



Kent Botany

2016

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(February 2017, web version 1)

Front cover: gametophytes of *Trichomanes speciosum* (Killarney Fern) at Hungershall Rocks.
Photo 20 March 2016 © Stephen Lemon.

Introduction

Kent Botany 2016 continues the series of annual reports of botanical developments in Kent. It is issued primarily as a web version, maintained on the Kent page of the Botanical Society of Britain and Ireland (BSBI) website, <http://www.bsbi.org.uk/> and this should be regarded as the definitive version. The web version is more extensively illustrated than the hard copy version issued in the Kent Field Club Bulletin, but the text in both cases is substantially similar.

Highlights

Highlights for 2016 included the following.

- *Carex x prolixa*, a very rare hybrid between two rare plant register sedge species, was found at Preston Marshes.
- *Lotus angustissimus* (Slender Bird's-foot-trefoil), feared extinct in Kent, has been sighted in quantity.
- *Trichomanes speciosum* (Killarney Fern), in its gametophyte form, was discovered, new to Kent, in several Wealden sandrock outcrops.

Eight taxa new to East Kent (vice county 15) and a similar number new to West Kent (vice county 16) were recorded.

Recording in Kent, 2016

Recording priorities were re-set at the Kent Botanical Recording Group (KBRG) AGM on 2 April. The existing target of good county recording coverage for the period 2010-19 inclusive would be maintained (the period is a BSBI 'date class' which would enable comparison with other date classes, to identify trends in plant distribution). Greater priority, however, would be given to recording as needed for the BSBI's next national plant atlas, which would cover the period 2000-19. Maps on both hectad and tetrad scale showing the recording position at the beginning of 2016 were distributed to all KBRG members, so that areas needing to be surveyed further could be ascertained.

The total of records for 2016 entered on the county database by mid-January 2017 was 50,000, more or less the same as had been achieved for 2015 at the equivalent time of year. Records continue to arrive for previous years: they have begun for the London Flora Project (which aims to record the flora of Greater London and its environs, eventually for the purposes of publication), but many more are expected. The re-stated totals for earlier years are: 21,300 (2010); 28,600 (2011); 28,000 (2012); 37,700 (2013); 62,100 (2014); and 53,600 (2015). The cumulative total for 2010-16 inclusive is 281,300, which has now surpassed the total for 1991-2005 inclusive in Philp (2010), although there will be some duplication within the 281,300 records.

Membership of KBRG almost levelled off at 113 members. The group held 16 field meetings, ranging from Dungeness to Crystal Palace (c. 90km apart as the crow flies, emphasising the extent of the botanical county, or vice counties, to be surveyed), many of these meetings being in the nature of a survey of territory with special

access arranged and some of them combining this with a focus on getting to know particular types of plants: grasses/sedges, roses and glassworts. Meetings were all reported in the KBRG newsletter (October 2016) and lists of recorded plants distributed after each meeting. The newsletter also made available crib-sheets for Kent roses and glassworts.

Other 2016 publications relevant to the Kent flora included Moyses & Shellswell (2016). This paper compares the effect of different cultivation regimes at Ranscombe Farm on the build-up of biennial and perennial plants in the course of maintaining the habitat for rare annual arable weed species. It was found that, in comparison with minimum (light) tillage, ploughing produced lower overall plant cover but had no significant impact on the numbers of annual plant species, or on the number or population size of rare annual plant species. Neither regime appeared to inhibit the continuance plants such as *Cirsium arvense* (Creeping Thistle) and *Sonchus arvensis* (Perennial Sow-thistle), but their abundance did not appear to prejudice the rare annuals. Kent Wildlife Trust have been surveying their reserves (for flora and other organisms) via newly established Ecology Groups, and their work has been summarised in their Winter 2016/17 newsletter (which includes indicator species heatmaps for various sites), accessible via <http://www.kentwildlifetrust.org.uk/wildlife/ecology-groups>. Also issued in 2016 for KBRG members as available on request, but expected to go on-line, was a transcript of as much as has been recovered of the missing MS Flora of Kent by Francis Rose. This has already enabled the re-finding of plants which have not been seen for decades and plant locations where Philp (1982, 2010) may have given tetrad records which are insufficiently detailed.

Kent rare plant register (RPR)

The annual update of RPR accounts went on-line in February 2016. Parts H, I and J/K were placed on-line after a members' consultation phase; parts L and most of M (22 species accounts in all) were circulated early in the year for consultation. A revised list of RPR taxa was issued in February 2016. Changes to be made after 2016 recording are the inclusion of *Lotus angustissimus* (Slender Bird's-foot-trefoil), which was re-found during a KBRG meeting set up with this as an objective and the removal of *Plantago major* subsp. *intermedia* (Greater Plantain), whose inclusion on the RPR list encouraged recording to an extent that it was found to be neither rare nor scarce after all.

The total number of RPR records for 2016 was 1,492, including some hybrids with one or more RPR species as parents, much in line with recent years' efforts. Records included a number of uncommon arable weeds in various locations: *Agrostemma githago* (Corncockle); *Anthemis cotula* (Stinking Chamomile – 19 records); *Bromus secalinus* (Rye Brome – 33 records); *Centaurea cyanus* (Cornflower); *Euphorbia exigua* (Dwarf Spurge); *Filago pyramidata* (Broad-leaved Cudweed); *Fumaria parviflora* (Fine-leaved Fumitory); *Glebionis segetum* (Corn Marigold); *Lithospermum arvense* (Field Gromwell); *Misopates orontium* (Weasel's-snout); *Papaver argemone* (Prickly Poppy); *Polygonum rurivagum* (Cornfield Knotgrass); *Silene gallica* (Small-flowered Catchfly – our first true arable record for decades); *Spergula arvensis* (Corn Spurrey); and *Valerianella dentata* (Narrow-fruited Cornsalad). There were some excellent finds in the Weald, not an easy area to cover: *Trichomanes speciosum* (Killarney Fern), mentioned above, a rare native, hitherto overlooked; a new site, Bedgebury, for *Nardus stricta* (Mat-grass); a further discovery of *Ranunculus tripartitus* (Three-lobed Crowfoot); and more data on the occurrence of *Tilia* spp. (Limes). Residual fen habitat in East Kent has been explored, with the discovery during a KBRG meeting at Preston Marshes of *Carex elata* (Tufted-sedge), a sedge of very limited distribution in Kent, and a rare hybrid involving that species; and records of *Isolepis cernua* (Slender Club-rush) and *Eleocharis uniglumis* (Slender Spike-rush) from a damp meadow near Hacklinge.

Once again, our most frequently recorded RPR species was *Fragaria vesca* (Wild Strawberry, 115 records), where the issue is rate of decline rather than scarcity, this year followed by *Oxalis acetosella* (Wood-sorrel, 75 records).

Plant records: selection criteria and recorders

Kent Botany 2016 covers Kent plant records mostly made or reported in that year. 'Kent' for these purposes comprises botanical vice counties 15 (East Kent) and 16 (West Kent), and is more extensive than the administrative county of Kent plus Medway Council unitary authority's area. The vice county boundaries may be viewed at Cucaera.co.uk.

The record selection criteria are flexible, but they focus on plants which are unusual in Kent, or where the plant's location, habitat or population characteristics are unusual. Preference is given to publication of new discoveries,

particularly those which do not correspond with a tetrad recorded in Philp (2010). Taxa which are new to vice county 15 or 16 are given in **bold**. Records of known populations of RPR species will usually be carried through for publication in the draft register, and not necessarily set out in these records.

Nomenclature follows Stace (2010).

All dates given in the records are for 2016, unless otherwise indicated.

Recorders and other persons mentioned in reports

AL Alex Lockton	DM Daphne Mills	JS Judith Shorter	RMB Rodney Burton
BT Barry Taylor	DMcL Duncan McLean	LR Lliam Rooney	SA Sheila Anderson
BW Brian Woodhams	DS David Steere	MB Mike Bax	SB Sue Buckingham
CAS Clive Stace	FJR Fred Rumsey	ME Mike Easterbrook	SC Steve Coates
CES C.E. Salmon	FR Francis Rose	ML Mel Lloyd	SK Sarah Kitchener
CJ Carl Jones	GK Geoffrey Kitchener	MM Mario Macuran	SL Stephen Lemon
CO Colin Osborne	IB Irina Belyaeva	MR Mike Robinson	SLP Sharon Pilkington
CR Chris Rose	JA Jan Armishaw	MSP Mike Porter	SP Sue Poyser
CS Cath Shellswell	JM J. Mobarak	OL Owen Leyshon	ST Samuel Thomas
DC D. Chambers	JP Joyce Pitt	PA Pat Acock	TCGR Tim Rich
DG Doug Grant	JPu John Puckett	PH Peter Heathcote	
DJ David Johnson	JR Julian Reed	RMa Roger Maskew	

Thanks are due to all these who have contributed; and to Charmian Clay for comments on the report presentation.

Other abbreviations or notation

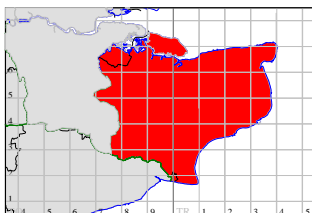
BSBI = Botanical Society of Britain and Ireland (formerly Botanical Society of the British Isles)	MOD = Ministry of Defence
comm. = communicated by	NNR = National Nature Reserve
conf. = confirmed by	RSPB = The Royal Society for the Protection of Birds
det. = identity determined by	Plant records which are marked ^R represent plants on the current draft Kent rare plant register list.
KBRG = Kent Botanical Recording Group	SBRS = Sussex Botanical Recording Society
KFC = Kent Field Club	sens. lat.. = <i>sensu lato</i> , in the wide sense of the plant name
KWT = Kent Wildlife Trust	sens. str. = <i>sensu stricto</i> , in the strict or narrow sense of the plant name
LNHS = London Natural History Society	

Amendments

In Kent Botany 2015, the *Cerastium brachypetalum* record for TQ 594 681 would more accurately read TQ 59433 68048.



Plant records for East Kent (vice county 15)



Achillea ptarmica (Sneezewort) would be accounted a rare plant register species if a register had been compiled separately for East Kent, given how much its county occurrences are confined to the West Kent Weald. So SB's discovery of it near Sellindge on 10 June is a welcome addition. The plant was growing in profusion in meadows on both banks of a stream from TR 11084 37673 to TR 11395 37651 in an area between the M20 and the high speed railway. Two patches were also seen by CO on 24 July around the private Poldhurst Farm Lake, Bigbury, TR 113 579. There were no signs of wildflower planting, although the lake appears to be a 1990s construction, albeit fed by a pre-existing stream.

Agrostis vinealis (Brown Bent)^R is a grass for which we have relatively few recent records. In Philp (1982), it was bundled with *Agrostis canina* (Velvet Bent) and in Philp (2010) only five tetrads were given. Now we may add SB's record of 4 July: a small amount on a dry sandy bank with *Calluna vulgaris* (Heather) and *Carex pilulifera* (Pill Sedge) near Rhodes Minnis, TR 1386 4324.

Anagallis arvensis subsp. *arvensis* f. *pallida* is a colour form of Scarlet Pimpernel (near white, with a purple centre) which the KBRG meeting of 10 August encountered on the Stour Valley walk at Trenleypark Wood, TR 1910 5983.

Atriplex x gustafssoniana (the hybrid between Long-stalked Orache and Spear-leaved Orache) was found during the KBRG meeting of 10 October at the saline base of the landward side of the sea wall west of Shellness hamlet, Sheppey at c. TR 048 681. This is only the second time that it has been found in East Kent, the previous find (under the name of *A. x kattegatense*) having been in the same area, in 1977 (Badmin, 1978). It has some stalked bracteoles, a character inherited from *A. longipipes* (Long-stalked Orache), which does not seem to have been recorded any nearer than Norfolk and Hampshire, but hybrids and hybrid derivatives appear generally to be more frequently encountered than the species.

Avena sterilis subsp. *ludoviciana* (Winter Wild-oat) could easily be (and probably is) passed over for *Avena fatua* (Wild-oat), and needs to be identified from mature spikelets, whose florets drop as a cluster, not individually. It was recorded by BW on 25 November south east of Maidstone, TQ7852, on disturbed ground at the edge of a building site. It may have originated from the seed bank built up when the site was a field.

Bupleurum rotundifolium (Thorow-wax), found by CS in the course of a Plantlife survey on 16 June east of Patricbourne, TR1955, originally gave rise to some excitement as a potential historic arable weed survivor. There were five plants in a field under oil seed rape, but it transpires that the farmer grows *B. rotundifolium* cv. 'Griffithii' as a cut flower, so these plants had presumably escaped or were a crop relict. Such an origin – or as a wildflower sowing – would seem to be our only realistic opportunity of finding the species wild in the county now.

***Calystegia pulchra*, 26 July 2016. Photo © Colin Osborne.**

Calystegia pulchra (Hairy Bindweed) has very few recent East Kent records and partly pink Bindweeds may turn out to be forms of either *C. sepium* (Hedge Bindweed) or *C. silvatica* (Large Bindweed); but a pink striped-white find by CO on 26 July at Thruxted, TR 101 539, fulfilled all the right criteria,



having pouched, overlapping bracteoles and pedicels sparsely hairy, winged at the top.

Calystegia soldanella (Sea Bindweed)^R was noted by OL in small numbers on 3 August on the shingle storm ridge between Galloways and Dengemarsh, Lydd MOD Ranges, which has seen a relaxation of mechanical sea defence works in the last two years. These records, for TR 04828 17013 and TR 05048 16984, fill a gap on the shingle coastline between the populations to the west at Camber in East Sussex and to the north at Greatstone Dunes.

Camelina sativa (Gold-of-pleasure) has very few recent Kent records indeed. There is a case for including it as a rare plant register species, given that it is accorded archeophyte status as an ancient introduction, although it currently seems to rely on introduction through sowing for game birds and the like. This may well have been the source of thousands of plants seen by OL on 3 July at Springfield Bridge, Dungeness, TR 056181, in a set aside field which has remained rough and weedy, with plants such as *Helianthus annuus* (Sunflower) and *Raphanus raphanistrum* (Wild Radish) suggesting similar origins.

Carex echinata (Star Sedge)^R was characterised in Philp (2010) as declining, with five county tetrad records for 1991-2005. However, there have been 14 tetrad records since 2010 (equivalent to 18 monads), including JP's record of 14 July at the edges of a Hemsted Forest ride, TQ 817 366 and discoveries during the KBRG meeting of 21 July in Hatch Park. The latter accounted for one plant at the north east margin of Heron Pond, in damp rising ground close to fringing bracken, TR 06684 40631; and several plants, scattered, and in places frequent, towards the margin of a mire at the eastern end of Boating Pond, TR 0648 4067.

Carex elata (Tufted-sedge)^R has a very restricted distribution in Kent. Philp (2010) treats it as only known in the Sandwich / Worth area, at least up to 2005, although it was subsequently confirmed at Dungeness. However, Rose (1950) had mentioned it as present on ditch borders at Wingham Fen, part of the Wingham River catchment which joins the Little Stour. Just downstream of this confluence lies the Preston Marshes SSSI, supposedly the last remaining area of fen vegetation in the Little Stour valley, and the KBRG meeting on 5 July was fortunate enough to find a number of plants along the margins of a ditch at TR 2335 5995 within the SSSI.

Carex nigra (Common Sedge)^R was not found in north east Kent at all during the 1991-2005 survey for Philp (2010), but it still retains a presence there, testified by a find by AL and TCGR on 2 May in the Stour valley south of Westbere, TR1960, and by SL's discovery on 13 August of plants south of Hacklinge Farm, TR 3406 5423. The latter were in the damp, closely grazed sward of a sedge-rich fen pasture, with *Hydrocotyle vulgaris* (Marsh Pennywort).

***Carex x prolixa* (the hybrid between *C. acuta*, Slender Tufted-sedge^R and *C. elata*, Tufted-sedge^R)** was discovered by the KBRG meeting on 5 July at Preston Marshes as a single plant on the margin of a ditch at TR 23106 60089. Material was sent to MSP (BSBI referee) who felt on balance that it should be recorded as this cross. The key elements were the short bract (as in *C. elata*) and the long spikes, both male and female (as in *C. acuta*). There are only a handful of records for this hybrid in England and Wales, and **this is the first record for vice county 15, East Kent.**



***Carex x prolixa*, 5 July 2016. Photo © Alex Lockton.**

Centaurea cyanus (Cornflower)^R often occurs in the context of wildflower sowings, but a find by SP & DG in a grass ley at the bottom of Bluebell Hill, TQ7560, on 22 September, was not necessarily of this origin.

Centunculus minimus (Chaffweed)^R is treated in Philp (1982 & 2010) as primarily a plant of Wealden woods, but we may not have cast the net wide enough in looking for this inconspicuous annual. SB has contributed records suggesting a much wider distribution in East Kent. On 1 September she found a few plants in a couple of damp hollows along a wide ride at Covert Wood, TR 18391 47888 and at TR 1819 4789. On 14 September in Gorsley Wood, Bishopsbourne, she came across groups of plants on damp grassy paths at TR 1666 5177 and at TR 1695 5198, with more

scattered from TR1719 5186 south to TR 1713 5172 in damp ruts made by chestnut coppice vehicles, and further plants on a side track at TR 1723 5182. On 20 September, she counted just five plants along a damp ride in Upper Hardres Wood from TR 14456 49439 to TR 14495 49525, the associated damp-loving flora including *Lythrum portula* (Water-purslane) and *Gnaphalium uliginosum* (Marsh Cudweed).

Chenopodium glaucum (Oak-leaved Goosefoot) ^R was noted by SB & LR on 27 September at the margin of the large bird scrape at Oare Marshes, TR 01264 6445, with *C. chenopodioides* (Saltmarsh Goosefoot).

Coriandrum sativum (Coriander) was found by SB on 12 July – a single plant at Dover in a sea-front raised flower bed. This observation was closely followed up by a weeding workforce.

Dactylorhiza x grandis (the hybrid between Common Spotted-orchid and Southern Marsh-orchid) was recorded by SB on 10 June, as several plants on the bank of the high speed railway alongside a public footpath south of Sellindge, TR1079 3770. The parents were present, *D. praetermissa* being in abundance close by.

Dipsacus pilosus (Small Teasel) ^R favours damp, shady, disturbed habitats, exemplified by the discovery by GK & SK of c.20 plants on 3 July in heavy shade on or near the south bank of the Great Stour, where cattle-trampled, west of Lenham Heath, TQ 9078 4908.

Eleocharis acicularis (Needle Spike-rush) ^R is now known from a second East Kent location, following its discovery by SLP on 13 October in a normally 'out of bounds' area (protecting breeding Lapwing) at Dungeness RSPB reserve in the course of a bryophyte survey of damp sand habitats. There was quite a substantial population, growing submerged in shallow water in a sheltered corner of a gravel pit, TR 0729 1929. There were no flowers/fruits but a dense 'lawn' of leaves, some of which were detached and floating together with their rhizome. It is a habitat much like the margins of many of the flooded worked-out sand and gravel pits that make up the Cotswold Water Park complex straddling the Wiltshire-Gloucestershire border, where it is familiar to SLP. She surveyed a number of other pit margins that day, but found the extent of *Crassula helmsii* (New Zealand Pigmyweed) was such as would be likely to limit opportunities for the spread of the *Eleocharis* elsewhere. This colony looks to be one more likely to have arrived through the agency of wildfowl than the other current East Kent one, at Betteshanger Country Park.

Eleocharis uniglumis (Slender Spike-rush) ^R has been restored to the flora of East Kent through its discovery by SL on 13 August in a cattle-grazed, marshy, sedge-rich fen pasture in Ham valley, on the west side of the A258 south of Hacklinge Farm, within Hacklinge Marshes SSSI. It was found in the area south of the dividing dyke, at TR 340 542, TR 341 542, TR 340 541 and TR 341 541. Plants were widespread but not obvious, due to heavy grazing, and they were most noticeable in the lush ungrazed growth that fringed the edges of old cow-pats. The last previous East Kent records have been in the lower catchment of the River Stour, TQ36, and sight seems to have been lost, until now, of its presence here after Rose (1950) referred to the tract west of the main road south of Hacklinge Farm as being dominated in part by *Blysmus compressus* (Flat-sedge) – now on our 'probably extinct' list – and *E. uniglumis*. He considered it to be (as at 1950) an area whose vegetation had been modified by grazing and mowing for hay over a long period, dominated largely by grasses and sedges characteristic of moist calcareous soils and subjected to brackish water conditions at some time past.

Epilobium (Willowherb) hybrids were recorded in East Kent as follows:

Epilobium x dacicum (the cross between Short-fruited and Hoary Willowherbs) – one plant with parents in a chalk field reverting to grassland, noted by GK below Burham Down, TQ 737 619, on 5 August.

Epilobium x interjectum (the cross between Broad-leaved and American Willowherbs) – seen at the bottom of a fence by a pedestrian / cycle way by GK & SK at Ashford, TR0142, on 11 August.

Epilobium x limosum (the cross between Hoary and Broad-leaved Willowherbs) – at least four hybrid plants seen, with characters suggesting that two were *E. parviflorum* (f) x *E. montanum* (m) crosses and two the reciprocal. These were in an area of scrub and brambles, probably cut back a few years before, by the North Downs way, south west of Hucking, TQ836570, in a mixed population of *E. montanum*, *E. parviflorum* and *E. tetragonum* (Broad-leaved, Hoary and Square-stalked Willowherbs).

Epilobium x vicinum (the cross between Short-fruited and American Willowherbs) – a couple of plants with parents in tall vegetation of a wet area in a field near Hinxhill, TR 043 428 and TR 042 428.

Erica cinerea (Bell Heather) ^R was recorded by SB on 19 July, a single patch on the landward slope of the sea bank at TR 37387 54833, with *Carex arenaria* (Sand Sedge) and other plants of fixed dunes and sandy shingle. This is the only record for TR35 and its surrounding hectads, so the presumption must be that this is an introduction, although Philp (2010) comments that a population of *Calluna vulgaris* (Heather) in a similar habitat at Sandwich Bay looks completely native.

Euphorbia maculata, 16 August 2016.
Photo © Sue Buckingham.

Euphorbia maculata (Spotted Spurge) is a pioneer species of disturbed open ground in north America, naturalised in Europe, often spreading via nurseries. Until 2016, it had not been recorded in Kent, but now we have two records from East Kent and one (see later) from West Kent. It was first recorded on 16 August in the course of a KFC meeting (comm. DG) at Saltwood Castle, where it was not deliberately introduced and has become a persistent weed on the gravelled driveway. Then on 17 October, SB found it to be abundant across two brick-paved front gardens in Grenham Road, Birchington at TR 29369 69723. The house occupant had no idea of the origin of the plants, which may have arrived as a weed with a nursery-bought plant. However, *Polycarpon tetraphyllum* (Four-leaved Allseed) was also present, suggesting similar habitat needs, but also raising questions as regards whether there was a common origin, e.g. nursery stock from Spain. These are accordingly **first and second records for vice county 15, East Kent.**



Festuca brevipila (Hard Fescue) was found by AL on 11 May, three clumps on the pavement of the Canterbury Road, Whitstable near the toll house, TR 1048 6558, conf. CAS, who remarked: 'thousands of tons of seed of this are sown every year by councils' – so it appears that it is being overlooked. As with other introduced plants, it is helpful if it is recorded so as to be able to differentiate between sites where persistent from sowing or where – as here – it is making its own way in the world.

Festuca brevipila, 11 May 2016.
Photo © Alex Lockton.

Galium parisiense (Wall Bedstraw) ^R has made another non-wall appearance in Kent, SB having found on 10 June a dense spread of plants for 40 yards on the sandy banks of the M20 alongside a footpath south of Sellindge, TR 1079 3772.

Geranium nodosum (Knotted Crane's-bill) is cultivated as forms of various colour shades. A light pink coloured form was seen by GK on 29 June, as two plants in the pavement of Sunningdale Drive, Wigmore, TQ8064, the second record for this species in East Kent.

Gladiolus x hortulanus (Large-flowered Gladiolus) represents a complex of hybrids which lie behind the development of the modern florists' Gladiolus, and a single flowering specimen was noted by OL on 30 July in Greatstone Dunes opposite Seaview Road junction on the seaward side of The Parade, TR 08215 22241. Whilst it was a somewhat plain-looking plant in terms of colour, given the current horticultural range, the flowers were a showy 10cm across. The garden Gladiolus records given in Philp (1982) are of *G. x colvillei*, a taxon with fewer and narrower leaves. **This appears to be a first record for vice county 15, East Kent.**

Gladiolus x hortulanus, 30 July 2016. Photo © Owen Leyshon.

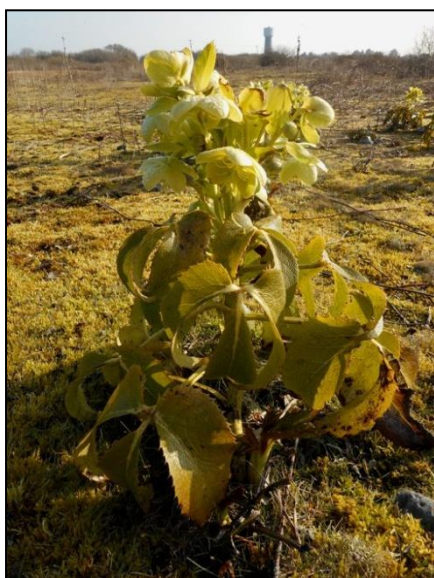
Glebionis segetum (Corn Marigold) ^R is all too often under suspicion of being a wildflower introduction, but a sighting by CO on 3 May seemed to have a fair prospect of resulting from seed-bank disturbance. This was of at least five plants on a freshly built mound alongside a farm road at St Nicholas Court Farm, St Nicholas at Wade, TR 2575 6695, with no apparent accompanying wildflower sowing.

Glyceria x pedicellata (the hybrid between Floating and Plicate Sweet-grasses) was recorded by BW on 25 May by a stream in an old meadow east of Sanding, TQ7658.

Helleborus argutifolius (Corsican Hellebore), with its architectural leaves, is not infrequent in gardens, but appears not to have been seen outside them hitherto in East Kent. However, a cluster of some 25 plants was recorded by OL on 31 March on old landscaped sand next to the ARC pit, Dungeness RSPB reserve, TR 06502 19816. This is a **first record for vice county 15, East Kent.**



Helleborus argutifolius, 31 March 2016. Photo © Owen Leyshon.



Himantoglossum hircinum (Lizard Orchid) ^R made an appearance at a new site, where there may well be scope for continuity and expansion, viz. at the Betteshanger Country Park, where DMcL counted 61 flowering spikes in grassland on 15 June. Twelve of these were also seen by SB on 26 June, between TR 3521 5377 and TR 3527 5363. DMcL's mapping places one plant at TR 362 541, in a different monad.

Hippuris vulgaris (Mare's-tail) ^R was encountered by the KBRG meeting on 10 October between Shellness and Harty (Sheppey), at TR 0370 6702, where there was a very large population in a brackish drainage channel and at TR 0409 6755, where there was a smaller population in a similar habitat.

Hottonia palustris (Water-violet) ^R was recorded, within the broad range of its Wealden distribution, by GK on 3 May in a woodland pond west of Digdog Lane, near Sissinghurst, TQ8139, and by SB on 5 August in a pond in sheep pasture north of Bethersden, TQ 9246 4121.

Hypericum hircinum (Stinking Tutsan) is a garden plant whose commercial prospects appear to have been limited by its English name (although the odour is not perceived by all as unpleasant). It was found on 30 April by GK & SK at Hythe, TR1534, growing inside a street drain.

Hypericum x inodorum (Tall Tutsan) is another hortical St John's-wort, and an odd bush was recorded by GK & SK on 10 April in *Allium ursinum* (Ramsons) woodland of the downs scarp slope above Fishponds Farm, Brook, TR 086 443.

Isolepis cernua (Slender Club-rush) ^R was first found in Kent at Worth Minnis in 2006 and has now been discovered by SL, on 13 August, at a site near Hacklinge, c.1.5km away, TR 34058 54243. One fruiting patch was seen growing in a damp, closely grazed sward of marshy, sedge-rich fen pasture in the Ham valley. Associated species included *Hydrocotyle vulgaris* (Marsh Pennywort) and *Calliergonella cuspidata* (Pointed Spear-moss). This is a significant addition to our knowledge of the very fragmentary flora of the (now largely lost) East Kent fens.

Lathyrus odoratus (Sweet Pea) was recorded by JA on 26 May, finding three plants on the sloping bank away from sea near to the shellfish hatchery at Reculver, TR234 694.

***Lotus angustissimus*, 10 August 2016. Photo © Liam Rooney.**



Lotus angustissimus (Slender Bird's-foot-trefoil) ^R was on the county 'probably extinct' list with a 'last seen' date of 1987, although it transpires that it had been seen since then. A KBRG meeting on 10 August targeted the re-finding of this species, in which it was very successful. Hundreds – possibly thousands – of plants were seen in fruit and flower lining both sides of a path (Stour Valley Walk) on bare sand and gravel from TR 19105 59832 westwards to TR 19205 59844 (c. 100m). The path is in Trenleypark Wood through sweet chestnut coppice which was cut during winter 2014/15. A patch of 8 plants was seen 30m east of the main concentration, at TR 19072 59824, at a gateway; and a further solitary plant was present

at a third site on a different path, TR 19560 59683 (nearer the road). It seems that the appearance of the species is dependent on the coppicing cycle and when this is unfavourable, then upon any adventitious opening up of the habitat by rabbits or the like.

Matthiola incana (Hoary Stock) normally grows on the east Kent cliffs, but a somewhat bizarre exception to this was its presence growing on soil dumped under Medway bridges during construction of the high speed railway, TQ7266, noted by DG on 3 June.

***Orchis x bergonii*, 16 May 2016. Photo © Liam Rooney.**

Orchis x bergonii (the hybrid between Monkey and Man Orchids) was seen and admired by a number of botanists at the *Orchis simia* (Monkey Orchid) ^R Ospringe site (TQ9860), for example on 13 and 16 May. It was a cage-protected plant, somewhat isolated from the seven *O. simia* plants which flowered in 2016. No *O. anthropophora* (Man Orchid) ^R plants were flowering, but they have been present in the past. Hybrid plants have been known here during 1985-92, but the earlier practice of hand-pollination at the site gave rise to query as to whether the hybridisation was an artificial product. No such doubt attaches to the present occurrence.

Orobanche picridis (Oxtongue Broomrape) ^R was the subject of an annual survey by FJR, looking at its sites from Dover Harbour to Langdon Bay (56 plants), St Margaret's Bay and Lighthouse Down (1 plant) and Dover Patrol to Kingsdown (190 plants). The total of 247 plants compares with 192 for the previous year (see Kent Botany 2015); recording was undertaken at 8-figure grid reference level.

Parapholis incurva (Curved Hard-grass) ^R was recorded by AL and JM on 3 July at Whitstable Harbour, TR109 671.

Phytolacca acinosa sens. lat. (Indian Pokeweed) was found by CO on 28 May at St Nicholas at Wade, TR2666. One plant grew in front of some garage doors and another adjoining a brick wall in the same road. As they had 7-8 stamens and a similar number of essentially free carpels, Stace (2010) would point one towards *P. acinosa*, but the key by Eric Clement in Rich & Jermy (1998)





instead identifies it as *P. esculenta* (by virtue of anther colour, at least). Nothing is straightforward about *Phytolacca* identification, however, and here we have included this species under *P. acinosa*, in a broad sense, as in Verloove (2010).

Phytolacca acinosa sens. lat., 28 May 2016. Photos © Colin Osborne.



Plantago major subsp. *intermedia* ^(R) (Greater Plantain) was designated for the rare plant register, because there were only two records in Philp (2010). It has now been recorded in nearly thirty monads, so it should now be withdrawn from the register list. Most of our records are coastal, and may well relate to var. *salina* of subsp. *intermedia*, adopting the taxonomic treatment of Sell & Murrell (2009). Var. *sinuata* is said to be a large, erect variant of waste and cultivated

ground; and this may well be the identity of inland plants found on 16 June by SB on the margin of a rape crop at Guston Mill, TR 33016 44679. They were unusually large and the number of seeds per capsule (average 28) placed them within subsp. *intermedia* (subsp. *major* has 4-15 seeds per capsule).

Poa bulbosa (Bulbous Meadow-grass) ^(R) records are very scanty along the north coast of the county, but the KBRG meeting of 29 April identified it at the top of the beach west of Seasalter, TR 0823 6507.

Polycarpon tetraphyllum (Four-leaved Allseed) ^(R) continues its spread, now not just along the coast, but also inland. It was found by OL at New Romney (four plants outside the Church Lane Surgery, TR 06563 24665, on 4 October; two more along the base of a wall edging a car park, TR 06543 24791, on 12 October). The gap from here to Dover was plugged with appearances at Dymchurch, seen by SB on 23 August as a pavement weed at Green Meadows, TR 1079 3059 and a large pavement population at the junction of Burmarsh Road and Tritton Gardens, TR 1077 3045. Inland, a single plant about 12cm across was found by a KFC meeting on 6 August at Conningbrook Country Park, Ashford, on a weedy bank near the car park, TR 0298 4353; and CO on 11 July found a few plants at Canterbury, TR1558, in a block-paved drive just west of the junction of the A28 and Glenside Avenue as well as outside nearby shops. He also added a further 10km square to the recorded distribution along the north Kent coast, with records on 23 June at Herne Bay, TR1767, on a block-paved private parking area and at Beltinge, TR 1990 6836, on bark mulch of a new shrubbery.

Polygonum oxyspermum subsp. *raii* (Ray's Knotgrass) ^(R) is a scarce plant of the upper beach, in Kent generally along the north coast and otherwise near Lydd. Two plants, however, were found by GK & SK in flower on 27 December, at Folkestone. They were at TR 2315 3575, on the site of a demolished building, just south of Marine Parade. Whilst the habitat was shingly ground, it was fairly remote from the sea, 125m from the upper beach strandline across level ground, and this has all been developed ground for many years, although now mostly cleared. Both habitat and location along the coast were therefore somewhat unexpected.

Portulaca oleracea (Common Purslane) is an uncommon introduced annual succulent, three plants of which were recorded growing in a gutter at Newlyn Drive, Staplehurst, TQ 78681 44138, by SB on 19 September.

Potamogeton coloratus^R (Fen Pondweed), with its conspicuously cross-veined leaves, was added to the list of Stodmarsh records by AL in August, at TR 2395 6242, thus providing a more extensive distribution than the limitation to the Ham Fen / Worth Minnis area given in Philp (2010). It is a reminder that it was earlier known in the Wingham River catchment area, with records in the 1940s from Wingham Fen and in 1997 from Newnham Valley.

Potamogeton coloratus, August 2016.
Photo © Alex Lockton.

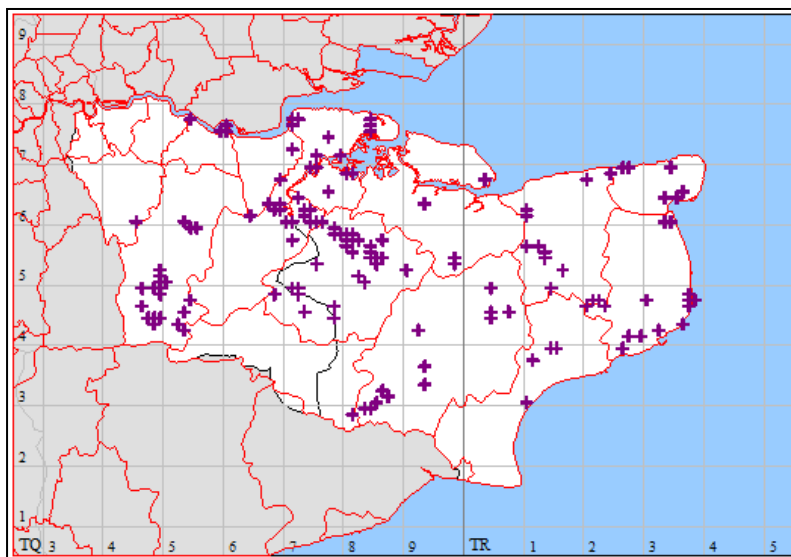
Ranunculus parviflorus (Small-flowered Buttercup)^R is scarce in the county, but was found in a new 10km square by CO on 9 May, being present, but sparse and patchy, in an area of about 1 m² adjoining an old fence post north of a public footpath at St Nicholas at Wade, with another very small patch along the same fence line of the next paddock to the north.

Ranunculus tripartitus (Three-lobed Crowfoot)^R is an Endangered species in England, with only three tetrad records in Philp (2010), one of which was at Longrope in the Shadoxhurst / Orlestone Forest area, which seems to have further scope for finding this species. Kent Botany 2015 reported its presence at Harp Meadows and on 28 May SL recorded it (previously discovered by MB) at a further pond here: a large one along the north western edge of a field at TQ 97208 35928. *R. tripartitus* formed a large patch in a shallow, muddy, open corner, sharing its habitat with *Callitriche* sp. (Water-starwort), *Glyceria fluitans* (Floating Sweet-grass) and *R. sceleratus* (Celery-leaved Buttercup). On the same day, 770m distant, he recorded more of the Crowfoot at a circular pond with shallow margins in the middle of a cattle-grazed field, immediately west of Sir Edward Street's Wood, TQ 97544 35230. The pond was open on all sides and there were a few flowering plants in two areas less dominated by *Glyceria fluitans* and one of these was slightly poached, where *R. tripartitus* grew among *Callitriche* sp.



Rosa recording in Kent, 2016

With the knowledge since August 2015 that *Rosa x dumalis* (the cross between Dog-rose and Hairy Dog-rose) is more or less as likely to be found in Kent as is plain *Rosa canina*, recorders have provided further evidence of the



hybrid's ubiquity (see distribution map). Mapping at present still indicates the presence of botanists in the relevant period more than the actual extent of occurrence of the hybrid; but it is clear that the plant may be found in most areas. Absence from Romney Marsh is likely to be real; absence from metropolitan Kent may only be real in part. We had 75 records for *R. x dumalis* in 2016; 74 for plain *R. canina*; and 144 cases where it was felt that the better course was to record *R. canina* agg.

Rosa x dumalis, records 2015-16

Rosa arvensis x canina (the cross between Field-rose and Dog-rose) was recorded by BW on 23 October east of Hucking and by SB on 25 August south east of Alkham. SB also found it on 20 October at the edge of woodland at Throwley, TQ 9912 5521, with another woodland edge plant bearing many aborted hips at Throwley Forstal, TQ 9850 5399 in the company of both parents.

***Rumex acetosa* subsp. *ambiguuus* (Garden Sorrel)** was found by SB on 13 October near Sandwich, TR 3416 6004 – several plants growing on disturbed ground beside a footpath, recently created in connection with River Stour flood defence operations. The area is likely to have been previously cultivated. The plants had several characters setting them apart from the usual subsp. *acetosa*; they were very well-branched, with thin-textured leaves and were late flowering (tepals were still not fully mature). This is a **first record of the subspecies for vice county 15, East Kent**.

Rumex x dufftii (the hybrid between Broad-leaved and Wood Docks) was noted by GK & SK on downland west of Postling, TR1339, on 2 October.

Rumex x schulzei (the cross between Curled and Clustered Docks) was recorded by the KBRG meeting on 10 October with both parents in coarse grassland between the sea wall and its parallel dyke, west of Shell Ness (Sheppey), TR 0370 6702.

Ruppia maritima (Beaked Tasselweed)^R was found by SB on 5 June to be abundant in a coastal dyke fringed by saltmarsh plants at North Stonar, TR 3357 6017. It was also seen west of Seasalter, TR0764, on 9 August by AL, CO, JPu & LR.

Salicornia pusilla^R x *ramosissima* (Hybrid Glasswort) was seen by the KBRG meeting on 10 October between Shell Ness and Harty (Sheppey), TR 0388 6717, comprising several plants with flowers in groups of one, two or three with the parent Glassworts, best sought amongst colonies of *S. pusilla* (One-flowered Glasswort) on slightly raised, flat ground around small, shallow saltmarsh pools.

Salix purpurea (Purple Willow)^R is native, but also planted. Some of our records look more likely to be the latter. However, two bushes were found by SB on 28 October at Hawthorn Corner near Hillborough, TR 21193 67205, not looking planted, although in a drier area than might have been expected.

***Salix x mollissima*, 13 July 2016.**
Photo © Alex Lockton.

***Salix x mollissima* (the cross between Almond Willow and Osier, known as the Sharp-stipuled Willow)** is generally an old introduction as a basket willow or, more recently, for biomass production, but a small patch in scrub by the Great Stour at Stodmarsh, TR 220 619, looked spontaneous to the recorder, AL, who found it on 13 July (conf. IB, BSBI referee). **This is a first record for vice county 15, East Kent.**

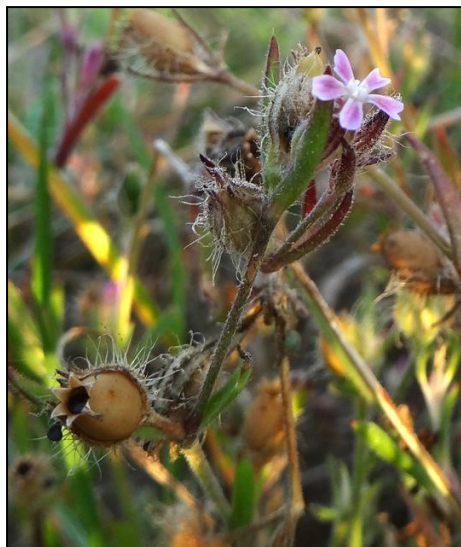


Salsola kali subsp. *kali* (Prickly Saltwort)^R, which has a very patchy distribution along the Kent coast, was noted by CO on 26 September on the shingle beach adjoining a saltmarsh spur from the stream at Long Rocks, Tankerton, TR 135 676. The small saltmarsh also carries an interesting flora, both *Salicornia fragilis* (Yellow Glasswort)^R and *Salicornia dolichostachya* (Long-spiked Glasswort) being recorded on the same occasion.

Scabiosa atropurpurea (Sweet Scabious), a garden annual or biennial, unlike our native perennial Small Scabious, was recorded on 4 July by DS as naturalised near the beach at the aptly named Botany Bay, east of Cliftonville, TR 39047 71131.

Senecio aquaticus (Marsh Ragwort)^R was found by the KBRG meeting of 5 July – a single flowering plant in a wet meadow in the Little Stour valley between Wickhambreaux and Preston, TR231 600, to add to sightings in the nearby Great Stour catchment.

Silene gallica (Small-flowered Catchfly) ^R was thought to be restricted in Kent to a small area at Littlestone, being one of those arable weeds which have declined to Endangered status in England, albeit always rare in Kent. A further location was discovered by SL on 13 August by an arable field bordering Westwell Lane and the high speed railway, Tutt Hill, Hothfield, TQ 975 465 / TQ 976 465 / TQ 976 464. This is an area which appears to have a history of good arable weeds, at least in the 1960s, confirmed by OL's subsequent find of *Glebionis segetum* (Corn Marigold) ^R. There were good numbers of plants flowering and seeding on the sandy field margin with a harvested grass crop and many arable weeds on a ridge above the railway. Associated species included *Matricaria chamomilla* (Scented Mayweed) and *Anisantha diandra* (Great Brome). The construction of the railway here (1999-2003) is likely to have sliced the edge of the original field, and may have opened up the seed-bank; the nature of flora here generally does not suggest that the railway was a source of introduction of this species. The presence of *Filago lutescens* (Red-tipped Cudweed) in the general area in 1963 (now probably extinct in the county) is also an indicator for the potential for survival of rare weeds. The patchy deep pink on the petals shows an approach towards var. *quinquevulnera*, although that variant has them more fully developed, as blood-red (hence the 'five wounds').

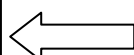


Silene gallica, 13 August 2016. Photo © Stephen Lemon.

Solanum physalifolium (Green Nightshade), an arable weed from south America, was found on 13 July by ML & SC in a new locality near Goldstone, TR 297 605, a weedy courgette field in which further south American influence was indicated by *Galinsoga parviflora* (Gallant Soldier), although it was difficult to see anything through the quantity of *Spergula arvensis* (Corn Spurrey) ^R present!

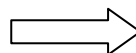
Spiraea x pseudosalicifolia (Confused Bridewort) was noted by OL on 13 July at Caldecott crossing, Caldecott Lane, near Lydd, TR 04203 22178, where a well-established large bush / thicket was growing out of the reach of the herbicide sprayer between railway line and a private sheep pasture.

Thalictrum flavum (Common Meadow-rue) ^R is not recognised for north east Kent in Philp (1982, 2010). There were old records, but the species has apparently remained unrecorded in recent years until found south of Westbere, TR 1987 6022, on 2 May by AL & TGCR, who found about a dozen plants by a ditch in grazing marshes. Then on 16 May, further east along the Stodmarsh valley, AL & JM discovered many plants over about 20m of wet grassland in an arable field margin, against the boundary ditch to the Stodmarsh NNR.



Verbascum densiflorum,
12 July 2016.
Photo © Sue Buckingham.

*Verbascum
chaixii*,
4 August 2016.
Photo ©
Barry Taylor.



Verbascum chaixii (Nettle-leaved Mullein) was seen on 4 August by BT at Queendown Warren, TQ8363, where there were two plants in Potter's Wood (det. GK). This would be a more likely habitat in some respects for *Verbascum lychnitis* (White Mullein), but the violet haired filaments rule out that species. This occurrence is

presumably of garden origin, as being cv. 'Album', and is the **first record in the wild for vice county 15, East Kent**.

Verbascum densiflorum (Dense-flowered Mullein) was present at Lydden Hill, where SB on 12 July saw an estimated 50 plants around the traffic lights on A2 at TR 2464 4680, some on the central reservation, others at the roadside. It appears also to have been present a year before, according to google earth street imagery, but not in such quantity.

Veronica scutellata (Marsh Speedwell) ^R has 13 tetrad records in Philp (2010), to which on 28 May SL added a sighting by a small circular pond in Harp Meadows, Shadoxhurst, TQ 97066 36019. The KBRG meeting on 21 July also found it on damp ground on the north side of the Boating Lake in Hatch Park, TR 064 406.

Viburnum rhytidophyllum (Wrinkled Viburnum) was present as a planted shrub in Vancouver Drive, Rainham, where GK on 29 June noted numerous seedlings in a pebbly bed outside a garden wall alongside the pavement. The status here is somewhat marginal, perhaps just enough to warrant treatment as a **first record for vice county 15, East Kent**.

Vulpia ciliata subsp. *ambigua* (Purple Fescue) ^R was included in the rare plant register as a nationally scarce plant and our records from 2010 onwards are coastal. However, it can appear inland, and BW recorded it as a roadside weed at Maidstone, TQ7655, on 29 June and near Coxheath, TQ7450, on 24 September. We should be looking out for this, in urban and suburban contexts.

Vulpia unilateralis (Mat-grass Fescue) ^R is an inconspicuous grass whose last Kent record was before 2000. A number of records came from the Medway valley, where its bare chalk habitats appear to have become unsuitable through moss cover, development or have been rendered inaccessible. However, a new location was discovered by GK on 5 August, the Upper Culand Pit near Bluebell Hill (a KWT-managed, but fenced-off site). At that date, there remained only a few dried-up plant fragments. About 20 plants were still discernible on a chalk ledge with c.25 on a small, flat chalk promontory a few metres below, TQ 7378 6187(8). Both areas were semi-bare, frequented by rabbits and bore *Clinopodium acinos* (Basil Thyme) ^R, which might be regarded as an indicator species in view of its shared affinity in relation to bare chalk habitats.

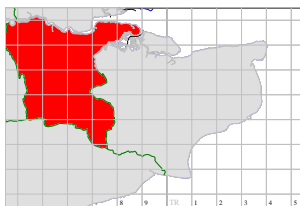
Wolffia arrhiza (Rootless Duckweed) ^R has a distribution focussed on Romney Marsh and the low ground around Thanet. The latter area has scope for further recording, and this was assisted by SB fishing out a small amount from water on the Ash Levels at TR 300 625, on 1 July.

X *Dactyloдения heinzeliiana* (the intergeneric cross between Chalk Fragrant-orchid and Common Spotted-orchid) was noted by DS on 24 June near Strawberry Bank, Bredhurst, TQ 80726 62156, where there was a hybrid swarm of at least 20 plants, in various forms, with the parents. Particularly unusual was a white form. All obvious hybrids were fragrant.

X *Dactyloдения heinzeliiana*, 24 June 2016.
Photo © David Steere.



Plant records for West Kent (vice county 16)



Adiantum capillus-veneris (Maidenhair Fern), which needs a moist, sheltered habitat in Britain, was found by JS on 24 July growing in a street drain at Cliffe Woods, TQ 73746 73613.

Allium paradoxum (Few-flowered Garlic) may have few flowers, but the bulbils enable aggressive spread. Patches along the south edge of Brokes Wood, Southborough, some of them large, were observed by GK on 6 April from TQ 5881 4203 westward to c. TQ 5872 4207. Over 100 plants were seen by DS on 8 May by the lane through High Woods, Hawkenbury, TQ6038, perhaps deriving from very old fly-tipped soil; this site must be close on the vice county boundary.

Allium pendulinum (Italian Garlic) was seen by GK & SK on 16 April at Long Coppice, Biggin Hill, TQ 4101 5877, where there were patches on both sides of a public footpath in Long Coppice just before emerging into a field to the west. It is superficially similar to much commoner *Allium triquetrum* (Three-cornered Garlic), but its umbel is not one-sided.

Alopecurus bulbosus (Bulbous Foxtail) ^R has a very restricted distribution on the north Kent coastal marshes, and a new 10km square site was added by GK & SK on 28 June at Allhallows Marshes, TQ 85154 77178. The grass was growing on a raised clod in uneven ground in a damp depression in the grazing marshes. There was probably at least another tussock present, but the extent of the population was not determined. The plant was noticeable as going over from flowering, whereas neighbouring *A. geniculatus* (Marsh Foxtail) was not. Bulbous stem bases were not as pronounced as is often the case, but its characters corresponded to the species, viz. culms 15-24cm, 2-3 nodes per culm, basal internode swelling 1.5mm in excess of stem and length 1-2cm, cauline leaves infolded, panicle 2.2-2.7cm, awns exceeding glumes by 2.2-3.0mm, anther length 1.5mm. Associated species included rare plant register taxa *Hordeum marinum* (Sea Barley) ^R and *Polypogon monspeliensis* (Annual Beard-grass) ^R.

Amsinckia micrantha (Common Fiddleneck) is surprisingly uncommon in Kent, and a very large plant found by RMB on 15 June by the gate from Wilson Lane behind Rabbits Farm, South Darenth, TQ 578 690, appears to be only a second record for West Kent.

Anisantha rigida (Ripgut Brome), a rare introduced grass closely related to *Anisantha diandra* (Great Brome), was recorded by BW on 7 September near East Barming, TQ7154, on a field margin. It may be relevant that this is in an area where shoddy-spreading was practised some decades ago, which could also account for the presence nearby of *Chenopodium hybridum* (Maple-leaved Goosefoot).

Araucaria araucana (Monkey-puzzle) is normally seen as a planted specimen tree in parkland or gardens, but a sighting by BW on 28 October was of a plant of different character, a sapling some 3 feet high in a location where planting seems unlikely: amidst hedgerow and copse growth of wild character at the top of a bank between two levels of the split route of Buckland Lane, Maidstone, TQ 7493 5672. No candidate parent tree was present in the immediate vicinity, however.

Arum italicum x *maculatum* (the cross between Lord's-and-Ladies and Italian Lords-and-Ladies) was seen by GK & SK on 16 April near the entrance to Dry Hill picnic site, Sundridge, TQ 4964 5524, both parents growing together and a range of intermediates, including some vigorous, early-leaving (as was apparent in the following January) plants with the whitish leaf veining of *A. italicum* subsp. *italicum* replaced by leaf-green.

Avena sterilis subsp. *ludoviciana* (Winter Wild-oat) was noted – just one plant – by RMB on 29 August in a field gateway south west of Eynsford, TQ5364.

Barbarea verna (American Winter-cress) was the subject of two roadside sightings. At High Brooms, TQ 5929 4116, GK on 6 April saw numerous plants underneath the railway fence by the pavement of Sandhurst Road; and at Clement Street, west of Sutton-at-Hone, TQ 544 706, RMB saw two separated plants on roadside waste west of the bridge over the M25 on 26 April.

Brachypodium pinnatum has given rise to complications in recording ever since it was ascertained that we should not have been calling Tor-grass by this name, but instead it is *B. rupestre*, and this is what the bulk of our records across Kent, notably on the chalk in East Kent, should have been called. The name *B. pinnatum* (Heath False-brome) now applies, not to Tor-grass, but to a plant 'of open woodland marginal or secondary habitats, often on clay soils' (Stace, 2010). The position is fully described by RMB (Burton, 2016). He writes how the diagnostic prickly-hairs on the leaves of true *B. pinnatum* may be detected as follows: 'firmly grasp with one hand the tip of a flat leaf (if there are no flat leaves, it's going to be *P. rupestre* anyway), and gently run a finger of the other hand lengthwise along the underside towards the other end of the leaf, avoiding the mid-vein as you go. If you can feel the roughness caused by the prickly-hairs, it's *B. pinnatum*'. This is clear, but as our county recording has generally sidestepped the issue by treating Tor-grass as *B. pinnatum* agg., so as to avoid commitment to either species, we have little or no idea how frequent true *B. pinnatum* may be in the county. However, we now have the following records for *B. pinnatum* sens. str. by RMB, as a start (the BSBI database also has some older records, but many, if not all, do not look as if they could be intended to be distinguished from ordinary Tor-grass):

- 19 June, northern Chevening Park, extending from TQ 4804 5812 to the western boundary of the monad and beyond, with a detached mass around TQ 4811 5810.
- 19 June, Park Wood, Chevening Park, TQ 477 581 between path and wood, extending well into next monad.

Calystegia silvatica var. *quinquepartita* was seen in the course of the KBRG meeting on 23 July clambering over a garden boundary at Charleville Circus, Crystal Palace, TQ347. The variety of Large Bindweed has, instead of the usual trumpet-shaped corolla, five rounded, deeply cut lobes. Whilst it is attractive, it was assumed that no-one would have been brave enough to invite *C. silvatica* into their garden. A record of 30 July was also received from PH for a sighting near New Barn, Longfield, TQ 619 685.

Carex acuta^R x *nigra*^R (the cross between Slender Tufted-sedge and Common Sedge, sometimes known as *C. x elytroides*) was discovered by SL in 2015 to be a component of the flora of the Eden valley (see Kent Botany 2015). SL on 12 June found a further colony, at Moorden meadow, TQ 52080 45968. This comprised a large, thinly-spread (probably clonal) patch within an area of around 3 to 4m², on flushed ground at a north facing slope. Stomata were present on both sides of the leaves (hence combining characters of both parents), basal leaves were wide and female glumes were both pointed and with hyaline edging. Plants were closer to *C. nigra* in overall size and bract size, and were of slightly smaller stature than the hybrid population discovered last year nearer the river. Good *C. nigra* populations were present close by.

Carex caryophyllea (Spring-sedge) has a wide ecological tolerance, but is most frequently thought of as a plant of dry basic ground, such as the North Downs. However, 2016 brought a number of Wealden records from neutral to acid grassland. On 2 May, SL noted it at Cowden Meadow SSSI, TQ 48100 41405 in a small area of sward and on the edge of an ant hill in a rabbit-grazed field corner, only two inflorescences being present. On 7 May, he also saw it at Cowden Pound Pasture SSSI / KWT reserve, flowering abundantly across a slope at TQ 46004 43208, and in the marshy area below, at TQ 45992 43182, with *Viola canina* (Heath Dog-violet)^R and *Potentilla erecta* (Tormentil)^R. The same day, a KFC meeting saw the sedge at the Hobb's Hill Farm Local Wildlife Site, Cowden in a sloping field just below the ridge, west of Top Hill Wood: a few patches at TQ 50561 40809; at TQ 50549 40822; and from TQ 506 409 to TQ 506 408, where abundant across steep slopes within species-rich grassland, with *Genista tinctoria* (Dyer's Greenweed)^R and *Viola canina*^R. Then a KBRG / SBRS meeting on 15 May at the Scotney estate found a few flowering plants in a large field adjacent to the River Bewl, either side of a footpath sloping up to Kilndown, TQ 68764 34765 and TQ 68935 34897, *Viola canina*^R yet again being present in the general vicinity.

Carex nigra (Common Sedge)^R was the subject of a number of records, including a new location found by SL on 2 May: a wet field edge, north of Kent Water and between Scarletts and Furnace Ponds, TQ 4470 3997, where there were a few scattered plants in flower; the recorder considered this to be the probable site of CES's 1891 record for *Persicaria bistorta* (Common Bistort), not re-found.

Carex x subgracilis (*C. acuta*^R x *acutiformis*, the hybrid between Slender Tufted-sedge and Lesser Pond-sedge) has been confirmed by MSP (BSBI *Carex* referee) from the Holborough Marshes KWT reserve, TQ 7072 6259, an area with an abundance of different sedge species. The establishment of its identity has been a gradual process. In June 2013, GK and LR saw this plant and a neighbouring patch, and identified *C. acuta*, which is indeed what the neighbouring patch is. Then, on a recce for a KBRG meeting of 7 June 2014, SL remarked on a very large clonal patch as not being quite right for *C. acuta*, and this was duly viewed by the meeting, which found flowering material extremely scanty. SL then suggested the possibility of *C. x subgracilis*. The material, however, was inadequate for referee determination. Further collection in 2015 was hampered by the field having been grazed hard, and the sedge cropped close to the ground; but by 24 May 2016 it had recovered well, and GK forwarded material to MSP for determination. This showed hybrid sterility, with scanty, largely abortive utricles, lower bracts equalling or just exceeding inflorescence (*C. acuta* well exceeds) and crucially the utricles had a mixture of (mostly) two styles (from *C. acuta*) and three (from *C. acutiformis*) on the same spike. This is a **first record for vice county 16, West Kent**.



KBRG members view the (then) mystery sedge. 7 June 2014. Photo © Geoffrey Kitchener.

***Carex x subgracilis*, 24 May 2016. Photos © Geoffrey Kitchener**



Chaenomeles japonica (Japanese Quince) was seen by GK & SK on 23 April, east of Southborough, TQ 588 432, a young shrub was present in flower, no more than a metre high, in coarse vegetation between a footpath and a stream, remote from housing and vehicular access. There is one earlier west Kent record, albeit without details of status.

Chaenorhinum origanifolium (Malling Toadflax)^R was recorded by RMB on 18 August as a street plant at the foot of garden walls at 20 and 22 Arcadia Road, Istead Rise; we have relatively few records for Malling Toadflax other than at West Malling.

Cordyline australis (Cabbage-palm) was noted by GK & SK on 30 July in Well Wood, West Wickham, TQ4064, behind housing; a shoot apparently cast out with garden refuse had produced a tuft of leaves and was well rooted. The leaf colour pointed to this being the cultivar 'Red Star'.

Cotoneaster dammeri (Bearberry Cotoneaster) has escaped, with many other Cotoneasters, presumed bird-sown, onto the south chalk slope of the A20 north west of Wrotham, remote from houses, where a large sprawling bush was seen by GK & SK on 11 January.

Cotoneaster hjelmqvistii (Hjelmqvist's Cotoneaster), resembling somewhat a large-leaved vigorous *Cotoneaster horizontalis* (Wall Cotoneaster) and indeed formerly grown as if a cultivar of the latter species, was found by an LNHS meeting on 28 May, led by RMB. A seedling 15cm high was growing at the pavement edge by a wall-post between 138 and 136 Harcourt Avenue, Blendon, TQ 47280 73756.

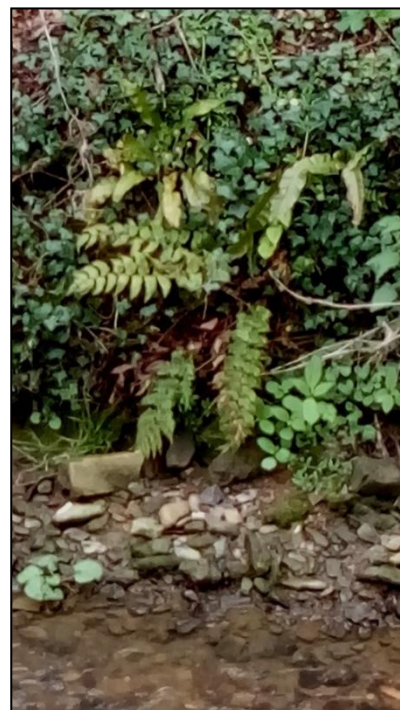
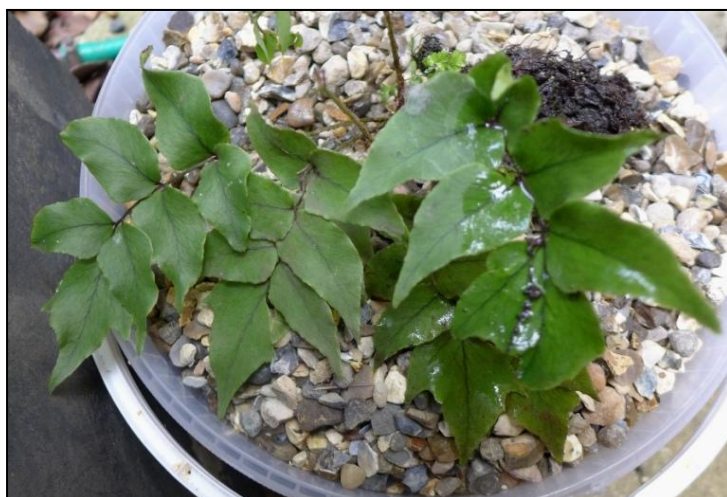
Cotoneaster x suecicus (Swedish Cotoneaster), a hybrid known only in cultivation (or escaped), was seen by BW on 16 October at Maidstone, TQ7455, where a seedling was growing by a path.

Cyclamen repandum (Spring Sowbread). For a successive year, we have a West Kent record for this relatively seldom naturalised species, a patch 3 x 3m at the east edge of Bexley Park Wood, seen by an LNHS meeting on 30 April.

***Cyrtomium fortunei* sporeling, Basted, 26 December 2016.
Photo © Geoffrey Kitchener**

Cyrtomium in Kent

Cyrtomium is a genus of ferns native to Asia, Africa and Hawaii, occurring in Britain as an escape from cultivation, although having a reputation of susceptibility to cold. *Cyrtomium* species often appear somewhat unfern-like, because of the large pinnae, although their distinctive basal lobing is reminiscent of the genus *Polystichum* (Shield-ferns), to which they are closely related. East Kent records for *C. falcatum* (House Holly-fern) were given in Philp (1982) for a wall at Sheerness, and in Philp (2010) for Mote Park, Maidstone. The latter was revisited by BW (to whom it has been known at least since 1970) on 18 March and it is in an overgrown and wooded area at TQ 78394 54961, to which it was considered to have spread from where grown in a greenhouse attached to a walled rose garden. *C. falcatum* is the species which in Britain used to be principally cultivated. In recent years, this has been largely replaced in commerce by *C. fortunei* (Fortune's Holly-fern). Now we are beginning to see *C. fortunei* in the wild in Kent. Records in 2016 began on 6 March with the discovery by GK and SK of a plant on the shady bank of Basted Lane near Borough Green, TQ 6065 5605, with a native fern flora and at least 45m from the nearest house. When revisited on 26 December (and independently that day by JR), it was found to have fronds 1.1m long and a sporeling had developed a metre away.



***Cyrtomium fortunei*, ex Cliffe Woods, July 2016. Photo © Judith Shorter**

***Cyrtomium fortunei*, Tunbridge Wells, 23 April 2016. Photo © Sarah Kitchener**

Then on 23 April, GK and SK found a further plant, on a river bank north east of Brokes Wood near Tunbridge Wells, far from houses, at c. TQ 5921 4306. Accompanied by a native fern flora, this plant was identified as *C. fortunei* var. *clivicola* by FJR (the variety – sometimes treated as a subspecies – having slightly larger, pale

yellow pinnae than the type). Yet another sighting of *C. fortunei* (det. FJR) was made, this time on 30 June by JS, who fished out a plant from below the cover of a street drain at Cliffe Woods, TQ 7368 7351, there being no sign of the fern in nearby paved-over front gardens.

Dactylorhiza maculata (Heath Spotted-orchid) ^R was seen in seed by SL on 18 September, near the eastern bank of a gill stream at Burnt Wood, east of Avery's Wood, Speldhurst, c. TQ 546 408, identified by scattered stomata along the upper edge of leaf (cf. Poland & Clement, 2009, where *D. fuchsii*, Common Spotted-orchid, is cited as having stomata below, only).



Dianthus barbatus (Sweet-William) was found by DS growing as an escape at the junction of tower block walling and a tarmac car park, at Wallis Park, Northfleet, TQ 61720 74733, in flower as early (or late) as 1 January. There were no gardens or hanging baskets nearby as an obvious source of seed.

***Dianthus barbatus*, 1 January (!) 2016.**
Photo © David Steere.

Dipsacus pilosus (Small Teasel) ^R was recorded by GK on 5 August, c. 20 plants in rough vegetation

north of an access way bounding a lake between Snodland and Leybourne, TQ6917 6004.

Dryopteris x deweveri (the cross between Narrow and Broad Buckler-ferns) was found by GK and PA on 28 July on a damp slope in Brokes Wood, Southborough, TQ5942, both parents being present. Whilst the plant appeared intermediate in overall frond shape and the character of the stipe scales, it was subsequently confirmed by PA on the basis of many spores being present, all of which were abortive. On 13 February the cross was also recorded by SL at Cobhambury Wood, west of Cowden Pound, TQ 45275 42769, on the basis of a single large collapsed plant with parallel-sided fronds which would have been held upright, with stipe scales some of which bore a black line, others a washed-out line, and others were relatively clear.

Epilobium hybrids were recorded in West Kent as follows:

Epilobium x erroneum (the cross between Hairy and Broad-leaved Willowherbs) was found by RMB (conf. GK) on 29 July on a trackside west of a railway bridge south of Otford, TQ 5330 5848.

Epilobium x floridulum (the cross between Hairy and American Willowherbs) was seen by GK & SK at the edge of a pavement at Coney Hall, West Wickham, TQ3964 on 30 July; with the parents on weed-killed ground at Whistlers Farm, How Green, TQ 4680 4652, on 13 August; and with the parents on disturbed ground by a cut-back hedge at Hever, TQ4744, on 16 October.

Epilobium x interjectum (the cross between Broad-leaved and American Willowherbs) was noted by GK & SK on 13 August in a roadside hedge at How Green, TQ 475 462.

Epilobium x palatinum (the cross between Hoary and Square-stalked Willowherbs) was recorded by GK & SK on an arable margin, with parents present, at Hall's Green on 5 October.

Epilobium x vicinum (the cross between Short-stalked and American Willowherbs) is one of the two commonest Willowherb hybrids, and was seen by GK on 25 July north east of Ramsden, Orpington, TQ 480 668, where there were several plants with parents in a disturbed weedy field corner used for manure storage; and by GK & SK on 28 June by the farm buildings of Binney Farm, Allhallows, TQ8477 and on 13 August in an arable margin by woodland at How Green, TQ 473 469.

Erigeron glaucus (Seaside Daisy) was found by CR on 14 March in an unusual habitat, by the A2 crash barrier between Penn Lane and Bexleyheath Golf Course, TQ 48056 74312.

***Euphorbia corallioides* (Coral Spurge)** is an introduced spurge, with some similarity to *Euphorbia oblongata* (Balkan Spurge) in that both are hairy; but the former has finely granulose capsules and the latter's capsules bear conspicuous hemispherical papillae. A small group of plants was seen by RMB on 16 July across the road from 18 Longleigh Lane, Bexleyheath, where there is the scrubby grassland of Bostall Heath. This appears to be a **first record for vice county 16, West Kent.**

***Euphorbia maculata* (Spotted Spurge)**, mentioned above as a first record for East Kent, now also has a **first record for vice county 16, West Kent**. It was found by RMB on 27 July on a pavement, mostly at the road edge in front of garages next to 117 Dumbreck Road, Eltham and a few in front of no.115, TQ 4338 7555. This is consistent with the sort of habitats in which it was subsequently found in East Kent. The central leaf spot (hence the specific name, *maculata*) seems clearer on the Eltham material than that of Saltwood Castle: when present, it differentiates this species from most other similar prostrate spurges, but it can be reduced or absent. We may be catching up with the sort of spread which has also been taking place on the Continent: it has since 1994 been increasing in Belgian urban and suburban habitats such as pavement cracks, parking places and gravelly ground in cemeteries (Verloove, 2013).



Euphorbia maculata, 27 July 2016. Photo © Rodney Burton.

***Euphrasia officinalis* subsp. *anglica*^R x *confusa*^R** (the hybrid between English and Confused Eyebrights) was the identity assigned by the expert panel of the Eye for Eyebrights Project in relation to material gathered by GK on 23 June 2015 along a 50m stretch of Chestnut Walk, Knole Park, TQ 549 533. At the time of collection, it had been assumed to be *Euphrasia officinalis* subsp. *anglica*. Subsequent search has not yet turned up any *Euphrasia confusa*, and it may be that the true species has been swamped by hybridisation. This appears to be a **first record for vice county 16, West Kent**.

Fallopia x bohémica (Bohemian Knotweed), the cross between Japanese and Giant Knotweeds (and perhaps doubly invasive!) was noted by BW as a garden escape at Barming Heath, TQ7255, on 11 August.

Geranium versicolor (Pencilled Crane's-bill) was recorded by JP on 22 June by a footpath/edge of a lane west of West Kingsdown, TQ 562 638.

Gnaphalium luteoalbum (Jersey Cudweed) continues its Kentish spread as an urban weed primarily in metropolitan West Kent, belying its rare plant register status derived from possibly non-anthropogenic spread to damp sandy/gravelly habitats. It was seen by CR on 3 September as a street weed at Silverdale Road, Bexleyheath, TQ 49719 77391; and on 25 October in front garden paving at Parkside Avenue, Barnehurst, TQ 50731 76099, and near the junction of that road and Old Manor Way, TQ 50651 76087. RMB recorded it on 16 July on brick paving at 133 Gipsy Road and on crazy paving at no.135, Bexleyheath, TQ 4759 7613; on 27 July in paving blocks in front of 180 Glenesk Road, Eltham, and on 18 August on the pavement at 25-31 Castlefields, Istead Rise. MR also noted a handful of plants beside a residential road, Barry Avenue near its junction with Cumberland Drive, Bexley, TQ 48229 77391, on 17 May.

Hedera colchica (Persian Ivy) was recorded by GK on 25 July, a small amount in woodland off Jasmine Close, Locksbottom, TQ4365, likely to have rooted originally from dumped clippings.

Helleborus argutifolius (Corsican Hellebore) has a number of West Kent records, but it is not clear how far most of them have any 'out of garden' status. A find by SB on 30 January at The Grange, Plaxtol, TQ6043 5391, was of an 'on the way out of garden' status, a single flowering plant having succeeded in growing near the top of a brick wall c. 8 feet high fronting the road outside. It was an unplantable position, with seed presumably having been taken there by ants, snails or mice.

Hypericum olympicum (Mount Olympus St John's-wort) was present at Parkfield, north of Godden Green, TQ 547 556, with several plants on the vertical face of a low bank immediately abutting onto carriageway, with a grass verge intervening between there and the neighbouring garden, seen by GK & SK on 3 March and looking unlikely

to have been planted. The same species was noted by them on 30 July as a pavement seedling south east of West Wickham, TQ3965, without any parent plant visible in neighbouring gardens.

Hypericum x desetangsii (Des Etangs' St John's-wort, the hybrid between Perforate and Imperforate St John's-worts) was seen by GK & SK on 13 August – a single plant by a track running through fields, just north of the River Eden east of Edenbridge, TQ 4602 4601. A further three clumps were recorded by the KBRG meeting of 3 September in scrubby grassland south of Penshurst near the River Medway, TQ 53214 42549. The meeting participants noted that there were only a few translucent glands on the leaves, the stems had two strong ridges and 2 faint ones, and the sepals were variously denticulate, most with central apiculus. Together with previous recent sightings, we are building up evidence of association with the Rivers Eden and Medway. As is not unusual, the hybrid occurred in the apparent absence of the parent *H. maculatum* (Imperforate St John's-wort).

Hypericum x inodorum (Tall Tutsan) was seen by RMB on 11 August, self-sown in the neglected driveway of Beech Tree Court, Shortlands Road, spread from shrubbery of adjacent Packham Court, Shortlands, TQ3969.

Ilex x altaclerensis (Highclere Holly) was recorded by GK & SK in several locations. Trees/bushes of all sizes were frequent and widely scattered in Petts Wood / Willett Memorial Wood, TQ4468 and TQ4458, when seen on 19 March. The other records were of singletons: a young tree, looking unplanted, in a hedgerow by a copse, Rectory Lane, Ightham, TQ 5923 5634, seen on 14 February; and a specimen east of Hever, TQ 4823 4486, seen on 17 October in woodland near a presumed planted *Thuja plicata* (Western Red-cedar), but otherwise with no evidence of planting.

Medicago polymorpha (Toothed Medick) ^R as an inland plant barely features in the distribution shown in Philp (2010), but on 15 June, RMB found it present on the west bank of a farm road at Green Street Green, Darenth TQ 5793 7095. Then, surprisingly, on 12 July he found two well developed plants in a space between shrubs at Sainsbury's car park between Otford and Sevenoaks, TQ5257.

Mirabilis jalapa (Marvel-of-Peru) does not feature in Philp (1982, 2010), but occasionally makes pavement appearances (its origins are tropical, so it does not always manage to be much more than annual in the British climate) and sightings were made by RMB and MM on 10 September at Abbey Wood: kerbside seedlings in a few places in TQ4678, and on the pavement between 149 and 151 Abbey Grove in TQ4778.

***Misopates orontium*, Upper
Halling, 4 August 2016. Photo ©
Sheila Anderson**

Misopates orontium (Weasel's-snout) ^R is becoming increasingly difficult to find as an arable weed, so its discovery on 4 August by SA in a field traversed by the North Downs Way near Upper Halling, TQ6764, is a valuable one. The field lies between Ten Acres Wood



(south) and Horseholders Wood (north) and is often ploughed out of season and left to seed for pheasants; *Spergula arvensis* (Corn Spurrey) ^R has been known from here. Otherwise, the appearance of *M. orontium* is perhaps more to be expected from a seed-bank disturbed by works, which was the case with a sighting by BW on 9 September north of Barming Heath, TQ7356.

Moenchia erecta (Upright Chickweed) ^R is now treated as Vulnerable to the risk of extinction in England. The Kent position does not seem quite so alarming, and is improved by RMB discovering on 14 May a new site at Hall Place, Bexley. At TQ 499 746 and TQ 499 747, there were six or more densely populated patches; and the species was also present at TQ 501 746 on the steepest part of hill and from TQ 5011 7470 to the west boundary of the hectad. That the species has escaped detection here for so long must be due to its inconspicuous nature.

Nardus stricta (Mat-grass) ^R is primarily a northern and western taxon in the British Isles, although also appearing on southern heathland, a habitat of which Kent has but little, so the grass is rare and restricted in Kent. However, a new site has been found, by SB & OL on 26 July, unrelated to others. This was at Bedgebury Forest, where there was a patch about a foot across on a path within the pinetum at TQ 72271 33252. It is possible that this is a residual native occurrence or it may have been introduced as part of the long history of forestry operations at Bedgebury: either way, it is a welcome find.

Oenanthe silaifolia (Narrow-leaved Water-dropwort) ^R had a presence in the Eden catchment mentioned in Hanbury & Marshall (1899) and known to FR, but after a tetrad presence given in Philp (1982), it received no recognition here in Philp (2010). This has partly been remedied by investigations by SL in TQ4945 and TQ5145. Now the gap north east of Chiddingstone (TQ5045) has been filled by ST, who on 29 June located the species (conf. JP) as being occasional to frequent towards the back of the floodplain meadow at Somerden Farm, TQ 50314 45804, this being lower away from the channel and so wetter than intervening ground..

Oenothera stricta (Fragrant Evening-primrose), in Kent only occasionally seen away from Sandwich, made an appearance in quarry workings, Hale Street, TQ 67974 48887, where a few short, scattered plants were seen in flower by SL on 18 June. It is an attractive Evening-primrose, with yellow flowers which redden with age.

Ophrys apifera (Bee Orchid) was present in rough grassland between the tunnel under the M2 and the bridge over the high speed railway, linking Strood and Ranscombe, TQ 709 687, when visited by DJ on 14 June. There were about 20 plants, several with atypical lip patterning or odd lip shape. One on inaccessible railway land c. 3m inside the fence and c. 50m down from the entrance to the railway bridge, was var. *fulvofusca*, a rare variant in which the lip is a uniform brown, without patterning and whose very few British occurrences were written up by Lewis & Edwards (2011). The variant has also been reported in this area in 2015 as outside railway land. No other occurrences in the county are known.

Orobanche crenata (Bean Broomrape) was reported in Kent Botany 2013 as first recorded in Kent, and pestilential in bean crops at Snodland and Upper Harvel. It seems not to have departed this general area, as on 25 July DC & ME encountered a Broomrape with large clove-scented spikes in quantity in adjacent fields near the North Downs Way above Birling, TQ 66872 62021 and TQ 66899 62031, which can only have been this species.

Oxalis stricta (Upright Yellow-sorrel) has hardly any recent West Kent records and, whilst that position may be comforting to those concerned with its reputation as one of invasive species, it has now been reported from Sidcup station cycle park, TQ 4632 7263, seen by RMB on 28 May; and by SP & DG east of Lower Higham, TQ7272.

Paeonia officinalis (Garden Peony) may have been demonstrating powers of long term survival when seen by SL on 27 August at Laddingford, a small plant suffering from heat in an open area by the public footpath between Gravelly Ways and River Medway, formerly the site of Yalding Tip.

Parapholis incurva (Curved Hard-grass) ^R put in another appearance as an inland roadside plant, recorded by GK on 24 May as scattered on the verge of the A228, Holborough, TQ 7046 6268. We do not seem, in recent years, to have caught up with the extent of traditional coastal occurrences that are shown as the distribution in Philp (2010), although it seems unlikely that these have declined.

Persicaria bistorta (Common Bistort) ^R is, where not introduced, a plant of damp, unimproved meadows and, rarely, moist open woods, but is apparently declining in the county. However, it was found by SL as present at Avery's Wood, Bullingstone, in the course of visits on 10 and 16 September. The former visit accounted for only a small patch of non-flowering plants in flushed ground at the spring line the western slope of a gill, c. TQ 5416 4095. The later expedition, however, demonstrated abundance as non-flowering plants in flushes on both slopes: TQ 54207 40973, TQ 54187 40970, TQ 54193 40959, TQ 54283 40989 and TQ 54265 40980. Non-flowering plants extended into the next monad, but were less extensive there: TQ 54230 41000, TQ 54250 41003.



Persicaria capitata, 27 October 2016.
Photos © Chris Rose

Persicaria capitata (Pink-headed Persicaria) is one of the less invasive garden *Persicaria* species, because not fully hardy in Britain, but it nonetheless occasionally escapes. It was seen by CR on 27 October around the Wellbeing Centre, Mill Road, Northumberland Heath, TQ 5021 577143, where it backs onto a car park, to which it had appeared to escape, under a fence, from a side passage of the adjoining house, 7 Mill Road. SP & DG also found it on a small piece of waste ground in a housing estate at south Strood, TQ7268. Otherwise, records in West Kent appear limited to three without comment on status (and so could have been in gardens) and (comm. RMB) a pavement weed record from Bexley Town in 1999.



Phalaris aquatica (Bulbous Canary-grass) was seen by GK and LR on 24 August as widespread and abundant across the grassland of northern Stoke Marshes, TQ8476, more than holding its own in a tall, dense sward. It is assumed that this has been a deliberate introduction, to extend the grazing season, the species being capable of carrying green leaves over a long period, and able to survive wet conditions.

Phormium tenax (New Zealand Flax) is grown in gardens in various leaf colour forms and can be sizeable, with flowering stems up to 4m high. Presumably the garden plant at 95 Bostall Hill, Abbey Wood, TQ4678, had flowered in the past, as the LNHS meeting of 10 September (consisting of RMB & MM) encountered large seedlings on the pavement outside, and to 90 Rochdale Road, illustrated in Burton (2016a).

***Polycarpon tetraphyllum* (Four-leaved Allseed)^R** is now beginning to appear as a metropolitan street weed, in similar habitats as with *Sagina* spp., which could transform its distribution. The nationally rare status which supports its inclusion in the rare plant register can only be maintained by excluding its recent expansion in south east England. It was seen by RMB in the course of an LNHS meeting on 13 March at Pagnell Street, New Cross, TQ3677 at the top of a kerb near a gate signed as not to be obstructed (this would appear to place it at TQ 3655 7732). This seems to be a **first record for West Kent, vice county 16**. On 16 July, RMB also came across several plants on crazy paving at 173 Gypsy Road, Bexleyheath, TQ 4762 7630; and on 27 July between paving blocks of forecourts of 146 and 150 Glenesk Road, Eltham, TQ4375. Outside metropolitan West Kent, but, significantly, another inland record – DM found it growing in block paving and a road gutter in King Street, West Malling, TQ 68076 57964.

Polygonum rurivagum (Cornfield Knotgrass)^R is not always easily spotted, especially given the ubiquity of *Polygonum aviculare* (Knotgrass). However, several plants were seen by the KBRG meeting of 4 August, at the highly disturbed margin of the shooting club car park at Dartford Marshes, TQ 543 771. DS found on 20 September that the species was present in the Longfield area, with records in two monads. It was recorded at TQ 610 690, and also at TQ 609 691, being quite numerous in a fallow field where there seemed to be more soil than surrounding chalky areas.

Potentilla tabernaemontani (Spring Cinquefoil) is generally absent from south east England; there is a Hampshire population on chalk, but its native status has been doubted. There is no doubt that the four or so plants found in

the course of an LNHS meeting on 30 April (comm. RMB) were not native, these being on a grassy spot at a path edge nearest 61 Camden Road, Bexley, TQ 48506 73306, but not particularly near a garden. They were probably the cultivar 'Nana', generally commended for rock gardens.

Rosa arvensis x *canina* was recorded by GK & SK on 13 August by the path from How Green to Delaware Farm, TQ4645, comprising linear woodland near River Eden. The bush carried *arvensis*-like hips which, however, were slightly conical at the top; the *arvensis* styler column was present but slightly loose and twisted; sepals were variable, some with lobing; pedicels were long (5 cm, from *arvensis*) but with very few glands, leaflets resembled those of *R. canina*. This was recorded as having *R. arvensis* as the female parent; a cross with *R. canina* as female parent would have had four-fifths of its genetic material from that parent, and so would have resembled it much more. Other 2016 records of the cross have been non-committal, treated as *R. x irregularis* without comment on cross directionality. For West Kent, these related to two bushes at Wickhurst Green, TQ4950, seen by GK & SK on 30 September and 3 October. It is possible that one of these was the reciprocal cross, *R. canina* x *arvensis*.

Rosa x andegavensis (the cross between Dog-rose and Short-styled Field-rose) was recorded by GK & SK on 28 September, by the drive leading to Owlet House Fruit Farm, Lamberhurst, TQ 665 368, where both parents were present at the edge of woodland, together with an intermediate bush, probably with *R. canina* as female parent.

Rosa x andrzejowskii (*Rosa spinosissima*^R x *tomentosa* (f) x (m), the hybrid between Burnet Rose and Harsh Downy-rose) was found on the basis of an originally tentative determination of a plant without flowers or fruits, seen on 11 August 2015 by RMa, GK and CJ at Crookhorn Wood, south west of Upper Halling, TQ 67692 62964, in opened-up area on chalk by a track. There was suckering growth over several square metres of cut-back scrub, possessing *spinosissima*-type prickles and somewhat tomentose leaflets, often in groups of 9. It was necessary to wait for the 2016 season, in order to see its pink flowers (*R. spinosissima* has only white flowers, so



Rosa x andrzejowskii, 9 June 2016. Photo © Carl Jones.

that pink implies hybrid influence) and these were photographed by CJ in June and July, receiving confirmation from BSBI referee RMa. It is an excellent result from the clearance work undertaken here on Tarmac's land. Not only is this a very rare hybrid nationally, but it also suggests some continuity from a record of several fine bushes in the chalk hills above Halling, made by Wolley Dod and Marshall and given in Hanbury & Marshall (1899). It is possible that, because of the suckering habit passed on by the *R. spinosissima* parent, the plant has continued in being for over a century; although fresh hybridisation of course cannot be ruled out.

Rumex maritimus (Golden Dock)^R and *Rumex palustris*^R (Marsh Dock), det. GK, both appeared by the dried up margin of a water feature which was part of the former Thamesview Golf Course, Thamesmead, closed down in 2014 and left to run wild. These were discovered by MR, seven *R. maritimus* plants being noted at TQ 48159 80995 over the period 29 July to 10 August, and ten *R. palustris* being seen at TQ 48112 80918. Either of these, especially *R. maritimus*, would have been unusual records for metropolitan vc16. For both of them to occur together is exceptional. It is likely that these species are spread by wildfowl, but may not have the opportunity of germinating without changes in water levels.

Rumex x dufftii (the hybrid between Broad-leaved and Wood Docks) was noted by GK & SK on 21 May south of St Mary Hoo, TQ8075, where one plant was present at a woodland margin in the vicinity of *R. sanguineus* (Wood Dock); the other parent being inferred from the presence of scattered papillae on the leaf midrib underside. The same cross was seen by them on 30 July, one plant with parents by ancient earthworks at West Wickham, TQ 399 651; and on 21 August with parents in the rough grassland of a former orchard at Claygate, TQ7144.

Rumex x sagorskii (the hybrid between Curled and Wood Docks) was found by GK & SK on 1 July in a grassy field north of Hadlow, TQ 632 505, where not uncommon with the parents; and also on 23 September near Mace Farm, Cudham, TQ 453 606, by a field fence-line, again with parents.

Salicornia pusilla^R x *ramosissima* (Hybrid Glasswort, the cross between One-flowered and Purple Glassworts) was found by SP & DG on 9 October at a small area of mud on the tidal Medway river bank with *S. fragilis* (Yellow Glasswort) at Medway City Estate; development has left very little suitable habitat in this area.

Salix repens (Creeping Willow)^R was seen by the KBRG meeting of 15 May on the Scotney estate, TQ6934, in a damp, recently cleared area in woodland, where a young plant had sprung up with *Calluna vulgaris* (Heather). This is a new 10km square record, including for the part of East Sussex in that square.

Salix x ehrhartiana (the cross between White Willow and Bay Willow) is regarded as almost always planted in Britain (an introduced-survivor, in Stace (2010) terminology), and then only as a male tree. At the LNHS meeting of 30 April, RMB recorded an old tree, some 20m tall, with male catkins and young leaves, formerly in parkland near the edge of Bexley Park Wood (hornbeam coppice woodland), now as a result of development, next to modern fenced-in building, TQ 4819 7372. There is obvious difficulty in evaluating its status, and the likelihood must be of a planted origin; indeed, the only clear evidence of an unplanted origin would require the observation of rooted twigs in the vicinity of a planted tree. The current find would be a first record for vice county 16, West Kent, if we were applying more relaxed status criteria for 'first records'.

Sarcococca confusa Sealy (Sweet Box), a taxon known only in cultivation and which may be of hybrid origin, was seen by GK & SK on 17 February at Rye Wood, Rye Lane, Dunton Green, TQ 515 572. Clearly several small plants had been thrown out in damp woodland, and only one of these had rooted successfully. There is a previous West Kent record, but of garden relict status (Clement & Foster, 1994).

Sedum dasyphyllum (Thick-leaved Stonecrop), a miniature Stonecrop which readily fragments and roots, was noted by GK & SK on 5 March in quantity at junction of pavement and wall outside Cabbages & Kings, at the crossroads of Knockholt Road and Church Lane, Halstead, TQ 4882 6114, presumably originally deriving from a window box or the like.

Senecio x albescens (the hybrid between Silver and Common Ragworts) forms not uncommonly when both species are in proximity and it has leaves which are grey-green, as distinct from the white or green of the parents. Two plants were recorded by GK & SK on 4 January in a fenced-off waste area near the Edinburgh Castle public house, Northfleet, TQ 6220 7432, where *S. cineria* (Silver Ragwort) was present, in early flower.

Solanum diflorum (Winter-cherry) is usually grown as a house plant, but was accommodating enough to appear at a kerbside by 125 Rochdale Road, Abbey Wood, seen on 10 September by RMB & MM with one unripe 'cherry', ostensibly from the BSBI database a second record for West Kent, but previous records of *Solanum pseudocapsicum* (Jerusalem-cherry) are likely to refer to the same taxon.

Sutera cordata (syn. *Chaenostoma cordatum*, its common name being Bacopa, a recipe for confusion since this is a totally different genus) was noted by the same recorders at the site and on the occasion given in the last record, a pink-flowered kerbside plant illustrated in Burton (2016a). There is a handful of previous West Kent records, but with no detail of status to indicate whether they were inside or outside gardens.

***Thalictrum speciosissimum*, 28 August 2016. Photo © David Steere.**

Thalictrum speciosissimum is a horticultural plant apparently synonymous with *T. flavum* subsp. *glaucum*, a native of Spain and northern Africa. Plants were seen by DS on 28 August in a hedgerow with nettles, brambles etc., at the edge of a sheep field on quite dry clay, some 100m from a farmhouse, with a small lake intervening. They were in seed, in some respects reminiscent of our native *T. flavum* (Common Meadow-rue) but the glaucous leaves were very distinctive (det. GK). The species has been recorded before in West Kent as a garden relic, but apparently not otherwise, so this is treated as **a first record for vice county 16, West Kent.**



Tilia cordata (Small-leaved Lime) ^R was reported as a probable native relic at Dogpits, Markbeech in Kent Botany 2012, with groupings of coppice stools in two areas. Further investigation by SL on 10 January and 24 April has shown that there are considerably more trees and stools than were previously recorded, over 40. These include a close grouping of three coppice stools which may have been one originally and so of considerable antiquity. They also include an isolated group of three coppice trees, which may be dying, within improved grassland c. 100m from the main population, but which appear originally to have been part of a shaw which linked up to the Dogpits woodland with the main population. The findings increase the evidence for the survival of *T. cordata* here as a native relic, potentially from the Holocene wildwood.

Tilia platyphyllos (Large-leaved Lime) was not included in the rare plant register on the basis that (as given in Philp, 2010) it is perhaps always introduced in Kent, or is at best a seedling from a planted tree. We have nothing to compare with the presumed native occurrences as formerly-coppiced stools in ancient woodland on the South Downs scarp in Sussex, just reaching into Hampshire. However, recovery of part of Francis Rose's MS Flora has given us his assessment of a site found by him in 1959 at Combwell Wood, with seven trees scattered along a woodland stream in a small valley ('it is just possible that this is a native relic here'). The site was rediscovered by SL on 11 December, with seven trees still present, spaced along a 100m length of the gill stream up to the monad boundary at TQ 70344 33993; but with a further three in the adjacent monad, TQ7034. The original seven were a mixture of coppiced trees, small, medium and large, with a couple of maiden trees, collapsed but regenerating. The tree species most immediately associated were *Alnus glutinosa* (Alder), *Betula pubescens* (Downy Birch) and *Quercus* sp. (Oak). Non-native *Castanea sativa* (Sweet Chestnut) and *Pinus* sp. (Pine) were also present on the sides and plateau of the gill, but this is ancient woodland, depicted on maps (as Stonerock Wood) with the same boundaries back to 1622. There is a large avenue of mature trees c. 1.4 km away, as an approach to Bedgebury Park (the mansion), but that ornamental planting is not of the same character as this remote valley occurrence. The native/introduced issue remains unresolved.



Tilia platyphyllos, 11 December 2016. Photo © Stephen Lemon.

Trichomanes speciosum in Kent

Trichomanes speciosum (Killarney Fern) ^R, as a mature plant with fronds (the sporophyte stage), is an extremely local plant of the western parts of the British Isles, in constantly damp, shaded localities. This growth stage of the plant is nationally rare and it is a species protected from picking or sale, whatever its state of development. Thanks to the investigations of SL, it is now known that the immature plant (the gametophyte stage) is present in a number of sites in two locations in Kent: a major discovery of a native species completely overlooked in the county, and one which reinforces the views of Francis Rose as regards survival of an Atlantic and sub-alpine flora (especially bryophytes) in sheltered Wealden habitats. It is likely that the presence of the gametophyte plants is of extremely long standing and is evidence of survival from warm and wetter climate conditions, when plants were able to grow to maturity and produce fronds and spores. Rumsey et al. (2005)¹ considered the species in a European context as having undergone post-glacial spread, with some glacial refugia having contributed to this distribution.

The gametophyte looks like moss or algae from a distance, but grows as a mat of entangled filaments, often branching at right angles so as to give an appearance of three-dimensional wire netting, whose rigidity gives an impression of textured resilience when touched. From these filaments occasionally project unicellular brown or colourless rhizoids and hammerhead-shaped gemmae which, if detached, may serve to establish the plant clonally in the vicinity.

¹ Rumsey, F.J., Barrett, J.A., Gibby, M., Russell, S.J. and Vogel, J.C. (2005). Reproductive strategies and population structure in the endangered pteridophyte *Trichomanes speciosum* (Hymenophyllaceae: Pteridophyta). *The Fern Gazette* 17: 205-215.



Trichomanes speciosum gametophytes,
20 March 2016.

Photo © Stephen Lemon.

These Kent finds have been detailed in two reports — the January 2016 finds (Stridewood Rocks, Chiddingstone Hoath, TQ4941) and the March 2016 finds (Hungershall Rocks, Tunbridge Wells, TQ5538) — which are summarised here.

The Stridewood Rocks location is an outcrop of Ardingly Sandstone running east-west alongside pasture dropping northwards into gill valley woodland for

about 800m, of which about 500m carries intermittent crags with vertical rock sections facing northwards. There were four principal sites seen by SL, LR and GK on 9 January. All were in north- or north-east facing rock cavities or crevices, mostly well inside, with limited light exposure, occasionally in more open fairly shallow rock indentations. The largest colony extended across a cave ceiling for a maximum width of 1.3m, beginning about 1.3m into the cave and reaching as far as 2.3m inside.

Trichomanes speciosum gametophytes on
cave ceiling, 9 January 2016.
Photo © Stephen Lemon.

The Hungershall Rocks location is on private land, visited by SL and GK on 20 March with permission, and comprises a small, sheltered valley lined between 75 and 80 metres altitude in the High Weald with Ardingly Sandstone outcrops (although the geology is a little more complex than this), through which a small wooded gill stream, a tributary of the River Grom runs, partly piped underground. From the presence of a number of Atlantic bryophytes, the valley appears to afford a damp and mild microclimate conducive to the survival of species which otherwise have a northern



and western distribution in the British Isles. Eight principal sites were recorded, in east-, west-, south-west and north-east facing caves (up to 3.3m inside), cavities, hollows under overhangs and in cracks. Gametophytes grew on the sloping walls or ceilings of caves or clefts, but the most usual habitat was in the recessed angle penetrating the bedding planes of the rocks. As a result, the colonies were usually linear, along the horizontal bedding planes. Presumably this usually has the advantages of greater moisture, of being tucked away from disturbance and of reducing light (and hence competition – the gametophytes are often growing in light conditions where nothing else grows). However, *Trichomanes* was seen in recessed bedding plane angles outside caves as well as inside, and one colony was surprisingly exposed, so the light aspect may be relatively incidental, although there are no fully south facing sites, subject to what is mentioned below regarding Redleaf Rocks. In general, gametophytes appeared not to be present in the wettest habitats (although they may have been sheltered among bryophytes, with which they sometimes grew mixed, and this makes it difficult to gauge the true extent of their growth at times), but the apparent dryness of the Ardingly Sandstone disguises constant water penetration through its porosity.

Trichomanes speciosum cave habitat, 20 March 2016.
Photo © Geoffrey Kitchener.

Search of numerous other sandrock exposures in the county had until January 2017 failed to yield any further discoveries, although a further find by SL, on 5 June, on the south bank (the East Sussex side) of the Kent Water near the outfall of Scarletts Pond, Cowden, was about as near as one could get to the vice county border without actually being in Kent. Another discovery by him, at Friezland Wood, Tunbridge Wells, TQ5638, was on the East Sussex side of the border, although within the administrative county of Kent. Elsewhere in Kent, it may be, SL suggests, that Ashdown Sandstone lacks sufficient porosity, unless it is coupled with a separate water source. Sites on Ardingly Sandstone could, of course, have been lost through human disturbance and the adverse effect of random events such as tree or rock falls and the growth of tree roots in crevices which, over many centuries, may have operated to extinguish individual plants that have no ability to reproduce by spores. So it is perhaps surprising that so much has still survived. These finds represent the **first and second records for the species in vice county 16, West Kent.**



This account had been completed by mid-January 2017, and any further developments properly belong to Kent Botany 2017; but a further find by SL on 15 January 2017 deserves a place here. There is a third West Kent location for *Trichomanes* gametophytes, again quite unknown hitherto, and this is at Redleaf Rocks, at the eastern end of the line of Ardingly Sandstone rocks which run along the southern side of The Grove (TQ5245). There was a very little amount, tucked into deep crevices formed on the eroding bedding planes of two shallow caves and adjacent to larger quarried caves with mortared stonework, which may be the product of landscape gardening from the early 19th century onwards, when the outcrop was treated as a garden natural feature. Despite the south facing aspect of these rocks, the cave habitat is sheltered, perhaps orientated slightly to the west. This represents the third different hectad discovery for Kent.

Urtica membranacea was recorded by CR (conf. RMB) on 3 September at Bexleyheath, where a single plant was present in a planter outside the Prince Albert public house at the end of Erith Road opposite the top of Gravel Hill, TQ49662 75140. This Mediterranean species has begun appearing in urban habitats in England,

such as plant containers and street-sides and this sighting represents a **first record for vice county 16, West Kent.**



Urtica membranacea, 3 September 2016.
Photo © Chris Rose

Verbascum virgatum (Twiggy Mullein) is not often offered in horticultural commerce, but yet casual plants occasionally get around; and RMB on 19 October saw two plants by a path through the nature area between Harrow Meadow and Castlefield Allotments, Eynsford, TQ5465.

Verbena x hybrida is used in hanging baskets, planters and the like. It does not have a reputation for escaping, although there are half a dozen records on the BSBI database, none of which has any comment as to whether the plant was inside or outside a garden, except for one referring to parkland. A new record is that by GK & SK on 16 October, relating to two plants at the edge of the road near the King Henry VIII public house, Hever, TQ 4757 4482, likely to have seeded from past plantings in hanging baskets or planters, although not then in cultivation there.

Viola canina (Heath Dog-violet)^R is treated as Vulnerable to the risk of extinction in England, so it is encouraging that there were several new finds in 2016, and that suitable habitat remains. On 7 May, it was recorded by SL as flowering patches in the southern half of a large field west of a gill, with *Pedicularis sylvatica* (Lousewort)^R and *Carex caryophyllea* (Spring-sedge), at Gilridge, TQ 45852 42936 and TQ 45810 42945. It was also present flowering in the northern half of that field, at TQ 45899 43147. On the same day, he visited neighbouring Cowden Pound Pastures KWT reserve, where the species is mentioned in the SSSI description, and flowering plants were noted on a grassland slope, TQ 45992 43182, with *C. caryophyllea* and *Potentilla erecta* (Tormentil)^R; also at TQ 46004 43208, with forms showing some intermediacy with *Viola riviniana* (Common Dog-violet). Additionally on 7 May, a KFC meeting noted *V. canina* in spread-out flowering patches across steep slopes within a species-rich grassland field west of Top Hill Wood, at Hobbs Hill Farm, between Fordcombe and Chiddingstone Hoath, TQ 50620 40923, TQ 50600 40833 and TQ 50634 40841. Other species present included *C. caryophyllea* and *Genista tinctoria* (Dyer's Greenweed)^R. Then on 15 May, a KBRG meeting at the Scotney estate found widespread scattered flowering plants in acid grassland adjacent to the River Bewl and up the valley slopes, on either side of the footpath to Kilndown, sample locations being TQ 68758 34949, TQ 68738 34910, TQ 68764 34765 and (in an adjoining monad, where not so common) TQ 69183 35187. Also present were *C. caryophyllea*, *P. erecta* and *Ophioglossum vulgatum* (Adder's-tongue); so throughout all these sites there is a consistent theme as regards the quality of acid grassland flora, of a level not often found in Kent.

Viola x intersita (the cross between Heath and Common Dog-violets) was seen at the Scotney estate KBRG meeting mentioned above, on an acid grassland slope east of the River Bewl. There were at least two patches, one of about 3m x 3m, very floriferous, at TQ 68942 34852, with intermediate leaves and stipules; and another at TQ 68941 34848, about 1 x 1.5m, with flowers coloured like *V. riviniana* (Common Dog-violet) bearing a very dead white spur, but with leaves closest in shape and texture to *V. canina* (Heath Dog-violet). Both parents were in the general vicinity



Viola x intersita, 15 May 2016. Photo © Lliam Rooney.

Vulpia ciliata subsp. *ambigua* (Purple Fescue)^R, as in relation to East Kent, was recorded^R in an inland urban or suburban roadside habitat, by BW: on 15 July south of Aylesford, TQ7258; and on 14 September at Allington, TQ7457.

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