus forsteri Smith

Juncoides forsteri (Kuntze)

Dry oak or beech woods on nutrient-poor soils; local and rather rare. Basal leaves less than 4mm wide, and the inflorescence not reflexed in fruit.

Ascot: formerly very local and rare by Blacknest Gate into Windsor Great Park [957688].

East Berks: in a wood between Hall Place and Harley-Ford, Bisham Wood, Windsor Park, Ashley Hill, Hurley, Quarry Wood. Arborfield, Wellington College. Rare and scattered on the periphery; absent from the interior. <1% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: extremely local, and all but confined to the south-west outskirts of Reading [57] and [67]. Elcot [36], Hawkridge Wood and Red Hill [57], Unhill Wood, Ham Wood and Streatley [58],

Sulham Woods, Bradfield (**OXF**) in 1892, Pangbourne (**OXF**) in 1896, Kent Wood (**RNG**) in 1892, Basildon Park and Tilehurst [67]. Atlas 2000: [56], [57], [58], [67]

Luzula x borrieri Bromf. ex Bab. = **L. forsteri** x **L. pilosa**

Not uncommon where *L. forsteri* grows (see above); very low fertility, showing intermediate leaf width and shape of the inflorescence.

East Berks: Arborfield (1964), Quarry Wood (1897).

West Berks: Red Hill [5973] and in a beech wood at Basildon Park [6077].

Luzula pilosa (L.) Willd. *Hairy Wood-rush* hs 4
Juncoides pilosum Morong
Juncus pilosus L.

Woods and thickets, on nutrient-poor soils. Occasional but absent from chalk and clays. Basal leaves more than 4mm wide; inflorescence reflexed in fruit.
NVC: W 10,14,15

Silwood Park: introduced to the Walled Garden, with plant material from Kent, as part of a woodland plant transplanting experiment in 1979; flowering 20 March 1980. Southwood Halls, in mixed deciduous woodland behind the Halls, where the Kent material was moved in 1983. Not seen since 1990.

Ascot: no records, but the plant is recorded from more distant parts of Windsor Great Park and from Highstanding Hill.

East Berks: scattered and uncommon as at Ambarrow, Farley Hill, etc. <1% (1km²). Atlas 2000: all except [96]

West Berks: throughout the Kennet valley and the woods of the Northern Loop, but absent from the interior (north of 80 and south of 00). Atlas 2000: all except [38], [39], [58], [68], [69]

Luzula sylvatica (Huds.) Gaudin *Great Wood-rush* hs 5
Juncus sylvaticus Hudson
Juncoides sylvaticum Kuntze

Woods, thickets and heathy places, evincing a preference for sandy soils. Steep banks in old oak woods. Local, rare and decreasing. Berkshire is too dry for the plant to flourish in the way that it does in western Britain.
NVC: M 21; W 8,10,15,16

Silwood Park: probably introduced during landscaping of the Cannon Wood car park in 1987. Too dry, and not flourishing (1988-90), but subsequently recovered, and two good patches in April 1994 are still there in 2004.

Ascot: very local; dominant under pines over a large part of the woodland floor on the sloping bank just north of Ascot Station [923684] (1971-2000). Very local and rare; one tussock, just 30cm diameter, in the south-western corner of Wells Wood [931683] in May 2002.

East Berks: Park Place, Windsor Great Park, Bracknell, Sunningdale, Swinley, Finchampstead, Bearwood. Remenham [7783], Riggs Copse [844687], Bear Grove [811797], Warfield House at Newell Green [885711]. Rare or extinct in heathy woods to the south of 70 and rare in the western Thames valley; absent from the interior. Atlas 2000: [78], [87], [96], [97]

West Berks: Hamstead Marshall [46], Wytham in 1897, now gone, planted at Jarn Mound, Chilswell, Wootton Heath and Boars Hill [40], Aldermaston and Pond Copse [56], Coombe Wood, Colliers Copse and Hawkridge Wood [57], Bagley Wood [50], Mortimer and Ufton [66], Burghfield [67]. Atlas 2000: [40], [56], [57], [50], [67]

Luzula luzuloides (Lam.) Dandy and Wilmott *White Wood-rush* ● hs 6 ↓
Juncus luzuloides Lam.

East Berks: a garden plant, long established at Wellington College [8363] in 1895 (**RNG**) and 1963.

Luzula campestris (L.) DC. *Field Wood-rush* hs 3
Juncus campestris L.,
Juncoides campestre Morong

Acid grasslands, fields, pastures, lawns and heaths, but also on chalk downs; common in all districts. An increaser under rabbit grazing, it rapidly declines in abundance when rabbit-proof fences are erected, as it is out-competed by faster-growing, more palatable monocots. An excellent competitor for nitrogen and phosphorus, it disappears quickly if N and P are applied to grassland. One of the first plants into mass flowering in spring. Told from *L. multiflora* by large anthers and short filaments; the anthers are more than 2.5 times the length of the filaments (not 0.8 to 2.2 times).
 NVC: CG 2,4; M 23; MG 1,4-6; OV 27; U 1,20

Silwood Park: in short acid grasslands and unkempt lawns throughout. A significant increaser under rabbit grazing. Typically the first grassland plant into flower each spring (it is known as Good Friday Grass in some places); 1 March 1980, 17 March 1981. It is the 16th most frequent species in small quadrats, but only the 28th most frequent at the 1ha scale.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
14	15	22	29	59

East Berks: 24% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [69]

Luzula multiflora (Ehrh.) Lej. *Heath Wood-rush* hs 4
Juncus campestris L. var. *multiflorus* Ehrh.
Juncoides multiflorum Morong

Damp heaths and commons on acid soils; locally frequent. Told from *L. multiflora* by the relative lengths of the anthers and filaments (see above).
 NVC: M 13,16,22,24; H 2; U 2,20; W 10,25

Ascot: in sunny ground at Sole's Pond near Ascot station. Rapley Lakes, Blane's Allotment, Martins Heron, The Orangery, Tower Hill, Swinley brick pits, Englemere, Swinley golf course, Kingsride, Sunningdale, in the heathy rough of Ascot Heath golf course, Breakheart Hill, South Forest, Windsor Great Park by Virginia Water. Not in Silwood.

East Berks: at the bottom of Bisham Wood, Bulmarsh, Bagshot, Sandhurst, Finchampstead, Long Moor, Bearwood, Bracknell Forest, Easthampstead, Wishmoor Bottom, Windsor Great Park. Common in the east and the interior, but uncommon to the west of 80 and absent from the chalk and the Loddon valley. 8% (1km²). Atlas 2000: all except [78]

West Berks: occasional in the heathy, southern and eastern parts of the Kennet valley, rare in the Northern Loop, and absent from the interior (north of 75 and south of 00). Atlas 2000: [28], [36], [38], [46], [47], [49], [40], [56], [57], [58], [50], [66], [67]

¶ **Luzula** *L. nivea*, *L. sylvatica* 'Aurea', *L. sylvatica* 'Hohe Tatra', *L. sylvatica* 'Marginata'

Eriophorum angustifolium Honck. *Common Cottongrass* hel 5 ↓

Bogs and marshes; local and greatly reduced, but still widely distributed in heathy districts. Absent from the chalk and northern clays.

NVC: M 13,16,21,22,24; S 4,10,27; W 4

Ascot: much reduced by drainage since the times of the famous Ascot Bog and Sunningwell Bog, but still at Tower Hill, Englemere Pond, Martins Heron, wet pasture at South Ascot, and in the triangle of boggy land where the railway line separates to go south to Guildford or west to Reading just to the west of Ascot Station. Not in Silwood Park for want of any acid bog habitat.

East Berks: in a meadow near the spring at Crazey Hill, common in the bogs about Wellington College, Bulmarsh, Finchampstead, Bracknell, Bagshot Heath, Long Moor, Sandhurst, Broadmoor, Easthampstead plain, White Moor bog, Coleman's Moor. Kings Mere, Owlsmoor, Broadmoor, locally common in the *Molinia* bog at Wishmoor Bottom where the power line crosses the Wish Stream [876625] (Plate 6), Long Moor. Extinct in the Thames valley
2% (1km²). Atlas 2000: [76], [86], [96]

West Berks: two widely separation locations: in the Northern Loop and in the bogs of the Kennet heaths. Hungerford meads [36], Snelsmore bog and Sole Common [47], Frilford Heath golf course [442986] and Cothill [49], Swinford and Wytham meads [40], Brimpton [56], Radley meads [59], Silchester Common [66], Thatcham [67]. Atlas 2000: [36], [47], [49], [40], [56], [57], [59], [66]

Eriophorum latifolium Hoppe *Broad-leaved Cottongrass* hel 5 ↓

Fens and flushed bogs, much more local than *E. angustifolia* and preferring lowland marshes on a calcareous soil. Never satisfactorily confirmed for Surrey, but still present in north-east Hampshire.

East Berks: Coleman's Moor, very rare in Druce's time, but extinct by Bowen's.

West Berks: very local and rare, now confined to the Northern Loop. Frilford golf course in the fen between the Red and Green courses; none seen in 2007, but 12 flowering plants on 4 June 2008 [4497], Cothill Fen [4699], Barrow Farm Fen [4697], Wootton Fen [4601], Barrow Hills [5198]. Dillenius recorded the plant from Chilswell Fen [4903] in 1730. Atlas 2000: [49]

[**Eriophorum gracile** W.D.J. Koch ex Roth *Slender Cottongrass*]

There are no Berkshire records, but the plant is present on Pirbright Common [95] just to the south in Surrey. It is believed to be extinct in North Hampshire.

Eriophorum vaginatum L. *Hare's-tail Cottongrass*

hel 4 ↓

Eriophorum brachyantherum sensu Tutin, non Trautv. & C. Meyer

Very local and rare; close to extinction in an acid bog near Sandhurst.

NVC: M 16; U 2; W 4

East Berks: not in Druce. Very local in Wishmoor Bog below Deer Rock Hill [879634] in 1950, on either side of the boundary stream, straddling the Surrey border. There were about 10,000 plants here in 1966. It was still present but rare in 1999 with less than 100 individuals. Plants were divided and replanted by Ted Green in an effort to save the population from extinction. In May 2004 there were 80 inflorescences in a single patch of 4m x 5m on the Berkshire side, about 20m west of the Wish Stream, and 50m south-west of the road bridge (Plate 16). On 2 June 2006 there were 7 distinct groups of flowering stems in a small area while the nearby wet tracks had *E. angustifolium*. After the serious heath fire at Easter 2007 there was concern about the population, but there were 2 good multi-flowered tussocks and two isolated flowering plants on 15 May 2008 which is good news. <1% (1km²). Atlas 2000: [86]

West Berks: no records.

Trichophorum cespitosum (L.) Hartm. *Deergrass*

hs 5 ↓

Scirpus cespitosus L.

Trichophorum cespitosum subsp. **germanicum** (Palla) Hegi

Trichophorum germanicum Palla

Scirpus cespitosus L. subsp. *germanicus* (Palla) Brodd.

Bogs, forest rides and wet heaths on acid, nutrient-poor soils, often on bare peat. Local and decreasing in south-east Berkshire.

NVC: M 16,21

Ascot: in the short, heathy rough on the golf course on Ascot Heath (still there in 2004), Swinley, Englemere, Whitmoor Bog, Kingsride, Buttersteep Hill, Tower Hill, Blane's Allotment, Sunningdale, Windsor Forest. Not in Silwood Park.

East Berks: "abundant in the heaths around Sandhurst" (Druce). Bagshot Heath, Wokingham Heath, Wellington College, Sandhurst, Finchampstead, Long Moor, Easthampstead Plain, Broadmoor, Crowthorne, Windsor Great Park. Owlsmoor, Wishmoor Bottom. 1% (1km²). Atlas 2000: [86], [96]

West Berks: extremely local on Silchester Common [66], and extinct at two of its 3 stations (formerly at Burghfield and Mortimer (RNG)). Atlas 2000: no records.

Eleocharis palustris (L.) Roem. & Schult. *Common Spike-rush*

hel 6

Scirpus palustris L.

Eleocharis palustris subsp. **vulgaris** Walters

Eleocharis vulgaris (Walters) Á. Löve and D. Löve

Shallow ponds, marshes, wet meadows; common and generally distributed. "Round the margins of many of our ponds it forms a conspicuous zone of vegetation" (Druce).

NVC: A 22; M 22; OV 29-32,35; S 4,8,12,14,15,19,22,23,28

Ascot: local and rare; in the pond below Ascot Station. Also at Leiper Hill, Windsor Great Park, Virginia Water. In ponds on Swinley and Royal Berkshire golf courses in 2002. Not in Silwood Park.

East Berks: scattered throughout in damp places. Locally dominant in the shallow pond south of Lower Star Post. Dominant over much of the species rich ground at Cock Marsh [881868]. 3% (1km²). Atlas 2000: all squares

West Berks: throughout, but commoner in the Thames and Kennet valleys than the interior. Locally frequent in ponds on Greenham Common [46] & [56]. Frequent in Reading's Lake District [66] & [67]. Atlas 2000: all except [68]

Eleocharis palustris subsp. **palustris**

Eleocharis palustris (L.) Roemer and Schultes subsp. *microcarpa* Walters

The spikelets have more than 40 flowers, and the glumes from the middle of the spikelet are 2.7-3.5mm (rather than 3.5-4.5mm in ssp. *vulgaris*).

West Berks: generally much rarer than ssp. *vulgaris* and recorded only from Hagley Pool [4709] in 1949 and a pond on Snelsmore Common [47]. Worth seeking out.

Eleocharis uniglumis (Link) Schult. *Slender Spike-rush*

hel 6 ↓

Scirpus uniglumis Link

Damp meadows, fens and pastures, rare and confined to North Berkshire. Told from *E. multicaulis* by the truncate (not oblique) angle of the uppermost leaf sheath, by its bi-convex (not 3-angled) nuts, and by the possession of 2 (not 3) stigmas.

NVC: M 22

West Berks: confined to the Northern Loop but for outlying stations at Hagbourne Moor [5387] and Inglesham [2098]. In wet meadows east of Noah's Ark [4396] and at Swinford [4408], from the famous saline meadow at Marcham [49] (OXF), fen at Wytham meads (OXF) [4709], Ferry Hinksey (OXF) [40], West Hagbourne Moor [58], South Hinksey [50], and by a pond at Radbrook Common [4508] in 1988. Atlas 2000: [49], [40], [58], [50]

Eleocharis multicaulis (Sm.) Desv. *Many-stalked Spike-rush*

hel 7 ↓

Scirpus multicaulis Smith

Acid bogs, pond sides and wet places in heathland; local in the south. Told from *E. uniglumis* by the oblique (not truncate) angle of the uppermost leaf sheath, by its 3-angled (not bi-convex) nuts, and by the possession of 3 (not 2) stigmas.

NVC: A 22; M 16,21

Ascot: Tower Hill (1965), Englemere Pond (1982, and still there in 2004), Sunningdale, Windsor Great Park. On the edge of ponds on Swinley [9165] and Royal Berkshire [8966] golf courses in May 2002.

East Berks: Sandhurst, Long Moor, Riseley, Bagshot Heath, Easthampstead, Broadmoor, Wellington College, Bracknell, Owls Moor. Wellington College (1962), Broadmoor Bottom (1987). 1% (1km²). Atlas 2000: [86], [96]

West Berks: Greenham Common [46] (**OXF**), Snelsmore Common [47] (**OXF**), Burghfield Common [66]. Atlas 2000: [57], [57], [66]

Eleocharis quinqueflora (Hartmann) O. Schwarz *Few-flowered Spike-rush* hel 6 ↓
Scirpus quinqueflorus F. Hartmann
Eleocharis pauciflora (Light.) Link

Fens and water meadows; very local and rare. The lowest glume is larger than in *E. acicularis* (2.5-5mm rather than 1.5-2.5mm) and the stems are rounder and wider (more than or equal to 0.5mm rather than less than 0.5mm and ridged).

NVC: M 13; S 19

East Berks: no records.

West Berks: South Hinksey [50] in 1880 (**OXF**), Frilford fen [4497], Cothill fen [4595] Atlas 2000: [49]

Eleocharis acicularis (L.) Roem. & Schult. *Needle Spike-rush* hel 8 ↓
Scirpus acicularis L.

A local speciality of shallow eutrophic water (less than 50cm deep) in sheltered lakes and backwaters of rivers, streams or canals. Commonly found on summer-dry, seasonally inundated sites or on river-dredgings with *Juncus bufonius*, *Gnaphalium uliginosum*, etc. Told by its very narrow stems (less than 0.5mm wide) with 4 ridges, and tiny lowermost glumes (1.5-2.5mm).

NVC: A 8

Ascot: no records.

East Berks: Bulmarsh Heath, rare on banks of Thames, Virginia Water, in the lake at Sandhurst. Once locally abundant, now extinct at many of its former sites, but there are recent records from Cock Marsh and from the shores of gravel pits at Charvil [781752] and [782758] and Sandhurst [8660] from the v.c.22 part of Lower Lake in July 2002. Moor Green Lakes [8062] in 2002, locally frequent. <1% (1km²). Atlas 2000: [77], [86], [88]

West Berks: extinct at all 8 of its former sites. Once known from the Wiltshire and Berkshire canal at Shrivenham [28], Eynsham [40], South Hinksey [50], the canal at Hamstead Marshall and Padworth [46] etc. Locally abundant on the gravelly margin of a pond near Goldfinch Bottom on Greenham Common [509641] on 21 August 2006, where it was found by Ron Porley growing with *E. palustris*. Atlas 2000: no records.

¶ **Eleocharis** *E. acicularis*

Bolboschoenus maritimus (L.) Palla *Sea Club-rush* hel 7 ↓
Scirpus maritimus L.
Schoenoplectus maritimus (L.) Lye

Saline ditches and ornamental lakes. Local and rare.

East Berks: reported by S. Rudge from Sonning in 1800 (**BM**), but Druce could not find it here. Ted Green knew the plant from [8380] where it grew with *Ranunculus lingua* in 1978.

West Berks: still plentiful in 1897 in a deep saline ditch which bordered the east side of the brackish meadow at Marcham [4595], growing with *Zannichellia palustris* and *Ranunculus trichophyllus*, with *Apium graveolens* on the banks of the ditch (Druce, last seen here by Bowen in 1964). Also in a pond at Snelsmore [4671] and in Englefield Park Lake [6271] in 1962 (RNG). In a small reservoir, built in 1974, at Frilford [434977] in 1978. Atlas 2000: [59], [57], [67]

Scirpus sylvaticus L. *Wood Club-rush*

hel 6

Shady swamps on acid soils. Local and rare, but typically dominant where it occurs.
NVC: OV 30; W 5

Silwood Park: a Silwood speciality (RNG in 1970), locally dominant on flat muddy stretches of the Clear Brook (The Marsh (Plate 13), Guinness's Bridge), and occasional in the alder swamps around the Red Brook (Cascade Marsh and Great Mead). Also on the margins of The Lake at The Willows and Guinness's Thicket. It is home to several rare Heteroptera, most notably *Cymus obliquus* which is a southern and central European bug which was discovered by Dick Southwood in The Marsh at Silwood in 1956. There was a good patch in Cascade Marsh [93843 68892] below Oak Mead on 15 June 2009.

Ascot: very local. Johnson's Pond, Sunninghill Park, Windsor Great Park by Virginia Water.

East Berks: near Sonning, Windsor, near Wellington College, by the Loddon near Sindlesham Mill, rather plentiful on both sides of the Blackwater near Thatcher's Ford. Coleman's Moor, Wokingham, Sandhurst. Recently at Eversley Bridge [760629], Shepherd Meadow at Camberley, Moor Green Lakes nature reserve [8062]. 2% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: very local in the central Kennet valley with an outlying station at South Hinksey [50]; extinct elsewhere. Sandleford [46], Boxford and Winterbourne [47], Thornford Bridge, Great Wood, Woolhampton and Thatcham Station [56]. Atlas 2000: [46], [56], [57], [50]

Schoenoplectus lacustris (L.) Palla *Common Club-rush*

hyd 6

Scirpus lacustris L.

Rivers, canals and ponds on nutrient-rich mud. This is the club rush that stands 2m proud of the water surface in the centre of the channel of fast-flowing rivers, often forming dense thickets in places like the R. Loddon where there is no boat traffic. It has 3 stigmas and the glumes are smooth (not microscopically densely papillose).

NVC: A 9, S 8,12,13,16

Ascot: no records.

East Berks: occasional along the whole length of the R. Thames from Reading down to Windsor, in the R. Loddon and Blackwater River. Also at Widbrook Common and at Rapley Lakes. 4% (1km²). Atlas 2000: all except [87], [96]

West Berks: occasional along the whole length of the Rivers Thames and Kennet, but absent from the interior. In the pond at Jarn Mound [4802] with *Menyanthes trifoliata*. Atlas 2000: all except [28], [48], [57]

Schoenoplectus tabernaemontani (C.C. Gmel.) Palla *Grey Club-rush*

hyd 6

Scirpus tabernaemontani C.C. Gmel.

Scirpus lacustris ssp. *glaucus* Hartm.

Told from *S. lacustris* by its shorter stems (to 1.5m rather than to 3m), which are narrower at their midpoint (3-8mm rather than c.10mm), and by the glumes which are densely papillose near the apex and midrib (not smooth). The nut is 2-2.5mm (not 2.5-3mm). The ecology is different too; the plant is more likely to be found in wetlands than in rivers. Druce looked hard and long for this species and failed to find it: "I have made repeated search for this about Marcham, but have been unable to find it there or elsewhere in the county. The glaucous form [of *S. lacustris* occurs] in the Wytham ditches ... but it has 3 stigmas". Perhaps most of the inland records are of garden escapes?

Ascot: in Sole's Pond to the east of Ascot Station 1979-2004.

East Berks: 'Zebrina' was in the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003. <1% (1km²).

West Berks: in the wetlands at Radley gravel pits [5296] in 2000, but *S. lacustris* is a far more abundant species here.

¶ **Schoenoplectus** *S. tabernaemontani* 'Albescens' and 'Zebrinus'

Isolepis setacea (L.) R. Br. *Bristle Club-rush* th 5 ↓
Scirpus setaceus L.

Woodland rides, marshes, damp winter-flooded pastures and margins of ponds on acid soils. Scattered but rare throughout, and absent from the chalk.

NVC: A 22,23

Ascot: local and rare at Leiper Hill and Windsor Great Park on the Berkshire side of Virginia Water.

East Berks: damp heathy spots near Hurst Grove, near Wellington College, Sandhurst, Ascot, Jouldern's Ford. Coleman's Moor, Wellington College, Bear Grove, Ashley Hill. Recently at Long Moor [7865], Moor Green Lakes nature reserve [8062], Heath Lake [828652], Wildridings.[8668]. 1% (1km²). Atlas 2000: all except [78], [96]

West Berks: very local in two epicentres in the Northern Loop and the east Kennet heaths. Badbury Wood [29], in old pasture at Enborne Row [46], Appleton Upper Common, Black Horse Field, Dry Sandford Pit, Hitchcopse pit and Marcham [49], Wytham [40], Cold Ash [56], Bagley Wood [50], Burnt Common and Burghfield Common [66], Sulham [67]. Atlas 2000: [29], [49], [40], [56], [57], [50], [66], [67]

¶ **Isolepis** *I. cernua*

Eleogiton fluitans (L.) Link *Floating Club-rush* hyd 6 ↓
Scirpus fluitans L.
Isolepis fluitans (L.) R. Br.

Floating in ponds and ditches of acid water; locally common in the heathy parts.

NVC: A 22-24; M 29

Ascot: in a shaded pond near Wood End [9270], north of Ascot Racecourse (1979-2004). Englemere Pond (1979-2004), Tower Hill, Virginia Water and other ponds in Windsor Great Park.

East Berks: Bulmarsh, pond at Hurst, Sandhurst, Long Moor, Wellington College, Bagshot, Broadmoor, Finchampstead, Spout Pond, Heath Pool, Bracknell. In an acid pond known as the Old Bathing Pool in the Royal Military Academy at Sandhurst [867613], and in the Surrey (v.c.17) part of the grounds at Upper Lake [8670] in 2002. A summer-germinating annual with a long-lived seed bank, flowering late in the summer (July to September). Atlas 2000: [76], [86], [96], [97]

West Berks: confined to the eastern Kennet valley, and extinct in most of its former stations. Hermitage pits [5173], Ufton Park [6366], Mortimer Common [6564], Wokefield Common [6566]. It was dominant in a shallow pond at [5817 6328] near Heath End in 2003. Atlas 2000: [56], [57], [66]

Blysmus compressus (L.) Panz. ex Link *Flat-sedge* hel 6 ↓

Schoenus compressus L.

Scirpus caricis Retz

Scirpus compressus (L.) Pers., non Moench

Marshes and damp meadows on nutrient-rich soils; very local, but common where it occurs in the Upper Thames and Kennet valleys.

East Berks: no records.

West Berks: two epicentres; on Abingdon Racecourse and in fields between it and Marcham [49], and in the western Kennet [36] to [56]. Freeman's Marsh, Hungerford in 1988 [3268], Boxford Church (OXF) in 1978 [4271], in a ditch by the saline meadow at Marcham in 1954 and 1964 [49] (see p. 116), by Thatcham canal (RNG) in 1951 [56], Downe House [57], West Hagbourne Moor [5387] in 1992. Atlas 2000: [36], [47], [49], [57], [58]

CYPERACEAE

Cyperus longus L. *Galingale* ● hel 8

An occasional garden escape in ditches and on damp waste ground. The narrow spiklets (< 2mm wide) have reddish centres and green edges.

Ascot: marsh near Ascot (1929) (OXF). Very rare escape in the stream [919708] that runs by the northern end of New Road opposite Ascot Place (1979-2007).

East Berks: not in Druce. Rare in the R. Thames in Henley Reach (1936-57). Gravel pits at Dinton Pastures (1984-88) and Sandford Mill [7772] (RNG), Swallowfield [7264] in 1986, Hewlett Packard headquarters at Pine Wood [836657] in 1999. <1% (1km²). Atlas 2000: [76], [77]

West Berks: planted in a small pond at Sutton Courtenay Centre [503914] in 2004, Bucklebury Common [555690] in 1983-87 (RNG), Wokefield Common [6566], Pangbourne [6376]. Atlas 2000: [39], [56], [68]

Cyperus fuscus L. *Brown Galingale* th 7 ↓

A local speciality and *Red Data Book* species of seasonally flooded pond margins, on soils rich in organic matter at the junction of the Tertiary deposits and the chalk. A summer-germinating annual with a long-lived seed bank, flowering late in the summer (July to September). The ground is typically open and heavily poached by cattle hooves. Associated species include *Agrostis stolonifera*,

Bidens cernua, *Gnaphalium uliginosum*, *Hottonia palustris*, *Juncus bufonius*, *Mentha aquatica*, *Myosotis laxa*, *Oenanthe fistulosa*, *O. aquatica*, *Persicaria hydropiper*, *P. minor*, *Ranunculus sceleratus*, *Rorippa palustris* and *Stellaria palustris*.

East Berks: known only from the 3 ponds at Cock Marsh [880867] (Plate 16). Numbers fluctuate dramatically from year to year with variation in weather conditions and the intensity of competition from taller vegetation. Threatened by willow scrub encroachment, but this is periodically cut back as part of site management. The cattle grazing on the marsh is sympathetically managed. Neither Druce nor Bowen knew of this site. <1% (1km²). Atlas 2000: [88]

West Berks: extinct. Formerly known from a damp copse between Pangbourne and Sulham [67] in 1911 (**OXF** and **RNG**). Atlas 2000: no records

Cyperus involucratus Rottb. *Umbrella Plant* ● hel 8

Silwood Park: flowering vigorously on 1 October 2008 from two formerly-potted rootstocks, thrown out on the nettle-dominated CABI waste soil pile by the Polytunnel. Next to where *Polygonatum verticillatum* used to grow, before it was grubbed up and eaten (by rabbits or squirrels is unclear) in June 2008. The *Polygonatum* was back in July 2010, but by then the hard winter of 2009-10 appeared to have killed off the *Cyperus*. However, it too was back, in late summer 2010.

East Berks: no other records

West Berks: no records

¶ **Cyperus** *C. eragrostis*, *C. involucratus*, *C. longus*

¶ **Uncinia** *U. rubra*, *U. uncinata*

Schoenus nigricans L. *Black Bog-rush* hs 5 ↓

Fens, bogs and marshes; very local and rare. These Berkshire records are the most continental in England and Wales; in Britain, *Schoenus* typically grows within a few miles of the seaside (see Plate 3).

NVC: M 13,24

East Berks: Bagshot Heath, extinct (if indeed it ever grew here; the early record could have been from v.c.17 Surrey). The plant still grows in [96] across the border in Surrey just south of our area in Lightwater Bog and Great Bottom on Westend Common. Atlas 2000: no records.

West Berks: restricted to the Northern Loop, extinct in its former stations in the western Kennet Valley (Kintbury [36] and Greenham Common [46]). Peat Bottom Wood [3495] and Hatford Wood [3394], fens at Frilford golf course between the Red and Green courses with 2 clumps on 4 June 2008 [4416 9849], Cothill Fen [4699] (Plate 3), Barrow Farm [4697] and Wootton [4701] and in Dry Sandford Pit [469996]. Atlas 2000: [49], [40]

Rhynchospora alba (L.) Vahl *White Beak-sedge* hel 7 ↓
Schoenus albus L.

Wet heaths and bogs. The species has suffered a massive decline in distribution and abundance. To Druce it was “local but rather common where it occurs”, whereas Bowen considered it to be “very local and decreasing”. It is now rare and confined to south-east Berkshire.

NVC: M 16,21

Ascot: first recorded by Sir Joseph Banks from Sunningwell Bog in 1773 (**BM**). Bog near Windsor Great Park, “on the peat bogs in Sunningwell in great plenty”. Long extinct as a result of drainage of the bog. It still grows on Sunningdale golf course [960655] on Chobham Common in the Surrey part of Sunningdale (v.c.17).

East Berks: Bulmarsh Heath, Bagshot Heath, Wellington College, near Sandhurst, Easthampstead Plain, Broad Moor, Wild Moor Bottom, near Bracknell, Crowthorne [8463] in 1967. Extinct at most of its former stations, but still at Owlsmoor Bog [849630], Wellington College Bog and Broadmoor. Atlas 2000: [86]

West Berks: very local and rare. Snelsmore Common [4671] in 1984 and 1999. Formerly at Three Firs [66] in 1892 (**RNG**) and Greenham Common [46] in 1897. Atlas 2000: [47]

Cladium mariscus (L.) Pohl *Great Fen-sedge* hel 7
Schoenus mariscus L.

Shaded fens, very local and rare.

NVC: M 13,22,24; S 4,25

Silwood Park: planted in the pond on the patio outside the Refectory when it was refurbished in 2006. Thriving, and flowering for the first time in August 2008.

East Berks: no records.

West Berks: about 50 plants in two separate patches in wet woodland at Peat Bottom Wood [335958] and [344954] in 1966 but not seen since. In cleared fen at Cothill [459996] in 1982 and 1988. Atlas 2000: [49]

¶ **Cladium** *C. mariscus*

Carex paniculata L. *Greater Tussock-sedge* hs 5

Alder woods, wet meadows, fens and margins of streams and canals. Locally abundant but absent from extensive areas. The utricles are conspicuously winged in the upper half.

NVC: M 27; OV 26,32; S 3,7,23,25; W 1,5,6

Silwood Park: very local and rare on the margins of the eponymous pond in Pond Field, but in sad decline, with many of the tussocks dead or dying from a combination of shade cast by the overhanging oak trees and a severe lowering of the water table (the pond is almost never full these days, even in midwinter); only 1 healthy tussock and 5 small ones survive in July 2000. In shade in Cascade Marsh, a single tussock on the east side and 2 on the west side of the inflow stream, downstream of Flow Station 3 in May 1998; unchanged in May 2003. Just one tussock alive in June 2006 and May 2007. On 15 June 2009 there was one tussock on each side of the Red Brook just downstream of Monitoring Post 3 [93959 68992].

Ascot: frequent and locally dominant on the southern shore of Virginia Water, common on the more shaded northern shore, and rare on the very shaded edge of Johnson’s Pond. Particularly fine

tussocks, shoulder to shoulder at the water's edge all around the island in the pond in Blacknest Park in August 2000 before the site was redeveloped for housing. Occasional around the ornamental lakes at Ascot Place. On the edge of the pond by the railway in Whitmoor Bog [892683].

East Berks: Wokingham, Bowsey Hill, Bracknell, Sandhurst, Easthampstead, Finchampstead, Windsor Great Park. Queens Mere and Kings Mere. Occasional along the Surrey and Hampshire borders in the east and south, but absent or rare in the Thames valley and the interior. 2% (1km²). Atlas 2000: [76], [77], [86], [96], [97]

West Berks: occasional in the Kennet, Pang and Lambourn valleys but absent from most of the Thames valley and rare in the interior. Occasional in the Northern Loop in fens as at Cothill [4699] where it is locally abundant and Chilswell [500036] where it is rare. On the edge of the lake at Benham Park [4367]. By the canal at Aldermaston Wharf. There is a superb population in the meanders of the chalk stream down from Winterbourne past the wonderfully named Honeybottom [4572]. By the R. Pang in Moor Copse [6573]. Atlas 2000: all except [29], [48], [59], [68], [69]

Carex x boeninghausiana Weihe = **C. paniculata x C. remota**

West Berks: Cothill [4699] in 1890 (**OXF**) and 1962, Greenham Common [4560] in 1893 (**OXF**), Marcham [4596] in 1895 (**OXF**).

Carex diandra Schrank *Lesser Tussock-sedge* hs 5 †
Carex teretiuscula Gooden.

Fens, probably long extinct. The plant has long rhizomes and hence is not tussock-forming. The lower bract is very short and not leaf-like, and the blackish brown utricles have long beaks (more than half the length of the utricle).

NVC: M 13

East Berks: not in Druce, who thought that "the plant should be found in the wet bogs about Sandhurst", presumably because he had seen it at Greywell Moors [7150] in Hampshire not far to the south. Atlas 2000: no records.

West Berks: collected by L.V. Lester-Garland at Frilford bog [4497] in 1912 (**OXF**), but not seen since then. Atlas 2000: no records.

Carex vulpina L. *True Fox-sedge* hs 5 †
Carex otrubae auct., non Podp.

By ditches and rivers on heavy clay (not peat). Ligule truncate, leaf sheaths transversely wrinkled on the back, utricles slit down back of beak.

East Berks: extinct. Not in Druce. Formerly very local and rare at Remenham (1963). Atlas 2000: no records.

West Berks: extinct. Collected at Coleshill [2393] in 1891 (**OXF**). Atlas 2000: no records.

Carex otrubae Podp. *False Fox-sedge* hs 6
Carex vulpina L.
Carex nemorosa Rebut., non Schrank nec Lumn. ex Honck.
Carex cuprina (S ndor ex Heuffel) Nendtv. ex A. Kerner, nom. inval.

Ditches on clay soils, damp woodland rides, wet grassland, roadsides and pond margins. Locally frequent, but rare or absent on the chalk. Ligule acute, leaf sheaths not wrinkled, utricle not split in the beak.

NVC: S 4,5,14,18,22,23,26

Ascot: particularly abundant along the track through Sunningwell Bog, locally dominant in the wet grassland between the South Ascot railway bridge and St George's School in Ascot. The Tip, Swinley brick pits, Ascot Station, Winkfield, Ascot Place, Cranbourne, Kingsmead. In re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008. Not in Silwood Park for want of clay soils.

East Berks: a curious distribution, occasional in the interior but absent to the north and east of a line from Sunninghill to Hurley and from most of the Loddon valley. By ponds at Billingbear, Hurst, Coleman's Moor, Ruscombe, Old Windsor, Pocket's Copse, Shepherd Meadow, etc. In the dry stream-bed of the new flood control channels in East Maidenhead. 13% (1km²). Atlas 2000: all squares

West Berks: another curious distribution; ubiquitous to the north of 85 but absent to the south. Throughout the Thames valley but absent from most of the Kennet valley. Common around Reading. Atlas 2000: all except [37], [46], [47]

Carex x pseudoaxillaris K. Richt. = **C. otrubae x C. remota**

Carex x axillaris Gooden., non L.

East Berks: Swallowfield (1892) (OXF), Three Mile Cross (1892) (RNG), Whistely Green (1897), Twyford (1891) (OXF), Wokingham (1918) (RNG), Waltham St Lawrence (1918) (RNG), Whiteknights (1982), Winkfield (1992).

West Berks: Buscot [29] (OXF), Marcham [49] (OXF), Mortimer [66] (RNG).

Carex spicata Huds. *Spiked Sedge*

hs 6

Carex muricata auct., non L.

Carex contigua Hoppe

Dry grassy heaths, roadsides and woodland margins, much commoner on heavy clay than on acid sands. Occasional in east Berkshire. Not separated from *C. muricata* in Druce. Told from it by its roots and stem bases purple-tinged, the ligule obtuse, longer than wide, and the utricles which are thickened and corky at base. Probably over-recorded in the past on the acid sands for *C. muricata*.

Ascot: locally frequent in drier parts of the fen-meadow north of the railway west of St George's Lane [927683] in 2002. Rare in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008. Not in Silwood Park.

East Berks: occasional in the Thames valley and to the north of 70. Old Windsor. Recently at Dinton Pastures [782719] where it is rare. Absent or rare in the south and east of the area. 2% (1km²). Atlas 2000: [76], [77], [78], [87], [88]

West Berks: occasional in the Northern Loop and in the Pang and Thames valleys. Absent from most of the Kennet valley and from the interior. On the calcareous roadside banks with *Centaurea scabiosa* etc., north of Shalbourne [317638] in 2001. Atlas 2000: all except [36], [46], [47], [48], [49], [57], [58], [66], [67], [68]

Carex muricata L.

Carex muricata subsp. **lamprocarpa** Celak. *Small-fruited Prickly-sedge*

hs 6

Carex pairii F. Schultz

Acid grasslands, dry grassy banks, wood margins and hedge-banks. Locally common, but absent from the chalk. Not separated from *C. spicata* in Druce. Told from it by its yellow-green (not purple) stem bases, and its squat, rounded ligule (not long and pointed). The utricles are smaller (2.6-3.5mm not 4-5mm), stick out less (not at a virtual right angle), are truncate, and not thickened at the base.

Silwood Park: easily our commonest grassland sedge, and a significant increaser under rabbit grazing. Roe deer are particularly partial to its young flower heads, and completely stripped tussocks, with long stalks but no fruits, are a common sight in summer time. Nursery Field, Pound Hill, Ashurst, very common in the churchyard with *Anthoxanthum* and *Arrhenatherum*, Rush Meadow, Gravel Pit, Church Field, Rookery Slope, Nash's Field, North Gravel, Heronsbrook Meadow. Huge tussocks next to the Croquet Lawn, in what used to be the Heather Bed before it was over-run by grasses and sedges.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	5	8	20	35

Ascot: common in rabbit grazed turf with *Senecio jacobaea* at the bottom of the hill in the magnificent abandoned garden at King's Beeches [934668] (1979-2004).

East Berks: Sonning, Bisham, Old Windsor, Hurst. Abundant by roadside near Maidenhead, Spencer's Wood Common, Windsor Park, Earley, Winkfield, Waltham, Sandhurst, Warren Row, Ruscombe. Reading, Whiteknights Park, Bulmershe, Loddon Bridge, frequent by the railway at Woodley, Twyford, Ambarrow, Wokingham, Englemere. 12% (1km²). Atlas 2000: all except [78]

West Berks: frequent on the heathy parts of the eastern Kennet valley [46], [56] and [66] and in the Northern Loop, but rare in the interior (north of 75 and south of 95). In the coarse grasslands at RAF Welford [4175] in 2002, and on the former runway at Greenham Common [5164] in 2004. Atlas 2000: [38], [39], [46], [49], [40], [56], [57], [59], [66], [67]

Carex divulsa Stokes

Carex divulsa subsp. **divulsa** *Grey Sedge*

hs 6

Dry grassy banks, hedges and margins of woods, occasional but never in quantity and widely scattered, commonest in the chalky districts. Like *C. muricata*, but lowest 2-4 spikes are smaller and separated by a gap (2 times their length) from the upper spikes. In *C. remota*, the lowest bract is leaf-like and longer than the inflorescence.

Ascot: occasional in the wet grassland by the track across Sunningwell Bog on 10 June 2001, on Kings Ride, Blacknest Park, occasional on dry ditch banks by Englemere on 17 July 2001. Very local on roadsides in Swinley Park near the sawmill [8967] on 20 May 2003. Not in Silwood Park. Locally frequent in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: Barge Lane [7164], Reading, Wargrave, Ruscombe, Shurlock Row, Shinfield, Arborfield, Lock's House, Coleman's Moor, very fine near Wokingham, Bearwood, Winkfield, Cookham, Windsor Great Park, Finchampstead, Warren Row, Park Place. Reading, Arborfield, Twyford, Ruscombe, Cookham Down, Windsor Great Park, RMA Sandhurst, Hollow Lane Shinfield, Lilly Hill Park, Bracknell, Three Castles Path, Foliejon Park, Bray Court, Holliday Plain, Bear's Rails, Clay Hill and on the ramparts of Windsor Castle. Scattered and uncommon in most of the interior. 10% (1km²). Atlas 2000: all except [96]

West Berks: commonest in the Pang valley [57] and [67], rare and scattered elsewhere. Kintbury [36], Fieldridge Copse [3574], Sandford [46], RAF Welford [47], Lockinge [48], Wytham [40], Hermitage, Hampstead Norreys, Bucklebury churchyard, Stanford Dingley and Quicks Green [57], Unhill Wood (OXF) and Streatley [58], Bagley Wood [50], Pangbourne, Sulham, Tilehurst (LAN) and Tidmarsh [67]. Atlas 2000: all except [28], [36], [39], [48], [68]

Carex divulsa subsp. **leersii** (Kneuck.) W. Koch *Many-leaved Sedge*

hs 6

Carex muricata L. var. *leersii* Kneucker

Carex polyphylla Karelín and Kir.

Carex leersii F. Schultz, non Willd.

Carex pairii F. Schultz subsp. *leersii* (Kneucker) O. Schwarz

Carex leersiana Rauschert

Dry grassy banks and margins of woods on chalky soils. Uncommon or overlooked. The gap is less than 2 times the length of lower spikes, and the utricles are divaricate, 4.5-5mm.

Ascot: no records.

East Berks: not in Druce. Bray (1966), Emmbrook (1966), rare, but quite frequent just across the river in the Oxfordshire parts of [77] and [78], so well worth looking for in Wargrave, Park Place, Remenham, etc. Atlas 2000: no records.

West Berks: chalky bank of the railway at Welford [4173] (OXF), Wickslet Copse [48], Streatley [58], Mortimer [66], Basildon [67]. Atlas 2000: [49], [58]

Carex disticha Huds. *Brown Sedge*

hs 6 ↓

Water meadows and marshes. Locally abundant in the Thames and Loddon valleys, occasional elsewhere. A classic water meadow plant. Like *C. arenaria* but the terminal spike is male only at the

apex (not all male), the glumes are less than 5.5mm, and the leaf sheaths are herbaceous (not hyaline, save for the apical rim) on the back.

NVC: M 22,27; OV 26,29; S 23

Ascot: no water meadows, hence no records.

East Berks: by the railway at Wokingham, Hurley, Sonning, Coleman's Moor, Farley Hill, Sandhurst, Windsor Park, Ruscombe, Maidenhead. Water meadows by the R. Thames and R. Loddon but absent from the interior. Recently at Dinton Pastures, Loddon Court, Crazies Hill, Shepherd Meadow at Camberley, Brook Farm, Leiper Hill. 2% (1km²). Atlas 2000: [76], [77], [86], [88], [97]

West Berks: occasional in wet meadows by the R. Thames all the way from Lechlade [29] down to Reading [67], but very uncommon in the Kennet valley (extinct at several of its former stations), and absent from the interior. Boxford water meadows SSSI [428719]. Recent records from Tuckmill [239898], near Buscot weir and Watchfield [29], Pucketty Farm [39], Buckland Marsh [30], Black Horse Field [467973], from Lashford Lane Bog [40] and Seacourt Stream at Wytham [4709], Little Wittenham [59], Iffley Meadows [50] and Cholsey Marsh [68]. Atlas 2000: all except [38], [48]

Carex remota L. *Remote Sedge*

hs 6

Wet woods, shady hedge-banks, especially in ditches that are permanently damp. "An elegant species from its gracefully curved leaves and long foliaceous bracts" (Druce). Frequent in south-east Berkshire but absent from the chalk. Bright, grass-green tussocks, with narrow leaves and small, distant flower heads. Told from *C. divulsa* by its lowest bract, which is leaf-like, and exceeds the length of the inflorescence.

NVC: W 1,5,8,14

Silwood Park: our commonest sedge of wet woodland, ditch and hedge-bottom. Dominant on the woodland floor in Great Mead, Cascade Marsh, Guinness's Thicket, The Willows and common in Rush Meadow, Farm Road, Farm Wood, Water Meadow, The Rookery, Wood Bank, The Marsh, Nash's Copse and by the pond in the Japanese Garden. Dominant in the ferruginous flush at the bottom of Farm Wood in 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	5	5	10	21

Ascot: very common on the southern shore of Virginia Water, growing on its own, or below the massive tussocks of *Carex paniculata*. In Sole's Pond, Sunningwell Bog and South Ascot Bog.

East Berks: locally abundant in wet woods and ditches throughout. 25% (1km²). Atlas 2000: all squares

West Berks: throughout the Thames and Kennet valleys but absent from the interior (north of 75 and south of 90). Atlas 2000: all except [48], [68], [69]

Carex ovalis Gooden. *Oval Sedge*

hs 6

Carex leporina sensu L.(1754) et auct., non L.(1753)

Damp grassland, woodland rides, and heaths on acid soils. Locally frequent in south-east Berkshire but absent from calcareous soils. The spike is longer than wide, and the utricles are winged in the upper half. The English name comes from the egg-shaped inflorescences.

NVC: MG 5,13

Silwood Park: conspicuous but uncommon as discrete tussocks in damp grassland. Towards the centre of Heronsbrook Meadow on 10 June 2000. Occasional in Ashurst Orchard and locally frequent in Rush Meadow; the tussocks stand out because they are less heavily rabbit grazed than the surrounding grasses. Church Field, south of the public footpath. Cutting the rushes at the southern end of Pond Field in January 2002 has encouraged a vigorous growth of Oval Sedge in May 2002. In the southern (older) part of the graveyard at Ashurst. In the grass track along the northern edge of the experiment in Nash's Field in May 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	4

Ascot: locally frequent in Sunningwell Bog, in drier parts of the fen-meadow north of the railway west of St George's Lane [927683] in 2002, and in the rough on Ascot Heath golf course. The Tip, Brook Farm, Cranbourne, Forest Lodge, Leiper Hill, Hiltons Covert, Windsor Great Park.

East Berks: on the high ground above Virginia Water, pond sides at Cookham Dean, Hurst, Sandhurst, Wellington College, Wokingham, Finchampstead, Long Moor, Farley Hill, Spencer's Wood Common, Earley Heath, Sunningwell, Bracknell, Upper Star Post, Three Castles Path, Stubbing's Heath, Warren Row Common. Winkfield [911721]. Common to the south and east of a line from Maidenhead to Arborfield, but absent or rare to the north of this. 7% (1km²). Atlas 2000: all except [78]

West Berks: very local, scattered throughout the heathy parts of the Kennet valley, rare in the Northern Loop but absent from most of the area (north of 75 and south of 00). Boxford [4271], Avery's Pightle [435651], Sole Common [413707], Brimpton Common [5763], Great Wood [5065], Hockett Wood [5568], Jewell's hayfield [572713], Burnt Hill Yattendon [5774], Burghfield [6668], Padworth Common [6165], Old Deerpark Wood [6171]. 3% (1km²). Atlas 2000: all except [28], [29], [37], [48], [58], [68], [69]

Carex echinata Murray *Star Sedge*
Carex stellulata Gooden.

hs 5

Damp heaths and bogs. Locally frequent but decreasing in south Berkshire. Bogs, wet heaths, etc. Local but not unfrequent in the heathy district. The spikes have less than 10 spreading (patent) utricles, and the spike is not longer than wide.

NVC: M 16,21

Ascot: local and uncommon. Buttersteep, Blaine's Allotment, The Orangery, Swinley golf course, Kingsride, Ascot Heath. Locally frequent in a sunny, grassy spot on the north-west corner of the pond to the east of Ascot Station in June 2001. On the edge of the northern triangle on Ascot Racecourse in May 2002.

East Berks: "very fine by Virginia Water, Heath Pool, Bagshot, Bracknell, etc." (Druce). Owlsmoor, Coleman's Moor, Tower Hill. Confined to the acid parts of the extreme south-east and extinct at more than half of its former stations. Recently from Dinton Pastures, Heath Lake, Shepherd Meadow, Edgebarrow, Wishmoor Cross, Mill Pond, Upper Star Post, Wishmoor Bottom. Locally common in the lawn at the edge of Lower Lake at Sandhurst in May 2002. 2% (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: very local and uncommon; Royal Military Academy Shrivenham [28], Greenham Common [46], Snelsmore Common [47], Cothill Fen and Parsonage Moor [49], Turners Green [530696], valley bogs on Silchester Common [6162]. Previously known from the Northern Loop but now extinct in its former stations (i.e. Wytham, Boars Hill, Tubney [40], Bagley [50]). Atlas 2000: [28], [36], [46], [47], [49], [56], [57], [66]

Carex dioica L. *Dioecious Sedge* hs 5

Among *Sphagnum* in short calcareous fen vegetation with other small sedges; formerly very rare, previously thought extinct, but re-discovered in 2012. Last seen in Surrey in 1933. The Mapledurwell site in north Hampshire [6852] was destroyed by the construction of the M3 motorway. Rhizomatous. Stems round and smooth; dioecious.
NVC: M 13

East Berks: extinct. Last seen near Sandhurst in 1897.

West Berks: long thought to be extinct. The most recent record from Frilford [4497] had been in 1946, but it was rediscovered here in 2012 by Judy Webb. Formerly at Cothill fen [4699] in 1890 (**OXF**) and Wootton fen in 1860. Long extinct at its former Kennet valley stations which included Greenham Common [46], Aldermaston [56], Stanford Dingley [57], Burghfield [66].

Carex elongata L. *Elongated Sedge* hs 5 ↓

A local speciality of lowland ponds and canal sides or wet alder woods and flooded meadows which dry out in summer. Rarely found as an epiphyte on fallen trunks in alder or willow carr. Utricles not winged, reddish purple to dark brown (not pale, as in *C. curta*).

East Berks: found in 1890 “on a marshy tract of ground, once Coleman’s Moor (**OXF** and **RNG**) in 1891, now almost entirely under cultivation. It occurs in hedges near Sandford Bridge and by a pond near Loddon Bridge” (Druce). Sparingly between Jouldern’s Ford and Thatcher’s Ford on the Blackwater (1898). Ditches along the Reading road past Hurst Grove. Sandford Mill [7873] in 1936 (**RNG**). By Bowen’s time, the plant was thought to be extinct in our area, largely as a result of drainage followed by urban expansion. Still at Wisley in Surrey [05]. Very rare in North Hampshire in very wet, acid willow-carr and alder-carr, beside very wet ditches; the site at Aldershot [85] was destroyed by road building in 1994 but plants were propagated and moved to an adjacent site in Surrey. Between Sandhurst and Blackwater (**OXF**) in 1898. Thought extinct by Bowen, but refound by R.C. Palmer in 1977. There were about 15 tussocks in a copse north of Blackwater Station on the Berkshire side of the river [851602] (**OXF**). <1% (1km²). Atlas 2000: [86]

West Berks: Padworth [66] in 1961 (**RNG**), but extinct by 1984. Atlas 2000: no record

Carex curta Gooden. *White Sedge* hs 5
Carex canescens sensu Light. et auct., non L.

A local speciality of ferruginous swamps, alder carr, *Sphagnum* bogs, marshes, and wet places on heaths, often in shade; local and rare; confined to south-east Berkshire. Heavily grazed by deer in early spring, and this delays flowering. A pale-green sedge found growing near to, but in wetter places than, the grass-green *C. remota*. The pale-green utricles are unwinged in their upper half (not winged like *C. ovalis*). It is simple to tell *C. remota* from *C. curta* on leaf colour alone. In flower, the

lowest bract of *C. remota* is leaf-like and much longer than the inflorescence, whereas *C. curta* has virtually no lower bract at all.

NVC: S 8

Silwood Park: one of our rarest native plants. Local and rare in Cascade Marsh, in bare, muddy runnels in alder woodland close to the edge of the lake, directly opposite the outflow sluice [942690]. Discovered during a survey of the alder carr in August 1982. In May 2000 there were 10 good tussocks around an open, black swamp about 10m inland from the lake-side alders, and before the terrestrial oak-birch woodland began; there were 12 in April 2002 and 22 in May 2003. The other black swamps nearby were dominated by *C. remota* with its glossy, grass-green leaves. The tussocks of *C. curta* are about the same size, but paler, duller green, and earlier into flower. The population may be increasing in numbers, but the plant is absent from all but one of the apparently suitable patches of black swamp, and may be dispersal-limited. A big tree fall during the winter of 2002-03 created a large light gap nearby, and it will be interesting to see if this has a negative impact on *C. curta*. Little change in distribution or abundance on 22 May 2007. There were at least 20 tussocks on 17 May 2008 but no increase in range (photographs). On 15 June 2009 there were worrying signs that both *Carex remota* and *Deschampsia cespitosa* were increasing at the expense of this species. Only one tussock was found here on 12 May in the very late spring of 2013.

Ascot: plentiful in Sunningwell Bog in Druce's time, but now much reduced through drainage. It is still locally frequent in standing ferruginous water beneath *Salix cinerea* in the north-west corner of Sunningwell Bog at [927683] growing with *Hydrocotyle vulgaris* and *Equisetum fluviatile*, beneath birches in South Ascot Bog [924677] with *Molinia caerulea* and *E. fluviatile*, by the lower of the two Sole's Ponds east of Ascot Station, and near the stream in the north-east corner of South Ascot Bog [927676]. Still at Tower Hill, under alder and birch at the western edge of Englemere Pond, and at Virginia Water. Other recent records from South Ascot [9267], and at Rapley Lakes [8964]. There is a thriving population in Whitmoor Bog, on the northern shore of the pond that backs onto the northern embankment of the railway line, immediately opposite the Sewage Works [891683]; in full flower on 28 April in the early spring of 2002 (it typically reaches full flower during the second week in May).

East Berks: Virginia Water, still plentiful there at the western end in Berkshire. In great luxuriance at Spout Pond and by Heath Pool near Wellington College. Sandhurst Lake, Heath Pool, Long Moor, road between Wellington College and Wokingham. Long Moor, Finchampstead Ridges, Queens Mere, Wokingham Station (RNG), Sandhurst Academy. Recently in the water of the stream on the eastern side of the lake close to the entrance to California Country Park. Also at Wishmoor Cross and at the eastern end of Upper Lake at the Royal Military Academy Sandhurst. Much the best place to see this plant, however, is from the boardwalk through Longmoor Bog [784653], at the western end of California Country Park, where it grows luxuriantly in alder carr with abundant *Equisetum fluviatile*. 2% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: Atlas 2000: no records.

Carex hirta L. *Hairy Sedge*

hs 5

Damp grassland, meadows, bogs, ditches, roadsides, and heaths, but sometimes in quite dry situations; frequent, but absent from the chalk ridge. Very easy to recognise by the grey-green colour of its leaves, its pale straw-coloured female inflorescences, and its very hairy lower leaf sheaths; the utricles are large (4.5-7mm) and very hairy.

NVC: M 22; MG 4,9,10; OV 26; S 19,23

Silwood Park: locally frequent in Nursery Field, Rush Meadow, Pound Hill, Gravel Pit, Farm Road, Farm Wood, Weir Wood, Kissing Gate, Nash's Field, The Elms, Pond Field, Heronsbrook Meadow,

South Lodge. Very common close to Church Lane footpath in the southern (older) part of the graveyard at Ashurst. Locally dominant in the part of Upper Pond Field where there had been no mowing to control the bracken in September 2006.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	4	8	7	14

Ascot: frequent in the wet meadow of Sunningwell Bog with *C. otrubae*, *C. ovalis* and *C. flacca*. In re-seeded grassland between Liddel Way and the railway in South Ascot [919677].

East Berks: scattered throughout the species-rich wet ground at Cock Marsh [881868]. 15% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet valleys but absent from the chalk ridge (north of 75 and south of 85). Atlas 2000: all squares

Carex acutiformis Ehrh. Lesser Pond-sedge

hel 4

Wet woods, river-sides, marshes, water meadows, and margins of ponds and canals. Locally abundant but absent from the waterless chalk. Very variable, and frequently hybridising. Early flowering. It is most likely to be mistaken for *C. riparia*, but *C. acuta* and *C. vesicaria* are superficially similar. It is told from *C. riparia* by its much smaller female glumes (3-4mm compared with 6-10mm in *C. riparia*). From *C. vesicaria* it is told by its smaller utricles (3.5-5mm rather than 5-8mm) with their shorter beaks (less than 1mm, rather than 1.5-2.5mm). *C. acuta* is told at once by the fact that its utricles has no beak at all. The stigma count is not much help because *C. acutiformis* can have 2 or 3 stigmas; the 2-stigma plants may be derived from hybrids with *C. acuta* (Stace).

NVC: M 22,27; MG 4; OV 26; S 7,14,18,23; W 5,6,8

Silwood Park: in swampy woods at the lakeside and along the inflow streams. Locally dominant in alder woodland in Cascade Marsh, Great Mead and Lake Wood, a fine site when monocultures of the sedge are in full flower in June. These large patches have reduced in density and broken up over the last 20 years, with *C. acutiformis* replaced by *C. remota* in most cases. This could be a transient response to the great droughts of 1995 and 1996 when the swamp became almost completely terrestrial for long periods, and recruitment of *C. acutiformis* may improve now that it is wetter again (November 2000 saw the worst floods since 1947). By 2002 all of the big patches on the west of The Lake had been massively reduced following increases in *Carex pendula* near the stream and *C. remota* elsewhere; there were still a few substantial patches on the northern shore. Locally abundant in the pond in the Japanese Garden by the ornamental bridge in May 1998, its flowering stems appearing, confusingly, to emerge from the leaves of *Glyceria maxima* 'Variegata'.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	4

East Berks: occasional, but locally abundant, in wet woodlands throughout. In several small patches by the Wish Brook in Wishmoor Bottom (1979-2008). 8% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet valleys, local in the clay vale, but absent from the chalk ridge (north of 75 and south of 85). Locally abundant in the damp Ash woodlands of Long Spinney Copse north of Kingston Lisle [329895]. Atlas 2000: all squares

Carex riparia Curtis *Greater Pond-sedge*
Carex acuta auct., non L.

hel 5

This is our common river-side sedge, and has blue-grey leaves: “a very conspicuous feature of Thames-side vegetation” (Druce). Also by canals, ditches, ponds, and in marshes. “The contrast of its glaucous-coloured leaves and glossy brown glumes and yellow anthers is pleasing” (Druce). First record: banks of the river at Marlow (1843). Locally frequent in the main river valleys, but absent from the chalk and much of east Berkshire. Male spikes 2 or more, female glumes 6-10mm, much longer than the utricles. It has much fatter black female spikes than *C. acutiformis* with which it often grows (see above).

NVC: OV 26; S 3-6,25,26; W 1,5,6

Ascot: no records.

East Berks: occasional all along the R. Thames and R. Loddon. Also at Virginia Water. Rare in the south-east and the interior. 6% (1km²). Atlas 2000: all except [86], [96]

West Berks: common along both major rivers, the Thames in the north and the Kennet in the south, but absent from the interior (north of 75 and south of 85). Atlas 2000: all except [48]

Carex pseudocyperus L. *Cyperus Sedge*

hel 5

Low marshes and margins of stagnant water, sides of ditches and ponds, often in shade. Uncommon in south-east Berkshire and absent from calcareous soils. One of our most beautiful sedges, often planted for ornament, and sometimes escaping downstream from larger gardens.

NVC: S 4; W 5

Silwood Park: very rare in Cascade Marsh, in deep shade close to the edge of the swamp in 1996. Increased to 2 plants by 14 May 1998. On 6 June 2005 there were clumps of plants in 3 places, all on the southern bank of the Red Brook: near nest box F25 at the trackside near Cascade Bridge, on the bog edge near box F19 between Cascade Bridge and Depth Post 3, and 30m downstream of Depth Post 3 (still there in May 2007 but not seen in 2009). Much less abundant than *Carex pendula*, and possibly threatened by its spread. A new location on 6 July 2008, north of the Red Brook, a single clump beneath a fallen birch trunk in Great Mead at [93766 68919]. This plant was flowering freely on 15 June 2009 at [93765 68919] with about 10 flowering shoots.

Ascot: scarce by Rapley Lake, locally abundant in an ornamental pond at Kings Beeches, locally frequent around Johnson's Pond.

East Berks: abundant in a ditch at the foot of Cookham Down by the nearest pond, Wellington College, Sandford Mill, Reading (LAN) in 1957, Wokingham, Hurst, Whitley Green, Sandford Mill, Bearwood Lake, Sandford Mill, Sonning, Hurley, Bray Wick, Cookham Down, Sunninghill Park, Arborfield Mill, Coleman's Moor [7772], Johnson's Pond Virginia Water, old gravel pit at Dinton Pastures. Recently at Rectory Farm, Chapel Green, Shepherd Meadow, Wishmoor Cross, the edge of Bearwood Lake, Cock Marsh, Widbrook Common, Great Meadow Pond, Windsor Great Park. Very frequent on the edges of Upper Lake at the Royal Military Academy Sandhurst (v.c.17) and less commonly in the western part of Lower Lake (v.c.22) in May 2002. At Cock Marsh, the plant has increased following removal of the willows from Pond A and in July 2005 was abundant in full sun, growing with *Lythrum salicaria* and *Rumex hydrolapathum*; still frequent in June 2008. 3% (1km²). Atlas 2000: all squares

West Berks: occasional in the Kennet valley, very local in the Thames valley (near Abingdon and south of Reading) and absent from all of the interior: Little Coxwell [29], Freeman's Marsh, Hungerford [36], Milton [49], Cakeball Copse [56], Sutton Courtenay gravel pits, Milton (**OXF**) and Didcot Power Station [59], Sulham (**RDG**) and Little Johns Farm [67]. Atlas 2000: [36], [46], [56], [59], [50], [66], [67]

Carex rostrata Stokes *Bottle Sedge*

hel 5

Carex ampullacea Gooden., nom. illegit.

In shallow water on lake edges, in fens or ferruginous bogs with peaty soil; uncommon but locally frequent in south Berkshire. Absent from considerable tracts of the country, and one of the plants which has suffered most from drainage. Told from *C. vesicaria* by its smaller utricles (3.5-6.5mm not 5-8mm) which are more widely spreading (patent), and abruptly contracted into a rather short beak (1-1.5mm) with acute (not acuminate) female glumes. The female inflorescences are held upright (not pendulous), despite their long pedicels. Many stems are non-flowering in most years, which can make the plant rather inconspicuous.

NVC: A 22; M 13,21,22,27; S 4,8,10,12,19,23; W 4

Silwood Park: very rare but locally dominant. Frequent in the inflow delta of the Read Stream, behind the lakeside phalanx of *Typha latifolia* [9392 6906], growing in full sun (1979-2012) with *Lycopus europaeus* and scattered shoots of *Typha* (this is **S12 Typha latifolia swamp, Carex rostrata sub-community**). Flowering profusely on 15 May 2008; the population is still in good condition in full sun. On exposed mud on the southern edge of The Lake in Guinness's Thicket on 8 August 1982; this population has not been seen 1989.

Ascot: local on the margins of acid ponds at Rapley Lakes, Tower Hill, Englemere Pond, Sole's Pond below Ascot Station. Formerly common in Sunningwell Bog, but now very local, as in the north-east corner of South Ascot Bog [927676] in May 2003 in a ferruginous seep, above the stream. Locally frequent in the interior of the willow carr in Sunningwell Bog [92740 68278] on 3 June 2012, but very few shoots in flower.

East Berks: first recorded by Samuel Goodenough, famous Bishop, scholar and sedge expert: plentiful at Virginia Water (1792). Long Moor, Finchampstead, Sandhurst, Bagshot Heath, Coleman's Moor. Wellington College, Heath Lake, New Lodge. Rare in the south-east (south of 70), and extinct at several of its former sites. There is still a single patch to the east of the Boathouse on the margin of Lower Lake at Sandhurst Military Academy in April 2002. Locally abundant in the soggy open ground where the electricity pylons cross Longmoor Bog. 1% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: occasional in the Kennet valley, but restricted to the Northern Loop in the Thames valley and absent from the interior. Kintbury [36], Hamstead Marshall and Newbury [46], Frilford, Cothill fen, Gozzards farm and Barrow Farm fen [49], Barrow Hills [59], Ufton Nervet [66]. Atlas 2000: [36], [46], [49], [59]

Carex vesicaria L. *Bladder-sedge*

hel 6

Carex inflata Hudson

Sides of brooks and ditches, wet alluvial meadows, marshes, margins of ponds and old gravel pits. Rather rare and scattered, reaching its maximum abundance in the flat tract of the Loddon district on the London Clay; absent from calcareous soils and from east Berkshire. Told from *C. rostrata* by its yellow-green (not dark green) leaves, larger utricles (5-8mm, not 3.5-6.5mm) which are erecto-patent

(not widely spreading), and gradually contracted into a longer beak (1.5-2.5mm, not 1-1.5mm) with acuminate (not acute) female glumes.

NVC: M 27; OV 30; S 11; W 1

Ascot: no recent records, but Druce knew the plant from Swinley.

East Berks: Bisham Wood, Hurst, Loddon Bridge, in several locations at Ruscombe, Whistely Green, Sandford Mill, Finchampstead, Arborfield. Leighton Park, Jouldern's Ford, Woodley, Wokingham, Great Hazes [8474], Whiteknights wilderness, Blackwater Station, Eversley, Long Moor, Sandhurst, Twyford, Ruscombe Lake [814764]. Most frequent in the south-east, and absent from the Thames valley downstream of Twyford and to the east of 90. Recently at Shepherd Meadow and Beenham's Heath. <1% (1km²). Atlas 2000: [76], [77], [86], [87], [97]

West Berks: confined to the south-eastern Kennet valley centred on [56] and [66], with outliers in the Northern Loop at Newbridge and Wytham Meads [40], Thatcham and Foxhold [56], Fence Wood [57], Radley College pond [59], Burghfield Common and Padworth (LAN) [66], Tilehurst and Sulham Hill [67]. Atlas 2000: [40], [56], [57], [67]

Carex pendula Huds. *Pendulous Sedge*

hs 5 ↑

Shady woods, hedges, on clayey soil. One of our most graceful plants. Local, but abundant in a few places. By streams and ditches in woods, on nutrient-rich soils. Scattered and as a rare escape from gardens in Druce's time. Increasing, but mostly as a garden escape. Much planted in cottage gardens and on ditch banks in villages, and now frequent as a garden escape.

NVC: W 8

Silwood Park: wet shade in Great Mead, The Willows, Farm Road, Cheapside, Weir Wood, Heronsbrook Cottage. It has increased markedly in abundance over the last 20 years. There were only 2 clumps, one on mud in the flowing part of the swamp, a second close to the path through Cascade Marsh on 6 May 1980. They probably come from seeds washed down from gardens upstream. By 1998 there were several hundred individuals, and the plant was dominating large patches of ground (more than 10m x 10m each) in summer 2000. Two plants on the banks of the Clear Stream near the road bridge at the Walled Garden in May 2002. Still increasing in 2004. Early stages of an invasion on the Lady Fern Seep, north of the Outflow Stream between Gas Pipeline and Water Meadow East [9430 6933] in May 2005. A single individual on 13 July 2007 in quite dry ground inside the Rhododendron Exclosure, close to the double gates. Still increasing inexorably in dominance in Cascade Marsh in June 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0		2	6

Ascot: a common garden escape, especially abundant on the stream adjacent to the Broomhall Recreation Ground in Sunningdale (with *Lysichiton americanus* and *Impatiens glandulifera*), and in the ditch opposite Charters School. The dominant plant beneath *Salix cinerea* where the Red Brook emerges from its arched, brick conduit under the railway line in Sunningwell Bog [929680], and abundant in several parts of South Ascot Bog [9267], especially along the stream banks. Rapley Lake, The Orangery, Coronation Road, becoming too abundant along the stream in South Ascot Bog, Ascot Station, Kings Beeches, Sunninghill, Sunningdale, Charters Road, Sunningdale Park, Sunninghill Park, Blacknest Park, Whitmore Lane, Titness, New Road, North Ascot, Great Meadow Pond, by Virginia Water. On fly-tipped garden waste in Swinley Park in 2003. Locally frequent in Froggnall [940681] and by the Marist Convent Lake [941682] in September 2005.

East Berks: not recorded by Druce. Park Place, Hurley, Cookham, Cookham Dene, Quarry Wood, Shurlock Row, Waltham St Lawrence, White Waltham, Sandhurst, Tower Hill, Virginia Water, Bearwood, Crowthorne. Abundant in Arborfield churchyard. Common as a result of fly-tipping at Caesar's Camp near Bracknell. 20% (1km²). Atlas 2000: all squares

West Berks: occasional in the Northern Loop as at Sunningwell [4900] and locally abundant in Wytham Wood [4608], less common in the Kennet valley and rare in the interior. Dominating the banks of chalk streams at Uffington [3089], by the R. Enborne at Newtown Pond [4764], Blewbury [5385] and in Welford Park [4073]. Mass-planted in municipal horticulture at Faringdon [2995] in 1999. Atlas 2000: all except [68]

Carex sylvatica Huds. *Wood-sedge* hs 5

Woodlands, frequent on calcareous soils, occasional elsewhere, but rare on acid soils. An ancient woodland indicator, but only of the second rank (cf. *C. strigosa*).

NVC: W 8,10,12,14

Silwood Park: introduced, but thoroughly naturalised in a few places, most abundantly in the woodland garden behind Southwood Halls where it was moved in 1984 from the Walled Garden where, in turn, it had been introduced from the chalk in Kent in 1979. Under the Camellia beneath the wall of the Pot Standing (1987-2007). Lost when the area was turned into a chicken run.

Ascot: in a curious urban habitat in Sunninghill Village, where it is dominant on gravel in a narrow, shady alleyway between brick houses off the High Street on 13 May 2000. Looking native in parkland at Kings Beeches and Ascot Place in 1998. Common in woods as soon as one crosses onto the clay at New Lodge, Cranbourne, or in Windsor Great Park, just outside the Ascot area.

East Berks: in all of the important older woodlands. Locally abundant in full sun in the churchyard at Hurley. 10% (1km²). Atlas 2000: all squares

West Berks: especially common in the Ash woods. Locally frequent in Bagley Wood [5102]. Atlas 2000: all except [68], [69]

Carex strigosa Huds. *Thin-spiked Wood-sedge* hs 5

An ancient woodland indicator species, local and rare by small streams in oak and alder woods, in small quantity. Like a miniature *C. pendula*, with female spikes less than 3mm wide. Told from *C. sylvatica* by its almost beakless utricles (not long, scabrid and forked as in *C. sylvatica*) and much broader leaves (6-10mm not 3-6mm).

NVC: W 8

Ascot: no records.

East Berks: not seen by Druce. Most frequent in the Reading area. Arborfield, Holme Park Farm, Bracknell. Recent records from ancient woodland remnants at Bridge Farm Arborfield [7467], Inkydown Woods [8584], Wykery Copse [851686] surrounded incongruously by industrial Bracknell and now (2013) by new-build houses, Bisham Wood [8585], Paddock Wood [870773], Goulding's Wood [856834]. <1% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: absent from the interior and most frequent in the south-east [56] and [66] with outliers in the Northern Loop and at Great Park Wood [341760]. Clarkes Gully Greenham [496640], Waterleaze

Copse [467638], Fosbert's Copse at Wytham [4505], Long Copse [40], Radley Large Wood [5200], south of Crookham Common [5164], Douai Abbey [5767], Old Copse Beenham [589685], Inwood Copse [562634], Boars Gully Crookham [526641], Great Wood [5065], Coombe Wood [545735], Kings Copse [577706], Mortimer West End [6363], Brocas Land Farm [6563], Padworth Gully [6165], Admoor Copse [6070], R. Pang above Bradfield [6072], Pingewood [6869], Moor Copse [6474], Horsemoor Copse Tidmarsh [6473]. Atlas 2000: [37], [46], [49], [40], [56], [57], [50], [66], [67]

Carex flacca Schreb. *Glaucous Sedge*
Carex glauca Scop.

hs 5

Calcareous grassland, rough pastures, roadsides, chalk downs, heaths, marshes, meadows and damp woodland rides on nutrient-rich soils; rare or absent on very acid soils. "Rather partial to clay or stiff soils but occurring in apparently dry soils. Its pretty glaucous foliage is the origin of its name Carnation Grass" (Druce). The leaves are distinctly bluish, the rhizomes are extensive (not tussock forming), male spikes 2 to 3, female spike clearly stalked and often pendant or erecto-patent. Told from the other common blue-leaved sedge, *C. panicea*, by the latter's 3-sided leaf tips and fewer, more inflated utricles in each female spikelet. The central leaf-channel in *C. flacca* disappears before it reaches the flat leaf tip (as in *Eriophorum angustifolium*).

NVC: CG 2-5; M 13,22; MG 5; W 12

Silwood Park: rare, possibly extinct. It used to be locally frequent on the grassy bank opposite the goods entrance to the Nuclear Reactor from 1980-85. The site was damaged by the construction in 1986 of a large soil pit to study radio-isotope movement through soil profiles. The hole was still not filled in by November 1989. The site was further disturbed during the summer of 1990 when a trench was dug to take the new fibre-optic cable to the satellite dish at the Met Tower (but at least Desmond McMahon's original hole was finally filled in). Not seen since.

Ascot: uncommon, but locally abundant in damp grassland in the northern triangle of Ascot Race Course and in Sunningwell Bog. Also at The Tip, The Orangery, Swinley Golf Course, Kingsride, Heatherwood Hospital, Ascot Heath, Charters Road, Brook Farm, Brookside, Leiper Hill, by Virginia Water.

East Berks: widespread, but least common on acid sands along the Surrey and Hampshire borders. 8% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Carex panicea L. *Carnation Sedge*

hs 5

Wet meadows, fens, bogs and marshes, less common in chalk grassland. Utricles less than 5mm, smooth, truncate, beak short and not deeply notched; leaves glaucous, sheaths not inflated. The leaf tips are 3-angled (in contrast to *C. flacca* which has flat leaf tips).

NVC: M 13,16,21,22,24; MG 4,5,9,10,13; S 4

Ascot: in the heathy parts of the rough at Ascot Heath golf course (still there in May 2003), and very local on the Berkshire side of Virginia Water. Druce knew it from Sunninghill but I have never seen it there. Not in Silwood Park.

East Berks: Hurst, Earley, Coleman's Moor, Sandhurst, Long Moor, Spout Pond, Finchampstead, Easthampstead, Ruscombe, Warren Row, Windsor Great Park, Riseley, Wokingham, Bracknell. Scattered in the south-east but absent or rare in the north and in the interior. Recently at Loddon

Court, Shepherd Meadow, Edgebarrow, Pine Hill, Broadmoor Bottom, Wishmoor Bottom. 1% (1km²). Atlas 2000: all except [78], [88]

West Berks: occasional throughout the Kennet valley, and in the western reaches of the Thames valley down to Abingdon, but absent from the interior (north or 75 and south of 95). Sites on the edge of the range include Boxford [4271], a field by the A4 [576665], Jennett's Hill [582710], Didcot [5090]. Atlas 2000: all except [37], [38], [48], [50], [68], [69]

[*Carex depauperata* Curtis ex With. *Starved Wood-sedge*]

No Berkshire records, but worth searching for in dry woods. It was at Bargate Stone in Surrey [94], last seen in 1992 after a 20 year gap of repeated searching. Never found in North Hampshire. Utricles more than 5mm and beak more than 2.5mm; female spikes less than 10, male spike 1.

Carex laevigata* Sm. *Smooth-stalked Sedge

hs 6 ↓

Carex helodes Link

Shady and marshy places in wet oak and alder woods; local and uncommon in south-east Berkshire. Like *C. binervis* in having utricles with scabrid beaks, but with much broader leaves (5-12mm not 2-5mm wide), female glumes acuminate (not obtuse), fine red dots on the utricles, and ligules 7-15mm (not 1-2mm). Densely tufted, like *C. sylvatica*, but with broader female spikes (6-8mm wide), on peduncles with the exposed portion shorter than the spike, and utricles with rough (not smooth) beaks; non-flowering plants can be distinguished by the much shorter ligules of *C. sylvatica* (2mm not 7-15mm).

Silwood Park: local and rare in wet shade. The clump in Hell Wood west, on boggy ground by the lakeside beneath birch and alder was lost in 1991 when the site became overgrown. It has not returned following scrub clearance in 1994. Cascade Marsh, very local, at the transition to the wetter parts of the wood on 6 August 1989. Also in Mann's Copse, but the best population is in Water Meadow, in wet shade just above the seep that leads down from Cheapside into the Outflow Stream close to the Herons Brook boundary fence, where there were 10 tussocks in May 2000. In May 2003 the tussocks had all been eaten down to the ground by deer, while nearby *C. pendula* had been left entirely alone. One large plant on the Nash's Copse bank of the Outflow Stream on 30 May 2003, growing with *Deschampsia cespitosa* and *Carex remota*. There were 3 tussocks in flower on 19 May 2007 on the slope between Mann's Copse and Great Mead, close to the boundary with Tetworth Hall [93744 68949]; this population had increased to 5 tussocks by 6 July 2008. On 15 June 2009 all 5 tussocks were flowering well [93743 68978].

Ascot: no other records.

East Berks: Crowthorne, in a bog in Windsor Great Park, in a damp thicket near Bracknell. Crowthorne (1962), Wokingham (1965), Windsor Great Park (1966). Lily Hill Park in Bracknell (1977). Confined to the acid soils of the south-east (absent north of 70). <1% (1km²). Atlas 2000: [76], [86], [96]

West Berks: very local, centred on [56], absent from the western parts of the Kennet valley and from all of the Thames valley and the interior. Greenham Common [46], alder wood south of Crookham Common, Bucklebury Common (RNG) in 1892, Inwood Copse, Carbins Wood and Great Wood [56], Fence Wood [57], alder woodland in Padworth Gully [6165], Burghfield [66], Bradfield, Moor Copse and Pangbourne [67]. Atlas 2000: [36], [46], [56], [57], [66], [67]

Carex binervis Sm. *Green-ribbed Sedge*

hs 5

Damp heaths and marshes on acid soils, untrampled heathy rides through pine plantations; local and decreasing in south Berkshire, but absent from extensive tracts in the north. Utricles with scabrid beaks, leaves narrow (2-5mm wide), female glumes obtuse mucronate, and small ligules (1-2mm). Early into flower, its anthers make it very conspicuous against the still wintry background.

NVC: U 2,20

Silwood Park: perhaps unintentionally introduced, but now extinct. Japanese Garden, in rushy ground beneath young rhododendrons in the part of the garden closest to the Cannon Path on 27 May 1990. Possibly imported with potted plants. Not seen since.

Ascot: characteristic of the mown, heathy rides through the Crown Estate pine plantations on the Bagshot Sands where it can be locally dominant. Locally frequent in the heathy rough on Ascot Heath golf course. Rapley Lake, Blane's Allotment, Swinley Park, Martins Heron, The Orangery, Tower Hill, Englemere, Swinley, Kingsride, Ascot, Sunningdale, Breakheart Hill, Windsor Great Park.

East Berks: Black Park, Windsor Great Park, Riseley, Jouldern's Ford, Sandhurst, Finchampstead, Bagshot Heath, Crowthorne, Easthampstead, Bearwood. Owlsmoor, Lookout, Lower Star Post, Wishmoor Bottom. Common throughout the heathy districts to the south of 70, but absent elsewhere. 9% (1km²). Atlas 2000: [76], [77], [86], [87], [96]

West Berks: confined to the heaths of the south Kennet valley, absent from the Thames valley and all of the interior. Inkpen Common [36], Greenham Common [46], Snelsmore Common [47], Crookham Common, Cold Ash Common [56], Stanford Dingley and Fence Wood [57], Mortimer (RNG) in 1892, Silchester Common and Ufton Park [66]. Atlas 2000: [36], [46], [47], [57], [66]

Carex distans L. *Distant Sedge*

hs 5 ↓

Marshy fields on nutrient-rich soils; local with a rather limited distribution. Told only with difficulty from *C. hostiana* by leaf blades and lowest bract gradually contracted to the apex, female glumes pale with narrow scarios margins.

East Berks: not in Druce or Bowen. Not in Surrey either, but recorded from the Loddon [65, 75, 85] in north-east Hampshire (v.c.12), so worth searching for. Atlas 2000: no records.

West Berks: rare in the Thames valley upstream of Wallingford, with an outlier in an old pasture at Enborne [439652]. Buscot and Longcot [29], Charney Bassett [39], Marcham and Cothill Fen [49], Lashford Lane Bog and Wytham [40], a fen at Hagbourne Moor [5387], Thrupp [59], Iffley Meadows [50]. Atlas 2000: [29], [37], [39], [49], [40], [57], [58], [59], [50]

Carex hostiana DC. *Tawny Sedge*

hs 6 ↓

Carex hornschurchiana Hoppe

Fens, marshes and bogs; local and rare. Told with difficulty from *C. distans* by leaf blades and lowest bract rather abruptly contracted to the apex (a narrow, parallel-sided point), and female glumes dark with broad scarios margins.

NVC: M 13,24

Ascot: Sunninghill (1897). Englemere Pond (1961). I have not seen it in the district.

East Berks: formerly very local and rare near Ascot. Not seen recently, and no specimens. Rare in Surrey [96] and north-east Hampshire [65, 75, 85]. Atlas 2000: no records.

West Berks: confined to the Northern Loop: Frilford Heath [4497], a drying fen at Cothill [4699], Tubney, Barrow Farm Fen, Abingdon and Marcham [49], and formerly at Cumnor, Wytham and Boars Hill [40]. Atlas 2000: [37], [49], [40]

Carex x fulva Gooden. = **C. hostiana x C. viridula**

Carex x appeliana Zahn

Carex x leutzii Kneucker

Frequent wherever *C. hostiana* meets any of the 3 subspecies of *C. viridula*.

East Berks: no records.

West Berks: like its rarer parent, confined to the Northern Loop; Cothill fen [49] in 1890 (**OXF**), Bessels Leigh [40] in 1880 (**OXF**), Cumnor [40] in 1938 (**OXF**).

Carex viridula Michx.

hs 6

Carex viridula subsp. **brachyrrhyncha** (Celak.) B. Schmid *Long-stalked Yellow-sedge*

Carex flava L. subsp. brachyrrhyncha Celak.

Carex lepidocarpa Tausch

Carex lepidocarpa Tausch subsp. **scotica** E. Davies

Carex viridula Michaux var. scotica (E. Davies) B. Schmid

Carex viridula Michaux var. lepidocarpa (Tausch) B. Schmid

Carex viridula Michaux var. elatior (Schldl.) Crins

Told from subsp. *oedocarpa* by the long beak (at least half as long as the curved body of the utricle).

East Berks: extinct at its sole station on Coleman's Moor c.1900 (**OXF**).

West Berks: confined to fens in the Northern Loop; Pusey [3596], Gozzards Ford [4595], Dry Sandford Pit [469996], Frilford golf course [4497], Cothill [4699], Barrow Farm [4697], Wootton [4601], Cumnor [4500] (**OXF**), Hagbourne Moor [5387], Barrow Hills [5198] (**OXF**), Bagley Wood [5002] (**OXF**). Atlas 2000: [49]

Carex viridula subsp. **oedocarpa** (Andersson) B. Schmid *Common Yellow-sedge*

hs 6

Carex oederi auct., non Retz. var. oedocarpa Andersson

Carex demissa Hornem.

Carex serotina auct., non M., rat

Carex tumidicarpa Andersson

Carex oederi auct., non Retz. subsp. demissa (Hornem.) C. Vicioso, nom. inval.

Carex flava L. subsp. demissa (Hornem.) O. Bolòs, Massales and Vigo, nom. inval.

Damp woodland rides on acid soils, damp heaths, pine plantations, marshes and bogs; uncommon and decreasing in south-east Berkshire. Beaks of utricles straight, less than half as long (and straight in line with) the more or less straight body of the utricle (3-4mm). Lowest female spike usually distant from others.

Ascot: Sunningwell Bog, locally frequent in drier parts of the fen-meadow north of the railway west of St George's Lane [927683] in 2002. Also in the Crown Estates land on Bagshot Sands at

Buttersteep, Blaine's Allotment, The Orangery, A322/A332 Roundabout, Tower Hill, Swinley golf course, Kingsride, Ascot Heath. Not in Silwood Park.

East Berks: Bulmarsh, Wellington College, Jouldern's Ford, Finchampstead, Sandhurst, Sunningwell, Long Moor, Easthampstead, Bagshot Heath, Crowthorne, Broadmoor, Earley Heath, Coleman's Moor, Windsor Park, Wokingham, Bearwood, Warren Row Common. Owlsmoor, Earley, Broadmoor, Bracknell, Lookout, Surrells Wood [822738]. Recently at Wellington College, Road Research Lab, Broadmoor, Wishmoor Cross, Upper Star Post, Three Castles Path. Occasional to the south of 75, extinct in the Thames valley (formerly at Warren Row [8180]). 3% (1km²). Atlas 2000: [76], [77], [86], [87], [96]

West Berks: confined to the Kennet valley heaths: Inkpen Common [383641], Enborne, Morewood House and Redhill Wood [46], Brimpton, Turners Green and Foxhold [56], Fence Wood [57], Burnt Common [66]. Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [58], [59], [66]

Carex viridula subsp. **viridula** *Small-fruited Yellow-sedge* hs 6

Carex oederi auct., non Retz.

Carex serotina Mérat

Carex pulchella (K. Lonnr.) Lindman, non S. Berggren

Carex bergrothii Palmgren

Carex serotina M, rat subsp. pulchella (K. Lonnr.) Ooststr.

Carex scandinavica E. Davies

Carex viridula Michaux var. pulchella (K. Lonnr.) B. Schmid

Told from subsp. *oedocarpa* by its much smaller utricles (1.75-3mm rather than 3.5-4mm), sessile (rather than distinctly stalked) male spike and bunched (not distant) lowest female spike.

East Berks: no records.

West Berks: very local and rare in fens at Cothill [467997] in 1976 (OXF) and Dry Sandford Pit [467995] in 1979-2004. Atlas 2000: [49]

Carex pallescens L. *Pale Sedge* hs 5

Moist woods and shady places, chiefly on clayey soil; local and rather rare. Woodland rides and wood margins on acid soils. Absent from calcareous soils and rare in east Berkshire. Lowest leaf sheaths and lower leaf blades pubescent; lowest bract crimped at base.

Ascot: no records.

East Berks: Hurst, Ashley Hill, Bracknell. Farley Hill [752656], Wykery Copse [861686]. Rare in a few scattered ancient woodlands, extinct in others. Recently at Dinton Pastures, Pockets Copse [8369], White Waltham [8476], Windsor Great Park [9778]. 1% (1km²). Atlas 2000: all except [77], [78]

West Berks: two centres, in the Northern Loop and central Kennet valleys, but extinct at several of its former stations. "Common over a considerable wooded area between Kintbury and Inkpen" (Druce) [36], Pucketty Farm [39], More Wood, Greenham Common, Redhill Wood and Newbury golf course [46], Mapleash Wood Snelmore [4671], Tubney Wood and Appleton Lower Common [40], Crookham Common [56], Briff Lane meadows SSSI, Coombe Wood and Fence Wood [57], Radley Little Wood and Radley Large Wood [50], Great Park Copse [685654], Sulham and Tilehurst [67]. Atlas 2000: [46], [47], [49], [40], [56], [57], [50], [67]

Carex caryophyllea Latourr. *Spring-sedge*
Carex praecox Jacq., non Schreber
Carex verna Chaix

hs 4

Lawns, short grassland, heaths, chalk downs, meadows, and railway banks. Rather common and widely distributed. Seriously under-recorded because of its small size, early flowering and tendency to grow in closely mown grass where flowering is discouraged by repeated defoliation. Early flowering, with a terminal flowering stem, leafy at base, lowest bract with a long sheath (3-5mm). Female spikes more than 4mm wide, falling short of the top of the male spikes, and the female glumes are acute with a narrow (or no) scarious border. The leaves are green (not glaucous) and curved.
NVC: CG 2-5; MG 5

Silwood Park: always the first sedge of the year to be found. It flowers reliably by the steps in Lily Pond Lawn next to Phase One; 14 April 1980, 5 May 1983, 17 April 1984, 16 April 1987, 1 May 1998, 12 May 2009. Local, in short grassland on the top of the central part of the Ha Ha, still there in April 2003 and May 2009. There were 35 flowering stems by the northern part of the steps on 30 April 2013 in the latest spring on record. Nash's Field, in mesic grassland with *Anthoxanthum* and *Luzula* on 14 May 1980; commonest in the grazed part of Plot L in 2005. Literally thousands of plants on the steep part of the lawn bank between the Lily Pond and the Manor House in April 2013. A large patch by Guinness's Hill on 20 April 1981. In the Croquet Lawn. Common and locally abundant in the older parts of the churchyard at Ashurst [94111 68623], growing in a distinctive community (MG5c) with *Luzula campestris*, *Anthoxanthum odoratum*, *Rumex acetosa*, *Conopodium majus*, *Viola riviniana*, *Veronica chamaedrys*, *Vicia sativa* subsp. *nigra*, *Ranunculus bulbosus*, *Ranunculus ficaria*, *Stellaria graminea* and *Achillea millefolium*.

Ascot: in short grass by the dual carriageway at the A322/A332 Roundabout, Sunningdale Park. In short turf in South Ascot churchyard.

East Berks: chalk grasslands in the western Thames from Wargrave to Winter Hill, and in lawns and short turf on sandy soils in the south-east. Under-recorded because of its early flowering. Recently at Farley Court, Chawridge Bank, Winter Hill, Cock Marsh, Hurley Lock. 4% (1km²). Atlas 2000: all except [86]

West Berks: on the chalk between Ashbury [28] and Streatley [58], and on Gibbet Hill [36], occasional in the Northern Loop and the Pang valley, but absent from large areas of the Thames and Kennet valley from habitats where the grass grows too tall for it. Atlas 2000: all except [50], [68], [69]

[**Carex filiformis** L. *Downy-fruited Sedge*]
Carex tomentosa L.

hs 5

A *Red Data Book* species of damp grassy places that is rare in the neighbouring vice-counties of North Wiltshire (v.c.7), Oxfordshire (v.c.23) and Surrey (v.c.17).

West Berks: there is an NCC record from Grafton Lock Meadow [2799] in 1982, but I can trace no details of it, and in the absence of an herbarium specimen or expert confirmation this is best treated as an error. It may be an Oxfordshire record from the northern bank of the Thames.

Carex montana L. *Soft-leaved Sedge*

hs 5 †

Formerly a local speciality of damp neutral to slightly acidic grassland, and light shade in woodlands. Extinct as a result of road building in 1973 (see below). Lower bract with sheath 0-2mm, brown, glume-like or bristle-like, while the female glumes are subacute and mucronate. Utricles 3-4.5mm, leaves mostly less than 2mm wide, soft and more or less erect. Its soft mid- to pale-green leaves, mat forming rhizomes, and mucronate female glumes distinguish it from *C. pilulifera*.
NVC: CG 2

East Berks: not in Druce, but in his Flora of Buckinghamshire he says it grows in Berkshire near Bracknell (1926). Not in Surrey or north-east Hampshire. The only Berkshire site was at St Ann's [835689] below Popeswood, where it was first described in 1917 (**OXF**) and known until 1972. It was destroyed by roadworks in 1973 during construction of the Coppid Beech roundabout which was enlarged to accommodate the flyover at the end of the A329(M) motorway. Turves that were brought into the Botanic Garden at Reading University to rescue the species no longer produce the plant. Recorded in 1934 and 1936 from Bracknell (both **RNG**) without detailed locations. It would be worth searching suitable grassland and woodland-edge habitats between Popeswood and Easthampstead on the western outskirts of Bracknell in May and June, because it would be excellent to rediscover this plant.

West Berks: no records.

Carex pilulifera L. *Pill Sedge*

hs 5

Dry heaths, dry woods, heathy forest rides and acid grasslands; locally frequent, but absent from calcareous soils. Widespread in south Berkshire. Lowest bract with sheath 0-2mm but green and leaf-like; female glumes reddish brown (not purple black as in *C. montana*), beak of utricule 0.3-0.5mm (not less than 0.3mm).
NVC: H 3; U 20; W 15

Ascot: in heathy firebreaks throughout the Crown Estate pine plantations, and at Virginia Water, Whitmoor Bog, Kingsride, Tower Hill, Ascot, Windsor Great Park. In heather by the railway at Englemere in May 2004. Not in Silwood Park.

East Berks: Bracknell, Wellington College, Sandhurst, Ambarrow, Farley Hill, Bagshot, Stubbings Heath, Warren Row Common. Crowthorne. All but confined to the acid sands of the south-east with outlying stations at Stubbings Heath [8481], Maidenhead Thicket [8580] and Warren Row Common [8180]. Absent from the Loddon valley. 4% (1km²). Atlas 2000: all except [78]

West Berks: occasional on the heaths of the south-eastern Kennet with outliers at Inkpen Common [3864], rare in the Northern Loop as at Frilford Heath golf course [448989] and Bagley Wood [5002], absent, mis-recorded or extinct in the interior. There are recent records from the far north-west, as at Coxwell Wood and Great Coxwell churchyard [28]. Atlas 2000: all except [28], [37], [48], [58], [59], [68], [69]

Carex acuta L. *Slender Tufted-sedge*
Carex gracilis Curtis

hel 5

Sides of lakes, rivers, canals, brooks and ponds, marshy meadows and gravel pits. Much less frequent than *C. acutiformis*. Told at once from the other big sedges like *C. acutiformis* and *C. riparia* by its slender habit and the almost beakless utricule. The plant looks like a tall, dark-blue-green leaved version of *Carex nigra*. The utricles may be minutely notched (<0.3mm), female glumes rounded, utricles with distinct veins. The leaves are 3-10mm wide and the lowest bract exceeds the

inflorescence, male spikes usually 2 to 4. Told from *C. nigra* by the lowest bract which overtops the inflorescence (shorter in *C. nigra*) and more numerous male spikes (2-4 rather than 1).
NVC: S 4-6,25,26

Ascot: local and rare on the southern shore of Virginia Water, opposite Temple Bungalow [965690] growing with *Acorus calamus* and *Carex paniculata* and on the northern shore close to the Surrey boundary [968692] in June 2003.

East Berks: locally frequent all along the Thames from Sonning down to Cookham and occasional elsewhere. Binfield, cleared woodland at Ashley Hill [8281]. Recently at Loddon Court, Bearwood. 2% (1km²). Atlas 2000: all except [87], [96]

West Berks: scattered in the Thames valley from Radcot [308999] down to Reading [67], but rare in the Kennet valley as at Hungerford [36] and Turners Green [533690]. Absent from the interior (north of 70 and south of 95). Atlas 2000: all except [28], [37], [47], [48], [57]

Carex nigra (L.) Reichard *Common Sedge*

hs 5

Carex acuta L. var. *nigra* L.

Carex goodenowii Gay, nom. illegit.

Carex vulgaris Fries, nom. illegit.

Marshes, wet meadows, heaths, fens, and bogs; absent from calcareous soils. It may be called *Common Sedge* but it is not common in Berkshire. Told from *C. acuta* by smaller leaves (1-3mm wide), shorter lowest bract (usually not overtopping) and male spike usually single.

NVC: A 22; M 13,22,24,27; MG 9; S 8,19; U 2; W 1,4

Ascot: Druce knew it from Sunninghill. Still to be found beneath *Salix cinerea* in Sunningwell Bog [927683], growing with *Carex curta* and *C. remota*. Brook Farm, Windsor Great Park. Not in Silwood Park.

East Berks: Windsor Park, Sandhurst, Earley, Bagshot, Long Moor. Occasional in the major river valleys but absent from the interior and the east, and commonest on the Hampshire border along the valley of the Blackwater River and on the Thames from Hurley down to Bray. Recently at Shepherd Meadow at Camberley, Pine Hill, Wishmoor Cross, in the Wish Brook in Wishmoor Bottom, Windsor Castle. 3% (1km²). Atlas 2000: all except [78]

West Berks: commonest in the western Kennet valley, rare in the Northern Loop but absent elsewhere. Atlas 2000: all except [28], [29], [38], [48], [58], [58], [69]

Carex elata All. *Tufted-sedge*

hs 5 †

Carex stricta Gooden., non Lam.

Carex hudsonii A. Bennett ex F. Hanb.

An extinct local speciality formerly found in marshy places by rivers, in peaty places and pond sides on peaty soil; always very local and rare. Planted garden relics survive locally. Forming extensive stands in its heartlands in East Anglia, Anglesey, Westmorland and Northern Ireland, but rare as scattered tussocks in Berkshire. Flowering (and hence recruitment for this non rhizomatous species) is very sensitive to water level and disturbance from boat traffic. Told from *C. acuta* by habit (usually densely tufted into tussocks), and leaf sheaths breaking into ladder-like fibres on the back. It can be confused with tussocky forms of *Carex nigra*. The garden plant is usually the yellow-leaved *C. elata* 'Aurea'.

Ascot: local and rare as a long-persistent relic cultivar *C. elata* 'Aurea'; large golden tussocks on the water's edge of the island in Sole's Pond east of Ascot Station (1979-2004).

East Berks: first found as a native as an immense tussock by the R Loddon in 1891 (**OXF**), and subsequently a few plants were discovered nearer to Sandford Mill (**K**) in 1910 and (**RNG**) in 1936. Sindlesham by the R Loddon in 1957. Recorded by Druce from Bracknell (1918) without further details. Not in Surrey and rare in north-east Hampshire. Atlas 2000: no records.

West Berks: no records.

Carex pulicaris L. *Flea Sedge*

hs 5 ↓

Bogs, marshy places, and wet heaths; local and decreasing in south Berkshire. The individual fruits are supposed to look like fleas, hence the name. Spike one, terminal. Stigmas 2, utricles 4-6mm, strongly reflexed, not ribbed.

NVC: M 13,24

Ascot: there are old records from Sunningwell Bog, below The Wells pub, but long extinct.

East Berks: Bulmarsh, Small Brook Marsh, Sandhurst, Broadmoor, Long Moor, Windsor Park, Easthampstead. Coleman's Moor [7570], Twyford [7575], Owlsmoor [8463]. Rare near the Thames in [7570] and on the acid bogs of the extreme south-east, but extinct at most of its former stations including the Virginia Water. Commonest at Broadmoor Bottom. 1% (1km²). Atlas 2000: [77], [86]

West Berks: very local in the Northern Loop and the heaths of the Kennet valley. Inkpen Common [383641], Hatford Wood [3394], Enborne [439652], Snelsmore Common [4671], Frilford Heath golf course [442986], Cothill fen [4690], Barrow Farm fen [4697], Wootton fen [4601], Radbrook Common [4505]. Atlas 2000: [37], [39], [46], [47], [49], [40], [56], [57]

¶ **Carex** *C. berggrenii*, *C. buchananii*, *C. comans*, *C. conica* 'Snowline', *C. elata* 'Aurea', *C. firma* 'Variegata', *C. flagellifera*, *C.* 'Frosted Curls', *C. grayi*, *C. morrowii* 'Fisher's Form', *C. muskingumensis*, *C. ornithopoda* 'Variegata', *C. oshimensis* 'Evergold', *C. petriei*, *C. riparia* 'Variegata', *C. secta* var. *tenuiculmis*, *C. siderosticha* 'Variegata', *C. testacea*

POACEAE

Bamboos

There is a useful key to the species of bamboo that are found as garden relics in Britain by D.T. Holyoak on p. 107 of *Alien Grasses of the British Isles* (Ryves *et al.*, 1996). The important thing is to make sure that you have mature stems, because young stems are often unidentifiable. Also remember that there are 21 naturalized species, so don't jump to conclusions. There is an excellent collection of bamboos, all clearly (and correctly) labelled in the Royal Horticultural Society's garden at Wisley [51/062583] at the bottom of the rock garden. The aphids found on bamboos in Britain are typically *Takecallis* spp.

[**Pleioblastus pygmaeus** (Miq.) Nakai *Dwarf Bamboo*]

• hs 6

Bambusa pygmaea Miq.

Arundinaria pygmaea (Miq.) Asch. & Graebner

Arundinaria disticha (Mitford) Pfitzer

Pleioblastus pygmaeus (Miq.) Nakai var. *distichus* (Mitf.) Nakai

This is the tiny bamboo (30cm tall) beloved of architects. Persistent in abandoned gardens, but no Berkshire records of naturalised plants. Stems up to 75cm high and leaves up to 7cm x 1.5cm.

Ascot: planted outside new offices on Sunninghill High Street in 1985.

[*Pleioblastus chino* (Franch. & Sav.) Makino *Maximowicz's Bamboo*] ● hs 6
Bambusa chino Franchet and P. A. L. Savat.

No Berkshire records, but locally abundant at Send and Clandon Park in Surrey, so worth looking out for.

***Pleioblastus auricomus* (Mitford) D.C.McClint.** ● hs 6
Arundinaria viridistriata (Siebold ex Andre) Makino

Over-recorded for *Sasaella ramosa*. Told from it by leaves striped yellow and dark green, soft with downy hairs on both surfaces.

East Berks: Sonning (1966).

West Berks: Lockinge [4387] in 1966, Bradfield [6072] in 1966.

[*Pleioblastus simonii* (Carrière) Nakai *Simon's Bamboo*] ● hs 6
Bambusa simonii Carrière
Arundinaria simonii (Carrière) Riv. & M. Riv.

Persistent in neglected gardens as at Camberwell in Surrey but no Berkshire records yet. Tall (> 3m) with more than 3 branches per node.

[*Pleioblastus humilis* (Mitford) Nakai] ● hs 6

No Berkshire records, but established very close by, on the Surrey banks of Virginia Water (1995), so worth looking out for. Told from *P. pygmaeus* by its taller stems (2m tall and 10cm diameter), and larger leaves (up to 20cm x 2.5cm).

Sasa palmata* (Burb.) E.G. Camus *Broad-leaved Bamboo ● hs 6 ↑
Bambusa palmata Burb.
Arundinaria palmata (Burb.) Bean

Sometimes forming vast colonies in damp woodland on sandy soils. This is the only really invasive bamboo in Berkshire, forming thickets in woodland (as on the northern slopes of Greenham Common). Stems up to 3m tall, 10mm in diameter, leaves up to 9cm wide, with green (not purple) false petioles. Only one branch per node.

Silwood Park: locally dominant in damp woodland in the corner of Nash's Copse where the outflow stream from The Lake passes through the boundary fence below Heronsbrook, dominant on the verge of Buckhurst Road, where the outflow stream runs underneath the B383 below Cheapside Road, locally dominant in The Rookery, on the Ashurst side of the former footbridge; a mass flowering occurred in the summer of 1983, and the site was cut down by Mark Burleton in 1988, but a few shoots survived in 1990 and the thicket was dense again by 2000. South Lodge Wood, locally

dominant by the path from the Science Park to Redwood Avenue. A population at the Header House, all along the north wall of the white hut used as a student workshop was destroyed to make way for the M-Scan car park. The population in Cannon Wood, restricted to a small patch at the edge of the beech clearing, was destroyed during construction of the Science Park car park in 1987. Invasive of shrub beds on the Tennis Court side of the Japanese Garden in 2000 and by South Lodge. A small patch on a dry spit in wet woodland just downstream from Cascade Bridge in May 2003.

Ascot: locally dominant in patches throughout Sunningdale Park in 1998, roadsides on Locks Ride, abandoned gardens at Ascot Place, Cranbourne caravan park. Locally abundant in shrubberies in the magnificent abandoned garden at King's Beeches [934668] (1979-2004).

East Berks: not in Druce. Whiteknights Park (1966). Recently at Bearwood, Simons Wood, Heath Pond, Pollock Bridge, Wellington College, College Town, Linderhill, Warfield Park, Warfield House, Nuptown, Harvest Hill [8879], Little Foxley, Pudding Hill, The Village in Windsor Great Park. 3% (1km²). Atlas 2000: all except [77], [78]

West Berks: in flower at Youlbury [4803] in 1965, Crookham Common [5164] in 1966, in flower in Bagley Wood [5002] in 1979 (RNG), forming thickets in Welford Park [4073] in 1984 (and 2003), Wash Common [4564] in 1988. An enormous stand in the alder woodland draining northwards from the edge of Greenham Common [5165] in 1999 was slashed down by conservation volunteers in 2000 but recovering in 2001. By the lake at Benham Park [4367] and local in the shrubbery around Marlston House [529719] in 2002. Locally thicket-forming in Bagley Wood [5102] in 2004 despite control attempts. Atlas 2000: [46], [47], [56], [57], [50]

[*Sasa veitchii* (Carrière) Rehder *Veitch's Bamboo*
Bambusa veitchii Carrière

• hs 6

Told from *S. palmata* by lower stature (to 1.5m), thinner stems (7mm dia.), margins of the leaf often withered, whitish all around the leaf, and false petioles purplish.

A persistent relic, as at Windlesham just south of the A30 in Surrey, but no Berkshire records yet.

¶ **Sasa** *S. kurilensis*, *S. nipponica*, *S. palmata*, *S. palmata* f. *nebulosa*, *S. palmata* 'Warley Place', *S. veitchii*

Sasaella ramosa (Makino) Makino *Hairy Bamboo*
Sasa ramosa Makino
Arundinaria vagans Gamble

• hs 6

This species is refreshingly easy to identify; just run your finger along the underside of the leaf and feel the soft, downy, long hairs. It is a short species (usually less than 1m tall) that forms extensive monocultures in woodland and on roadsides. The leaves are not striped green and yellow (as in *Pleioblastus auricomus*), but often go straw-coloured on their edges in winter. Only one branch per node.

Silwood Park: locally dominant in woodland at the bottom of Wood Bank, a large patch (25m x 25m in 1980) at the edge of the *Scirpus* marsh, but not encroaching into it. The plant looks to be invasive here, and may not have been intentionally planted. Fortunately, the patch has not grown much in the last 20 years, and does not seem to be spreading any more. In contrast, the population in the Japanese Garden, which used to be restricted to the margin of the pond, has now crept under the grass path and is seriously invasive of the azalea bed on the slope above; first seen in 1994, locally dominant by

1998, despite being cut back by the gardeners. The azalea side was cleared and thoroughly dug-over in March 2008.

Ascot: dominant on the corner of St Mary's Hill and Brockenhurst Road [931674] opposite the Berystede Hotel in Sunninghill, in the north-east corner of South Ascot Bog [927676], and at Broadlands [930666]. Isolated small clumps in the birch woodland on South Ascot Bog. A single clump measuring 5m x 2m in the damp woodland off Lower Village Road in January 2007 [927677].

East Berks: a garden relic established at Sonning. <1% (1km²).

West Berks: no records.

¶ **Sasaella** *S. masamuneana* f. *albostriata*, *S. ramosa*

¶ **Shibataea** *S. kumasasa*

Pseudosasa japonica (Siebold and Zucc. ex Steud.) Makino ex Nakai *Arrow Bamboo* • hs 6
Arundinaria japonica Siebold and Zucc. ex Steudel

Plantations and parks, local but established. Only one branch per node. Very tall (up to 5m) with relatively broad leaves (2-4cm rather than 0.3-2.5cm), 5-9 veins on either side of the mid-rib and leaves glaucous beneath. Like a taller version of *Sasa palmata* with narrower leaves, but much less common than it.

Silwood Park: very local. A dense thicket by the Outflow Stream in Nash's Copse, downstream of the *Sasa palmata* patch, close to the boundary with Heronsbrook [9443 6932]. Just outside the property, at Cheapside Bridge at Mill Lane, on the opposite side of Buckhurst Road from the dense *Sasa palmata* thicket at Heronsbrook.

Ascot: on the north side of Titness Park, Rapley Lake, Fernbank Road, near Kennel Green Park in North Ascot [9169], in the birch woods on South Ascot Bog. A dense stand below the pond in the magnificent abandoned garden at King's Beeches [934668] (1979-2004). A stand in the old garden at Froggnall [940681] in September 2005.

East Berks: not in Druce. Whiteknights Park, Binfield, Bear Grove, Bisham Wood, an old shrubbery at Binfield (**RNG**) [8070] in 1964, High Wood, Bulmershe [7572] in 1969 and 2002, old nursery ground at Suttons in 1978, at St Sebastian's [8265] in flower in 1987 (**RNG**). Recently at Swallowfield, Hurst, Wheatlands, Heath Lake, East Maidenhead, by the Thames at Maidenhead Court, Broadmoor [8463] and several places in Bracknell. 2% (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: Hinton Waldrist [3799] in 1963, Faringdon [2995], Lockinge [4387], Marcham [4596], Bayworth Copse [5001], Welford Park [4073] in 1965, an old garden at Benham Park [4467] in 1986 and still at [435674] in 2002, in a shrubbery at Padworth College [6265] in 1987. Atlas 2000: [46], [66]

[**Semiarundinaria fastuosa** (Lat.-Marl. ex Mitford) Makino ex Nakai *Narihira Bamboo*] • hs 6
Bambusa fastuosa Latour-Marl. ex Mitf.

A persistent garden relic in several places in Surrey, but no Berkshire records yet. Nodes with 3-5 branches and stems flattened only at the upper internodes.

Phyllostachys aurea (Carrière) Rivière and C. Rivière ● hs 6

East Berks: collected by C.E. Hubbard from Frogmore Gardens [9775] in 1936 (OXF).

West Berks: a relic of cultivation at Bagley Wood [50] in 1964, Milton Hill [4790] in 1973.

Phyllostachys bambusoides Siebold and Zucc.

East Berks: in flower in a neglected garden at Forestend House, Sandhurst [830622] in 1977 (RNG) (det. D. McClintock).

[Yushania anceps (Mitford) W.C. Lin *Indian Fountain-bamboo*] ● hs 6

Arundinaria anceps Mitf.

Arundinaria jaunsarensis Gamble

Sinarundinaria anceps (Mitf.) C.S. Chao and Renvoize

Chimonobambusa jaunsarensis (Gamble) Bahadur and H.B. Naithani

This is a very tall bamboo with tiny leaves. Rhizomes long, so stems well-spaced (not clumped), and inflorescence not enveloped partially by long spatheaceous bracts.

No Berkshire records, but established and persistent just south of the A30 at Windlesham [9364] in Surrey, so worth looking out for.

Fargesia murielae (Gamble) T.P. Yi *Umbrella Bamboo* ● hs 6

Arundinaria murielae Gamble

Sinarundinaria murielae (Gamble) Nakai

Thamnocladus murielae (Gamble) Domoly

Persistent in neglected parks and gardens. Densely tufted stems to 3m tall, nodes with 3 or more branches, leaves 6-10cm long.

Silwood Park: widely planted as part of the landscaping on the Science Park in 1988. It all flowered and died in summer 1997.

Grasses

¶ **Lamareckia** *L. aurea*

Zea mays *L. Maize* ● th 7

An increasingly popular arable crop (e.g. grown during the 1990s on most of the farms within Windsor Great Park). Stray plants from spilled seed are found on lanes, and in gateways and farmyards throughout. The ornamental Maize cultivars 'Harlequin' which had been intended to form the centre-piece in Kew Gardens Festival of Colour beds in summer 2002 were destroyed by the resident badgers. Grown as a major arable crop and on allotments but not persistent, and very seldom self-seeding.

Silwood Park: introduced as a crop and as an experimental GM plant sown into natural habitats. The PROSAMO plants (transgenic for tolerance of glufosinate herbicide) were grown at Pound Hill, Rush Meadow, Merten's Acres and Guinness's Hill in 1991 but proved to be incapable of recruitment from seed in closed vegetation. The plants which grew and fruited on the fenced cultivated plots left no

progeny. An impermanent casual in Silwood Bottom. Grown on the student allotments and occasional as a stray in September 2002.

Ascot: a rare casual on farmland at Sunninghill Park in 1998-2002.

East Berks: first record Reading tip in 1962. Recently at Highgrove, Lambs Lane, Mill House, Shinfield, Kenney's Farm, Upperwood Farm, Farley Castle, Hall Farm, Newlands, South Charvil, Furze Covert, Lines Road, South Twyford, Great Hollands, Beenham's Heath, Brooklands Farm, Howlane Bridge. Extensive maize fields between Ryeish Green and Shinfield [7267] in August 2002. 3% (1km²). Atlas 2000: [76], [77], [86], [87], [97]

West Berks: first record Didcot [59] in 1927 (OXF). On waste ground on allotments in Botley [40] and Grandpont [50] in 2002. Under-recorded. Atlas 2000: [49]

Secale cereale L. *Rye* ● th 7

A very rare crop in Berkshire these days. Sometimes used in conservation crops designed to conserve rare arable weeds because of its relatively low competitive impact.

Silwood Park: grown for a few years in Silwood Bottom as part of a plant pathology experiment (1981-85), but not seen since.

West Berks: at Frilford [4496] in 1996.

Panicum schinzii Hack. ex Schinz *Transvaal Millet* ● th 6 †
Panicum laevifolium Hack.

East Berks: a grain and bird-seed casual found at Reading by V.E. Murray in 1924 (OXF).

Panicum capillare L. *Witch-grass* ● th 7

Told from *P. miliaceum* by its smaller spikelets (2-3.5mm not 4.0-5.5mm)

East Berks: by the M4/A33 Interchange [709702] in August 1999.

West Berks: Englefield [6271] in 1887 (RNG).

Panicum miliaceum L. *Common Millet* ● th 7

Waste places, "owing its origin to the sweepings of seed-shops and the cleaning of bird cages" (Druce). A frequent casual on warm rubbish tips and an occasional contaminant of imported topsoil.

Silwood Park: a rare casual in Oak Mead. One clump with 40 flowering stems in cultivated, methyl bromide treated fenced ground next to the old Block B. The ground was cultivated in spring 1998 and the plant found on 15 October 1998. Not seen since. Origin unknown, but probably introduced (perhaps by birds) in late spring 1998, because the seed is most unlikely to have survived the methyl bromide fumigation.

Ascot: locally frequent on imported topsoil on top of the gabion wall on the western boundary of the building site at Matthew Court Sunninghill on 23 October 2004. Growing with *Sorghum bicolor*, *Phalaris canariensis* and *Echinochloa crus-galli*. A single plant at the roadside beneath a wall behind

Ascot Racecourse [923688] on 30 August 2005. A single plant beneath *Yucca gloriosa* on the z-bend in Upper Village Road [934678] on 21 September 2005.

East Berks: on rubbish in Reading and Windsor. Smallmead tip (1965), Cookham, Woodley tip (1969-75), Smallmead tip (1971), dumped soil in Whiteknights Park (1977). Locally frequent by the M4/A33 Interchange [709702] in August 1999. < 1% (1km²). Atlas 2000: [76], [77], [88], [96]

West Berks: 19th century records from Newbury [46], Abingdon Racecourse [49], Wytham Mill [40], Grandpont [50]. Recently recorded at Didcot tip [5392] in 1969, a gutter in Abingdon [4997] in 1976, a garden in Didcot [5190] in 1976, grown as a crop with maize south of Greathouse Wood [5873] in 1987-88, and an arable weed at Bradfield [589722] in 1988. Headland strip near Paices Wood [5821 6399] in 2003. Atlas 2000: [39], [46], [57]

Nardus stricta L. *Mat-grass*

hs 6

Short turf on heaths and commons on acid sandy soils; local and decreasing in south Berkshire, absent from calcareous soils, and extinct in North Berkshire. Unpalatable to most herbivorous animals, the grass tends to increase in cover under light, selective grazing. It is highly intolerant of heavy grazing, if hunger forces the animals to eat it.

NVC: M 16,21; OV 27; U 2,20

Silwood Park: local and rare. On the grassy bank below the Lime trees on the path from The Conservatory to The Greenhouses, opposite the Well. Growing with *Deschampsia flexuosa* and *Festuca ovina*. Croquet Lawn, in the triangle of mown rough grass beneath the smaller cedar. Japanese Garden, in short grass on the bank above the Croquet Lawn; it benefited from the erection of the rabbit fence around the Japanese Garden in early 1990. Planted in an experiment at Pound Hill Field (2002-04) using material collected in Scotland.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	2

Ascot: frequent in the short rough of the golf course on Ascot Racecourse, heathy rides in Blane's Allotment, The Orangery, A322/A332 roundabout, Tower Hill, Swinley golf course, Kingsride, Charters Road, Sunninghill, Sunningdale, Windsor Forest, Virginia Water. Locally frequent in heathy ground by the hockey pitch in Frognall [939677] in September 2005.

East Berks: Bagshot Heath, Easthampstead, Crowthorne, Wellington College, Finchampstead, Ambarrow, Riseley, Long Moor, Bearwood, Earley, Wokingham, Bracknell, Upper Star Post, Three Castles Path, Windsor Great Park. Finchampstead Ridges, Owlsmoor, Bracknell. Restricted entirely to the country east and south of a line from Windsor to Finchampstead. There are a few odd outliers as at High Wood, Bulmershe [752725] and on the old nursery grounds at Sutton's Seeds [7473]. 4% (1km²). Atlas 2000: all except [78], [88]

West Berks: confined entirely to the heaths of the southern Kennet valley, and extinct at many of its former sites, even here. Inkpen Common [36], Snelsmore Common [47], Crookham Common, Bucklebury Common and Greenham Common [56], Hermitage [57], Padworth Common and Burghfield Common [66]. It is long extinct in the Northern Loop, where it formerly grew at Cumnor Hurst [4704]. Atlas 2000: [36], [47], [56], [57], [66]

Stipa gigantea Link

• hs 6

Silwood Park: the plants in the perennial bed at The Greenhouses were still there in July 2007 after 20 years of neglect.

East Berks: a rare garden outcast at College Town [8561] in 1999 and Cookham Dean [8785] in 2003. Atlas 2000: [86]

¶ **Stipa** *S. arundinacea*, *S. barbata*, *S. calamagrostis*, *S. gigantea*, *S. pennata*, *S. splendens*, *S. tenuifolia*, *S. tenuissima*

Milium effusum L. *Wood Millet*

hp 6

Woods and shady places on clay or chalk on nutrient-rich soils. Commonest in well drained fertile woodland, managed as oak/hazel coppice. An ancient woodland indicator species.

NVC: W 8,10,12,14

Silwood Park: very local and rare; introduced from Kent with other woodland plants in pots in 1979, then self-seeding at the base of the wall of the pot standing at the Greenhouses, where it has persisted in the shade of the *Camellia*, increasing to 50 flowering stems by June 2006. It was frequent in June 2007 on the visit of the Berks Plant Group.

Ascot: no records.

East Berks: common in the woods about Bisham and Marlow, Wargrave, Ashley Hill, Bowsey Hill wood, Quarry Wood, Bisham Wood, White Waltham, Knowl Hill wood. Commonest on the fertile soils to the north of 75, scattered and rare to the south of this. 5% (1km²). Atlas 2000: all except [96], [97]

West Berks: locally frequent in the old Ash woodlands as at RAF Welford [47]. Occasional in the Northern Loop, then missing for the substantial tract of the northern clay (north of 85 and south of 00), then common again for most of the remaining area in the south, except for the south-east where it is absent or rare. Atlas 2000: all except [29], [66], [68], [69]

Festuca L. *Fescues*

If you want to identify *Festuca* species you need to equip yourself with one essential piece of understanding. You have got to know the difference between extra-vaginal tillering and intra-vaginal tillering. When I learned about grasses, I was taught the wrong thing, and I had to unlearn it. I was told that *F. rubra* was mat-forming (*rhizomatous*) and *F. ovina* was tussock-forming (*caespitose*). Unfortunately, there is rather more to it than that. For example, there are tussock-forming subspecies of *F. rubra* like *F. rubra* subsp. *commutata*. The correct feature that distinguishes the aggregate of 8 species in the *F. ovina* group from the others is that they produce their branches (tillers) *inside* the older leaf sheaths (hence, intra-vaginal). The others, including *F. rubra*, have tillers that break out through the base of the older leaf sheaths, right at the bottom of the stem (hence extra-vaginal). As a consequence of this, the young tillers of *F. ovina* burst out of the top of the sheaths of the older tillers, so these older sheaths are not fused at the apex and have overlapping (not fused) margins lower down. The sheath of *F. rubra* is an unbroken cylinder from top to bottom. To tell the subspecies apart you need to cut transverse sections of the leaves and observe them under a high-power microscope (not recommended for the faint-hearted).

Festuca pratensis Huds. *Meadow Fescue*

hs 6

Festuca elatior auct., non L.

Water meadows, damp pastures, sides of rivers, marshes, cultivated fields, damp hedge-rows, also in dry valley on the chalk; common and widely distributed. Hard to tell from small *F. arundinacea* in leaf (both have clasping auricles), but in flower the lowest panicle node has 2 unequal branches and the shorter of the branches bears 1 or 2 spikelets (in contrast, *F. arundinacea* has 2 more equal branches, the shorter of which has 3 to many spikelets).

NVC: MG 1,4-7,9,10,13

Silwood Park: local and uncommon in wet grass at the Walled Garden, above the ditch by the door on 4 May 1980.

Ascot: in old meadows at Sunninghill and Leiper Hill.

East Berks: recently at Dinton Pastures, The Holt, Broad Common, Lillibrooke Manor, New Lodge, St Leonard's Hill, Stag Meadow. 2% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [37]

Festuca arundinacea Schreb. *Tall Fescue*
Festuca elatior L.

hs 6

Wet pastures, ancient meadows, sides of rivers, marshes, cultivated fields, damp hedgerows, wet ditches, roadsides and waste places. Common and widely distributed. Frequent in north Berkshire, occasional elsewhere. For identification, see *F. pratensis*, above.

NVC: CG 2,3; M 22; MG 4,5,9; OV 23,26; S 26

Silwood Park: Reactor Bank, long grass opposite the Reactor fence on 11 June 1980. Opposite the steps up to the Reactor entrance on 11 May 1983. Rush Meadow, one huge tussock by the path in June 1994, still there in June 2003. Pound Hill Field, several huge tussocks in the 6th year of the fallow following abandonment of cultivation for the PROSAMO experiments on 6 June 1994. Walled Garden, on the eastern side of the path, several large clumps on 25 May 1980. Ashurst Lodge, in long grass on 10 May 1984. In damp grass by the Kissing Gate at the foot of Nash's Field on 10 June 2000. Occasional in tall grassland in Water Meadow.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	1	5	4

Ascot: Sunningwell Bog, Heatherwood Hospital, Charters Road, Sunningdale Park, Brook Farm, Polo Club, Brookside, Cranbourne. Massive tussocks in the set-aside (formerly maize) east of the racecourse [925700] in May 2003. In re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: widespread in ancient grassland, least common on the heathy ground of the east and south along the Surrey and Hampshire borders. Gravelly Bridge, Arborfield, Finchampstead, Thames Valley Park, St Patrick's Bridge, Cockpole Green, Moor Green, Chapel Green, Edgebarrow, Brookers Row, West Hanworth, Devil's Highway, Bracknell, Lily Hill Park, Bill Hill, Bowsey Hill, Broad Common, Haines Hill, Hungerford Lane, Waltham St Lawrence, Knowl Hill, Beenham's Heath, Shottesbrooke, Hazelwood House, Woodlands Park, Jealott's Hill, Howlane Bridge, Woodlands Park, Touchen End, Warfield Park, Warren Row, Ashley Hill, Prospect Hill, Hurley, Temple, St Leonard's, Sutherland Grange, Stag Meadow, Clewer, Cavalry Exercise Ground, Review Ground, Clewer, Bear's Rails, Home Park, New Lodge, abundant in meadows at the western end of Windsor Racecourse, Windsor Castle, Home Park. 14 % (1km²). Atlas 2000: all except [86]

West Berks: widespread, but least common on the chalk ridge from Ashbury [28] to Streatley [58].
Atlas 2000: all squares

Festuca x fleischeri Rohlena = **F. arundinacea x F. gigantea**
Festuca x gigas O. Holmb.

East Berks: Shottesbrooke [847785] in 1959.

West Berks: north-east of Wittenham Church [5693] in 1987 (RNG).

Festuca gigantea (L.) Vill. *Giant Fescue*
Bromus giganteus L.

hs 6

Woods, shady hedge-banks, thickets and plantations. "An adornment of many of our old hedgerows on a moist soil, from its gracefully curved flowering stem and open panicles" (Druce). Widespread but only locally abundant, least common on the acid sands. Particularly common in Ash woods by the R. Thames. Easy to identify from the glossy pale green leaves, clasping auricles, and 'black knees' (dark violet-purple nodes) on the flowering culm. *Bromopsis ramosa* also has a drooping panicle, but has hairy (not glabrous) leaves.

NVC: W 8,14

Silwood Park: very local and rare at Silwood House in the shade of the fence by the footpath on the London Road, growing with *Bromopsis ramosa* on 20 September 1994, not seen since; it appears to have been tidied up. Introduced at The Horticultural Greenhouses, locally common in the bed below *Camellia* on the wall of the pot-stand; probably introduced during Jo Francis' experiment involving transplanting success of woodland plants in July 1993; still there by the door, and on the outside of the garden wall beneath the *Eucalyptus*, in July 2002 and June 2007. Also by the Tractor Sheds, Cricket Wicket, South Lodge and East Lodge, but not seen at these sites since 1995. Two plants in the gravel strip behind Greenhouse 3A on 8 June 2007. A single, multi-branched plant in a crack in the concrete apron outside the Jiff Greenhouse on 10 June 2007. Locally abundant in the strip bed between Header House Greenhouses 4b and 5c on 14 June 2007. Amongst *Pentaglottis sempervirens* near the Greenhouses Service Yard where the *Orobanche minor* grows on 26 July 2007. Several clumps at the edge of the concrete apron between the Jiff Greenhouse and CABI Quarantine on 29 July 2010, with *Mercurialis annua* and *Senecio inaequidens*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	5

Ascot: in shady parts of the old garden at the junction of Coronation Road and South Ascot during construction of the two new houses at Ravens Corner in May 2004.

East Berks: recently at Barge Lane, Lambs Lane, Barkham Manor, Thames Valley Park, Dinton Pastures, Twyford, Wargrave Marsh, Heath Ride, Heath Lake, Shepherd Meadow, Camberley, Linderhill clay pits, Castle Royle golf course, Old Malt House, White Waltham, Newell Green, Warfield House, Stud Green, common on shady lane sides at Long Lane, Old Beams, Holyport, Warren Row, Shepherds Lane, Ashley Hill, Prospect Hill, Hurley, Cookham Dean, Sunninghill, Foliejon Park, Holliday Plain, Oakley Green, Kingsmead, Old Windsor. 7% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Festuca heterophylla Lam. *Various-leaved Fescue*

• hs 6

Introduced in plantations on dry soils in shade; rare. Easy to identify by the contrast between the hair-like (< 0.6mm) basal leaves and the broad (2-4mm), flat leaves on the flowering stems.

East Berks: Reading (1960) (**LAN**), Leighton Park (1962), Whiteknights Park (**RNG**) in 1965, Bearwood, and on the lake border at Rapley Lakes [8964]. Atlas 2000: no records.

West Berks: a lane bank on the Bere Estate [621751] in 1907 (**OXF**), 1962 (**RNG**) and often subsequently, Bradfield [6072] in 1936 (**OXF** and **RNG**), Pangbourne [620750] in 1971, Esso Reserve at Stevenon [4789] in 1982, roadside bank at the bottom of Padworth Gully [6165]. Milton Hall [4680] in 1995. Atlas 2000: [48]

Festuca rubra L. *Red Fescue*

Festuca rubra subsp. **rubra** *Red Fescue*

hs 5

Dry pastures, lawns, roadsides, dry woods and heaths, wall-tops, etc.; locally common and widely distributed. Grassland; abundant and locally dominant. Capable of forming a sward in all kinds of grassy places, common. Rhizomatous and mat-forming. A highly preferred forage species, and decreasing under rabbit grazing, replaced by *Anthoxanthum*, *Carex muricata*, *Luzula campestris*, etc. Also, however, highly tolerant of grazing, so recovering quickly as soon as a rabbit fence is erected, and rapidly excluding many other species, both forb and grass, when herbivores are excluded. Not susceptible to the normal grass-killing selective herbicides, so it increases dramatically when these are applied to grassland.

NVC: CG 2-4; H 2; M 13,16,22,24,27; MG 1,4,-7,9,10,13; U 1,4; OV 23,27,41,42; S 4,7,19; W 16,22-25

Silwood Park: one of our most widespread plant species, but not always one of our most abundant because it is so highly favoured as food by rabbits. Rapidly attains dominance once rabbit fences are erected, especially on lawns and closely-grazed U4. The 6th most frequent species in small quadrats, behind *Agrostis capillaris*, *Holcus mollis*, *Holcus lanatus*, *Stellaria graminea* and *Senecio jacobaea*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
24	37	50	53	86

East Berks: not quite ubiquitous, absent from some of the most intensive arable land; only 11 species are more frequent species at this scale. 94% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Festuca rubra subsp. **commutata** Gaudin *Chewing's Fescue*

ch 5

Festuca nigrescens Lam.

Festuca rubra L. subsp. *caespitosa* Hackel

Festuca rubra L. var. *fallax* sensu Tutin, non (Thuill.) Hackel

In tufts in rough ground and dry grassy places, sown commonly in grass seed mixtures on roadsides. Not rhizomatous, and hence sometimes confused with *F. ovina* agg. (e.g. records of "*F. longifolia*"), but like all *F. rubra*, the tillers are extra-vaginal, despite the tussock-like growth form (see p. 1062).

Silwood Park: in flower on the verge at Sunninghill Roundabout, the tussocks in full flower on 22 April 2000. In the gravel strip between CABI and M-Scan in April 2002. A single plant inside the rabbit fence at the Ashurst Lysimeters in August 2005 (the second year since top-soiling). Large, blue-leaved plants, common in the New Chalk Plots in June 2003, were named as this by Tom Cope at Kew, but they look distinct to me.

Ascot: plentiful tussocks with other caespitose grasses in the set-aside (formerly maize) east of the racecourse [925700] in May 2003.

East Berks: Reading, Windsor, Sandhurst, Bracknell, Legoland. Common and widespread, but under-recorded. 4% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Festuca rubra subsp. **megastachys** Gaudin

● hs 5 ↑

Festuca heteromalla Pourret

Festuca fallax Thuill.

Festuca diffusa Dumort.

Festuca rubra L. var. *fallax* (Thuill.) Hackel

Festuca rubra L. subsp. *fallax* (Thuill.) Nyman

Festuca rubra L. subsp. *multiflora* Piper

An enormous grass, often more than 1m tall, with flat leaves; planted in waysides and escaped on waste ground. Often present as single, isolated tussocks.

Silwood Park: on disturbed ground at the roadside at the junction of Silwood Road and London Road in May 1998. Also at Drive Lawns and by the gate to the Japanese Garden in 1999. In rough grass by the Nuclear Reactor in May 2002. Rare in the grassy verge of London Road opposite Knight Frank on 6 May 2003.

Ascot: occasional on the margins of Ascot Racecourse.

East Berks: 2% (1km²). Atlas 2000: all squares

West Berks: widespread, but not yet recorded in detail. Faringdon [29], Lambourn [37].

Festuca ovina L. *Sheep's-fescue*

hs 5

Dry pastures, heaths, commons, sown road verges and chalk downs. Locally abundant. Dry grassland, waste places and wall-tops. Spikelets more than 5.3mm, lemmas more than 3.3mm, awns 0-1.6mm, leaves often pubescent at the base. Critical taxonomy (see below) based on microscopic investigation of morphology of transverse leaf sections. Soil type is useful in confirming identification, but can not be used on its own.

NVC: CG 2-5; H 2; MG 1,5,6; OV 10,27,39; U 1,2,20; W 10,16

East Berks: 3% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

The distributions of the two subspecies have not been worked out in detail for Berkshire, but their substrate preferences are reasonably clear cut.

Festuca ovina subsp. **hirtula** (Hack. ex Travis) M.J. Wilk. hs 5

Festuca ovina L. subvar. *hirtula* Hackel ex Travis

Festuca tenuifolia Sibth. var. *hirtula* (Hackel ex Travis) Howarth

Festuca ophioliticola Kerguelen subsp. *hirtula* (Hackel ex Travis) Auq.

Festuca filiformis Pourret subsp. *hirtula* (Hackel ex Travis) Kerguelen

Festuca hirtula (Hackel ex Travis) Kerguelen

Common in grassy places on well drained *acid* soils. The extent of the synonymy shows how hard it is to identify these plants. Extreme forms are easily told from subsp. *ophioliticola* on spikelet morphology (it is subsp. *hirtula* if the spikelet is less than 5.5mm and the lemmas are less than 3.6mm.) but there is great overlap in spikelet and lemma size.

Silwood Park: locally abundant in the U1 grassland in the Gravel Pit with *Anthoxanthum*, *Luzula campestris* and *Rumex acetosella*, where the small tussocks are conspicuous in early spring before the rabbits have grazed them flat. Frequent on Farm Road Bank opposite Nursery Field with *Trisetum flavescens*. Also on Elm Slope, in the tiny fragment of heathland that has survived rabbit grazing and bracken encroachment; There were discrete tussocks amongst the *Erica cinerea* on 13 June 1980; still just hanging on in June 2000. There may have been a decline in the abundance of this species over recent years, because an anonymous (but clearly, as judged by their other records, a very careful) recorder wrote that this species was “common in dry grassland” in Silwood in 1959, and you would certainly never write that now. Perhaps eutrophication from atmospheric inputs is to blame? Locally frequent in the New Chalk Plots at Ashurst in August 2010.

Ascot: locally frequent in the heathy rough of Ascot Heath golf course. Englemere. Blane’s Allotment.

Festuca ovina subsp. **ophioliticola** (Kerguelen) M.J. Wilk. hs 5

Festuca ophioliticola Kerguelen

Common in grassy places on well drained *calcareous* soils. Extreme forms are easily told from subsp. *hirtula* on spikelet morphology (it is subsp. *ophioliticola* if the spikelet is more than 6.3mm and the lemmas are more than 4.2mm.) but there is great overlap in spikelet and lemma size.

East Berks: in chalk grassland on Winter Hill and above Hurley.

West Berks: this is the abundant tussock-forming grass in chalk grasslands as at Whitehorse Hill and Aston Upton Downs.

Festuca filiformis Pourr. *Fine-leaved Sheep’s-fescue* hs 5

Festuca capillata Lam., nom. illegit.

Festuca tenuifolia Sibth.

Festuca ovina L. subsp. *tenuifolia* (Sibth.) Dumort.

Heathy woodland rides, dry heaths and open grassland; frequent and locally common on acid sandy soils. Spikelets less than 5.6mm, lemmas less than 3.6mm, awns 0-0.6mm. Sometimes grows side by side with *Festuca brevipila*.

Silwood Park: our plants are hairless at the base and have no awns at all. Croquet Lawn, small, discrete tussocks amongst the mown *Nardus* and *Calluna* by the Lily Pond beech tree in June 2000. Also on Elm Slope on dry ground with *Calluna* and *F. ovina* subsp. *hirtula*. Also in partial shade on top of the bank above the London Road fence by the Tractor Sheds in 1999.

Ascot: frequent in dry acid grasslands and rides in the Crown Estate woodlands at Swinley, Buttersteep, Blaine's Allotments, etc. Common about Sunningdale, Sunninghill and Ascot. In short acid grasslands on Ascot Heath in the middle of the race course.

East Berks: Bracknell, Ambarrow, Sandhurst, Windsor Great Park, Broadmoor. Bulmershe [7473]. Frequent on the acid sandy soils (south of 70), scattered and uncommon to the north of this. 1% (1km²). Atlas 2000: [77], [86], [96], [97]

West Berks: occasional on the heaths of the eastern Kennet valley, rare in the northern loop but absent from most of the area. Greenham Common [46], Snelsmore Common [47], Crookham Common [56], Burghfield Common [6566], Brimpton Common [5763], Harts Hill [5268]. Atlas 2000: [28], [40], [56], [50], [67]

[Festuca lemanii Bastard *Confused Fescue*]

hs 6

Festuca longifolia sensu Howarth et auct., non Thuill.

Festuca bastardii Kerguelen and Plonka

Under-recorded; often with *F. ovina* on both acid and calcareous soils. There are no Berkshire records yet. Told from *F. ovina* by its wider leaves (mid-rib to edge more than 0.57mm), larger spikelets (longer than 7mm) usually with awns longer than 1mm, larger panicles (up to 13cm), more numerous spikelets (up to 40), and longer basal internodes (up to 3.7cm).

Festuca brevipila R. Tracey *Hard Fescue*

• hs 4

Festuca duriuscula auct.

Festuca trachyphylla (Hackel) Kraj., non Hackel ex Druce

Festuca longifolia sensu C.E. Hubb. et auct., non Thuill.

Festuca cinerea Villars var. *trachyphylla* (Hackel) Stohr

Festuca stricta Host subsp. *trachyphylla* (Hackel) Patzke, nom. inval.

Sown on roadsides, and common in grass seed mixtures. Also on railway banks, waste ground and old walls. The leaves have 4 adaxial grooves (not 2 as in *F. ovina* and *F. lemanii*), and longer lemma awns (1.2-2.6mm) and pedicels (1.2-2.8mm). The leaves are *not* strongly glaucous (as in *F. longifolia* Thuill.). Early flowering.

Ascot: scattered and uncommon on the earthworks and landscaping associated with the new Race Course (2005-07).

East Berks: frequent on the newly sown verges of the northern relief road at Quelm Park Bracknell in May 2003. There were two forms, both with purplish spikelets: the commonest had glabrous lemmas, while the rare form had the lemmas densely covered in short, bristle-like hairs.

West Berks: Druce had records from Buckland (OXF) [3598], Enborne (OXF) [4365], Frilford [4497], Radley (OXF) [5398] and Padworth [6166]. There are only two 20th century records from Tilehurst (LAN) [6874] in 1960 and Cothill [4699] in 1963. On the newly sown banks of the Newbury bypass in May 2001. Atlas 2000: no records.

¶ **Festuca** *F. amethystina*, *F. eskia*, *F. glauca*, *F. punctoria*, *F. valesiaca* 'Silbersee'

X Festulolium loliaceum (Huds.) P. Fourn. *Hybrid Fescue* = **Festuca pratensis** x **Lolium perenne**

Festuca x *loliacea* Hudson

On damp rich soils, as in water meadows and on riverbanks. The 2 species of *Lolium* are capable of crossing with 3 species of *Festuca* (*F. pratensis*, *F. arundinacea* and *F. gigantea*) and 5 of the 6 combinations have been found in Britain (Stace, 1997). X *F. loliaceum* has awnless lemmas and glabrous auricles.

Silwood Park: in the grassy verge of London Road opposite the Silwood Road junction on 6 May 2003.

East Berks: scattered in the western reaches of the Thames valley from Reading down to Cookham. Found in Cock Marsh and in chalk grassland at the top of Winter Hill [8786], old gravel pit at Queen's Eyot, Bray [912784]. 1% (1km²).

West Berks: rare in the Thames valley but absent from the Kennet valley and the interior. Tuckmill Meadow [2488], Aston Upthorpe [5483], arable field at Bradfield [589722], water meadows at Basildon (RDG) [6078] and Little Johns Farm (LAN) [6974].

Lolium temulentum L. *Darnel* o th 5

An occasional casual on rubbish tips, formerly in cornfields and waste places; very rare.

East Berks: Windsor in c.1700 (OXF), Reading tip (1960), Twyford (1962), Smallmead tip (1965), Woodley tip (1969). Atlas 2000: no records.

West Berks: by the railway at Didcot [59] and Kingston Bagpuize [49] in 1897, Abingdon [49] in 1926, Newbury tip [46] in 1958 (OXF), Theale tip [67] in 1958, Wallingford [68] in 1963. Atlas 2000: [50], [67]

Lolium perenne L. *Perennial Rye-grass* hs 5

Pastures, roadsides, sports fields and cultivated ground; generally distributed. Abundant in "improved" sown grasslands. It is resistant to grazing and trampling and it is therefore especially common in pastures and lawns. It is not particularly competitive with less palatable native grasses in pasture, so it has to be periodically re-sown to maintain high levels of abundance. Along with *Cynosurus cristatus*, it declines in hay meadows if autumn grazing is replaced by a second cut (i.e. it is more grazing tolerant than cutting tolerant), because they are out-competed by taller grasses like *Arrhenatherum*, *Dactylis* and *Alopecurus*. Known at once by its dark green leaves which are metallic-glossy with a pronounced mid-rib beneath, and by its clasping auricles.

NVC: CG 2-4; MG 1,4-7,9,10; OV 4,9,10,12,13,15,16,18-24,26,28,29,33; S 23; W 24

Silwood Park: local and uncommon. Our grasslands have never been reseeded, so the plant is restricted to waste ground and a few grassy roadside verges. The mown walkways in Biodepth II were sown with Rye-grass in 1999 following methyl bromide fumigation in 1998. Most of it has disappeared by 2007, following abandonment of the experiment in 2000. Common in the graveyard at Ashurst and in Cheapside Village. Rare in June 2004 on introduced topsoil used to finish the landscaping of the lysimeters at Ashurst in summer 2003. The Pound Hill Enclosure was sown to rye-grass in the late 1990s but was rare by June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	4	32

Ascot: common and locally dominant on soil piles and bare ground during construction of Ascot Racecourse in August 2005.

East Berks: all but ubiquitous at this scale. 87% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Lolium x boucheanum Kunth = **L. perenne** x **L. multiflorum**

Lolium x hybridum Hausskn.

Occasional in sown leys.

East Berks: tip at Smallmead [7169] in 1982, a gravel pit at Cock Marsh [8886] in 1985.

Lolium multiflorum Lam. *Italian Rye-grass*

• th 5

Lolium perenne L. subsp. *multiflorum* (Lam.) Husnot

Sown grassland, locally abundant; occasional in arable fields and waste places.

NVC: MG 7; OV 4,12,22

East Berks: Maidenhead, Twyford, Sonning. It “grew in patches, about twice as tall as the *L. perenne* which surrounded it” (Druce). Abundant on the dump at Devil’s Pound at Sandhurst in August 2002. 3% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all except [68], [69]

Vulpia bromoides (L.) Gray *Squirreltail Fescue*

th 5

Festuca bromoides L.

Open grasslands on sandy soils, dry waste places, cinder tracks, paths on heaths and wall-tops. Occasional, but absent from calcareous soils. Told from *V. myuros* by the much longer lower glume (2.5-5mm), which is more than 50% of the length of the larger, upper glume, and by the fact that the base of the inflorescence is well clear of the uppermost sheath (not partly enclosed by it).

NVC: OV 1,3

Silwood Park: locally frequent in the fallow following glyphosate treatment in June 1986, and common in the headlands of the disturbance time experiment at Pound Hill, Ashurst churchyard, Biodepth, Church Field, Ashurst Warren, the brow of the hill in Nash’s Field, steep banks of the main road through Drive Lawns, on the cinder pot stand at The Greenhouses. Formerly on compacted ground at the end of the Outdoor Insectary, but extinct following construction of the new CPB car park in 1988. Header House, in the gravel strip along the back wall of IIBC on 20 June 1996. South Gravel, patches scattered over the former Parade Ground on 1 June 1984; extinct following construction of the Science Park.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	10	12

East Berks: Ascot, Swallowfield, Sunninghill, Coleman’s Moor, Sonning, Twyford, Sandhurst, Ambarrow, Wellington College, Finchampstead, Bracknell. 14% (1km²). Atlas 2000: all squares

West Berks: common in the Northern Loop and in the central Kennet valley but absent from the interior (north of 75 and south of 90). Atlas 2000: all except [38], [48], [69]

Vulpia myuros (L.) C.C. Gmel. *Rat's-tail Fescue*

o th 5 ↑

Festuca myuros L.

Vulpia megalura (Nutt.) Rydb.

Dry waste places, disturbed ground, cinder tracks, dry sandy soil and walls; confined to the drier parts of the county where it is local and uncommon. Long-lived in the seedbank. Told from *V. bromoides* by its tiny lower glume (0.4-2.5mm), which is 10-45% of the length of the upper glume (rather than 50-75%) and its narrow lemmas (less than 1.4mm wide when flattened out). The base of the long inflorescence is usually not fully exerted from the upper sheath at maturity. When open-grown, the plant forms a circular rosette, with the flowering stems spreading almost horizontally, close to the ground. Increased substantially at many of its sites since 1999.

NVC: OV 19,23

Silwood Park: formerly very rare, but now locally dominant. A single record from the cinder pot stand at The Greenhouses where a single very tall plant (75cm) was growing amongst *V. bromoides* and other annuals on 14 May 2000. By 6 May 2003, it had increased spectacularly, and was locally dominant over much of the cinder pot standing, having benefited from killing of the perennial plants with glyphosate in the previous autumn (2002). Still dominant over half of the area in May 2004. In the seedbank beneath old grassland at Nursery Field in May 2004 following cultivation in 2003. Just two plants amongst abundant *Poa trivialis* in Ashurst Lysimeters on 20 May 2008. Locally frequent on the autumn-cultivated ground at Pound Hill on 16 June 2008. Following a no-cultivation year in 2009, it was very local on 24 June 2010 on the Ashurst Hedge side of the fence, in the location where the *Sinapis arvensis* had been. Still there, and spread no further, in July 2012. Locally frequent on paving outside the east door of Munro Building on 15 July 2012.

Ascot: long known from Ascot. Still on gravel with *Crepis biennis* at Ascot Station in June 2003. On the trackbed at Ascot Station on 16 May 2008.

East Berks: Sonning, very fine at Sunninghill, Swallowfield growing with *V. bromoides*, Bearwood, Loddon Bridge, Twyford. Swallowfield Park, Reading, Broadmoor, Coleman's Moor, Wokingham, Heywood Park, Kingside, waste ground at Legoland, old walls at Frogmore. Scattered and uncommon. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. <1% (1km²). Atlas 2000: [76], [77], [86], [96]

West Berks: occasional in the Northern Loop, but scattered and rare elsewhere. Shrivensham [28], quarry at Faringdon [288942], old airfield at Membury [311749], Wantage Road Station [38], Buckland [39], Snelsmore Common and Welford Park [47], Grove, Steventon and Abingdon [49], Appleton and Swinford [40], Brimpton pit [567652], Radley and Sutton Courtenay [59], South Hinksey and Kennington [50], South Moreton and Tilehurst [67], Wallingford [68]. Locally abundant on cinder in railway sidings at Didcot Parkway Station [5290] in 2003, where it was the commonest grass species. Atlas 2000: all except [36], [48], [66], [68], [69]

Vulpia ciliata Dumort. *Bearded Fescue*

th 5 †

Vulpia ciliata subsp. **ambigua** (Le Gall) Stace and Auquier

Festuca ambigua Le Gall

Vulpia ambigua (Le Gall) More

Disturbed soil on heaths; very local. Now extinct. Told from the other two common *Vulpia* species by spikelet number (1-3 rather than 2-5 bisexual, and 3-7 distal sterile rather than 1-2 sterile florets).

Ascot: sandy tracks on the old camp at Tower Hill [9066]. About 1000 plants in 1965. I have looked for it here and failed to find it.

East Berks: south of Wellington College in Bowen's time, but not seen recently.

West Berks: no records.

Vulpia unilateralis (L.) Stace *Mat-grass Fescue*

● th 5 ↓

Triticum unilaterale L.

Nardurus maritimus (L.) Murb.

Vulpia hispanica (Reichard) Kerguélen, nom. inval.

Bare places in calcareous grassland, very local.

West Berks: chalk grasslands at Fair Mile, Moulsoford [5583] in 1956 (**RNG**) and 1966 (**OXF**), sand pit at Hitchcose Farm pit [452996] in 1967, 1980 (**RNG**) and 1999, Dry Sandford Pit [49] in 1980. Recently found by Susan Erskine in Faringdon pit [285942] on 2 June 1999 but not seen since. Atlas 2000: [29], [49], [58]

Cynosurus cristatus L. *Crested Dog's-tail*

hs 6

Dry fields, roadsides and downs. Common and generally distributed. Grassland on a wide range of soils. Commonest in dry pastures, where it is resistant to trampling. Frequent to locally abundant. Declines if mowing replaces grazing, as at Park Grass. Easy to overlook when not in flower, so under-recorded in closely mown lawns and heavily grazed pastures. The flower stalks themselves are unpalatable to herbivores, and are often conspicuous in summer-grazed fields.

NVC: CG 2-4; MG 1; M 22; OV 21,23

Silwood Park: local and uncommon, mostly introduced. Not a frequent component of Silwood's semi-natural grasslands. In the lawn by the Squash Court on 3 July 1980. Sown in the conservation mixture opposite Southwood Halls in 1983 and seen every year until the grassland was destroyed to make way for Flowers Halls. Sown in the original seed mix on the Chalk Plots, and still present on the chalky plots in 1989. Ashurst New Chalk Plots, sown in the original seed mix and locally abundant by the end of 1995. In unsown grassland at The Oaks and Oak Mead and on waste ground on the Science Park. Common inside rabbit fences in the Arboretum on Garrison Ridge in June 2002. One plant in gravel at the rear of CABI in June 2003.

Ascot: dry, open grassland on Blane's Allotment, Rapley Lake, Swinley Park, Ascot Heath, Charters Road, Sunningdale Park, Sunningdale, Windsor Great Park, Brook Farm, Winkfield, Brookside, Spring Hill, Bear's Rails. Very local in the set-aside (formerly maize) east of the racecourse [925700] in May 2003. Abundant in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006. This is one of the few grasses to take abundantly in places where the grass-sowing failed, as on the corner of New Mile Road in May 2007. Locally abundant in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: 16% (1km²). Atlas 2000: all squares

West Berks: common in reseeded grassland on chalk as at Combe Gibbet and Walbury Camp [36]. Often associated with *Carduus nutans*. Atlas 2000: all squares

Puccinellia distans (Jacq.) Parl.

• hs 6 ↑

Poa distans Jacq.

Panicularia distans Kuntze

Glyceria distans (Jacq.) Wahlenb.

Phippsia distans (Jacq.) Á. Löve and D. Löve

Puccinellia distans subsp. **distans** *Reflexed Saltmarsh-grass*

Abundantly naturalised by the sides of winter-salted roads. It forms a strip of grey-green grass leaves about 30cm wide, just in from the kerb stone, where it grows with *Cochlearia danica*; the Scurvy Grass typically flourishes somewhat closer to the road.

NVC: OV 21

Ascot: no records, but growing close by, as on Winkfield Road [9373] between The Squirrels and Legoland in July 2002.

East Berks: not in Druce or Bowen. First recorded at Coppid Beech roundabout [8368] in 1987 (RNG) and locally common there in 2003, and by the A308(M) from the M4 Junction 8/9 south of Maidenhead [8881] in 1987 (locally abundant in 2003). Recently at Highlands, by the A308 in Bray Wick, M4/A33 interchange, M4 at Lower Earley, Loddon Bridge, Sheeplands Farm, M4/A329(M) interchange, Edgebarrow, Road Research Lab, Amen Corner, by the new road from Bracknell to Camberley opposite Broadmoor, Wishmoor Cross, by the A4 at Bowsey Hill, Howlane Bridge, M4/A423 interchange, by Ascot Road in Holyport, Stubbings, Guild House, Clewer. 3% (1km²). Atlas 2000: all except [78], [96]

West Berks: first recorded as a casual Didcot railway [59] in 1897, Abingdon Racecourse [49] in 1918, then later as a salt adventive on inland roadsides: by the M4 north of Hungerford Newtown [37] (RNG) in 1982, and from the central reservation of the M4 at Maidenhatch Farm [6173] in 1988. By the A34 dual carriageway at Shippon [4898] in 1992. Marcham Road interchange [477968] in June 2003 and in a lay by on the A34 [474935] in 2004. Atlas 2000: [37], [47], [49], [57], [59], [67]

[Puccinellia fasciculata (Torr.) E.P. Bicknell *Borrer's Saltmarsh-grass*]

Poa fasciculata Torrey

Puccinellia pseudodistans (Crépin) Jansen and Wachter

Phippsia fasciculata (Torrey) Á. Löve and D. Löve

A rare member of the roadside salt adventive community, yet to be recorded from Berkshire. Told from *P. distans* by the lower panicle branches bearing spikelets almost to the base (not aggregated at the tips) and smaller anthers (less than 0.75mm).

[Puccinellia rupestris (With.) Fernald and Weath. *Stiff Saltmarsh-grass*]

Poa rupestris With.

Glyceria rupestris (With.) E. Marshall

A rare member of the roadside salt adventive community, yet to be recorded from Berkshire. Told from the last two species by its bigger lemmas (2.8-4mm not 1.8-2.5mm).

Briza media L. *Quaking-grass*

hs 6

Chalk grassland, meadows, pastures, roadsides, but also in boggy fens and heathy places; common and widely distributed. "In our wettest bogs, and also on our dry chalk downs" (Druce). Abundant on the chalk, but rare or absent in south-east Berkshire.

NVC: CG 2-5; M 13,22,24; MG 1,4,5,9

Silwood Park: very rare as a native, occasional as a sown species. Locally common in rough grass behind Knight Frank in June 1999 on what was formerly a lawn. North Gravel, sown in the conservation grassland in 1983; still there when the site was destroyed to make way for Flowers Halls. Sown on the Chalk Plots, still there in 1989 but gone by 1998. It reappeared in July 2006 on plots 7 and 8 following two very dry winters. Ashurst New Chalk Plots locally frequent on 20 June 2000 but only occasional in 2006 and by 26 May 2007 it was present on just two plots on the Marist side of the New Chalk Plots.

East Berks: very local and absent from the interior, but occasional on the chalk in the western part of the Thames valley from Wargrave to Cookham. By Bishops Gate into Windsor Great Park [9572], edge of Maidenhead Thicket. In the Fritillary Meadow at Stanford End, Hurley, Temple golf course, Winter Hill, Cock Marsh, Copper House, Windsor Castle. 1% (1km²). Atlas 2000: all squares

West Berks: frequent on the chalk (north of 75 and south of 90), and in the Northern Loop, but uncommon in the Kennet valley (e.g. in old pasture at Enborne [439652] and Enborne Row [450635]. Atlas 2000: all except [56], [50], [68], [69]

Briza minor L. *Lesser Quaking-grass* ● th 7

The ligule is longer than in *B. media* (2-6mm not 0.5-1.5mm) and the plant is an annual, lacking non-flowering branches.

East Berks: occurred as a casual near Reading (c.1890). Extinct according to Bowen. A new population was found in 1999 on a roadside in the northern suburbs of West End [8275]. <1% (1km²).

West Berks: rare on the gravel pot standing in the grounds of the Old Rectory at Burghfield [6668] in 2004.

Briza maxima L. *Greater Quaking-grass* ● th 7

An occasional garden plant, self-seeding freely and readily naturalized on dry substrates in full sun.

Silwood Park: very common and locally dominant on the cinder pot stand at The Greenhouses. It was first recorded here in 1985, was common by 1990 and dominant by 1996. It grows with other aliens, most notably *Nonea lutea*, and the area was managed for their conservation until the area was turned into a chicken run in 2008; the grass has not been since then. Below the Met Tower at Pound Hill in 1972. This population was extinct by 1979 having been overgrown by *Carex muricata* subsp. *lamprocarpa* (the sedge is unpalatable to rabbits and hence immune to grazing). Two plants in the gravel strip below the CABI Quarantine Greenhouse on 8 June 2007. A single clump at the CABI end of the Header House on 18 May 2010.

East Berks: not in Druce. A rare casual at Leighton Park (1951), on the railway near Sutton's Nurseries (RNG) in 1959, waste ground at North Town (1999). Garden outcasts in a beech wood south of the B3051 [580627] in July 2003. <1% (1km²). Atlas 2000: [88], [96]

West Berks: Atlas 2000: no records.

Poa infirma Knuth *Early Meadow-grass*

th 1

Told from *P. annua* by its tiny anthers (0.2-0.5mm rather than 0.6-0.8mm), and the panicle branches tending towards erect and appressed (not spreading or reflexed) at fruiting. Anther length is usually unequivocal, and the florets are further apart than they are in *P. annua*, giving the spikelet a more open appearance. Possibly overlooked. First Berkshire record on 15 September 2007.

This is what Tom Cope wrote to MJC in September 2007: “ Anther length is usually unequivocal. Spikelet parts are a little trickier to use, but significantly, the florets are further apart in *P. infirma* than they are in *P. annua*, giving the spikelet a more open appearance. In support of anther length, there is panicle branch disposition. In *P. infirma* the branches always point upwards at maturity whereas in *P. annua* they mostly point downwards (but sometimes are horizontal). There is increasing evidence that as *P. infirma* spreads it is beginning to hybridize with *P. annua*. So far, hybrids seem to be sterile and anther length is intermediate”.

Silwood Park: a single plant with three flowering stems, growing in gravel beneath the east-facing brick wall of the church at Ashurst overlooking the graveyard on 15 September 2007. Just above it on the wall, about 30 cm above the ground, was a fine individual of *Poa compressa* (still there and flowering on 10 May 2008, but no sign of *P. infirma*).

East Berks: no other records until 14 April 2010 when Fred Rumsey found the plant growing on an open grassy bank with *Stellaria pallida* at the junction of Kings Meadow Road and Napier Road, opposite the BMW dealership near Reading Station.

West Berks: no records until scores of plants were found in February 2010 at Chieveley Service Station [480725] by Paul Stanley, growing with *Poa annua* beneath trees on the top of the grassy bank between the car park and the Services.

Poa annua L. *Annual Meadow-grass*

th 1

Meadows, pastures, waste places, garden ground, set-aside, roadsides and putting greens; frequent and locally abundant. Flowering throughout the year in a very wide range of open habitats. Requires bare soil for seedling recruitment, and hence dependent on disturbance for its persistence.

NVC: MG 6,7,13; OV 1,3,4,7-10,12-16,18-25,28,29,31-33,35,42; S 18; U 1,2

Silwood Park: widespread at larger scales, but not a major component of any natural vegetation, and unrecorded in any of the smaller quadrats (even from waste ground).

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	26	45

Ascot: abundant over large areas of disturbed soil and abundant on soil piles on the construction site of Ascot Racecourse [9268] in August 2005, and all along the edge of the new tarmac road parallel with the Straight Mile [9269] and [9369].

East Berks: joint second most frequent species at this scale (only *Trifolium repens* occurs in more 1km squares). 99% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Poa trivialis L. *Rough Meadow-grass*

hs 6

Meadows, pastures, borders of fields, damp woods, roadsides, moist meadows; common in all the districts in a very wide range of habitats. Tolerant of partial shade on fertile, water-retentive soils. Recognisable at once by its massive ligule, and flower stems that are rough to the touch. Often paler, yellowish green, than the other grasses with which it is growing.

NVC: M 22,27; MG 1,4-7,9,10,13; OV 3,4,9,10,12,15,19,21-24,26,27,29,30,33,41;

S 4-7,15,19,22,23,26,28; W 4-6,8,10,12,14,21,22,24,25

Silwood Park: Pound Hill, Sunninghill Crossroads, Ashurst, Oak Mead, Cheapside, Walled Garden, Old Orchard, Silwood Farm, The Rookery, Silwood Bottom, Observatory Ridge, Japanese Garden, Heronsbrook Meadow, Cannon Crossroads. Locally abundant in damp ground shaded by alders at the side of The Lake by Silwood Farm, and in recently disturbed soil at Mill Lane. The most abundant grass in the first growing season after landscaping the lysimeters at Ashurst using imported topsoil, in May 2004. Locally abundant in the seedbank studies at Heronsbrook Meadow in May 2004. Abundant on 27 May 2006 in the cultivated parts of Ashurst Four Acre Field after a very dry winter. By the ferruginous flush at the bottom of Farm Wood in 2007. The dominant grass in Ashurst Lysimeters on 16 May 2008 following herbicide treatment but no cultivation in the previous autumn, where it was replaced by *Holcus lanatus* by 15 July 2008. Again, following a no-cultivation year in 2009 it was co-dominant with *Holcus lanatus* on 20 June 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	5	35	28

Ascot: frequent in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: commonest on nutrient enriched, moist soils. In a curious habitat, growing with *Molinia* in the Wish Brook amongst heathy vegetation in Wishmoor Bottom. 83% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Poa humilis Ehrh. ex Hoffm. *Spreading Meadow-grass*

hs 5

Poa pratensis L. subsp. *subcaerulea* (Smith) Tutin

Poa subcaerulea Smith

Grassland, rough grass, waste ground, old walls usually on sand and often close to water. Rhizomatous, and hence not tufted. Glumes both 3-veined, and sheaths hairy at the ligule. Certainly under-recorded in the past (as *P. pratensis sensu lato*).

Ascot: no records.

East Berks: in old pasture at Bulloways Farm [76], Blackwater [86] (OXF), Whiteknights.

<1% (1km²). On the northern relief road at Quelm Park in Bracknell on 6 May 2003. Atlas 2000: [76], [77], [86]

West Berks: Weathercock Hill and Whitehorse Hill [28], Furze Hills [29], Freeman's Marsh at Hungerford [36], Hackpen Hill, Blowingstone Hill and Crog Hill [38], Boxford [47], Ilsley Bottom [48]. Atlas 2000: [28], [29], [36], [38], [47], [48], [40], [66]

***Poa pratensis* s.s.** L. *Smooth Meadow-grass*

hs 5

Meadows, lawns, pastures, waysides, woods, wall-tops, heaths. Abundant in all the districts, and one of our commonest grasses. Told from *P. humilis* by its glumes which are unequal in length, the lower glume 1-veined, and sheaths not hairy at the ligule. Told from *P. angustifolia* by its non-tussocky habit and broad leaves (2-4mm not 0.5-2mm wide). Told from *P. trivialis* by its smooth (not rough) flower stalk and by its small, clerical collar of a ligule.

NVC: CG 2-5; M 27; MG 1,4-7,9,10; OV 13,18,21,23,27,32,42; S 18,23; U 20; W 23,24

Silwood Park: a minor component of all our semi-natural grasslands in Nash's Field, Pound Hill, Ashurst, and Heronsbrook Meadow, and in lawns around all the buildings. Common in grassy roadsides, as along London Road. Also on waste ground, as in the Walled Garden. There was an unusually large, very early flowering plant in the verge by the Cannon Crossroads on 22 April 2000. It had leaves 5mm wide, glumes unequal (3mm and 2.2mm, respectively), the lower glume 1-veined, with a hairless ligule 3mm long and serrate-truncate. The lowest panicle node had 6 flowering branches, the shortest of which was 7mm long. Frequent in the October-cultivated plots at Pound Hill Cultivation Timing Experiment on 15 July 2008, growing through after the dominant *Anisantha sterilis* had died back.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
10	11	15	25	36

Ascot: large plants in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: 87% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Poa angustifolia L. *Narrow-leaved Meadow-grass*
Poa pratensis L. subsp. *angustifolia* (L.) Dumort.

hs 5

Dry banks and waste places, walls and rough grassland; occasional, perhaps overlooked. Told from *P. humilis* by the glumes more or less unequal in length, the lower glume 1-veined and from *P. pratensis* by its tussocky habit and very narrow leaves (0.5-2mm not 2-4mm wide).

Silwood Park: occasional in the grassland in Nash's Field, and most conspicuous when this is protected from grazing by the erection of rabbit fences; in June 1999 in Blocks C and D where the fences were erected in 1986.

East Berks: Reading (RNG), Loddon Bridge (OXF), Twyford Station (OXF), Wellington College, Frogmore (OXF), and several records by Hubbard from Windsor (1927-37). 2% (1km²). Atlas 2000: [86], [96]

West Berks: Hamstead Marshall [46], Welford [47], Tubney and Frilford [49], on top of dry limestone walls at Wytham [40], Ashampstead [57], Moulsoford [58], on the railway at Thrupp [59], Kennington [50], Calcot Row (RNG), Theale pits (RNG) and Tilehurst (LAN) [67]. Atlas 2000: [46], [40],

Poa chaixii Vill. *Broad-leaved Meadow-grass*

• hs 6

Plantations and shrubberies on the larger estates, where it is planted as a woodland ornamental. Very local, but sometimes in quantity. Told by its wide leaves (6-10mm) and large lowest lemma (more than 3mm). The top leaf on the stem is much shorter than its sheath.

East Berks: Leighton Park.(1962), north of Earley Gate at Whiteknights (1974, now gone). Atlas 2000: no records.

West Berks: at the base of Riever Hill [36] in 1896 (**OXF**) and at Padworth [66] 1961-84. Atlas 2000: [57]

Poa compressa L. *Flattened Meadow-grass* hs 6 ↓

Wall-tops, dry stony fields, steep chalk banks, and formerly in calcareous arable fields. Uncommon and in small quantity. Easy to tell by its flattened flower stem (you can not roll it between your fingers), and few basal flower branches (2 or 3). The flower stem has many more nodes than other *Poa* species (4-9 rather than 2-4 nodes) and the stem is slightly bent at each of the nodes.

Silwood Park: on the stonework of the Lily Pond, about 10cm above the water level. On the brick wall facing the graveyard at Ashurst in 1979 (still there in 2008).

East Berks: rare in the western part of the Thames valley; on ruins at Hurley, Woodley, Twyford. On old walls at Hall Place [8382] in 2003. 1% (1km²). Atlas 2000: [77], [88], [96], [97]

West Berks: rare and scattered, absent from large areas of the interior and the south, but most frequent to the north of 95 and in [58]. Faringdon [29], on the old airfield at Membury [37], Hell Bottom [38], Pucketty Farm and Hinton Waldrist [39], Greenham Common [46], Harwell, Ginge, East Ilsley and on the railway bridge at Chilton [48], on walls and in pits at Cothill, and on ancient wall tops in Abingdon [49], Sunningwell and Wytham [40], West Hagbourne, Lowbury Hill, Upton, Blewbury and Fair Mile [58], Radley Park, Sutton Courtenay and Long Wittenham [59], Kennington [50], Southcote (**RDG**) and Tilehurst [67], Wallingford Priory [68]. Atlas 2000: all except [36], [47], [56], [57], [69]

Poa palustris L. *Swamp Meadow-grass* ● hs 6 ↓

River banks and waste places; rare. Like *P. chaixii* but with long uppermost stem leaves, and leaves less than 6mm wide.

East Berks: not in Druce. By the Blackwater River near Yateley (**RNG**) [8162] in 1961 and by a ford near Sandhurst [835609] in 1966.

West Berks: Didcot [59] in 1929 (**OXF**) and on the river wall at Abingdon [49] in 1957 (det. J. E. Lousley). Little Wittenham Wood nature reserve [5792] in 1982.

Poa nemoralis L. *Wood Meadow-grass* hs 3

Woods and shady hedge-banks. Locally abundant but rarer on the chalk. When visiting the former East Germany, I was amused to learn that the local botanists refer to this species as “Heil Hitler Grass” because of the stiff, straight angle at which the leaf blades are held, especially when viewed *en masse*. It really is an excellent description of the jizz. Very early flowering.
NVC: W 8,10,12,14,15

Silwood Park: locally abundant under the Horse Chestnut tree on the bank of London Road, 50m below the Sunninghill Crossroads, where the bus shelter used to be (before it was demolished by a Friday night driver in 2001), and at Sunninghill Crossroads in 2003 beneath the new Mobile Phone mast (erected in 2002). In flower on 8 February 2008. Frequent on the shaded parts of The Dam by the Outflow Sluice beneath holly with *Moehringia trinervia*. Occasional under *Sorbus aria* at East Lodge on 17 May 1993. Locally frequent in the woodland behind Southwood Halls with *Carex sylvatica* and *Brachypodium sylvaticum* on 14 May 1998. Silwood Farm, on the dam, and in the shade of alders by The Lake with *P. trivialis* on 21 May 1998. Great Mead, a single plant beneath the big beech tree on the dry ridge just down from Cascade Bridge on 14 May 2000. Nash's Copse, rare on the dry bank above the stream at the Heronsbrook end with *Deschampsia cespitosa* on 22 May 2000. Cannon Path, locally abundant inside the rabbit enclosure opposite TTC in May 2004; the plant occurs nowhere else in Garden Wood and is evidently excluded by rabbit grazing. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006.

Ascot: in drier parts of the swampy woodland west of South Ascot playing fields. Dominant on the bricked banks of London Road opposite Queens Beeches between The Wells and Ascot. Frequent in the old gardens at Frognall in September 2005.

East Berks: Binfield, Wokingham, Arborfield, Long Moor, Barkham, Riseley, Farley Hill, Finchampstead, Sandhurst, Easthampstead, Bracknell, Park Place, Twyford, Wargrave, Swallowfield, on chalk in Bisham Wood, Ashley Hill. 17% (1km²). Atlas 2000: all squares

West Berks: common in the Kennet valley (as at Wasing [5862]) and the Northern Loop (as in Bagley Wood [5102]), occasional in the Thames valley, but absent from much of the interior (north of 80 and south of 95). Atlas 2000: all squares

Poa bulbosa L. *Bulbous Meadow-grass* hs 4 †

West Berks: casual colonist on a wall at Cothill Mill [4699] in 1894 (OXF). This plant is not native in Berkshire.

¶ **Poa** *P. chaixii*, *P. cita*, *P. colensoi*, *P. labillardierei*,

Dactylis glomerata L. *Cock's-foot* hs 5

Meadows, pastures, long grass, roadsides, railway embankments and waste places, preferring dampish soil. Abundant and generally distributed. Preferred by rabbits and declines under heavy grazing pastures, but forms large tussocks after fencing to exclude rabbits. Long term rabbit enclosure leads to co-dominance with *Festuca rubra* and a great reduction in plant species richness as most low-growing herbs and other grasses suffer competitive exclusion. Often with abundant cuckoo spit produced by *Philaenus spumarius*.

NVC: CG 2,3; M 27; MG 1,4-7,9,10,13; OV 9,10,12,15,18-27,33,41,42; S 18,26; W 1,6,8,10,12,14,21-25

Silwood Park: throughout the grasslands, but generally inconspicuous because of heavy rabbit grazing, commonest in Pound Hill and least common in the upper, drier parts of Nash's Field. What used to be the best Cock's-foot grassland was on Rookery Slope, but this is now completely altered by protracted heavy rabbit grazing. In 1980 it used to be difficult to walk across Rookery Slope because of the almost complete coverage of dense, ankle-twisting tussocks of Cock's-foot, but now, thanks to the high local densities of rabbits, it is a close-grazed sward of *Agrostis capillaris* and *Festuca rubra*. There is still a reasonable patch of tussock grassland on the part of Pond Field

adjacent to the track up the hill by the boundary fence of Silwood Bottom but this, too, has greatly reduced in size over the last 20 years. The first tussock grass to respond to fencing to exclude rabbit grazing. Particularly fine following fencing in Oak Mead in 1996; now (2003) locally dominant in most of the fenced plots that were left as intact grassland (i.e. uncultivated). Very rare in the cultivation timing experiment at Pound Hill, but a few plants on each of the March-cultivated plots on 4 June 2007 following the very dry spring, when the March-cultivated plots stayed completely bare for more than a month.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
3	5	15	28	49

East Berks: 99% (1km²); only *Trifolium repens* is more frequent at this scale. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Catabrosa aquatica (L.) P. Beauv. *Whorl-grass*

hel 6 ↓

Aira aquatica L.

Catabrosa aquatica (L.) P. Beauv. subsp. minor (Bab.) Perring and Sell

By springs and ditches, on nutrient-rich mud in unpolluted water. Uncommon, but sometimes dominant where it does occur.

Ascot: no records.

East Berks: near Jouldern's Ford on the Blackwater (1897). Coleman's Moor (1918). Hurley (1966). Riseley Green (1966). <1% (1km²). Atlas 2000: [76], [86], [88]

West Berks: occasional, and scattered on low ground throughout; east of Lechlade [29], Hungerford Meads and West Woodhay [36], Letcombe springs [38], wet pasture at Enborne [46], by the River Lambourn near Weston [4073], south of Barrow Farm fen and Marcham [49], Northmoor lock and Harts Weir [40], Stanford Dingley [57], Hagbourne Moor and Streatley [58], Barton Court, Radley Park and in a fen drain at Thrupp [59], Sugworth Farm [50], Bradfield (RNG) [67]. Atlas 2000: all except [28], [29], [37], [39], [48], [66], [68], [69]

Catapodium rigidum (L.) C.E. Hubb. *Fern-grass*

th 5

Poa rigida L.

Festuca rigida (L.) Rasp., non Roth

Desmazeria rigida (L.) Tutin

A tiny, stiff grass of dry calcareous grassland and sandy ground, railway ballast, chalk and limestone pits, and tops of old limestone walls, in small quantity and preferring sunny spots.

NVC: OV 42

East Berks: Earley, Sandhurst, Maidenhead. Reading, Shottesbrooke, Maidenhead Thicket, Cookham, Winter Hill. Rare in the western parts of the Thames valley from Reading to Cookham, absent elsewhere. Hurley chalk pit, on the brick tops of the old Abbey walls at Sonning, and on the brickwork of the railway arches in Windsor. 1% (1km²). Atlas 2000: [77], [88]

West Berks: scattered throughout but most frequent in the north (north of 85). Great Coxwell and Faringdon pits [29], Membury airfield [37], Dragon Hill [38], Stanford-in-the-Vale, Buckland and Denchworth [39], walls in Newbury and Crockham railway bridge [46], Chilton [48], Drayton,

Grove, Tubney and Cothill [49], Youlbury, Wytham, on the ruined walls of Godstow Nunnery and Appleton [40], in a beech wood at Aldworth, Hermitage and Yattendon [57], Aston Upton Downs, railway between Moulsoford and Cholsey and Streatley Hill [58], Didcot Power Station, Sutton Courtenay, Radley gravel pits and Little Wittenham [59], Kennington [50], Tilehurst [67], Wallingford bridge [68]. Atlas 2000: all except [36], [39], [47], [66], [68], [69]

Glyceria maxima (Hartm.) Holmb. *Reed Sweet-grass* hel 7
Panicularia aquatica Kuntze
Molinia maxima Hartman

Sides of rivers, canals, streams and ponds with nutrient-rich water; common and widely distributed. "A conspicuous feature of our river vegetation from its handsome panicle and yellowish green foliage, which afford a pleasing variation from the bluish green leaves and dark purple panicles of *Phragmites*" (Druce). Locally dominant but absent from the chalk ridge.
 NVC: M 27; OV 26,32; S 4,5,13,16,23,26,28; W 5

Silwood Park: Virginia Water Lodge, a small colony in rushy grassland along the line of a small stream below Hayes Wood and Merten's Acres. Becoming overgrown as the ground dries out after the two drought summers of 1989 and 1990. Recovered subsequently.

Ascot: local and rare. Frostfarm Plantation, Cumberland Lodge, by Virginia Water on the Berkshire side. Commonest in the remnants of Sunningwell Bog west of the playing fields in South Ascot.

East Berks: an interesting distribution; frequent in the Thames valley and in the south-east but uncommon in the interior. Recently at Stanford End, Barkham, Fobney, Coley, Kings Meadow, Kennet Mouth, Reading Marina, Bulmershe, Earley, Thames Valley Park, Winnersh, South Charvil, Borough Marsh, Dinton Pastures, Lands End, Billingbear, Wargrave, Whistley Green, Crazies Hill, Queens Mere, Chapel Green, Shepherd Meadow, Sandhurst, Edgebarrow, Bracknell, Stanlake Park, Pebblestone Copse, Shurlock Row, Old Malt House, Jock's Copse, Stud Green, Warren Row, Hurley, Temple, Winter Hill, Maidenhead, East Maidenhead, North Town, Cookham, Cock Marsh, Widbrook Common, Windsor Castle, Home Park, Cookham Lock. 13% (1km²). Atlas 2000: all squares

West Berks: frequent in the major river valleys but absent from the chalk ridge (north of 75 and south of 85). Atlas 2000: all except [69]

Glyceria fluitans (L.) R. Br. *Floating Sweet-grass* hel 5
Panicularia fluitans Kuntze
Festuca fluitans L.

Often forming a floating mat on the margins of rivers, canals, brooks, ditches, swamps and ponds; frequent and widely distributed in a wide range of wet habitats, but absent from the chalk ridge. Lemmas large (more than 5mm).
 NVC: A 3,8,9,10,11,15,19,20,21,24; MG 7,9,10,13; OV 29,31; S 4,8,12,13,14,16,19,22,23; W 1

Silwood Park: Water Meadow, The Marsh, locally dominant in the *Scirpus* swamp, Great Mead, on the inflow streams, Lake Wood, The Willows, Guinness's Thicket, in sedge swamps at the northern end of The Lake, by Guinness's Bridge, and in the wetter parts of Nash's Copse. It was abundant in the new spring at the Farm (appeared January 2001) by July 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	5

East Berks: absent from large areas of dry ground, but frequent in the water courses. 14% (1km²).
Atlas 2000: all squares

West Berks: common everywhere except the chalk ridge (it is absent north of 75 and south of 85).
Atlas 2000: all except [69]

Glyceria fluitans x declinata

Differs from *G. x pedicellata* in its obscurely 3-toothed lemmas and chromosome number (2n=30).

East Berks: collected by the great C.E. Hubbard himself, in water by a pond between Sandhurst and Wokingham (probably Kings Mere or Queens Mere, but no more detail in Stace (1975) and no specimen in **OXF**).

West Berks: no records.

Glyceria x pedicellata F. Towns. *Hybrid Sweet-grass* = **G. fluitans x G. notata**

Often forming large patches, even in the absence of one or both of the parents. Told from *G. fluitans* by the smaller lemmas (5-5.5mm rather than 5.5-6.5mm) and the anthers remaining indehiscent (as befits a sterile hybrid). Much over-recorded, but there are reliable records from the following locations:

East Berks: Whiteknights Park, Bracknell, Hurley.

West Berks: south bank of the R. Cole at Lechlade [2298], Rushy Weir and Buckland Marsh [30], Redhill Wood [46], Harts Weir, Wytham and Appleton Manor [40], Turners Green [5268], North Farm [5892], Hinksey (**OXF**) and Sandford Lasher [50].

Glyceria declinata Bréb. *Small Sweet-grass*

hel 6 ↓

Glyceria plicata (Fries) Fries subsp. *declinata* (Bréb.) Weeda

Glyceria fluitans (L.) R. Br. subsp. *declinata* (Bréb.) O. Bolòs, Massales and Vigo

Glyceria notata Chevall. subsp. *declinata* (Bréb.) Weeda

Damp arable fields and margins of ponds. Occasional, but rare on the chalk. Declined as a result of drainage. Lemmas small (less than 5mm), distinctly 3-toothed at apex, exceeded by 2 sharply pointed apical teeth of palea.

NVC: A 8; MG 13; OV 32

Ascot: no records.

East Berks: Jouldern's Ford, Coleman's Moor, Wellington College, Owlsmoor, Winkfield, Cookham Moor. Scattered and rare, but possibly under-recorded. <1% (1km²). Atlas 2000: [86], [87], [88]

West Berks: in the Northern Loop and scattered throughout the Kennet valley, but absent from the middle reaches of the Thames valley and from the interior. Freeman's Marsh at Hungerford [3369], Kintbury [36], Appleton [4401] (**OXF**), a fen drain at Thrupp [512970], Little Wittenham [59], Mortimer Common [6564]. Atlas 2000: all except [28], [37], [38], [47], [57], [58], [50], [67], [68], [69]

Glyceria notata Chevall. *Plicate Sweet-grass*
Panicularia plicata
Glyceria plicata (Fries) Fries

hel 5 ↓

Ditches, marshes and the margins of ponds and slow streams, often growing in water or on nutrient-rich soils; occasional, rare on the chalk. Less common than *G. fluitans* and absent from both the chalk and from very acid soils in south-east Berkshire. Declined as a result of drainage. Lemmas small (less than 5mm), not toothed, not exceeded by the 2 very short apical teeth of the palea.
NVC: A 8,20; MG 13; S 13

Ascot: no records.

East Berks: Shottesbrooke, Earley, Ruscombe, Wokingham, Windsor Great Park. Very local, and more or less confined to the western reaches of the Thames from Reading to Hurley. There is an outlying record from Coppid Beech between Wokingham and Bracknell [8268]. <1% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: occasional in all the major river valleys but absent from the interior (north of 75 and south of 85). Atlas 2000: all except [68], [69]

¶ **Glyceria** *G. maxima* var. *variegata*

Melica uniflora Retz. *Wood Melick*

hp 5

Old woods, typically on the dry bank above the surrounding ditch which marked the boundary of an ancient woodland. Also on dry hedge-banks on light soils; occasional, but less common in south-east Berkshire and absent from the northern clays. Often an indicator of a woodland with a superior flora.
NVC: W 8,10,12,14

Silwood Park: local and rare at The Greenhouses, where it is naturalised (1980-2004) under the *Camellia* by the gated wall, having been introduced unintentionally with woodland plants from Kent in 1979.

Ascot: very local and rare at Winkfield Lodge. It appears in abundance as soon as one crosses the boundary from the acid sands onto the clay; e.g. at New Lodge.

East Berks: scattered throughout, but least common on the acid sands of the east and south, along the Surrey and Hampshire borders; e.g. it grows in the churchyard at Finchampstead, just off the most acid soils. In a wood between Hurst and Reading, Park Place, Culham, Hurley, Quarry Wood, Arborfield, Long Moor, Wokingham, Coleman's Moor, abundant and luxuriant in Bisham Wood, Scarlett's Wood at Hare Hatch [8177], White Waltham [8577], Ashley Hill, Knowl Hill. 11% (1km²). Atlas 2000: all except [96]

West Berks: an interesting distribution, frequent in the south, occasional in the Northern Loop (as in Bagley Wood [5102]), but absent from the northern clays (north of 85 and south of 00), reflecting the distribution of ancient woodland. On the banks of the ancient sunken lane through Down Copse at RAF Welford [4175]. Atlas 2000: all except [28], [29], [38], [59], [68], [69]

Helictotrichon pubescens (Huds.) Pilg. *Downy Oat-grass*
Avena pubescens Hudson
Avenula pubescens (Hudson) Dumort.

hp 6

Avenochloa pubescens (Hudson) Holub

Chalk grassland, gravelly pastures, meadows, roadsides and railway banks; locally common on calcareous soils, but absent from acid soils. Told by its hairy lower sheaths and spikelets with few florets (2-3 rather than 3-6).

NVC: CG 2-6; MG 1,5; OV 41

Silwood Park: probably extinct. Reactor Bank, in long grass on the steep bank opposite the entrance to the Reactor goods yard on 14 June 1980. Greatly reduced by the digging of a test pit by Desmond McMahon in 1988 in the course of which the plants were buried in sand. Extinct since 1990.

East Berks: Pig's Green Lane near Reading, meadows about Windsor, common on the chalk at Winter Hill, Sandhurst, Waltham, Maidenhead, Sonning, Park Hill. Very local but commoner than *H. pratense*. Occasional to the north of 80 but absent or rare to the south of this. Very local on grassy banks around the hospital carpark at Royal Military Academy Sandhurst in May 2004. 2% (1km²). Atlas 2000: all except [76], [78]

West Berks: frequent on the chalk, occasional in the Thames valley but absent or rare in the Kennet (south of 75); frequent on the southern chalk above Inkpen [36] and in Dry Sandford Pit [49]. Atlas 2000: all except [47], [50], [68], [69]

Helictotrichon pratense (L.) Besser *Meadow Oat-grass* hp 6

Avena pratensis L.

Avenula pratensis (L.) Dumort.

Avenochloa pratensis (L.) Holub

Dry chalky and calcareous pastures and downs. "The stiff herbage of this handsome species is a frequent feature of the northern escarpment of the chalk" (Druce). Rare on roadsides and railway banks away from chalk or limestone. Told by its hairless lower leaf sheaths and spikelets with numerous florets (3-6 rather than 2-3).

NVC: CG 2-6

Ascot: no records.

East Berks: very local on the chalk in the northern Thames valley from Remenham to Cookham. Still in the fragment of good chalk grassland on the western edge of Remenham Wood [7683] in 2002. 1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: frequent on the chalk, rare on the oolitic limestone of the Northern Loop, but absent elsewhere. Occasional on the southern chalk above Inkpen [36]. Atlas 2000: all except [47], [56], [57], [58], [50], [67], [68], [69]

Arrhenatherum elatius (L.) P. Beauv. ex J. Presl and C. Presl *False Oat-grass* hp 6

Avena elatior L.

Arrhenatherum precatorium Beauv.

Roadsides, motorway verges, rough ground, hedges, pastures, thickets. This is the "long grass" that you played in as a child. A palatable species that declines under grazing, but which is tolerant of occasional mowing. Because of this, it is much more abundant in hay meadows than in grazed pastures. It grows with, but is less drought tolerant than *Alopecurus pratensis*, on soils of moderate pH that are rich in nitrogen, phosphorus and potassium. The bulbous-based form var. *bulbosum* (see

below) can be a troublesome weed in arable land. Frequently attacked by Ergot fungus, *Claviceps purpurea*, which forms black fruiting bodies on the inflorescence.
 NVC: CG 2-4; M 22,27; MG 1,4-7,9; OV 9,18,22-24,26,27,30,39,41,42; S 7,25,26;
 W 6,8,10,12,21,23-25

Silwood Park: the tussocky grassland to the north of Silwood Bottom, formerly dominated by *Dactylis*, was almost pure *Arrhenatherum* in 1996. Nash's Slope, locally abundant in long grass where soil water and nutrients are more plentiful. Ha Ha, locally dominant in the ditch below the wall. Site destroyed in 1987, when the bank was levelled and the ditch filled in. With other tall grasses at the southern end of the Walled Garden in 2003. Dominating much of the southern (older) part of the graveyard at Ashurst. Sown in October 1991 in the Nash's Field Experiment in monoculture, and in pairwise and 4-species mixtures with *Anthoxanthum odoratum*, *Festuca rubra* and *Alopecurus pratensis*. It came to dominate the plots where it was sown with *Anthoxanthum* or *Festuca*, but lost out in competition with *Alopecurus*, especially after the successive droughts of 1995 and 1996. Dominant over the Biodepth Experiment at Oak Mead by 2001, independent of the initial species sown in 1996. Slowly invading the limed, rabbit-fenced plots in Nash's Field (2004) and dominant on most of them by 2008. Sparse on Plots 5 to 8 of the Chalk Plots on 7 July 2008. Grew very poorly in 2010 when the rainfall during the rapid growth phase was exceptionally low (the first 6-month total precipitation was the lowest for more than 80 years); the plants were tiny and mostly non-flowering at the end of June.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
6	10	19	34	58

East Berks: common and widespread throughout. 93% (1km²). Of the grasses, only *Dactylis glomerata*, *Poa annua* and *Festuca rubra* are more frequent at this scale. Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Arrhenatherum elatius var. **bulbosum** (Willd.) St-Amans *Bulbous False Oat-grass* hp 6
Arrhenatherum tuberosum (Gilib.) F.W. Schultz
Arrhenatherum elatius subsp. *bulbosum* (Willd.) Hyl.

This grass is told at once by the stout, typically double bulbs just below the soil surface. Above ground, the plant is bluer-green, with straighter, stiffer, more erect (less floppy) leaves than the type. It can be a troublesome weed of arable land.

Silwood Park: local in the permanent fallow, half way up the London Road side of Ashurst Four Acre Field [941685]. This variety was the subject of ecological experiments during the early 1980s and some of the individuals may be relics of these plantings.

East Berks: at Wokingham, Coleman's Moor, Bray, Sandhurst, and comes true from seed.

West Berks: scattered but widespread. Newbury, Faringdon, Hinksey.

[**Avena barbata** Pott ex Link *Slender Oat*]

No Berkshire records, but worth looking for. It is told from *A. strigosa* by its disarticulating rhachilla and by the dense, long hairs on the basal half of the lemma.

Avena strigosa Schreb. *Bristle Oat* ● th 7 †

Formerly a rare weed of cornfields, now a very rare casual. Unlike our other 2 wild oat species, the lemma veins reach to the apex of the bifid tip of the lemma.

East Berks: Binfield, Clewer, Hurley, Sonning. Not seen by Bowen. Extinct.

West Berks: Midgham (**OXF**) [56] in 1880, Streatley (**RDG**) [58] in 1910, Moulsoford Downs (**OXF**) [58] in 1912, Chilswell Farm [40] in 1944. No recent records.

Avena fatua L. *Wild-oat* ○ th 7

Arable fields, frequent or abundant on calcareous soils, but rare or absent on acid soils in south-east Berkshire. Common on waste ground in towns and villages throughout. The rhachilla breaks up at maturity between the florets so that the fruits are dispersed separately (cf. *A. sterilis*, below); i.e. there are separate abscission scars on each floret.

NVC: OV 7,8,13,15,16,25,33

Silwood Park: occasional each year in the fallow in Ashurst Four Acre Field (1979-2004). Not found in the other long-term arable fallows in Silwood Bottom or Pound Hill Field.

East Berks: the common field at Bisham, common fields about Windsor, Maidenhead, Bray, Winkfield, Wokingham, Barkham, Three-mile Cross. By the side of the A4 opposite the Bird in Hand at Knowl Hill. 12% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Avena sterilis L.

Avena sterilis subsp. **ludoviciana** (Durieu) Gillet and Magne *Winter Wild-oat* ● th 6
Avena ludoviciana Durieu

Told from the much commoner *A. fatua* by its bigger glumes (25-30mm rather than 18-25mm) and by the way that the rhachilla breaks up at maturity to release 2 or 3-fruited disseminules (i.e. there is only a single abscission scar). This is commoner in winter sown than in spring sown cereals, and on heavy clay land than on sand.

Ascot: very local and rare on Locks Ride in 1999.

East Berks: not in Druce. Shottesbrooke. Recently at Fobney, Woodcraze. 1% (1km²). Atlas 2000: [76], [86], [87], [88], [97]

West Berks: first record Didcot [59] in 1927 (det. C.E. Hubbard). Atlas 2000: [29], [39], [49], [40], [58], [59], [50]

Avena sativa L. *Oat* ● th 6

Domestic oat is a frequent casual in arable fields, waste places and tips, even though it is uncommon as an arable crop in modern Berkshire. The florets are un-awned and do not disarticulate at maturity (as you would quickly select for, if you wanted to harvest the grains).

Silwood Park: Header House, 4 plants by the pot stand on 12 July 1998. On waste ground at Cheapside in July 1999.

East Berks: recently at Riseley, Great Copse, Fobney, Coley, West Whitley, Culham House, Devil's Highway, Hanworth, Bracknell, The Holt, Burdows Farm, Carters Hill, Shottesbrooke, Furze Platt, Kings Beeches, Bray. 4% (1km²). Atlas 2000: all squares.

West Berks: clearly under-recorded. Atlas 2000: [36], [38], [46], [40]

Avena byzantina K. Koch *Algerian Oat*

• th 6 †

Told from *A. sativa* by the fact that the rhachilla breaks just above (not just below) each floret, and so remains attached to the next floret above (rather than to the next floret below).

East Berks: collected on Cookham tip [8985] by Edgar Milne-Readhead in 1954 (det. C.E. Hubbard).

Trisetum flavescens (L.) P. Beauv. *Yellow Oat-grass*

hp 5

Trisetum pratense

Avena flavescens L.

Meadows, pastures, roadsides; "an elegant species that is locally common, preferring dry situations" (Druce). Frequent in calcareous and neutral grassland, but uncommon on acid soils.

NVC: CG 2-5; MG 1,4-6,9; W 24

Silwood Park: in the verge of Farm Road by Nursery Field on dry sunny banks in years when rabbit numbers are low; e.g. 6 June 1994, growing with *Carex muricata* and *Trifolium striatum*. It was spectacular here in June 2006 following a succession of two very dry winters, but very poor in June 2008. Nash's Field, where it became conspicuous only following erection of the rabbit fences in 1991. Water Tank, in dry turf on the embankment of the tank on 21 June 1996. A seed contaminant in the Oak Mead experiment, very tall plants in a sown *Arrhenatherum* sward on 8 July 2000 growing with *Hordeum secalinum*. Local and rare in the rabbit fence in the uncultivated verge of the Disturbance Timing Experiment at Pound Hill in 2001. On gravel between greenhouses at the Header House in May 2002. In the older parts of the graveyard at Ashurst.

Ascot: in unfertilised old grasslands. Brook Farm, Polo Club, Copper Horse, Virginia Water.

East Berks: Maidenhead, Sonning, Sandhurst, Windsor, Bray, Waltham, common in the Home Park. Widespread, but least common on the acid sands along the Surrey border. 4% (1km²). Atlas 2000: all squares

West Berks: widespread, common in ancient chalk grasslands along the Ridgeway, but least common in the heathy districts of the south-east Kennet valley. Frequent in all the best orchid sites on chalk grassland, as at West Woodhay Down [388618]. Atlas 2000: all squares

Koeleria macrantha (Ledeb.) Schult. *Crested Hair-grass*

hp 6

Aira macrantha Ledeb.

Koeleria gracilis Pers., nom. illegit.

Koeleria cristata auct., non (L.) Pers.

Koeleria glauca auct., non (Sprengel) DC.

Koeleria albescens auct., non DC.

Koeleria britannica (Domin ex Druce) Ujh.

Chalk grassland, and sandy, calcareous pastures and downs.

NVC: CG 2-5; MG 5; U 1

Silwood Park: extinct (or error?). “Local, on North Gravel only” in 1959. I can not trace the origin of this record, but if the record is correct, then the plant must surely have been introduced. The site was destroyed by construction of Southwood Halls in 1982.

Ascot: no records.

East Berks: above Hurley “in the little wood on the right of the Maidenhead road, in its first ascent, but sparingly” (Druce). Very local in chalk grassland at Winter Hill and above Cock Marsh, but apparently extinct in its only other site near Hurley. <1% (1km²). Atlas 2000: [88]

West Berks: frequent on the chalk from Ashbury to Streatley, and occasional on coralline limestone in the Northern Loop (e.g. on top of Wytham Hill [40] and on Frilford Heath [49]), but very rare to the south of 75 (except on the chalk above Inkpen [36]) and on the clay to the north of 90. Outlying stations are at Sulham wood [6474] in 1920 (RDG) and Pumney pits [5397] in 1973. Atlas 2000: all except [46], [56], [66], [68], [69]

Deschampsia cespitosa (L.) P. Beauv.

hs 6

Aira cespitosa L.

Deschampsia cespitosa subsp. **cespitosa** *Tufted Hair-grass*

Damp pastures, ditches, commons, heaths, woodland rides, swamps, etc.; generally distributed and common. Druce’s advice on pasture management would certainly raise a few eyebrows amongst conservationists today: “It is injurious in meadows and can only be extirpated by draining and burning”.

NVC: CG 2; M 22,24; MG 4,6,9,13; OV 26,27,32; S 23,28; W 4-6,8,10,12,14,16,24

Silwood Park: wet woodlands and damp grasslands, Great Mead, Oak Mead, The Willows, Rush Meadow, Farm Road, Cheapside playing field, Ashurst churchyard, Guinness’s Bridge, Weir Wood, Water Meadow, Guinness’s Thicket, Nash’s Copse, Heronsbrook Meadow. Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Common amongst *Carex pendula* close to Monitoring Point 3 [93959 68992] in Cascade Marsh on 15 June 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	5	16	14

Ascot: locally abundant in Sunningwell Bog, where large tussocks, reminiscent of *Carex paniculata*, dominate clearings amongst the *Salix cinerea*. In Wells Wood, especially by the drainage ditches. Dominating large areas of the open Bog in full sun, growing with *Juncus effusus* and *Cirsium palustre*.

East Berks: locally dominant over substantial areas of Beech Wood near Billingbear. 26% (1km²). Atlas 2000: all squares

West Berks: it forms characteristic patches on steep chalk slopes in Rivar Copse [3562], where it grows in clearings with Ash saplings. Common by the R. Kennet [4266]. Atlas 2000: all squares

Deschampsia cespitosa subsp. **parviflora** (Thuill.) Dumort. *Small-flowered Hair-grass*

Aira parviflora Thuill.

Deschampsia cespitosa (L.) P. Beauv. var. *parviflora* (Thuill.) Cosson and Germ.

This is the elegant plant of wet woods, damp woodland rides and shady hedge-banks. Told from subsp. *cespitosa* simply by its smaller spikelets (2-3 rather than 3.5-5mm). The Berkshire distribution of subsp. *parviflora* has not been fully worked out, but it is the common subspecies in lowland woods in Britain according to Stace (1997). Druce recorded it as var. *parviflora*.

Silwood Park: locally dominant in wet woodland along the gas pipeline where this bisects Water Meadow, and in wetter parts of Nash's Copse. The spikelets are 2mm long in our plants.

Ascot: abundant in wet woodlands in South Ascot Bog and Sunningwell Bog.

East Berks: woods at Swinley, Easthampstead and Windsor.

West Berks: woods of Wytham [40] and Aldermaston [56]. Locally frequent in Bagley Wood [5102] in 2004.

[*Deschampsia setacea* (Huds.) Hack. *Bog Hair-grass*] hs 6
Aira setacea Hudson

A scarce British plant of bare, stony margins of shallow seasonally inundated pools on heathland, growing in wetter places than the otherwise similar-looking *Agrostis curtisii*. Intolerant of shade or competition from more aggressive plants.

East Berks: no definite records. The records from Finchampstead and Sandhurst (both 1916) by H.W. Monckton are plausible, but since they are not supported by specimens, they must remain doubtful. This would be a wonderful species to discover in Berkshire. Druce believed that the plant "may yet be found in the district of the Loddon on the Bagshot sands", and it is possible that this is what prompted Monckton's records. There used to be a site on Chobham Common (Birch Hill, south of Sunningdale in [96]), just out of our area in Surrey, but this was destroyed by the construction of the M3 motorway. It is still found nearby in other parts of Surrey [94, 95, 96], but it is gone from north-east Hampshire, where it used to grow in a wet bog on the eastern margin of Fleet Pond [8254] (Brewis *et al.*, 1996). "Difficult to find when in flower on account of the way it harmonises with the background, and almost impossible to find in years when it fails to flower" (Lousley, 1976).

Deschampsia flexuosa* (L.) Trin. *Wavy Hair-grass hs 6
Aira flexuosa L.

Dry acid grassland and heaths. Locally frequent or abundant in south Berkshire, but absent from calcareous soils.

NVC: H 2; M 20; U 1,2,20; W 4,10,14-16,23

Silwood Park: locally dominant (1979-2009) with *Erica* and *Calluna* between the Croquet Lawn and the new Garden Wood Laboratories; a superb sight in summer when its wine red stems and shiny metallic flowerheads wave in the breeze. It used to be dominant on The Heath to the west of the Cannon Path, but this was invaded by broom and then overgrazed by rabbits. The site became dominated by bryophytes and invading birch trees in the late 1990s, and was rabbit-fenced in winter 2000-01 in an attempt to restore the *D. flexuosa* and to renovate the ant hills. The grass regrew well during the first (2001) growing season from a scattering of surviving rootstocks. In June 2002 it had increased to 20% cover, but the site was still dominated by *Holcus mollis*. It will obviously take several years to regain its former dominance (c.40% cover in July 2005). Hell Wood East, dominant over the ground flora in the drier parts of the wood. In the heathland fragment on Elm Slope. The Croquet Lawn population had a massive increase in the summer of 1990 following fencing of the Japanese Garden against rabbits in the early months of the year. Drive Lawns, in heathy parts of the

lawn, below beech trees by the greenhouses. Outflow Sluice, on the top of the earthen dam, following felling of the large alder trees in August 1985. Cannon Path, on compacted ground under the massive old beech tree, with the neat tussocks of the moss *Leucobryum glaucum*; much reduced following the felling of the beech in 1995. Church Lane Footpath, on the grassy verges. In the U1 grassland at the Gravel Pit, where it is restricted to a narrow zone on the edge of the invading bracken. By the Tractor Sheds and at South Lodge.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	9

East Berks: frequent on the acid, sandy ground to the south and east of a line from Bray to Arborfield. Absent or rare to the north and west. 16% (1km²). Atlas 2000: all except [78]

West Berks: frequent on heathy ground in the south-east Kennet valley and in the Northern Loop, but absent or rare to the west of 45 and to the north of 75. Atlas 2000: [36], [38], [46], [47], [49], [40], [56], [57], [50], [66], [67]

Holcus lanatus L. *Yorkshire-fog* hp 6

Meadows, cultivated ground and fallow fields and waste places, preferring nutrient-rich soils. Abundant and generally distributed in a very wide range of habitats. A non-rhizomatous, tufted grass. NVC: CG 2-5; M 13,22,24,27; MG 1,4-7,9,10,13; OV 4,9,10,19-27,30,32,42; S 4,7,14,15,19,23,26,28; U 1,20; W 1,4-6,8,10,14-16,21-24

Silwood Park: the 3rd most widespread species in small quadrats after *Agrostis capillaris* and *H. mollis*. All sorts of grassland and waste ground, but intolerant of shade. Locally dominant in the Walled Garden. The most extraordinary growth of Yorkshire-fog was in June 1994 in a fallowed part of Ashurst Four Acre Field, adjacent to The Oaks, when a waist-high monoculture covered the entire plot, 3 years after cultivation. It is one of the commonest members of the arable fallow community in the second year after soil disturbance, when its circular tussocks form c.25% cover, alternating with *Plantago lanceolata*, *Rumex crispus* and *Trifolium repens*. Dominant on the Pot Standing at the Horticultural Greenhouses on 10 June 2007, following herbicide treatment to control the other perennials in 2006. Replacing *Poa trivialis* as the commonest grass on the Ashurst Lysimeters on 15 July 2008 following herbicide treatment but no cultivation in 2007. Again, following a no-cultivation year in 2009 it was co-dominant with *Poa trivialis* on 20 June 2010.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
35	50	54	65	85

East Berks: 88% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Holcus mollis L. *Creeping Soft-grass* hp 6

Locally dominant in deciduous woods, heaths, and grasslands on acid sandy soils, often growing with *Pteridium*. Locally frequent, but absent from much of the chalk and the northern clays. A rhizomatous, carpet-forming (not tussocky) grass. *Leptopterna dolobrata* is the common meadow plant bug (miridae), but its principal herbivore is the grass-aphid *Holcaphis holci* (below). Very commonly attacked by Choke fungus, *Epichloe typhina*, like a chalky white collar on the upper stem.

NVC: MG 1,9; OV 1,9,23,27; S 14,15; U 2,20; W 4,6,8,10

Silwood Park: a local speciality, in that it is abundant in grassland in full sun, as well as in shady woodland and beneath bracken. It is the 2nd most frequent species in small quadrats after *Agrostis capillaris*. It is a rapid responder to the addition of nitrogen-plus-phosphorus fertiliser and protection from rabbit grazing, and quickly attained dominance in the Nash's Field experiment when fenced against rabbits and provided with a balanced fertilizer. In these circumstances, there was a dramatic reduction in associated plant species diversity; many of the plots had become pure monocultures of *H. mollis*. It is attacked by the aphid *Holcaphis holci* which, in years when the aphid is abundant, can significantly reduce the vigour of the grass, favouring the spread of low growing herbs like *Galium saxatile*, and thus enhancing plant species diversity. It is the response of *H. mollis* that is primarily responsible for the negative relationship between plant species richness and insecticide application in Nash's Field; excluding the grass aphid with insecticide makes the grass even more vigorous and hence it is even more effective at excluding other plant species (see p. 237). When the birch trees were cleared in an attempt to restore The Heath on the Cannon Path, it increased to dominance inside the rabbit fence that was erected in 2000. The *Deschampsia flexuosa* is increasing gradually in abundance, but *Holcus* still had c. 80% cover in June 2002 and 50% in 2005. Dominant on the fenced, cultivated plots of the Nash's Field experiment in June 2008. Dominant on the cultivated Pound Hill experiment on 15 June 2008, but substantially declined on many of the plots receiving both N and P on the Nash's Field Experiment where once it had formed a monoculture. Grew very poorly in 2010 when the rainfall during the rapid growth phase was exceptionally low (the first 6-month total precipitation was the lowest for more than 80 years); the plants were tiny and mostly non-flowering at the end of June. Dominant following recruitment from the seed-bank by the new road to the renovated Silwood Farm on 29 August 2011.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
40	50	57	62	93

East Berks: a grassland as well as a woodland species. 73% (1km²). Atlas 2000: all squares

West Berks: frequent in the Kennet valley and by the R. Thames in the north, but absent from most of the interior (north of 80 and south of 95). Atlas 2000: all except [28], [69]

Aira caryophyllea L. *Silver Hair-grass*

th 5

Aira multiculmis Dumort.

Aira caryophyllea L. var. *multiculmis* (Dumort.) Mathieu

Aira plesiantha Jordan ex Boreau

Dry open grassland and heaths on more or less acid sandy soils, railway banks and cinder beds. Local, and absent from calcareous soil.

NVC: CG 1; OV 39

Silwood Park: local in full sun, and uncommon. Church Field, in the most closely grazed turf in the horse pasture, near the rabbit warren, growing with other tiny plants like *Ornithopus* on 2 June 1989. Self-sown in the gravel of the Ashurst Warren raised beds experiment on 26 May 1999. In the graveyard at Ashurst, close to the path, and on Church Lane footpath.

Ascot: The Orangery, Coronation Road, waste ground near Ascot Station, on dry compacted ground above Virginia Water. Very rare on Ascot Station; one plant in a crack in concrete on the sloping western end of Platform 2 amongst *Chaenorhinum minus* on 13 June 2004.

East Berks: Earley, Sandhurst, Jouldern's Ford, Bagshot, Finchampstead, Crowthorne, Ascot, Farley Hill, Ambarrow. Common on the grassy banks of several of the pedestrian underpasses in new housing estates in Bracknell in 1998. Abundant with *Aira praecox* in bare ground on the margins of the main car park in Sandhurst RMA on 9 June 2009. 3% (1km²). Atlas 2000: all except [78]

West Berks: local, commonest in the Northern Loop [49] and [40] and in the central Kennet valley [46], [56], [47] and [57], but absent from most of the interior (west of 45 and south of 95), and rare to the south of Reading. The best place to see this plant is Greenham Common, in open ground at the eastern end [516644] that had been kept free of perennial plant cover by disturbance from military vehicles. Atlas 2000: all except [28], [29], [37], [38], [48], [58], [50], [68], [69]

Aira praecox L. *Early Hair-grass* th 4

Open, acid grassland, dry heathy and sandy fields, commons, dry banks, paths, waste ground and wall-tops. Locally common and much more frequent than *A. caryophyllea*, but absent from calcareous soils.

NVC: CG 1; U 1; W 23

Silwood Park: one of the only annual plant species that is common in the closed turf of acid grasslands. Very conspicuous in spring when its prostrate, silvery flower heads mark out star-shaped rosettes in the turf. Locally abundant in the blast-zone of the fan on the aphid suction trap in Silwood Bottom, where the constant air-flow has kept the grass short. A characteristic species of dried-out ruts of wagon tracks through woodland. An important component of the raised beds experiment at Ashurst, and capable of excluding many of the other annual plants when seed is sown at the highest densities.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
3	3	3	19	33

East Berks: occasional throughout except for the chalky parts of the Thames valley in the north and north-west. 16% (1km²). Atlas 2000: all except [78]

West Berks: local, on the heaths of the Kennet valley and on sandy soils in the Northern Loop, but absent from the interior (north of 75 and south of 90). Common along with *A. caryophyllea* on Frilford Heath [447981] in 2001. Atlas 2000: all except [28], [37], [38], [48], [50], [68], [69]

Anthoxanthum odoratum L. *Sweet Vernal-grass* hp 4

Common in meadows and pastures, heaths and open woods. Abundant and widely distributed. Grassland and woodland rides. Abundant, but less frequent on heaths in south Berkshire.

NVC: CG 2-5; M 13,22,24,27; MG 1,4,5,6,7,9,10,13; OV 27; S 1,7; U 1,2; W 4,10,16,23-25

An increaser under rabbit grazing, declining if fences are erected to exclude the rabbits, when it is replaced by more palatable but less grazing tolerant grasses like *Dactylis glomerata* and *Arrhenatherum elatius*, before succession takes the ground to scrub and then eventually to woodland. Possessed of rather uncompetitive seedlings and tends to establish poorly from seed compared to other grasses like *Festuca rubra*. Tolerant of low soil pH, even at high rates of nitrogen input (e.g. capable of forming monocultures in Park Grass Experiment at Rothamsted when nitrogen is applied at 150 kg/ha/yr in the form of ammonium sulphate, which causes the soil pH to fall as low as 4.0).

Silwood Park: abundant in all our grasslands, and an increaser under rabbit grazing. Tolerant of partial shade in dry woodlands. Common and locally dominant in the older parts of the churchyard at Ashurst, growing in a distinctive community with *Luzula campestris*, *Carex caryophylla*, *Rumex acetosa*, *Conopodium majus*, *Viola riviniana*, *Veronica chamaedrys*, *Vicia sativa* subsp. *nigra*, *Ranunculus bulbosus*, *Ranunculus ficaria* and *Achillea millefolium*. Absent only from the shadiest or most fertile places.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
9	12	22	43	56

East Berks: acid grasslands throughout. Conspicuous by its absence from the ancient meadows at Review Ground in Windsor Great Park. 37% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Anthoxanthum aristatum Boiss. *Annual Vernal-grass*

• th 6 †

Anthoxanthum aristatum subsp. **puelii** (Lecoq and Lamotte) P. Silva

Anthoxanthum puelii Lecoq and Lamotte

NVC: OV 1

East Berks: a rare casual of cultivated fields, impermanent; in a wild-looking spot at Sonning (RNG) in 1884, in a sandy field with clover. On a grassy bank, in heathy country near Wellington College Station (OXF) in 1891, "perhaps introduced with pheasant food, but I saw no buckwheat near" (Druce). Also seen in a clover field near Clewer (1895). Extinct according to Bowen.

Phalaris angusta Nees ex Trin.

West Berks: a rare casual found by V.E. Murray at Prospect Park [67], Reading (OXF) in 1912.

Phalaris arundinacea L. *Reed Canary-grass*

hel 6

Baldingera arundinacea (L.) Dumort.

Phalaroides arundinacea Rauschert

Sides of rivers, ditches, ponds, canals and brooks. Common and generally distributed in all the valleys. As a thatch, it is more durable than straw. Marshes, margins of rivers, ditches and ponds. Locally abundant, but absent from the chalk ridge.

NVC: M 22,27; MG 9,10; OV 26,28-32; S 4-7,12-14,19,23,25,26,28; W 1,5,6,24

Silwood Park: uncommon in wetlands near The Lake. Cascade Marsh, The Swamp, Cascade Bridge in alder woods.

Ascot: in wet ground to the east of the station; this site was destroyed for the construction of the Clover Leaf car park in 1992. Still in Sunningwell Bog and at Englemere.

East Berks: by the R. Loddon at Arborfield, and all along the R. Thames from Reading to Old Windsor. Common in wet fields by the Blackwater River. Locally dominant in ditches around Swallowfield. In wet rubbish dumps in Bulmershe. In the dry streambed of the flood control channels in Maidenhead. 18% (1km²). Atlas 2000: all squares

West Berks: frequent everywhere except the chalk ridge (north of 80 and south of 85). Locally dominant on pond-sides in Reading's Lake District [66] and [67]. Atlas 2000: all except [69]

Phalaris arundinacea var. **Picta** *Gardener's Garters* ● hel 6

Common variegated garden plant, often thrown out because it is so vigorous, and naturalised frequently in rough grass, woodland edges and waste ground. Long persistent and tenacious in competition with other grasses.

Silwood Park: long naturalised in waste ground between Drive Field and The Greenhouses, by the *Cortaderia* (1971-2004).

East Berks: scattered in towns and villages throughout. Growing in the water at the shady edge of Heath Pond in Simon's Wood [8163]. 9% (1km²). Atlas 2000: all squares

West Berks: scattered in towns and villages throughout. Atlas 2000: [38], [46], [40], [50], [68]

Phalaris aquatica L. *Bulbous Canary-grass* ● hr 6 †
Phalaris bulbosa sensu L.(1759), non L.(1755)

East Berks: on the old nursery grounds of Sutton's seeds at Reading [7473] in 1978 (RNG).

Phalaris canariensis L. *Canary-grass* ● th 6

On rubbish tips, and waste ground near houses as a bird-seed alien. One of the commonest (and most easily recognised) of all the bird-seed aliens. Also grown as an ornamental in gardens.

Ascot: occasional on imported topsoil on the western boundary of the new housing development at Matthew's Court in Sunninghill on 30 October 2004, growing with rare *Sorghum bicolor* and frequent *Panicum miliaceum*. No records prior to this.

East Berks: Reading, Maidenhead, Windsor, Wargrave. Rare and scattered, as you would expect of an alien relying on importation of seed. Recently at Courage Brewery, waste ground near Oxford Road in West Reading, M4/A33 Interchange, Wokingham, Shaw Farm. Locally frequent on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008, where it was the only common alien grass. <1% (1km²). Atlas 2000: all except [78], [96]

West Berks: scattered throughout but commonest where human population density is highest, and rare in the extensive arable heartlands. Atlas 2000: all except [28], [46], [47], [69]

Phalaris minor Retz. *Lesser Canary-grass* ● th 6 †

West Berks: recorded only once at Cothill [4699] where it was collected by Druce in 1925 (OXF).

Phalaris paradoxa L. *Awned Canary-grass* ● th 6

An uncommon grain alien, found on set-aside land and in waste places.

West Berks: Kennington [50] in 1924 (OXF), Abingdon [49] in 1925, old railway near Furze Hills [2892] in 1987. Spoil heap at Abingdon Common [471963] in 2000 and 2001.

Agrostis L.

There are two things to know before trying to identify *Agrostis* species. You *must* look underground to see if the plant has rhizomes or not. And you *must* determine whether the palea is relatively long or relatively short compared with the lemma (this is a fiddly operation to accomplish in the field because the spikelets are so small, and is better done indoors, with a good light source and more powerful magnification).

Agrostis capillaris L. *Common Bent*

hp 6

Agrostis tenuis Sibth.

Agrostis vulgaris With.

Dry pastures, roadsides, lawns, heaths; common and generally distributed. Often dominant in acid grassland, but frequent in chalk grassland as well. In the past, there were conflicting views about its agricultural value: “On Bagshot Heath and the best sheep pastures in Berkshire” (1775), or “On poor dry sandy land, disliked by cattle as all the bents are” (1809). “Forms an excellent turf. Its panicles are a charming purplish-brown tint, and a field lighted up by the declining sun is a beautiful sight” (Druce). Essentially, this is a grass without any real distinguishing features (no ligule, no hairs, etc.), but the bright green leaves are held in a characteristic way; they are stiff and straight (“non-floppy”), and lie at a constant angle of about 40 degrees to the vertical. Its identification needs to be confirmed by attention to detail. The palea is large, and rhizomes are present. Ligules of tillers (on non-flowering shoots) are shorter than wide, and the leaves are rarely more than 4mm wide. Non-flowering individuals can be hard to tell from *Briza media*, *Alopecurus pratensis*. It is a good competitor for both phosphorus and potassium, and is abundant on acidic soils that are low in both these nutrients. The plant is a common component of turf grazed by sheep or rabbits, but is overcome by more palatable, faster growing species like *Festuca rubra*, *Arrhenatherum elatius* or *Dactylis glomerata*, if herbivores are excluded (e.g. by fencing). Often attacked by ‘Grass Choke’, *Epichloë typhina*, a fungal pathogen that produces hard, white, chalky collars on non-flowering stems.

NVC: CG 1-4; MG 1,4-10; OV 4,9,10,18,19,22,23,27,42; S 23; U 1,2; W 1,4,10,14,15,16,22-24

Silwood Park: this is the most frequent species in small quadrats, found in grasslands, lawns and on waste ground throughout. It is less common in shade and is not found in wet places. It prospers under grazing, because it is less highly preferred than more competitive species like *Festuca rubra*. It declines if rabbit fences are erected, and in the long term is replaced by taller grasses like *Dactylis glomerata* and *Arrhenatherum elatius* before woodland eventually encroaches, and the grasses are all replaced by woody plants. There was virtually no grass growth in the pyramids in Heronsbrook or Rookery Slope between 20 June and 20 July 2010, the driest growing season in memory.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
55	61	59	68	90

East Berks: 93% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Agrostis gigantea Roth *Black Bent*

o hp 6

Agrostis vulgaris var. *nigra*

Agrostis stolonifera L. var. *ramosa* Veldk.

Cornfields and dry cultivated ground; locally common but overlooked. The palea is large. The presence of rhizomes distinguishes it from *A. stolonifera*. It is told from *A. capillaris* by its larger leaves (often more than 5mm wide) and bigger ligules (longer than wide) on non-flowering tillers. In

the field, the best characters are the habitat (arable weed), the large size of the flower stems, and the fact that the spikelets are clustered at the ends of the panicle branches.

Silwood Park: a common weed of arable land, and often dominant in fallows at Pound Hill (especially after April cultivation), Silwood Bottom and in Ashurst Four Acre Field. Also in Nursery Field, Rush Meadow, Biodepth, Church Field, Cheapside, Old Orchard. Dominant on the New Chalk Plots in their early years post cultivation in 1994, but now declined. In July 2004, from imported topsoil used to landscape the lysimeter at Ashurst in late 2003. Very common in July 2008 at Ashurst Four Acre Field, Silwood Bottom and Pound Hill (after March and May cultivation). Occasional on the abandoned gravel beds at Ashurst on 9 July 2009.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	11	12

Ascot: common in an abandoned garden in South Ascot, by Coronation Road in 2003.

East Berks: Wellington College, Finchampstead, Ambarrow, Shottesbrooke, Twyford, Sunningdale, Barkham, Earley, Winkfield. Under-recorded. 4% (1km²). Atlas 2000: all squares

West Berks: scattered throughout. Atlas 2000: all squares

Agrostis castellana Boiss. & Reut. *Highland Bent*

• hp 6

Agrostis capillaris L. subsp. *castellana* (Boiss. & Reuter) O. Bolòs, Massales and Vigo

A common component of seed mixtures found in lawns, roadsides and sports grounds. Frequent, but under-recorded. Palea large, rhizomes present. The only way to tell it from *A. capillaris* is to dissect the spikelet under high power with good illumination. The presence of a tuft of hairs on the lemma callus (although this is often inconspicuous) will confirm it. If there are awns (and there often are), they arise from the basal third of the lemma (not from the tip).

Silwood Park: locally abundant in cultivated grassland inside the rabbit fences at Oak Mead (det. T. Cope at Kew, 3 July 1997). Still there, inside the fence of Block B in June 2003, but not seen since. Origin unknown, and grasses were not supposed to be in any of the seed mixtures sown in the 1996 experiment. Possibly introduced with horse feed, pre-1995.

East Berks: not in Druce or Bowen. <1% (1km²). Atlas 2000: [96]

West Berks: no records.

Agrostis stolonifera L. *Creeping Bent*

hp 7

Agrostis alba

Streamsides, wet meadows, damp waste ground, ditches, marshes, lake sides and the edges of ponds and rivers. Also a weed of damp arable ground, rough grassland, heaths and thickets; very abundant and generally distributed in an extremely wide range of habitats. "A valuable plant of the alluvial meadows in the Thames valley, especially those subject to inundation, which adds largely to the two or more cuttings of hay during the season. It is the coarse, stiff stoloniferous grass which is common in ditches" (Druce). Palea large, rhizomes absent (or short, less than 4 scale leaves), but stolons well developed. The panicle is contracted into a narrow cylinder after flowering.

NVC: CG 2-4; M 13,22,24,27; MG 1,4-7,9,10,13; OV1,3,4,7,9,10,12-16,18-21,23-26,28-33,35,42; S 4,6,12,13,18,19,22,23,26,28; U 1,20; W 1,4-6,14,16,24

Silwood Park: in damp grass all around The Lake, Water Meadow, Cheapside, Rookery Slope, The Marsh, Wood Bank, Cricket Wicket, Cannon Crossroads. Rare or absent from the mesic grasslands like Nash's Field.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
1	3	5	7	20

Ascot: locally abundant on the southern shore of Virginia Water. Common in parts of Sunningwell Bog and South Ascot Bog.

East Berks: possibly under-recorded. 34% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Agrostis curtisii Kerguélen *Bristle Bent*
Agrostis setacea Curtis, non Villars

hs 6

A local speciality of heaths on the Bagshot Sands (see p. 18), especially in the drier parts where *Molinia* is less abundant. Very local, but common over limited areas. The pale-green, wiry-leaved tussocks make the plant look superficially more *Festuca*-like than *Agrostis*-like. Palea small, rhizomes usually present but stolons always absent. Inflorescence with erect branches.

NVC: H 2,3; M 16,21; U 20

Silwood Park: grown on North Gravel in experimental plots along with *Molinia* in 1979, but extinct following construction of Southwood Halls. Neither grass showed any recruitment from seed, and neither has been seen since at this site (see *Molinia*).

Ascot: Sunninghill, Englemere, Swinley, Heatherwood Hospital. Still to be found on the broader heathy rides through the conifer plantations on the Crown Estates to the west of the Bagshot to Ascot railway, from Kingsride down to Earlywood [910670].

East Berks: confined entirely to heathland on the Surrey border in the extreme south-east. Bagshot Heath, Sandhurst (**OXF**) in 1892, Swinley Park, Easthampstead Plain (1897). Lower Star Post (**OXF**) in 1966 (still there in 2004), Deer Rock Hill (1983), Owlsmoor Bog [8462] (1986-2004). Recently at Edgebarrow, Read Research Lab, Caesar's Camp, Wishmoor Bottom, Wishmoor Cross, Devil's Highway, Upper Star Post, Mill Pond, Rapley Lakes. 2% (1km²). Atlas 2000: [86], [96]

West Berks: very local and rare: Snelsmore Common [4670]. Downe House [57], Padworth Common [6164], Mortimer Common [66] (**RDG**). Very local and rare on Greenham Common; two widely-separated tussocks were found during the BSBI visit on 23 June 2007 in heather just north of the main runway to the south of the central car park [499645]. Atlas 2000: [47], [66]

Agrostis canina L. *Velvet Bent*

hp 6

Damp meadows, marshes, ditches, pond sides and rough grassy places on acid soils. Frequent, but much confused with *A. vinealis* in the past. The wet/dry habitat difference is useful for confirmation, but should not be used on its own. Palea minute, less than 40% of lemma length, rhizomes absent, stolons present, bearing tufts of shoots at the nodes, ligule (on the second culm-leaf from the base) usually more than 1.5 times as long as wide.

NVC: M13,M24,M27; OV 35; S 1,8,11,12,14; U 2, 20; W 1,4

Ascot: Rapley Lakes, Martins Heron, A322/A332 roundabout, Swinley brick pits, Heatherwood Hospital, Coronation Road, Sunninghill, Sunningdale, South Coworth, Brook Farm, North Ascot, Sunninghill Park, Virginia Water.

East Berks: scattered throughout, but uncommon. Finchampstead, Bear Grove etc. 7% (1km²). Atlas 2000: all except [78]

West Berks: local and uncommon: most frequent in the southern Kennet valley as at Wash Water, Enborne Row [450635], Carbins Wood [5668], Padworth Common [6165] and Tilehurst [6874] (RDG). Atlas 2000: [46], [47], [40], [56], [66], [67]

Agrostis vinealis Schreb. *Brown Bent* hp 6
Agrostis stricta J. Gmelin
Agrostis coarctata Ehrh. ex Hoffm.
Agrostis canina L. subsp. montana (Hartman) Hartman

A plant of dry heathy places; local, but common where it occurs. Told from *A. canina* by the presence of rhizomes and the absence of stolons. Palea minute, less than 40% of lemma length, ligule on second culm-leaf usually less than 1.5 times as long as wide.

NVC: H 2; U 1

Silwood Park: local and rare on the Cannon Path Heath; a single clump amongst *Deschampsia flexuosa* in June 2000. On dry gravelly soil by the Cannon Path at the north-west corner of TTC, protected from rabbit grazing by the chicken-wire around the base of *Betula* 'Jermyn's' on 15 July 2008.

East Berks: Bulmarsh, Earley, Farley Hill, Ambarrow, Riseley, Finchampstead, Wokingham, Bracknell, Binfield, Bearwood, Broadmoor, Bagshot, Long Moor, Sandhurst, Easthampstead, Sunninghill, Ascot, Windsor Great Park. Finchampstead, Bear Grove. Scattered throughout but commoner on the acid sandy soils of the south-east (e.g. below Deer Rock Hill [879633]). 1% (1km²). Atlas 2000: [76], [86], [96], [97]

West Berks: sandy heaths at Buckland Warren [344956], dry grassland at Hurst Hill [4704], Burghfield [6566] (LAN). Atlas 2000: [46], [47], [40], [56], [66], [67]

Calamagrostis epigejos (L.) Roth *Wood Small-reed* hp 7 ↓
Arundo epigejos L.

Damp woodland rides and wood margins on clay soils; local. Taller and much later into flower than *C. canescens* (see below).

NVC: S 24

Ascot: first recorded on 20 September 2009 on the edge of Allens Field off Liddell Way in South Ascot. A single patch, about 2m wide, on the bank at the north-eastern edge of the field, probably introduced with topsoil.

East Berks: in Druce's time the plant was at Virginia Water, Windsor Great Park, Barkham. Recently from Waltham St Lawrence, Ashley Hill, Jealott's Hill, and Binfield. Extinct at Barkham and in Windsor Great Park and Virginia Water. <1% (1km²). Atlas 2000: [87], [88]

West Berks: very local; all but restricted to the Northern Loop. Tuckmill Meadows [28], Hatford and Buckland Warren [39], Cothill Fen and Parsonage Moor [49], Appleton Lower Common, Tubney Wood, Boars Hill, Marley Wood and Wytham [40], Radley Station and Sugnell Copse [59], Englefield [67]. Atlas 2000: [29], [39], [49], [40], [59], [50], [67]

Calamagrostis canescens (F.H. Wigg.) Roth *Purple Small-reed* hp 5 ↓
Arundo canescens Wigg.

Much rarer than *C. epigejos* and told from it by its hairy (not scabrid) upper leaf surface and shorter ligules (2-4mm rather than 4-9mm) and lemmas with shorter basal hairs (not more than 1.5 times as long as the lemma). It seldom grows more than 1.2m tall, whereas *C. epigejos* can grow up to 2m in height. It flowers much earlier than *C. epigejos* (by up to 6 weeks).
NVC: M 22; W 5

East Berks: Atlas 2000: no records.

West Berks: very rare in a shady carr at Colliers Copse near Bessels Leigh [449011] in 1969 (OXF) and subsequently. Also in Cothill Fen [49]. Atlas 2000: [49], [40]

Ammophila arenaria (L.) Link *Marram* hp 7 †
Arundo arenaria L.

East Berks: on Suttons old nursery grounds in Reading in 1978, perhaps brought in with beach sand?
Atlas 2000: no records.

Lagurus ovatus L. *Hare's-tail* • th 6 †

This is a relatively popular garden plant, and self-seeds in flower beds. Plants seen on waste ground in towns are more likely to be garden escapes than grain-aliens or bird-seed outcasts.

East Berks: a single plant in the bicycle racks at Whiteknights Park in Reading [7472] in May 1977 (RNG).

Apera spica-venti (L.) P. Beauv. *Loose Silky-bent* ○ th 6
Agrostis spica-venti L.

An elegant, tall, annual grass weed of dry, sandy arable land; one of our local specialities. Locally, a serious weed of wheat crops on light soils. Otherwise, a garden escape or casual, rarely established at any one site for more than a few years. Regarded as an alien by Easy (in Stewart, 1994) but considered native by both Druce and Bowen. Stace says “possibly native”. Now classed as an archaeophyte (Preston, Pearman and Dines, 2002).

Silwood Park: one of our few nationally scarce plants. Silwood may be the site from which Druce knew the plant in the 19th century: he wrote “near Sunninghill just within the county”. It is locally frequent in the south-eastern corner of the arable fallow at Ashurst Four Acre Field, which has been managed specifically for the conservation of this beautiful grass since 1985 using autumn-cultivation; particularly abundant, however, in July 2003 after spring cultivation, in places where the *Cirsium arvense* was less dense, but there were only 5 stems in July 2004 following autumn cultivation in 2003. The population recovered well and was strong on 25 June 2005 after a very dry spring, following autumn cultivation in 2004. In 2007, the plants were very short-stemmed, only about half the height of neighbouring *Arrhenatherum elatius*.

Also found in the October-cultivated plots (replicate A, nearest the Met Tower) of the Pound Hill disturbance timing experiment on 4 July 1999, but much rarer at this site than at Ashurst. Very rare in the Pound Hill Cultivation Timing Experiment on 15 July 2008, but in a different place, when there was 1 plant in the middle and 30 plants at the Met-Tower end of the October-cultivated strip in Block C (same again on 7 July 2009). On 9 September 2013, the plant was locally dominant at the western end of the October-cultivated plot in Block C, it was occasional in Block B and rare in the original site on Block A.

Locally frequent (more than 100 plants) in a roughly square area on the eastern side of Silwood Bottom (closer to The Hut than The Gate) on 26 July 2005 [94470 68889] following cultivation in October 2004. Locally abundant in July 2006 (its best year ever), on autumn-cultivated plots following a succession of two very dry winters, all down the southern edge of Ashurst Four Acre Field and in a distinct, circular patch of 12m diameter, in the centre of Silwood Bottom, just south-east of The Shed. In the same place in July 2007, but the plants were less numerous and much shorter-stemmed than in 2006. Surviving well on 15 July 2008 in Ashurst Four Acre Field despite the erection of the rain shelter experiment in spring of that year, but no plants at all were seen on 9 July 2009 after a year without cultivation. Very poor in July 2011. Very abundant in a 15m square between the Shed and the corner of the dense thistle *Cirsium arvense* stand in Silwood Bottom on 16 July 2008, growing with scattered *Tripleurospermum inodorum*, *Rumex crispus* and *Raphanus raphanistrum* but without tall *Cirsium arvense*. In July 2009 the patch was just as extensive as before, but the individual plants were much shorter in stature than in previous years. The *Cirsium arvense* was particularly dense in summer 2013 and the grass was correspondingly scarce, but still occupied the same distribution to the south-east of the weather station.

East Berks: cornfields near Old Windsor, common in sandy fields among corn, Emmbrook Brickfields, abundant in a cornfield near Ambarrow, Finchampstead, Sandhurst. Hurst, Sonning, Reading tip, Wargrave, Twyford, Little Sandhurst, Easthampstead, Warren Row, Bracknell, Cookham, Sunninghill, Old Windsor. Scattered in the sandy parts of the region, with recent records from an old gravel pit at Queen's Eyot near Bray [9178], a commercial fruit growing enterprise at Grays Farm Wokingham [8267], wheatfields at Cookham Dean [8785] and arable land at Holm Grange [8367]. 1% (1km²). Atlas 2000: all except [78]

West Berks: local and rare. Cornfield at West Hagbourne Road near Didcot [5188] (OXF), in an old pit at Pingewood [690693]. Common inside recently-erected rabbit fences at Dry Sandford Pit [4699] in June 2002 and May 2004, suggesting that the plant may be under-recorded in heavily grazed communities. The commonest weed in a wheat field at Kingston Bagpuize [4098] in July 2003. Atlas 2000: [58], [59]

Apera interrupta (L.) P. Beauv. *Dense Silky-bent*
Agrostis interrupta L.

• th 6

A nationally scarce grass of arable land, rail verges and gravel pits, growing with *Arenaria serpyllifolia*, *Catapodium rigidum* and *Sagina procumbens*. It is a tiny plant when growing on unfertilized sandy soils, but can reach 50cm on fertilised arable land (in East Anglia it is sometimes regarded as a serious arable weed). G. Easy considered it to be a native plant of sheepwalks on the chalk and Stace says "possibly native". Now classed as an neophyte (Preston, Pearman and Dines, 2002).

East Berks: no records.

West Berks: restricted to the Northern Loop, where it was first recorded by Druce from a wall in Marcham [4596] in 1900, with an outlying station on Greenham Common in the south. Next found in arable land at Frilford (**OXF**, **LAN** and **RNG**) [442962] between 1923 and 1960. Discovered on Frilford Heath golf course [448986] in 1964. Found at the back of Cothill pit [467995] in 1981. Discovered in 1995 in a sandy field planted with *Vicia faba* at Marcham [446969] and a cereal field at Bessels Leigh [459019]. Found recently by Ron Porley on Greenham Common [521643] in 1998; the tiny plants were locally frequent on open sandy ground at the south-east corner of the former military airbase, discovered during work to clear away the old runways; still there in 2002. In set-aside at Black Horse Field [468979] and Frilford Heath [447981] in 2001. In a field north of the sandstone pit at Tubney [448008] in 2002. Susan Erskine found plants in June 2005 on the edge of a set-aside field at Folly Hill [295956], and on Frilford Heath Common [442976]. Atlas 2000: [49], [40], [56]

Polypogon monspeliensis (L.) Desf. *Annual Beard-grass*

• th 6

Alopecurus monspeliensis L.

Polypogon paniceus (L.) Lagasca

There are many more modern records of this grass than for most of the casual wool-aliens and bird-seed casuals, because this species is cultivated in gardens, and most of the records are probably of garden escapes. Also a contaminant of pheasant food. Unmistakable with its dense but delicate, silky greenish-white flower heads. A coastal species as a native in Britain, but not native in Berkshire.

Silwood Park: very rare, first recorded on 11 June 2004. Five widely separated plants, each with 5-8 flowering tillers, on introduced topsoil used to finish the landscaping of the lysimeters at Ashurst in summer 2003.

East Berks: Smallmead tip [7169] and old allotments on Gillette Way, Reading [7170] (**RDG**) in 1982. By the M4/A33 Interchange [709702] in 1999. <1% (1km²). Near Field Farm [672702], found by Bill Helyar on 20 August 2005. Atlas 2000: [76], [77]

West Berks: first collected from the railway at Didcot [59] in 1892. Waste ground at Cothill [466995] in 1969 but extinct by 1971, gravel pit at Appleford Halt [5293] in 1976 (**OXF**), gravel pit at Steventon [4792] in 1978 (**OXF**) where flowering plants ranged in height from 1cm to 170cm, tip at Pingewood pits [6969] in 1986. Radley [5296] in 1994, Hitch Copse pit [4498] in 1995, Tadley Common [605625] on 13 June 2001, on bare ground where topsoil had been stored. Abingdon Common [472962] in 2001. Compact waste ground in Reading's Lake District [6969] in July 2002. Rutted tracks in Wasing Wood [5763] in September 2004, probably from pheasant food. Atlas 2000: [39], [49], [59], [66]

Polypogon viridis (Gouan) Breistr. *Water Bent*

• h 6

Polypogon semiverticillatus (Forssk.) Hyl.

Agrostis semiverticillata (Forssk.) C. Chr.

An increasing alien of damp, shady pavements in towns. Easily recognised by its awnless glumes, covered all over with short pricklets. Formerly a rare casual of waste ground. Increasing in urban areas since 2000, and now frequent in London.

Silwood Park: still no records

Ascot: first record from the pavement outside north-facing terraced houses opposite the railway at the gas works (eastern) end of Bridge Road in Sunninghill [936676] on 29 October 2012.

East Berks: first recorded for v.c.22 by Tim Harrison on 14 August 2006 on a pavement in Woodley [761732]. Second record for East Berks from pavements outside semidetached housing on Harfield Road, Highway (Maidenhead) [86835 81489] on 20 October 2012. In Windsor on 15 December 2012, the plant was found only at Bexley Street [96133 76729] in front of terraced houses.

West Berks: first recorded for West Berks from pavements outside terraced housing on Bridge Street, Osney [SP 50234 06158] on 6 October 2012.

Alopecurus pratensis L. *Meadow Foxtail*

hp 4

Meadows, pastures and roadsides preferring rich alluvial soil. "Common in the best meadows of which it forms part of the herbage. The most grateful of all grasses to cattle" (Druce). Abundant or frequent everywhere, and much the earliest flowering of the meadow grasses. More drought tolerant than *Arrhenatherum elatius*, and out-competing it in very dry years like 1995. The presence of *A. pratensis* was the main determinant of invisibility of experimentally sown plots in Nash's Field; plots with Meadow Foxtail (the superior competitor) showed much lower levels of establishment of immigrant seeds than plots without it.

NVC: MG 1,4-7,9,10,13; S 5

Silwood Park: seldom more than a minor component of the grassland biomass on our infertile sandy soils. Ashurst, at the top of the hill in Oak Mead, The Oaks, Ashurst Orchard, Church field, Water Meadow, Hill Field, Nash's Field, The Elms, Pond Field, Heronsbrook Meadow. Common with other tall grasses at the southern end of the Walled Garden. In the grassy verge of London Road opposite Knight Frank. It quickly became dominant on fertilised, cultivated and methyl bromide treated plots where it was sown in the Tilman Plots in Nash's Field in 1991, out-competing *Arrhenatherum*, *Anthoxanthum* and *Festuca rubra* on all of the liming treatments. Much more drought tolerant than *Arrhenatherum elatius* it benefited from competitor release during the successive droughts of 1995 and 1996. Very rare in the Oak Mead Experiment: by April 2002 there was only 1 tussock, and that in the fenced part of Block A, by the woodland edge. Rare in the ungrazed grassland of Water Meadow East [9431 6937] in May 2005 (there were very few signs of rabbit activity). Very rare in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court with a single plant on 27 May 2006. Locally abundant on the eastern boundary of Ashurst Four Acre Field on 6 June 2006. Still locally abundant in the Tilman Plots in Nash's Field on 18 May 2008 despite three years without any fertilizer application and rabbits getting through the fences.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	10	12

East Berks: 51% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Alopecurus x brachystylus Peterm. = **A. pratensis x A. geniculatus**

Alopecurus x hybridus Wimmer

Intermediate in most characters (spikelet length 3-4.5mm) and highly sterile.

East Berks: wet fields at Sindlesham Mill (1966).

West Berks: water meadows at West Brook Farm by the R. Lambourn at Boxford [4272] in 1978, and a wet field at Pingewood pit [690693] in 1986.

Wet places, margins of ponds, damp pastures and ditches. Common and generally distributed in the valleys on clay soils, but absent from the chalk ridge. The lemma awn is exerted from the glumes by at least 1mm, and the anthers are yellow or purple; these features distinguish it from *A. aequalis*.

NVC: MG 6,7,10,13; OV 21,28-31,35; S 19,22,23

Silwood Park: in the Walled Garden, one highly incongruous clump of flowering shoots on 22 May 1980, unintentionally introduced with the material from Kent in 1979. Not seen again. It is odd that Marsh Foxtail does not grow in Rush Meadow or Pond Field. A single plant on imported topsoil at Ashurst lysimeters on 11 June 2004.

Ascot: local and rare. The Tip, Polo Club, Leiper Hill, Bear's Rails. Frequent in damp parts of the set-aside (formerly maize) east of the racecourse [925700] in May 2003. Locally dominant in damp patches in re-seeded grassland between Liddel Way and the railway in South Ascot [919677] on 24 May 2008.

East Berks: locally abundant in the best surviving water meadows like Shepherds Meadow at Camberley, and on wet waste ground in towns as at Reading Station. Damp patches on Billingbear golf course. Abundant over much of the species-rich wet ground at Cock Marsh [881868]. There is an extensive population in winter-flooded hollows in grasslands west of Fifield [903770], where Lapwings were breeding in 2002. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 7% (1km²). Atlas 2000: all except [78]

West Berks: a curiously gappy distribution. Common in wet ground along the whole length of the R. Thames from Lechlade [29] down to Reading [67], and in the western parts of the Kennet valley [36], [46] and [47]. Absent from the chalk ridge (from Ashbury to Streatley) and rare in the eastern Kennet valley (e.g. [56]). Atlas 2000: all except [69]

Alopecurus aequalis Sobol. *Orange Foxtail*

th 5 ↓ or †

Alopecurus fulvus Smith

A local speciality of mud at the margins of shallow ponds, gravel pits and reservoirs often growing with plants like *Agrostis stolonifera*, *Chenopodium rubrum* and *Juncus articulatus*. Fluctuating greatly in abundance from year to year. Told from *A. geniculatus* by its orange (not purple) anthers and lemmas un-awned or awns not exerted by more than 0.5mm. It prefers wetter places than *A. geniculatus*.

NVC: OV 35

East Berks: almost certainly extinct. "A conspicuous object from its bright orange-scarlet anthers and glaucous foliage" (Druce). Formerly very local and confined to a few localities on the London clay. Brickfield by Emmbrook Mill [7969] north of Wokingham (1871), still there sparingly in 1889 (Rev V.C. Crawley), but plentiful in 1892 when Druce ripped up considerable quantities of plants for the Botanical Exchange Club. In great abundance in two ponds opposite Shottesbrooke Church [838764] (OXF) (the ponds nearer Waltham, not the one closest to the church) on the road to Twyford (now the B3024) in 1894. Marshes near Twyford and Ruscombe (1897). It was still at Emmbrook Mill in 1930 (RDG), but not seen in Druce's other sites. Scandalously, the once-celebrated ponds at Shottesbrooke were destroyed for land-fill during the 1980s. Very scarce in both Surrey [95] and north-east Hampshire [75, 76]. Not in Wiltshire or in the adjacent parts of

Oxfordshire. Well worth searching the wet ground around the massive M4/A329(M) interchange [7970]. Atlas 2000: no records.

West Berks: probably extinct. Padworth Common [66] in 1918, Grazeley Green (BM) [66] in 1935, a pond on Sulham hill top [67] in 1955, and old gravel pits at Pingewood [690693] in 1986. Atlas 2000: no records.

Alopecurus myosuroides Huds. *Black-grass*

th 6

Cultivated fields, roadsides, etc; common in all the districts under cultivation, and more frequent in poor thin soils. A troublesome weed. Arable fields and disturbed ground; frequent but absent from very acid soils in south Berkshire.

NVC: OV 1,8,13,15

Silwood Park: this plant is an impermanent casual in Silwood. On the soil tip by the Header House on 15 May 1987, probably experimental plants thrown out from a greenhouse. Ashurst Lodge, a small group of plants on the gravel pot standing on 10 June 1984. Sown in weed-control experiments at Pound Hill in 1984-85 and still growing there in 1989 but not seen recently. Locally abundant on Garden Wood Bank in certain lorry loads of imported topsoil; flowering profusely on 13 May 1990 in a patchwork showing where different lorry loads of soil had been spread; not seen since. Oak Mead, occasional on several of the cultivated plots in Biodepth II on 8 July 2000. A weed in the Herbaceous Border in May 2002. A handful of plants on imported topsoil at Ashurst lysimeters on 11 June 2004 (with *A. geniculatus*) but not seen since.

Ascot: casual at The Tip, South Ascot, Ascot Station, Sunningdale Park, Cumberland Lodge, frequent tussocks in the set-aside (formerly maize) east of the racecourse [925700] in May 2003. Rare in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: widespread, commonest in arable country in [87], and least common on the acid sands along the Surrey and Hampshire borders. 12% (1km²). Atlas 2000: all squares

West Berks: widespread, but least common in the southern Kennet valley (south of 65). Atlas 2000: all except [69]

Phleum pratense L. *Timothy*

hp 7

Meadows, pastures, reseeded 'improved' grasslands, roadsides, chalk downs, etc.; common in all the districts. Viviparous in wet autumns. Sown as a grass crop, then producing enormous, yellow-green plants with huge spikes. The commercial cultivars occur as casuals in gateways and lane sides where grass seed is spilled, and occur occasionally as volunteer weeds of succeeding crops, where their enormous tussocks are extremely conspicuous. It is called Timothy after Timothy Hanson who introduced the grass to the United States in about 1720. Replaced in infertile grasslands on sandy soils by the much smaller, blue-green *P. bertolonii*.

NVC: CG 2,3; M 22,27; MG 1,4-7,9,10; OV 21,24,26,33; U 1

Silwood Park: an uncommon casual. None of our grasslands have been reseeded, so there is no Timothy in Nash's Field, Heronsbrook Meadow or Nursery Field. Locally abundant in Oak Mead, in one of the Biodepth II plots with *Arrhenatherum* as a seed contaminant, along with *Hordeum secalinum* and *Trisetum flavescens*, obviously from meadow-collected seed, on 13 July 2000. Rare in grassland beneath The Oaks in 1999. Locally frequent with *Agrostis gigantea* as a component of the grassy fallow in Ashurst Four Acre Field in July 2002. One plant in the grassy triangle at Mill Lane in June 2004.

Ascot: uncommon on the edge of the playing fields at South Ascot in 2001.

East Berks: commonest on farm land, infrequent in towns. 23% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Phleum bertolonii DC. *Smaller Cat's-tail*

hp 7

Phleum nodosum auct., non L.

Phleum pratense L. subsp. *serotinum* (Jordan) Berher

Phleum pratense L. subsp. *bertolonii* (DC.) Bornm.

Phleum hubbardii D. Kováts

Phleum pratense L. subsp. *hubbardii* (D. Kováts) Soó

Dry, infertile, unimproved grasslands where it is much commoner than *P. pratense*. Locally abundant on the chalk and frequent elsewhere, even on acid sands. It is easy to tell from *P. pratense* because of its small size, pale blue-green foliage and striking white anthers. However, detailed measurement is necessary to confirm identification: the spikelets are 2-3.5mm including the awns (not 4-5.5mm), the panicle is 3-6mm wide (rather than 6-10mm), and the ligule is usually acute (rather than obtuse).

NVC: CG 2-4; MG 1,5,6,9; OV 21,23

Silwood Park: this is our common grassland *Phleum*, but it is never more than a miniscule component of the biomass in Nash's Field, Oak Mead, Ashurst churchyard, Church Field, Ashurst Orchard, Silwood Bottom, The Elms, Observatory Ridge, New Chalk Plots. Appeared in the fenced cultivated part of Block D in the Nash's Field experiment after cultivation was resumed in 2003. Common in certain of the ungrazed, limed plots in the Nash's Field Experiment in 2006 after two very dry winters. Locally dominant in the corner of the fenced, cultivated Block D in Nash's Field on 17 June 2008 in a plot otherwise dominated by *Holcus mollis*.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	3	4	10

Ascot: locally frequent in sown verges of the new underpass road at Ascot Racecourse [925692] on 2 July 2006.

East Berks: Bulmershe, Sonning, Bray, Twyford. Widespread, but least common on the most fertile clay soils where the other grasses grow too tall for it. 19% (1km²). Atlas 2000: all squares

West Berks: widespread, common in ancient chalk grasslands as at Whitehorse Hill [2986], Segsbury Camp [3884] and other locations along the Ridgeway, but rare on the northern clays (north of 90 and south of 95) and in the southern parts of the Kennet valley (south of 70). Atlas 2000: all squares

Bromus japonicus Thunb. *Thunberg's Brome*

• th 6

Silwood Park: grown in competition experiments with other Bromes in Nash's Field in 2000-02.

East Berks: no records.

West Berks: seen by Druce on the Berkshire side of the R. Thames between Oxford and Iffley [50] in 1892, but no specimen.

Bromus squarrosus L.

• h 6 †

West Berks: seen by Druce at Wytham Mill [40] in 1897, but no specimen.

Bromus arvensis L. *Field Brome*

• th 6 ↓

East Berks: in a wheat crop [864740], in the corner of a field north-west of Jealott's Hill in 1999.

West Berks: on the railway at Didcot [59] in 1892 (**OXF**), between Ferry Hinksey and Hen Wood [40] in 1897, and on downland [58] in 1931 (**RDG**).

Bromus commutatus Schrad. *Meadow Brome*

th 6 ↓

Bromus pratensis Ehrh. ex Hoffm., non Lam.

Bromus racemosus L. subsp. *commutatus* (Schrader) Syme

Rich, damp meadows in the Thames valley, field borders and cultivated ground. Locally abundant in Druce's time but now much decreased through drainage and improvement of meadow land. Absent from south Berkshire. Long panicle branches, big spikelets, hairy lower stems and long awns give the plant a distinctive jizz. Hard to distinguish from *B. racemosus* without careful measurement of lemma, anther and lowest rhachilla segment lengths. Lemmas 8-11mm, anthers mostly 1-2mm, and the segments of the lowest rhachilla are longer (1.3-1.7mm rather than 0.7-1mm).

Silwood Park: very local and rare. In tall mesic grassland at Pound Hill on 2 June 2000. The lemmas (10mm) were glabrous, the pedicels 3 times as long as the spikelets, and the lowest rhachilla segments were 1.5mm. Not seen since.

East Berks: on the Reading road near Hurst, Finchampstead, Jouldern's Ford, Sonning, Bisham, Bray, Windsor, Maidenhead, Old Windsor. Extinct at most of its former Thames-side stations, but still at Maidenhead, the Cavalry Exercise Ground in the Great Park, and Old Windsor. Apparently extinct in the Blackwater meadows at Sandhurst. Locally frequent in a wheat crop at the edge of arable land by the former Cider House on the Drift Road in July 2003. <1% (1km²). Atlas 2000: [77], [88], [97]

West Berks: Great Coxwell and Grafton Lock meadow [29], Uffington [38], Pucketty Farm, Balking and Charney Bassett [39], Buckland Marsh [30], a damp pit at Milton [4892] (**OXF**), Cothill Fen and Abingdon Common [49], Farmoor, Long Leys Farm and Wytham Meads [40], in a wood (oddly) at Aldermaston [5966] (**LAN**), Little Wittenham and Radley [59], Kennington [50]. Atlas 2000: [28], [29], [38], [39], [30], [49], [40], [59], [50], [67]

Bromus commutatus x **racemosus**

West Berks: in a field border on the south side of Beacon Hill near Stroud Copse [4407] in 1964 (**OXF**) (det. P.M. Smith).

Bromus racemosus L. *Smooth Brome*

th 6 ↓

Meadows and pastures; locally common, especially near the Thames but absent from south Berkshire. Told from *B. commutatus* by its smaller lemmas (6.5-8mm), and bigger anthers (mostly 1.5-3mm), and its shorter lowest rhachilla segments (0.7-1mm).

NVC: W 8,10,12,14

East Berks: Old Windsor (**K**), in the riverside meadows under Bisham Wood, Sonning, Bray and in many of the Thames meadows. Uncommon in water meadows in the Thames valley and by the R. Loddon at Stanford End [705631] and Riseley [7263] (**LAN**). Also on dumped soil at Reading gas works [7373] in 1985. Absent from the interior and the south-east. <1% (1km²). Atlas 2000: [76], [77]

West Berks: an interesting contrast between the Thames water meadows where it is frequent and the Kennet where it is absent. Druce notes “Thames meadows near Lechlade and at intervals along the river’s course to Oxford, but not so generally distributed as *B. commutatus*”. Long Leys Farm west of Cumnor [443045] in June 2002. Still at Little Coxwell and Grafton Lock [29], Pucketty Farm [39] and Little Wittenham [59]. Atlas 2000: [29], [38], [39], [46], [48], [49], [40], [58], [59], [50], [67], [68], [69]

Bromus hordeaceus L.

th 5

Bromus hordeaceus subsp. **hordeaceus** *Common Soft-brome*

Bromus mollis L.

Water meadows, pastures, waysides, arable land, waste ground and fallow fields. Abundantly distributed throughout the county.

NVC: MG 1,4-7,13; OV 22-25,41; U 1

Silwood Park: Pound Hill, Nursery Field, Gravel Pit, Cheapside, Nash’s Field, Silwood Lodge, Cricket Wicket, Silwood Bottom, Drive Lawns, Observatory Ridge, Reactor Bank, Silwood Road, M-Scan, Cannon Crossroads, Ashurst churchyard. Locally abundant in the seed bank of Nash’s Field, and locally dominant after cultivation in 1986. Particularly abundant in June 1996 following the 1995 drought. A decreaser under rabbit grazing. It is most abundant following early spring cultivation (March-April) at Pound Hill, and particularly abundant in July 2005 after the very dry winter of 2004-05. Conspicuous inside the new deer enclosure fence in Gravel Pit on 18 June 2006. Rare on the New Chalk Plots at Ashurst on 7 June 2007. On 7 June 2009, tall plants were evenly scattered across all four replicates of the October-cultivated plots at Pound Hill, above a low, but continuous cover of *Anisantha sterilis*. There were no flowers at all on this date on the March-cultivated plots that were still quite bare after a very dry April and May.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	7	15

East Berks: 63% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Bromus hordeaceus subsp. **longipedicellatus**

th 5

Common and widely distributed on waste ground and roadsides. An occasional weed of cereal fields. Told from subsp. *hordeaceus* by its large anthers (up to 2.3mm) and long pedicels (i.e. longer than the spikelets they support). Much earlier into flower (1st week in May).

Silwood Park: frequent in disturbed soil in the grassy verge at the Cannon Crossroads in April 2000. Identification confirmed by L.M. Spalton (15 May 2000). Cheapside waysides and gardens. Amongst other tall grasses in the Walled Garden and on the cinder pot standing by The Greenhouses.

Ascot: in a sunny spot on the verge opposite The Old Mill near Harewood on Mill Lane in May 2002. Roadsides through arable land in Windsor Great Park in May 2003. By the lane across Sunningwell Bog in May 2004. Liddel Way playing fields in South Ascot on 28 May 2006. Common on roadsides near the Cricket Pavilion in the centre of Ascot Race Course in May 2007.

East Berks: common in Reading in May 2000, dominant in the grassy strip between the two carriageways of the A329 at Garth Hill in Bracknell in May 2001, flowering profusely before the municipal grass cutters had swung into action, on farm tracks at Beech Hill [7064], Stroud Farm [9077], and Hall Farm [7468] in May 2002. Common on roadsides in Pinkneys Green [8581] and Arborfield Garrison [7765]. A weed of barley at Forest Park [9474] and wheat at Nuptown [8873] and Clayhill Farm [9774] in June 2003. Abundant on grassy banks around the hospital carpark at Royal Military Academy Sandhurst in May 2004 and 2008. 5% (1km²).

West Berks: occasional on the new verges of the Newbury bypass in May 2000. Waste ground in Sutton Courtenay Manor in May 2001. Verges in Burghfield [6668], grassland at RAF Welford [4175], and on the chalk at Ashdown House [28] in May 2002. On waste ground at Faringdon [2895] in July 2002.

[**Bromus hordeaceus** subsp. **thominei** (Hardouin) Braun-Blanq. *Sand Soft-brome*]
Bromus thominei Hardouin

A small coastal plant, much over-recorded for *B. x pseudothominei*. Told from it by size (culms up to 8cm rather than more than 10cm) and short caryopses (less than the palea rather than equal to it).

Bromus x pseudothominei P.M. Sm. *Lesser Soft-brome* = **B. hordeaceus** x **B. lepidus** • th 6
Bromus x thominei sensu Tutin et auct., non Hardouin
Bromus hordeaceus L. subsp. pseudothominei (P.M. Smith) H. Scholz

Often found without either parent nearby, and under-recorded (typically as *B. thominei*). I have put all of the records of *B. thominei* here, but they should be checked.

Silwood Park: in grazed grassland in Nash's Field on 15 June 2009. The lemmas were hairy, only just 6.5mm long with 5mm awns, and the glumes were unequal. The palea was as long as the caryopsis.

West Berks: Riever [36] in 1936 (**OXF**), St John's Lock [29] in 1947, Letcombe Bassett in 1956 (**OXF**), Cumnor and Appleton [40] in 1965 (det. T.G. Tutin). At Blewbury (**LAN**) [5385] in 1959.

Bromus lepidus Holmb. *Slender Soft-brome* • th 6
Bromus gracilis Krosche, non Leysser and Weigel
Bromus britannicus I.A. Williams

Roadsides, waste ground and grassland, especially on the chalk; occasional but always in man-made habitats. The lemmas are very small (less than 6.5mm) compared with *B. racemosus* and *B. commutatus*, and the caryopsis is longer than the palea. The lemmas are glabrous with a straight awn (2-5.5mm). Told from *B. hordeaceus* ssp. *hordeaceus* by its much smaller lemmas (5.5-6.5mm not 8-11mm).

Ascot: Bowen recorded the plant in 1968, but I have not seen it here.

East Berks: a typical scattered alien distribution. Shinfield, Reading, Dinton Pastures, Wokingham, Holyport, Jealott's Hill, Hurley, Windsor (**K**). 1% (1km²). Atlas 2000: [76], [77], [87], [88]

West Berks: first recorded in 1929 from Rivar Copse [3562] and Basildon [6078]. Also at St John's Lock, Lechlade [2298] and on The Fair Mile [59]. Scattered and uncommon, but most frequently recorded in the Northern Loop and around Reading (e.g. the old pit at Pingewood [6869] in 1987). Possibly over-recorded. Atlas 2000: all except [36], [46], [68]

Bromus interruptus (Hack.) Druce *Interrupted Brome*

• th 6 †

Bromus mollis L. var. *interruptus* Hackel

An endemic British rarity discovered by Druce in a Berkshire cornfield (see below). Extinct in the wild, but maintained in cultivation at Kew Gardens and elsewhere. The palea is divided almost to the base, as pointed out to Druce by the Rev L.V. Lester.

A *Red Data Book* species, regarded as extinct in the wild in Britain, having last been recorded in 1972 in Cambridgeshire. It might have arisen as a spontaneous mutant in a Sainfoin field in about 1870, or been imported from an unknown native location, but it increased dramatically so that by the 1920s it had been recorded from 65 hectads across whole of south-east England. Its subsequent decline was probably due to improved seed-cleaning methods. By 1962 only one site was known, and conservation action did not succeed in saving the species in the wild.

East Berks: extinct. Formerly at Park Place (1894) in a field of Sainfoin (**BM**), and near Windsor (1918).

West Berks: discovered by Druce when it was new to science, and kept under observation for 7 years, in chalky fallow between Blewburton Camp [5486] and Unwell Wood in July 1888, and at Aston Tirrold [5584], Goring [6180] and Unhill Wood [5682] (**OXF**). Very abundant in a field of seeds near Upton [5186] in 1895 (**BM**, **OXF**, etc.), in an arable field near Moulsoford [5983] and among 'seeds' near Streatley [5980] in 1897. Druce contributed specimens to the Botanical Exchange Club, with the result that sheets are represented in many Herbaria (**BIRM**, **BM**, **CGE**, **NMW**, **OXF**, **SLBI**). It came true from seed and was fairly persistent at its localities. The fact that Druce did not find *Silene dichotoma*, *Crepis vesicaria* subsp. *taraxacifolia* or *C. nicaeensis* growing with it, led him to conclude that this was not an alien introduced with continental grass seed, but a new native taxon. A specimen in Kew labeled *B. mollis* var. *pseudo-velutinus* was dated 1849. Extinct in the wild.

Bromus secalinus L. *Rye Brome*

○ th 6 ↓

A rare casual in cornfields and waste places; probably decreasing. As in *B. pseudosecalinus*, the rhachilla is revealed between the florets, but told from that species by its much larger spikelets (12-20mm rather than 8-12mm).

East Berks: Sonning, Winkfield, Windsor (**K**), Shinfield Green, Maidenhead, Twyford, Tilehurst. Formerly scattered in the Thames valley. Last seen at Three Mile Cross (**RNG**) in 1945. Atlas 2000: no records.

West Berks: scattered and extinct at most of its former stations. Last seen at Wayland's Smithy [2885] in 1963. There are several records from the 1930s in **OXF** (Cothill [49], Dry Sandford [40], Upton [58], Basildon [67]) suggestive of a batch (or batches) of contaminated imported seed. Recently from the verge of the B4001 north of Childrey [356888] and east of Buckland Warren [343963]. Streatley (**RDG**) [58] in 1910. Atlas 2000: [38], [39], [40], [58]

Bromopsis ramosa (Huds.) Holub *Hairy-brome*

hp 7

Bromus ramosus Hudson
Zerna ramosa (Hudson) Lindman

Woods, copses, hedges and shady places. "A handsome species which is abundant in some localities and found in all the wooded tracts of the county" (Druce). Rare on very acid soils in south-east Berkshire.

Silwood Park: locally frequent at the Buckhurst Road end of Church Lane Footpath by Heronsbrook, 1979-2004. Silwood House, with *Festuca gigantea* in the shade of the Horse Chestnut tree by the London Road footpath on 20 September 1994. Southwood Halls, where material from the Walled Garden was planted into the Woodland Garden behind the Halls in 1985. Still there, and spreading into the adjacent Buckhurst Wood, 1989. Walled Garden, planted out as part of the Kent experiment in 1979, and thoroughly naturalised on the north-facing wall on 25 July 2000. The Greenhouses, introduced in 1990 during a project on establishment of woodland ground flora in newly planted woods at Milton Keynes; well established in 2000 and still there in 2007. Tractor Sheds, Silwood Lodge, Cricket Wicket, Cheapside footpath to The Farm.

Ascot: Blane's Allotment, Blacknest Park, Johnson Pond, Winkfield, Cranbourne, Kingsmead, Sunninghill Park; not common until one passes onto the clay at New Lodge.

East Berks: particularly abundant in ancient woodland at Holliday Plain [9274]. 25% (1km²). Atlas 2000: all squares

West Berks: frequent in Bagley Wood [5102] and other ancient woodland fragments. Atlas 2000: all squares

Bromopsis benekenii (Lange) Holub *Lesser Hairy-brome* hp 7 ↓
Schedonorus benekenii Lange
Bromus benekenii (Lange) Trimen
Zerna benekenii (Lange) Lindman
Zerna ramosa (Hudson) Lindman subsp. *benekenii* (Lange) Tzvelev
Bromopsis ramosa (Hudson) Holub subsp. *benekenii* (Lange) Tzvelev

A local rarity of beech woods on chalk. A scarce plant in Britain, confined to dry beech woods on shallow chalk, typically on steep valley sides. Hard to separate from *B. ramosa*: the lowest panicle node has > 2 branches (2 in *B. ramosa*) and the spikelet scale is glabrous (pubescent in *B. ramosa*), with the whole panicle swept to one side (pendent in *B. ramosa*). A useful field character is that the sheath is almost hairless below the ligule (long-hairy in *B. ramosa*).

East Berks: not seen by Druce. Very local and rare. Hurley (1966), and found by C.E. Hubbard in Quarry Wood (K) [8685] in 1971. Atlas 2000: no records.

West Berks: at Streatley [58] in 1883 (OXF) and Frilsham [57] in 1897. In a beech wood at Harley Hill Wood, Upper Basildon [595777] in 1964. Atlas 2000: [57]

Bromopsis erecta (Huds.) Fourr. *Upright Brome* hs 6
Bromus erectus Hudson
Zerna erecta (Hudson) Gray

Chalk grassland. Locally abundant in taller, less heavily grazed parts of the grassland on dry limestone and chalky pastures and downs. Very easy to identify from the long, isolated hairs, like

eyelashes, on the leaf margins, which distinguish the species from other larger grasses of chalk grassland like *Brachypodium pinnatum*. “The anthers, which are at first bright yellow, change to reddish purple; the grass is very handsome when the flowers are fully expanded” (Druce).
NVC: CG 2,3,5; MG 1,4; W 21

Silwood Park: a rare introduction. Ashurst Warren, unintentionally introduced with chalk grassland plants like *Blackstonia* and *Carlina* that were grown in pots in 1997 and 1998. Much eaten by roe deer, who leapt over the tall mesh fence to get at it on 25 July 2000.

East Berks: common in the chalk grasslands at Bisham Wood, Culham, Wargrave, Winter Hill, Cookham, Bray and Park Place. Also on a few railway banks elsewhere, but absent from most of south and east Berkshire. 2% (1km²). Atlas 2000: [77], [78], [88]

West Berks: frequent on the chalk and in the Thames valley, and on the downs above Inkpen [36], but scattered and rare in other parts of the Kennet valley, and absent from the heathy tracts of the south-east. Atlas 2000: all except [50], [68], [69]

Bromopsis inermis (Leyss.) Holub *Hungarian Brome* ● h 6 ↓
Bromus inermis Leysser
Zerna inermis (Leysser) Lindman
Bromopsis inermis subsp. **inermis**

Casual seed contaminant on railway banks and waste places. Like *B. erecta* but with long rhizomes (and hence not densely tufted), and shorter awns (0-3mm rather than 3-8mm).

East Berks: not in Druce. On a railway bank in Reading (1961) (RNG), on waste ground at Park Place [7782] (1970). Atlas 2000: no records.

West Berks: field border at Compton Beauchamp [28] in 1964, Purley [67] in 1967, Broadway, Didcot [59] in 1976-77, Lousehill Copse, Tilehurst [67] in 1987. Recently at Didcot (OXF), between Mowbray Road and East Hagbourne [524887] near the edge of the reservoir (1984-2001). Atlas 2000: no records.

Anisantha diandra (Roth) Tutin ex Tzvelev *Great Brome* ● th 5 ↑
Bromus diandrus Roth
Anisantha gussonei (Parl.) Nevski

A beautiful, statuesque grass up to 1m tall, with big lemmas (20-36mm), long awns (25-60mm) and obviously hairy panicle branches. Told from *A. rigida* by its open, lax (not dense) panicle, and spreading (not erect) panicle branches. A grain and bird-seed alien on sandy arable land, field corners and disturbed ground.

East Berks: no records.

West Berks: Faringdon pits [2894] and nursery gardens [2995] in 1963. In the verge of the A420 at Watchfield, south of Southdown Farm in 1993 [253908]. Little Coxwell [287933] in 1998 and Drayton [4694] in 2000. On set-aside land at Abingdon Common [472962], Frilford Heath [447981] and Black Horse Field [468979] in 2001. By Ardington Lane near the railway [434916] in 2002. Dominating a field corner on the chalk above Streatley in June 2002 [58]. Atlas 2000: [28], [29], [38], [39], [49].

Recorded subsequently by D. Broughton at Eastbury Fields, Eastbury [3478], on 8 July 2009.

Anisantha sterilis (L.) Nevski *Barren Brome*
Bromus sterilis L.
Zerna sterilis (L.) Panzer

th 5 ↑

Waysides, hedge bottoms, wall-tops, waste land and cultivated ground; very common. Widespread and increasing in abundance. “A prominent feature of many of our cultivated and fallow fields” (Druce). Now one of the commonest hedgerow grasses, and amongst the earliest into flower. Locally abundant on set-aside land.

NVC: MG 1; OV 1,9,10,13,16,19,21,22,23,25,41; U 1; W 12,21,24

Silwood Park: Sunninghill Crossroads, Nursery Field, Pound Hill (locally dominant on the May-cultivated plots of the disturbance-timing experiment), Ashurst Church, Four Acre Field, throughout Cheapside Village, Biodepth, Silwood Lodge, Silwood Bottom, South Lodge, Reactor Bank, Residences, Cannon Crossroads, East Lodge, verges of London Road. It took over many of the 1991 grass-sown plots in Nash’s Field by 1996, tolerating the deep thatch that developed after the drought of summer 1995 and the lack of a second harvest that autumn. Locally abundant on freshly disturbed soil that had been banked up to rabbit-proof the new boundary fence at The Cedars in September 2002. It is abundant or dominant following October cultivation at Pound Hill, but much less frequent following April or May cultivation. Flowering on 16 September 2005 on the May cultivated plots after severe drought had prevented germination until the rains came in late July. After the very dry spring of 2007, the plant was still dominant in May 2007 on the October-2006-cultivated plots but the canopy was very low (c. 20cm). Following a no-cultivation year in 2009, it was very local on 24 June 2010 in the Ashurst Road corner of the fence.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	13	21

East Berks: one of the most frequent grasses. Occasional on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 86% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Anisantha tectorum (L.) Nevski *Drooping Brome* or *Cheat grass*
Bromus tectorum L.
Zerna tectorum (L.) Lindman

• th 5 †

West Berks: recorded by Druce from Didcot [59] in 1897 but there is no specimen.

Anisantha madritensis (L.) Nevski *Compact Brome*
Bromus madritensis L.

• th 4

A beautiful brome, with softly hairy leaves and a compact upright inflorescence. Typically a wool- or grain-alien in other parts of Britain, but no outdoor records from Berkshire.

Silwood Park: self-sown on gravel benches in the abandoned greenhouses by the Pot Standing, surviving to flowering without any watering; 18 April 2005. Still locally abundant here on 18 April 2008 and 17 January 2009. Presumably from plants grown in the same greenhouses by Ryan Keane during his PhD research on bromes, 4 years earlier, but this was not one of his main study species (see below).

East Berks: no other records.

West Berks: no records.

Ceratochloa carinata (Hook. & Arn.) Tutin *California Brome* ● hp 6
Bromus carinatus Hook. & Arn.
Bromus marginatus auct., non Nees ex Steudel

Grassy roadsides, river banks, waste ground and rubbish tips. Bowen thought it “likely to spread”. The lemmas have awns 6-10mm long (4-6mm in *C. marginata*) with 7-9 veins (9-11 veins and awnless (or short-awned; <4mm) in *C. cathartica*).

East Berks: not in Druce. Hurley Mill in 1966. Smallmead tip [7169] in 1972, gravel pit on Coleman’s Moor [7772] in 1985. Recently at Linderhill [8178], Hurley [8284] and Holloway [8480]. Locally frequent on the pavement of Waterloo Road Wokingham [82157 68029] on 4 June 2012; these plants had relatively long awns and relatively hairy leaf sheaths. Atlas 2000: [76], [77], [87], [88]

West Berks: South Hinksey tip [50] in 1965, Sutton Courtenay [5093] in 1976 (**OXF**), Buckland Warren [3496] in 1977 (**RNG**), Steventon Green [4791] in 1978 (**OXF**), Harwell [4989] in 1980. Atlas 2000: [39], [48], [49], [59]

Ceratochloa marginata (Nees ex Steud.) B.D. Jacks. *Western Brome* ● hp 6
Bromus marginatus Nees ex Steudel

Casual on waste ground and rubbish tips (see above for identification).

East Berks: earthworks near the M4/A33 interchange in 1999.

West Berks: field track by Pusey House [3696] in 1993 (**RNG**).

Ceratochloa cathartica (Vahl) Herter *Rescue Brome* ● hp 6 ↑
Bromus catharticus M. Vahl
Bromus unioloides (Willd.) Kunth
Bromus willdenowii Kunth

Rare casual on rubbish tips and waste ground. Now more frequent on roadsides and field margins. The lemmas are awnless or short-awned (< 3mm) and have 9-11 (not 7-9) veins.

Silwood Park: local and rare. In the gravel at the base of the wall of CABI opposite the Header House on 26 September 2002.

East Berks: not in Druce. Reading in 1906 (**OXF**). Sonning Lane (1959). Earthworks near the M4/A33 interchange in 1999. <1% (1km²).

West Berks: Cothill and Abingdon [49] in 1918, Didcot [59] in 1919 (**OXF**), Tilehurst [6874] in 1959 (**LAN**), Kingston Bagpuize House [4097] in 1988. Atlas 2000: [67]

¶ **Bromes** During his PhD (1999-2002) Ryan Keane grew a number of exotic Bromes at Silwood both in the field (Nash’s Field) and under glass (Horticultural Greenhouses, derelict since 2002). Field

grown taxa included *Bromus japonicus*, *B. inermis*, *Anisantha diandra*, *Ceratochloa cathartica* while extra species were grown under glass including *Bromus alopecuroides*, *B. briziformis*, *B. intermedius*, *B. japonicus*, *B. lanceolatus*, *B. pectinatus*, *B. pseudosecalinus*, *B. scoparius*, *B. secalinus*, *B. squarrosus*, *B. lepidus*, *B. arvensis*, *Anisantha madritensis*, *A. diandra*, *A. tectorum*, *A. rigida*, *A. rubens*, *A. rigida*, *Ceratochloa carinata*, *C. brevis*, *C. staminea*, *C. marginata*.

Brachypodium pinnatum (L.) P. Beauv. *Tor-grass* hs 7
Bromus pinnatus L.

Chalk grassland. Locally abundant to co-dominant on chalk, but absent from the clays and Bagshot Sands. Told from *Bromopsis erecta* by the absence of long “eyelashes” on the leaf edge. The knees of the nodes have short, appressed hairs in contrast to the long spreading hairs (> 1mm) on the nodes of *B. sylvaticum*.

NVC: CG 2-5; W 21

Silwood Park: a new record on 8 July 2008 in grass at the edge of the low concrete retaining wall by Greenhouse 3B on North Gravel at the back of the north-west corner of the CABI building. A single clump with more than 20 flowering culms. Origin unknown, but been there at least a year, possibly 3 or even 4 years, overlooked as *B. sylvaticum* until it flowered for the first time in 2008. Flowering vigorously on 26 July 2009.

East Berks: not in Druce. Confined to the remnants of chalk grassland on the scarp above the Thames from Park Place to Cock Marsh. 2% (1km²). Atlas 2000: [78], [88]

West Berkshire. frequent on the chalk, occasional in the Northern Loop, but absent south of 75 except on the chalk above Inkpen [36]. Atlas 2000: all except [47], [56], [50], [66], [68], [69]

Brachypodium sylvaticum (Huds.) P. Beauv. *False Brome* hs 7
Festuca sylvatica Hudson
Brachypodium sylvaticum (Hudson) Á. Löve and D. Löve

Shady places, hedge-banks, woods, rough pastures, chalk downs (as *B. gracile*); its yellowish green foliage is a conspicuous feature of the spring vegetation. Rather common and widely distributed. Woods, plantations, and hedge-banks, rarely in sheltered grassland. Frequent, but absent from very acid soils.

NVC: CG 2,3; MG 1; OV 27; W 8,10,12-14,21-24

Silwood Park: not a common native component of the Silwood woodland flora, but introduced and extensively naturalised in the woodland behind Southwood Halls. The plants were dug up from the Walled Garden and planted in here in 1983. The Walled Garden plants had been introduced from Kent and planted out in 3 rows across the full width of the garden in 1979. It was recorded from the wood to the north of the Walled Garden in 1959 (Anon), and these plants may well have been native. In 1999 the plant occurred in The Rookery, by the Tractor Sheds, commonly naturalised below the old brick wall on the pot stand at The Greenhouses, South Lodge, Walled Garden and East Lodge, but never far from buildings.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	9

Ascot: in woods at Englemere, Heatherwood, Ascot Station, Blacknest Park, Johnson’s Pond, Breakheart Hill, Cranbourne, Sunninghill and Windsor Great Park, scattered, but nowhere abundant.

East Berks: abundant on the edges of ancient woodland. 50% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Elymus caninus (L.) L. *Bearded Couch*

hp 7

Triticum caninum L.

Agropyron caninum (L.) P. Beauv.

Roegneria canina (L.) Nevski

Woods, plantations, shady lanes and hedges on nutrient-rich soils; local and scattered, least frequent on clay soils. Commonest beneath elms, persisting long after the trees have died.

Silwood Park: local and rare in thickets around the Nuclear Reactor and on Observatory Ridge.

Ascot: first record: Sunninghill (Sir Joseph Banks, 1773). Rare on Coronation Road and by Great Meadow Pond.

East Berks: Bisham Wood, Twyford, Jouldern’s Ford, Blackwater, Bisham, Waltham, Windsor, Cox Green, Maidenhead. Occasional in the Thames valley but absent in the interior and now uncommon in the Blackwater and Loddon valleys. Locally frequent by the R. Loddon at Whistley Park [7873] in 2002, and on shady lanes with elms south of Knowl Hill [8278] in 2003. 8% (1km²). Atlas 2000: all squares

West Berks: occasional in the Northern Loop and in the Pang valley, but rare in the Kennet valley and absent from most of the interior. Furze Hills [2892], Chieveley [47], Holly Copse [4671], Hurdle Shaw [5879], Buscot Gully [5971]. Atlas 2000: all except [48], [69]

Elytrigia repens (L.) Desv. ex Nevski *Common Couch*

hp 6

Triticum repens L.

Agropyron repens (L.) P. Beauv.

Elymus repens (L.) Gould

Elytrigia repens subsp. **repens**

Waste ground, meadows, arable fields, field borders, hedges, etc. “One of the most common and troublesome weeds in neglected arable lands, and which can only be effectually destroyed by fallowing in a dry summer” (Druce). Druce recognised 4 varieties. Frequent or locally abundant. Host to the “cigar gall” of the fly *Harmolita hyalipenne*. The leaves are flat (not rolled) and the margins of the sheath are completely hairless (not ciliate); the area surrounding the ligule, however, is hairy.

NVC: M 27; MG 1,7; OV 3,4,8-10,12-16,18,19,21,22,25-29,33; S 4,18,23,26,28; W 21,24

Silwood Park: Met Tower, Pound Hill (especially after April Cultivation), Sunninghill Crossroads, Nursery Field, Ashurst churchyard, Oak Mead, locally dominant in the fallow on Ashurst Four Acre Field where we are trying to conserve *Apera spica-venti*, Church Field, Cheapside, Tractor Sheds, Silwood Bottom, South Lodge, Silwood Road. A single plant with awns 7mm long amongst abundant un-awned plants on imported topsoil at Ashurst lysimeters in June 2004; still abundant in 2006 despite herbicide treatment with glyphosate in summer 2005 and in September 2008 following herbicide treatment in autumn 2007. Much reduced in the Pound Hill Cultivation Timing Experiment on 15 July 2008.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
------------------	-------------------	--------------------	---------------------	-----------------------

0	0	0	4	18
---	---	---	---	----

East Berks: 50% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: all squares

Leymus arenarius (L.) Hochst. *Lyme-grass* hp 7 †
Elymus arenarius L.

East Berks: a rare garden relic at Sutton's Nursery grounds in Reading [7473] in 1978.

Hordelymus europaeus (L.) Jess. ex Harz *Wood Barley* hs 6 ↓
Elymus europaeus L.
Hordeum sylvaticum Hudson, nom. illegit.

A scarce grass in Britain that tends to occur in small, discrete colonies on banks in beech woods and in hedgerows on chalk, often as an indicator of a medieval woodland boundary. Found beneath Elder or Hazel where light penetrates from the woodland edge. Known from *Hordeum* by the glumes fused (not free) at the base. An attractive, short-lived species, seeding readily but producing few vegetative shoots and hence rarely lasting for more than 2 or 3 years in any spot.

East Berks: local and rare. In "woods between Maidenhead and Great Marlow, about Henley and Marlow, abundantly in Bisham Woods, Quarry Wood" in Druce's time. By Bowen's time it was "local and usually in small quantity". At the top of Sham Hill [7683] above Henley (1960), Quarry Wood (1957), Park Wood (1952) Bisham. Now rare on the chalk in the northern part of the Thames valley from Remenham to Bisham. <1% (1km²). Atlas 2000: [78], [88]

West Berks: rare and declining. Near Childs Court Farm [5775] in 1963 and Harley Hill Wood [5977] in 1964. Layfields Copse [5776] in 1971 (det. C.E. Hubbard). In Radley Large Wood [5200] in 1981. Extinct in [58] where it was formerly found in Unhill Wood and [67] where it used to grow at Sulham. The surviving records for [67] are from north of the R. Thames in v.c.23 Oxfordshire. Atlas 2000: [57], [67]

Hordeum vulgare L. *Six-rowed Barley* ● th 6

A rare casual grain alien, no longer grown in commercial agriculture. All 3 florets in each triplet make a grain with a long-awned lemma (not just the central floret).

East Berks: uncommon, sometimes recorded in error for *H. distichon*. A rare volunteer in a wheat crop near The Bourne [886760] on 30 May 2002. <1% (1km²). Atlas 2000: [77], [97]

West Berks: on an old tip at Sutton Courtenay [5193] in 1980.

Hordeum distichon L. *Two-rowed Barley* ● th 6

This is the common barley of modern agriculture, often found on waysides, farmyards and in gateways where seed is spilled. Occasional as a volunteer weed in succeeding crops. Frequent throughout the arable regions, occasional in towns and villages. Only the central of the three florets in each triplet is awned and produces a ripe seed.

Ascot: no records. Barley is not grown in the district.

East Berks: common in the arable districts, especially on the clay. 4% (1km²). Atlas 2000: all squares

West Berks: Atlas 2000: [38], [46], [49], [57], [58], [59], [66], [68]

Hordeum murinum L. *Wall Barley*

o th 6

Critesion murinum (L.) Á. Löve

Hordeum murinum subsp. **murinum**

Waste places, roadsides, walls, especially in and about villages. Common and widely distributed. In Scotland this plant has the wonderful common name of "Bus Stop Grass". It is particularly common in places where dogs piss.

NVC: MG 7; OV 18,22-25

Silwood Park: not in any of the natural habitats, and showing all of the attributes of an alien species. Ashurst in the Church car park and in the graveyard, several places in Cheapside Village (including the bus stop), and in the disturbed grassy verge of London Road at Sunninghill Crossroads, Cannon Crossroads and Silwood Road. On imported topsoil at Ashurst Lysimeters on 10 July 2004.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	8

Ascot: in the High Street car park. Occasional in the landscaping work associated with the new Race Course (2005-06) and locally frequent in the subsequent grass-sowing on mounds and verges (May 2007). Dominant on the strip of grass outside the Telephone Exchange in Upper Village Road Sunninghill, known locally as The Dog Toilet. This area was gravelled over on 18 February 2008 in an attempt to tidy up the frontage.

East Berks: uncommon on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 61% (1km²). Atlas 2000: all squares

West Berks: widespread, but uncommon on the western chalk in [37] and [47]. Atlas 2000: all squares

[Hordeum murinum subsp. **leporinum** (Link) Arcang.]

• th 6

Hordeum leporinum Link

Critesion murinum (L.) Á. Löve subsp. *leporinum* (Link) Á. Löve

No Berkshire records, but worth looking for as a casual on waste ground. It is told from subsp. *murinum* by the central floret having a stalk that shows above the glumes 0.6-1.5mm (rather than <0.6mm) and by the lemma body of the central floret being shorter than that of the lateral floret (longer in subsp. *murinum*).

[Hordeum murinum subsp. **glaucum** (Steudel) Tzvelev]

• th 6

No Berkshire records, but worth looking for as a casual on waste ground. It is told from subsp. *murinum* by the same characters as subsp. *leporinum* (see above) and distinguished from the latter by its small (< 0.6mm) blackish anthers of the central florets, which are less than one third as long as the anthers of the lateral florets (in subsp. *leporinum* the anthers of the central florets are about as long to half as long as in the lateral florets).

Hordeum jubatum L. *Foxtail Barley*

• hp 6

Rarely established temporarily on sown banks and waste places. Told by the fact that the rachis breaks up at maturity (this separates it from commercial barleys), and by the relatively long (> 30mm) glumes on the lateral spikelets that are awn-like all the way to the base (not distinctly widened at the base). The awn of the central lemma is also very long (>50mm).

East Berks: not in Druce. Wellington College [86] in 1918 (**OXF**), roundabout of Junction 11 of the M4 motorway south of Reading (**RNG**) [7168] in 1987-88. <1% (1km²). Atlas 2000: [76], [97]

West Berks: Moulsoford [58] in 1928 (**OXF**), Didcot [59] in 1928 (**OXF**), Tilehurst [67] in 1924 (**RDG**), Hungerford Newtown [37] in 1982, Benham Park [46] in 1986, central reservation of the M4 motorway west of Greathouse Wood [5673] in 1987, Radley [5298] in 1987. Atlas 2000: [57], [59]

Hordeum secalinum Schreb. *Meadow Barley*

hp 6

Hordeum nodosum auct., non L.

Critesion secalinum (Schreber) Á. Löve

A local speciality and a distinctive feature of the Thames-side alluvial meadows, but absent from the chalk and south Berkshire. Frequent to locally co-dominant in *Holcus lanatus-Deschampsia cespitosa* grassland.

NVC: MG 9

Silwood Park: unintentionally introduced as a seed contaminant at Oak Mead, where it was very local on one of the Biodepth II plots on 8 July 2000. Growing with other meadow plants like *Phleum pratense* and *Trisetum flavescens* in what was supposed to be a monoculture of *Arrhenatherum elatius*. Not in any of the natural grasslands.

Ascot: appearing in the ancient grasslands as soon as one crosses onto the clay at the Polo Club, Cranbourne, Forest Lodge, Cumberland Lodge, Copper Horse, Spring Hill, Bear's Rails and Park Place.

East Berks: low lying meadows by the Thames all the way from Reading down to Old Windsor. One of the commonest grasses in the rich alluvial meadows and pastures of the northern parts of Windsor Great Park as in Stag Meadow, Review Ground and on the Cavalry Exercise Ground. Sonning, Bray, by the side of the Thames at Park Place, Charvil Meadows. In the wet meadow at Marsh Down, Shottesbrooke [8476] in 2003. Still common in the ancient grassland nature reserve at Chawridge Bank [894738] in 2008, growing with *Trisetum flavescens* and *Convolvulus arvensis*. 2% (1km²). Atlas 2000: all except [86], [96]

West Berks: frequent in the Thames Valley and the Northern Loop, but absent to the south of 85 except for a scattering of outliers as at Sandleford [473654], by the side of the A4 near Midgham Park [562667] and near Aldermaston [6065]. Atlas 2000: all except [37], [47], [57]

Hordeum marinum Huds. *Sea Barley*

• th 6

Critesion marinum (Hudson) Á. Löve

Told from *H. murinum* by details of the glumes: they are awn-like to the base in *H. marinum*, but are broad-based with conspicuously hairy margins in *H. murinum*.

East Berks: A rare salt adventive on motorway verges as at the M4/A33 interchange south of Reading. <1% (1km²). Atlas 2000: [76]

West Berks: no records yet, but it is likely to spread along the M4 from Reading.

Triticum aestivum L. *Bread Wheat*

• th 6

Common casual on roadside dumps, farmyards and field margins, and occasionally as a volunteer weed. Locally abundant from spilled seed, on set-aside fields, and occasional on pavements and waste ground in towns.

NVC: OV 19

Silwood Park: an occasional, but quite long persistent, volunteer in arable fallows at Ashurst Four Acre Field, Pound Hill and Silwood Bottom, still found up to 10 years after the last wheat crop was grown, presumably from a continuous trickle of local seed production rather than from a seed bank. A single plant in gravel by West Block in June 2004. Occasional in the new flower beds at Virginia Water Lodge on 15 June 2009 after they had been created in autumn 2008.

East Berks: not in Druce. Throughout the arable districts and commonest on the clay. On the dump at Devil's Pound. Common in field margins throughout Windsor Great Park. Very local on the enormous soil pile overlooking Drift Road at Silver Springs Farm on 17 June 2008. 9% (1km²). Atlas 2000: all squares

West Berks: first record Kennington tip (1951) (RNG). Under-recorded Atlas 2000: all except [28], [36], [37], [39], [49], [56], [58], [59], [50], [68], [69]

Danthonia decumbens (L.) DC. *Heath-grass*

hs 7

Festuca decumbens L.

Sieglingia decumbens (L.) Bernh.

Acid grassland, heaths, bogs, heathy rides in conifer plantations and railway banks on acid soils. pastures. Absent from chalk and most of the clay. It is typically a light silvery-green grass amongst darker green *Molinia*, *Agrostis* and *Festuca*.

NVC: CG 2-5; H 3; M 16,24; MG 5,9; OV 23; U 1,20

Silwood Park: local and rare in acid grassland on the bank at the edge of the Croquet Lawn beneath the smaller of the two cedars, sparingly throughout the more nutrient-poor parts of Nash's Field, and in heathy lawns at South Lodge. Long-lived individuals, but always at very low densities in Silwood. Locally frequent in the rabbit enclosure in U1 Grassland at Gravel Pit in July 2004. In Nash's Field, it is commonest on the untreated strip between the fence of Block P and the grazed part of Block L and between the fences of Blocks Q and P. Locally frequent with *Nardus stricta* in the heathy grassland between the Croquet Lawn and the Wishing Well on 15 July 2012.

Ascot: Rapley Lakes, Martins Heron, The Orangery, A322/A332 roundabout, Tower Hill, Swinley brick pits, Coronation Road, in the acid turf of the lawn at 'Styles' on Charters Road, North Ascot, Ascot Heath, Forest Lodge, north shore of Virginia Water, Spring Hill. Locally frequent in heathy ground by the hockey pitch in Frognall [939677] in September 2005. Occasional, but relatively widespread in heathy rides between the pine trees in Kingsride [9067], [9167], [9066] and [9067] in June 2012. In short acid grasslands on Ascot Heath in the middle of the race course.

East Berks: Bulmarsh, woods near Marlow, Farley Hill, Jouldern's Ford, Finchampstead, Ambarrow, Ascot, Sandhurst, Coleman's Moor, Stubbing's Heath, Riseley, Windsor Great Park. Finchampstead, Wellington College, Lower Star Post, Tower Hill, New Lodge, Virginia Water, Bearwood. More or less restricted to the east and south on heathy ground along the Surrey and Hampshire borders. There is an outlying station on the railway between Twyford and Wargrave. Still common in the ancient grassland (the eponymous MG5c) nature reserve at Chawridge Bank [894738] in 2008, where it thrives in co-dominance with *Genista tinctoria* and *Succisa pratensis* on the field that was stripped of its topsoil for construction of the dog-racing track next door. 6% (1km²). Atlas 2000: [76], [77], [86], [88], [96], [97]

West Berks: Ashdown Park [28], Inkpen Common and Kintbury [36], Enborne Row, Avery's Pightle and Greenham Common [46], Snelsmore Common [47], Frilford golf course [49], Crookham Common and Bucklebury Common [56], Briff View field, west of Bucklebury [545705], Hagbourne Moor [58], Aldermaston Soke, Ufton Park and Wokefield Common [66]. Atlas 2000: [28], [36], [46], [47], [49], [56], [57], [58], [66], [67]

Cortaderia selloana (Schult. & Schult.f.) Asch. & Graebn. *Pampas-grass* ● hp 7
Arundo selloana Schultes and Schultes f.

Persistent where planted or thrown out, but not commonly spreading or establishing from seed.

East Berks: not in Druce or Bowen. Recently at Coley [7172], West Reading [7073], Chawridge Manor Farm [9073] and Maidenhead [9083]. Atlas 2000: [77], [97], [98]

West Berks: rarely self-sown, but there was a single young plant in a basement off the market place in Faringdon [288955] in November 2001.

Cortaderia richardii (Endl.) Zotov *Early Pampas-grass* ● hp 7
Arundo richardii Endl.

East Berks: an old shrubbery at Heathlands, St Sebastian's [8265] in 1987 (RNG).

¶ **Cortaderia** *C. selloana* 'Pumila', *Cortaderia selloana* 'Sunningdale Silver'

Molinia caerulea (L.) Moench *Purple Moor-grass* hs 6
Molinia varia Schrank
Aira caerulea L.

Molinia caerulea subsp. *caerulea*

Wet heaths and bogs, marshes and fens. "Abundant in the south, occupying square miles of the heathy country, almost to the exclusion of other grasses" (Druce). Locally dominant in two very distinct habitats: fens and boggy heaths. Absent from the chalk and almost all of the clay.

NVC: H 2,3; M 13,16,21,22,24,27; S 3,4; U 2,20; W 1,4,15,16

Silwood Park: probably not in any of the natural habitats until 2007, and extinct in sites where it was introduced in earlier years. Grown experimentally on North Gravel in 1979 until the site was destroyed by the building work for Southwood Halls in 1982. It never self-seeded or spread beyond where it was planted. First recorded in May 2007 inside the rabbit fence at The Heath on Cannon Path. By 15 May 2008 there were 5 large tussocks, evidently several years old. It is not clear whether the plants had been here a long time but were grazed down by the rabbits, or whether they had recruited from seed since the fence was erected in winter 2000-01, but *Molinia* is a recognized

component of U2 *Deschampsia flexuosa* grassland. Still thriving in June 2012, but not much increased in number of tussocks.

Ascot: locally abundant on Ascot Heath racecourse and in South Ascot Bog. *Molinia* marks out the boundary between the two main plant communities that dominated the Ascot district before it became suburbanised in Victorian times. To the west and south, *Molinia* dominated the wet peaty ground. To the east and the north, the ground is higher and relatively dry, and would have supported oak-wooded heathland (this is the area that includes what is now Silwood Park). This pattern remains today, but its edges have been blurred by drainage of many of the former bogs. *Molinia* still dominates in the wet woodland which is all that remains of the once great Sunningwell Bog where Sir Joseph Banks botanized in the 1770s. The surviving fragment lies just west of the playing fields at South Ascot, but it used to stretch all the way up to The Wells pub (there are remnants beneath the birches in Wells Wood [933684]). Other *Molinia* bogs survive at Whitmoor and Englemere. The grass is common on the heathy rides in the Crown Estate Woodlands at Kingsride that lie west of the Bagshot-Ascot railway line and in Swinley Park. Much less frequent to the east of Ascot, but locally common in parts of Windsor Great Park. Dominant in shade on heathy parts of the southern shore of Virginia Water.

East Berks: Earley, Bulmarsh Heath, Bracknell Forest, Windsor Park and all of the Bagshot Sands. Threatening to take over the prime habitats in Wishmoor Bottom as the water table falls; there is still no policy of water-level management in place by May 2004. Often dominant in wet heathy places on Bagshot Sands in the south and east, but rare to the north of 70 and the west of 90. It forms an interesting 2-species community in soggy ground west of Mill Pond [8865], where its waist-high tussocks are interspersed by *Myrica gale*. 12% (1km²). Atlas 2000: all except [78], [88]

West Berks: occasional north of 95 and south of 75 but absent from the interior, save for an outlying station on Hagbourne Moor [5387]. Atlas 2000: [36], [46], [47], [49], [40], [56], [57], [58], [66]

[*Molinia caerulea* subsp. *arundinacea* (Schrank) K. Richt.] hs 6
Molinia arundinacea Schrank
Molinia caerulea (L.) Moench subsp. *altissima* (Link) Domin
Molinia caerulea (L.) Moench subsp. *litoralis* (Host) Paul

In fens and fen-scrub by rivers and canals. Told from subsp. *caerulea* by its taller flower stems (65-160cm rather than <65cm), and panicle branches longer (> 10cm), uneven and often spreading. The sizes of the spikelets (4-7.5mm rather than 3-5.5mm) and lemmas (3.2-5.7mm rather than 3-4mm) overlap, so confirmation may require a chromosome count (90 rather than 36).

No Berkshire records but worth checking in the fens of the Northern Loop at Frilford and Cothill.

¶ ***Molinia*** *M. caerulea* subsp. *caerulea* ‘Moorhexe’, *M. caerulea* subsp. *caerulea* ‘Variegata’

***Phragmites australis* (Cav.) Trin. ex Steud. Common Reed** hel 8
Arundo australis Cav.
Phragmites communis Trin.

Sides of rivers, ponds and streams, wet hedge-banks, marshes and fens; common and in some places dominant (see p. 54). There are some fine reed beds by the Loddon where the reeds attain a height of 3m. Also in rather dry places where seeds are blown. Absent from the chalk. Host to the “cigar gall” of the fly *Lipara lucens*.

NVC: M 13,21,22,24,27; OV 25,26; S 1-6,8,13,14,18,23,25,26; W 1,5,6,24

Silwood Park: very rare on the abandoned gravel beds at Ashurst on 9 July 2009; a long-distance immigrant, and the first record for Silwood (see below).

Ascot: there are excellent and extensive reed beds at Englemere Pond, and these are cleared from time to time of invading willow saplings to conserve them. Also at Swinley brick pits and around Sole's Pond below Ascot Station. Locally abundant at Great Meadow Pond growing with *Typha angustifolia*, and by Cumberland Lodge in Windsor Great Park. Very local on the southern shore of Virginia Water, close to the Surrey boundary [968691]. Not in Silwood Park, where the lake margins are dominated by *Iris* and *Typha latifolia* or are shaded by alders.

East Berks: on most of the larger water bodies, usually in full sun. 8% (1km²). Atlas 2000: all squares

West Berks: common in the major river valleys but rare in the interior (north of 75 and south of 90). Frequent in Reading's Lake District [66] and [67]. Atlas 2000: all except [48]

Eragrostis curvula (Schrad.) Nees *African Love-grass* ● hp 5 †
Poa curvula Schrader

East Berks: on the old nursery grounds of Sutton's seeds in Reading [7473] in 1978 (RNG).

Spartina pectinata Bosc ex Link *Prairie Cord-grass* ● hel 5

East Berks: planted at the pond side in the Botanic Gardens in Whiteknights Park in 1959 (RNG). Found in 1986 just south of our area at Farnborough [8757] near the R. Blackwater in Hampshire on the edge of a former gravel pit that had been used as a slurry pond; a single, huge plant spreading vegetatively. This is a prairie, not a salt marsh plant, which is long established in widely separated areas in West Galway in Ireland and Seaton Burn in Northumberland.

Echinochloa crus-galli (L.) P. Beauv. *Cockspur* ● th 8
Panicum crus-galli L.

A casual of rubbish tips, bird-feeders and sown fields; uncommon. Commonest now as a motorway-side plant, becoming locally dominant after 2005.

Silwood Park: a single, massive plant inside the rabbit fence at Ashurst Lysimeters on 28 August 2004, from topsoil imported in August 2003. Not seen again until 2009, when three clumps appeared on 31 August, following herbicide treatment and late-spring cultivation of the Lysimeter plot. Also, three clumps on 1 September 2009, in the former orchard of Silwood Lodge, in ground that was cultivated in May 2009 following renovation of the house as student accommodation, growing with a dense, 2m-tall stand of *Datura stramonium*. Almost certainly from seed originating from Vicky Taylor's industrial-size bird feeder that was situated here from 1985-2008.

Ascot: locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road on 29 August 2004 (not there in September 2005 or 2006). Locally frequent on bare soil by the gate to the gas works on Bridge Road Sunninghill on 31 August 2011.

East Berks: not in Druce. Reading, Bracknell, Maidenhead, Cookham. Smallmead tip (1971), Woodley tip (1975), Shinfield Grange [7468] (1982), St Andrews Hall Reading [722727] (1983). By the M4/A33 Interchange [709702] in August 1999. Reported by Charles Godfray as abundant in the central reservation of the motorway spur A308(M) between Bray Wick and the M4 [887788] on 12

September 2006; dominant along this whole section of the central reservation in September 2007, from the Holyport Roundabout all the way to the M4 interchange (J9), but much less common on the adjacent Maidenhead bypass or on the M4 itself. Locally dominant in the verges and central reservation of the M4 motorway in east Reading [7268 etc] and scattered all the way east to Maidenhead on 18 September 2008. <1% (1km²). Atlas 2000: [76], [77], [88]

West Berks: there are nineteenth century records from Longworth [39], Abingdon [49], Wytham Mill [40] (**OXF**) and Didcot [59] (**OXF**). Pre-1975 records are from tips at Newbury [46], Didcot [59], South Hinksey [50], Theale and Pangbourne [67]. From the banks of the R. Kennet at Blake's Lock in 1985. Locally dominant in the verges and central reservation of the M4 motorway to the west of Reading [6869, 6472 etc] on 18 September 2008. Atlas 2000: [38], [40], [57], [59], [66]

Echinochloa esculenta (A. Braun) H. Scholz *Japanese Millet* ● th 8
Echinochloa utilis Ohwi & Yabuno
Echibochloa frumentacea auct. non Link

A rare bird-seed alien, told by its fat, congested inflorescence branches, which form a single, lobed head.

East Berks: rare on the river bank by the M4/A33 Interchange [709702] in August 1999, found by Tony Mundell (det. Eric Clement).

Echinochloa colona (L.) Link *Shama Millet* ● th 8 †

East Berks: waste ground in Reading in 1906 (**OXF**) (det. C.E. Hubbard).

Setaria italica (L.) P. Beauv. *Foxtail Bristle-grass* ● th 7 ↓

Rubbish tips, an occasional casual. Bristles below each spikelet 1 to 3, spikelets disarticulating below the upper lemma, leaving both glumes and lower lemma behind.

East Berks: not in Druce. Smallmead tip (1965-71), Reading tip (1961-62), Woodley tip (1969-75). Atlas 2000: no records.

West Berks: records from the 1950s and 60s from tips in Newbury [46], Thatcham [56], Didcot [59], Kennington and South Hinksey [50], Pangbourne and Theale [67]. Atlas 2000: no records.

Setaria verticillata (L.) P. Beauv. *Rough Bristle-grass* ● th 7 †

Casual of rubbish tips and waste ground. Bristles below each spikelet 1 to 3, main rachis hispid rather than pubescent, leaf sheaths pubescent on the margin.

East Berks: by the railway near Maidenhead (1897). Earley allotments in 1887 (**RNG**). Reading (1961-65). Atlas 2000: no records.

West Berks: no recent records but found pre-1897 on the railway at Newbury [46] and on waste ground at Didcot [59] and South Hinksey (**OXF**) [50]. Atlas 2000: no records.

Setaria parviflora (Poir.) Kerguélen *Knotroot Bristle-grass* ● th 7 ↓
Setaria geniculata P. Beauv.
Panicum geniculatum Willd. non Lam.

Bristles very numerous (6-8) beneath each spikelet (but beware; see *S. viridis*, below).

East Berks: in a garden at Sidmouth Street, Reading [7272] in 1970 (det. C.E. Hubbard).

Setaria viridis (L.) P. Beauv. *Green Bristle-grass*

● th 7 ↓

Panicum viride L.

A relatively common bird-seed alien. Bristles below each spikelet 2 (1 to 3), spikelets falling whole, leaving only pedicels and bristles (beware when counting the bristles, because it is all too easy to over-count them by including bristles from neighbouring, but aborted spikelets). The rachis is hairy but the leaf blades are hairless (but the leaf sheaths are very hairy on their margins beneath the ligule).

Silwood Park: first recorded as a single, large clump on 31 August 2009, more than 1.2m tall, in the centre of the Lysimeter Plot at Ashurst, following herbicide treatment and late-spring cultivation in 2009. Presumably from the seed bank of soil imported when the Lysimeters were filled in during summer 2003. Another two plants, presumably introduced with bird seed, amongst *Datura stramonium* at Silwood Lodge on 26 September 2009.

Ascot: in an alleyway off Bridge Road, Sunninghill in July 2003. Locally frequent on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] with other bird-seed aliens, where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road on 29 August 2004.

East Berks: by the railway near Wellington College (1896) (**OXF**). Sandhurst (1897) (**OXF**). Reading, Jealott's Hill, Cookham. Smallmead tip (1971), Woodley tip (1975), roadside at Church Farm, Finchampstead [7963] in 1975, St Andrews Hall, Reading [722727] in 1983, Homebase Reading in 2001 (det. T.B. Ryves). Bracknell [8569] waste ground in October 2003. 2% (1km²). Atlas 2000: all except [78]

West Berks: nineteenth century records from tips at Newbury [46], Didcot [59] (**OXF**), South Hinksey [50], Tilehurst Station [67] (**RNG**). More recently South Hinksey (**OXF**) [5004] in 1965 and at Didcot tip [5392] in 1969. Headland strip near Paices Wood [58216399] in 2003. Atlas 2000: [50], [67]

Setaria pumila (Poir.) Roem. & Schult. *Yellow Bristle-grass*

● th 7 ↓

Panicum pumilum Poiret

Setaria glauca auct., non (L.) P. Beauv.

Setaria lutescens Hubb.

Rare casual of waste places. There are numerous (6-8) golden coloured bristles below each spikelet. The ripe fruits are larger than in *S. parviflora* (3.0-3.3mm, not 2.0-2.5mm).

East Berks: Windsor. Not seen by Bowen. By the M4/A33 Interchange [709702] in August 1999. An isolated individual with 3 flowering stems by the Thames-side path between Old Windsor Lock and Runnymede [991741] on 15 September 2002. <1% (1km²).

West Berks: Theale tip (1957) but no specimen. In a cabbage field north of Didcot [5491] in 1999 and in the Power Station [509917] in 2004. Headland strip near Paices Wood [5821 6399] in 2003. Malcolm Storey found the plant at Cod Hill, by Douai Abbey [5766 6792] on newly dug ground beside a new footpath just behind the hedge on 10 September 2008. Atlas 2000: [29], [59]

Digitaria ciliaris (Retz.) Koeler *Tropical Finger-grass* ● th 8 †

West Berks: bird-seed alien in pavement cracks near Didcot post office (**OXF**) [59] in 1976 (det. C.E. Hubbard).

Digitaria ischaemum (Schreb. ex Schweigg.) Muhl. *Smooth Finger-grass* ● th 8 †
Panicum ischaemum Schreber ex Schweigger

NVC: OV 5

East Berks: waste ground in Reading (1918).

West Berks: waste ground and rubbish at Grandpont [5105] in 1890 (**OXF**).

Digitaria sanguinalis (L.) Scop. *Hairy Finger-grass* ● th 8 †
Panicum sanguinale L.

Warm rubbish tips and disturbed ground; rare and not established.

Silwood Park: common around the greenhouses at Ashurst in July 1984. Site destroyed by building work in April 1994, six years (and great financial loss) after Ashurst was sold to property speculators to pay for the construction of the new Biology Buildings in Garden Wood.

East Berks: near Bagshot in v.c.22, Toutley Hall, Wokingham [7970] (1935), Reading (**RNG** and **RDG**) in 1935 and 1946. Found at Sidmouth Street, Reading [7272] in 1970. By the M4/A33 Interchange [709702] in August 1999. Atlas 2000: [96]

West Berks: Didcot Station [59] in 1886 (**OXF**), Tilehurst Station in 1887 (**RNG**). In a field margin sown with game cover (quinoa, millet, fodder radish, etc.) at Little Wittenham Nature Reserve [563919] on 21 September 2006 (Kevin Walker).

Miscanthus sacchariflorus (Maxim.) Hack. ● hp 5 †

East Berks: a garden escape, established by a gravel pit near Twyford [781751] in 1973, but lost by 1988.

Miscanthus sinensis Andersson ● hp 6

A common ornamental grass (especially 'Zebrinus' with its cross-striped stems).

Silwood Park: long persistent (1979-2004) outside the wall of the pot standing near the Fig tree, facing Drive Field.

East Berks: old gravel pits at Trilakes, Sandhurst [8261]. <1% (1km²).

Miscanthus x giganteus ● hp 10

Most of the *Miscanthus* cultivars proposed as commercial biomass crops in Europe are sterile hybrids (*Miscanthus x giganteus*) which originated in Japan.

Silwood Park: Silwood Bottom, first grown as a biomass crop in 1993 as part of Dave Huggett's PhD on its insect pests. The 15m square plot below William Penney is still there in 2006 but not spreading. The plant flowered for the first time in late October 2006 after the warmest ever months of May, June, July, August, September and October on record (there had been no frosts at all up to the end of October 2006).

¶ **Miscanthus** *M. floridulus*, *M. sacchariflorus*, *M.* 'Silberfeder', *M. sinensis* 'Ferne Osten', *M. sinensis* 'Flamingo', *M. sinensis* 'Gracillimus', *M. sinensis* 'Graziella', *M. sinensis* 'Kleine Fontäne', *M. sinensis* 'Kleine Silberspinne', *M. sinensis* 'Malepartus', *M. sinensis* 'Morning Light', *M. sinensis* 'Nippon', *M. sinensis* var. *purpurascens*, *M. sinensis* 'Undine', *M. sinensis* 'Variegatus', *M. sinensis* 'Yakushima Dwarf', *M. sinensis* 'Zebrinus'

Sorghum bicolor (L.) Moench *Great Millet* ● th 7

A very rare bird seed alien. Told from Maize, which it greatly resembles in general habit, pre-flowering, by its lack of clasping auricles and hairless leaf sheaths. The young inflorescence forms a very tight, knobby panicle before opening out somewhat at maturity.

Ascot: just two plants on imported topsoil, spread on top of the gabion wall on the western edge of the building works at Matthews Court in Sunninghill on 22 October 2004. Growing with *Phalaris canariensis*, *Panicum miliaceum* and *Echinochloa crus-galli*.

East Berks: alien on Reading tip (1960). With a wealth of other aliens in South Reading [709702] beside the new A33 road in 31 October 1999.

West Berks: Burghfield [66] in 1890 (OXF), Theale tip [67] in 1897.

Sorghum halepense (L.) Pers. *Johnson-grass* ● h 7
Holcus halepensis L.
Andropogon halepensis (L.) Brot.

A tall (1.5m), tussock-forming grass with elegant dark rusty-red spreading panicles; the hairy florets are in pairs, with a large, awned hermaphrodite flower and a smaller, un-awned, male flower below. Garden escapes or bird-seed aliens.

Ascot: several large, widely separated clumps on 16 September 2003, on bare ground on the demolition site in Sunninghill [939683] where the long-empty houses of Matthews Court had stood until the site was bulldozed in early 2003. Flowering in their first growing season. The site was destroyed by building work in early 2004, but a few plants survived on the western edge in October 2004.

East Berks: on Smallmead tip in 1969 (RNG). Waste ground in Windsor (1999-2004).

West Berks: at Didcot [59] in 1927 (OXF), in a chicken-run at Harwell [4989] in 1960.

Imperata cylindrica (L.) Beauv. 'Rubra' *Chigaya* or *Japanese Blood Grass* ● h 7

Silwood Park: planted in the new garden of South Lodge following rebuilding in September 2008.

Hakonechloa macra (Munro) Mak. 'Albo aurea' *Golden Hakone Blood Grass* ● h 7

Silwood Park: planted in the new garden of South Lodge following rebuilding in September 2008.

SPARGANIACEAE

Sparganium erectum L. *Branched Bur-reed*

hyd 6

Sides of rivers, brooks, ponds, ditches and canals. Abundant and generally distributed, but absent from the chalk ridge. Inflorescence branched, tepals dark-tipped. The distributions of the 4 subspecies within Berkshire remain to be worked out, but all 4 are likely to be present, and Druce and Bowen recorded subsp. *neglectum* (our commonest subspecies) and subsp. *microcarpum* as frequent. The 4 are distinguished by the shape of the fruits: 2 have a distinct shoulder below the beak (subsp. *erectum* has a flat-topped fruit and subsp. *microcarpum* has a domed top), while 2 are gradually rounded below the beak (subsp. *neglectum* has ellipsoid fruits gradually tapered into the beak and subsp. *oocarpum* has subglobose fruits abruptly contracted into the beak). Attacked by the beetles *Donacia vulgaris* and *D. marginata*.

NVC: A 9,20; M 27; OV 26,30; S 3-8,12,14-16,18,22,26; W 5

Silwood Park: in shallow water at the end of the Japanese Garden pond with *Alisma* and *Persicaria hydropiper* in August 2000, but gone following dredging in 2002. In the wet, shady ground at the edge of Farm Road. The Swamp, in wet alder woodland, by the Outflow Sluice, amongst *Typha latifolia* on lake margins along the edge of the dam after the alders were cut down to stabilize the bank in 1985 (still abundant in 2002-04). Lake Wood, on exposed mud at lake-side. Guinness's Thicket, on the lake margins. Dominant in the small garden pond at East Lodge in June 2007.

Ascot: in the lake at Blacknest Park, and in Sole's Pond below Ascot Station. Local and uncommon on the southern shore of Virginia Water [965690] in 2003, growing with *Acorus calamus* and *Carex paniculata*.

East Berks: Hurst, Billingbear ponds, Winkfield, Wokingham, Wargrave, Hurley, Paley Street, Virginia Water, Sandhurst. 8% (1km²). Atlas 2000: all squares

West Berks: common except in the interior (north of 75 and south of 85). Atlas 2000: all squares

Sparganium emersum Rehmman *Unbranched Bur-reed*

hyd 6

Sparganium simplex Hudson, nom. illegit.

Grass-like leaves in deeper (to 1.0m), faster-flowing water than *S. erectum*, in rivers, canals, ponds and brooks, often with submerged or floating rather than upright leaves. It is common in rivers on the clay, often growing with *Elodea nuttallii*, *Nymphoides alba* and *Nuphar lutea*. Locally frequent in the Thames, Kennet and Cole valleys, but absent from the chalk and east Berkshire. The inflorescence is unbranched and the tepals are not dark-tipped. One of the most boat-tolerant of all the aquatic plants, and consequently one of the few abundant species in the larger rivers.

NVC: A 5,8,11,15,21; S 16

Ascot: no records.

East Berks: all along the Thames from Reading to Old Windsor, often the only abundant vascular plant in the water. Very local to the south of Reading [76] and [77] with one record from Trilakes on

the Blackwater River. Recently at Twyford, Wargrave, Henley, Remenham, Aston, Cookham, Lines Road, Chapel Green, Shepherd Meadow, Old Windsor. 5% (1km²). Atlas 2000: all except [96]

West Berks: occasional in the Thames, Cole and Kennet valleys but absent from the interior. Atlas 2000: all except [28], [38], [48], [69]

TYPHACEAE

Typha latifolia L. *Bulrush*

hyd 6

Margins of ponds, slow rivers, ditches and gravel pits; locally dominant but absent from the chalk. Told from *T. angustifolia* on leaf width (8-24mm not 3-6mm) and on the shape of the flower head (there is no gap between the male and female parts of the spike).

NVC: OV 26; S 3,4,6-8,12-15,18,19,22,23,26

Silwood Park: dominant in several places around The Lake, especially on the inflow of the Red Stream and on the edges of the "Ninety-five Islands" where it forms an extensive swamp. It is scattered along the front of the earthen dam by which Humphrey Repton created the lake in the late 18th century, and by the Outflow Sluice. Also on the Marist Convent inflow stream, in The Marsh, below Wood Bank. Great Mead, The Willows, Farm Road, Weir Wood, Wood Bank, Guinness's Thicket. It is interesting that the "Ninety-five Islands" were formed by an abrupt reversed succession. Instead of *Salix* invading an established *Typha* swamp as conventional wisdom would have it, the *Salix* showed mass seedling recruitment on the bare sediment during the dry summer of 1995, and the *Typha* invaded subsequently. It was dominant by 5 December 1997, two growing seasons after colonisation. By May 2007, the advancing front of the *Typha* stand was 10 m further into the shallow open water of The Lake, beyond the edge of the *Salix* trees. The advancing front of the 95 Islands was at [94011 69059] on 15 June 2009: the *Salix* seem to be stuck in their recent positions.

Ascot: occasional on the southern shore of Virginia Water. In Sole's Pond, east of the railway station. Scattered in the wetter parts of Sunningwell Bog. Frequent at the edges of the Marist Convent pond at Frognaill [941682] in September 2005.

East Berks: in every village pond, and on wet waste ground in towns as at Bracknell [8569]. 25% (1km²). Atlas 2000: all squares

West Berks: common in the Thames and Kennet valleys but absent from the interior (north of 75 and south of 85). Atlas 2000: all except [69]

Typha x glauca Godr. = ***T. latifolia*** x ***T. angustifolia***

Intermediate in all its characters and highly sterile. There is a slight gap (< 3cm) between the male and female parts of the inflorescence. Almost certainly under-recorded.

East Berks: occasional by ponds in Windsor Great Park.

West Berks: at the edge of the R. Thames 0.5km below Moulsoford Ferry [5982] in 1985 (OXF).

Typha angustifolia L. *Lesser Bulrush*

hyd 6

Lakes, ponds and riversides, typically in deeper water than *T. latifolia*. Where the two species grow together, *T. angustifolia* forms the zone further from the shore, where the water is deeper than 50cm. Rather local; rare or absent from the chalk. This is the decorative species of choice, and many of the Lesser Bulrush stands in ornamental ponds (e.g. in Windsor Great Park) were originally planted. It is a much more elegant plant than *T. latifolia*, and is told from it by its very narrow leaves (3-6mm) and by the gap (3-8cm) in the spike between the male and female parts.

NVC: OV 26; S 4,6,13,14,25,28

Ascot: Swinley brick pits, Sunninghill Park, locally dominant on the edges of Englemere Pond, Forest Lodge, The Village Pond in Windsor Great Park, Great Meadow Pond, abundant and very luxuriant in a pond near Cumberland Lodge, Virginia Water. Not planted in Silwood Park.

East Berks: Shinford Green, Easthampstead, by the Loddon. Bearwood Lake, Woodley, Wellington College Lake, Wokingham, Bracknell, and at the edge of the R. Thames in Borough Marsh. Recently at Kennet Mouth, Reading Marina, Thames Valley Park, Keeppatch, Broadmoor, Scotlands, East Maidenhead. 3% (1km²). Atlas 2000: all except [78]

West Berks: all but confined to the eastern section of the Thames valley, downstream from Oxford, with outlying stations in the Kennet Valley at Greenham and Benham Park [46]. Buscot and Great Coxwell [29], in the village pond at Childrey [38], Buckland House [39], Steventon and Abingdon [49], Wootton [40], Cholsey [58], Wittenham, Radley, Abbey Fishponds and Sutton Courtenay [59], South Hinksey [50], Pangbourne [67]. Atlas 2000: [29], [38], [39], [46], [49], [40], [58], [59], [50], [67], [68]

¶ **Typha** *T. minima* This is a plant that you can not look at without smiling. It is either so cute or so silly (according to taste), that it is irresistible.

CANNACEAE

¶ **Canna** *C. indica*, *C. indica* × *generalis*, *C. indica* ‘Purpurea’, *C. iridiflora*, *C.* ‘President’, *C.* ‘Striata’, *C.* ‘Wyoming’

PONTEDERIACEAE

Pontederia cordata L. *Pickerehweed*

• hyd 6

This is a common, blue-flowered garden aquatic, sometimes found in old ponds or as an outcast in ponds on waste ground.

Silwood Park: planted long ago in the Lily Pond in front of the Manor House and thriving on neglect (1971-2004). Not spreading away from where it was planted.

East Berks: old gravel pits at Trilakes [8261] from 1977-2004. Massive plants in the new village pond (planted c.2000) south of Knowl Hill [825793] in July 2003. <1% (1km²).

West Berks: no records.

¶ **Pontederia** *P. cordata*

LILIACEAE

Nartheceium ossifragum (L.) Huds. *Bog Asphodel*
Anthericum ossifragum L.

hs 7 ↓

Acid bogs and peaty places. One of our most attractive and charismatic rarities. Local and decreasing on the surviving fragments of boggy heathland on the Bagshot Sands.

NVC: M 16,21,24

Ascot: “in great plenty at Sunningwells upon the peat bogs” (1762) and at Virginia Water, Windsor Great Park, “abundant near the railway at Ascot Station” (Druce), Whitmoor Bog, Rapley’s Farm. Still in a few of these places, though the great Sunningwells Bog is long since drained, the railway has been driven through it, and South Ascot built upon the remnants. Recently from Whitmoor Bog, Swinley Park and Blane’s Allotment.

East Berks: Bagshot Heath, Bulmarsh Heath (1800), abundant near Sandhurst, Broadmoor, Owls Moor, Easthampstead Plain, Finchampstead Ridges near Spout Pond, Long Moor, near Wellington College. Rare in the heaths of the Surrey and Hampshire borders, but extinct at all 5 of its former more northerly stations. Still at Edgebarrow, Wellington College Bog, Pine Hill, Broadmoor Bottom, Owlsmoor, frequent in Wishmoor Bottom where the power line crosses the stream [876626], and by the Mill Pond south of The Lookout in Bracknell Forest. Particularly good at Gormoor Valley [872658] and Gormoor Heath [869646]. <1% (1km²). Atlas 2000: [86]

West Berks: rare in the heaths of the Kennet valley from Inkpen Common [36] through Greenham [46] and Snelsmore [47] Commons, to Silchester and Wokefield Commons [66]. Extinct in the Northern Loop; it was at Wootton [40] in 1780 but was “destroyed by enclosure”. Formerly also in the catchments of the R. Pang at Cold Ash Common [56], last seen in 1897. Growing abundantly with *Cirsium dissectum* in the bog at Inkpen in 2005. Atlas 2000: [36], [47], [57], [66]

Asphodelus albus Mill. *White Asphodel*
Asphodelus fistulosus L. *Hollow-stemmed Asphodel*
Asphodelus tenuifolius Cav.

• gb 3 †

West Berks: a grain casual from Abingdon [49] in 1922 (OXF).

¶ **Hosta** *H. ‘Albomarginata’, H. ‘August Moon’, H. ‘Big Daddy’, H. ‘Blue Moon’, H. crispula, H. fortunei* var. *albopicta, H. fortunei* var. *albopicta* f. *aurea, H. fortunei* var. *aureomarginata, H. fortunei* var. *hyacinthina, H. ‘Francee’, H. ‘Frances Williams’, H. ‘Ginko Craig’, H. ‘Gold Edger’, H. ‘Gold Standard’, H. ‘Golden Prayers’, H. ‘Golden Tiara’, H. ‘Ground Master’, H. ‘Halcyon’, H. ‘Honeybells’, H. ‘Hydon Sunset’, H. ‘Krossa Regal’, H. lancifolia, H. ‘Royal Standard’, H. ‘Shade Fanfare’, H. sieboldiana* var. *elegans, H. ‘Snowden’, H. ‘Sum and Substance’, H. undulata* var. *albomarginata, H. undulata* var. *undulata, H. ventricosa, H. venusta, H. ‘Wide Brim’, H. ‘Zounds’*

¶ **Sprekelia** *S. formosissima*

¶ **Sternbergia** *S. lutea*

¶ **Zephyranthes** *Z. candida*

¶ **Zigadenus** *Z. elegans*

¶ **Uvularia** *U. grandiflora*, *U. perfoliata*

¶ **Trillium** *T. erectum*, *T. grandiflorum*, *T. luteum*, *T. sessile*

¶ **Tricyrtis** *T. formosana*, *T. hirta*, *T. latifolia*

¶ **Tulbaghia** *T. violacea*, *T. violacea* ‘Silver Lace’

¶ **Rhodohypoxis** *R. baurii*, *R. ‘Picta’*

Hemerocallis fulva (L.) L. *Orange Day-lily*

• grh 6

Hemerocallis lilioasphodelus L. var. *fulva* L.

Popular garden perennials, often thrown out and long persistent on waste ground. All the Day-lily records post-1986 are lumped together here, but various cultivars are no doubt involved.

Silwood Park: in shady waste ground in woodland, on a horticultural dump behind the Tennis Court, where it has persisted for over 10 years (1989-2004).

Ascot: local and uncommon in roadsides at South Coworth and Locks Ride. A single plant at the base of the wooden fence behind the shops south of the railway bridge on Sunninghill High Street, close to the *Passiflora* on 3 July 2007.

East Berks: in a gravel pit at Sandford Mill from 1969-85, Whiteknights Park (1974). A common garden outcast in villages and towns throughout (e.g. Sonning, Bulmershe, Bisham, Holyport, Cox Green, Reading, Maidenhead, Windsor). On a shady rubbish pile and bonfire site behind Wargrave Church. Common beneath old brick walls at Finchampstead Church. 12% (1km²). Atlas 2000: all except [78]

West Berks: Buscot [29] and Kennington tip [50] in 1953, Frilford [49], a roadside verge at Purley [67] in 1960, Boars Hill [40], Little Wittenham [59], South Hinksey tip [50], Wallingford [68] in 1953 (still common in the churchyard in 2004), Cothill pit [4699] in 1976. Faringdon [29], Newbury [46] and Abingdon [49] in July 2002. At Steventon [4791] and Kingston Bagpuize [4098] in July 2003. Atlas 2000: [29], [36], [46], [49], [68], [69]

Hemerocallis lilioasphodelus L. *Yellow Day-lily*

• grh 6

Hemerocallis lilioasphodelus L. var. *flava* L.

Hemerocallis flava L., nom. illegit.

East Berks: not in Druce. By ornamental lakes, rare. Sunninghill Park Lake [9370] in 1964, Whiteknights Park in 1965. No recent records (but see above).

¶ **Hemerocallis** *H. ‘Amersham’*, *H. ‘Anzac’*, *H. ‘Autumn Red’*, *H. ‘Black Magic’*, *H. ‘Bonanza’*, *H. ‘Burning Daylight’*, *H. ‘Cartwheels’*, *H. ‘Catherine Woodbery’*, *H. ‘Cherry Cheeks’*, *H. ‘Chicago Royal Robe’*, *H. ‘Chicago Sunrise’*, *H. ‘Children’s Festival’*, *H. ‘Corky’*, *H. ‘Cream Drop’*, *H. dumortieri*, *H. ‘Eenie Weenie’*, *H. ‘Frans Hals’*, *H. fulva* ‘Flore Pleno’, *H. ‘Gentle Shepherd’*, *H. ‘Golden Chimes’*, *H. ‘Hyperion’*, *H. lilioasphodelus*, *H. ‘Little Wine Cup’*, *H. ‘Luxury Lace’*, *H. ‘Marion Vaughn’*, *H. ‘Pink Damask’*, *H. ‘Sammy Russell’*, *H. ‘Stafford’*, *H. ‘Stella de Oro’*, *H. ‘Summer Wine’*, *H. ‘Whichford’*

¶ **Galtonia** *G. candicans*, *G. princeps*, *G. regalis*, *G. viridiflora*

Kniphofia uvaria (L.) Oken *Red-hot-poker*

• grh 6

Aloe uvaria L.

Kniphofia aloides Moench

Told from the hybrid (below) by its short bracts (3-9mm, not 8-12mm) and V-shaped, narrow leaves (less than 2cm wide).

East Berks: recently at Ryeish Green, Spencer's Wood, Three Mile Cross, Riseley, Newlands Farm, Wheatlands, Barkham Ride, West Whitley, Whitley, Lower Earley, South Lake, South Charvil, North Twyford, Wild's Beit, Heath Ride, College Town, Wildridings, Foliejon Park, West Dedworth, Ham Island. 7% (1km²). Atlas 2000: all except [96]

West Berks: Atlas 2000: [28], [36], [38], [46], [49], [68]

Kniphofia x praecox Baker *Greater Red-hot-poker*

• grh 6

Stems to 2m (rather than 1.2m), much larger bracts (8-12mm rather than 3-9mm) and broader leaves (to 4cm rather than to 1.8cm).

Silwood Park: this is the Red-hot-poker that is naturalized with us, and I suspect that a number of the records of *K. uvaria* would be referable to this garden hybrid.

East Berks: Reading, Maidenhead and Windsor as a garden outcast. In a relatively remote hedge near White Waltham [8577] in 2003. 7% (1km²).

West Berks: Faringdon [2895], Newbury [4767] and Abingdon [4997] in July 2002, and at Kingston Bagpuize [4098] in 2003.

¶ **Kniphofia** *K. 'Ada'*, *K. 'Alcazar'*, *K. 'Border Ballet'*, *K. 'Bressingham Comet'*, *K. caulescens*, *K. citrina*, *K. galpinii*, *K. 'Green Jade'*, *K. 'Jenny Bloom'*, *K. 'Little Maid'*, *K. 'Percy's Pride'*, *K. 'Royal Standard'*, *K. 'Shining Sceptre'*, *K. 'Sunningdale Yellow'*, *K. 'Toffee Nosed'*, *K. triangularis*, *K. uvaria* 'Nobilis'

Colchicum autumnale L. *Meadow Saffron*

gt 9 ↓

Grassy rides through oak woods and in water meadows on calcareous clayey soils. One of the classic ancient woodland plants, but much less common with us than in neighbouring Oxfordshire, where large populations (c.10,000 blooms) still survive in Wychwood [31]. Much reduced and now very local in west Berkshire. In the past, it was persecuted in meadows because the leaves are poisonous to cattle. Planted on many of the larger estates and sometimes found as a garden escape.

NVC: MG 5

Silwood Park: long persistent in the graveyard at Ashurst (pre-1979-2012). Two dense clumps, c.30cm in diameter with 70 and 80 flowers respectively in 1999 (60 and 110 in 2006), at the eastern (bottom) end of the graveyard [94129 68601]. The plants are very conspicuous in leaf in the summer, because the big, bright green leaves are studiously avoided by the hoards of rabbits that inhabit the graveyard, and which graze the rest of the vegetation flat to the ground. Flowers in late summer after the leaves have died down (the flowers were just starting to go over on 21 September 2006 and were just past their best on 16 September 2008). Flowering was poor in September 2009, possibly because rabbit numbers were low and the grass was correspondingly tall.

East Berks: no records from natural habitats. A relic in abandoned gardens in Reading in 1999 and Cookham [8985] in September 2002. <1% (1km²). Atlas 2000: [77], [88]

West Berks: extinct at most of its former woodland and meadow stations: water meadows in Hungerford Park [36], Inkpen [36], still in Cake Wood [3069], Wickham [37], Longworth village [39], Ashridge and Cheseridge Woods [47/57], Woolvers [48], Appleton Upper Common and Marcham [49], Wytham Wood, waste ground in Cumnor, Eynsham, Marley Wood, Tubney Wood and Chilswell Copse [40], Hampstead Norreys [57], meadows near Wittenham [59], Bagley Wood [50]. Garden escapes at Frilford [49], Lockinge [48], Little Heath [67]. Atlas 2000: [36], [47], [57], [67]

¶ **Colchicum** *C. speciosum*, *Colchicum speciosum* ‘Album’

Gagea lutea (L.) Ker-Gawl. *Yellow Star-of-Bethlehem* gb 3 †
Ornithogalum luteum L.

Damp woods on calcareous soils. Very local and rare, but so early in its flowering that it might be under-recorded.

East Berks: no records.

West Berks: Long Copse [473046] 12 plants in 1980, copse above South Hinksey [501031] in 1953. There are pre-1920 records from Inkpen [36], Cothill [49], Wytham, Cumnor Hurst (where Druce was confident that the plant was native), Childswell Farm and Marley Wood [40], Hawkrigge [57]. Chris Perrins remembers the plant from Chawley Wood [473047] to the west of Cumnor Hurst (surely this is the same site as Long Copse, above). I have not found the plant in any of these places, despite repeated searches in March and April (1995-2005). About 100 flowering plants on 15 March 2006 in Limekiln Copse to the west of Chilswell Farm Cottages [49990 03014] in a small colony north of the brook, just south-west of a large Field Maple with 4 trunks. A very exciting rediscovery. Mark Jannink rediscovered the plant in Long Copse, Chawley [47261 04638] on 25 March 2007. There were four flowering plants plus the leaves of c. 50 non-flowering individuals amongst bluebells on the south-western edge of the copse, just inside the wood, about 100 paces north-west from the stile on the Cumnor to Botley road, just behind a post with a white disc reading ‘Please Keep to the Footpath’.

Tulipa sylvestris L. *Wild Tulip* ● gb 4 ↓

Plantations, churchyards, parks and orchards, an introduced species usually found near villages. Local, rare and often sterile.

East Berks: no records.

West Berks: Druce’s understanding of the status was “as a relic of Speaker Lenthall’s garden at Besilsleigh where it is still plentiful but rarely flowers”. Still at Bessels Leigh [40] in Bowen’s time, as sterile plants by the school drive under elm. Recently at Sparsholt [349871], next to the Village Hall in West Challow [365885], East Challow [382883], Wadley Manor [310959], Marcham [4596] and near Kennington [50] as the remains of a cottage garden. In Marlstone Park [5372] and in a wood near Kintbury [36], Balsdon and Winding Wood [36], Childrey Rectory [38], between Wantage and Kingston Lisle [38], Brightwalton [429791], Kingston Bagpuize [49]. Two large clumps were discovered in the churchyard at Coleshill [2393] in full flower on 14 April 2001; they were c.3m x 2m in March 2004.

Tulipa gesneriana L. *Garden Tulip*

• gb 4

Occasional in churchyards throughout. Planted on graves, and sometimes long persistent.

Silwood Park: on graves at Ashurst and below the churchyard wall; also as relics of cultivation around the Manor House.

East Berks: Sandhurst, Littlewick Green, Holloway, Stubbings, Guild House. In several places in the lane from Remenham Church to the Thames-side path in 2004. <1% (1km²). Atlas 2000: [86], [87], [88], [97]

West Berks: in an old pit at Frilford [4498] in 1955, and by the motorway bridge where the M4 crosses the A34 at Chieveley Services [4873] in 1984. In grass by the River Thames opposite The Seven Deadly Sins in Pangbourne [6276] in April 2004. Atlas 2000: [46], [40]

¶ **Tulipa** *T. acuminata*, *T. aucheriana*, *T. biflora*, *T. clusiana* var. *chrysantha*, *T.* ‘Giuseppe Verdi’, *T.* ‘Heart’s Delight’, *T. humilis*, *T. kaufmanniana*, *T. kolpakowskiana*, *T. linifolia*, *T. linifolia* ‘Bright Gem’, *T. orphanidea* Whittallii group, *T.* ‘Oxford’, *T. praestans* ‘Fusilier’, *T.* ‘Prinses Irene’, *T.* ‘Red Riding Hood’, *T. saxatilis* ‘Lilac Wonder’, *T. sprengeri*, *T. tarda*, *T. turkestanica*, *T. urumiensis*

Fritillaria meleagris L. *Fritillary*

• gb 4

One of our most attractive rarities. Massively reduced in distribution because of drainage of riverside meadows and “agricultural improvement”, but still abundant in the handful of places where it still occurs. Its status is contentious: some think it a native British plant, others consider it to have been introduced as an ornamental (Stace has it as “doubtfully native”). It is difficult to accept that such an attractive plant would go unmentioned until 1736 when the first “out-of-garden” British record of Fritillary was made by John Blackstone. It grows in MG4 *Alopecurus pratensis*-*Sanguisorba officinalis* grassland with such associates as *Rhinanthus minor*, *Silaum silaus*, *Cardamine pratensis*, *Leontodon hispidus*, *Thalictrum flavum*, and *Serratula tinctoria*. The best time to visit Fritillary sites is in mid April in most years.

NVC: MG 4

Silwood: repeated attempts to naturalise Fritillary by planting bulbs in the wet grassland between Silwood Farm and The Lake have failed. The habitat looks ideal, but perhaps the soil is too acidic.

Ascot: very local and rare. Two plants by the fence on the eastern edge of the northern triangle of Ascot Racecourse [923699] in fruit in May 2002, just one in May 2003, none in May 2004 or 2005 one in May 2006 and 7 fruiting stems in May 2007, in an unlikely spot for an intentional introduction. It does not grow well on the acid sandy soil, and is very uncommon as a garden plant in the district.

East Berks: the Loddon water meadows where the plant was once so abundant are now dismal cattle-grazed monocultures of Ryegrass, fertilised with up to 200kg of nitrogen/hectare/year, and utterly inhospitable to the growth of any interesting plants at all. Druce knew it from Maidenhead Thicket, in the meadows about the Loddon and St Patrick’s stream in great abundance, about Bolney and below Hemerton, and in Arborfield meadows. By Bowen’s time it was still frequent by the Loddon, but rare elsewhere. Stanford End (about half a million plants in 1965), Blackwater, Swallowfield, Arborfield. “This plant is still ruthlessly picked, but is in greater danger of extermination by ploughing and intensive grazing than by picking” (Bowen). Intensive search of the banks of the R. Loddon in 1997, 1998 and 1999 found no sites other than the justly famous meadow at Stanford End [705633] where there were many thousands of flowers in 2000-04 (Plate 5). The R. Thames sites, downstream of

Borough Marsh Farm [7777] (between Wargrave and Shiplake), are all apparently extinct. Also recently as naturalised garden plants at Heath Pond and Scotlands. <1% (1km²). Atlas 2000: [76], [77], [86], [88]

West Berks: restricted to water meadows by the Thames from Coleshill [29] down to East Hagbourne Mill [58]. The wonderful population (more than 12,000 individuals in 2003) in Iffley Meadows [5203], just north of Oxford's southern by-pass, is managed by BBONT specifically for the benefit of the Fritillaries. The best of all the surviving populations by the R. Thames, about 15km upstream from Buscott at Cricklade North Meadow NNR is in Wiltshire, where there are literally millions of individuals in some years, but even this population has declined dramatically in recent years, probably as a result of protracted flooding in the exceptionally wet winter of 2000-01. This is how the west Berkshire distribution was described by Druce in 1897: "near Coleshill by the R. Cole [29] where is it called *Wild Tulip* (1897), very abundant in the meadows between Iffley and Kennington where the plants for sale in Oxford are picked [50], Thorncroft Meadow at Blewbury [5385], in meadows about Burghfield [67] and near Theale [67] in the Kennet Meadows". Bowen records the distribution in 1968 like this: "Inglesham [2098] about 1000 plants, Broadleaze Farm [2095], in quantity at Grafton Lock [273993], Bagley Wood [5002], once abundant but now nearly extinct at Sandford Lock, well-managed populations still survive in Iffley Meadow (Plate 9) where there were 68,000 plants in 2011 and 34,000 in 2012, but the plant was last seen in 1920 and destroyed by cultivation at East Hagbourne Mill [5388], on the north bank of the Kennet at Burghfield Bridge [678707]". There is still a good population at Little Wittenham reserve meadow [5693] and at Grafton Lock [275991]. Garden escapes at Longcot churchyard [2790], Frilford [4497], Wootton [4701], Wytham [4508], East Hendred [4588], Streatley [5880], Sutton Courtenay Manor [502943]. It still grows by the R. Cole at Wickstead Farm [228937], the site producing 50 or so flowers each year, but the meadow was cut before flowering in 2004, so there were no flowers that year. It is well naturalized around the pond in the garden of the Old Rectory at Burghfield [666686] 1980-2004. Locally common as naturalised garden escapes (and also deliberately planted) in the country lanes east of the Newbury bypass around Foxgrove [445650]. Atlas 2000: [29], [46], [48], [40], [58], [59], [50], [67]

Fritillaria imperialis L. *Crown Imperial*

• gb 4

Statuesque garden plants with orange flowers and leaves in whorls, occasionally planted outside gardens on banks and ditches, typically in partial shade.

East Berks: in the roadside ditch uphill from the Dewdrop Inn on Ashley Hill [823814] in 2002. <1% (1km²).

West Berks: very common in the grounds of Kingston Bagpuize House [4097] in 1998-2004.

Lilium martagon L. *Martagon Lily*

• gb 6

This is the purple-flowered lily. Our *Lilium* are all garden escapes. Plants in gardens are often stripped bare of their leaves by the black larvae of the lily beetle *Lilioceris lili*, whose adults are bright crimson red.

East Berks: naturalised in Foliejon Park in grass on the edge of woodland in July 1999. <1% (1km²). Atlas 2000: [97]

West Berks: by ponds at Bucklebury [57] in 1897, Kingston Bagpuize House [405976] in 1897, 1968 (OXF) and 2003, planted in Langley Wood [489761]. Scattered through the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [46], [49]

Lilium pyrenaicum Gouan *Pyrenean Lily*

• gb 5

This is the orange-yellow-flowered lily.

Silwood Park: self-sown in disturbed ground near The Greenhouses, where it persisted from 1989-2000.

East Berks: in the verge at Newlands Farm in 1998 and on waste ground at Warfield Park in 1999. <1% (1km²). Atlas 2000: [76], [87], [96]

West Berks: in old gardens at Stanford Dingley [574716] in 1961 and Frilford [441974] in 1965. Atlas 2000: [49], [57]

Lilium candidum L. *Madonna Lily*

• gb 6

This is the white-flowered lily.

West Berks: in a roadside hedge at Wootton [4701] in 1965 and an old pit at Sutton Courtenay [5093] in 1977. Atlas 2000: no records.

¶ **Lilium** *L. African Queen* group, *L. 'Bright Star'*, *L. bulbiferum* var. *croceum*, *L. canadense*, *L. candidum*, *L. 'Casa Blanca'*, *L. 'Connecticut King'*, *L. 'Côte d'Azur'*, *L. formosanum* var. *pricei*, *L. henryi*, *L. lancifolium*, *L. lancifolium* 'Flore Pleno', *L. longiflorum*, *L. mackliniae*, *L. martagon* var. *album*, *L. martagon* var. *cattaniae*, *L. monadelphum*, *L. 'Mont Blanc'*, *L. nepalense*, *L. oxypetalum* var. *insigne*, *L. pardalinum* var. *giganteum*, *L. Pink Perfection* group, *L. pumilum*, *L. pyrenaicum*, *L. regale*, *L. regale* 'Album', *L. speciosum* var. *rubrum*

¶ **Liriope** *L. muscari*, *L. muscari* 'Variegata', *L. spicata* 'Silver Dragon'

¶ **Ophiopogon** *O. planiscapus* 'Nigrescens'

Convallaria majalis L. *Lily-of-the-valley*

grh 5

Oak and beech woods on leached soils; very local and rare as a native, but often planted in wild-looking situations and sometimes escaped from gardens. Most of our recent records are obvious garden relics.

NVC: W 8

Silwood Park: long persistent in a number of the plantation woodlands, but not found in any of the natural habitats. Cannon Wood, frequent in deep shade behind the Electricity Sub-station, in a large, ivy-filled clearing surrounded by dense holly on 20 April 1980 [9478 6840]; much increased by 2000; it now forms a solid patch measuring 15m x 10m. Drive Lawns, a few plants beneath the large Cypress. The tree was felled in 1980, and the plants, exposed to full sunlight, soon disappeared. Locally abundant in Ashurst Wood, behind the grass car park, adjacent to the road from Sunninghill Parish Church. South Lodge Wood, a patch measuring 25 m² close to the rear of South Lodge garden in 1980, still there in 2004. Under the hedge at Crossways by Silwood Road. In the woodland behind the Tennis Court; this population benefited greatly from the felling of the dense stand of self-sown Lawson Cypress in winter 2004-05 and the erection of a deer-and-rabbit fence to protect the newly planted rhododendron collection. Several places in Cheapside Village. Common beneath shrubs in the wilder parts of the Japanese Garden, and abundant on the gravel steps leading up to the wooden seat facing the bridge. Locally abundant beneath *Buxus* at the bottom of the graveyard at Ashurst, in the shade of the Black Pines that border the Ashurst Orchard (1979-2004). Locally

abundant in several places in the second year after the erection of the deer/rabbit fence at the back of the Tennis Court on 27 May 2006 as by the Tennis Court fence and the South Lodge gate.

Ascot: Tower Hill, Englemere, Coronation Road, South Ascot, Kings Beeches, Upper Village Road and Bridge Road Sunninghill, Charters Road, Sunningdale Park, Sunningdale Church, Titness, North Ascot, South Coworth, Winkfield Lodge.

East Berks: not in Druce and certainly not native in this district. Planted and relic populations at Whitley, Wargrave churchyard, Wellington College, Bisham, Wargrave, Finchampstead churchyard, Ambarrow, St Lawrence's at Reading. (Britten's old Cliveden locality is in Buckinghamshire), Willow Lane on Wargrave Marsh. Formerly under-recorded, now in 18% (1km²). Atlas 2000: all except [78]

West Berks: as a native plant it is confined to the eastern Kennet valley (mainly [46] and [56]) and the Northern Loop [40]. Chilswell Hill [40] in 1660, and abundant in Bagley Wood [50] towards Sunningwell in 1813. Wasing Wood [5763] in the Kennet valley in 1770. Recent records are mainly of garden escapes, as at Waterleaze Copse, Clarks Gully south of Greenham Common, Newbury golf course and Aldernbridge Gully [46], Jarn Mound and Wytham chalet garden [40], Thatcham and Bucklebury Common [56], Fence Wood [57], Benyon's Enclosure and Silchester [66], Pangbourne [67]. Atlas 2000: all except [37], [38], [39], [48], [49], [58], [59], [68], [69]

Polygonatum multiflorum (L.) All. *Solomon's-seal* grh 5
Convallaria multiflora L.

A local speciality of Kennet valley oak and alder woods, where it is locally abundant as an ancient woodland indicator species. Also occasional as a garden escape, but most if not all of the garden escapes are *P. x hybridum* (see below).

NVC: W 8

Ascot: no records of the wild plant (but see *P. x hybridum* below).

East Berks: between Shinfield and Swallowfield, Finchampstead woods, Ashley Hill wood. Rare as a native plant in Maidenhead Thicket in 1969. In the valley bottom at Lindenhill Wood [812795] in 2001. In shade on the edge of the ditch between Cannon Bridge and The Priory [705641] below Beech Hill in May 2002. <1% (1km²). Atlas 2000: [76], [88]

West Berks: a real local speciality, occasional in ancient woodlands throughout the Kennet valley (south of 80), but rare or absent to the north of 80. In Oldlands Copse near West Woodhay [378629], Ashampstead Common [5875], Sutton Courtenay [59] and in many south-eastern Kennet woodlands including [4065], [4570], [4575], [5962], [5070], [5570], [6060]. Particularly good on east-facing banks in Padworth Gully [6165]. Uncommon in Moor Copse Nature Reserve [6374]. Atlas 2000: all except [28], [38], [48], [40], [59], [68], [69]

Polygonatum x hybridum Brugger *Garden Solomon's-seal* ● grh 5
Polygonatum x intermedium Boreau, non Dumort.

The perianth is larger than in *P. multiflorum* (15-22mm rather than 9-15mm) and stems slightly angled rather than round. Often completely defoliated by the dark grey larvae of Solomon's-seal Sawfly, *Phymatocera aterrma*.

Silwood Park: Ashurst Lodge, 1 spike underneath the Wellingtonia on 21 April 1980. Cannon Wood, the patch by the Electricity Sub-station was seen in 1973, but not found again until 10 June 1980,

when 2 shoots were seen at the west edge of the ivy by the lily-of-the-valley patch. Conservatory, below the wall to the east of the steps past the bundle-planted beech in May 1999. Cannon Crossroads, beneath the hedge at Crossways where the *Allium ursinum* grows.

Ascot: local and rare on large estates. Sunningdale Park, Ascot Place.

East Berks: recently at Spencer's Wood, Riseley, Farley Court, The Mount, Road Research Lab, Scotlands, Ashley Hill, Burchett's Green, Park Wood, Cannon Court Farm, Maidenhead, St Leonard's, and on the ramparts of Windsor Castle. 3% (1km²). Atlas 2000: all except [78]

West Berks: Faringdon [29], Lockinge [48], Frilford [49], Boar's Hill [40]. Atlas 2000: [28]

Polygonatum odoratum (Mill.) Druce *Angular Solomon's-seal* ● grh 6
Convallaria odorata Miller

East Berks: plantations in the Wilderness and Fox Hill at Whiteknights Park (1969-80).

Polygonatum biflorum (Walter) Elliot ● grh 6
Polygonatum caniculatum (Muhlenb.) Pursh.

East Berks: a garden relic established on both the Berkshire and Surrey banks of Virginia Water (RNG) in 1986. This is an enormous plant, reaching 1.8m in height on rich moist soils, as in Savill Garden.

Polygonatum verticillatum (L.) All. *Whorled Solomon's-seal* ● grh 5

A very rare British native from mountain woods in Perthshire, Angus and Northumberland. A very rare alien in Berkshire.

Silwood Park: a single plant of unknown origin amongst nettles on the rubbish tip beside the CABI Polytunnel on 26 July 2007 (still there in December 2007). I suspect that the plant was used in the CABI Quarantine Greenhouses as a screening subject in the attempt to find a biocontrol agent for Japanese Knotweed in Britain, in the mistaken assumption that it belonged to the Polygonaceae. Still growing there in June 2008 despite dumping of waste during CABI's evacuation to Egham in winter 2007/8. Dug up, only days after this record, apparently by rabbits, on 25 June 2008. Not seen in 2009. Reappeared in the same spot on 24 June 2010 with two shoots amongst nettles. It survived the very hard winter of 2010-11, and there were three flowering shoots in June 2011. The plant is clearly thriving, despite competition from taller species.

¶ **Polygonatum** *P. biflorum*, *P. falcatum*, *P. falcatum* 'Variegatum', *P. hookeri*, *P. humile*, *P. x hybridum*, *P. x hybridum* 'Striatum', *P. odoratum* 'Flore Pleno'

¶ **Smilacina** *S. racemosa*, *S. stellata*

¶ **Lapageria** *L. rosea*

¶ **Reineckea** *R. carnea*

Maianthemum bifolium (L.) F.W. Schmidt *May Lily* ● grh 4

An uncommon garden plant in woodland gardens on the larger estates.

West Berks: local and rare. Well naturalized in the garden of the Old Rectory in Burghfield [66686] in April 2001.

Paris quadrifolia L. *Herb-paris*

grh 5

Sheltered Oak/Ash woods, local and rare, mainly in south-west Berkshire. An ancient woodland indicator, and one of the most exciting woodland plants to find in flower, partly because it is rare, but mainly because it is so strange.

NVC: W 12

East Berks: no records.

West Berks: in Middle Wood at Ashdown House [2882] and in Botley Copse [2880] nearby, Woolstone Wells [2987], Rivar Copse, under Ash in the dry valley at the western edge of the plantation (2 clumps in April 2002 of 35 and 5 stems) [350622], West Woodhay [3963], Kintbury [3866], West Fieldridge Copse [3574], Lodge Down Wood [3077], Shefford Woodlands [3673], Uffington Wood [3087], Holtwood [4164], Irish Hill [4067], locally frequent in Wytham Wood [4709], Cold Ash [5169], Radley Large Wood [5200], in a wet Ash woodland south of the canal at Theale [510662]. It is no longer found in Uffington (also called Britchcombe) Wood on White Horse Hill [3087], which has been ruined by fertilizer pollution from the adjacent arable land on the top of the down (see p. 94). Atlas 2000: [28], [36], [37], [38], [46], [40], [56], [50]

Ornithogalum pyrenaicum L. *Spiked Star-of-Bethlehem*

gb 6

Loncomelos pyrenaicus (L.) Hrouda ex Holub

A local speciality of calcareous oak woodlands and hedge-banks in south-west Berkshire. Very restricted in its distribution, but locally frequent. This is a scarce British plant of Oolitic Limestone, Lower Chalk and Greensand, growing up to 1m tall when it flowers in mid-June. In ash woodland it is often associated with *Allium ursinum* and in some old and ancient woodlands it can vie for dominance with *Hyacinthoides non-scripta*, but it often grows in hedge-banks, roadsides, old green lanes, unimproved pasture and river banks. Seedlings are produced *en masse* in early spring, but they take several years to grow to flowering size. The plant is easiest to count in early spring, because its narrow, blue-green leaves appear before those of the bluebell with which it often grows. Its English stronghold is around Bath, but it has declined since Dutch Elm Disease because of the rank growth of *Urtica dioica* that has followed the increase in light following the death of the canopy trees, and the pulse of nutrients that resulted from decomposition of the elm trunks. The unopened flower spikes were formerly collected and sold as *Bath Asparagus*; according to White (1912) they were "very little inferior to the cultivated esculent". Long after the bluebells have gone to seed, the slender leafless stalks rise 60cm above the dark green woodland carpet. The most usual associate is *Mercurialis perennis*, but occasional spikes are found among *Hedera helix*, *Melica uniflora*, *Glechoma hederacea*, *Stellaria holostea* or even *Pteridium aquilinum*. It is the same height as the *Poa trivialis* and, amazingly, in the speckled sunlight, they can be confused with one another.

East Berks: no records. The Ashridge Wood [8171] records are errors for the celebrated Ashridge Wood [4978] in West Berkshire (see below).

West Berks: there are 3 epicentres to the distribution: Hungerford [36], Beedon [57] and Greenham Common [56] (map on p. 13). The plant is found in hedges around Wansdyke and Prosperous [335645] and at East Court [318645], by the side of the A338 south of Standen Manor [329660] and on Inkpen Lower Green [3564], and in woods at Lower Poughley [346728] and Rivar Copse [3161]. To the east of Beedon the plant is common in Ashridge Wood [498783]. Your first sight of it is likely to be at the crossroads of the green lanes, growing amongst ivy under a big beech tree (Plate 16). In

the wood itself, the plant is commonest in the eastern edge, close to the grassy clearing. Sadly, the wood is spoiled by dark plantations of *Thuja plicata*. Also found on the sides of green lanes nearby, at Cheseridge Wood [507783], on the woodland edge by the track facing across to Banterwick farm at [503776], and in a wood margin below Nutfield Down at [488793]. In a roadside hedge in Harts Hill Road, Bucklebury [534685] in 2004. At Greenham Common the plants are found mainly to the north of the boundary road on either side of the cattle grid [507648], and near The Round House [515651] and [520650]. There were 14 spikes in long grass in full sun on the northern verge of the boundary road of Greenham Common, just before the sharp bend [519650] on the descent to Thatcham on 24 June 2007 in exactly the same location as the plant were re-discovered by Bill Helyar in the early 1970s (Druce knew this site, although he put it in the Pang rather than Kennet District: “On the banks by the side of Greenham”). Frank Hunt found a single spike growing in the hedge bank by footpath at Blewbury Reservoir [528852] on 22 June 2008. Atlas 2000: [36], [37], [47], [48], [56], [57]

Ornithogalum angustifolium Boreau *Star-of-Bethlehem*
Ornithogalum umbellatum auct., non L.

• gb 5

Meadows, pastures, osier holts, cornfields and grassy waste places; local and usually in very small quantity. It is an alien garden escape in Berkshire, but some authors think it is native in other parts of England (e.g. in Breckland).

Silwood Park: long-persistent in rough grassy places. Bowen had “3 clumps in Silwood Park (1972)”. These were probably the plants on North Gravel by the Header House. There is still a small colony in the triangle of grass next to the COPR greenhouse which is the last surviving fragment of North Gravel [9472 6875]. Seen every year from 20 May 1980 until 1988 when the site was cleared to make way for new greenhouses to replace those lost by the sale of Ashurst Lodge. There was no sign of any plants in May 1989 and the colony was assumed to be lost. Not so; on 20 May 1996 it was rediscovered in its original location, where there were 5 clumps in the tall grass below the new BP Greenhouse. Not seen in 2000 or 2001 and again feared lost, but there were 2 clumps with 20 or so flowers each on 9 May 2002, 7 clumps on 14 May 2003, and still 7 on 16 May 2004. This North Gravel population had increased to 10 clumps by 22 April 2006 despite the dominance of *Securigera varia* over much of the area. There were 10 flowering individuals on North Gravel on 3 June 2013 after the latest spring in memory. In 1990 a plant flowered at the corner of the new CABI Library, next to the old Furniture Store. Also at The Greenhouses, behind the Soil Washing Room, in a small rabbit enclosure that was erected to protect turfs rescued from the building work at Crown Wood, Bracknell, containing Common Spotted Orchids and Helleborines in February 1981. Star of Bethlehem appeared (presumably from the imported turf) in 5 June 1984. Still there in 1989, but now shaded out. Numerous clumps in the circle of bulbs where the *Malus floribunda* used to grow by the Herbaceous Border [9453 6850]; a patch of 3m x 5m in May 1994, still there in May 2003. In the Buckhurst Road Woodland behind Southwood Halls there were 3 plants in May 1999 close to the *Iris foetidissima*. In the graveyard and growing through the gravel of the church car park at Ashurst on 1 May 1999. One clump in the grassy verge of London Road below the lamp post opposite Silwood Road on 7 May 2002. A single individual in long grass, near the grave of Ann Finden (d. 1883), in the southern (older) part of the graveyard at Ashurst on 31 May 2003. A single individual in the lawn of the Buckhurst Road entrance, just north of the security hut, first seen on 15 May 2004. Still in the older parts of the graveyard in May 2006 but on different graves: several clumps on the grave of Archibald Hitchcock (d. 1900) and at the foot of the grave of James Walker (d. 1901).

Ascot: local and rare, on waste ground in Sunninghill Village in 1998. On a grave in the shady northern corner of Sunningdale churchyard in 2002. Rare in South Ascot graveyard on 26 April 2004. A single plant in the roadside at South Ascot [926677] on 26 April 2009.

East Berks: on islands in the Thames at Shiplake, at the foot of Winter Hill and in Quarry Woods, Wellington College brickfield, Remenham lane, by the river at Park Place, well naturalized near Victoria Bridge, Windsor. Leighton Park, Park Place, Arborfield, Wellington College, Easthampstead Park, Cookham, Cookham Dene, Boulter's Lock, churchyard of St Michael's Sandhurst [827619], and as a weed of flower beds in the Military Academy [8660], between Woodley and Wokingham [7870], Farley Hill [7564], Ashley Hill [8281], Sindlesham [7670], Whiteknights Park, Hopkilm Farm [7068], Rapley Lakes [8964], abandoned allotments at Woodley [7573]. 4% (1km²). Atlas 2000: all squares

West Berks: Ashbury [28], Faringdon pit and Longcot Church [29], Whitehorse Hill [38], Buckland and Longworth [39], Donnington Castle [46], East Ilsley [48], frequent on verges in Fyfield [423987], Frilford Heath and Cothill [49], Bessels Leigh, Boars Hill and Long Copse [40], Lower Radley [59], Great Wood [56], Stanford Dingley [57], Streatley [58], Little Wittenham [5693], Pingewood [6869], Sulham and Lower Basildon [6078]. Atlas 2000: all except [50], [69]

Ornithogalum nutans L. *Drooping Star-of-Bethlehem* ● gb 4 ↓

A spectacular garden plant, introduced in plantations and parks, rare. This bulky, early flowering plant has upper bracts longer than the pedicels and the anthers have broad wings, ending in projecting triangular points.

East Berks: a rare alien in Coley Park Reading in 1881 (**BM**). Wantage Hall, Reading University [7371] in 1968 (**RNG**). Atlas 2000: no records.

West Berks: Wickham [37] in 1936 (**RDG**), Lockinge [4387] in 1962-76 (**LAN**), Longworth pit [39] in 1964, with pre-1920 records from Bessels Leigh [40] and Sutton Courtenay [59]. In pasture at Manor Farm Little Coxwell [282931] on 27 March 1988. On a roadside verge at Cothill [4648] in 1991. A single plant in an old orchard behind the church at West Ilsley [473824] on 14 April 2001. Local and rare below a lime tree in the rookery on the green outside Kingston Bagpuize Church [4098] on 20 April 2001. Atlas 2000: [29], [48], [49]

¶ **Ornithogalum** *O. longibracteatum*, *O. nutans*, *O. thyrsoides*

Scilla bifolia L. *Alpine Squill* ● gb 3

Much less common than the nodding *S. siberica* in churchyards and on banks, it has smaller, erect (not pendant) flowers and leaves sheathing the flowering stem.

West Berks: in the churchyard at Pangbourne [6376] in 1999.

Scilla bithynica Boiss. *Greek Squill* ● gb 3

In grass with other spring bulbs, but much the least common of the Squills with us.

West Berks: in short grass at Stanford Dingley churchyard in 2002 [5771].

Scilla siberica Haw. *Siberian Squill* ● gb 3

This is the most frequent of the *Scilla* with us. Occasional in churchyards and parkland throughout. The dark blue large flowers (tepals 12-16mm) face downwards (pendant), and the bracts are very

small (1-2mm). Told from *Chionodoxa* by the fact that the tepals are separate all the way to the base (not fused into a tube).

Silwood Park: uncommon as relics of former mass-plantings, as in the shrub bed west of the Conservatory. Also in grass by The Greenhouses. Much less common than *Chionodoxa* in Silwood.

East Berks: typically found in graveyards as at Wargrave where it flowers amongst the snowdrops. <1% (1km²). Atlas 2000: [77], [96], [97]

West Berks: locally common, as at the streamside meadow below the church at Lockinge. Also at Little Coxwell [29], Welford Park [47], West Hendred [48], Steventon [49], Stanford Dingley [57], Streatley [58]. Long Copse [473046] on 25 March 2007 growing with *Eranthis hyemalis*. Atlas 2000: [29], [36], [46], [47], [48], [49], [40], [57], [58], [67]

Scilla liliohyacinthus L. *Pyrenean Squill* ● gb 3

Known by its broad leaves (10-30mm), numerous (5-15) erect flowers, and large bracts (10-25mm).

East Berks: Cookham Rise [8884] in 1999. <1 % (1km²).

West Berks: in a plantation at Coleshill [29] in 1968 but not persistent.

¶ **Scilla** *S. autumnalis*, *S. bifolia*, *S. liliohyacinthus*, *S. litardierei*, *S. mischtschenkoana*, *S. peruviana*, *S. siberica*, *S. siberica* 'Alba', *S. verna*

Hyacinthoides italica (L.) Rothm. *Italian Bluebell* ● gb 4 †
Scilla italica L.

West Berks: a garden escape found at Wantage [48] in 1958 (OXF), but not persisting.

Hyacinthoides non-scripta (L.) Chouard ex Rothm. *Bluebell* gb 4

Hyacinthus non-scriptus L.

Scilla non-scripta (L.) Hoffsgg. & Link

Scilla festalis Salisb.

Endymion non-scriptus (L.) Garcke

Our most spectacular woodland wildflower, carpeting the drier parts of woodlands in unbroken sheets of blue in April. Also found in thickets, coppices, hedges, bushy heaths and in grassland. Abundant and generally distributed, but uncommon in the Vale of the White Horse and least common on the chalk ridge, where the woodland ground flora tends to be dominated by *Mercurialis perennis*. It is one of the chief adornments of our woodlands, and had the distinction of being the emblem of the Botanical Society of the British Isles. "It seems the heaven upbreking through the earth". It was in full flower at the beginning of April during the very early spring of 2002. A highly charismatic wildflower, it is the plant dedicated to St George, patron saint of England, and is the envy of botanical visitors from continental Europe. Threatened by habitat destruction, eutrophication, acid rain and the depredations of alien animals like Muntjak deer (and feral Wild Boar in the not too distant future, no doubt). There is no evidence, however, that any populations of the wild plant are threatened by invasion of the garden plant (*H. non-scripta* x *H. hispanica*) or by "genetic pollution" through hybridization (with *H. hispanica*). It is distinguished from the hybrid by the racemes which are pendant (not spreading) at the apex, the anthers are cream coloured (not blue), and the perianth is tubular (i.e. parallel-sided, not bell-shaped).

NVC: OV 27; U 20; W 6,8,10,12,14-16,21,22,25

Silwood Park: the best bluebell wood is Mann's Copse, where the plant is "magnificent, a sight to be seen" in late April. Locally abundant in the ancient woodland fragment at Nash's Copse, and by the ancient track of Church Lane footpath at the Mill Lane end. Found sparingly in all the woodlands, and in the vicinity of all the buildings. Also growing in full sun in grasslands as at Church Field and Oak Mead, where it is locally abundant on the western edge. The younger, naturally regenerated Oak woodlands that recruited during the myxomatosis epidemic of the late 1950s, do not yet (2004) have bluebells in the understorey, 50 years later. Common in the churchyard at Ashurst and throughout Cheapside Village, where it grows with the hybrid *Hyacinthoides non-scripta* x *H. hispanica*. Self seeding freely into the gravel plots at Ashurst Warren in May 2004 from the mature plants under the trees lining the graveyard. On imported topsoil in the Ashurst Lysimeter in its second year on 6 May 2006 there was one white-flowered individual and one blue-flowered individual, about 5m away.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	1	0	25	37

East Berks: the hazel coppice within the ancient woodlands alongside the M4 motorway in [87] are particularly good for bluebells, as at Great Wood [8576] and Billingbear [8272]. These communities have *Galium aparine* and *Stellaria holostea* amongst the bluebells, with very little bramble and no *Anemone nemorosa* or *Orchis mascula*. The woodland at Wykery Copse [8568] on the western outskirts of Bracknell has the later two species, but in different parts of the wood, away from the bluebells. In the chalk woodlands at Bisham [8584], the bluebells are restricted to the acid soils on top of the ridge. Great Wood [7365] at Swallowfield is distinguished by the extraordinary abundance of Climbing Corydalis, *Ceratocarpus claviculata*, scrambling amongst the bluebells. 54% (1km²). Atlas 2000: all squares

West Berks: widespread, but uncommon in parts of [39], [48] and [58] on the chalk ridge, but grows in the flatter summit parts of the chalk woodlands at Rivar Copse [3562] where the chalk is overlain by more acid substrates. Most abundant in the Kennet woodlands: the Oak-Hazel woodlands at Leyatt Copse, Watchcroft Copse, Patch Copse, Great Park Wood, Cymbalcroft Copse and Househill Copse, all in [3475], have spectacular shows of bluebells. Other good bluebell woods include Enborne Copse [4366], Irish Hill [4067], Eatley Copse [4577], Woolvers Borders [4680], Wickslett Copse [4480], Powder Hill Wood [4803], Saddle Copse [4605], Cakeball Copse [5065], Woolhampton [5766], Ashampstead Common [5875], Park Wood [5275], Beche Park Wood [5577], Aldworth [5579], Bennet's Wood [5878], Cheseridge Wood [5078], King's Copse [5770], Padworth Gully [6165], Beech Hill Coverts and Priory Copse [6964], James Copse [6669], and Moor Copse Nature Reserve [6374] at Sulham. The woods below Woodlands St Mary [3475] are good for bluebells, but then there is a big gap in the distribution from Lambourn [3279] north to Buscot [2497] and eastwards to Pusey [3697] where the woods are dominated by *Mercurialis perennis*. The woods from Tubney [4400] through Bessels Leigh [4602] to Bagley [5002] have some good bluebell patches. The break between the bluebell and Dog's Mercury woods in [57] occurs between Bennet's Wood, east of Aldworth [588788] and Mutton Copse, south of Streatley [586794]. Atlas 2000: all squares

Hyacinthoides non-scripta* x *H. hispanica *Garden Bluebell*
Scilla x *patula* Lam. ex DC.

• gb 5

A common garden escape in ditches and on banks in villages. Seldom found in deep shade. Intermediate in all characters of both parents. Fertile, and often present in the absence of both parents. Most old records of *H. hispanica* probably belong here. Told from bluebell by its blue (not white) anthers and its bell shaped (not parallel-sided) flowers. The pink form is very common. There is

absolutely no evidence that these plants are invasive of ancient woodland, nor that gene flow from them threatens native populations of bluebell.

Silwood Park: uncommon in old flower beds and shrubberies around the Manor House and at The Farm. Roadsides in Cheapside Village. In the hedge of London Road east of Knight Frank.

Ascot: Englemere Pond (1970), Sunningdale Park, Ascot Station, Charters Road, Dry Arch Road, Johnson's Pond. A riot of different colour forms (white, pink and blue) on the bank of the railway cutting below the bridge in Upper Village Road, Sunninghill. Locally abundant on railway banks at Ascot Station. Plants with pink flowers common by the stream through South Ascot.

East Berks: not in Druce or Bowen. Leighton Park (1968), building site in Reading (1982), Virginia Water (1984). Recently at Spencer's Wood, Three Mile Cross, Mill House, Randall's Farm, Limmerhill, Rivermead, Ruscombe, Gardener's Green, Sandhurst, Hare Hatch, Littlewick Green, White Waltham, Stubbings, in shade in the northern block of Maidenhead Thicket at Pinkneys Green, East Maidenhead. All along the railway, especially where gardens back onto cuttings, as at Martins Heron, Bracknell, Wokingham, Winnersh, Earley and Reading. 7% (1km²). Atlas 2000: [77], [86], [87], [88], [96]

West Berks: Didcot [59] in 1977, Boars Hill [40] in 1981, Silchester Common [66] and Inkpen common [36] in 1983, Coleshill [29] in 1987, Lewingdon [5879], Sutton Courtenay [5094] in 2002. Atlas 2000: all except [37], [47], [56], [50]

Hyacinthoides hispanica (Mill.) Rothm. *Spanish Bluebell* ● gb 5
Scilla hispanica Miller
Endymion hispanicus (Miller) Chouard
Scilla non-scripta (L.) Hoffsgg. & Link subsp. hispanica (Miller) Ietsw.

Roadsides and grassy waste places near houses; in small quantity. Much over-recorded in the past for the hybrid (see above). Racemes erect, anthers blue, perianth bell-shaped.

East Berks: the old records from Maidenhead, Bisham Wood, Cookham are possibly the hybrid rather than the true species.

West Berks: in an old garden in Faringdon in 2001. Newbury [46], on an abandoned allotment.

Puschkinia scilloides Adams *Striped Squill* ● gb 2

A garden escape and relic of former cultivation. Occasional in churchyards, but seldom far from habitation.

Silwood Park: in the churchyard at Ashurst.

East Berks: in rough grass in the old abbey grounds at Sonning (1982-2004).

West Berks: Faringdon [29], close to the church in 2000.

¶ **Puschkinia** *P. scilloides* var. *libanotica*

Hyacinthus orientalis L. *Hyacinth* ● gb 3

Widespread in churchyards, usually blue-flowered, but whites and pinks occur. Often planted on graves, or put out on graves as potted plants (the bulbs are sometimes planted after flowering, sometimes thrown away, where they persist quite happily on the churchyard compost heap). Sometimes on waste ground in villages as a garden outcast.

Silwood Park: long-lived relics around The Greenhouses (1979-2001). A single red-flowered plant in the wood opposite Silwood Nurseries adjacent to Pound Hill Field in 2000. Occasional in the churchyard at Ashurst.

East Berks: frequent in churchyards and cemeteries. Recently at Wargrave, Sonning, Hurley, Blackwater Station and Sandhurst. <1% (1km²). Atlas 2000: [77], [86], [87], [96]

West Berks: planted on graves in churchyards throughout. Atlas 2000: [29], [36], [39], [46], [47], [40], [57], [66], [67]

¶ **Hyacinthus** *H. orientalis* ‘Hollyhock’, *H. orientalis* ‘Gipsy Queen’, *H. orientalis* ‘Ostara’

Chionodoxa species are told from *Scilla* by the tepals fused into a short tube at the base.

Chionodoxa forbesii Baker *Glory-of-the-snow* ● gb 3
Chionodoxa luciliae sensu Baker, non Boiss.
Scilla siehii (Stapf) Speta
Scilla forbesii (Baker) Speta

This is much commoner than *C. luciliae* as a self-sown garden escape or outcast. It is told from it simply by the number of flowers: 4-12 is *C. forbesii*, 1-2 is *C. luciliae*.

Silwood Park: naturalized in sunny places in the shrubberies around the Manor House, commonest below the Conservatory Steps.

East Berks: Clewer, Sonning Church, Sandhurst, Blackwater, Windsor. 2% (1km²). Atlas 2000: [77], [86], [96], [97]

West Berks: Atlas 2000: [39], [40], [56]

Chionodoxa sardensis Whittall ex Barr *Lesser Glory-of-the-snow* ● gb 3

West Berks: in a ditch at Silchester [6262] in 1978 (RNG) (det. R. Sonster).

Chionodoxa luciliae Boiss. *Boissier's Glory-of-the-snow* ● gb 3

An uncommon garden escape (see *C. forbesii*, above). None of these records is supported by specimens, so it must remain doubtful that this is a Berkshire plant.

East Berks: Whiteknights Park (1974). Atlas 2000: [86], [96]

West Berks: Longworth House [39] in 1966, in the copse on Lamborough Hill at Wootton [40] in 1977, and planted on Jarn Mound [40] in 1982. Atlas 2000: [46], [67]

Muscari neglectum Guss. ex Ten. *Grape-hyacinth* ● gb 3
Muscari atlanticum Boiss. & Reuter
Muscari racemosum Lam. & DC non (L.) Mill.

Railway banks, very rare. Alien (but thought to be native in Suffolk and Cambridgeshire). Over recorded for *M. armeniacum* (see below). The basal fertile flowers are almost blackish-blue (not bright blue).

East Berks: Katesgrove, Reading (1831), a sandy field by Coppid Beech roundabout (1987). Atlas 2000: no records.

West Berks: on a railway bank near Newbury Station [46] in 1897, Rowstock [48] and Bessels Leigh [40] in 1918, planted on Jarn Mound in 1933, weed in Childrey rectory garden [38] in 1963, Farmoor [40] in 1964 (OXF), Great Shefford [37] in 1971. Atlas 2000: [29] [38], [46]

Muscari armeniacum Leichtlin ex Baker *Garden Grape-hyacinth*

• gb 4 ↑

Waste ground, walls, roadsides and railway banks, locally frequent but never far from houses. This is much the commonest *Grape-hyacinth* found as a garden escape. It is often abundant in dumped topsoil, being moved about both as seeds and bulbs. Told from *M. neglectum* by flower colour (bright blue rather than blackish-blue) and smaller fertile flowers (3.5-5.5mm rather than 3.5-7.5mm).

Silwood Park: Garden Wood Bank, very common on imported topsoil around the Science Park and North Block following the landscaping work in April 1990. It was still frequent in April 1996 but rare by 2000 and gone by 2002.

Ascot: local and uncommon in the district. Occasional on waste ground at Tower Court in 2002 and in North Ascot in 2000. Locally frequent in the churchyard at South Ascot.

East Berks: Whiteknights (1974). Particularly common in the grassy triangle around the pond in Shurlock Row [834747]. Frequent in villages throughout from Sonning to Finchampstead, in sites too numerous to mention. 16% (1km²). Atlas 2000: all squares

West Berks: on the railway at Newbury [46] in 1892 (OXF), on the roadside at Appleton Lower common [40] in 1955 (OXF), Denchworth churchyard [39] in 1962, on the railway at Compton [58] in 1963, and in Little Wittenham churchyard in 1987. Recently at Shrivenham and Woolstone [28], Faringdon [29], Kintbury [36], Welford and Shefford Woodlands [37], Stanford-in-the-Vale [39], Enborne Church and Newbury [46], Boxford, Leckhampstead and Brightwalton [47], Farnborough [48], Steventon, Fyfield, Abingdon and Kingston Bagpuize [49], Burghfield, Stratfield Mortimer, Beech Hill and Mortimer [66], Pangbourne [67]. Particularly common in villages high up on the chalk downs at Peasemore [4577] and East Ilsley [4981] in 1998-2004. Atlas 2000: all squares

Muscari comosum (L.) Mill. *Tassel Hyacinth*
Hyacinthus comosus L.

• gb 4 †

Sown fields, rare and transient. Long extinct.

West Berks: Bessels Leigh [40] in 1907-45, in a vetch field at Upton [58], Sutton Courtenay [59] and Streatley [58] pre-1918, Frilford [49] in 1929 (OXF), Aldworth [57] in 1933 (RDG). Atlas 2000: no records.

¶ **Muscari** *M. aucheri*, *M. azureum*, *M. comosum* 'Plumosum', *M. latifolium*

Allium porrum L. *Leek*

• gb 6

Silwood Park: rare but spectacular in Silwood Bottom, where several leeks ran to flower in July 2000.

East Berks: grown commercially in large fields at Sheeplands Farm near Wargrave [787777], and surviving cultivation to become a volunteer weed of succeeding crops. An occasional outcast on waste ground in allotments, and frequent on compost heaps as culinary waste. The habit of growing giant pot leeks for competitive purposes is nothing like as widespread amongst Berkshire allotment holders as it is in Northern England. Show leeks in Berkshire village fetes are a pale imitation of their northern cousins. Seeds of well over 100 named cultivars of leeks are currently sold in Berkshire, but rather few of them are F1 hybrids. Bulmershe Court, Upper Wargrave. <1% (1km²). Atlas 2000: [77]

West Berks: common on old allotments, as at Botley [40] and Grandpont [50] in 2002. Atlas 2000: [46], [40], [50], [66]

Allium cepa L. *Onion*

• gb 6

Grown on virtually every allotment and vegetable garden, and often thrown out onto compost heaps and waste ground. Poor competitors with established vegetation, and short lived on grassy waste ground. Their tall stems are extremely conspicuous when running to seed. A cultivated plant of great antiquity, not known as a wild plant. Most garden onions are F1 hybrids of which more than 50 named forms are currently available. Spring Onions (which are cultivars like 'White Lisbon' with long necks and a small bulb), are frequent in culinary waste.

Silwood Park: a relic of cultivation in Drive Field and Lodge Field (both sites now built over) and in Ashurst Four Acre Field on the site of the former student allotments in June 1994. Locally common in Silwood Bottom on abandoned student allotments in July 2000.

East Berks: Smallmead tip (1971). Whitley, Bulmershe Court, Woodley, Sheeplands Farm, Downshire, West Maidenhead. 1% (1km²). Atlas 2000: [77], [86], [88], [96]

West Berks: Abingdon Racecourse [49] in 1918. Atlas 2000: [40], [66]

Allium fistulosum L. *Welsh Onion*

• gb 6

Grown in gardens and allotments and hybridised with *A. cepa*. The plants are like large and very coarse chives with hollow evergreen leaves, but they have cylindrical leaves, the stem widest at the middle, and the tepals are longer (7-9mm rather than 3-4.5mm). This is the species that is used in Chinese and Japanese cooking as Spring Onions, sometimes as the hybrid with *A. cepa*.

East Berks: on abandoned allotments at Bulmershe [7573] in 1997. <1% (1km²).

Allium schoenoprasum L. *Chives*

• gb 6

A common herb-garden plant, often grown in beds near the kitchen door with other frequently used plants like parsley and sage. Occasional on stony waste ground in towns and on dry banks in villages where garden waste is fly-tipped. The flower heads are the colour of Thrift, *Armeria maritima*.

Silwood Park: a relic of cultivation on the rockery in the Japanese Garden in 1980. Rare in Silwood Bottom in 1999.

Ascot: rare on the grotto at Ascot Place in 1998. On the grave of Esther Goodger (d. 1965) in South Ascot graveyard in June 2003.

East Berks: a garden in Reading in 1964 (RNG), near a pond in Silwood Park in 1970 (RNG). Recently at Spencer's Wood, Eversley Bridge, South Reading, Bulmershe, Bulmershe Court, Wargrave, Upper Wargrave, Great Hollands, West End, Woodlands Park, Scotlands, North Town, Harvest Hill, Old Windsor. 3% (1km²). Atlas 2000: all except [78]

West Berks: as a garden outcast in a lay-by on the A340 near the M4 motorway bridge [6373] in 1986. Recently in Faringdon [29], Newbury [36] and Abingdon [49]. Locally common on abandoned allotments in Botley [40] and Grandpont [50] in 2002. Atlas 2000: [29], [36], [46], [40], [50], [67], [68]

Allium roseum L. *Rosy Garlic* ● gb 6

Ascot: about 20 plants in old flower beds in South Ascot on 29 May 2009 at the junction of Woodland Drive and Lower Village Road [928678].

Ascot: rare in old flower beds in South Ascot on 29 May 2009 where there were 20 or so plants.

East Berks: recently on waste ground at Sindlesham Mill, Pollock Bridge, Westcott, West Dedworth. <1% (1km²). Atlas 2000: [77], [86], [97]

Allium neapolitanum Cirillo *Neapolitan Garlic* ● gb 4

East Berks: not in Druce or Bowen. Rare on waste ground in Reading in 1997. Sindlesham Mill and Loddon Bridge in 1999. <1% (1km²). Atlas 2000: [77]

Allium subhirsutum L. *Hairy Garlic* ● gb 5

Silwood Park: by the Met Tower, in a disturbed piece of ground by the control block of the new satellite dish; growing with *Papaver dubium* on 10 May 1990. Still there in a single clump with 4 flower stems amongst *Carex muricata* subsp. *lamprocarpa* at the Satellite Control Room [9380 6928] on 8 May 2005 and 10 May 2010. One bulb was moved to a similar habitat by the Machinery Centre, but this did not take.

East Berks: only recorded from Silwood Park. <1% (1km²). Atlas 2000: [96]

West Berks: found by John Killick at Sutton Pools [505944] in May 2004.

Allium moly L. *Yellow Garlic* ● gb 5

A distinctive garden plant with small yellow flowers. Uncommon as an outcast.

Silwood Park: Met Tower, one plant by the drain cover at the edge of the bed below the right hand window of the control block on 6 June 1994. Overgrown by *Carex muricata* in 1997 and last seen in 1998.

Ascot: waste ground at Coronation Road and Polo Club in 1997.

East Berks: not in Druce or Bowen. Lambs Lane, Three Mile Cross, Arborfield, Binfield, Woodlands Park, Cookham Dean, Hog Common, Old Windsor. 2% (1km²). Atlas 2000: [76], [87], [88], [96], [97]

West Berks: Atlas 2000: [49]

Allium triquetrum L. *Three-cornered Garlic*

• gb 5

A rare garden escape in Berkshire, not naturalised to anything like the extent that it is in south-west England.

NVC: OV 24

Ascot: local and rare. King's Beeches and Coronation Road naturalized along a stretch of fencing at Garden House (1999). Still abundant, but spread no further at Garden House on 15 May 2008.

East Berks: not in Druce or Bowen. Bearwood, Emmbrook, Bulmershe Court, Eastheath, East Maidenhead. Locally abundant with *Ranunculus ficaria* in the lane-side at Weir Bank, Bray [913789] in April 2003. 1% (1km²). Atlas 2000: [76], [77], [86], [88], [96]

West Berks: on the path to the Thames at Duxford [3699]. Atlas 2000: [29], [39], [46]

Allium paradoxum (M. Bieb.) G. Don *Few-flowered Garlic*

• gb 4

Scilla paradoxa M. Bieb.

A curious, untidy-looking species with bulbs and long-stalked flowers.

Ascot: very local and rare. A single clump of c.10 plants in the shady grassed verge of Whitmore Lane, opposite Dale Lodge Road at the edge of the alder swamp [954681] on 3 April 2001. Not in Silwood Park.

East Berks: locally abundant in Maidenhead Thicket in 1968. The population was thought to have been destroyed during construction of the A404(M) Maidenhead Bypass, but two good patches were found on the edge of the northern block of the woodland [854816] to the south of Pinkneys Green in April 2002. 1% (1km²). Atlas 2000: [88]

West Berks: very local and rare. Plantations near Sparsholt Church [3487] in 1977 (**OXF**). A single patch in the grass verge on the northern edge of Bourton [2387] on 20 April 2001. Atlas 2000: [28], [38]

Allium ursinum L. *Ramsons*

gb 4

Damp woods, bushy places and by springs on nutrient-rich soils in woods. Scattered and local but sometimes in large stands in the west of the county. It is a curious distribution that would repay a more detailed investigation.

NVC: OV 27; W 8,12,21

Silwood Park: very rare in Nash's Copse; a single plant amongst bluebells under sycamore close to the boundary of Herons Brook (still there in April 2003). Very rare in wet woodlands west of Silwood Lake; a single plant on 15 May 2003. Very local and rare as scattered individuals in the bottom of the hedge at Crossways by the Cannon Crossroads. There was one plant in the mown part of the verge on 7 May 1997 and two plants under the hedge in April 2000; there were 11 stems in May 2002 and 16 in 2004. A few plants scattered in the grass verge on the Silwood side of London Road under the *Quercus ilex*, and between Knight Frank and Silwood Road in 2001-04; the largest clump is by the first lamp post east of Knight Frank, and there is another small clump opposite the telephone substations. One plant beneath the fence at the South Lodge entrance in May 2002, and 3 plants beneath the fence of Silwood House in May 2003; there were 6 plants below the fence on the verge of

London Road at Silwood House in May 2004 and these had increased to *c.* 20 plants by 25 April 2007 (they were the only plants on bare ground below the fence, perhaps the beneficiaries of selective weeding?). Increased even more, and it is now continuous over several metres of fence on 2 May 2009.

East Berks: local and rare. The best population is in the northern block of Maidenhead Thicket, to the south of Pinkneys Green [856817], where there are several patches in which Ramsons forms a dense monoculture on the woodland floor. In the dry zone above the sodden Loddon Lily sites on sloping ground that is not flooded in winter at Sandford Mill [7873], Shinfield, Arborfield, Cookham. Recently, beneath alders on the western bank of the R. Loddon at Hall Farm Arborfield [747681], Scotlands, Burchett's Green, by the A332 roundabout in Windsor, and on the cliffs below Windsor Castle. 1% (1km²). Atlas 2000: [76], [88], [96], [97]

West Berks: scattered along the length of the Thames valley but commonest in the Northern Loop and the Goring Gap, with a few records from the western parts of the Kennet valley. Beckett Park [28], Coleshill [29], Little Rivar Copse (rare), sunken lanes around Inkpen and Wallingtons Lake [36], locally dominant in Lynch Wood Lambourn [37], Letcombe and on the edge of the churchyard in Wantage [38], Shellingford and Buckland [39], Nalderhill Copse [416691], Sandleford and Donnington Grove [46], Courtfield House and Milton House [49], Appleton, Wytham and Long Copse Cumnor [40], South Lands [56], Frilsham [57], Streatley and Fair Mile [58], Sutton Courtenay Manor [59], very local on the roadside edge of Moor Copse Nature Reserve [6373], Sulham, Pennycroft Copse, Little Bowden and Purley [67]. Atlas 2000: all except [47], [48], [50], [66], [68], [69]

Allium oleraceum L. *Field Garlic*

gb 7 †

West Berks: very rare in "upland meadow" at Pennyhooks farm [2390] near Watchfield in 1895 (OXF), and on a grassy bank at Tilehurst [67] in 1955-56. These records are probably as colonists rather than natives. Extinct.

Allium vineale L. *Wild Onion*

gb 6

Dry roadsides, grassland, churchyards (especially on the clay), dry arable fields, old wall tops, hedge-sides, gardens and waste places. Occasional, but rare or absent from acid soils in south and east Berkshire. Very conspicuous in February, after the leaves have expanded, but long before the grass has started to grow.

Silwood Park: first Silwood record, in the planter outside the front of Munro Building on 24 June 2010, with *Scrophularia auriculata* and *Barbarea vulgaris*. Still thriving in February 2014.

Ascot: very local as a garden weed in Winkfield Row [8970] in 1999. In the grassy triangle at the northern end of Ascot Racecourse [922699] in 2001. Local and rare in Sunninghill, in the verge of Bagshot Road opposite Cavendish Meads [934674] in January 2002. Rare in pastures on the Broomhall Priory land in Sunningdale in 2003. Not in Silwood Park until 2010 (see above).

East Berks: Ryeish Green, Aston Lane Remenham, Sandford Mill, Sonning meadows, Bulmershe, Dinton Pastures, Littlewick Green, Maidenhead Bridge, Windsor, Ruscombe, Twyford, Hurley, Wargrave, Cookham, Bray, Monkey Island Lane, Loddon Bridge, Bearwood, Jouldern's Ford, abundant in Clewer churchyard, Warfield cemetery, on ditch banks below Windsor Castle and in verges at Savill Court near Bishop's Gate. Increasing, especially on roadsides and embankments as at

Windsor; scattered throughout but commonest in the Thames valley. 10% (1km²). Atlas 2000: [76], [77], [87], [88], [97]

West Berks: locally abundant in churchyards in the Vale of the White Horse and in the Thames Valley. Scattered throughout, but less common in the west. Ashbury and Bourton [28], Coleshill, Longcot, Faringdon and Great Coxwell [29], Kintbury [36], Lambourn [37], Kingston Bagpuize and Drayton [49], Thatcham [56], Bucklebury [5570], common by the footpath between Aston Upthorpe and Blewbury [5485] in 2002, Radley [59]. Atlas 2000: all squares

Allium nigrum L. *Broad-leaved Leek* ● gb 5

East Berks: by the pavement of Waterloo Road Wokingham [82157 68029] on 4 June 2012.

West Berks: in a hedge near Aldermaston Wharf [603670] in 1960 and on the riverbank at Sutton Courtenay [5093] in 1976-77 (OXF) (det. D. McClintock).

Allium giganteum Reg. ● gb 5

East Berks: recently at Bulmershe, Mill House, The Mount, Wescott, West End, Littlewick Green, Altmore, Maidens Green, Burchett's Green, Holloway, Bear's Rails. 2% (1km²). Atlas 2000: all except [78], [96]

West Berks: Atlas 2000: [36]

Allium cristophii Trautv. *Star of Persia* ● gb 5

A spectacular bedding plant with huge flower heads up to 20cm across. Rare as a garden outcast.

East Berks: on waste ground at Westcott [8268] in 1998. <1% (1km²). Atlas 2000: [86]

Allium sativum L. *Garlic* ● gb 5

Ubiquitous in kitchens, but usually bought in. Grown by keen gardeners in dry sunny beds, where the cloves are planted in spring, after the risk of frost has passed, then dug up again in autumn and overwintered indoors, before planting out a second time (as "rounds") in the following spring. The multi-cloved bulb is then harvested at the end of the second growing season. The species is so ancient as a crop plant that it is not known from the wild (there is evidence that the Egyptians were using garlic around BC3200). It is propagated entirely by vegetative means, and never sets viable seed under any growing conditions. This severely limits its potential for naturalisation, and the plant is very seldom seen outside gardens except as an obvious component of culinary waste.

East Berks: rare on allotments at Bulmershe [7573] in 1999. <1% (1km²).

The National Collection of *Allium* with 187 species is held by Mrs P. Davies, 6 Blenheim Road, Caversham, Reading.

¶ **Allium** *A. acuminatum*, *A. akaka*, *A. atropurpureum*, *A. beesianum*, *A. caeruleum*, *A. carinatum* subsp. *pulchellum*, *A. cristophii*, *A. cyaneum*, *A. cyathophorum* var. *farreri*, *A. fistulosum*, *A. flavum*, *A. giganteum*, *A. hollandicum*, *A. hollandicum* 'Purple Sensation', *A. karataviense*, *A. moly*, *A. neapolitanum*, *A. nigrum*, *A. oreophilum*, *A. rosenbachianum*, *A. roseum*, *A. schoenoprasum* 'Black Isle Blush', *A. schoenoprasum* 'Forescate', *A. senescens* subsp. *montanum* var. *glaucum*, *A. sikkimense*, *A. sphaerocephalon*, *A. tuberosum*, *A. unifolium*, *A. zebdanense*

¶ **Asphodeline** *A. liburnica*, *A. lutea*

Nectaroscordum siculum (Ucria) Lindl. *Honey Garlic*
Allium siculum Ucria

• gb 5

Ascot: rare in old flower beds in South Ascot on 29 May 2009 where there were 5 plants at the junction of Woodland Drive and Lower Village Road [928678].

East Berks: very local, but spectacularly naturalised on a roadside bank in Emmbrook [797697] in 1998, just north of where the road passes under the railway line. <1% (1km²). Atlas 2000: [76]

West Berks: in the grounds of the Old Rectory at Burghfield [6668] 1980-2004.

¶ **Nectaroscordum** *N. siculum*, *N. siculum* subsp. *bulgaricum*

¶ **Agapanthus** *A. praecox*

Tristagma uniflorum (Lindl.) Traub *Spring Starflower*
Triteleia uniflora Lindley
Milla uniflora Graham
Ipheion uniflorum (Graham) Raf.

• gb 4

Silwood Park: in disturbed ground at The Greenhouses from 1980 to 2009, and self-sown in compacted ground on 22 March 1999.

East Berks: in grassland, close to the car park at the Dinton Pastures nature reserve [784718] in 1993. <1% (1km²). Atlas 2000: [77], [96]

West Berks: growing under ash trees by a footpath near Thrupp [518966] in 1974. Stratfield Mortimer [668640], in the churchyard in 2000. Atlas 2000: [40]

¶ **Tristagma** *T.* ‘Rolf Fiedler’, *T. uniflorum*, *T. uniflorum* ‘Album’, *T. uniflorum* ‘Froyle Mill’, *T. uniflorum* ‘Wisley Blue’

Nerine bowdenii Will. Watson

• gb 10

Frequent in gardens but very rare as an outcast.

East Berks: on waste ground off Wokingham Road, Reading [735730] on 30 October 2004.

¶ **Nerine** *N. bowdenii*, *N. bowdenii* ‘Pink Triumph’, *N. filifolia*, *N. masoniorum*, *N. undulata*

Amaryllis belladonna L. *Jersey Lily*

• gb 9

Flowers at the same time of year as *Nerine*, but told from it by its stouter, almost black stems, and trumpet-shaped (not star-shaped) flowers, with less divided tepals.

Silwood Park: long persistent below the western wall of the conservatory of the Manor House, flowering in September and October, long after the leaves have withered, and before the new ones have started to appear. Much reduced since 1979 when it formed a solid monoculture, down to 10 or

so plants at its minimum but recovered to 30 or so by 2000. This is the plant that shelters and protects the tender alien *Selaginella kraussiana*.

West Berks: waste ground in Newbury in 1998.

Leucojum aestivum L. *Summer Snowflake*
Leucojum aestivum subsp. **aestivum**

gb 4 ↓

Perhaps the most special of our local specialities. Berkshire's official county plant. A *Red Data Book* species of shady riverbanks and osier-holts, known locally as *Loddon Lily* (Plate 6). Most populations occur in willow carr or alder woodland along muddy river banks and ditches or on islets in rivers. It grows on flat, silty parts of the river bank that are flooded in winter but dry in summer. It has upright, grass-green tussocks of leaves that are often stained dirty brown by the floodwaters. Generally associated with a small number of other spring flowering species like *Arum maculatum* and *Ranunculus ficaria* and often with a rank growth of nettles and cleavers in summer. The leaves appear above ground in February or March and flowering occurs between late March and mid April (flowering as early as 28 February in the early spring of 2002); the last of the flowers hang on until the middle of May. About 70% of the entire British population occurs in just 6 sites (in the Loddon near Twyford and the Thames between Reading and Bisham). The main threats are urban development, road and bridge-building, drainage and riverbank engineering.

East Berks: its stronghold is still in the Loddon and Thames valleys to the south-east and east of Reading in [76] and [77] centred on Dinton Pastures Country Park. In Druce's time it was "locally common on the islands and banks of the Thames near the efflux of the Loddon (1809), between the Mill and the Pound at Sonning, Windsor, Henley, the beautiful snowflake can be found in masses on several of the eyots here, and below the marsh and Hambleton Lock, as altar decorations in Wargrave Church, by the Loddon in great luxuriance and beauty". Winnersh, Sandford Mill, Whistley Farm. It is still present from Park Place down to Cookham, but less abundantly than in the Loddon. Recent records from the confluence of the R. Kennet and R. Thames in Reading [730739], the Loddon Meads at Sindlesham [757696], Winnersh [766710], Loddon Bridge [768716], Sandford Mill [779729], Whistley Mill [789749], Sonning [764768], Shiplate [766773], Wargrave [783785], Aston [785845], a backwater at Hemmerton [7880], Quarry Wood [861858], south of Cookham [9080] and Windsor Racecourse [947766]. There are some good surviving fragments in 2004 to the north of Dinton Pastures, between Whistley Mill and Twyford (see p. 171), and in the ash/willow wood at the northern tip of Wargrave Marsh [779809]. Probably the best, and certainly the most accessible, population is in the willow/alder swamp, just north of the Upper Thames Rowing Club between Henley and Remenham, where the woodland edge comes right up to the Thames Path [767837] (Plate 6). 1% (1km²). Atlas 2000: [76], [77], [78], [88], [97], [98]

West Berks: in Druce's time, pre-1900, the plant was found by the Thames from Oxford [50] all the way down to Reading [67]: from between Iffley and Sandford, around Shillingford, Marcham, Tubney, Wittenham, and by the Thames between Wallingford and Reading. He writes "It is to be hoped that this great adornment of our rivers will not be too recklessly gathered. Large quantities from Shillingford have been sold in the Oxford streets recently". By Bowen's time in the 1960s, it was known only from north of Streatley [58], an island near Moulsoford viaduct [58], Clifton Hampden Bridge [59], Shillingford Bridge [59], Basildon Grotto [67] and north of Wallingford [68]. Recent records from Buscot Wharf [236978], by the R. Kennet, west of Hungerford [330701], Lashford Lane [40], the wet part of the old garden on Jarn Mound [40], Lowerhill Farm wood [59], an island in the R. Thames at Nuneham Courtenay [5397], in the flood zone adjacent to the Thames at Sutton Courtenay Manor House [501943], west of Long Wittenham [5493], [5884], [5892], Clifton

Hampden bridge [548954], north of Wallingford [614908]. Atlas 2000: [28], [29], [46], [58], [59], [67], [68], [69]

Leucojum aestivum subsp. **pulchellum** (Salisb.) Briq.
Leucojum pulchellum Salisb.

• gb 3

The two sharp edges of the stem are entire throughout (not inconspicuously denticulate). Flowers in 2–4's (rather than 3–5's). Spathe much narrower 4–7mm (rather than 7–11mm). Most records of garden escapes refer to this subspecies rather than subsp. *aestivum*.

Silwood Park: an occasional garden escape. Cannon Path, naturalized by the skip at the end of TTC on shady waste ground in 1991. Still there; 3 good plants in April 1996. Buckhurst Road, scattered in the grass at the edge of the East Lodge car park of the Science Park on 15 April 1994; one plant left amongst *Lychnis coronaria* in May 2000. These plants were presumably imported with topsoil spread during landscaping of the Science Park in 1987. The Greenhouses, a single clump under the *Magnolia* behind the Bait Hut on 22 March 1999 (origin unknown). By 18 April 2013, there was one surviving clump, beneath shrubs in the (now privatized) garden of East Lodge.

East Berks: not in Druce or Bowen. <1% (1km²). Atlas 2000: [96]

West Berks: a single clump in Stratfield Mortimer churchyard [66].

Leucojum vernum L. *Spring Snowflake*

• gb 2

Very uncommon and always planted. Like a large snowdrop with yellowy-green patches at the tips of its tepals (and flowering at the same time in February), this is an uncommon garden plant and very uncommon garden escape (allegedly native at 2 sites in South Somerset and Dorset (Stace, 1997), but excluded from the *Red Data Book* as an introduction). Extensively naturalised in moist shade in Savill Gardens on the Surrey side of Virginia Water.

East Berks: in a wild garden at Scotlands in 1998, no doubt planted. One clump in the south-east corner of the old abbey walls at Sonning graveyard in February 2003. <1% (1km²). Atlas 2000: [77], [88]

West Berks: a rare garden outcast on roadside banks. Fine plants in lawns stretching down to the Thames at Norman Hall in Sutton Courtenay [504945], 2 February 2002. Atlas 2000: [38], [66]

¶ **Leucojum** L. *aestivum*, L. *aestivum* 'Gravetye Giant', L. *autumnale*, L. *nicaeense*, L. *vernum*, L. *vernum* var. *carpathicum*

Galanthus nivalis L. *Snowdrop*

gb 1

Woods, often by streams, plantations, roadsides, churchyards, orchards, hedges and gardens. Locally frequent, but typically in small quantity and usually near houses. Absent from east Berkshire and from the chalk ridge. Ubiquitous in churchyards throughout the county. Often accompanied by *G. nivalis* 'Flore Pleno' which has attractive, double, ruffled flowers. Flowering in January, February and March. The much bigger plants, conspicuous from a distance by their taller habit and much bigger flowers, are usually 'Magnet', 'S. Arnott' or 'Atkinsii' (these are cultivars of unknown hybrid origin). 'Magnet' has long pedicels and big outer tepals that are conspicuously "waisted" in the lower third. 'S. Arnott' has the petals spreading sideways (rather than hanging down) and is somewhat shorter in stature than the other two common cultivars. 'Atkinsii' is earlier flowering (it often looks rather weather-beaten and slug-eaten by peak snowdrop time), and has the biggest flowers, with narrow,

pointed, outer tepals with a very short pedicel, often with one or more deformed petals. There is a late-flowering clone 'Scharlockii' which has small flowers and a very distinctive bifid spathe that extends well beyond the flowers like a pair of hare's ears (see Bishop *et al.*, 2001, for illustrations). Snowdrops with leaves wider than 10mm at flowering are probably *not* this species (see below).

Silwood Park: locally abundant all down the shady, southern side of the graveyard at Ashurst, under laurels and pines. These were originally planted on individual graves and have spread locally to form patches. Reactor Bank, a good clump amongst builder's rubble under the large sycamore at the end of the Reactor track, close to the gate into Silwood Bottom; 9 March 1984. Mann's Copse. Weir Wood, only 2 small clumps, close to The Farm; 9 March 1980. Locally frequent around the Croquet Lawn. Abundant around the walls of Virginia Water Lodge. Does not form the great swathes of flower with us that one sees in churchyards in the north-west of the county. Flowering peaked in the first week of February in 2008 after a very mild January.

Ascot: local and uncommon. A322/A332 roundabout, Charters Road, Sunningdale, Sunninghill Park, Sunningdale Park, Blacknest Park, Titness, Tittenhurst.

East Berks: in virtually every churchyard, but seldom abundant. 5% (1km²). Atlas 2000: all squares

West Berks: there are fine snowdrop displays to be seen at Sparsholt [3487], Shellingford [3193], Welford Park [4073], Kingston Bagpuize [4098], Bessels Leigh [4501], Greathouse Park [5973] and Purley [6673]. Welford Park is open on several days during February for a Snowdrop experience not to be missed, with extraordinary unbroken carpets of white below the trees (Plate 8); open Sunday, Tuesday, Wednesday and Thursday, 2.00-5.00 p.m., during snowdrop season. In almost every churchyard. On shaded parts of the Thames river bank as at Buscot Weir [2397]. Rarely in semi-natural woodland (as on the southern slopes of Greenham Common [46]), but locally frequent in plantation woodland (e.g. Englefield [6271], Wellhouse [5272]). In Little Coxwell [2893] it flowers in hedge bottoms soon to be dominated by *Galium aparine*. Atlas 2000: all except [69]

***Galanthus nivalis* 'Flore Pleno' Double Snowdrop** gb 1

Very common, especially in churchyards, when it is often more abundant than the single flowered forms.

Silwood Park: frequent in the churchyard at Ashurst, beneath the trees on the boundary with the Orchard and Ashurst Warren. Occasional clumps in Mann's Copse close to the Silwood Close gardens. One clump under trees at The Farm, and another on the edge of Weir Wood, above the *Adoxa*.

East Berks: widespread and locally frequent in many churchyards, often as common as single-flowered plants; Loddon Bridge, Swallowfield, Arborfield, Finchampstead, Bearwood, Wokingham, Shurlock Row, Ashley Hill, Wargrave, Frogmore.

West Berks: particularly abundant in churchyards at Ashbury [2685], Longworth [3899], Kingston Bagpuize [4098], Bessels Leigh [4501] and Cummor [4604], whereas single flowered plants are relatively abundant on the big estates like Welford Park [4073]. In the roadside verge at Manor Farm [3986]. In woods by the M4 motorway where it crosses the R. Lambourn at Easton [413724]. Abundant in Little Wittenham churchyard and by the Thames bridge [5693] in February 2004.

***Galanthus* 'Blewbury Tart'** • gb 2

This extraordinary sport of the double flowered *G. nivalis* 'Flore Pleno' was discovered by Alan Street at Blewbury in 1975. The flowers are held almost erect, and form a symmetrical, dark green rosette, set within 3 narrow, white outer segments.

West Berks: in the churchyard at Blewbury [5385], where a recent (post-1998) snowdrop collection has been planted.

Galanthus 'Magnet'

• gb 2

This is the commonest of the 'giant snowdrops', and is occasional in parkland and churchyards, but rather rare in wild-looking woodland at any distance away from buildings. It is a sterile triploid with 36 chromosomes (not the usual 24) that stands out in mass-plantings of snowdrops with its taller stems (23cm), broader leaves (to 9mm), and perfectly formed long white petals (28mm), hanging straight downwards and slender-waisted. The apical green mark is V-shaped, making an angle of 70 degrees (the green V-shape of the very similar cultivar *G. 'Galatea'* makes a perfect right angle).

Silwood Park: local and uncommon in the churchyard at Ashurst, amongst regular snowdrops

East Berks: in many of the churchyards, as at Finchampstead, Binfield, Wargrave, Sonning, Warfield and White Waltham. In a wooded verge at Cold Harbour [833791] in February 2003.

West Berks: the best semi-natural woodland site is in the remote Whitley Copse between Bablock Hythe and Cumnor [439046] where it forms several large patches under the oaks. Beneath hedges in Winterbourne [4572] and Boxford [4271]. Kintbury cemetery [3865] in Feb 2004. In woods by the M4 motorway where it crosses the R. Lambourn at Easton [413724]. In all of the good snowdrop populations, as at Sparsholt [3487], Shellingford [3193], Welford Park [4073], Kingston Bagpuize [4098], Bessels Leigh [4501], Greathouse Park [5973] and Purley [6673].

Galanthus 'Atkinsii'

• gb 1

If 'Magnet' has big flowers (28mm), then those of 'Atkinsii' are enormous (30-32mm). Almost as tall as *G. 'Magnet'* (21cm) but earlier flowering (late January), with narrower, more pointed, often deformed flowers (to 33mm). The apical green mark is heart-shaped, slightly blurred in the middle (not a sharply defined 70 degree angle). Both 'Magnet' and 'Atkinsii' are told from other big-flowered Snowdrops by their obviously *G. nivalis* leaves (narrow with a central pale line, rather than broad or plicate as in *G. elwesii*, *G. plicatus* or *G. woronowii*).

Silwood Park: rare in Mann's Copse, the churchyard at Ashurst and around The Greenhouses.

East Berks: in the churchyards at Sonning, Wargrave, Binfield, Finchampstead and Arborfield. In the verge at Pitlands [8379] as outcasts.

West Berks: uncommon in churchyards as at Kintbury [36], Winterbourne [4571] and Kingston Bagpuize [49]. In snowdrop collections at Welford Park [4073] and Kingston Bagpuize House [4098].

Galanthus 'S. Arnott'

• gb 1

Many galanthophiles favourite snowdrop. The outer perianth segments (31mm) spread out like a Victorian lamp shade (rather than hanging downwards in the classic manner).

Silwood Park: rare in the churchyard at Ashurst, amongst regular snowdrops (1979-2004).

East Berks: Sonning, on roadside banks. Binfield and Finchampstead churchyards.

West Berks: in the churchyard at Blewbury [5385], Winterbourne [4571], and Kingston Bagpuize House [4098].

Galanthus elwesii Hook.f. *Greater Snowdrop*

• gb 1

The broad, blue-green leaves are rolled around the stem (not packed flat) as they unfold. Sometimes the two green patches on the inner perianth segments are fused into a continuous (but waisted) green stripe. The flowers are sometimes over before the middle of February. *G. elwesii* 'Monostictus' (see below) is a very large form, lacking the basal green blotch, that naturalises well (e.g. it covers a whole bank beside the rock garden in Wisley).

Silwood Park: Cannon Path, a single plant in bare ground beneath Turkey Oak close to the skip at the corner of TTC on 1 February 2000. Rare in the new part of the graveyard at Ashurst; 1 plant on the grave of Louise Davenport (d. 1999) in February 2004. Garden Wood Bank, 50 bulbs planted in 2002; 6 plants survive in 2004 and just 3 in February 2007. There was only one plant left in February 2014.

East Berks: Three Mile Cross, Finchampstead Church, Wokingham, and at Winter Hill and in the churchyards of Hurley, Bray, Binfield, Swallowfield and in the graveyard uphill from Remenham Church. It is particularly frequent at Wargrave Church (1990-2004). 1% (1km²). Atlas 2000: all squares

West Berks: common in orchards at Longworth [389982] from 1958 (OXF) to 2003, and in the nearby Manor grounds [384994] from 1995-2004. Particularly common in the grounds of Kingston Bagpuize House with numerous hybrids [407978]. Faringdon churchyard [289957] from 1966-2004, Little Wittenham Church [566935] from 1977-99. In grass at Bucklebury, Blewbury, Yattendon, Peasmore and Boar Hill. Recently in the churchyards of Shrivenham [28], Inkpen [36], Sparsholt [38], Winterbourne [47], West Hanney [49], North Hinksey [40], Bucklebury [57], Marlston House Chapel [529719], Streatley [58], Beech Hill [66], Pangbourne [67] in 2001. Locally frequent on banks in Woolstone village [2987]. Fine plants in lawns stretching down to the Thames at Norman Hall in Sutton Courtenay [504945], 2 February 2002. A good population on the *Vinca*-covered bank of the A417 on the northern outskirts of Streatley [590814]. Atlas 2000: [28], [29], [36], [38], [47], [48], [49], [40], [57], [58], [59], [67]

Galanthus elwesii var. **monostictus** *Caucasian Snowdrop*

• gb 2

Galanthus nivalis L. subsp. *caucasicus* Baker

Galanthus caucasicus (Baker) Grossh.

A huge Snowdrop with a single green spot but smooth, broad, grey-green leaves is likely to be this plant. The broad leaves are rolled around one another in the sheath (as in *G. elwesii* var. *elwesii*), but the tepals do not have green marks at the base (cf. *G. elwesii*). The leaves have conspicuous, sharp veins beneath (like well ironed creases) as in *G. plicatus* but not *G. elwesii*. The cultivar 'Comet' is outstanding.

East Berks: churchyards at White Waltham and Clewer. There is a particularly fine clump on the north side of the churchyard at Wargrave (1995-2004). <1% (1km²). Atlas 2000: [77]

West Berks: Bucklebury churchyard [5570], 1982-2004. Baulking Church [3190], 17 February 2001. Kingston Bagpuize House with numerous hybrids [407978]. Atlas 2000: [38], [46], [48], [57]

Galanthus plicatus M. Bieb. *Pleated Snowdrop*

• gb 2

Galanthus plicatus subsp. **plicatus**

The margins of the big, broad leaves are folded underneath along most of their length even after they are fully expanded, and there are strong, sharp, parallel veins beneath, giving the leaves a conspicuously W-shaped cross section. There are green patches only at the apex of the tepals. This is much the commoner of the two subspecies in churchyards and gardens in Berkshire.

Silwood Park: in the churchyard at Ashurst; rare in grass on 1 March 1999. One clump on the grassy triangle where Cheapside Road meets Buckhurst Road (1991-2007). Garden Wood Bank, 6 plants beneath *Mahonia*; 2 February 2002, declined in 2003, but recovered to 6 in February 2007. There were 6 strong plants in February 2013.

East Berks: churchyards at Clewer, Winkfield, Sonning, Knowl Hill, Hurley and Finchampstead. <1% (1km²). Atlas 2000: [96]

West Berks: excellent displays in several of the churchyards on the chalk, notably at Blewbury [5385] where it grows luxuriantly with several hybrids (one particularly striking plant has solid green inner perianth segments). Fine plants in lawns stretching down to the Thames at Norman Hall in Sutton Courtenay [504945], 2 February 2002. Kingston Bagpuize House with numerous hybrids [407978]. Little Wittenham churchyard [5693] in February 2004. Atlas 2000: [36], [38], [39], [46], [47], [57], [58]

Galanthus plicatus subsp. **byzantinus** (Baker) D.A. Webb

• gb 2

Galanthus byzantinus Baker

This has two (separated) green patches, with one at the base of the tepals as well as one at the tip, often in the form of a cross (cf. *G. elwesii* which also has 2 green marks on the inner perianth segments, but has flat rather than pleated leaves). An uncommon garden plant and a rare relic in plantations and churchyards. Over-recorded in the past; cultivars with solid green markings from top to bottom of the inner perianth segments are *not* this subspecies (see above).

East Berks: in Sonning churchyard in 2000. <1% (1km²).

West Berks: Longworth Manor [384995], amongst a mass of snowdrops in shade near the churchyard wall (1996-2004). A single, strong clump in the churchyard at Blewbury [5385] in February 2003.

Galanthus ikariae Baker

• gb 2

Very rare in Berkshire. Darkish matt-green leaves 15-25mm wide and up to 35cm long. Differs from *G. woronowii* in its bigger apical green mark which covers half to two-thirds of the length of the inner perianth segment (not confined to the apex). Big air spaces are visible in a transverse section cut through the leaves at a right angle to the mid-rib (the air spaces are barely visible to the naked eye in *G. woronowii*).

West Berks: only in the larger snowdrop collections, as at Kingston Bagpuize House [407978].

Galanthus woronowii Losinsk. *Green Snowdrop*

• gb 2

Galanthus ikariae subsp. **latifolius** Stern

Galanthus ikariae of gardens

Occasional in churchyards and on roadside banks. The glossy leaves are light to medium grass-green on their upper surface, in contrast to the bluey-green of most other snowdrops (but see *G. ikariae*, above). The leaves have flat to slightly undulate margins, 11-20mm wide and are hooded at the apex, with 2 (-4) shallow furrows in the upper surface with corresponding folds on the under-side. There is a single, rather short and angular U-shaped green mark at the apex of the inner perianth segments.

Silwood Park: local and rare in the churchyard at Ashurst. Three clumps on 1 March 1999, one in the south-east corner close to the Celtic Cross on the grave of Frederick Mays (d. 1947), one by the grave of E. Sexton (d. 1970), and the other in the north-west corner, on the grave of Charles Ford (d. 1984), where there were 15 plants on 30 January 2004. A single clump in the verge by the gate of The White Cottage, where Mill Lane meets Buckhurst Road in February 2001. Garden Wood Bank, 50 bulbs planted beneath *Arbutus* in 2002 but none came up in 2003 or 2004.

East Berks: commonest at Sonning, where it grows all along the base of the north edge of the church. <1% (1km²). Atlas 2000: [77], [96]

West Berks: at the foot of a tree in the lawn opposite the church in Englefield Park [623719] in 1988 (RNG) and still there 1999-2004. Path-side opposite the church in Letcombe Regis [3786]. On the village greens at East Ilsley [493809], a single patch in the churchyard at Bucklebury [552709]. In the graveyard at West Hanney [4092] and Hamstead Marshall [4266] on 17 February 2001. Kingston Bagpuize House with numerous hybrids [407978]. Atlas 2000: [39], [46], [47], [49], [57], [67]

Galanthus reginae-olgae Orph. *Queen Olga's Snowdrop*
Galanthus nivalis L. subsp. reginae-olgae (Orph.) Gottl.-Tann.

• gb 11

Told from other common snowdrops whose leaves are flat as they unfold (not inrolled) and by the striped upper surface of the leaves (*G. reginae-olgae* has a pale (glaucous) central band, flanked by dull green lateral bands).

East Berks: in the beautiful churchyard at Finchampstead in 1992. <1% (1km²).

¶ **Galanthus** *G. 'Atkinsii'*, *G. gracilis*, *G. ikariae*, *G. 'Lady Beatrix Stanley'*, *G. 'Magnet'*, *G. nivalis 'Lady Elphinstone'*, *G. nivalis 'Pusey Green Tip'*, *G. nivalis 'Viridapicis'*, *G. 'Ophelia'*, *G. plicatus* subsp. *byzantinus*, *G. reginae-olgae*, *G. 'S. Arnott'*, *G. 'Straffan'*, *G. woronowii*.

Narcissus L. *Daffodils*

The approach in horticulture is to separate the cultivars into 12 divisions, 11 of which are of garden origin (all the wild species are bundled together into Division 10). There are 3 rag-bag Divisions: all the double (*Flore Plena*) forms are in Division 4; the split-cup forms make up Division 11, while Division 12 contains "miscellaneous cultivars". The main determinant of Divisions 1 to 3 is the length of the trumpet relative to the petals; in Division 1 the trumpet is long (as long or longer than the petals), in Division 2 it is intermediate (a 'cup' that is shorter than the petals but more than one third their length), while in Division 3 it is short (a 'bowl' or 'disk' that is less than one third the length of the petals). There are more than sixteen thousand named cultivars, but only a handful of these are sufficiently vigorous, and hence cheap enough, to be mass-planted or to be thrown out from gardens. Most of the records described in this account were made during a survey of Berkshire Daffodils carried out during the epidemic of Foot-and-Mouth Disease which closed the whole of the countryside from February 2001 onwards, so that churchyards were the only places left to botanise. Out of 70 churchyards surveyed, the best for daffodils were Finchampstead and Enborne with 15 and 14 cultivars respectively, and the worst were Wytham and Aston Tirrold with no daffodils at all.

Rarer taxa are not given a text entry of their own. There is a key to the Divisions and to the cultivars on the web site, along with pictures of the most frequent cultivars.

In the scheme adopted here, you need only to decide on the colour of the petals (what botanists call the perianth segments or tepals) and the colour of the trumpet or cup (the corona of botanists). There are only 3 classes of colours: yellow (Y), white (W) and orange (O). If in doubt, very pale yellow should be scored as white, and pink scored as orange. In the pair of colours, petal colour comes first, then trumpet colour, so WY is a daffodil with white petals and a yellow trumpet. Note that in YY cultivars, the petals and trumpet may be quite different shades of yellow or gold (i.e. YY does not necessarily mean that the trumpet and petals are concolorous).

Group	Code	Petal colour	Trumpet colour	page
1	YY	yellow	yellow	1154
2	YW	yellow	white	1162
3	YO	yellow	orange	1162
4	WY	white	yellow	1165
5	WW	white	white	1169
6	WO	white	orange	1171
7	WR	white	red-lined	1173

Group 1 YY: yellow petals, yellow trumpet

N. pseudonarcissus subsp. **major** (Curtis) Baker *Spanish Daffodil* • gb 2
Narcissus major Curtis
Narcissus hispanicus Gouan

This is much the commonest daffodil found as a garden outcast, on railway cuttings, roadsides and waste ground. Told from the wild daffodil *N. pseudonarcissus* subsp. *pseudonarcissus* by the fact that the petals are held upright (not swept forward) and are more or less the same shade of yellow as the trumpet (not distinctly paler). Even experts have difficulty telling many of the D1 YY cultivars apart. Told from the much smaller, more delicate subsp. *obvallaris* by the longer pedicel (> 15mm), and the fact that the petals are twisted at the base. In this account, I give the locations only of specimens that I have tentatively attributed to cultivar. The subspecies in aggregate is found in every 10km square.

East Berks: all squares

West Berks: all squares

N. 'Dutch Master' • gb 2

This is the most frequent of the large, concolorous D1 YY daffodil cultivars, much planted in municipal schemes, and long-persistent in old gardens. Vigorous, and hence often thrown out of gardens; it is long persistent as an outcast. Plantations, parks, churchyards, orchards, roadside banks and waste ground.

Silwood Park: abundantly naturalised in Heronsbrook Meadow on the side next to Church Lane Footpath, where there were 35 clumps in February 2002, and in Church Field close to the rabbit warren. The origin of these field populations is a mystery, but they have been there since before 1970. Frequent in Four Acre Field, in short grassland. Wood Bank, in bracken, one clump at the bottom of the slope, close to The Marsh in 1984. Still one clump with 12 flowers on 10 April 1994. Locally abundant on Drive Lawns, on both banks of the road to South Lodge, and in all the rougher lawns around the Tennis Court and The Plane Tree. In the churchyard at Ashurst, and throughout Cheapside Village. Rare in Mann's Copse, by the Machinery Centre, William Penney, below the Ha Ha, and in Nursery Field (it is abundant in Silwood Nurseries, just over the fence). A single clump in the oak woodland at Merten's Acres, close to the grave of William, a much loved Silwood terrier (d. 1986). Very rare, a single bulb, flowering in the most inaccessible, boggy part of Cascade Marsh on 9 March 2002. A single individual in the very cold spring of 2013 by the Farm Road by Weir Wood [941 692] on 28 March 2013.

Ascot: locally common on roadsides as at The Orangery and on the A322/A332 roundabout, much planted on Ascot Racecourse, Ascot Church, Charters Road, Sunningdale Park, Sunninghill Park, Cranbourne, Sunninghill, South Ascot, Sunningdale, common on the steep banks of the railway cutting below Upper Village Road, and on the banks of Virginia Water.

East Berks: villages throughout. Shurlock Row, Ashley Hill, in the private section of Windsor Great Park. Whiteknights Park, Finchampstead, Shurlock Row, Boars Hill, Frogmore. Recently at Lambs Lane, Lodge Wood, Twyford, Hurley, Blackwater, Sandhurst, Wellington College, Stubbings, St Luke's Maidenhead, Touchen End, Maidens Green, Warfield, Dinton Pastures. Roadsides on the western approaches to Bracknell. 2% (1km²).

West Berks: common in churchyards and (suspiciously) in many of the woods from which native daffodils have been reported in the past. Ashbury, Shrivenham and Woolstone [28], Faringdon [29], Hungerford, Kintbury and Inkpen [36], Woodland St Mary [37], Uffington [38], Shellingford and Longworth [39], Harrowdown Hill [30], Hamstead Marshall [46], World's End [47], East Hendred and Lockinge [48], the commonest daffodil on the Causeway at Steventon [468918], Frilford and Milton Hill [49], rare by the path through Powder Hill Wood, Appleton, Youlbury, Jarn Mound and Sunningwell Church [40], Cold Ash, Ashmore Green and Henwick [56], Bucklebury, Hermitage and by the M4 between Great Bear and Yattendon [57], Silchester [66], Englefield and Moor Copse [67].

N. 'Golden Harvest'

• gb 2

One of the largest and earliest of the commonly planted D1 YY cultivars (flowers to 113mm diameter), sometimes used in municipal mass-planting schemes along with pansies and wallflowers. It is recognised most easily by the shape of the outer petals, which have their edges characteristically swept back like the rims of Napoleon's hat ("inflexed at the base and reflexed at the apex"). The trumpet is deeper gold than the petals (14B compared with 7A), and the mouth is conspicuously frilled ("widely expanded, strongly ribbed, rim deeply notched and crenate").

Silwood Park: rare at the Buckhurst Road entrance, under trees and uncommon in grass by the Plane Tree. Clumps in several locations near the roundabout at Sunninghill Crossroads. Scattered in the newer parts of the graveyard at Ashurst, and locally frequent at the bottom of the old graveyard. Scattered around Silwood Farm. Ashurst Oaks, in grass by the top of Four Acre Field next to the New Chalk Plots. The single clump outside the western fence of the Ashurst Enclosure was in full flower on 25 February 2007 and 10 February 2008.

Ascot: on the edge of Ascot Place, in North Ascot, Warfield Church, South Ascot and Sunningdale graveyards.

East Berks: in the churchyards at Clewer and Waltham St Lawrence. In field margins in Old Windsor in March 2004.

West Berks: in the churchyard at Blewbury [5385] on 27 February 2003. Kintbury cemetery [3865] and Little Wittenham churchyard [5693] in Feb 2004.

Narcissus pseudonarcissus subsp. **obvallaris** (Salisb.) A. Fern. *Tenby Daffodil* ● gb 2
Narcissus obvallaris Salisb.

A beautiful, small flowered concolorous D1 YY with forward pointing (not upright) yellow (not pale yellow) petals that are not twisted at the base. Told from subsp. *major* (the commonest concolorous D1 YY) by shorter pedicels (less than 15mm), narrower leaves (10mm rather than 15mm), and smaller petals (to 35mm not 40mm). Always planted in Berkshire.

Ascot: rare in the churchyard at Sunningdale in February 2004.

East Berks: on Ascot Racecourse, in grass in Windsor Great Park and Virginia Water. <1% (1km²).

West Berks: naturalised in grass in parkland at Buscot [29], Basildon Park [67]. On grassy banks at Jarn Mound [40].

Narcissus pseudonarcissus subsp. **pseudonarcissus** *Daffodil* ● gb 2

This is the native plant of ancient woodlands. The forward-pointing petals are pale yellow, so plant is described in Group 4 (WY), below.

N. ‘Rijnveld’s Early Sensation’ ● gb 1

This is by far the earliest-flowering of the common D1 YY (it sometimes scores as D2 YY); flowers 90mm diameter, with pale greenish-yellow petals (6C) with conspicuous green stripes on the back, and a darker, golden-yellow trumpet (12A). The petals overlap for one quarter (not one third) at the base. It would key down as *N. bicolor* because of its small (8mm) hypanthial tube (not 12-25mm as in *N. pseudonarcissus*) and long (35mm) trumpet (not 16-25mm as in *N. minor*). It is very rare as a garden outcast, and is typically found as mass-plantings or as a relic of cultivation.

Silwood Park: scattered but locally frequent under the trees to the north of the Buckhurst Road entrance; always the first daffodil into flower in January each year, while the nearby *N. ‘Fortune’* are still pushing up their leaves through the lawn. Very local and rare in the churchyard at Ashurst (2 bulbs on one of the newest graves). There was one flowering stem on the grave of David William Marling Long (next to the Buster Marling plinth) on 16 February 2013. None in the margin of Silwood Nursery in 2004. The Buckhurst Road plants were in flower on New Year’s Day, 1 January 2007, the earliest ever seen. Until the next year, that is! A single plant in full bloom at the Buckhurst Road Entrance on 1 December 2007 but not starting to come out fully until 15 January in 2009. After the wettest year in memory in 2010, the flowers did not begin to open until 2 February 2011, more than 30 days later than in 2007. In January 2013 the buds were closed on New Years Day, but had opened by January 5th. The early winter of 2013-2014 was very wet with widespread flooding by the R. Thames, but it was not cold. The first flowers of the Buckhurst Road population were still in tight bud on 15th January 2014 and did not open until 25 January 2014.

Ascot: abundant in the slender central section of the Peanut Roundabout at Cranbourne (Plate 8) where it was mass-planted in summer 2002, but very rare elsewhere, and not a churchyard cultivar at

all. First flowers in late December 2006 after the warmest year on record in England, but still not into full bloom by mid January 2009, following a cold dry December and early New Year. The year of 2012 was the wettest on record for England, despite starting with a drought; the plants were just starting to break bud on 8 January 2013, but substantially later with some yellow showing by 25 January in 2014 despite the warm winter (but with record rainfall and flooding).

East Berks: in the verge of the Drift Road west of Braywood [866751] from 1988-2004. Mass-planted on the new roundabout at Grange Cottages on the Binfield Road out of Bracknell [856707] and on new road banks at Binfield [841691], first flowering in February 2003. Very local in North Bracknell on new housing estates [881706] near the Whitegrove superstore in January 2004. On the roadside by Oakley Court Hotel [923775] on 12 January 2008.

West Berks: grassy bank in Streatley [5980] in February 2003. Very rare, on a single grave in Boxford churchyard (Florence May Turner, d. 1990) in February 2004.

N. ‘Tête-à-Tête’ *Narcissus x cyclazetta* = *N. cyclamineus* x *N. tazetta* • gb 2

This is the most popular dwarf daffodil, a D12 YY or YO with grass-green (not blue-green) leaves. The petals are upright, at an almost perfect 90 degrees to the line of the trumpet (neither reflexed nor forward pointing). The trumpet is much darker than the petals (almost orange). It is sold as a flowering pot plant in garden centres from January onwards, and mourners often buy these and put the pots on graves. The bulbs are sometimes planted out after flowering, but many are discarded in their pots. Very variable in size; plants may be as little as 10cm tall or as much as 40cm. The flowers can be multiple (2 or 3 per stem), but are typically single in Berkshire. Flower size is also variable, typically 50mm diameter across the petals with the trumpet 15mm long, but occasionally as much as 65mm diameter and 20mm trumpet. It has a fascinating history as a cultivar. It arose as one of just 3 seeds in a single capsule of the normally sterile N. ‘Cyclataz’ that were found and propagated by the legendary Alec Gray in the late 1940s. The remaining two seeds also became the parents of well-known cultivars in N. ‘Jumblye’ and N. ‘Quince’ (see Chater and Stace (2003), *Watsonia* 24, 532).

Silwood Park: under the beech trees by the Squash Court 1981-2004. In several places on the Science Park from bulbs imported unintentionally with topsoil in 1987. Very common on graves in the newer parts of the churchyard at Ashurst. In planters around the Manor House and Refectory Patio since 2001. Mass planted on the new lawn created when the trees were felled on the southern side of Unit B on the Science Park: flowering for the first time in late February 2007. In flower in early February 2008 in a ring around the base of the veteran oak (Tree 1002) outside stores.

Ascot: frequent in the churchyards at Sunninghill, Sunningdale, South Ascot and Ascot. Abundant on the steep banks of Truss Hill Road in Sunninghill, and on a grassy stream bank in Hayley Green.

East Berks: common in churchyards throughout, almost always single-flowered. Triple-flowered and double-flowered forms occur in Bearwood churchyard. 3% (1km²). All squares.

West Berks: in many of the churchyards but scarce on the chalk. Ashbury, Bourton and Woolstone [28], West Woodhay, Kintbury and Hungerford [36], Eastbury, Lambourn, Woodland St Mary and Great Shefford [37], Uffington and Letcombe [38], Shellingford and Buckland [39], Enborne [46], Harwell and East Ilsley [48], Steventon and Frilford [49], Appleton, Bessels Leigh, Wootton, Cumnor and North Hinksey [40], Aldermaston [56], Blewbury [58], Sutton Courtenay [59], Burghfield [66], Englefield and Pangbourne [67]. In a neat row all along the base of the wall above the R. Lambourn in Boxford churchyard [4271] in February 2004.

N. 'Quince'

• gb 3

Like a tall, single-flowered version of *N.* 'Tête-à-Tête'.

Silwood Park: rare in the woods between the Greenhouses and Buckhurst Road, and in the grassy triangle at the junction of Cheapside and Buckhurst Road (1999-2008).

N. 'February Gold' = *N. pseudonarcissus* x *N. cyclamineus*

• gb 3

One of the most commonly planted daffodils. A beautiful medium-sized concolorous golden yellow D6 YY species with greenish leaves, used in mass-plantings in towns and villages. Frequent in churchyards. Occasionally found as an outcast on waste ground. Despite its name, it does not flower until March in most years. Told at once by its long, slender trumpets and spreading petals, which curve back elegantly in an arc from the vertical.

Silwood Park: planted in the lawns, but not naturalised. Still common in 2003 on the ground that used to be shaded by the old *Malus floribunda* by The Greenhouses; the tree died in 1993. It is rare beneath the pines by Buckhurst Road entrance, and beneath the Plane tree by the Tennis Court. Ashurst churchyard and car park, Cheapside Village Hall, Sunninghill Crossroads.

Ascot: by the village hall in Sunningdale. South Ascot recreation ground and churchyard. In the verge of Oliver Road near the railway bridge. Frequent by Winkfield Road north of Ascot Racecourse [9270].

East Berks: frequent in churchyards throughout, also on waste ground at Wokingham, Knowl Hill and Maidenhead. Dominant on the lane-side south of Jealott's Hill Research Station [874730] in 2002. Local and rare in woodland, as at Ashley Hill above the Dewdrop Inn [8281]. Frequent around the Methodist Church in Old Windsor. Mass-planted in landscaping schemes at Holyport, Maidenhead, Windsor, Bray, Littlewick Green and Clewer. 2% (1km²).

West Berks: frequent in churchyards throughout: Woolstone, Ashbury and Shrivenham [28], Faringdon [29], Inkpen, Kintbury and Hungerford [36], Eastbury and Great Shefford [37], Uffington [38], Buckland [39], Enborne [46], West Hendred and Ardington [48], Steventon [49], Appleton, Wootton and North Hinksey [40], Aldermaston [56], Blewbury [58], Sutton Courtenay [59], Burghfield [66], Sulham [67]

N. 'Telamonius Plenus'

• gb 3

The commonest of the yellow doubles (D4 YY) with a dense jumble of rather ragged, greenish-yellow petals where the trumpet ought to be. The leaves are conspicuously narrower than those of other frequent cultivars (10mm wide rather than 18mm). Common in churchyards, and occasional on waste ground and banks in villages. Another all-yellow double is *N.* 'Thomas' Virescent Daffodil', which has rather rectangular-shaped flowers (the shape is "landscape" rather than "portrait") and 2 or 3 epicentres in each flower, is rare in old gardens; it is thought to be a double variant of *N. obvallaris*.

Silwood Park: a single plant in shade by the oaks at the entrance to East Lodge. Very rare on the grassy bank opposite the Thatched Tavern in Cheapside on 20 March 2001. Locally frequent in the older (southern) parts of the graveyard at Ashurst, but absent from the newer parts. A clump of plants in grass at Ashurst Oaks adjacent to Four Acre Field and several clumps in Ashurst Wood have very double trumpets but absolutely normal D1 YY petals. On 30 March 2011 there were two clumps, one on either side of the gate from the Cheapside public footpath, in the ground disturbed by the creation of the new Farm Drive at Pound Hill.

Ascot: rare in the churchyards at South Ascot and Sunningdale. Occasional on the banks of the deep, wooded railway cutting through Sunninghill, and below the railway bridge at the Dog and Partridge.

East Berks: churchyards at Finchampstead, Sunningdale, Twyford, Knowl Hill, Warfield, Winkfield, Bearwood, Clewer. Most frequent at Swallowfield Church. 2% (1km²).

West Berks: churchyards at Ashbury and Shrivenham [28], Faringdon [29], Kintbury [36], Eastbury, Woodland St Mary and Great Shefford [37], Uffington and Letcombe [38], Enborne [46], Lockinge, East and West Hendred [48], Frilford [49], Cumnor [40], Aldermaston and Brimpton [56], Bucklebury [57], Blewbury [58] and Sulham [67].

N. 'Carlton'

• gb 3

The most popular of the large D2 YY cultivars. Its most distinctive feature is the contrast between the pale yellow petals and the deep golden-yellow trumpet (some individuals might even be scored as WY rather than YY); the flowers typically droop, showing the backs of the petals. Potted plants are widely sold in flower in garden centres, and often placed on graves in churchyards (the bulbs are occasionally thrown out, along with the pot, when the plants have finished flowering). The flowers are very large (up to 120mm diameter) and the petals are more lemony-yellow than in other D2 YY, and they are longitudinally ribbed (creased). The trumpet is more bell-shaped than parallel-sided, and the darker mouth is expanded and strongly ruffled ("frilled, notched and crenate").

Silwood Park: occasional in the Drive Lawns, by the Ha Ha, on the Reactor Bank and in Mann's Copse. The dominant daffodil on the banks of Farm Road (1971-2004). Between the Ashurst Exclosure and the graveyard, locally frequent by the Apple Sheds in the Orchard at Ashurst, and beneath the big oak at the entrance to the tip in The Rookery. Abundant in a strip along the edge of Ashurst Wood, facing Four Acre Field. Rare in the churchyard at Ashurst and at the back of The Tip. South Lodge. Amongst the rabbit warrens of Church Field. Planted *en masse* by the new gate into the graveyard at Ashurst in March 2004.

Ascot: in the churchyards at Sunningdale, South Ascot and Ascot, in grass at Sunninghill school, outcast in woods in South Ascot. On the roadside of B383 between Ascot Gate and Sunningdale Park. At the end of Station Road in Sunningdale, and in the Broomhall Playground opposite.

East Berks: in churchyards at Waltham St Lawrence, Knowl Hill, Hurley, Warfield, Ruscombe, Bray and Clewer. In the grounds of the Royal Military Academy at Sandhurst. 1% (1km²).

West Berks: in the churchyards at West Woodhay and Kintbury [36], Woodland St Mary [37], Uffington [38], Enborne [46], Steventon [49], Bessels Leigh [40], Englefield [67].

N. 'Saint Keverne'

• gb 2

An elegant D2 YY cultivar with almost concolorous flowers (the petals are golden-yellow and the trumpet is somewhat deeper yellow), flowers *c.*70mm across and trumpet 30mm long (sometimes exactly D1 rather than D2) with the flat petals, overlapping only one quarter at the base, and white-mucronate at their tips. Common as a garden plant, but too valuable to be thrown out in any numbers. It has a rather military, well ironed appearance with upright, very flat petals and a parallel-sided trumpet with very little flare at the mouth. One of the earliest of the D2 YY.

Silwood Park: uncommon in the newer part of the graveyard at Ashurst.

Ascot: rare in Sunningdale churchyard in February 2004.

East Berks: in Warfield and Ruscombe churchyards, North Ascot village on the boundary of Ascot Place, and on grassy roadside at the junction of Chawridge Lane and Winkfield Street in Maiden's Green. <1% (1km²).

West Berks: Wallingford churchyard [68] in February 2004.

N. 'Peeping Tom'

• gb 2

This is a large D6 cultivar (100mm wide) with a greatly extended narrow trumpet (40mm long but only 16mm wide in the middle); only the rare, smaller N. 'Bartley' is more extreme in its flare, with a 6mm flange (4mm in Peeping Tom). Occasional in parkland and churchyards, but rare as an outcast on waste ground. Long-lived as a garden outcast.

Silwood Park: locally frequent in the wood behind Silwood Farm 1979-2004 and in Farm Wood north-west of the farmhouse lawn in 2002, both outcasts from The Farm garden where it is still common. Beneath the *Fuchsia* on the south-east corner of the Manor House. Very local, a small clump in the corner of the Science Park car park by East Lodge. Rare in the graveyard at Ashurst.

Ascot: rare in the churchyard at Sunningdale.

East Berks: in shrub gardens in Windsor Great Park, and in churchyards at Finchampstead, Sunningdale, Warfield and Binfield. 2% (1km²).

West Berks: at Shrivenham [28], Buscot [29], Bucklebury [57], Blewbury [58], Sutton Courtenay [59].

N. 'Bartley'

• gb 4

This D6 cultivar has an outrageously long, thin trumpet, an abruptly flared mouth and strongly reflexed petals. Very like Peeping Tom, but smaller flowered (84mm wide rather than 100mm) and shorter stemmed, with a more exaggerated flare to the trumpet. Uncommon as a relic of planting. The trumpet is 38mm long and 30mm wide at the mouth, with a 6mm flange (only 4mm in Peeping Tom), regularly crenate.

Ascot: rare in Windsor Great Park by Virginia Water.

East Berks: <1% (1km²). Atlas 2000: [97]

West Berks: in churchyards at Letcombe Bassett [38] and Streatley [67].

N. 'Yellow Cheerfulness'

• gb 3

Often mass-planted on roadsides and roundabouts in towns, sometimes in alternating geometrical patterns with D4 WY N. 'Cheerfulness'.

East Berks: mass-planted on the Loddon Bridge roundabout [767714].

Narcissus x odorus L. *Campernelle Jonquil* = **N. jonquilla** x **N. pseudonarcissus** agg.
Narcissus x infundibulum Poiré

These have 1 or 2 perfectly formed, small, fragrant, concolorous flowers per stem. The jonquils have narrow, rush-like leaves but the hybrid jonquils have deeply channelled leaves, 6-8mm wide. The most common D7 YY cultivars are 'Pipit', 'Sweetness' and 'Sundial' (the attractive 'Suzy' is D7 YO).

Silwood Park: on the grassy bank facing the lily pond; 14 May 1983. On the grassy triangle at the junction of Cheapside Road and Buckhurst Road.

East Berks: <1% (1km²). Atlas 2000: [96]

West Berks: the cultivar N. 'Pipit' is pale lemon-yellow and occurs in the graveyard at Stanford Dingley [5771]

N. 'Trevithian' ● gb 3

Silwood Park: a single plant in the verge of London Road outside Hereford Lodge on 14 March 2008.

N. 'Quail' ● gb 3

Small, neat, fragrant, concolorous flowers held singly or in pairs on elegantly long, slender stems, with petals and trumpet of a deep, uniform golden yellow and conspicuous white mucros (D7 YY).

Silwood Park: rare in the wood on the northern side of the main Buckhurst road entrance; 1981-2004.

Ascot: locally frequent on the grassy triangle at the junction of Cheapside Road and Buckhurst Road 1995-2007 where it is the dominant daffodil.

N. 'Hawera' ● gb 4

A delightful, multi-flowered, slender cultivar with narrow spreading petals and short, broad trumpets (D5 YY); unmistakable, both petals and trumpets are pale canary-yellow. Late flowering.

Silwood Park: on the edge of the Science Park car park next to East Lodge since 1988. Rare in the churchyard at Ashurst on 10 May 2000.

Ascot: in the churchyard at South Ascot in 2000-04 and Sunningdale in 2003.

East Berks: in Bearwood churchyard on 6 May 2002. <1% (1km²).

West Berks: Ashbury Church [28] in May 2001.

N. 'Golden Ducat' ● gb 4

One of the biggest YY Doubles. An attractive concolorous cultivar, with neat tiers of large inner petals (not a ragged jumble like N. 'Telamonius Plenus', or neat but smaller as in N. 'Pencrebar'). Uncommon in churchyards, and seldom thrown out.

Silwood Park: rare in the graveyard at Ashurst (1996-2004).

Ascot: abundant on the Bracknell side of the Heatherwood Roundabout (2000-04).

East Berks: in Swallowfield and Finchampstead churchyards. Mass-planted on the Loddon Bridge roundabout [767714]. <1% (1km²).

West Berks: in graveyards at West Woodhay [36], Lambourn [37], Uffington [38], Compton [57], Streatley [67]. On the roadside bank at the entrance to Dry Sandford Pit [4699] in 2004.

N. ‘Pencrebar’ ● gb 3

An attractive concolorous YY double like N. ‘Golden Ducat’ but more strongly scented and with smaller interior segments, graded in size.

Silwood Park: rare, in the graveyard at Ashurst.

East Berks: <1 % (1km²). Atlas 2000: [96]

N. ‘Rip van Winkle’ ● gb 3

An outrageous-looking double D4 YY with pointed petals after the style of a punk hair-do.

Silwood Park: the grave of Captain J.C. Barker (d. 1987) at Ashurst has a classic collection of churchyard daffodils on it, with ‘Rip van Winkle’ and ‘Topolino’ rare amongst abundant ‘Jetfire’ and ‘Tête-à-Tête’.

East Berks: in the churchyards at Ruscombe and Warfield. <1% (1km²).

West Berks: rare, in the churchyard at Wootton [40].

Narcissus cyclamineus DC. *Cyclamen-flowered Daffodil* ● gb 2

This species has a long, slender, parallel-sided trumpet and reflexed, backward pointing, linear petals. It is one of the few garden Daffodils to naturalise from seed, and is found in damp grass in parkland (see also *N. bulbocodium*). Often grown on rockeries in gardens but seldom planted in churchyards or cemeteries.

Silwood Park: long persistent (1971-2004) as tiny plants in heathy ground under the massive bundle-planted beech tree by The Conservatory, with other small daffodils like *N. triandrus* and *N. bulbocodium*. Rare on the rockery in the Japanese Garden, where it is self-sown.

Ascot: self-sown and locally abundant in damp grass in Savill Gardens (v.c.17) and occasional in the Berkshire part of Virginia Water (1984-2004). A single plant on a grave in South Ascot churchyard with *Erica cinerea* and *Calluna vulgaris* in February 2004.

East Berks: by the R. Blackwater, Frogmore, Home Park, Great Park. <1% (1km²). Atlas 2000: [86], [96], [97]

West Berks: very local and rare. Atlas 2000: [46]

Narcissus bulbocodium L. *Hoop-petticoat Daffodil* ● gb 3

A rush-leaved species (1-2mm wide) with a cone-shaped trumpet and greatly reduced petals. Planted in groups in parkland, and sometimes self-sown.

Silwood Park: long persistent (1971-2000) in heathy ground under the massive beech tree by The Conservatory with other small daffodils like *N. diandrus* and *N. cyclamineus*. Naturalised on the rockery in the Japanese Garden. Ashurst, Cheapside.

Ascot: rarely naturalised in damp grass in the Berkshire part of Virginia Water (1984-2004).

East Berks: Frogmore, Home Park, Great Park. <1% (1km²). Atlas 2000: [96], [97]

West Berks: Atlas 2000: [46]

GROUP 2 YW: YELLOW PETALS, WHITE TRUMPET

N. ‘Spellbinder’ • gb 4

This is an uncommon colour combination. The only D1 YW likely to be found in churchyards or banks in villages. Often concolorous with lemon-yellow petals and trumpet. Rare as an outcast.

West Berks: rare at Welford Park and Hamstead Marshall.

Group 3 YO: yellow petals, orange trumpet

N. ‘Fortune’ • gb 3

A very common garden plant, widely planted in churchyards, and often seen on roadside banks and on village greens. This is much the most frequent of the D2 YO cultivars, and also the earliest into flower. The flowers are 108mm diameter. A key feature is that the mouth of the trumpet is very clearly 6-lobed, and the deep lobes are strongly overlapping. The trumpet is not as intensely orange as in other YO cultivars, and the base of the trumpet is paler orange than the mouth.

Silwood Park: locally dominant in the lawn at the main Buckhurst Road entrance. Also in grass by William Penney, South Lodge, Buckhurst Road at Heronsbrook, Machinery Centre and on the Reactor Bank. Sunninghill Crossroads and Ashurst churchyard. In woodland at Mann’s Copse, rare. Starting to flower on 14 February in the early spring of 2008, but many stems knocked down by frost on 19 February.

Ascot: in the churchyards at Ascot, South Ascot and Sunningdale and roadsides at Cranbourne.

East Berks: banks of the A4 road between Charvil and Knowl Hill, on shady banks of the A4 in west-central Maidenhead, Braywoodside, Hare Hatch, churchyards at Finchampstead, Twyford, Touchen End, Winkfield, Warfield, Maidens Green, Crouch Lane, Bearwood, Bray, Binfield, Sonning, Hurley, Clewer. In an appalling combination with *N. ‘Ice Follies’* in the verge opposite The Bell at Waltham St Lawrence, where bulbs of the two cultivars were planted in the same hole, and the effect repeated in regularly spaced clumps for several metres. 2% (1km²).

West Berks: churchyards at Ashbury and Shrivensham [28], Kintbury and Hungerford [36], Lambourn [37], Wantage and Uffington [38], Ardington and East Ilsley [48], on the Causeway at Steventon [468918], Frilford [49], Youlbury, Wootton, Cumnor and North Hinksey [40], Brimpton and

Ashmore Green [56], Bucklebury and Cold Ash [57], Blewbury [58], Sutton Courtenay [59], Burghfield [66], Englefield, Pangbourne and Sulham [67], Wallingford churchyard [68].

N. 'Jetfire'

• gb 3

A short D6 YO (or D12) cultivar, very popular as a pot plant on graves, often subsequently planted in grass (like a big-flowered version of 'Tête-à-Tête' but with dark blue-green (not grass-green) leaves, and downward-facing (not horizontal) trumpets). The reddish-orange, parallel-sided trumpet is fancifully seen as the exhaust flame from a jet fighter plane. There are several cultivars that resemble over-sized Jetfire (e.g. 'Glenfarclas', 'Itzim' and 'Andalusia') but I have never seen these outside gardens.

Silwood Park: occasional on and near graves in the churchyard at Ashurst; in flower on 19 February 2008 with 'Tete a Tete'.

Ascot: in the churchyards at Ascot, South Ascot and Sunningdale, and incongruously planted round tree bases on the edge of wet grass opposite the playing fields in South Ascot (planted during municipal tidying up operations in 1999).

East Berks: on graves in churchyards at Finchampstead, Sunningdale, Twyford, Winkfield, Warfield, Bearwood, Clewer, Sonning, Ruscombe, Hurley. By the village cross in Waltham St Lawrence. Planted in 2002 in a line along the roadside verge at the redevelopment of Bear's Rails Park in Old Windsor. 1% (1km²).

West Berks: at Uffington and Letcombe Bassett [38], Shellingford [39], Cumnor, Appleton and Wootton [40], Bucklebury [57], Blewbury [58], Sutton Courtenay [59], Burghfield [66], Streatley [67]

N. 'Hollywood'

• gb 3

An occasional D2 YO with pale lemon-yellow petals that are ribbed and creased. Trumpet is orange, rather narrow (not widely flared) at the mouth, and yellow at the base.

Silwood Park: very rare in the woodland between Southwood Halls and Buckhurst Road on 9 March 2004.

N. 'Home Fires'

• gb 4

An occasional D2 YO, but nowhere near as common as *N.* 'Fortune'. Graveyards and banks in villages, rarely on waste ground.

East Berks: Windsor, Maidenhead, Sandhurst. <1% (1km²).

West Berks: Lambourn [37].

N. 'Jumbly'

• gb 3

This is a cute-looking, short trumpeted, dwarf D6 (or D12) YO or YY cultivar with grass-green leaves and 1-4 flowers per stem, popular as an ornament on graves in churchyards, and as an edging plant in rockeries. Like a fragrant version of 'Tête-à-Tête' but with smaller flowers and much more strongly swept-back petals (the petal tips are almost parallel with the sides of the trumpet, as in *N. cyclamineus*).

Silwood Park: rare on graves in the churchyard at Ashurst; absent from the older parts

East Berks: only at Maidenhead. <1% (1km²).

West Berks: in the graveyard at Buckland [39].

N. 'Tahiti'

• gb 4

The commonest of the YO doubles, with regular, rounded, yellow petal segments surrounding a cluster of bright red-orange central segments. Churchyards and abandoned gardens; occasional.

Silwood Park: rare in the graveyard at Ashurst.

Ascot: rare in the churchyards at Sunningdale and South Ascot, 2000-03.

East Berks: mass-planted on the Ruscombe roundabout in Twyford; in the churchyard at Finchampstead. <1% (1km²).

West Berks: in the roadside verge in Brimpton [557647], and the churchyard at Bucklebury [5570].

N. 'Grand Soleil d'Or'

• gb 2

A striking multi-flowered cultivar (D8 YO) with small rounded yellow petals and very short orange cups. The commonest of this Division in gardens, but uncommon in churchyards. Very early flowering.

East Berks: in churchyards at Sunningdale, Hurley and Warfield. 1<% (1km²).

Narcissus x incomparabilis Mill. *Nonesuch Daffodil* = **N. poeticus x N. pseudonarcissus**

A fragrant, single-flowered D2 YO cultivar. Plantations and parks, occasionally naturalised. Many un-namable D2 cultivars might be recorded under this name, including WY and WO as well as YO forms.

Silwood Park: on the banks of the lawn on the Main Drive.

East Berks: Whiteknights Park. <1 % (1km²). Atlas 2000: [77], [96]

West Berks: Snelsmore [47], Frilford and Marcham (**OXF**) [49], Bessels Leigh [40], banks of the M4 motorway east of the A34 junction near Frilsham [57], Aldermaston [66] (**LAN**), Moor Copse and Basildon Park [67]. Under-recorded. Atlas 2000: no records.

Group 4 WY: white or pale yellow petals, yellow trumpet

N. 'Ice Follies'

• gb 3

Many peoples' least favourite Daffodil, but I like it. Much the commonest white-petalled cultivar (D2 WY), and found on waste ground, mass-planted in towns, village greens, parkland, churchyards, and even on banks in open countryside. The short, frilled trumpet starts out lemon-yellow but soon fades to white, so the plant can look either WY or WW. The flowers are often badly eaten by slugs.

Silwood Park: in Nursery Field on the boundary with Silwood Nurseries, also under the *Pinus radiata*, in the churchyard at Ashurst. With other garden outcasts in the wood east of The Farm. Amongst ivy under limes near Sunninghill Crossroads.

Ascot: mass-planted at the eastern end of Ascot High Street, on the roadside at Cranbourne, churchyards at Sunningdale, South Ascot, Ascot, Winkfield, Warfield, Binfield.

East Berks: mass-planted in municipal schemes throughout Maidenhead. On roundabouts in Windsor. In most of the churchyards, and as an outcast in woods at Sandford Mill [780730]. Common on banks at Braywoodside [8375], Touchen End, Hare Hatch, Waltham St Lawrence, Hurley, The Willows [9277], Dedworth and Maidens Green. 4% (1km²). Atlas 2000: all squares

West Berks: in the village and churchyard at Ashbury [28], particularly common in and around Shrivenham [28] and on the main street of Lambourn [37]. Churchyards at Woolstone [28], Faringdon [29], Kintbury [36], Eastbury, Woodland St Mary, Lambourn and Great Shefford [37], Wantage, Uffington and Letcombe [38], Shellingford [39], Enborne, Hamstead Marshall and Newbury [46], Harwell, East Hendred and East Ilsley [48], Steventon [49], Bessels Leigh, Wootton, Appleton and North Hinksey [40], Ashmore Green, Henwick, Cold Ash, Aldermaston and Brimpton [56], Tutts Clump and Bucklebury [57], Blewbury and on banks in Streatley [58], Sutton Courtenay [59], Burghfield [66], Englefield, Pangbourne and Sulham [67]

Narcissus pseudonarcissus subsp. **pseudonarcissus** *Daffodil*

• gb 2

Narcissus gayi (Hénon) Pugsley

This is the native, wild daffodil of woods, coppices, and shady grassland. Local, but formerly plentiful over a limited area of West Berkshire; not seen recently at any of the former supposedly native sites (see below). These daffodils are so widely planted and outcast in remote-looking places that it is impossible to find sites that are certainly native. Told from the other sub-species of *N. pseudonarcissus* by the petals, which are much paler than the trumpet (scored as WY not YY), forward pointing (not spreading) and clearly twisted. There is a bewildering variety of colour variation from pure white petals and deep golden trumpets, to almost concolorous pale lemon-yellow, but they all share the relatively long slender trumpet, and the forward-pointing, twisted petals.

Silwood Park: locally frequent in the wood between the Walled Garden and Ashurst Four Acre Field, rare on the edge of Rookery Copse and locally frequent in the older (southern) parts of the churchyard at Ashurst (these plants have delightful pale yellow, very twisted forward-pointing petals, and lemon-yellow trumpets with wide-flared mouths; just like illustration (b) on p. 110 of Rix and Phillips (1981) *The Bulb Book*).

Ascot: no other records.

East Berks: there are no documented native sites. Planted or outcast in Ambarrow Wood, Arborfield, Ashley Hill Wood, by the Loddon. Hurst House, Wellington College. Commonest in the west [76], [77] and [86]; scattered elsewhere. There are recent records from woodland at Leighton Park [7371], Crowthorne [8463], Shinfield [733673], and under pines at Ambarrow Lodge [879628]. Often planted with other daffodils, as on the banks of many of the R. Thames locks (e.g. Cookham). In the churchyards at Warfield and Clewer. 15% (1km²). Atlas 2000: all squares

West Berks: Druce recorded the plant from ancient woodlands in the Kennet valley (e.g. Inholmes [3373]) and from the Northern Loop, but it is absent from the interior and extinct at most if not all of its former sites. The most celebrated of the old sites was in Powder Hill Wood at Youlbury on Boars

Hill [487037]; this site is now an open birch and holly wood with good bluebell cover but no daffodils, save for a few *N.* ‘Dutch Master’ by paths and outbuildings. Wild daffodils are common in the garden of the Carmelite Priory next door, but these look planted to me. At the edge of the wood in Shellingford [3193], but probably planted. Not in the alleged native site at Lower England Copse between Appleton and Bessels Leigh (but there are a few *N.* ‘Dutch Master’ by paths). Several of the woods in the Enborne Valley [4062] to [4862] are suitable habitat, and might repay detailed scrutiny (there are four records from the Hampshire side of the river). Planted in the old garden at Jarn Mound [40]. Recent woodland records from Irish Hill [405670] where the plants were seeding, Beedon [4878], Tubney Wood and Wytham [455055], Scotland [564699], Hyde End [547637], Wasing Wood [575635], Carbins Wood [5669], Midgham Park [560760]. Occasional in parkland at Welford [4073]. In churchyards at Kintbury [36], Woodland St Mary [37], Enborne [46], Wootton [40], superb in Bucklebury and Briff Lane [57], Englefield [67]. Charlie Gibson recorded about 1000 plants with 250 in bloom in Wytham Wood [40] in 2006. Atlas 2000: all except [68], [69]

N. ‘Empress’

• gb 3

A beautiful and distinctive cultivar with a deep-golden-yellow, narrow trumpet, and pure white, slightly forward pointing petals of great substance (D1 WY).

Silwood Park: frequent in the grass beneath the Plane Tree at the Greenhouses and on banks adjacent to the Main Drive. Occasional in the graveyard at Ashurst.

East Berks: in the churchyards at Finchampstead, Sonning, Maidenhead and Cookham.

West Berks: Newbury and Kintbury churchyards.

N. ‘Princeps’

• gb 3

A famous old cultivar, like *N. pseudonarcissus* subsp. *pseudonarcissus* with its forward pointing twisted and inflexed petals, but the petals are much whiter, and the trumpet is more slender, longer, and bright rich yellow, with very little flare at the mouth.

Silwood Park: scattered wherever masses of daffodils occur, as by The Plane Tree and on Drive Lawns. Local in the churchyard at Ashurst. By the Ashurst Road at the edge of Rookery Copse opposite the Walled Garden. Between Ashurst Enclosure and the Churchyard Fence.

Narcissus x medioluteus* Mill. *Primrose-peerless* = *N. tazetta* x *N. poeticus

• gb 3

Narcissus x poeticus auct., non L.

Narcissus x biflorus Curtis

A D8 WY, occasionally naturalized in grass fields near houses. Often only 2 or 3 fragrant flowers, and these tend to be larger than other Division 8 WY taxa (the hypanthial tube is 20mm or more). The trumpet is yellow (not deep orange, as in *N.* ‘Geranium’).

Silwood Park: in the shrubbery by the Machinery Centre. Also in the lawn below the Plane Tree by the Tennis Court; a plant with very pointed tepals on 22 March 1999.

Ascot: in the churchyard at Sunningdale.

East Berks: orchards and waste ground near houses. Maidenhead. 1% (1km²).

West Berks: Longworth and Shellingford [39], Shaw [46], Cothill [49], Bessels Leigh [40], Hawkridge [57], Little Wittenham [59].

Narcissus minor L. *Lesser Daffodil*

• gb 3

Like a miniature version of *N. pseudonarcissus*, the hypanthial tube is only 9-15mm long (not 15-25mm). The narrow trumpet is deep golden-yellow, and the narrow, forward pointing petals are pale yellow, sometimes almost white. Could be confused with 'Little Beauty'.

Silwood Park: in grass at the Tennis Courts and by the CABI Library. In the older (southern) part of the graveyard at Ashurst.

Ascot: in grass above Virginia Water. Rare in the churchyard at Ascot.

East Berks: local and rare; see Ascot. <1% (1km²). Atlas 2000: [96]

West Berks: common on Jarn Mound [40] in 2002, obviously long persistent. In the graveyard at West Woodhay [36] in April 2002. Rare in the hilltop churchyard at Midgham [5567] on 30 January 2004.

N. 'February Silver'

• gb 3

A pale flowered D6 WY version of the very popular 'February Gold' (above). Later flowering (late March), with a lemon-yellow trumpet and spreading white petals (not forward pointing as in the earlier-flowering *N. pseudonarcissus* subsp. *pseudonarcissus* or *N. 'Little Beauty'*). Rather uncommon.

Silwood Park: uncommon in the older parts of the graveyard at Ashurst. Beneath the final oak in Ashurst Oaks, close to the cypress hedge of Ashurst Park.

East Berks: churchyards at Twyford, Finchampstead, Ruscombe, Bearwood, Bray, Binfield, South Ascot, Clewer. 1% (1km²).

West Berks: churchyards at Enborne [46], Ardington [48], Blewbury [58], Sutton Courtenay [59], Burghfield [66], Englefield and Sulham [67].

N. 'Jack Snipe'

• gb 3

A very attractive D6 WY daffodil with reflexed white petals and a short lemon-yellow trumpet. The flowers are roughly the same shape as 'Tête-à-Tête' but larger (70mm rather than 65mm wide), and WY rather than YO.

Silwood Park: rare, in the graveyard at Ashurst.

East Berks: churchyards at Twyford, Swallowfield, Ruscombe. <1% (1km²).

West Berks: in the graveyard at Kintbury [36], and churchyards at Uffington [38], East Hendred [48], North Hinksey [40], Blewbury [58], Streatley [67].

N. 'Bravoure'

• gb 3

This is the only common tall D1 WY that is likely to be found outside gardens. The base of the white petals is suffused with the same golden-yellow as the trumpet. A very striking, large-flowered (120mm diameter) daffodil with a long, slender trumpet. The gold at the mouth of the trumpet is flecked with white.

Silwood Park: locally common in grass by the Tennis Court, by the Squash Court, and rare on the boundary of Silwood Nurseries. Rare amongst other daffodils at the Buckhurst Road entrance.

East Berks: Bearwood and Warfield churchyards, and on waste ground at Fyfield. <1% (1km²).

West Berks: very uncommon, in churchyards at Uffington and Letcombe Bassett [38], Enborne [46], Carmelite Priory on Boars Hill and Wootton [40], Aldermaston [56], Blewbury [58].

N. 'White Lady' • gb 4

An elegant, slender, later-flowering D3 WY cultivar with narrow, separated white petals and a very short yellow trumpet, making a distinctive, star-shaped flower.

Silwood Park: locally frequent in the woods between the Jiff Greenhouses and Buckhurst Road, occasional in Ashurst churchyard, and rare by the Orchard Road on the corner of Rookery Copse. Much the commonest daffodil in the garden of East Lodge in April 2007.

Ascot: a single clump in the roadside ditch at Woodside [935714] on 11 April 2007.

East Berks: Waltham St Lawrence, frequent in Cookham and Swallowfield churchyards. <1% (1km²).

West Berks: common on the causeway at Steventon [4791], occasional at Shrivenham [28], Kingston Bagpuize [49], Wootton [40] and in churchyards at Enborne [46], Aldermaston [56], Burghfield [66].

N. 'Minnow' • gb 3

One of the smallest cultivars with up to 5 tiny flowers per stem; it has cream or pale yellow petals and lemon-yellow cups that fade to cream.

East Berks: rare, in Sunningdale churchyard. <1% (1km²).

Narcissus tazetta L. *Bunch-flowered Daffodil* • gb 4

These are strap-leaved (not rush-leaved) cultivars with multiple tiny flowers that are fragrant (D8 WY or WO). There are usually fewer than 10 flowers per stem, often only 5 or 6.

East Berks: Sonning Church. <1% (1km²).

West Berks: Lambourn [37] and Wantage [38] churchyards.

N. 'Jenny' • gb 3

The commonest and the earliest flowering of several D6 WY cultivars, with pale lemon-yellow trumpets and narrow, reflexed white petals.

Silwood Park: rare within the churchyard wall at Ashurst in March 2004.

N. 'Dove Wings' ● gb 4

A very attractive D6 WY with spreading creamy white overlapping petals and a relatively long lemon-yellow trumpet.

East Berks: rare, in the churchyard at Winkfield. <1% (1km²).

West Berks: rare, in the churchyards at Aldermaston [56] and Bucklebury [57].

N. 'Topolino' ● gb 2

A very attractive short-stemmed D1 WY with relatively large flowers (80mm wide) with forward-pointing, twisted, white petals, pale, blue-green leaves, and a clear, lemon-yellow trumpet (30mm long). Early.

Silwood Park: rare on graves in the churchyard at Ashurst in February 2004.

East Berks: sold as a pot plant in flower, and planted out on graves at Warfield, Finchampstead and Binfield.

West Berks: rare on Boar's Hill [40]

N. 'Little Beauty' ● gb 3

A delightful dwarf D1 WY Daffodil with a pale lemon-yellow trumpet and palest yellow, almost white twisted petals, directed forwards. Excellent for mass-planting in an alpine bed. Very rare as an outcast, or in churchyards

Silwood Park: one bulb on a grave at Ashurst (1979-2004). Several bulbs planted on a 1998 grave in the new part of the churchyard (2003).

Group 5 WW: white petals, white or pale yellow trumpet

Narcissus papyraceus Ker Gawl. *Paper-white Daffodil* ● gb 4

A multi-flowered, all-white D8 species most frequently represented by the cultivar *N. 'Paper White'*. It has up to 10 small (1.5cm diameter), highly fragrant flowers per stem.

Silwood Park: very rare, in the graveyard at Ashurst.

East Berks: <1% (1km²). Atlas 2000: [96]

N. 'Thalia' ● gb 4

A big D5 WW (milk-white) cultivar with 3-4 flowers per stem, resembling a blown-up *N. triandrus* but with spreading rather than reflexed petals, and gaping rather than rounded trumpets. This cultivar was formerly mis-classified as D8.

Silwood Park: rare by the water tap next to the road on the western edge of the churchyard at Ashurst (1983-2007). A single clump amongst N. 'White Lady' in the garden of East Lodge on 10 April 2007.

Ascot: in South Ascot churchyard on 26 April 2004.

East Berks: local and uncommon in churchyards. <1% (1km²). Atlas 2000: [96]

West Berks: rare, in Hungerford (1957). In the churchyard at Bucklebury [57] in 2001.

N. 'Ice Wings' ● gb 4

D5 WW like 'Thalia' but smaller (flowers 40mm dia. rather than 50mm) with a parallel-sided (not expanding) trumpet and broader petals.

Silwood Park: locally common in the grass at the corner of the Science Park car park by East Lodge.

East Berks: <1% (1km²). Atlas 2000: [96]

Narcissus triandrus L. *Angel's-tears* ● gb 3

A popular dwarf daffodil. The nodding flowers are multiple, white, and have strongly reflexed petals. The cup-shaped trumpet has rounded sides.

Silwood Park: long persistent (1971-2004) in heathy ground under the massive beech tree by The Conservatory with other small daffodils like *N. cyclamineus* and *N. bulbocodium*. Flowers over a much longer period than most of the cultivars (right through March and April).

Ascot: rare at Ascot Place and in thin turf above Virginia Water.

East Berks: Easthampstead Park, Bearwood, Wokingham. 1% (1km²).

West Berks: Botley [40].

N. 'Empress of Ireland' ● gb 4

The commonest of the all-white D1 WW cultivars; big flowers with white petals and a cream coloured trumpet, fading to off-white. The trumpet is more widely flanged than in *N.* 'Mount Hood'.

Silwood Park: rare in the graveyard at Ashurst in March 2002, and in the wood by the Buckhurst Road entrance.

East Berks: a rare graveyard plant; Sonning, Clewer. <1% (1km²).

West Berks: only seen in Newbury [46], Botley [40] and Burghfield [66] churchyards.

N. 'Cassata' ● gb 4

A beautiful split-cup Daffodil (D11 WW) with 100mm diameter flowers in which the petals are almost obscured by the flattened corona segments which open pale lemon-yellow then fade to white.

East Berks: local and rare in churchyards at Finchampstead and Sunningdale. <1% (1km²).

West Berks: only in the churchyard at Uffington [38].

N. 'Cheerfulness'

• gb 4

A popular garden plant with several fragrant double flowers per stem (D4 WW or WY) each 5.5cm diameter. The double centre has a mixture of white and cream coloured segments (as compared to D4 WO 'Bridal Crown' which has orange-yellow segments in the central cluster). Often mass-planted on roadsides and roundabouts in towns.

Silwood Park: common on the edge of the Croquet Lawn. Below the Ha Ha. In the former orchard at The Farm.

East Berks: on banks in Bracknell. Abundant by the A4 at Charvil. Finchampstead Church. Mass-planted on the Loddon Bridge roundabout [767714]. <1% (1km²). Atlas 2000: [96]

West Berks: in the churchyards at Burghfield [66] and Streatley [67]. On the embankment of the new road junction of the A420 at Faringdon [3096] in April 2003. On the roundabout of the A34 at Chilton [4886] in 2004.

N. 'Irene Copeland'

• gb 4

A beautiful double D4 WY, with white ruffed petals, the centre-most of which are pale creamy yellow.

Silwood Park: rare in the graveyard at Ashurst.

East Berks: <1% (1km²). Atlas 2000: [96]

West Berks: in the roadside verge at Brimpton [5564], churchyard at Bucklebury [57].

GROUP 6 WO: WHITE PETALS, ORANGE TRUMPET

N. 'Geranium'

• gb 4

This is much the commonest of the late-flowering multi-flowered WO cultivars. It is a fragrant D8 Daffodil with up to 6 medium-sized flowers (55mm diameter) with glistening, much-creased white petals and bright orange cups. One of the favourite daffodils for cutting.

Silwood Park: frequent in lawns around the Plane tree and the Horticultural Greenhouses. Also on the banks of Main Drive. Locally abundant at the entrance to the house called Fairfield on the bank of London Road opposite South Lodge (1989-2007). Very common all through the shrubbery separating TTC from the Croquet Lawn and on the edge of the TTC car park adjacent to East Block, where it was planted in 1990.

East Berks: on banks at Swallowfield Church and in grass by the village pond at Shurlock Row. Finchampstead Church. 2% (1km²).

West Berks: in the churchyards at Enborne [46] and Stanford Dingley and Bucklebury [57], and on waste ground at Compton [5279].

N. 'Flower Record'

• gb 4

The commonest of the D2 white-petalled daffodils that have a broad orange rim to their yellow trumpets: D2 W YYO (or W YO).

Silwood Park: several clumps in grass close to the Met Tower on Pound Hill and scattered around The Farm, 1979-2007.

N. 'Cragford'

• gb 1

A D8 WO, like an early-flowering Primrose Peerless, but with vivid orange rather than yellow trumpets. Flowers 53mm wide, in groups of 4-6 per stem. The white petals are flushed yellow at the base and are often very crinkled ("un-ironed"). Much earlier flowering than *N. 'Geranium'*.

Silwood Park: masses of plants in the sycamore wood on the boundary of Silwood Nurseries. On both sides of Drive Field. In two places at Silwood Farm: in the orchard below the cherry tree (flowering in February 1979-2004), and in Farm Wood on the north-west side of the lawn in front of the farmhouse. Very early flowering (e.g. 24 January 1999) and fragrant.

N. 'Kilworth'

• gb 4

A neat D2 W-YO with yellow bases to the white petals, and a straight-sided expanding trumpet (triangular in section) that is yellow at the base and vivid orange at the mouth (the "eye" has a touch of green).

Ascot: rare, in the churchyard at South Ascot at the end of April.

N. 'Bridal Crown'

• gb 4

The commonest of the small-flowered WO doubles with multiple flowers per stem. Like 'Cheerfulness' but with double petals as well as double cups, and smaller flowers.

Silwood Park: in the graveyard at Ashurst.

East Berks: Sunningdale churchyard. <1% (1km²).

West Berks: in the verge at West Woodhay House [3863], in short grass at Stanford Dingley Church [5771].

N. 'Salome'

• gb 4

The only pink trumpet daffodil likely to be seen outside gardens. It is a D2 WP cultivar with smooth waxy pale cream petals and large, peach-pink trumpets with little flare at the mouth. The flowers are 90mm in diameter.

Silwood Park: rare in the new (north-eastern) part of the graveyard at Ashurst. In the lawn by the Reactor Block.

Ascot: rare in the churchyard at South Ascot.

East Berks: very rare, in the churchyards at Bearwood and Finchampstead. <1% (1km²).

GROUP 7 WR: WHITE PETALS, SHORT RED-LINED YELLOW TRUMPET

Narcissus poeticus L. *Pheasant's-eye Daffodil*

• gb 4

Narcissus poeticus subsp. **poeticus**

Narcissus majalis Curtis, nom. illegit.

Narcissus ornatus Haw.

Common in churchyards and on grassy banks in villages; the latest flowering of all the daffodils. The narrow red rim to the very short disc-shaped trumpet is distinctive. The position of the stigmas is diagnostic; 3 are exerted, and 3 are included in the throat. The cultivar *N.* 'Actaea' is the most commonly seen of this mid-season D9 W-YJR group.

Silwood Park: uncommon beneath the Plane Tree, on both sides of The Drive, scattered plants in rough grass in the graveyard at Ashurst, The Farm, in Farm Wood, and at the edge of the wood by the Met Tower.

Ascot: on the Racecourse and on the banks of Virginia Water.

East Berks: recently at Farley Court, Culham Court, Wokingham, Finchampstead Church, Easthampstead Park, Littlewick Green, Scotlands, Binfield Church, Park Wood, Quarry Wood Cookham. 2% (1km²). Atlas 2000: all squares

West Berks: recently at Inkpen [36], Stanford-in-the-Vale [39], Boxford [47], West Ilsley [48], Abingdon [49], Brimpton [56], Ufton Nervet [66]. Atlas 2000: [29], [36], [57], [67]

Narcissus poeticus var. **recurvus**

• gb 5

This cultivar has reflexed, glistening white petals, and is the last common daffodil into flower.

Silwood Park: scattered throughout the older parts of Ashurst churchyard in small, isolated clumps, flowering in May, well after all of the other daffodils are over (1979-2009).

Ascot: very local, in heathy ground under birch north of the railway at Englemere [902683] on 28 April 2002.

East Berks: in open woodland on the northern edge of Ashley Hill [828815] in 2002, common on both sides of the woodland drive leading to Farley Court [751642]. <1% (1km²).

West Berks: on the causeway at Steventon [4791].

Narcissus poeticus subsp. **radiiflorus**

• gb 5

All 6 stamens are exerted or partly exerted, and the petals are narrow and non-overlapping.

West Berks: Faringdon churchyard in 1998.

The National Collection of *Narcissus* was moved to Silwood Park in 2004 from its previous home next to the A30 in Sunningdale. A list of cultivars in the collection is available on the web site. The cultivars grown prior to this and in other parts of Silwood Park are shown below.

¶ **Narcissus** *N. assoanus*, *N.* ‘Baby Moon’, *N. bulbocodium* subsp. *bulbocodium* var. *conspicuus*, *N.* ‘Canaliculatus’, *N. canariensis* (gift from Chelsea Physic Garden in 2005), *N.* ‘Charity May’, *N. cyclamineus*, *N.* ‘Dutch Master’, *N.* ‘Empress’, *N.* ‘February Gold’, *N.* ‘February Silver’, *N.* ‘Geranium’, *N.* ‘Hawera’, *N.* ‘Ice Follies’, *N.* ‘Jack Snipe’, *N.* ‘Jenny’, *N.* ‘Jetfire’, *N. jonquilla*, *N.* ‘Jumble’, *N.* ‘Liberty Bells’, *N.* ‘Little Gem’, *N.* ‘Little Witch’, *N.* ‘Minnow’, *N. minor*, *N.* ‘Mount Hood’, *N.* ‘Newcastle’, *N. obvallaris*, *N. x odorus* ‘Rugulosus’, *N. papyraceus*, *N.* ‘Passionale’, *N.* ‘Peeping Tom’, *N.* ‘Pencrebar’, *N.* ‘Petrel’, *N.* ‘Pipit’, *N. poeticus* var. *recurvus*, *N.* ‘Purbeck’, *N.* ‘Quail’, *N.* ‘Rijnveld’s Early Sensation’, *N.* ‘Rip van Winkle’, *N.* ‘Rippling Waters’, *N. romieuxii*, *N. rupicola* subsp. *marvieri*, *N.* ‘Saint Keverne’, *N.* ‘Salomé’, *N.* ‘Silver Chimes’, *N.* ‘Sun Disc’, *N.* ‘Sundial’, *N.* ‘Suzy’, *N.* ‘Sweetness’, *N.* ‘Taffeta’, *N.* ‘Tahiti’, *N.* ‘Tête-à-Tête’, *N.* ‘Texas’, *N.* ‘Thalia’, *N.* ‘Tom Thumb’, *N.* ‘Topolino’, *N.* ‘Trevithian’, *N. triandrus* var. *triandrus*, *N.* ‘Tuesday’s Child’, *N.* ‘Unique’, *N.* ‘White Lion’, *N.* ‘W.P. Milner’, *N. watieri*, *N.* ‘Yellow Cheerfulness’

Asparagus officinalis L.

o grh 7

Asparagus officinalis subsp. **officinalis** *Garden Asparagus*

Alien on dry waste ground, tops of garden walls, graves, etc.; “evidently a garden escape or from seeds being carried by birds. It does not become permanently established” (Druce). Uncommon but persistent. Host plant of the beetle *Crioceris asparagi*.

Silwood Park: bird-sown on Drive Lawns, beneath a fence post in the shrub bed below the Japanese maples in 1994 (still there in 2004). Long established by the southern door of The Greenhouses (1979-2004). Several large plants on graves in the churchyard at Ashurst, up to 2m tall by July 2000; restricted to the grave of Edward Humble (*d.* 1930) in July 2005-September 2008. In the fence of The Playground at Cheapside in 1999.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	1	6

Ascot: uncommon, on Fernbank Road, Woodlands Road, Brookside, Forest Lodge, in shade on the edge of grassland in the northern triangle of Ascot Racecourse. In the verge by the Civil Service College, opposite Magnolia House in July 2003-04, and beneath yew in the churchyard at South Ascot in September 2003.

East Berks: Hurley, Winkfield, Wellington College. Smallmead tip (1969), Reading gas works (1979), commercial fields at White Waltham. Recently at Shire Hall, Upperwood, Fleet Copse, West Whitley, Woodley, Earley, Hallsmead, Sheeplands Farm, South Twyford, Temple Coombe, Blackwater, Wellington College, Broadmoor, Great Hollands, Shurlock Row, Old Malt House, Little Foxley, Old Beams, Holyport, Fifield, several places in Maidenhead, Cookham Rise, Cookham Dean, Cookham village, Odney Club, The Bounty, Foliejon Park, New Lodge, Clewer Green, on the earthworks of the new flood defences in Stag Meadow, Clewer, Shaw Farm, Frogmore, and on the cliffs below Windsor Castle. 8% (1km²). Atlas 2000: all squares

West Berks: Hungerford [36], Longworth and Hatford Wood [39], Harwell [48], Steventon, Grove, Dry Sandford Pit, Kingston Bagpuize and Frilford pit [49], Botley [40], Hermitage and commercial

fields at Stanford Dingley [57], East Hagbourne [58], Sutton Courtenay churchyard, Radley Station and Little Wittenham [59], Grandpont [50], in the grounds of the Old Rectory at Burghfield [66], Purley and Pangbourne Station [67], Wallingford [68]. Atlas 2000: [29], [36], [39], [46], [48], [49], [40], [56], [57], [59], [50], [66], [67], [69]

Ruscus aculeatus L. *Butcher's-broom*

• n 1

Woodland, plantations and hedge-banks. Possibly native in a few places on the chalk, but widely planted elsewhere in woodlands for game cover, and in hedge bottoms and neglected parts of larger gardens; sometimes long persistent. Local and uncommon.

NVC: W 14,15

Silwood Park: very local and rare. A small patch of plants beneath a birch tree on the southern side of the Cannon Path (since 1979 at least). Still there, and the patch roughly the same size, in August 2007. The encroaching rhododendrons were cut back on 20 October 2007 after which England lost 6-15 to South Africa in the rugby World Cup Final in Paris.

Ascot: no records in [96], but occasional on the clay just to the north, as at Winkfield Lodge and Sunninghill Park [97] where it grows in the ditch near Ascot Gate.

East Berks: near Wellington College, Finchampstead Ridges, Park Place. Reading, Leighton Park, (1962), St Leonard's, Bearwood, Finchampstead Leas, Park Place, Woodside. Scattered throughout: Riseley, Whiteknights, Windsor Forest, Warren Copse [8374], Windsor Lane [9676], Wokingham [8068]. Recently by the M4 in Lower Earley, Bearwood, West Emmbrook, Finchampstead, Twyford Church, North Twyford, Ashridgewood, Broad Common, Pond Wood, Surrells Wood, Dial Close, Foliejon Park, Forest Park, Frogmore, Windsor Castle, Cookham Lock. There is an extraordinary hedgerow of *Ruscus* with oaks above the R. Blackwater at Finchampstead [8062]. Atlas 2000: all except [96]

West Berks: scattered throughout, with the classic "dotty" distribution of a planted alien or garden escape. Bourton and Compton Beauchamp [28], in hedge bottoms at Buscot weir, Little Coxwell, Great Coxwell [29], Inkpen and Hungerford [36], Kingston Lisle, Childrey and Wantage [38], Pusey and Carswell [39], Winterbourne Holt, Welford Park and Peasemore [47], Lockinge and East Ilsley [48], Tubney Wood and planted at Jarn Mound [40], Wasing Park [56], between Little Wittenham churchyard and Day's Lock [5693], Radley Large Wood and Bagley Wood [50], Mortimer West End [66], Sulham Woods, Church End Copse, Basildon and Tilehurst [67]. Atlas 2000: all except [37], [46], [58], [68], [69]

Alstroemeria aurea Graham *Peruvian Lily*

• gb 6

Alstroemeria aurantiaca D. Don

This is the common patch-forming, orange-flowered lily of herbaceous borders. It persists as an outcast, and can form substantial clumps when conditions are good for it.

Silwood Park: thoroughly naturalised in damp half-shade, growing with bracken under *Quercus nigra* at the western end of the Japanese Garden. The patch was 6m x 5m on 12 July 1998 but bigger and more vigorous (7m x 7m) on 10 July 2000. The bracken has been hand-pulled from the patch for the last 4 years, and this has helped to improve the vigour.

Ascot: locally naturalised in abandoned shrubberies in Sunningdale Park in 1999, and in the graveyard at South Ascot in 2000-04.

East Berks: recently at Thatcher's Ford, Woodley, The Throat, Chapel Green, Wokingham, Altmore, Maidenhead, Cookham, Old Windsor, Shaw Farm. 2% (1km²). Atlas 2000: all except [78]

West Berks: at Kingston Bagpuize [4098] in 2003. In the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [46]

Erythronium dens-canis L. *Dog's-tooth-violet* ● gb 6

Very rare in damp grass, as a relic of cultivation.

East Berks: a single clump in the churchyard at Binfield in March 2001. <1% (1km²).

West Berks: in an old garden near Frilford [440974] in 1965. Atlas 2000: [36]

ZINZIBERACEAE

¶ **Roscoea** *R. cautleyoides*, *R. humeana*, *R. purpurea*

¶ **Hedychium** *H. coccineum*, *H. gardnerianum*

IRIDACEAE

Libertia formosa Graham *Chilean-iris* ● gb 6

Libertia chilensis (Molina) Klotzsch ex Baker, nom. nud.

Told from *Sisyrinchium* by the inner tepals, which are twice as long as the outer tepals (not roughly the same length). Flowers are white rather than pale yellow.

East Berks: a rare garden outcast. Spencer's Wood, Windsor. <1% (1km²). Atlas 2000: [76], [97]

West Berks: in the grounds of the Old Rectory at Burghfield [6668], 1979-2004.

¶ **Libertia** *L. formosa*, *L. grandiflora*, *L. ixioides*, *L. peregrinans*

Sisyrinchium bermudiana L. *Blue-eyed-grass*

hr 7

Sisyrinchium angustifolium Miller

Sisyrinchium graminoides E. Bickn.

Sisyrinchium hibernicum Á. Löve and D. Löve

A rare casual of waste places.

East Berks: found in Wellington College grounds despite not being known in the gardens there (1874). Woodley (1933-34), Bracknell (1958). Near Rapley Farm, north of the wood [8965] in 1974. Atlas 2000: no records.

West Berks: Tilehurst [67] in 1939. Atlas 2000: no records.

Sisyrinchium striatum Sm. *Pale Yellow-eyed-grass*

• hr 6

After *Crococsmia* and a few of the *Iris*, this is the most common garden outcast of the Iridaceae. It grows well in gardens on the heavier soils, and survives the trauma of expulsion relatively well. It is found on banks, waste ground and in ditches in villages throughout.

Ascot: on waste ground in south Ascot (1985-2004). Not wild in Silwood Park.

East Berks: recently at Ryeish Green, Whitley, Earley, Bulmershe, Newlands Farm, Coppid Hill, Winnersh Station, Kiln Ride, Chapel Green, on old allotments in Wokingham, Popeswood, Shottesbrooke, Warfield Park, Furze Platt, Halfway House, Holyport, Summerleaze Lakes. Absent from the acid soils to the east of 90. 3% (1km²). Atlas 2000: [76], [77], [86], [87], [88]

West Berks: on waste ground at Faringdon [2895] and Newbury [4767] in July 2002, and at Steventon [4691] and Kingston Bagpuize [4098] in July 2003. Atlas 2000: [29], [36], [38], [49], [66], [68]

¶ **Sisyrinchium** *S. angustifolium*, *S.* 'Biscutella', *S.* 'Blue Ice', *S.* 'Californian Skies', *S. californicum*, *S. californicum* Brachypus group, *S.* 'E.K. Balls', *S. idahoense* 'Album', *S. idahoense* var. *bellum*, *S. macrocarpon*, *S.* 'Quaint and Queer', *S. striatum*, *S. striatum* 'Aunt May'

¶ **Hermodactylus** *H. tuberosus*

¶ **Sparaxis** *S. tricolor*, *S. variegata*

Iris germanica L. *Bearded Iris*

• h 5

An alien on waste ground and tips, rarely established and then only for a short time.

Silwood Park: a large patch by the Shell Building in 1980; site destroyed during redevelopment in 1993.

East Berks: a relic of cultivation by the railway near Twyford (1897). Smallmead tip (1973). Woodley, Ashenbury, East Maidenhead, Old Windsor. 1% (1km²). Atlas 2000: [77], [88], [97]

West Berks: roadsides at Baydon [27], Dry Sandford Pit and Sutton Courtenay tip [49], roadside at Farmoor [40], Blewbury [58], railway sidings at Didcot, and in abandoned allotments at South Moreton [59], South Hinksey tip [50], tip on Burghfield Common [66]. Atlas 2000: [46], [49], [40], [58], [59], [50], [66]

Iris sibirica L. *Siberian Iris*

• h 5

Told from other non-evergreen blue irises by its hollow flower stem and brown papery bracts.

Ascot: wild looking, in damp grass away from the house at Sunningdale Park in 1999.

East Berks: in a marsh near Lead Farm at Whistley Green [790730] in 1969 and a gravel pit at Sandford Mill [778732] in 1969. Recently at Lambs Lane, Spencer's Wood, Round Hill, Barkham Ride, The Mount, Bulmershe Court, Twyford, Ruscombe, Wescott, Haines Hill, West End, Cox Green, Burchett's Green, West Dedworth. 3% (1km²). Atlas 2000: all except [78]

West Berks: Atlas 2000: [38], [49]

Iris pseudacorus L. *Yellow Iris*

hel 5

By rivers, brooks, streams and marshy places; common and widely distributed. Wet woods, marshes, river banks, ditches and ponds. Occasional but absent from the chalk ridge. Seriously defoliated in some years by caterpillars of the Iris Sawfly, *Aphthona coerulea*.

NVC: M 22,27; MG 6,10; OV 26,30,32; S 4,5,8,13,14,18,23,25,26; W 1,5,6

Silwood Park: common in full sun in patches all around The Lake, especially on the Dam by Silwood Farm. In The Marsh, by the inflow stream, especially common downstream from the *Scirpus sylvaticus* monoculture. In Cascade Marsh and Guinness's Thicket in wet grass by the edge of the lake. Next to the Walled Garden, in willow carr in the ditch and throughout the swampy part of the Old Orchard. Great Mead, The Willows, Farm Road, Guinness's Bridge, The Rookery, locally dominant in the pond of the Japanese Garden. Abundant in the small garden pond at East Lodge in June 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	5	11

Ascot: frequent at the edges of the Marist Convent pond at Frognall [941682] in September 2005.

East Berks: widespread and locally abundant. It grows with *Molinia* in the Wish Stream through Wishmoor Bottom. 37% (1km²). Atlas 2000: all squares

West Berks: common in wetlands everywhere except on the chalk ridge (north of 75 and south of 85). Atlas 2000: all squares

Iris versicolor L. *Purple Iris*

• hel 6

In reed swamps, and by lakes and rivers.

NVC: A9,S8,S12,S16

East Berks: at Keeppatch [8269] in 1998. <1% (1km²). Atlas 2000: [86]

Iris spuria L. *Blue Iris*

• hel 6

Told by its solid stem, wide leaves (>10mm), green bracts and flowers less than 8cm across.

Silwood Park: in grass by the Met Tower, one clump in rabbit-grazed turf, just behind the Control Room on the Pound Hill Field side of the building on 3 June 1995. The clump was 60cm in diameter in 2000, still there in 2004.

East Berks: an outcast in Sonning [7575] in 2002. <1% (1km²).

Iris reticulata M. Bieb. *Dwarf Iris*

• h 2

Commonly sold as a scented, winter-flowering pot plant in garden centres, and planted on graves in churchyards and by memorial stones in crematoria. Occasional throughout in gardens and churchyards, but never naturalised in Berkshire.

Silwood Park: rare in short grass in the graveyard of Sunninghill Parish Church at Ashurst on 1 March 1999. On the grave of George Rowe in 2001. Also in disturbed ground at Sunningdale Cemetery, opposite the Civil Service College.

East Berks: in churchyards at Winkfield, Sonning, Wargrave in February 2001, and Bearwood, Finchampstead and Arborfield in February 2003. 1% (1km²). Atlas 2000: [77], [96]

West Berks: in the roadside outside the churchyard at Little Wittenham [5693] in 1987 but not seen again since then, but still present in the churchyard in February 2004. Bourton Church [2387] and Buckland Church [3598] in 2001. In short grass at Hermitage [5173], and Norman Hall in Sutton Courtenay [504945], on 2 February 2002. Atlas 2000: [57], [59]

Iris orientalis Mill. *Turkish Iris*

• h 4

Iris ochroleuca L.

Iris spuria L. subsp. *ochroleuca* (L.) Dykes

This is the classic white-flowered iris with yellow patches on the outer tepals. An occasional garden outcast on dry banks and waste ground in towns and villages.

Ascot: on the dry bank beneath the oak trees on The Rise in Sunningdale from 1980-2000. In Sunningdale Park in 1998. In a wild part of the garden of 84 Upper Village Road, Sunninghill in May 2004.

East Berks: recently at Lambs Lane, Spencer's Wood, Three Mile Cross, Lower Earley, Warren Lodge, Central Reading, West Whitley, South Reading, The Mount, Woodley, Winnersh, Sonning, Westcott, Shottesbrooke, Maidens Green, Cookham Rise. 3% (1km²). Atlas 2000: all squares [78]

West Berks: on a grassy bank near Foxhall caravan park at Didcot [5190] in 1977 (**OXF**), but extinct by 1980. By the side of the brick bridge in Chilton railway cutting [496857] on 12 June 2004. By the orchard pond in the grounds of the Old Rectory at Burghfield [6668] in 2004. Atlas 2000: [38], [49], [68]

Iris foetidissima L. *Stinking Iris*

ch 5

Oak and beech woods and plantations on calcareous soil. Local and in small quantity, but very tolerant of shade. Commonest on the Upper Greensand, and absent from south-east Berkshire. Commonly naturalised in churchyards throughout. Known at once in winter from the remnants of its bright orange seeds.

NVC: W 8,12,13,21

Silwood Park: originally very local and rare in semi-natural woodland; a single individual in Weir Wood (1979-2004). Now much increased, following planting in the woodland garden behind Southwood Hall in 1984. Thoroughly naturalised and widely self-sown, it first crossed over the track into Buckhurst Road Wood, where it seeded under oak 'number 1016' in 1993. Ashurst churchyard, a single clump on the shaded, southern boundary on 25 January 1999. It has sprung up from seed on North Gravel in 2001 after the Leyland Cypresses between BP Greenhouse and Southwood Hall were cut down in 1999; there were 3 clumps flowering profusely on 18 June 2002. The plant spread quickly into the dry bare ground and there were 86 plants flowering on 4 June 2007.

Ascot: local and rare. In the lane between Sunningdale Bowling Club and Sunningdale cemetery, off Whitmore Lane from 1984-2004.

East Berks: Bisham Woods, Park Place, Rose Hill, Wokingham. Widespread in churchyards, less common in ditches and woodland edges. Apparently much commoner than in Bowen's time but perhaps under-recorded by him if he assumed that the individuals in churchyards were planted. Self-seeded in Wargrave and Arborfield churchyards. 6% (1km²). Atlas 2000: all squares

West Berks: scattered throughout, but under-recorded: Beckett Park [28], Little Coxwell, Grove Copse and Great Coxwell Church [29], West Woodhay Church [36], Sparsholt Church [38], Hinton Waldrist, Longworth, Denchworth and Baulking Church [39], Peasemore [47], East Hendred and Harwell Church [48], Kingston Bagpuize House, Abingdon and West Hanney Church [49], Hen Wood and Jarn Mound [40], Woolhampton [56], Bucklebury [57], Moulsoford, Blewbury, Streatley, Aston Tirrold Church [58], Little Wittenham, Sutton Courtenay Manor and churchyard [59], in the grounds of the Old Rectory at Burghfield [66], Wallingford churchyard [68]. Atlas 2000: all except [37]

Iris unguicularis Poir. *Algerian Iris*

• h 2

The common winter-flowering blue iris; occasional in gardens but rare as an outcast.

Silwood Park: long naturalized by the Conservatory of the Manor House as a relic of cultivation.

East Berks: in Windsor on 15 December 2012, the plant was found only at Bexley Street [96133 76729] in front of terraced houses.

West Berks: in the grounds of Kingston Bagpuize House [49] in February 2002.

The National Collection of *Iris* (80 species and 170 cultivars) is held at the University of Reading in Whiteknights Park.

Iris latifolia

Silwood Park: one plant on the edge of the grass semicircle, south of Unit B, on 23 June 2010 opposite the *Quercus acuta*.

¶ **Iris** *I.* 'Amber Queen', *I. attica*, *I.* 'Austrian Sky', *I.* 'Berkeley Gold', *I.* 'Black Swan', *I.* 'Blue Denim', *I.* 'Blue Pigmy', *I.* 'Blue Shimmer', *I.* 'Braithwaite', *I.* 'Brighteyes', *I.* 'Brown Lasso', *I. bulleyana*, *I.* 'Butterscotch Kiss', *I.* 'Cantab', *I.* 'Chantilly', *I.* 'Cherry Garden', *I. chrysographes*, *I. confusa*, *I. cristata*, *I.* 'Dancer's Veil', *I. danfordiae*, *I. douglasiana*, *I.* 'Edward of Windsor', *I. ensata*, *I. ensata* 'Moonlight Waves', *I. ensata* 'Pink Frost', *I. ensata* 'Rose Queen', *I. ensata* 'Variegata', *I.* 'Florentina', *I. foetidissima* var. *citrina*, *I. foetidissima* 'Variegata', *I. forrestii*, *I.* 'Frost and Flame', *I. x fulvala*, *I.* 'Gingerbread Man', *I. graminea*, *I.* 'Green Spot', *I.* 'Holden Clough', *I.*

innominata, *I. 'Jane Phillips'*, *I. japonica 'Variegata'*, *I. 'Kent Pride'*, *I. 'Knick Knack'*, *I. laevigata*, *I. lazica*, *I. orientalis*, *I. pallida 'Argentea Variegata'*, *I. pallida* subsp. *pallida*, *I. pallida 'Variegata'*, *I. 'Party Dress'*, *I. 'Pearly Dawn'*, *I. pumila*, *I. reticulata*, *I. x robusta 'Gerald Darby'*, *I. ruthenica*, *I. setosa* var. *arctica*, *I. sibirica*, *I. sibirica 'Butter and Sugar'*, *I. sibirica 'Dreaming Yellow'*, *I. sibirica 'Papillon'*, *I. sibirica 'Perry's Blue'*, *I. sibirica 'Ruffled Velvet'*, *I. sibirica 'Sparkling Rosé'*, *I. 'Tinkerbelle'*, *I. unguicularis*, *I. unguicularis 'Mary Barnard'*, *I. versicolor*, *I. versicolor 'Kermesina'*, *I. winogradowii*

¶ **Dierama** *D. pulcherrimum*

¶ **Romulea** *R. bulbocodium*

Crocus *L. Crocus*

Mass-planted in towns and villages, and on all the larger country estates. The first species into flower, and much the most widely self-sown is the pale mauve *C. tommasinianus* in late January. The common yellow crocus is *C. x stellaris* which appears in the second week of February. Of the autumn flowering species, *C. nudiflorus* is much commoner than *C. speciosus* or *C. serotinus*.

Crocus vernus (L.) Hill *Spring Crocus*

• gt 2

Crocus purpureus

Crocus sativus L. var. *vernus* L.

Meadows, grasslands, churchyards, and roadsides in villages. Much the most commonly planted crocus, but very rarely seen far from houses or churches, and seldom self-sown. Leaves 4 to 8mm wide, flowers white to deep purple, perianth tube only white if the rest of the perianth is white. The stamens are bright orange, no matter what the colour of the perianth (e.g. purple or white).

Silwood Park: after *C. tommasinianus*, the second commonest *Crocus* in the churchyard at Ashurst. Also present in a pure white form with startling orange stigmas on 26 February 1999.

East Berks: in almost every churchyard, and on grassy roadside banks in most villages but much less abundant than *C. tommasinianus*. Perhaps the best display is in the churchyard at Ruscombe. Mass-planted on roadside verges in Bracknell and Wokingham. The white-flowered plants are particularly good at Sonning churchyard. 3% (1km²). Atlas 2000: all squares

West Berks: its most famous site is in Crocus Meadow nature reserve at Inkpen [370640] where it has been known since at least 1800 (Plate 8). The site is at its best in early March, when you will see carpets of Crocus with 50 or more flowers in each metre square. Most of the blooms are purplish blue, but a scattering of the flowers are pure white. Also in woods at Shellingford [321935], Boxford [4271], Winterbourne [4571], Hyde End Mill [5563], Stanford Dingley and Bucklebury [57], Little Wittenham churchyard [567935]. Atlas 2000: all except [69]

Crocus tommasinianus Herb. *Early Crocus*

• gt 1

Much the most commonly self-sown species, often naturalised and forming large swathes of pale purple-blue blossom in churchyards, on banks in villages and in parkland. A pale, delicate, rather floppy crocus with a pure white tube, that suffers badly from rain damage. Leaves narrow (2 to 3mm wide), perianth tube white.

Silwood Park: frequent in grass around The Greenhouses. Occasional in the graveyard at Ashurst Church. One clump by the footpath at Cheapside opposite Gravel Pit on 14 February 2001. A single

plant in flower near the northern edge of the Ashurst Lysimeter on 15 February 2006 following glyphosate treatment then late autumn cultivation. Two plants on 28 February 2009 in the same place. A few plants at the base of the front wall at St Michael's Ashurst on 16 February 2013.

Ascot: very commonly naturalized in rough grass in South Ascot churchyard. On waste ground in Sunninghill village and locally abundant in the verge of Truss Hill Road close to the railway bridge of Upper Village Road (this population has remained roughly the same size from 1971-2006). In damp grass on Breakheart Hill below Valley Gardens.

East Berks: waste ground at Reading (1982), and churchyards at Waltham St Lawrence (1985), Shottesbrooke (1987) and Bearwood (1988). Recently at White Waltham, Hurley, Finchampstead, Arborfield and Winkfield Churches. Naturalized in the verge at Shurlock Row (2003). 5% (1km²). Atlas 2000: all squares

West Berks: in churchyards and cemeteries as at Great Coxwell, Longcot, Faringdon and West Hanney [29], Longworth Manor [39], Welford Park and Boxford [47], Kingston Bagpuize, Drayton, Marcham and Steventon [49], Cumnor and North Hinksey [40], Hyde End Mill [56], South Hinksey [50], Bucklebury [57], Blewbury [58], Beech Hill and Stratfield Mortimer [66]. Fine expanse of plants in lawns stretching down to the Thames at Norman Hall in Sutton Courtenay [504945], 2 February 2002. Atlas 2000: all except [37], [68], [69]

Crocus sieberi J. Gay *Sieber's Crocus* • gt 4

The corm has a vertically splitting, fibrous covering, and the leaves are 1.5-2mm wide. A white or pale mauve crocus with a yellow throat, glabrous and the perianth is *not* striped on the outside.

West Berks: Atlas 2000: [49]

Crocus ancyrensis (Herb.) Maw. *Ankara Crocus* • gt 4

A beautiful pure yellow crocus (unstriped on the outside), told from *C. chrysanthus* by its vertically (not horizontally) splitting corm covering, and by the yellow (not cream) background colour of the perianth.

West Berks: planted in short grass in West Ilsley churchyard on 17 February 2001.

Crocus chrysanthus (Herb.) Herb. *Golden Crocus* • gt 4
Crocus annulatus Herbert var. *chrysanthus* Herbert

Perianth yellow, sometimes striped purple, the corm-covering splitting into very distinctive rings at the base (i.e. horizontally and not vertically).

Silwood Park: occasional in grass near the Tennis Court. Also in Ashurst churchyard, where it is rare; one plant on 29 January 1999.

East Berks: Wokingham, Bracknell, etc. 1% (1km²). Atlas 2000: all except [78]

West Berks: Atlas 2000: [28], [29], [36], [38], [39], [46], [47], [40], [57], [59]

Crocus x stellaris Haw. *Yellow Crocus* = *C. angustifolius* x *C. flavus* • gt 2

Very common in roadside mass-planting schemes in new towns like Bracknell. Also commonly planted on graves in churchyards. Much the commonest yellow crocus. Told from the other yellow spring crocuses by the corm covering splitting vertically (not into rings), and by the perianth being striped (or suffused) purple on the outside (not pure yellow).

Silwood Park: uncommon in the churchyard at Ashurst; a clump of 6 plants at the base of the churchyard wall on 29 January 1999.

Ascot: uncommon, but long persistent in rough grass in South Ascot churchyard (1971-2004).

East Berks: in almost every churchyard. In long grass at Clewer Church. Mass-planted in the central reservations of the dual carriageways on the eastern and western approaches to Bracknell. 5% (1km²). Atlas 2000: all squares

West Berks: locally frequent in churchyards throughout. In a wild garden at Wytham [473088] in 1979, Little Wittenham Church [5393] in 1987. Atlas 2000: all squares

Crocus nudiflorus Sm. *Autumn Crocus* ● gt 9

This is the only common autumn-flowering crocus (but there is *Colchicum* as well, of course). Told from the rarer *C. speciosus* by its fibrous corm covering, not splitting into rings at the base. The throat is white to pale purple (not yellow).

West Berks: in a few churchyards, but not common. Faringdon in November 2000, St Nicholas Newbury in September 2001. On waste ground in Grandpont [5104] in October 2002.

Crocus serotinus Salisb. *Late Crocus* ● gt 9

A delightful autumn crocus with ornately divided orange stigmas and orange pollen. Told from *C. nudiflorus* by its pale yellow (not pale purple) throat.

Silwood Park: two blooms in the grass beneath the Plane Tree on the central axis of the path by the Wishing Well Lawn on 28 September 2006. These bulbs have certainly not been planted since 1971 and so must have gone undetected for at least 35 years.

Crocus speciosus M. Bieb. *Bieberstein's Crocus* ● gt 9

Autumn-flowering, anthers yellow, perianth pale mauve to purple with darker stripes outside, corm-covering splitting into rings at the base (i.e. horizontally and not vertically).

East Berks: Whiteknights Park (1977). <1% (1km²).

West Berks: occasional in churchyards and cemeteries as at Newbury [46] and Cold Ash [56]. Atlas 2000: [39]

Crocus biflorus Mill. *Silvery Crocus* ● gt 4

Perianth white, mauve or pale bluish with a pure yellow throat and very dark stripes on the outside, corm splitting into horizontal rings.

Silwood Park: very rare, by the Croquet Lawn, one plant inside the rabbit enclosure on 27 February 1999.

East Berks: <1% (1km²). Atlas 2000: [96]

West Berks: Atlas 2000: [56], [57]

¶ **Crocus** *C. 'Advance'*, *C. ancycensis*, *C. angustifolius*, *C. banaticus*, *C. biflorus* subsp. *alexandri*, *C. cancellatus* subsp. *mazziaricus*, *C. cartwrightianus*, *C. chrysanthus* 'Blue Pearl', *C. chrysanthus* 'Cream Beauty', *C. chrysanthus* var. *fuscotinctus*, *C. chrysanthus* 'Ladykiller', *C. chrysanthus* 'Snow Bunting', *C. chrysanthus* 'White Triumphator', *C. chrysanthus* 'Zwanenburg Bronze', *C. corsicus*, *C. goulimyi*, *C. korolkowii*, *C. kotschyanus* subsp. *kotschyanus*, *C. laevigatus* 'Fontenayi', *C. medius*, *C. minimus*, *C. niveus*, *C. nudiflorus*, *C. ochroleucus*, *C. olivieri*, *C. pulchellus*, *C. sativus*, *C. serotinus* subsp. *salzmannii*, *C. sieberi* 'Albus', *C. sieberi* 'Hubert Edelsten', *C. sieberi* subsp. *sublimis* 'Tricolor', *C. speciosus*, *C. tommasinianus* f. *albus*, *C. tommasinianus* 'Ruby Giant', *C. tommasinianus* 'Whitewell Purple', *C. tournefortii*, *C. vernus* 'Jeanne d'Arc', *C. versicolor* 'Picturatus', *C. 'Zephyr'*

Gladiolus communis L. *Eastern Gladiolus*

• gt 5

Gladiolus communis subsp. **byzantinus** (Mill.) D.C.V. Douin
Gladiolus byzantinus Miller

A garden escape on waste ground and as a casual on rubbish tips.

Ascot: rare in Sunningdale Park in 1998.

East Berks: recently at Hurst, The Leas, Cockpole Green, Bray, Hog Common. <1% (1km²). Atlas 2000: [76], [77], [78], [96], [97]

West Berks: Cothill pit [4699] in 1953, Newbury tip [46] in 1958. Atlas 2000: [28], [36], [38]

Gladiolus L. '**Grandiflora Group**'

• gt 7

These are the big florist's gladioli, found occasionally in a wide range of colours.

East Berks: locally abundant amongst vegetables on allotments at Bulmershe [7573] in July 2002, evidently as volunteers from former cultivation. A most incongruous sight. <1% (1km²).

¶ **Gladiolus** *G. callianthus* 'Murieliae', *G. communis* subsp. *byzantinus*, *G. papilio*, *G. 'The Bride'*, *G. tristis*

Crocsmia paniculata (Klatt) Goldblatt *Aunt-Eliza*

• gt 8

Antholyza paniculata Klatt
Curtonus paniculatus (Klatt) N.E. Br.

The leaves are broad (up to 8cm) and pleated like a concertina (fan-like, not flat and ribbed). The garden cultivar 'Lucifer' is the commonest large, red flowered plant.

Silwood Park: the orange-flowered plants in the perennial bed at The Greenhouses are still there in July 2007 after 20 years of neglect.

Ascot: 'Lucifer' on waste ground in Course Road, Ascot, in November 2003. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road on 29 August 2004. In an old garden on School

Road Sunninghill [935677] in July 2005. In the derelict garden of the ruined Sunninghill Lodge on New Mile Road [933691] on 10 September 2005.

East Berks: in an old garden at Heathlands, St Sebastian's [8265] in 1987. Recently at Newlands Farm, Coppid Hill, Brookers Row, Old Malt House, Warfield Park, Kimbersfarm. 'Lucifer' on waste ground at Broadmoor [8463], Marsh Down [8476], Cookham Dean [8785] and Beenham Heath [8575] in July 2003. 1% (1km²). Atlas 2000: [76], [86], [87], [97]

West Berks: rare, or under-recorded. Atlas 2000: [46]

Crocsmia x crocosmiiflora (Lemoine) N.E. Br. *Montbretia*
 Montbretia x crocosmiiflora Lemoine
 Tritonia x crocosmiiflora (Lemoine) Nicholson

• gt 7

Roadsides, railways and banks near houses, common but not thoroughly naturalised. Widespread, growing all too vigorously in gardens and hence occurring as a garden outcast in almost every village, but never forming such extensive patches as it does in the west and north of Britain. Seldom far from houses.

Silwood Park: North Gravel, in shady grass, a single clump beneath *Prunus avium* 'Plena' next to the *Calocedrus decurrens* opposite Stores, on 1 August 1994. Still the same size in 1996, having survived the removal of the cherry tree, and still the same size in 2000. Ashurst Church, rare in the graveyard on 1 March 1999. Tennis Court, rare on the edge of the woodland. By the gate from Virginia Water Lodge onto Buckhurst Road. Also at Sunninghill Crossroads, Old Orchard, Ashurst Orchard, St Michaels churchyard, Silwood Farm, Cheapside Playground. Occasionally naturalized in the garden of East Lodge on 25 August 2007.

1 m ²	10 m ²	100 m ²	1000 m ²	10,000 m ²
0	0	0	0	6

Ascot: on the Racecourse, Fernbank Road, Heatherwood Hospital, Coronation Road, birch woods in South Ascot, Ascot Station, Sunninghill, Sunningdale Park, Locks Ride, Winkfield, New Road, North Ascot, Ascot Place. Common with other garden outcasts in the lane behind Sunningdale Bowling Club, off Whitmore Lane. Outside the derelict shops at the northern end of New Road [919708] on 10 September 2007.

East Berks: not in Druce. Arborfield, Park Place, Cookham pit (1957). Now widespread, but seldom abundant. 38% (1km²). Atlas 2000: all squares

West Berks: now widespread; first record Inkpen Common [3864] in 1965. Towns and villages throughout. Atlas 2000: all except [36], [39], [57], [58], [67], [69]

¶ **Crocsmia** *C. x crocosmiiflora* 'Emily McKenzie', *C. x crocosmiiflora* 'Lady Hamilton', *C. x crocosmiiflora* 'Norwich Canary', *C. x crocosmiiflora* 'Solfaterre', *C. x crocosmiiflora* 'Star of the East', *C.* 'Emberglow', *C.* 'Lucifer', *C. masoniorum*, *C.* 'Severn Sunrise'

¶ **Tritonia** *T. disticha* subsp. *rubrolucens*

Schizostylis coccinea Backh. & Harv. *Kaffir Lily*

• gt 8

A brilliant-red flowered garden plant, found rarely on waste ground.

Silwood Park: a long-persistent relic of cultivation near the Horticultural Greenhouses, flowering from mid September until cut down by winter frosts. The 2m long patch has persisted since 1979 without changing in extent.

East Berks: very local as a relic of abandoned gardens. Flowering freely in a waste building plot in Cookham village [8985] in September 2002. <1% (1km²).

¶ **Schizostylis** *S. coccinea* ‘Jennifer’, *S. coccinea* ‘Major’, *S. coccinea* ‘Mrs Hegarty’, *S. coccinea* ‘Sunrise’

AGAVACEAE

Yucca recurvifolia Salisb. *Curved-leaved Spanish-dagger* ● n 7

This is a thicket-forming species with horizontal stolons, capable of regenerating new leaf rosettes following mechanical damage. It is long persistent as a garden outcast, even in deep shade.

Silwood Park: planted as a hedge on the road to the Nuclear Reactor below the Immunology Building. Repeat flowering and long-lived. The plants regenerated from apparently dead blackened stolons after a trench had been dug through the thicket in spring 2000 during cable laying operations when all the buildings on the site were linked to the fibre optic network. Also at the Squash Court, and on waste ground by The Greenhouses. Long-persistent as an outcast on the leaf dump in South Lodge Wood, despite the deep shade cast by mature beech and hornbeam trees (1996-2009).

East Berks: recently recorded as garden outcasts on rough ground at Newlands Farm, West Reading, Hogwood, Coppid Hill, Barkham Ride, West Whitley, Earley, Bulmershe, Childs Hall, Winnersh, Alder Moors, Wokingham, Brookers Row, Savernake Park, Lillibrooke Manor, Holyport, Warren Row, Furze Platt, Halfway House. Less common in the east of the area (east of 90), as in the churchyard at Clewer in 2003. 2% (1km²). Atlas 2000: [76], [77], [86], [87], [88], [96], [97]

West Berks: a rare garden outcast on waste ground in Faringdon [2895] and Newbury [4767] in July 2002.

Yucca gloriosa L. ● n 7

This is the plant that forms an upright, branched trunk in old age. It grows remarkably well in Berkshire and flowers repeatedly (unlike *Agave*).

Ascot: there is a pair of very conspicuous elderly individuals on the Z-bend in Upper Village Road in Sunninghill (1979-2004). These were under-planted with cuttings in 2004 which were dense, and reached up to the original canopy by the end of 2009.

East Berks: planted in the churchyard at Cookham. Open ground in Whitley [7270] in 2003. <1% (1km²).

¶ **Yucca** *Y. filamentosa*, *Y. filamentosa* ‘Bright Edge’, *Y. flaccida* ‘Golden Sword’, *Y. flaccida* ‘Ivory’, *Y. gloriosa*, *Y. recurvifolia*

Agave americana L. *Centuryplant* ● n 7

This remarkable plant does not grow out of doors in Berkshire, but it is grown in pots and these are put out of doors for the summer to adorn patios and terraces. They are occasionally found as outcasts on tips once they have outgrown their pots. The species is a common alien in Mediterranean countries, where its massive flowering spikes, often held at a jaunty angle, are such a familiar feature of coastal environments.

East Berks: Reading tip in 1998, Windsor in 2001, as outcast pot plants.

Cordyline australis (G. Forst.) Endl. *Cabbage-palm* ● m 7
Dracaena australis G. Forster

This is just about hardy in Berkshire. Sometimes in sheltered gardens in towns, but not yet found as an outcast.

Silwood Park: on the steep banks of London Road by Victory Fields below the Sunninghill Crossroads. These two trees were killed during the very cold month of December 2010.

Ascot: common in the garden of The Crispin at the Peanut Roundabout [934713] since 1990. Two plants in the verge of Wells Lane in 2003. Cottage gardens by Virginia Water. Particularly common in Woodby Drive off Charters Road in Sunningdale.

East Berks: in the park by the R. Thames in Windsor. Two plants in waste ground on Bottle Lane south of Knowl Hill [828797], and a single plant in Barkham [783673] in 2003.

¶ **Cordyline** *C. australis*

Phormium tenax J.R. Forst. & G. Forst. *New Zealand Flax* ● n 7

Rare garden outcasts that are not self-sown in Berkshire.

Silwood Park: on a rubbish pile on the Science Park in 1994. On The Tip in 1997.

East Berks: Reading in 1991, Maidenhead in 1999. <1% (1km²).

Phormium cookianum Le Jol. *Lesser New Zealand Flax* ● n 7
Phormium colensoi J.D. Hook.

Told from *P. tenax* by its smaller size. The leaves grow up to 2m x 7cm (not 3m x 12cm) and the perianth is 2.5-4cm (not 3-5cm).

East Berks: waste ground in Windsor in 1998. <1% (1km²).

¶ **Phormium** *P. cookianum*, *P. tenax*

DIOSCOREACEAE

Tamus communis L. *Black Bryony* g 5

Wood margins, hedges and thickets; common and widely distributed on freely-drained calcareous soil, but it is absent from considerable areas of the heathy portion of the county, and from wetter low-lying ground in other parts.

NVC: W 8,12,13,21

Silwood Park: very local and rare. A single individual in a shady hedge on the edge of Church Lane Footpath opposite Heronsbrook in 1999; still there in 2004.

Ascot: one of the best indicators of the sharp botanical boundary between the Bagshot Sands (where it is rare or absent) and the London Clay (where it is frequent). This geological discontinuity is associated with a remarkable change in scenery as you leave the Royal Forest at New Lodge [915751]. The whole width of the Thames Valley opens up, as you enter the arable land around Fifield. See also *Sison amomum*. Swinley Park, Brookside, Winkfield Lodge, Kingsmead, Sunninghill Park. The Silwood Park record is the only one in [96].

East Berks: widespread on the clay, but uncommon on the acid sands along the Surrey boundary in the east, and the Hampshire border in the south. In woods by the R. Thames on the edge of Windsor Racecourse. Wykery Copse, Bracknell and 10 other sites in [86], Hare Hatch, Binfield, Billingbear and 38 other sites in [87]. Local and rare on Holliday Plain [9274]. 25% (1km²). Atlas 2000: all squares

West Berks: locally frequent on the edges of grassy rides through Fence Wood [5171] in 2002. At Kingston Bagpuize [4098] in 2003. Common in Bagley Wood [5102] in 2004. Atlas 2000: all except [68], [69]

ORCHIDACEAE

Cephalanthera damasonium (Mill.) Druce *White Helleborine* grh 5 ↓
Cephalanthera pallens Rich.
Serapias damasonium Miller

Beech woodlands on calcareous substrates; rather frequent on chalk, but rare on the coralline oolite. Absent from acid substrates.

NVC: W 12

Ascot: no records.

East Berks: restricted entirely to the chalk by the Thames from Park Place to Bisham. Near Henley, Hall Pace (1804), between Henley and Marlow, in Bisham Wood abundantly, plentiful above Hurley and Bisham Abbey, Park Place coming up in the trodden woodland paths, Ashley Hill, Quarry Wood" (Druce). Now much reduced. Recently at Crazies Hill, Hurley chalk pit, Quarry Wood and Bisham Woods [8584]. <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: commonest in the chalk woods near the river in the Pang valley and in the interior around Kingston Lisle [38] and [48]. Lynch Wood [37], in a beech plantation at Crog Hill [323834], Sparsholt [3487], Pitchpole Wood [3784], Lockinge [4387], East Hendred [4588], Rowstock Hill and Grove Farm [4789], near Hanger 9 at AERE Harwell [4887], Wytham Wood [40], Hampstead Norreys [57], Ashampstead Common [5875], Aldworth [5579], Streatley [58], Unhill Wood [58], Bradfield, Tilehurst, Basildon and Sulham [67]. Atlas 2000: [38], [48], [40], [57], [58], [67]

Epipactis palustris (L.) Crantz *Marsh Helleborine* g 6 ↓
Serapias helleborine L. var. palustris L.

Marshes and bogs; very rare, and extinct in most of its former sites.

NVC: M 13,22,24; S 1

East Berks: extinct. "Peaty margins of the larger lake at Bulmarsh" (presumably South Lake [7570]). Druce was "somewhat curious that none of the peaty bogs in the south of the county should yield this plant". Not seen by Bowen. Atlas 2000: no records.

West Berks: all but confined to [49] in the Northern Loop, with an outlier at Lower Lake, Elstrees school near Woolhampton [581673]. In a fen near Hatford [39], Frilford Heath golf course [442986], Hitchcopse pit [4599], Barrowfarm fen [4697], Cothill fen [4699], Abingdon [49], Foxcombe Hill and on the south side of Wytham [40]. Still in Cothill fen, in the wetland at the bottom of Dry Sandford Pit at Cothill, and on Frilford Heath golf course nearby. Atlas 2000: [49]

Epipactis purpurata Sm. *Violet Helleborine*

g 8 ↓

Epipactis sessilifolia Peterm.

Epipactis violacea (Dur.-Duq.) Boreau

Epipactis helleborine (L.) Crantz *purpurata* (Smith) Sunderm., nom. inval. praesep.

Open woodlands of oak and beech, rare and locally extinct. Told by its greyish (not dark green) violet-tinged leaves, the lowest of which is much longer than wide. The labellum has two smoothly pleated, pinkish bosses (not rough brownish bosses) at its base.

East Berks: "There is an *Epipactis* growing in the Stokenchurch woods which is, in its young state, quite purple in both leaves and stem; it must, I suppose, be *E. purpurata*. I have seen it also in Bisham Wood" (Mill, 1843). Quarry Wood (1897). Bear Grove [806796] in 1966. Atlas 2000: no records.

West Berks: scattered throughout the Kennet valley, but absent to the north of 80 with an outlier in the Northern Loop at Marley Wood [4707]. Great Park Wood [346756], Pond Close Wood, Kintbury [3565], Eastbury [3575], Mapleash Wood [4671], Dunston Park Wood north of Thatcham [5209 6838 and 5215 6832], Foxhold Farm [516642], Heath End [581628], Baughurst [5862], Chapel Row [572690], Jennett's Hill Wood [582709], northern edge of Fifty Acre Piece [6365], Tadley Common and Brocas Wood Mortimer [6363], Tilehurst [6874]. Malcolm Story took an excellent photograph of the plants of var. *rosea* on the south side of the road across Bucklebury Common [563694] on 25 June 2009. Atlas 2000: [36], [37], [46], [40], [56], [57], [66]

Epipactis helleborine (L.) Crantz *Broad-leaved Helleborine*

g 7

Epipactis latifolia

Serapias helleborine L.

Woods and bushy places. It is possible that this orchid has bucked the trend and has actually increased in abundance. Druce had it as "local and not common", but it is certainly better described these days as locally frequent, at least on the Bagshot sands. Several of the old field records of *E. phyllanthes* and *E. leptochila* are certainly this species. The axis of the inflorescence is hairy (cf. *E. phyllanthes*) and the upper leaves are obviously spiral in their arrangement, rather than two-ranked (cf. *E. leptochila*). Told from *E. purpurata* by the 2 rough brown (not smoothly pleated pink) bosses at the base of the labellum.

NVC: W 14

Silwood Park: in woods at the edge of Rush Meadow, in naturally regenerated (post-myxomatosis) oak woodland below the Playing Field at Cheapside, Nash's Copse, under beech by Drive Lawns, under birch on Reactor Bank. In shrub beds on the Science Park; the first by TTC, perhaps introduced in the rootball of *Quercus trojana* from 1992-2000, the second in the narrow strip of birch trees in the

centre of the main car park first seen in June 2000. It has self-sown into the gravel strip that edges the road between Technology Transfer and Unit F; there were 3 flowering plants here on 26 June 2001. By July 2004 it was locally frequent around *Quercus aliena* beyond the Transformer at the end of TTC. Three patches, each with 6 good spikes, growing with *Ajuga reptans* in the damp shade of Water Meadow Woods on 28 July 1999.

Ascot: very common on shaded, sandy banks and waysides about Ascot. Rare on ruins during construction of the new grandstand at Ascot Racecourse [92034 68865] in August 2005.

East Berks: Bisham Wood, especially the continuation of it on the right of the Maidenhead Road, Park Place, railway embankment at Wellington College, Woodley, Bulmarsh Park (the type specimen), Windsor Forest. Woods, plantations and acid banks. Local and in small quantity. Wellington College, Queens Mere, Binfield, Ashley Hill, Sandhurst, Bracknell, Winkfield, Bisham Wood, Beenham Heath. Widespread, but least common in the west [76] and [77]. 7% (1km²). Atlas 2000: all except [78]

West Berks: occasional in the Kennet valley and the Northern Loop but rare to the north of 85. Atlas 2000: all except [29], [39], [48], [59], [68], [69]

Epipactis leptochila (Godfery) Godfery

g 6 ↓

Epipactis viridiflora (Hoffm.) Reichb. var. *leptochila* Godfery

Epipactis dunensis (Stephenson and T.A. Stephenson) Godfery

Epipactis cleistogama C. Thomas

Epipactis helleborine (L.) Crantz *leptochila* (Godfery) Sunderm., nom. inval. praesp.

A scarce plant in Britain, found on decomposed leaf litter in deep shade under beech woods on the chalk, where there is little or no ground cover. A long-lived perennial appearing above ground irregularly, but sometimes in great abundance (e.g. following scrub clearance). The upper leaves are obviously 2-ranked (not spirally arranged) and the pollinia crumble rather than become detached as entire units. Over-recorded for *E. helleborine*. These records are all det. D.P. Young.

East Berks: not separated by Druce. Rare in beech woods at Ashley Hill [8281] in 1966. There is a record from Bisham [8285] in 1925 (presumably Quarry Wood). Atlas 2000: no records.

West Berks: in beech woodland at Grims Ditch at Streatley [5959] (**RDG**), beech wood at Upper Basildon [5976] (**RNG**), Ridge House Drive in Upper Basildon [6078] (**RDG** and **LAN**), Westfield [6078]. Atlas 2000: [56], [57], [67]

Epipactis phyllanthes G.E. Sm. *Green-flowered Helleborine*

g 7 ↓

Epipactis vectensis (Stephenson and T.A. Stephenson) Brooke and F. Rose

Epipactis pendula C. Thomas, non A.A. Eaton

Epipactis cambrensis C. Thomas

Epipactis confusa D.P. Young

Epipactis helleborine (L.) Crantz *phyllanthes* (G.E. Smith) Sunderm., nom. inval. praesp.

Epipactis helleborine (L.) Crantz subsp. *phyllanthes* (G.E. Smith) Sunderm., nom. inval.

A scarce plant in Britain, found in shade on rather more acid soils than *E. leptochila*, often associated with *Pyrola minor* in beechwoods on flint capping, and with pine/birch on the Bagshot sands. The plant is completely autogamous with partially (var. *vectensis*) or completely (var. *degenera*, var. *phyllanthes*) cleistogamous flowers. This high level of self pollination means that individuals within populations tend to be very similar, but there are marked differences from one population to another.

Separated from *E. leptochila* by its less hairy flower stem and flowers that are pendulous as soon as they open. The leaves are often shorter than the internodes, but the East Berkshire plants have leaves longer than the internodes, which can make them hard to distinguish from *E. helleborine* (but the stigmas of *E. phyllanthes* have already been self-pollinated by the time the flowers have opened).

Silwood Park: locally frequent on compacted bare ground beneath *Quercus cerris* at the north-east corner of TTC; first seen in 1990, with about 100 spikes by July 2004.

East Berks: not separated by Druce. Rare in damp oak or alder woods at Maidenhead, Quarry Wood, Cookham Dean Common (all 1962). var. *vectensis* at Tower Hill [9066] (1966-2004), roadsides at Martins Heron, Bracknell [894695], Englemere [900685] and Kings Ride [909685] (19 and 26 plants respectively in 1986). Scattered in both verges of Longhill Road, just south of Longhill Road Roundabout [895695] in July 2004, found by John Ward-Smith. Atlas 2000: [86]

West Berks: near Ginge Brook [4487], in an alder wood at Cothill [4699], Wasing [5763], under beech at Heath End [582677] and [583629], var. *vectensis* at Brimpton [5796727], by the side of Welshman's Road near Benyon's Inclosure 30 plants of var. *pendula* [6164 and [6264] in 1980 (det. Francis Rose), at Mortimer [6263], Five Oaken [6465]. Recently from west of The Ark near Wantage [391871] in 1999, and still locally frequent in a beech wood at Tadley Common and on roadsides to the south of Wasing Wood from [580627] to [585630] where it grows with *E. purpurata*. There were c. 100 plants, extending over 400m close to the B3051 at the Heath End site [5820 6274] in July 2003. Atlas 2000: [46], [56], [66]

[*Epipogium aphyllum* Sw. *Ghost Orchid*]

One of Britain's rarest and most elusive species. A *Red Data Book* species, never recorded from Berkshire, but you can see the Buckinghamshire woods where it survives today from the top of Quarry Woods. An excellent candidate for introduction at Bisham Woods (along with Military and Monkey orchids and the rarer Helleborines) now that the land is secure in the possession of the Woodland Trust.

Neottia nidus-avis* (L.) Rich. *Bird's-nest Orchid
Ophrys nidus-avis L.

g 6

Shady woods on chalk, chiefly of beech or hazel, among the decaying leaves. Local and rare.
NVC: W 12

East Berks: Druce regarded the plant as "abundant in Bisham Wood, between Henley and Marlow, and abundant in Park Place". I suspect he was getting somewhat carried away, and what he actually meant was "locally frequent". In any case, the plant is now rare in Bisham [865856], but still relatively frequent at Park Place [775818], in the steep woods above the Wargrave to Henley road. Also in Ashley Wood, Bowsey Wood, Woodley, and Hurley. Recently, the plant has been superb in Park Place woods forming majestic, cinnamon-coloured tussocks of stems in dense shade beneath beech trees on a west facing slope (1980-2004). <1% (1km²). Atlas 2000: [77], [78], [88]

West Berks: Fernham [2991], Middle Brake Wood [3298], Kintbury [3866], under hazel at Cothill fen [4699], Wytham [4708], Furze Hill [5174], Yattendon [5474], Ashampstead Common [5875], Burnett's Copse [5677], Quicks Green [5876], Radley Large Wood [5398], Sulham Woods [6474], Flobriham's Copse [624737]. Atlas 2000: [29], [36], [39], [46], [49], [40], [57], [50], [67]

Listera ovata* (L.) R. Br. *Common Twayblade
Ophrys ovata L.

g 6

Woods, chalk grasslands, marshes and bushy places on nutrient-rich soil; rather common and generally distributed, but absent from very acid soils in south and east Berkshire.
NVC: MG 5; W 8,12

Ascot: locally frequent in damp grassland in the northern triangle of Ascot Racecourse, growing through deep litter beneath bracken with other orchids and many interesting species (see p. 199). The plants were particularly large in June 2001 after the wettest winter on record (2000-01). Also in grass at Brookside and by Johnson's Pond. In the damp grass verge on Breakheart Hill below the edge of the Valley Gardens on 10 June 2001. In ferruginous swamp beneath *Salix cinerea* where the Red Brook emerges from its brick conduit underneath the railway to enter Sunningwell Bog [929680]. Not in Silwood Park.

East Berks: occasional on the chalk in the western part of the Thames valley from Reading to Hurley, and along the Surrey border from Virginia Water to Sandhurst, but absent from most of the interior. On the chalk cliffs of Windsor Castle 1999-2004. Locally frequent in Park Wood at Bisham [8584]. 2% (1km²). Atlas 2000: all squares

West Berks: scattered throughout but rare in [47] and [48]; in open chalk grassland at Whitehorse Hill and Dragon Hill [3080], Crog Hill [3282] and above Compton Beauchamp [2887]. In the sand pit at Dry Sandford [468996]. Ashdown and Shrevenham [28], Northfield Covert [29], Cothill Fen [49], Wytham Wood [40], Little Wittenham Wood [59]. Atlas 2000: all except [68], [69]

Spiranthes spiralis (L.) Chevall. *Autumn Lady's-tresses* grt 8 ↓
Ophrys spiralis L.
Gyrostachis autumnalis Dumort

Pastures, lawns and downs on acid or calcareous soils; local and rare.
NVC: CG 2

East Berks: near Remenham (1888). Sporadic and decreasing at Leighton Park (1941-55), Three Mile Cross (1918), Ashley Hill (1970). Crazies Hill. There is a carefully protected site on heathy ground in the centre of the Transport Research Laboratory [850655] at Crowthorne (1983-2004). <1% (1km²). Atlas 2000: [86]

West Berks: mostly in the Kennet valley to the south of 75, with an outlying station at East Garston [363768]. Irish Hill and Hamstead Marshall [46], Cold Ash [56], in several lawns near Aldermaston [5964], Hawkridge House [57], Upton [58], Burghfield [66], Tilehurst [67]. Locally abundant on the ground that was the western end of the runway of Greenham Common airbase [495647], with several thousand spikes in late August 2001. Atlas 2000: [37], [38], [46], [56], [57],

Herminium monorchis (L.) R. Br. *Musk Orchid* g 6 ↓
Ophrys monorchis L.

Chalk downs, very local and rare in west Berkshire.
NVC: CG 2

East Berks: never recorded from the Thames Valley chalk

West Berks: only on West Woodhay Downs [387618] on the chalk south of Inkpen (see Plate 9), and on Dragons Hill to the west of the crossroads below Whitehorse Hill [300870]. The Atlas record from

[28] may be an error for the Dragons Hill site, but it is possible that the plant grows on the part of Whitehorse Hill that lies in [28]; a thorough search of the hill in early July might be fruitful. There is a record from “below Rivar Copse” [3562] in 1918, and it is possible that the chalk downs on the Hampshire border directly to the south of Inkpen might repay more detailed attention. The closest Hampshire records are [3256] and [3456] near Vernham Dean, but the best nearby place to guarantee seeing Musk Orchid is at Gilbert White’s celebrated site at Noar Hill [7431] near Selbourne in north-east Hampshire. Atlas 2000: [28], [36], [38]

Platanthera chlorantha (Custer) Rehb. *Greater Butterfly-orchid* g 5 ↓
Habernaria chloroleuca Ridley
Orchis chlorantha Custer
X Pseudanthera breadalbanensis McKean

Oak and beech woods on nutrient-rich soils. Local, chiefly in the Thames valley, in small quantity and decreasing. The big pollinia (3-4mm) are converging towards their tips (2mm and parallel in *P. bifolia*).

NVC: MG 5; W 8

East Berks: Hall Place, in beech woods above Hurley and Bisham Abbey, Bisham Wood, Park Place, Windsor Forest, Binfield, Ashley Hill, Bowsey Hill. Not seen by Bowen and probably extinct. A strong candidate for reintroduction at Bisham now that the woods are owned by the Woodland Trust. Atlas 2000: no records.

West Berks: Carswell, Appleton, Wytham, Idstone Wood, Buscot, Marcham, Bagley Wood, Cothill, Radley, Tubney, Wittenham, Steventon, Norcott, Ashridge Wood, Unhill, Wolver, Sulham, Hewins Wood, Streatley, Basildon, Compton, Fence Wood, Ashampstead, Woodhay, Weston, Riever Wood, Enborne, Lambourn Woodlands, Tilcombe, Templeton; extinct at more than half of its former sites. Now rare in the Thames and Kennet valleys, and all but absent from the interior. Recently from Coleshill [233939] and [248971], Royal Military Academy at Shrivenham [28], Eaton Wood [2696], Inkpen [36], on north-facing chalk at Cleeve Hill [333764], Middle Brake Wood [3298], Tubney Wood [4400], Stroud Copse [4407], Bushy Leaze Copse [4405], Wytham [4708], Unhill Wood [5682], Hampstead Norreys [5276], Ashampstead [5676], Little Wittenham Wood [5493], Radley Large Wood [5200], Sulham [6474], Tilehurst [6874]. Atlas 2000: [29], [36], [37], [39], [40], [57], [58], [59], [50], [67]

Platanthera bifolia (L.) Rich. *Lesser Butterfly-orchid* g 5 †
Habernaria bifolia
Orchis bifolia L.

Oak woods, limestone grassland or acid grassland. Never more than very local and rare; now extinct. NVC: MG 5

East Berks: near Wellington College (**OXF**) in 1897. Extinct.

West Berks: a single plant on Wytham Hill [40] in 1958, in Bagley Wood and Radley Large Wood [50] in 1949 and the last Berkshire record was from here in 1981. Recorded from the Military College at Shrivenham [28] in 1952. There are nineteenth century records from Sunningwell [50] (**OXF**) and Sulham [67]. Unhill Wood [58], last seen in 1978. Atlas 2000: no records.

Anacamptis pyramidalis (L.) Rich. *Pyramidal Orchid* grt 6
Orchis pyramidalis L.

Dry calcareous pastures, roadsides and chalk downs; locally common, but somewhat uncertain in its appearance. Rare and sporadic on acid sandy soils.

NVC: CG 3-5; OV 12

Silwood Park: very local and rare. It appeared spontaneously on Rookery Slope, where a single beautiful spike was discovered in Rosemary Setchfield's ragwort plot on 6 July 1996. There were two good spikes on 18 July 1997, but the plant has not been seen since then despite annual searches. The origin of the plant is unknown, but the nearest population is certainly several miles away (e.g. Swinley Bottom on Ascot Racecourse). A single pale-pink-flowered spike appeared, again spontaneously, inside the low rabbit fence to the north of the smaller CABI Polytunnel, next to the concrete road to the BP Greenhouse, growing with *Pastinaca sativa* and *Brachypodium sylvaticum* on 25 June 2007; it continued to flower until mid August 2007 and set a full head of seeds. A single plant in the same place on 1 July 2008, but not seen in July 2009 or subsequently. A single deep-pink-flowered spike appeared, again spontaneously, inside the netted bird cage, to the west of the smaller CABI Polytunnel, next to the sand pile by the BP Greenhouse, growing with *Pastinaca sativa* and *Oreganum vulgare* on 1 July 2011. There was a single spike here again, just starting into flower on 23 June 2013.

Ascot: 3 spikes in the grassy triangle at the northern end of Ascot Racecourse [923699] in July 1991. A single spike in exactly the same spot, on the western boundary of the open grassland on 26 June 2002.

East Berks: on the Berkshire side of the river near Henley, by the Henley to Maidenhead road, Park Place, Row Hill, Hennerton [7880], between Twyford and Henley, grass slopes under Quarry Wood, Hurley chalk pit, Cookham Down. Uncommon in the northern part of the Thames valley from Hurley to Cookham. Ambarrow Court [825627] in 1991. At Dinton Pastures [775723] in 2001. In the picnic area on the new dual carriageway of the A404 above Temple, and on Temple golf course. A single perfect spike in grassland near Stokes Farm on the north-eastern embankment leading to the road bridge over the A329(M) motorway [829696] on 6 July 2002. On the chalk cliff below Windsor Castle (1998-2004). At Cookham Down [87941 86703], there were c.100 spikes between the path and the marsh on 10 July 2005, just below the *Carduus nutans* zone. At The Grove Shinfield Park [730690] on 29 June 2010 (Jan Haseler). 1% (1km²). Atlas 2000: [77], [86], [88], [96], [97]

West Berks: occasional on the chalk all the way from Ashbury [28] to Streatley [58] and around Inkpen [36], but rare elsewhere. Records away from the chalk at Cothill fen [462999], Drayton [4894], Wytham [4708], slag waste at Baughurst [5962], gravel pit at Brimpton [572656], Hurdle Shaw [5879], Radley gravel pits [59], South Hinksey [5004], Sulham [6474]. At the eastern end of the old runway on Greenham Common airbase [512645]; more than 100 spikes in June 2001. Locally frequent in long grass in the roadside verge at Cold Harbour [345671] on 12 June 2004. Very frequent in the steep parts of Holies Down on [594797] 21 June 2008. Atlas 2000: all except [29], [47], [59], [66], [68], [69]

Gymnadenia conopsea (L.) R. Br. *Fragrant Orchid*

g 6 ↓

Habenaria conopsea

Orchis conopsea L.

Gymnadenia conopsea subsp. **conopsea**

Chalk downs, limestone pastures, bogs, and marshes; locally common. Chalk grassland, occasional. This has the labellum scarcely wider than long (5-6mm long by 5.5-6.5mm wide);

NVC: CG 2,3; M 13,24

Ascot: Ted Green remembers seeing the plant in the grassy roadside verge on Breakheart Hill below the edge of Valley Gardens, but not seen recently.

East Berks: Park Place, Bisham. Hurley pit (above Frogmill Farm) [8183]. Extinct or rare on the Thames valley chalk between Remenham and Winter Hill. <1% (1km²). Atlas 2000: [88]

West Berks: on the chalk and in the Northern Loop on oolitic limestone. Alfred's Castle [2782], Badbury Hill and Little Coxwell [28], in the grassland above the chalk pit at West Woodhay Down [388618], Walbury Camp [3761], Coppington Down [3177], Whitehorse Hill, Dragon Hill and Devil's Punchbowl [38], Crog Hill [323834], Seven Barrows [3282], Pusey [3596], Furzewick Down [3984], above Letcombe Bassett [3785], Ardington [4288], Greenham Common airbase [56], Upton Lodge [5186], Lowbury [5382], Blewburton Hill [5486], Blewbury Hill [530848], Streatley Hills House [5979], Moulsoford Downs [5782], Cholsey Downs [5886]. The commonest orchid in the short, compacted turf on the flat top of The Manger at Dragon Hill [298868] on 8 June 2004. Atlas 2000: [28], [36], [37], [38], [39], [48], [49], [40], [57], [58], [67]

Gymnadenia conopsea subsp. **densiflora** (Wahlenb.) E.G. Camus, Bergon and A. Camus g 6 ↓
Orchis conopsea L. var. densiflora Wahlenb.

This has the labellum much wider than long (3.5-4mm long by 6.5-7mm wide) and lives in cooler, wetter habitats like base-rich fens and north-facing chalk grasslands.

West Berks: Frilford fen [4497], Cothill fen [4699], Wootton fen [4701], Wytham Meads [4709]
Atlas 2000: [49], [40]

X Dactyloдения st-quintinii (Godfery) J.Duvign = **Gymnadenia conopsea** x **Dactylorhiza fuchsii**
X Orchigymnadenia st-quintinii Godfery

Not uncommon where the parents grow together.

West Berks: Cothill fen [49] in 1933 and West Woodhay Down [36] in 1984. Frequent in the grassland above the chalk pit at West Woodhay Down [388618] on 12 June 2004 with both parents and *Ophrys apifera*.

Coeloglossum viride (L.) Hartm. *Frog Orchid* g 6 ↓
Satyrium viride L.
Habernaria viridis R. Br.

Chalk downs, pastures, heaths; occasional and declining, restricted to west Berkshire. Very intolerant of grassland fertilisation, and soon overrun by perennial grasses under high intensity management. Modern molecular evidence suggests that this species should be placed in the genus *Dactylorhiza* (Bateman *et al.*, 1997).
NVC: CG 2,3; MG 5

East Berks: never recorded from the east Berkshire chalk, nor from the adjacent chalk in Oxfordshire.

West Berks: Ashbury, Idstone, Whitehorse Hill, on the northern slope of Dragons Hill, Cumnor, Sandford lock, Sparsholt, Wantage, Bagley Wood, in various places along Ridgeway, Radley, Blewburton, Chilton, Lowbury, Lockinge Downs, Letcombe Castle, Uffington, Ilsley Downs, Unwell Downs, Moulsoford Downs, King Standing Hill, Streatley, Shaw, Letcombe, Lambourn Downs,

Gibbet Hill. Now greatly reduced in both distribution and abundance. Still found on the chalk between Ashbury [28] and Streatley [58], and on the Hampshire border to the south of Inkpen, but probably extinct in the Northern Loop. The most recent records are from Hackpen Hill, Crowhole Bottom [356847], West Woodhay Down [388618], Dragons Hill [300870], Churn [5284], Aston Upton Down [5483] and Lower Chance Farm on the Ridgeway [58] in 2002. Five flowering stems on the species-rich ditch bank amongst abundant common spotted orchids by the path from the disabled car park to the top of the White Horse on Whitehorse Hill [300865] on the occasion of the BSBI visit on 24 June 2007. Atlas 2000: [36], [37], [38], [58]

X *Dactyloglossum mixtum* (Asch. & Graebn.) Rauschert
= ***Coeloglossum viride* x *Dactylorhiza fuchsii***
X *Orchicoeloglossum mixtum* Asch. & Graebner

Has the colour of the *Dactylorhiza* parent variously tinged and overlaid by green. The habit, leaves and perianth are all variously intermediate.

West Berks: Whitehorse Hill [3086] (det. V.S. Summerhayes) and still there in 2004, Devil's Punchbowl [355850], Moulsoford Down [5782].

X *Dactyloglossum conigerum* (Norman) Rauschert
= ***Coeloglossum viride* x *Dactylorhiza maculata***

Coeloglossum x *conigerum* J. Norman
Orchis x *mixta* Domin, non Retz.
Orchis x *dominiana* Camus, Bergon and A. Camus
X *Dactyloglossum dominianum* (Camus, Bergon and A. Camus) Soó

West Berks: Lambourn [3280] in 1937 (RDG) (det. P.F. Hunt).

Dactylorhiza fuchsii (Druce) Soó *Common Spotted-orchid* grt 6
Orchis fuchsii Druce
Dactylorchis fuchsii (Druce) Vermeulen

Woods, thickets, meadows, heaths and marshes; common and generally distributed. Woodland rides, nutrient-rich grassland (wet or dry) and flushed heaths. Much the commonest orchid of chalk grassland.

NVC: CG 2,3; M 9,10,13,22,24; MG 9; OV 26

Silwood Park: local, rare and sporadic. Nash's Field, in wet grassland by the Kissing Gate; never more than two flowering spikes in any year since 1980; not seen since 1986 as the site has dried out. Heronsbrook Meadow, one stunted plant on the track next to Pond Field on 17 June 1984. One very dense spike, right in the centre of the field on 12 June 1987. Not seen since (but the hybrids persist along the Virginia Water Lodge side of the field; see below). Pond Field, one spike in *Juncus acutiflorus* wet grassland next to the Southern Marsh Orchid in June 1983; one spike again in 1984 and on 12 June 1987 but not seen since. One spike by the Heron's Brook track 10 June 1995; one excellent spike in almost the same spot; 20 June 1996. Nash's Slope, on the top of the ridge, between the broom patch and The Elms; one spike on 12 July 1980 and again on 15 June 1984. A single spike in bush-hogged ground at the north-east corner of Nash's Slope in June 2004. Elm Slope, planted in 1981 in a small rabbit enclosure on the south facing side of The Hedgerow, facing the Ashurst Path. Flowered well in 1982 to 1985. Not seen since. Garrison Ridge, one good spike in the bramble patch just below William Penney; 25 June 1985. Garden Wood, planted in beech woodland in February 1981 with material rescued from the housing development at Martins Heron in Crown Wood, Bracknell. Well established in the clearing, with 25 plants in flower 7 July 1983. Five plants

flowering in the tractor track on the edge of South Gravel on 1 July 1985. Some plants were dug up and moved in March 1986 but the colony was destroyed during construction of the Science Park. Japanese Garden, self-sown on the pond margins; one plant in grass by the dwarf bamboo on 21 June 1983 had increased to 5 spikes in 1985. A further plant appeared beneath *Cephalotaxus* at the eastern end of the garden in 1984. The Greenhouses, in a small rabbit enclosure, erected to protect turves containing orchids brought in from Crown Wood, Bracknell, in February 1981. Still there in 1989 but not seen since. Silwood Farm, 2 spikes in grass by the weeping willow in June 2000, 2001 and 2002. Rush Meadow, a single spike in June 2002 on the western edge near the willows. One spike in the grassy clearing in South Lodge Wood south of the Japanese Garden on 10 May 2005. A single plant in Drive Field in damp grass beneath *Quercus palustris* on the *Q. leucotrichophora* side on 16 June 2008 but this site was dug up in September 2008 to fix a leaking water pipe next to the road.

Ascot: Swinley Park, roadsides by The Orangery, A322/A332 roundabout, Tower Hill, Woodlands Ride, Heatherwood Hospital, Ascot Heath, Charters Road, Sunningdale Park, Johnson's Pond, Breakheart Hill, Brookside, Virginia Water. Very common, along with *D. x grandis*, in the northern triangle of Ascot Heath Racecourse by Swinley Bottom, growing with unusual associates like *Pulicaria dysenterica* and *Scrophularia auriculata* (particularly abundant in June 2002). There were only 2 spikes in the very poor orchid year of June 2007 after a very dry April.

East Berks: scattered throughout, but typically at low densities as at Beenham's Heath. Locally abundant with *Vicia sepium* by the upper lake at Park Place in 2004. Uncommon on heathy rides in pine plantations in Bracknell Forest. One of the most accessible populations is in the unmown grass by the tea shop in California Country Park. 8% (1km²). Atlas 2000: all squares

West Berks: much the commonest orchid in chalk grassland as on White Horse Hill [2986], Dragon Hill [3087], or West Woodhay Down [3861], Cumnor Hurst [4704], Radley gravel pits [5297]. Several substantial clumps in the west-bound verge of the M4 motorway between Reading and Newbury, as at [6073] in June 2004. Very abundant on Whitehorse Hill [300865] on the occasion of the BSBI visit on 24 June 2007. Atlas 2000: all except [68], [69]

Dactylorhiza x kernerorum (Soó) Soó = **D. fuchsii x D. incarnata**

Orchis x kernerorum Soó

Orchis x engadinensis Cif. & Giacom., nom. nud.

Dactylorhiza x engadinensis (Cif. & Giacom.) Soó, nom. inval.

Dactylorhiza x variabilis (J. Heslop-Harrison) Soó

West Berks: Midgham [56] in 1892 (**BM**) and Cumnor [40] in 1938 (**BM**) (both det. P.F. Hunt).

Dactylorhiza x grandis (Druce) P.F. Hunt = **D. fuchsii x D. praetermissa**

Orchis x grandis Druce

Dactylorhiza x mortonii (Druce) Soó

According to Stace (1997) this is the commonest hybrid orchid in southern England.

Silwood Park: massive plants in Heronsbrook Meadow in tall damp grass adjacent to the track from Pond Field to Virginia Water Lodge (Plate 16); 7 big spikes with narrow spotted leaves on 26 June 2000. In the peak year of 2002, there were 38 big plants with spotted leaves, including 13 along the fence of the track to Virginia Water Lodge and 20 in the big central patch of orchids on 18 June. On 10 June 2004, there was total of 39 plants in Heronsbrook Meadow, most of them along the Virginia Water Lodge track edge. In June 2009, the plants were all but confined to the damper spots dominated by *Juncus acutiflorus*, and gone from the centre of the field.

Ascot: locally abundant in wet grass at the northern triangle of Ascot Racecourse (1980-2004); much bigger than either parent. The population was thriving on the day before Royal Ascot on Monday 15 June 2009.

West Berks: Freeman's Marsh at Hungerford [3369], Buckland Park and Pusey marsh [39], Snelsmore Common [47], Frilford, Cothill fen, Dry Sandford Pit and Abingdon [49], Wytham meads [40], AWRE Aldermaston and Midgham Park [56], Didcot [58], by the Ridgeway [5282], Barrow Hills fen [5198], Radley gravel pits [5297].

Dactylorhiza maculata (L.) Soó *Heath Spotted-orchid* grt 6

Orchis maculata L.

Dactylorhiza maculata (L.) Vermeulen

Dactylorhiza maculata subsp. **ericetorum** (E.F. Linton) P.F. Hunt and Summerh.

Orchis maculata L. subsp. *ericetorum* E.F. Linton

Acid bogs, heaths and damp, acid grassland; local in south Berkshire and absent from calcareous soils.

NVC: M 15,16,24

Ascot: very rare at Tower Hill. I have never seen it there.

East Berks: Long Moor. Heath Pool, Wellington College, Surrells Wood, Broadmoor, Easthampstead. Superb in the bog below Broadmoor Hospital for the Criminally Insane in 1999. <1% (1km²). Atlas 2000: [76], [77], [86]

West Berks: in two centres, on the Northern Loop, and in the heaths of the south Kennet. Inkpen Common [3864], Southmoor [398977], Enborne [4365], Greenham Common [46], Snelsmore Common [47], Tubney Wood [4400], Hurst Hill [4704], Hermitage [5173], Baughurst [5862], Bucklebury Common [5669], AWRE Aldermaston [593627], Silchester Common [6162]. Atlas 2000: [36], [39], [46], [47], [49], [56], [57], [66]

Dactylorhiza x carnea (E.G. Camus) Soó = **D. maculata x D. incarnata**

Orchis x carnea Camus

Dactylorhiza x maculatiformis (Rouy) Borsos and Soó

Dactylorhiza x claudiopolitana (Simonkai) Borsos and Soó

Dactylorhiza x ampolai Hautzinger

East Berks: Sandhurst [8065] in 1896 (**OXF**) (det. P.F. Hunt).

West Berks: Frilford [4497] in 1915 (**OXF**) (det. P.F. Hunt).

Dactylorhiza incarnata (L.) Soó *Early Marsh-orchid* grt 5 ↓

Orchis incarnata L.

Dactylorhiza incarnata (L.) Vermeulen

Dactylorhiza incarnata subsp. **incarnata**

Orchis strictifolia Opiz

Marshes, fens and wet meadows on nutrient-rich soils; very local but plentiful where it occurs.

NVC: M 9,13,22,24

East Berks: near Earley by the railway, on Coleman's Moor. Thought to be extinct by Bowen, but re-found (and det.) by C.J. Hora in 1989 in marshy ground south of Folly Court, Wokingham [794674-5]. One large spike (35cm tall) in the eastern arm of the sunken centre of the Running Horse Roundabout [883690] in Bracknell on 2 June 2003 and 24 May 2004 (det. R. Bateman), origin unknown but possibly sown as part of a wildflower mix during the original landscaping of the roundabout in 1996. John Ward-Smith found 3 plants in the meadow at Lily Hill Park [885694] amongst *c.100 D. fuchsii* on 9 June 2004. In May 2007, John Ward-Smith wrote "The majestic plant that flowered at the Running Horse Roundabout in 2003 and 2004, was again doing well in 2005. However, when I visited the site on 2 June 2005, some idiot had recently dug the plant up. I looked out for daughter plants in 2006 and found none, and a visit on 24 April 2007 yielded the same result. I will continue to monitor the site. Some compensation is the fact that the numbers at Lily Hill Park have increased in recent years. There were 7 spikes of *D. incarnata* in the grass south of Lily Hill House in 2006, though the specimens were nowhere near as imposing as the Roundabout specimen was". John's report for 2010 recorded 7 flowering and 10 vegetative plants at the Running Horse Roundabout, with 25 in Lily Hill Park. <1% (1km²). Atlas 2000: [76]

West Berks: confined to the Northern Loop, the R. Cole and the Kennet valley (where it is least rare in the western reaches). Tuckmill Meadow and Royal Military College of Science at Shrivenham [28], Watchfield [2490], Pennyhooks Farm [2390], Hungerford Meads [3368], Kintbury [3866], Pusey [3596], in a rough field by the canal east of Marsh Benham [4267], Boxford Church [4271], Frilford [4497], Cothill Fen and Dry Sandford Pit [4699], Bessels Leigh [4501], Farmoor [4406], Cumnor [4604], Wytham Meads [4709], Goldfinch Bottom [5064], water meadows at Brimpton [5663], Hermitage [5173], Little Wittenham reserve meadow, Radley gravel pits [5297], Radley Meads [5398], Kennington [5202], Nunhide Lane [6472]. Atlas 2000: [28], [29], [36], [37], [39], [46], [47], [49], [40], [56], [57], [50], [67]

Dactylorhiza praetermissa (Druce) Soó *Southern Marsh-orchid*

grt 6

Orchis latifolia L.

Orchis praetermissa Druce

Orchis pardalina Pugsley

Fens, marshes, bogs, wet meadows, and osier holts; locally common (Plates 9, 13).

NVC: M 13,22

Silwood Park: without doubt, our most spectacular native plant. Locally frequent in damp grassland in Heronsbrook Meadow. There were a dozen good spikes in an arc, 15m from the gate on 28 June 1984. These particular plants were not seen again for a long time (but see below). On 12 June 1987 a thorough search of the whole field revealed a total of 20 spikes, mostly confined to the edges where the turf was somewhat shorter. Mr Brown's Horse, which had kept the turf close-grazed for many years, died in 1987, and the sward subsequently became rank and overgrown with marsh thistles. No orchids were found in June 1989 or 1990, the two very dry years, or in 1991. The field was absolutely full of ragwort in 1991 and 1992. A good patch of 20 big spikes in the middle of the field, but not where they had been in previous years, on 5 June 1993. On 17 June 1994 there were 62 individuals including 5 enormous spikes in the central patch, with a few individuals along the edge of the Pond Field track. There were 40 plants in the central patch on 10 June 1995, and 2 in the top corner by Upper Pond Field. On 20 June 1996 there were 50 spikes in the central patch and 2 plants in the original location by the entrance gate. There was just one spike in the rushes by the gate, and none in the centre of the field on 20 June 1998. The record year was 2000, when a comprehensive count of the whole field, carried out on 26 June 2000, revealed 133 big spikes. The large individuals were the biggest ever seen; a combination of a wet spring and relatively high myxomatosis meant low rabbit grazing and tall wet grass. Still quite abundant in June 2001. The population began to flower on 28 May 2002 after a very early spring. Following mowing and carting off all the biomass in winter 2001-

02, the population broke all records in June 2002; there were 344 spikes (of which 38 had spotted leaves) with 157 spikes in the central clump. The population was a little lower in June 2003, but had increased again to break the record in 10 June 2004 with 452 spikes plus 39 spotted-leaved plants. On the same date there were an extra 5 spikes (plus one spotted) in unmown grass between Heronsbrook Meadow and Virginia Water Lodge. Flowering peaked on 6 June in the poor orchid year of 2006. The next year was even poorer, with the very dry spring leading to low plant numbers, and heavy rabbit predation on the few stems that did try to flower, meaning that 7 June 2007 had the lowest count in recent years (although there was one spectacularly tall plant sticking up from a clump of *Juncus acutiflorus* in the centre of the field on 26 June 2007). The population was very low in June 2008, with 17 and 3 plants inside the NutNet rabbit exclosures in Block C (unfertilized and fertilized respectively) and very few individuals in the rabbit-grazed sward in the centre of the field. In June 2009, the plants were all but confined to the damper spots dominated by *Juncus acutiflorus*, and gone from the centre of the field, with the only locally abundant plants inside the unfertilized fence in Block C (in 2009 the hybrids were later to flower than the species; they were at their best on the third-year field course, on 1 July when the species had gone over). Upper Pond Field, a single superb spike on 4 July 1980 in the mowed part of the grassland below The Elms. Growing with *Stellaria graminea*, *Cirsium palustre* and *Ranunculus repens*. The first flowers in the following year were out on 17 June 1983, on a rabbit run 20m south of the Heronsbrook Meadow track, in line with the willow bush. Maximum flowering; 2 large and 7 smaller spikes on 21 June 1983. In the next year, the largest spike had its inflorescence attacked and spoiled by caterpillars. Two better spikes, closer to the track were photographed on 17 June 1984. Five good spikes on 25 June 1985 were subsequently felled by rabbits. Following several years in which the site was not mown (Phil Hulme's PhD study on small mammals required that the rosebay willowherb was left as cover), the population has declined (or at least stopped flowering). On 12 June 1987 there was one good spike in a new position, at the other end of the slope, close to The Pond, but there were no flowers at the main site. No flowers were found in either position in 1988 (very wet) or 1989 and 1990 (exceptionally dry). None seen until 15 June 1994 when one small plant was found. Two isolated spikes on 10 June 1995, but none in 1996 or since. The rosebay willowherb had completely disappeared by June 2001 as a result of repeated mowing. Populations were extremely low in June of the drought year of 2010, essentially confined to the fenced unfertilized plot in Block C of Heronsbrook Meadow. Another low population in June 2011, following the driest spring anyone can remember (essentially no rain in March, April or May 2011).

Ascot: superb, along with their hybrids and *D. fuchsii* in the northern triangle of Ascot Racecourse; many hundreds of plants in most years (2006 was notably poor for orchids here). The population was thriving on the day before Royal Ascot on Monday 15 June 2009. Particularly good at Gormoor Valley [872658], where there were 4 strong specimens in 2010, the best since 1997 (John Ward-Smith). No other records.

East Berks: Blackwater meadows, Bulmarsh, Crazy Hill, Thames meadows at Bolney, Coleman's Moor, Hurley, Sandhurst. Local, confined to river valleys and absent from most of the area. Coleman's Moor (1890, 1921, 1953), Wellington College. Crowthorne [8463], Long Moor [7865], Owlsmoor [846631] in 1982 and 2004. 1% (1km²). Atlas 2000: all except [87], [88]

West Berks: occasional in the Kennet valley and the Northern Loop, rare and scattered elsewhere and absent from large areas of the interior (north of 75 and south of 95). Beckett Park [2589], Woolstone [2987], Hungerford Meads [3268] and Park [373675], Eddington Marsh [3468], Denford Mill [3568], Coppington down [3177], Leverton [3370], Shefford Meads [3875], in chalk grassland at Devil's Punchbowl [3585], Pusey [3596], Greenham [4765], Rack Marsh at Bagnor [453693], Morewood House [419668], Newbury [4766], Welford [4173], Kimbers Field [453713], Boxford Church [4271], Frilford [4497], Barrow Farm Fen [4697], Cothill [4699], Marcham [4596], Wytham Meads [4709], Farmoor [4406], gravel pits at Brimpton [5665], Woolhampton [5766], Stanford Dingley [5771],

Barrow Hills [5198], Didcot [512910], Thrupp [5197], Daisy Bank [514980], Radley gravel pits [5297], South Hinksey [5004], Aldermaston Soke [6163], Nunhide Lane [6472], Sulham [6474], Tilehurst Station [6775]. Atlas 2000: all except [38], [48], [58], [68], [69]

Dactylorhiza traunsteineri (Saut. ex Rchb.) Soó *Narrow-leaved Marsh-orchid* grt 5 ↓
Orchis traunsteineri Sauter ex Reichb.
Dactylorchis traunsteinerioides (Pugsley) Vermeulen
Dactylorchis traunsteineri (Sauter ex Reichb.) Vermeulen

Fens in north-west Berkshire, very local and rare.
NVC: M 13

West Berks: Tubney [4398] in 1882 (**BM**) (det P.F. Hunt). Cothill fen [460997] where it has been collected repeatedly (and quite unnecessarily) since 1954 (**BM, OXF, LAN**, plus 4 in **RNG**), Dry Sandford Pit (6 plants in 1960) (**RNG**), Frilford Heath golf course, in the fen between the Red and Green courses, with 6 flowering stems on 4 June 2008 [4416 9849] (known since 1961, with 50 plants in 1979), Barrow Hills fen [516983] (20 plants in 1979). Also recorded from Abbey Fishponds [59] in 1985 without a specimen.

Orchis mascula (L.) L. *Early-purple Orchid* grt 4 ↓
Orchis morio L. var. mascula L.

Open oak woods, bushy places, meadows, heaths and chalk downs. “Rather common and widely distributed in every parish where there is woodland. Begins to flower a fortnight before *O. morio*” (Druce). By Bowen’s time it was “local but widespread; mainly in small quantity”. Its presence distinguishes all of the better surviving fragments of ancient woodland. Sadly uncommon, and now much reduced from its former abundance by such unsympathetic woodland management practices as pheasant rearing.
NVC: W 8

Ascot: no records. It is odd that the ancient woodlands in Windsor Great Park do not support this species.

East Berks: absent from large areas, and persisting in only a few undisturbed ancient woodlands as at New England Wood [855751], Ockwells Manor Wood [874785], Bisham Wood [8585] and Wykery Copse on the western edge of industrial Bracknell [8568]. In May 2010, there were 185 flowering spikes here, more than in the three previous years combined (John Ward-Smith) 1% (1km²). Atlas 2000: all except [96], [97]. In the very late spring of 2013, there were 12 flowering spikes near the kink in the boardwalk and 20 more towards the eastern edge of the wood on 11 May, flowering in perfect synchrony with the Bluebells.

West Berks: occasional in the Thames and Kennet valleys but rare in the interior (north of 80 and south of 95). Stainswick Farm [28], Coleshill, Buscot House, Longcot, Little Coxwell, Camden Farm and Faringdon [29], Irish Hill [36], Britchcombe Farm and at [329895], Littleworth and Barcote Manor [39]. Locally frequent in Moor Copse Nature Reserve [6374]. Discovered in Kintbury cemetery [36] in 2001. Atlas 2000: all except [58], [68], [69]

Orchis morio L. *Green-winged Orchid* grt 5 ↓

Meadows, pastures, chalk downs, heaths and bogs. Locally abundant in Druce’s time but “uncommon and decreasing owing to ploughing and early grazing” by Bowen’s time. Now local and rare.

Molecular studies indicate that it may be more appropriately placed in the genus *Anacamptis* (Bateman *et al.*, 1997).

NVC: MG 5

Silwood Park: Cemetery Field, in rabbit-grazed turf. A single spike in full flower on 13 May 1991. Found by Chris Thomas during the first season of a ragwort experiment in the area between the bottom of the graveyard and the edge of Rookery Copse. Not seen since. The grass is much longer now, since the erection of a fence in 1991 excluded the grazing horses; the orchid has not been seen again. The fence was removed in 2003, but by then the site had become densely overgrown by a bramble thicket.

Ascot: no other records.

East Berks: Meadows near Wellington College, Park Place, Culham Court, Cranbourne Chase, Bulmarsh, Bracknell, Long Moor, Farley Hill, Stubbing's Heath, Hurley, Temple golf course, Cookham, Shinfield Grange, Arborfield, Wellington College, Wokingham, Hurley golf course, St Leonard's. Woodley (1919) (**RDG**). Scattered throughout, but extinct at several of its former sites. 1% (1km²). Atlas 2000: all except [78], [87]

West Berks: scattered throughout but extinct at most of its former sites on the chalk, with few modern records north of 75 or south of 90. Above Compton Beauchamp [2887], Inkpen [3562], Wickham [3971], Croker's Hole, with more than 500 flowering spikes on 15 May 2008 [322820], Pucketty Farm [3198], Charney Bassett [3794], Wash Common [4564], Newbury [4766], Frilford [4497], Farmoor [4406], Bessels Leigh [4501], Hill End Camp at Wytham [4505], Beenham House [5868], Aldermaston [5965], Frilsham [5373], Furze Hill [5174], Yattendon [5474], Cholsey [5886], Didcot [5190], Radley [5398], AWRE Aldermaston [6063], Burghfield Common [6566], Sulham [6474]. Atlas 2000: all except [29], [47], [48], [50], [67], [68], [69]. There were many hundreds of flowering spikes on the cooler, north-facing side of Croker's Hole on 8 June 2013, after the coldest, latest spring on record. At this site, it grows amongst *Anthoxanthum odoratum*.

Orchis ustulata L. *Burnt Orchid*

grt 5 ↓

A truly charismatic orchid, symbol of all that is best about unspoilt chalk grassland. Rare and sporadic, flowering unpredictably. This is a scarce plant in Britain that grows in short, well grazed chalk downland with plants like *Anthyllis vulneraria*, *Gentianella amarella*, *Polygala calcarea*, *Sanguisorba minor*, *Primula veris* and *Rhinanthus minor*. It takes 10 years or so from germination to first flowering. Declined through ploughing, herbicide and fertilizer application, and cessation of grazing. It occurs in North Hampshire in [45] and [55], in Oxfordshire [41], just over the Wiltshire border south of Hungerford [36] and east of Swindon [27], but its Wiltshire headquarters are some distance away, to the north-west of Salisbury. Recent molecular studies indicate that it may be more appropriately treated in the genus *Neotinea* (Bateman *et al.*, 1997).

NVC: CG 2

East Berks: no records.

West Berks: rare on the chalk, but extinct on limestone in the Northern Loop. Last seen at Aston Upton Down [544833] in 1984 (35 spikes), 1986 (21 spikes), 1988 (20 spikes counted by John Ward-Smith) and 1992, and before that at Kingstone Down above Ashdown House [2882] and at Blewburton Camp [5486] in 1964. There were several sightings in the 1950s at Gore Hill to the south of Chilton [4883], but the site was ploughed up, East Hendred downs [4685] and Streatley [5881], but

most of the records were pre-1900: Whitehorse Hill [28], Lambourn Downs and Wantage [38], Cherbury Camp [39], Chilswell Hills [40], Ilsley Downs, Churn, Unhill and Moulsoford Downs [58]. Extremely sporadic in its flowering and hence always worth looking for at its former sites. Vic Freestone found one spike on 26 May 2009 at the Aston Upthorpe Down site [544833], and Anthony Flemming found three flowering spikes here on 23 May 2010. Atlas 2000: [28], [38], [48], [58]

Orchis purpurea Huds. *Lady Orchid*

grt 5

Typically a plant of open beech woodland on chalk, disappearing if the wood becomes too dense or dark, and a candidate for introduction in Bisham Woods. There are recent records from [67] but these are from the Oxfordshire side of the Thames near Goring (one in, and the other close to, the Hartslock reserve; see *O. simia*, below). The top of each flower is dark purple, the bottom lighter (in *O. militaris*, the top is light and the bottom darker). The most recent addition to the Berkshire list.

West Berks: discovered on 5 June 2005 by Richard Roslyn on the side of the chalk track towards Wayland's Smithy, 1.5 km south-east of Ashbury [277 857]. A single flower spike in good condition, on the west side of the beech copse on Odstone Hill. The images on the web site are by Steve Covey. The rumour in 2007 was that the plant was dug up towards the end of 2005 and was not seen in 2006 or subsequently.

Orchis militaris L. *Military Orchid*

grt 5 †

Woods and borders of woods on the chalk; formerly local and rare, now extinct. Survives close by on the Buckinghamshire side of the Thames at Marlow [88], in a grassy roadside bank on the forest edge.

East Berks: extinct. "About Henley, on the precipitous bank of Bisham Wood, near the Quarry, both below and above the path, but sparingly" (1843). In his *Flora of Buckinghamshire*, Druce writes "It is not easy to account for its disappearance. Willful depredations have been made by some botanists, not only by botanical students who should know better, but by Boswell Syme, the eminent author of *English Botany*, who collected rapaciously. Rabbits, I think, must have been an active agent". In the *Flora of Berkshire* he writes "The reckless manner in which Dr. Boswell Syme collected the rare Thames orchids was exceedingly reprehensible". Extinct in Berkshire according to Bowen. There is a 1987 record from Quarry Wood [858854], but Bowen did not find it in 1988, and I have not seen it subsequently. A candidate for reintroduction at Bisham Woods.

West Berks: extinct. Hinksey in 1699. There are nineteenth century records from Pangbourne [67], between Pangbourne and Streatley [57] in 1809 and 1886 and Moulsoford Downs [58], but no twentieth century records.

Orchis simia Lam. *Monkey Orchid*

grt 5 †

Woods on the chalk downs. Recorded from Caversham Hill north of the R. Thames in Oxfordshire v.c.23 by Sir Joseph Banks in 1778. "Among bushes on the rising ground to the west of the great chalk pit near Caversham, facing the Thames" (Bicheno, 1818). "At Whitchurch in 1839 when going over the ground late in summer, I was grieved and horrified to see the steep slopes pared and burnt in order to enrich the land with the ashes, and so I actually witnessed the roasting alive of both Soldier and Monkey Orchis" (Whitchurch 1881 in Druce's *Flora of Oxfordshire*).

East Berks: no records from the eastern chalk.

West Berks: recorded by Mr Brown (*Merrett's Pinax*) between Wallingford and Reading on the Berkshire side of the river in 1666. Streatley [5580] in 1879 (OXF). There are field records from

Pangbourne [67] in 1860 and Streatley [58] before 1913, but no sightings since then. It is possible that some of the early sightings were errors for the famous Monkey Orchid site just over the river at Hartslock in Oxfordshire where Lady Orchid also grows (you can visit the orchid's web site at <http://hartslock.org.uk/>).

[*Aceras anthroporum* (L.) W.T. Aiton *Man Orchid*]

There are no confirmed records of Man Orchid for Berkshire, but several errors found their way into circulation, including mis-identifications of Frog Orchid and Twayblade. There is a 1666 record in Merrett's *Pinax* from between Wallingford and Reading, repeated in the Botanist's Guide of 1805, and the 1854 list of Streatley plants by Pamplin. Morphological and molecular (Bateman *et al.*, 1997) evidence suggests that *Aceras* belongs in the genus *Orchis*.

Himantoglossum hircinum* (L.) Spreng. *Lizard Orchid

g 6 †

Satyrion hircinum L.

Orchis hircina (L.) Crantz

A *Red Data Book* species which *increased* its distribution markedly between 1900 and 1930. It was formerly restricted to Kent, but spread as far as Yorkshire in the north, and Devon in the west. It looks as if this increase was transient, and the distribution has since contracted markedly to just 2 large populations at Sandwich Bay in Kent and Devil's Dyke in Cambridgeshire. Since 1987, however, at least 7 new populations have appeared, so it is well worth searching for re-established populations in the Berkshire downs.

East Berks: no records from the eastern chalk.

West Berks: not in Druce. Tall, open chalk grassland; very rare, sporadic or extinct. Pitchpole Wood at Letcombe Bassett [3784] in 1936 (**OXF**), and Lollingdon Hill above Cholsey [5785] in 1921 (**OXF**) and 1979. There is a field record from Kingston Lisle [3287] in 1970. It is not known how these populations became established nor how long they lasted, but they may have been single, essentially casual establishments.

Ophrys insectifera* L. *Fly Orchid

grt 5 ↓

Ophrys muscifera Hudson

Woods and thickets on the chalk. One of our most charismatic orchids. Unaccountably rare in even our best chalk woodlands. Pollinated by wasps like *Argogorytes mystaceus* and *A. fargei*. Close to extinction if not already extinct, this species would repay a detailed survey. An obvious candidate for reintroduction at Bisham Woods.

NVC: M 13

East Berks: Hurley (1818), Cookham (1805), Bisham Wood (1897), Park Place, "in almost all the woods near Marlow" (Druce), Quarry Wood. Rare and decreasing. Remenham (1962). A candidate for reintroduction at Bisham. Still found just over the R. Thames in Oxfordshire to the west [77] and [78]. Atlas 2000: no records, apparently extinct

West Berks: much reduced, and now on the verge of extinction. Last seen in the summit beech wood on Kingstone Warren [3286] in 1961, the scarp ash wood at Uffington Wood [3087] in 1961 and 1981, and in Beech Wood at Hampstead Norreys [5376] in 1965. There are nineteenth century records from Ilsley [48], Ginge Brook [49], Streatley [58], Sulham and Basildon [67]. Still found just over the R. Thames in Oxfordshire to the north [67]. Atlas 2000: no records. Three plants were found

by Bill Helyar in May 2002 on the western side of the railway-arch north-west of Pangbourne [623773].

Ophrys apifera Huds. *Bee Orchid*

grt 6

Ophrys trollii Hegetschw.

Ophrys apifera Hudson var. *trollii* (Hegetschw.) Reichb.f.

Ophrys apifera Hudson subsp. *trollii* (Hegetschw.) K. Richter

Ophrys apifera Hudson subsp. *jurana* Ruppert

Ophrys holoserica (Burman f.) Greuter

Chalk grassland, quarries, brick-pits, chalk downs, railway embankments, disturbed chalky ground: local, but springing up in odd places. Still relatively frequent in Berkshire. Self pollinating despite the elaborate, insect-like labellum.

NVC: CG 2,3,5

Ascot: a small population (2 or 3 spikes in most years) in the grassy triangle at the northern end of the racecourse [923699] since 1991. There were 11 flowering plants here in 2010 (John Ward-Smith). Not in Silwood Park.

East Berks: "In a plantation on the right-hand side of the road going from Hurley Bottom to Henley, and in a wood near the Druid's Temple in Park Place" (Druce). Quarry Wood. Rare and sporadic. Remenham (1955), Hurley chalk pit (3 plants in 1988 and 4 in 2004). In steep chalk grassland above Cock Marsh [887866]. It can appear almost anywhere, as in new roadworks leading down to the ferry over the Thames at Pennyroyal Field at Bray (May 1998). Chalk grasslands in the western Thames valley from Remenham to Cock Marsh; absent from the interior, and from the south and east. Recently at Crazies Hill, Ambarrow Court [825627], Hurley chalk pit, Winter Hill, in the steep chalk grasslands above Cock Marsh, Dinton Pastures, Bray. There were 12 spikes by the ride at Hut Hill [852654] on 10 June 2004. 1% (1km²). Atlas 2000: all except [76], [87]

West Berks: on the chalk, but uncommon in the centre of the district (e.g. rare in [48]), and on the oolitic limestone. Always very rare in the Kennet valley. Ashdown Park [2881], Buscot Park [2496], Compton Beauchamp [2887], Inkpen Downs [3562], in the orchid-rich grassland above the chalk pit at West Woodhay Down [388618] on 12 June 2004 (Plate 9), Whitehorse Hill [3080], Seven Barrows [3282], above Letcombe Bassett [3785], at both ends of the former runway of Greenham Common airbase [46] and [56], with about 100 plants at the western end in June 2001, including 5 spikes of var. *flavescens* in June 2002, AERE Harwell [4887], Chilton [4886], Cothill quarry [4699], Cumnor Hill [4704], Wytham hill top [4608], Brimpton gravel pits [5764], AWRE Aldermaston near Building C8 [5863], Streatley Hills House [5979], Burnt Hill [5674], Aston Upthorpe Downs [5483], Aston Tirrold [5586], Cholsey [592868], Lollingdon Hill [5785], Didcot Power Station [513916], Radley gravel pits [5297], Sutton Courtenay [508941], Barrow Hills [5198], Chilswell valley [5003], Decoy Heath [613635] 30 plants in June 2003, Burghfield gravel pits [66], 35 plants in June 2001. Atlas 2000: all except [47], [68], [69]