



Kent Botany

2015

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Front cover: *Ranunculus baudotii* (Brackish Water-crowfoot) at Grain. Photo 23 June 2015 © David Steere.

Introduction

Kent Botany 2015 is the sixth in a 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 Kent Field Club version, but the text in both cases is substantially similar.

Highlights

Highlights for 2015 included the following.

- *Anthemis arvensis* (Corn Chamomile) found in a West Kent field
- The discovery of populations of *Carex acuta* x *nigra* (the cross between Slender Tufted-sedge and Common Sedge) in the Eden valley
- *Galium pumilum* (Slender Bedstraw), an Endangered species, found in a local nature reserve in West Kent
- The first record for *Polypodium cambricum* (Southern Polypody) in Kent since 1976.

Eleven taxa new to East Kent (vice county 15) were discovered and two earlier first records noted; and fourteen taxa new to West Kent (vice county 16) were recorded.

Botany in 2015

A sequence of warm, wet winters has continued. Temperatures remained remarkably high through to the end of the year, with virtually no hard frosts and only a very short flurry of snow in some places. Unusually late flowering plants overlapped with early flowering plants for the next season: *Ficaria verna* (Lesser Celandine) was not uncommon in flower during December and *Prunus spinosa* (Blackthorn) was reported flowering near Edenbridge on 31 December.

Recording in Kent

Recording continued to target both general surveying and increasing the information available regarding the status of rare plant register plants, for county-wide coverage during the current BSBI recording period 2010-19 inclusive. The approach to general recording began to develop from seeking to record as widely as we could. It then moved to targeting areas with limited current records; and then to targeting areas with a relatively low proportion of different plants recorded in the current date class in relation to the total of different plants ever recorded in that area. This last method of prioritising under-recorded areas was illustrated by a colour-coded map of Kent divided into 10km squares distributed to Kent Botanical Recording Group (KBRG) members. The indications were that priority areas were mostly in West Kent, but that there had been some under-recording in peripheral parts of East Kent. The best recorded areas in terms of the proportion of plants re-found in 2010-14

were around Dungeness. Preliminary analysis for 2015 indicates further progress, with fewer areas in West Kent needing prioritisation.

The total number of records for 2015 entered by 25 January 2016 was 50,700, well above average but about 8% down from the previous year, which was exceptional. Records continued to be added for previous years, so that their restated totals are: 21,300 (2010); 28,500 (2011); 27,600 (2012); 36,900 (2013); and 60,700 (2014). This gives a total of 225,700 records for the period 2010-15 inclusive, not far away from the total included in Philp (2010) for the much longer period 1991-2005, although the 2010-15 data are based on finer area resolution (monads, not tetrads), they do not discount duplicates and have the benefit of being compiled by a network of botanists.

Membership of the KBRG rose to 112 during the year. The group held 14 field meetings, including joint sessions with the British Pteridological Society, Surrey Botanical Society and Sussex Botanical Recording Society; weekend meetings were also generally shared with the Kent Field Club. Themed meetings were held for ferns, glassworts and grasses. One meeting made national news when the discovery of a gall wasp on *Castanea sativa* (Sweet Chestnut) in Farningham Woods was a first British record of a notifiable pest and accelerated the felling of 35 acres of woodland by way of control. Meeting reports were given in newsletter no.8, published by email and on the KBRG webpage.

Survey lists/reports were provided to (amongst others): the RSPB for surveys at Lodge Hill; Kent Wildlife Trust; the Ministry of Defence; Natural England; the River Stour Internal Drainage Board; the management of the Bluewater shopping centre; and the preparers of an environmental impact assessment for the Swanscombe peninsula. We also supply our data to the Kent and Medway Biological Records Centre, who are the first port of call for third parties seeking botanical data in relation to Kent sites. Records were also passed to the BSBI for their database, to contribute to their on-line distribution maps and to build up data for the next national atlas. The BSBI ran a national *Euphrasia* (Eyebrights) project, for which material from all current Kent species was collected and made available for DNA analysis. Fred Rumsey shared his survey data on *Orobancha picridis* (Oxtongue Broomrape), whose Kent and Isle of Wight occurrences are the principal populations in the British Isles. Our knowledge of *Rosa* (Roses) was greatly enhanced by a visit from the BSBI referee, Roger Maskew.

Kent rare plant register (RPR)

The RPR introduction, list of taxa and Parts A to G inclusive were updated and reissued on-line in February 2015. These included 21 new accounts, as a result of species added to the RPR list of taxa in 2014. Parts H, I and J/K were issued to KBRG members during 2015 for consultation, containing 25 new accounts.

Changes due to be made to the RPR list of taxa comprise the addition of *Anthemis arvensis* (Corn Chamomile); *Polypodium cambricum* (Southern Polypody); *Salvia verbenaca* (Wild Clary), which was inadvertently missed from the 2014 changes reflecting its risk re-categorisation as Near Threatened in England; and *Trichomanes speciosum* (Killarney Fern), whose records will be dealt with in Kent Botany 2016.

The level of recording for RPR plants in 2015 was broadly in line with the previous year (1,560 records for 2015, in comparison with 1,486 for 2014). The numbers reflect the presence in the register of some relatively common species whose risk status was reassessed for England in 2014, largely as a result of their rate of recent decline. By far the most fully recorded of these was again *Fragaria vesca* (Wild Strawberry), with 162 records; next were *Veronica officinalis* (Heath Speedwell) with 73 records and *Cruciata laevipes* (Crosswort) with 64. The fact that 19 records were made for *Orchis anthropophora* (Man Orchid) shows how important the county's populations are in a national context.

RPR plants recorded in 2015 included several findings of note mentioned under 'Highlights' above, and also:

- a third current Kent site for *Carex canescens* (White Sedge)
- 16 reports of *Carex vesicaria* (Bladder-sedge), for which Philp (2010) had only four tetrad records
- two sightings of *Fumaria bastardii* (Tall Ramping-fumitory) which, with a 2011 record from the East Sussex borders, break the long absence of this species from the Kent flora
- 14 records of *Polycarpon tetraphyllum* (Four-leaved Allseed), which show how dramatically this species is beginning to spread
- a new location for *Ranunculus tripartitus* (Three-lobed Crowfoot) – only three tetrads were given in Philp (2010).

Plant records: selection criteria and recorders

Kent Botany 2015 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 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 2015, unless otherwise indicated.

Recorders and other persons mentioned in reports

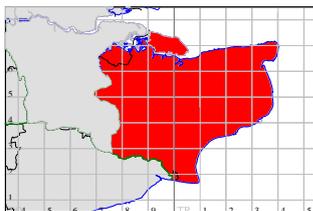
AG Alfred Gay	DS David Steere	JRP John Palmer	PvW Petra van der Wiel
AJ Ade Jupp	EW Elizabeth Winterbourne	JS Judith Shorter	RMa Roger Maskew
AL Alex Lockton	FB Fred Booth	LC Laurence Clemons	RMB Rodney Burton
BB Brian Banks	FJR Fred Rumsey	LR Lliam Rooney	SB Sue Buckingham
BW Brian Woodhams	FR Francis Rose	MC Professor Mick Crawley	SC Steve Coates
CC Chris Cook	GHo George Hounsome	ML Mel Lloyd	SG Steve Gale
CJ Carl Jones	GK Geoffrey Kitchener	MP Mike Phillips	SK Sarah Kitchener
CM Chris McGaw	HS Heather Silk	MR Mike Robinson	SL Stephen Lemon
CO Colin Osborne	JA Jan Armishaw	MSP Mike Porter	SP Sue Poyser
DG Doug Grant	JC Juliet Cairns	NB Nick Bertrand	TI Tim Inskipp
DH Don Hardwick	JL Jacky Langton	OL Owen Leyshon	WW Bill Welch
DM Daphne Mills	JP Joyce Pitt	PA Pat Acock	

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

Other abbreviations or notation

BPS = British Pteridologicql Society	KWT = Kent Wildlife Trust
BSBI = Botanical Society of Britain and Ireland (formerly Botanical Society of the British Isles)	LNHS = London Natural History Society
comm. = communicated by	MOD = Ministry of Defence
conf. = confirmed by	NNR = National Nature Reserve
KBRG = Kent Botanical Recording Group	RSPB = The Royal Society for the Protection of Birds
KFC = Kent Field Club	Plant records which are marked ^R represent plants on the current draft Kent rare plant register list, with the additional species mentioned above as to be included.

Plant records for East Kent (vice county 15)



Anthemis austriaca (Austrian Chamomile) is not just Austrian, but is found more extensively in Eastern Europe as well as being widely introduced, as with us, as a wildflower seed mix plant. There were no clues of origin, however, with the plant noted by LR on 3 June east of Faversham, a street weed growing from the base of a wall at Whitstable Road, TR0261.

Brassica oleracea x *napus* subsp. *oleifera* (the hybrid between Wild Cabbage and Oil-seed Rape) was identified in a coastal population of Wild Cabbage at Hope Point, TR 377 460, from material gathered in 2004. This note is given so as to mark **the first record for East Kent**, vice county 15, by way of exception to the usual restriction of reported records in the Kent Botany series to the last recording season; further details will be given in an updated Part B of the rare plant register.

Bromopsis ramosa subsp. *benekenii* (= *B. benekenii*, Lesser Hairy-brome) ^R was seen by GK and SK on 12 October on the lower slopes of the North Downs east of Thurnham, TQ 8176 5791, on a bank under *Fagus sylvatica* (Beech) on chalk. As so often with this taxon, a plant could be identified as fully matching identification requirements, including the absence of hairs on the scale at the base of the lowest branchlet, but another in the vicinity did not quite meet the criteria.

Camelina sativa (Gold-of-pleasure) is an archaeophyte, or ancient introduction, formerly associated with arable farming, but having become rarer with the use of cleaner grain and flax seed. More recently its occurrence has been associated with bird seed, which is the likely origin of the three records given in Philp (1982). These three records are, according to Eric Philp's file cards, all from West Kent, so that one may need to go back to Hanbury & Marshall (1899) for the last East Kent record, probably that by Miss Young in Rainham or, in 1865, Mrs Benson's sighting at Deal Beach. So a record by SB on 28 May at the Lampen Wall, Stodmarsh, TR 22270 61614 follows a long gap. There was a single plant, fruiting and flowering with other weeds on shale which had been put down to repair the footpath. Although no other bird seed alien species were noted, it may be that seed contamination of the shale is the origin. The species is also apparently used in seed mixes for game bird food or cover. In view of the single casual occurrence, it is not proposed yet to add this species to the rare plant register.

***Camelina sativa*, 28 May 2015.
Photo © Sue Buckingham.**



Carex acuta (Slender Tufted-sedge), according to Philp (2010), would appear to be limited to the Wantsum and the Len in East Kent, and the Medway, the lower reaches of which are the East/West Kent vice county boundary and the upper reaches are in West Kent. SL's researches in 2015, however, give the plant along both sides of the Beult, which also partly defines the East/West Kent

boundary. The sedge was seen near Stile Bridge, in TQ7448 and TQ7548 (and also on the West Kent side, in TQ7547), the largest patch being some 15m long on the north bank at TQ 75128 48073.

Carex canescens (White Sedge) ^R. A third current Kent site for this sedge was discovered by SL on 9 May, at Norland Wood, Ruckinge, TR 02328 35243, a known location for the rare species *Carex elongata* (Elongated Sedge) ^R. At least 40 flowering clumps were present with *C. elongata*, *C. pseudocyprus* (Cyperus Sedge), *C. remota* (Remote Sedge) and the moss *Calliergon cordifolium*, growing on sphagnum peat in one end of a series of interconnected swampy ponds.

Carex echinata (Star Sedge) records during 2015 included finds by SL and LR on 1 August at Willesborough Lees, TR 03890 42525 and TR 03926 42544, where it was growing with *Carex canescens* (White Sedge) in a boggy area which was coppiced in Winter 2014; most plants were heavily rabbit-grazed. The number of *C. echinata* sites in the county noted from 2010 onwards is now over ten, exceeding the level at which a plant normally qualifies as locally scarce for the purposes of the rare plant register.

Carex x pseudoaxillaris (the hybrid between False Fox-sedge and Remote Sedge) was discovered by SL on 13 June north west of Tenterden, TQ 86630 35207, on a marshy hillside under willow, where there was one flowering plant growing with both parents. This cross has an inflorescence structure intermediate between the congested panicle of *C. otrubae* and the spaced-out spikelets of *C. remota*.

Cerintho major (Greater Honeywort), commonly grown as the cultivar 'Purpurascens' and capable of self-seeding although with only one other East Kent record, was recorded on 4 April by DM, JS and FB. They saw three plants on the edge of a cliff path, Prince's Walk, Palm Bay, Cliftonville, TR 3800 7137. Another plant was seen as a casual on a recently graded slope above Herne Bay Sailing Club, TR1868, by CO on 15 April.

***Cerintho major*, April 2015.
Photo © Daphne Mills.**



Chenopodium murale (Nettle-leaved Goosefoot) ^R. Two plants were recorded by OL on 14 September at the edge of a new housing estate on fresh imported and disturbed soil, Church Lane, New Romney, TR 06751 24515 and TR 06790 24474. The species is regarded as Endangered in England. Both plants, with everything else which was green, were treated with herbicide by the developers within a month of discovery and the ground reseeded to grass.

Chenopodium vulvaria (Stinking Goosefoot) ^R has in recent times been a coastal plant with us, although previously known in inland nitrogenous situations. The finding by SP and DG on 17 October of four plants at Darland Banks, Gillingham, TQ 78078 66157, is a new discovery in the older inland habitat type. The plants were growing on a hill slope heavily disturbed by scrub clearance, weedy and with indications of nitrogen enrichment. Darland Banks is maintained by the KWT as a chalk grassland reserve; this is perhaps one of the least likely species to be found in such a context!

Coriandrum sativum (Coriander). AL began the year by finding a few plants flowering on 1 January around street trees near allotments by Whitstable library, TR 106 661. Another casual plant was spotted by LR on 7 June by an exit road on the A2 verge south of Canterbury, TR 15374 55172.

***Crataegus rhipidophylla* (Large-sepalled Hawthorn)** has few British records and many of these relate to plantings in wild situations, typically as a hedging shrub. It has been frequently planted in the Cambridgeshire

and Cardiganshire vice counties, and the lack of comment regarding its status elsewhere may arise from a reluctance to identify the species in view of its similarity to *Crataegus monogyna* (Hawthorn). LR and SL on 24 May came across a seemingly self-sown shrub deriving from nearby planted trees east of Headcorn, TQ 86416 44429. It stood out in particular for its very large flowers, including sepals, and its distinctive leaves, with the lowest leaf-lobes being serrated for more than half their length from apex to petiole. This is a **first record for vice county 15, East Kent**. *Crataegus laevigata* (Midland Hawthorn) also grew in the vicinity and there was at least one apparently self-sown bush nearby which warrants further investigation as a potential hybrid.



Crataegus rhipidophylla, 24 May 2015.
Photos © Liam Rooney.

Crocus chrysanthus (Golden Crocus) was amongst a number of other hortical species escaped onto the shingle of Dungeness NNR behind Derville and Channon Roads, TR0821, seen by GK and SK on 21 February. There were several associated clumps of plants bearing yellow perianths heavily lined on the outside with feathered brownish purple streaks. In the same area the recorders also noted *Crocus tommasinianus* (Early Crocus), *Crocus vernus* (Spring Crocus) and *Crocus x luteus* (Yellow Crocus).

Cucurbita pepo (Ornamental Gourd) was found by SG, comm. OL as for 6 November, growing in a rabbit warren, near the Old Lighthouse, Dungeness, TR 08892 16831.

Cucurbita pepo, November 2015.
Photo © Owen Leyshon.

Dianthus armeria (Deptford Pink) ^R has two main populations in Kent, but a further small colony was found at Ashford, TR 007 449, by HS on 20 August. There were nine plants on a sandy sloping bank by the road at the edge of Eureka Park. The bank had been disturbed, presumably by rabbits. The disturbed sandy habitat is common to all sites, although in this case it is on Folkestone Sand, and the others are on dune sand and Thanet Sands Formation.



Dianthus deltooides (Maiden Pink)^R is another pink with very few Kent sites. To these may be added Hurst Wood, near Charing Heath, where it was first seen by MP. A viewing by MP, JP and AG on 29 August 2014 led to the conclusion that this was likely to be the identity of the plant, when one specimen, past its best, was seen at TQ 9302 4841. The position was clearer when visited as a follow-up by a KFC meeting on 7 June 2015, when the pink was seen at TQ 92875 48545, with several other colonies scattered in the vicinity across a south-facing sandy slope, associated with the HS1 railway line construction.

Digitaria sanguinalis (Hairy Finger-grass) was recorded by SB on 24 September as a patch of plants in a house driveway at Newington, Thanet, TR 36798 66394; and on 3 November on a pavement edge at Leeds, TQ 8188 5259, presumably from a garden bird feeder.

Doronicum pardalianches (Leopard's-bane) was seen on 19 May by LC near Luddenham, east of Faversham, TQ 995 621, a large patch growing just inside broad-leaved woodland, mainly *Castanea sativa* (Sweet Chestnut) coppice. The presence of *Aquilegia vulgaris* (Columbine) and *Pentaglottis sempervirens* (Green Alkanet) suggested a garden origin for all, although this *Doronicum* species is less grown now than formerly.

Dorycnium hirsutum (Canary Clover) is being increasingly recorded in Kent and, although previously seen in the context of amenity grassland sowings, this may not necessarily be the origin of a sighting on 23 July reported by PVW as a plant growing on a stony bed/pavement near a wall, on the verge of Moyle Court, not far from Marine Parade, Hythe, TR1634. No other plants were present. Another Canary Clover was also noted by LR on 2 July on the not-very-accessible roadside of the A2 Boughton bypass, TR 05915 59136.



Epilobium brachycarpum, 23 August 2015.
Photos © Mel Lloyd.



Epilobium brachycarpum C. Presl (Panicled Willowherb), a North American willowherb spreading across mainland Europe, was first reported for Kent in 2014, when discovered on a development site in vc16 (see Kent Botany 2014 for this and a general account of the species). It has now appeared in East Kent, having been found by ML and SC on 23 August on waste ground at Betteshanger Sustainable Parks, TR 3386 5313. Plants were numerous, mostly small, but some in excess of

30cm high, and the flowers were of the small self-pollinating form which is characteristic of the taxon spreading in Europe (in North America, a larger flowered, out-crossing form is also known). The terrain here is sharp-draining colliery shale deriving from the former Betteshanger Colliery (as with the terrain at nearby Betteshanger Country Park, formerly Fowlmead C.P.), the lack of nutrients resulting in delayed plant succession and very little competition. The colony, when subsequently explored by GK and SK, appeared to cover intermittently about 100m x 40m, extending from the Betteshanger Road / Colliers Way roundabout (at TR 3390 5317) south westwards between these two roads, with a small amount on the southern side of Colliers Way. Denser areas of plants could be seen as a copper sheen just above ground level, from the colour of the stems. The number of plants must easily be in hundreds of thousands: a count in a sample area of 20cm² extrapolates to 1875 plants per square metre. Origin could be windborne from mainland Europe, or on cross-Channel vehicles visiting neighbouring commercial/industrial premises. The site may be destined for development, but the species might have a longer-term future if it reaches similar terrain at Betteshanger Country Park, 1.5km away. This is a **first record for vice county 15, East Kent** and currently its presence in the British Isles appears limited to Kent and the Colchester area.

Epilobium x floridulum (the hybrid between Hoary and American Willowherbs) was seen by GK and SK on 27 June, one plant by weed-killed ground alongside Mill Road near Aldington, TR 055 362, the parents being present. A further plant was found by GK by a woodland path with the parents and shown to a joint KBRG/BPS meeting at Brabourne Lees, TR0839, on 1 August. In a plant nursery at Northdown, Thanet, TR3870, another specimen was seen by GK and SK, on 3 September. All these are typical disturbed habitats.

Euphorbia oblongata (Balkan Spurge), increasingly escaping from gardens, was recorded by DG and SP as established, growing on a large soil bank brought in to level a new golf driving range near Chatham, TQ7666.

Fallopia x bohémica (Bohemian Knotweed, the cross between Japanese and Giant Knotweed) suggests a plant to be feared and, indeed, it is at least as invasive as the parents. A clump was noted by LR on 27 May by a footpath above Flowergarden Wood, Hinxhill, TR 0477 4266.



***Ferula tingitana* (Giant Tangier Fennel).** This Mediterranean umbellifer, growing to 1.5m tall, is occasionally cultivated in the British Isles, and was written up by Southam (1998) in the context of *Ferula communis* (Giant Fennel) beginning to be found escaped. However, no UK records of *F. tingitana* in the wild appear to have arisen yet, until noted by OL by Dungeness Road, TR 09278 17524. In recent years a number of plants have sprung up in the shingle mainly around a gorse patch adjoining a residential property, whose owner sowed seed in his garden from Gibraltar, over 25 years ago. The plants have been cut to reduce spread of the plant, but OL recorded four plants as having appeared in April, of which three were cut, one re-sprouting as viewed on 6 December. **This is a first record for East Kent (vice county 15).**

***Ferula tingitana*, November 2015.
Photo © Owen Leyshon.**

Fumaria bastardii (Tall Ramping-fumitory)^R appeared to be absent from the county, after a fleeting appearance at Jury's Gap near Dungeness in 2011, but now we have two further finds. The first was by CO just within the railway fence by the former level crossing at Walnut Tree Lane, Westbere, TR 1965 6101, on 18 June 2015. Its presence is perhaps associated with crossing closure works by Network Rail in the preceding year or so. Further investigation by LR on 25 June revealed a small population, c.20 plants ranging from small and scraggy to robust, scattered by a footpath parallel to the railway, both within and outside railway land. *Fumaria muralis* (Common Ramping-fumitory) was also present, *F. bastardii* being distinguishable from this by its smaller sepals and concolorous upper petal, lacking a dark tip. The second find was at Graveney Road, Faversham, made by LR on 10 October. A very large plant was seen sprawling for 3m along the ground and up 1.5m into windbreak trees at TR 02910 61057; two small specimens were at TR 02979 61051; another very large fumitory grew at TR 02986 61052, spreading 2m x 1.5m up the fence with two or three small plants 0.5m away. Then there was a

small collection of small plants scrambling along the ground and a swathe of larger plants in the hedge for 12m, the middle grid reference being TR 02999 61057 going into TR0361. This year has accordingly transformed our knowledge of the species in Kent; and although fumitories are of their nature often casual in occurrence, in each case these finds represent populations with a reasonable expectation of continuance.

***Fumaria bastardi*, 18 June 2015.**

Photo © Colin Osborne.



***Fumaria parviflora* (Fine-leaved Fumitory) ^R**

was seen by SB on 16 May, a lone flowering plant west of Petham, TR 11293 50839, in the unsprayed top corner of a wheat field. This, and other earlier records, mostly made by SB, result in a total of nine sites from 2010 onwards, providing evidence that the drop from ten to three tetrad records between the surveys in Philp (1982) and Philp (2010) probably does not represent a real decline.

Galanthus plicatus* subsp. *byzantinus is a subspecies of Pleated Snowdrop which has only been seen in the wild as an escape in the British Isles since the 1980s. It differs from the usual subspecies, *plicatus*, in that its inner tepals have green patches at both apex and base. It was recorded as well naturalised on a sandy bank at Sandling Lane, Maidstone, TQ 7558 5802, by SP and DG on 1 March; they had known snowdrops here for at least 20 years, but had not stopped to look until then. The snowdrops appear to be unmanaged and to have spread originally out of a garden, eventually also spreading across the road. **This is a first record for vice county 15, East Kent, and for Kent as a whole.**



***Galanthus plicatus* subsp. *byzantinus*. Photos © Sue Poyser, 1 March 2015.**

***Glebionis segetum* (Corn Marigold) ^R**. A single flowering plant was recorded by OL on 14 September amongst planted hedging at a new housing estate, New Romney, TR 06845 24599. The surrounding farmland is all very sandy, which would suit the species, but it is more likely to be an introduction from soil imported for the estate or related to previous allotment use, than originating from any arable weed seedbank. Whilst this species is a constituent of wildflower seed mixes, no other plants characteristic of such a mix were noted in surrounding areas. Also, on 20 August, SP and DG found many plants growing down a bank which had been created from soil removed to level a new road being constructed alongside Burham, from c. TQ 730 615 to TQ 720 620. Grass had been sown on the flat area, but the bank had only weedy plants and the Corn Marigold. Other



characteristic arable weeds were found in the general vicinity, including *Chaenorhinum minus* (Small Toadflax) and *Euphorbia exigua* (Dwarf Spurge) ^R, so there is reasonable evidence that the Corn Marigold has appeared from the seedbank.

***Glebionis segetum*, August 2015. Photo © Sue Poyser.**

Hieracium scotostictum (Dappled Hawkweed), an introduced species which moves in and out of gardens, was recorded by SB on 8 October, with plants on a wall top at Folkestone Leas, TR 21274 35368.

Hypericum hircinum (Stinking Tutsan) is not grown a great deal (and the English name has nothing to commend it), so escapes are relatively infrequent, even though it seeds very readily; but LR recorded the species on 31 August as present on waste ground by the exit route of the Faversham household waste recycling centre, TR0160.

***Hypericum xylosteifolium* (Turkish Tutsan)** is 'an elegant shrub' with 'a graceful arching habit', according to Bean (1973), who then goes on to say 'but is one of the most disappointing in its flowers, which appear a few at a time'. DG found it growing on the pedestrian/emergency access to the M2 motorway bridge at Borstal, TQ 7267 6666, on 5 July. When the site was revisited by DG and SP on 12 July, the plant had been cut back, with just a few shoots remaining, but it is strongly rhizomatous, so this should not affect survival. **This is a first record for East Kent (vice county 15).**



***Hypericum xylosteifolium*, July 2015.
Photos © Sue Poyser.**

***Jasminum nudiflorum* (Winter Jasmine)** was recorded by SP and DG on 1 March growing out of a steep wooded roadside bank of Pilgrims Way near Wouldham, TQ 7225 6472. Whilst this gave the appearance of a young plant, the species is said not to set seed in British gardens; the origin of its presence in this location is unclear. The plant appears to be sufficiently wild here, however, to be treated as **a first record for East Kent, vice county 15.**

***Jasminum nudiflorum*, 1 March 2015.
Photo © Sue Poyser.**

Lolium x boucheanum (the cross between Perennial and Italian Rye-grass) has no Kent records in the Philp (2010) survey and half a dozen in the period 2010-14. It was found by AL on 11 June in the entrance to a pasture field near Grove Ferry, TR 234 629, and he then demonstrated it at a KBRG meeting on 22 July at Stodmarsh, TR 2172 6102, where there were a few



plants overtopping the crop at the corner of an arable field. This was followed, in vc15, by sightings on 12 August by SB near Deal, TR 3666 5373 (in the corner of a field recently under cultivation, but then under grazing); by GK and SK east of Wouldham, TQ7264 (at a disturbed pathside, not near sown grassland) and TQ7364 (present in a ley mixed with *Lolium perenne*, and assumed sown); and on 20 October by SB west of Dover, TR 29035 41688 (in arable). The likelihood is that it is being sown along field margins or as temporary leys where it continues after ploughing up; and that it is susceptible to being recorded as one of the parents, *Lolium multiflorum*.

Marrubium vulgare (White Horehound) in Britain is of mixed native / introduced status, and Hanbury & Marshall (1899) did not consider it native in Kent. That judgement is understandable from most of the records which they cited, given that one of the habitats affording best indication of native status is short grassland on chalk slopes, and the only site given likely to match this was Boxley Hill (site found by W.W. Reeves, who died in 1892). It has remained unreported there since, until the KBRG meeting on 18 June, when a patch was found on a steep slope of Boxley Warren at TQ 76543 59944. The plants have appeared on bare chalk which has been previously scarified by machinery. Data on seed longevity for this species is lacking, although it has been said that anecdotal evidence indicates that seed may survive in the soil bank for between seven to ten years (Weiss et al., 1999). If there has been continuity at Boxley, then either seed survival can be considerably longer, or the seedbank has been replenished by earlier reappearances.

Moenchia erecta (Upright Chickweed) ^R was seen by AG and SB on 14 April in great quantity on sharp-draining colliery spoil at Stodmarsh, with flowering plants being almost continuous on both sides of a path for 40 metres or more from TR 2129 6141 to TR 2149 6102. This appears to be the first sighting in hectad TR26 for over fifty years.

Myosotis secunda (Creeping Forget-me-not) ^R has four records in Philp (2010), including one east of Sissinghurst. To these, a further sighting was added by GK on 26 May north of Sissinghurst, a patch in a boggy glade of Bull Wood, TQ 7974 3797.

Nectaroscordum siculum (Honey Garlic) was found by a joint KBRG/BPS meeting on 1 August near Bog Farm, Brabourne Lees, TR0839, in a couple of places in boggy woodland, one by the side of a footpath where it appeared to be established and spreading. The upright conical seed heads were as distinctive as would have been the pendulous pink/green flowers earlier on. This is an area with other horticultural species which have naturalised extensively.

Neottia nidus-avis (Bird's-nest Orchid) ^R. This year's records included a note by ML and SC on 16 June of 13 plants in Oxney Wood, TR 3596 4714 among mature *Fagus sylvatica* (Beech), seemingly lining the old track from Ringwould to St Margaret's, around which the wood has grown up. The species is very scarce in this part of Kent.

***Nerine bowdenii*, 8 November 2015.
Photo © Owen Leyshon.**

***Nerine bowdenii* (Cornish Lily)**, named after A.H. Cornish-Bowden, is a late-flowering South African plant which was recorded by OL as about eight plants growing on shingle along the railway line and the side of a residential property, at Pleasance Road North, Lade near Dungeness, TR 08549 20297 and TR 08554 20314. They appeared to have been there for some years and were not part of any planting scheme by current neighbours. **This is a first record for East Kent, vice county 15.**



Nicandra physalodes (Apple-of-Peru) was noted by OL on 14 September, a single plant on fresh imported soil at the edge of a new housing estate, New Romney, TR 069 246.

Nicotiana x sanderae (*N. alata* x *forgetiana*) is a horticultural hybrid between Sweet and Red Tobacco, one plant of which was recorded by LR as a street weed on Station Road, Faversham, TR0161 6090.

Orobanche elatior (Knapweed Broomrape)^R was seen at Langdon Bay in 1987, but had eluded searches since, in spite of a presence nearer Dover. On 20 July, however, it was run to ground by AG, with two fruiting spikes seen at the margin of an arable reversion field, TR3447 4273, associated with the host species, *Centaurea scabiosa* (Greater Knapweed).

Orobanche picridis (Oxtongue Broomrape)^R has two main areas of distribution in the British Isles – the Isle of Wight and the Kent coast from Dover to Deal. It is nationally rare, although recently demoted from Endangered to Vulnerable in England, albeit that available habitat in Kent is declining. The species' status has been assessed by FJR, who has attempted annual surveys. His 2015 data indicate that 34 plants were found in the Dover area (TR3341, TR3342, TR3442); five in the St Margaret's Bay area (TR3643); and 153 in the area from Dover Patrol to Kingsdown (TR3745, TR3746, TR3846, TR3847, TR3747). The overall total is 192 plants, a relatively low one, although fluctuations are quite wide, from 73 in 1997 to 1120 in 2007 – it is unclear what may cause such variations.

Phytolacca acinosa (Indian Pokeweed), with its attractive blackish fruits, has only been recorded once before in East Kent, but was seen in a visit on 9 July by LR, DM, JS and JA to a site previously noted by LR, when the plants were not in flower. It was then found in flower, enabling identification, apparently self-sown at the roadside of Vicarage Lane, Selling with several more plants in the margin of a nearby field, TR0432 5722.

Poa bulbosa (Bulbous Meadow-grass)^R was seen by SB on 6 May at Lodge Camp, Chattenden, TQ 7672 7369, on a dry, bare track side, this being a first record for hectad TQ77.

***Polycarpon tetraphyllum*, habitat.
Photo © Sue Poyser, September 2015.**

Polycarpon tetraphyllum (Four-leaved Allseed)^R, was reported in Kent Botany 2012 when believed to have been first found in Kent, and further discoveries were set out in Kent Botany 2013. The species has continued to spread in coastal areas, but it appears that it has actually been around at least since 2008. SP and DG came across it on 17 September growing between block pavings at Chatham Maritime, TQ 7621 7022 & TQ 7629 7002. One site was near a capstan and the other by an old boat containing a flower display, the gardener of which said she had known it there for at least seven years. *Polycarpon* is



now also well-established on Thanet, where seen by SB on 29 June on brick drives, kerbsides and pavements at Cliftonville (TR 37529 70606, TR 37153 70758 to TR 37171 70759, TR 3702 7121, TR 37925 70658, TR 3795 7075 and TR 38016 70965). At Paragon Street, Ramsgate, TR 37919 64456, she saw on 15 March a c. 6m stretch of plants in a gutter. Apparently, foreign students, mostly Spanish, of the Churchill House School of English Language, are regularly dropped off and picked up near here in their parents' vehicles; so car tyres may be a vector of introduction as well as subsequent spread. The species, however, is more widespread in this part of Ramsgate, as CO found it in June and July, occupying similar habitats, block-paved drives and pavements, in the adjoining monad, TR3765 – at Station Approach Road (locally common), Boundary Road (one plant), and Wilfred Road (locally frequent). He also found it at Birchington on a flint garden wall, TR 29860 69368; at a junction of pavement and drive, TR 29806 69364; and the junction of pavement and a garden wall, TR 29876 69379. The 2012-15 distribution is now sufficient to warrant mapping: there is plenty of scope for finds on suburban pavement and drives to link these records, if spread in this way continues.



***Polycarpon tetraphyllum* distribution 2012-15.**

Polygonum oxyspermum subsp. *raii* (Ray's Knotgrass) ^R has the potential to turn up on the strandline of many of our Kent beaches but is notoriously erratic. A new find was made by LR on 28 August, of one plant growing on the shingle near the Sportsman, Graveney, TR 06364 64844.

Potamogeton trichoides (Hairlike Pondweed) is in Kent mostly restricted to Romney Marsh, and the KBRG meeting on 16 July succeeded in extending records into three monads, TR9629, TR9630 and TR9730 by following the Blackman's Arm sewer and related ditches in sheep pasture.

Ranunculus parviflorus (Small-flowered Buttercup) ^R was discovered by SB and LR on 23 September, a small patch of plants at Betteshanger Sustainable Parks, TR 3383 5312, growing on bare colliery spoil, a similar nutrient-poor habitat to that occupied by this buttercup at Betteshanger Country Park, over 1.5km distant.

Ranunculus peltatus (Pond Water-crowfoot) ^R was recorded by BB at Horton Priory on 29 April, two plants in an ephemeral pool in sheep pasture, TR 10762 39411. Whilst it was previously recorded in the same tetrad, earlier records appear to relate to a different site, Gibbin's Brook. The species was also found by SL on 9 May near Ruckinge, TR 02002 34882, in a pond in the sheep-grazed pasture of a former orchard, more reflective of the general Wealden bias of previous records in the county.

Ranunculus tripartitus (Three-lobed Crowfoot) ^R is an Endangered species with only three records in Philp (2010), to which may now be added a further site at Hart Meadows near Shadoxhurst, TQ 9714 3603, discovered by AJ. This was revisited by AJ, with SB and SL, on 9 May, where there was a patch flowering along a muddy and well-poached pond margin in the corner of a field under light woodland shade.

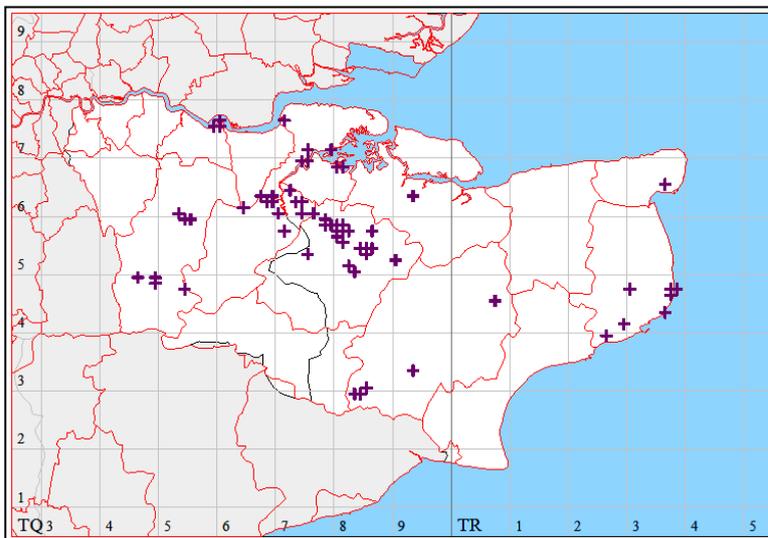
Rosa

The Kent visit by Roger Maskew (BSBI *Rosa* referee) in August has cast new light on the status of roses in the county. The principal consequences for our understanding are:

1. First, we should not assume that *Rosa canina* (Dog-rose) is the commonest rose to be found in Kent, in spite of records and assumptions to date. *Rosa x dumalis* (*Rosa caesia* ssp. *vosagiaca* x *canina*) is often as frequent, or more frequent. This assessment is consistent with findings by Roger Maskew in Surrey/North Hampshire/West Sussex in 2009. It now applies to Kent after sampling across the county from West Kent (Kemsing) to East Kent (Dover and Kingsdown).

No *Rosa x dumalis* was recorded in the county in the course of the surveys published as Philp (1982) and Philp (2010). The accompanying map shows records from August to December 2015. Essentially, this is a distribution map of the locations visited during this period by botanists who have some knowledge of the taxon and while it remained identifiable. The map has limited validity as a record of actual distribution, which will be much more widespread than this.

Rosa x dumalis distribution 2015.



The *Rosa caesia* (Glaucous Dog-rose) parent is a northern species, not present in Kent, and the existence here of the hybrid presumably reflects the presence of *R. caesia* in distant times or (more likely) the spread of the hybrid beyond that parent's range. *R. x dumalis* is apparently fertile and in Kent behaves as though a species, seemingly hybridising with other species.

R. x dumalis differs from *R. canina* in its zigzag, often reddish branches; in the generally short pedicels enfolded by large, often foliose bracts; in the hairy styles; and the leaves are often folded, with a distinct colour difference between upper and lower sides.

From now onwards Kent recorders should record *Rosa canina* only when sure the plant is not *Rosa x dumalis*; otherwise it would be safer to record as *Rosa canina* agg.

2. Secondly, *Rosa* hybrids are a great deal more common than the current state of our records would suggest. The 2015 visit has resulted in determinations of hybrids hitherto unrecorded in the county (*Rosa x toddiae* and *R. x belnensis*), and indicates that in some cases where we may only have had one or two records before, the cross may well be present wherever the distribution of the parents coincides. Evidence was also noted of hybrid bushes apparently with three contributory parent taxa, viz. (*Rosa x dumalis*) x *R. stylosa*, (*Rosa x dumalis*) x *R. micrantha* and (*Rosa x dumalis*) x *R. canina* Group Pubescentes (this last combination being taken as three-way on the supposition that the usual *canina* genetic content in *R. x dumalis* growing in Kent is not from Group Pubescentes). These records are not assigned 'first vice county record' status below, because of their complex origins.

The following determinations were (amongst others) made by Roger Maskew as regards East Kent (vc15) plants, omitting *R. x dumalis* records, which are included in the accompanying map. Those for West Kent (vc16) will be found in a later section.

At Staplehurst Road, Boughton under Blean, on 12 August (RMa, LR & GK):

- *Rosa arvensis* x *canina* (the cross between Field Rose and Dog Rose), TR 06588 59621, in a south-facing roadside hedge.
- (*Rosa x dumalis*) x *R. canina* Group Pubescentes, a shrub with characters of these constituent taxa, in a roadside hedge, TR 065 596.

At Dawes Road, Dunkirk, on 12 August (RMa, LR & GK):

- *Rosa arvensis* (f) x *canina* (m) (*R. x irregularis*), TR 0760 5996 and eastwards, the hybrid grew almost continuously along 30m and upwards of the hedge on the southern side of Dawes Road (amidst planted *R. rugosa*) and was also present on the northern side. Another *R. x irregularis* plant, a tall bush scrambling high into trees in woodland near the road, with variable large hips, was seen at TR 0780 6005.
- *Rosa stylosa* (probably f) x *arvensis* (probably m) (*R. x pseudorusticana*) was re-confirmed from the site mentioned in Kent Botany 2011.

At Kingsdown, on 12 August (RMa, SB, LR & GK):

- *Rosa* 'Hollandica', a clump in rough coastal vegetation at the junction of Undercliff Road and Oldstairs Road, TR 37985 47816.
- The Kingsdown *Rosa 'mollis'* (see Kent Botany 2011 for a discussion of this taxon) was noted in a number of sites related to Kingsdown golf course. It is remarkably large-fruited and does not correspond with native *R. mollis* (Soft Downy-rose). It now appears that it is *R. villosa* (Apple Rose), the largest hips and leaves coming within the range of that species. The nearest native site would be the east coast of Holland, so it seems more likely that it is a naturalised escape, for over a century, at Kingsdown.

At Bluebell Hill, on 13 August (RMa & GK):

- *Rosa arvensis* (f) x *canina* (m) (*R. x irregularis*), at a woodland margin on a chalk slope, TQ 74049 62255, possessing some prickly clustering, characteristic of a cross with *R. arvensis* (which the plant more generally resembled) acting as female parent; hips were variable, many abortive.
- ***Rosa micrantha* (f.) x *canina* (m) (*R. x toddiae*)**, the cross between Small-flowered Sweet-briar and Dog-rose, on a scrubby chalk grassland slope at TQ 74096 62213, with the parents in the general vicinity, possessing very short pedicels, prickles with heavy (*canina*-type) bases, and variably shaped hips. **This appears to be the first record for East Kent (vice county 15).** It was also seen at TQ 74045 62206.

Amongst other *Rosa* finds, unrelated to Roger Maskew's Kent visit, was the discovery by SB and LR on 10 September of *Rosa arvensis* x *canina* (the cross between Field Rose and Dog Rose), growing in a roadside hedge at Ashley, TR 30173 48032.

Rubus loganobaccus (Loganberry). Although with blackberry/raspberry ancestry, this taxon qualifies as a species, albeit that it arose through hybridisation. A well established bush was found by OL on 3 July amongst

brambles at Old Romney railway crossing, Wheelsgate, TR 02396 23680. Whilst it is recognised as recorded for vc15 in Stace et al. (2003), and should be capable of escape from cultivation, no other recent attested records for East Kent are known. It looks unlikely to be bird-sown here as, although the area seems remote for any planting, the presence of *Rosa spinosissima* (Burnet Rose) as well suggests anthropogenic origins.

Rumex x pseudopulcher (the cross between Curled and Fiddle Docks) was seen on 13 July by GK and RMa at Bluebell Hill, TQ 7434 6212, a couple of plants being present where populations of the parent species overlapped, on a grassy bank below a car park.

Rumex x sagorskii (the hybrid between Curled and Wood Docks) was seen by GK and SK on 9 September near the edge of an overgrown field east of Burham, TQ 734 625, with the parents; on 8 October at the edge of a field by woodland north west of Detling, TQ 7806 5962; and on 12 October at a field entrance near Thurnham, TQ 8154 5741. The tendency is for this cross to be formed where *Rumex sanguineus* spreads out from a hedge or wood boundary and encounters *Rumex crispus* in the open.

Salicornia x marshalli (the hybrid between One-flowered and Purple Glassworts) was found by a KBRG meeting at Shell Ness near Pegwell Bay on 23 September, several plants being observed at TR 34953 62587 within a large area dominated by *S. pusilla*. This is a first record for hectad TR36. A single plant was also found on 7 October by SB and LR at Horrid Hill, TQ 8115 6882, in an area with *S. ramosissima* but devoid of the other parent, *S. pusilla*. This is a first record for TQ86.

Salix x holosericea (the cross between Grey Willow and Osier) was recorded by AL on 7 July at Stodmarsh, TQ2262, a couple of bushes near the river.

[*Sedum sexangulare* (Tasteless Stonecrop). The record from Whitstable given in Kent Botany 2014 is withdrawn.]

Senecio aquaticus (Marsh Ragwort)^R. There have been two visitors to the River Stour in 2015, ascertaining that the Westbere presence of this scarce (in Kent) ragwort extends into the next hectad beyond where recorded in Philp (2010). CO on 18 June found that the colonies which he has previously recorded in TR1960 continued through into TR2060, and LR on 11 July found that these amounted to thousands of plants from the south bank of the River Stour covering hundreds of square metres north of Greater Puckstone Farm in wet grazing meadows.



Sequoiadendron giganteum (Wellingtonia) was recorded in Philp (2010) as a couple of cases of wild, unattended trees in East Kent. This description may still be compatible with those trees having been planted. On 24 April, however, OL came across a 5ft high tree in a grassy verge/gateway at Brenzett, TR 00036 27970. There were logs in a ditch, apparently fly-tipped some years previously, and the tree was taken to have sprouted and to be establishing itself, unplanted, from these.

***Sequoiadendron giganteum*, 24 April 2015.
Photo © Owen Leyshon.**

Silene noctiflora (Night-flowering Catchfly)^R is an arable weed regarded as Vulnerable in England (although on a strict application of the category assessment criteria it would be Endangered) and has only one record in Philp (2010). We are gradually assembling more, however, and a KFC meeting on 15 August found c. 30 plants on the margin of a cornfield on sandy clay north of Doddington and south of Lynsted, TQ 93212 58968, growing with *Stachys arvensis* (Field Woundwort)^R. Also, on 21 June, TI came across a single plant in a more

atypical habitat, a vacant plot at the junction of Grand Parade and Queen's Road, Littlestone, TR 08379 24313.

***Solanum laciniatum*, with KWT scrub working party in background, 16 October 2015. Photo © Sue Buckingham.**

Solanum laciniatum

(Kangaroo-apple) is a native of Australasia, occasionally grown in British gardens, but not very hardy here, other than in the Channel Islands and the Isles of Scilly. Remarkably, it was found at Darland Banks KWT reserve, TQ 78068 66188, by DH on 15 October, conf. SB. One plant c.1m tall and another a few centimetres high were growing on a chalk slope from which scrub had been cleared the previous winter, leaving a disturbed and probably nitrogenous soil in which a number of arable and ruderal weeds



were growing, including another *Solanum*, namely *S. nigrum* (Black Nightshade) around the base of the main plant. *Chenopodium vulvaria* (Stinking Goosefoot)^R – see above – was growing in the same field; either of these species, Kangaroo-apple or Stinking Goosefoot, would be remarkable individually, but the combination is inexplicable. Even so late in the year, the plants were in leaf only and could not be expected to fruit (the 'kangaroo apples'). There are no previous Kent records, so this constitutes a **first record for East Kent, vice county 15**.

Solanum nigrum subsp. *schultesii* (Black Nightshade). This glandular-haired, introduced subspecies, from southern Europe, was noted by JL (conf. SB) on 15 September at Burham, TQ7161, as a ruderal growing in large fields of *Phalaris canariensis* (Canary-grass), cultivated as a crop.

Solanum physalifolium (Green Nightshade), often considered to be a seed contaminant, but persistent once it arrives, was recorded by SB on 22 October as frequent in a large neglected arable field, on sandy soil, between Marshborough and Ash, TR 2963 5769.

Spiranthes spiralis (Autumn Lady's-tresses)^R. Amongst the records for this species was a report by CM of ten spikes in four discrete clumps on a lawn at Kench Hill, Tenterden, TQ 90557 32248, probably the first sighting in hectad TQ93 for sixty years.

Stachys x ambigua (the hybrid between Marsh and Hedge Woundwort)) was discovered by SB on 1 October by a ditch in Moor Lane near Woodchurch, TQ 9343 3329. *Stachys sylvatica* grew nearby; the other parent, *S. palustris*, was not seen – not unusual for this cross.

***Symphytum caucasicum* (Caucasian Comfrey)** is an intensely blue flowered comfrey, seldom naturalised, which was seen by LR on 17 April, a large clump established on a roadside bank at Fox Hill, Oversland, South Street, TR 057 573, not appearing part of any planting scheme. **This is a first record for East Kent, vice county 15.**



***Tetragonia tetragonioides*, leeward of young *Glaucium flavum*, 9 August 2015. Photo © Owen Leyshon.**

Tetragonia tetragonioides (New Zealand Spinach). First recorded in East Kent in 2014 as a shoreline drift species, more plants have now been found. Two were seen by OL on 9 August growing on undisturbed sandy/gritty ground, seaward of a deep trough between fishing boats at Dungeness, TR 09707 17192 and TR 09713 17224. Then on 23 September, a KBRG meeting found eight plants along the drift-line of a sandy beach at Shell Ness Point, Pegwell Bay, TR 3482 6273.

Thymus 'Culinary Lemon' (Lemon Thyme), the lemon-scented herb of gardens, is referred to in Stace (2010) as the hybrid *T. x citriodorus* (*T. vulgaris* x *pulegioides*)¹, and it is there stated that it might occur as a throw-out or relic. The status of a couple of plants found by LR on 25 July on a bank at South Street, TR 05386 57862, seemed unplanted, and more likely to be a throw-out from a nearby garden. There are very few records for this nationally as having escaped, **and this is a first record for vice county 15, East Kent.**

Trifolium incarnatum (Crimson Clover), occasionally grown as green manure, has only a handful of Kent records, to which is now added LC's sighting of two plants on 26 May, growing at the margin of arable land at Pump Orchard, TQ 997 628.

Triglochin palustris (Marsh Arrowgrass)^R appears to be declining in Kent, if one compares the 19 tetrad records in Philp (1982) with four only, in Philp (2010). This is against a somewhat different background that over a third of the Philp (1982) records lay in Romney Marsh, but Phil Williams reported in 1994 a 1.7% increase in the occurrence of the species there between 1985 and 1993-94, probably benefiting from an increase in sheep grazing. Our records for 2010 onwards also suggest that the apparent decline may not be as extensive as seemed since we now have 11 monad records in separate tetrads, the latest being from the KBRG meeting on 16 July. This meeting found numerous small patches on the north bank of Engine Sewer near Appledore, from TQ 96565 29808 to TQ 9669 2982.

Triteleia laxa (Triplet Lily) was on 3 July seen by OL, following notification by a member of the public, on the grass verge at the Ashford Road / Five Wents Lane road junction, TR 03961 26393, a second East Kent record for this blue-flowered Californian garden plant.

Urtica dioica subsp. *galeopsifolia* (Stingless Nettle) was recorded by AL at Stodmarsh: on 30 August in wet woodland by the Lampen Stream, TR2260; and on 8 September as many plants, up to eight feet tall, again in wet woodland, TR2261, with flowering from nodes 14 to 25 (subsp. *dioica* mostly flowers at node 7 up to 14). It was also seen by GK on 19 September along Hill Road, east of Wouldham, TQ7263, TQ7264, in terrain not especially wet, but presumably with impeded drainage on clay-with-flints.

Valeriana officinalis (Common Valerian)^R entered the rare plant register in 2014 on reassessment of its conservation status in England, due to the extent (albeit borderline) of the decline in its area of occupancy, even though it is not uncommon. No separate reassessment was made of its subspecies *sambucifolia* and *collina*, partly due to the lack of distributional data. To help remedy this, it is proposed that the rare plant register will treat each subspecies separately. Subspecies *collina* is a plant of drier habitats, having middle stem-leaves with mostly 15-27 usually entire leaflets and lacking stolons. Subspecies *sambucifolia* is a plant of damp habitats, having middle stem-leaves with mostly 5-13 usually toothed leaflets and possessing stolons. A KBRG meeting on 22 July recorded the latter at Stodmarsh, TR2161; and SB noted it on 30 July next to a ditch alongside Grove Road, Preston, TR 244 618.

Verbascum speciosum (Hungarian Mullein) was found by SB on 17 September, 26 plants on the northern verge of the A20 near Bearsted, at TQ 8108 5515, three of which were flowering and the remainder were rosettes. It is presumed that they originated from the nearby nursery, although the species is not particularly common now in cultivation. In the absence of any signs of neighbouring planting, they were taken to be self-seeding. A further plant was seen by LR on 31 August on waste ground by the exit route of the Faversham household waste recycling centre, TR 0173 6015.

Vicia sylvatica (Wood Vetch)^R was noted by SB on 29 May at Garden Wood MOD training area, north of Acrise, TR 19429 42829. This is at the fringes of the narrowly focussed Kent distribution. Plants were spread for 5m at a track margin in a fairly well lit area and were climbing over a coppice of hazel, sweet chestnut and field maple.

¹ There is, however, more to be said about this nomenclature – see http://www.thymus.co.uk/culinary_lemon1.html.

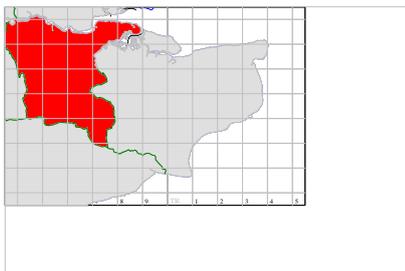
She also found the species on 21 July at nearby Canterbury Wood, TR 20165 44879. This is an area which is managed for game birds, and therefore clearings are created sporadically, suitable for the vetch, of which a patch 1m² was found, climbing over bramble in chestnut coppice.

Viola canina (Heath Dog-violet)^R is regarded as vulnerable to the risk of extinction in England and was down to six tetrads in Philp (2010). It is therefore good news that a first record for hectad TQ93 has been found by SB and SL on 9 May near Shadoxhurst, at Alex Farm Pastures, TQ9670 3678. The species is not included in the site's SSSI citation. Around 100 plants were found in acidic terrain, a scattering mostly around the ruts and bare ground created by vehicle tyre movements. Associated plants included *Ophioglossum vulgatum* (Adder's-tongue).

Viola x bavarica (the hybrid between Early and Common Dog-violets) was determined by BW for KFC meetings on 30 May at Larkey Valley Wood (one plant by the car park at TR 1235 55649) and on 15 August south of Lynsted, TQ9358.

Wahlenbergia hederacea (Ivy-leaved Bellflower)^R has in Kent for a long time only been seen near Sissinghurst, TQ8038, but on 26 May GK discovered it in a neighbouring monad (indeed, hectad as well). A vegetative patch was seen in Bull Wood, TQ 7974 3796, scattered in an area c. 1m x 2m in a woodland clearing, the spot being sunny, south-facing, sloping towards a damper area and presumably affected by winter inundation. Associated species were of wet acid habitats, including *Ranunculus flammula* (Lesser Spearwort) and *Juncus bulbosus* (Bulbous Rush).

Plant records for West Kent (vice county 16)



Allium nigrum (**Broad-leaved Leek**) was first found in the wild in East Kent in 2012 and now this Mediterranean onion has arrived in West Kent as well, with the finding by MC on 3 May of a patch growing with other clearly fly-tipped species in woodland in the angle of Maidstone Road at Seal, TQ 55915 56455. This appears to **be a first record for West Kent, vice county 16**.

Anagallis arvensis subsp. *arvensis* f. *carnea*, the flesh-coloured flower form of Scarlet Pimpernel was seen by GK and PA on 4 August at Grosvenor and Hilbert Park, TQ5940, a couple of plants in a sown grass area with the normal scarlet-coloured f. *arvensis* also present.

Anthemis arvensis (Corn Chamomile) ^R was previously on the county 'probably extinct' list as last seen between 1971 and 1980, although also noted by MC in 2010 at Crayford town centre as a result of wildflower mix sowing. It has now been found by SL on 15 August, south of Chartwell, TQ 4548 5081, growing on a disturbed bank of soil next to a pond created before 1990 at the southern end of a sheep grazed pasture. There were a few low-growing plants in flower, together with *Matricaria chamomilla* (Scented Mayweed), having hairy leaves/stems, white lanceolate scales with no teeth in the middle of the capitula, achenes with around 10 wart-less ridges and a pleasant aromatic scent unlike that of *Anthemis cotula* (Stinking Chamomile). *Anthemis arvensis* is an archaeophyte, or ancient introduction, formerly associated with arable cultivation, but an arable history has not been traced for this location. The likelihood is that it was originally a grass seed introduction here. The plant has been added to the county rare plant register and a species account issued. It was confirmed as not being the look-alike *Anthemis austriaca* (Austrian Chamomile), which may be found in seed mixes.



Anthemis arvensis, 6 September 2015.
Photo © Stephen Lemon.

Arctium x nothum (*A. lappa* x *minus*, the hybrid between Greater and Lesser Burdocks). Following on from RMB's Barnes Cray record for this cross (see Kent Botany 2013), he noted on 22 July a group of 21 Burdock plants at a corner of Westminster Fields, Horton Kirby, TQ 5602 6863 to TQ 5603 6864, only one of which appeared to be pure *A. lappa*, the rest hybrids; and seven or eight more, all apparent hybrids, to the north east at TQ 5616 6883.

Barbarea intermedia (Medium-flowered Winter-cress) only accounted for three 1991-2005 Kent tetrad records in Philp (2010). However, in 2015, DS found it in one of those tetrads (a solitary flowering plant on waste ground close to the B260 junction with Fawkham Road, near Longfield, TQ 59781 69327, seen on 30 April); and RMB also recorded it on 6 July at Gorse Hill, Farningham, TQ5665.

Bergenia x schmidtii (*B. crassifolia* x *ciliata*) was mentioned in Kent Botany 2013 as found at Fowlmead (now Betteshanger) Country Park, and this should have been flagged as **a first record for East Kent, vice county 15**. It was also recorded on 21 November by GK and SK at Fackenden Lane, Shoreham, TQ5261, where there were scattered roadside plants remote from housing, evidently established from garden throw-outs. In spite of the

hybrid being perhaps the most widely cultivated Elephant-ears, it is said in Stace et al. (2015) that it has only recently been found in the wild, although this may be due to identification difficulties, rather than that it has not escaped. The hybrid has sparsely ciliate leaf margins, from one of its parents, and pink flowers, from the other. This appears to be **a first record for West Kent, vice county 16.**

Bolboschoenus laticarpus, related to *Bolboschoenus maritimus* (Sea Club-rush), has in recent years been recognised as native in the British Isles in non-saline wet habitats, but its general distribution remains to be worked out. It is distinguished from *B. maritimus* by its long-stalked spikelets and by characteristics of the nutlets in cross-section. It now appears that there is another complicating factor in establishing its British status, as RMB reported his discovery of this taxon as obviously planted, albeit well established, in corners of Gallions Lake, Thamesmead, TQ 4486 7969 and TQ 4494 7969, on 8 August. All inland populations of *Bolboschoenus* are worth checking in case they are *B. laticarpus*, and consideration given to their apparently wild or planted status.

Bromopsis benekenii (= *B. benekenii*, Lesser Hairy-brome) ^R was welcomed back to current status in the Kent flora in Kent Botany 2013 and 2014. Our records continue with a find by SL on 8 August east of Crockham Hill, TQ 45834 50326, where it was growing under trees at a coppiced shaw and conifer plantation, with *Bromopsis ramosa* (Hairy-brome) and *Mercurialis perennis* (Dog's Mercury). Also, RMB recorded it further up Fackenden Lane, Shoreham than where viewed by the 2014 KBRG meeting, present on the north side of the road at TQ 5301 6117 on 17 July.

Bupleurum rotundifolium (Thorow-wax) is listed amongst the county 'probably extinct' taxa, and the occurrence of one plant in a patch of apparently fairly new sown grass by Roundabout Wood, Grosvenor and Hilbert Park, Tunbridge Wells, TQ 59625 40735 need not change that status. It was found by GK and PA on 4 August. There appears to be no arable history for this location (the species was originally an arable weed in Britain), nor was the plant accompanied by an obvious wildflower mix, although the range of weeds in the vicinity was wider than expected, which may be a pointer to the latter origin. It is a component of some commercial wildflower seed mixes; the similar *Bupleurum subovatum* (False Thorow-wax) being a product of bird seed mixes.



***Bupleurum rotundifolium*, 4 August 2015.
Photo © Geoffrey Kitchener.**

Caltha palustris subsp. *polypetala* (Giant Kingcup) is a name sometimes assigned to the very large form of *C. palustris* cultivated by garden ponds and the like, and such a plant was noted by GK on 5 March at Barden Park, Tonbridge, TQ 5775 4635, growing in a ditch where unlikely to have been planted.



Cardamine corymbosa (New Zealand Bitter-cress) was recorded by MC on 3 May on compact bare soil by residential properties at Dynes Road, Kemsing, TQ 54530 58724. Its ability to arrive in gardens was illustrated by GK's record on 30 June of this species at Halstead, TQ4860, received with a potted plant grown in Shropshire and despatched via Devon.

***Carex acuta x nigra* near Swan Nest Island, 26 April 2015. Photo © Stephen Lemon.**

Carex acuta (Slender Tufted-sedge) was further confirmed by SL in West Kent to be not just limited to the Medway, as might be supposed from Philp (2010), but also in the Eden catchment, with a record north west of Hever (on 3 May in a field corner at TQ 47060 45600). This adds to others in the catchment which he found in 2013-14. What is truly surprising about *C. acuta* in the Eden

catchment, however, is that it has hybridised there as well and *Carex acuta x nigra* was discovered by SL in the following three sites. Material from each was collected by him in 2015 and forwarded for confirmation as this hybrid to MSP (BSBI referee), who concurred.

(1) TQ 46923 45592, ten patches were seen on 26 April emerging from water in flooded marsh on the north bank of the River Eden close to Swan Nest Island (an area created as marshland around 2009 from what was previously a farmed field, with the flora giving the impression of having colonised naturally), and revisited on 7 June.

(2) TQ 49229 45812 and TQ 49216 45753, patches were noted on 7 June as spread over a damp field corner with dense patches near to a pond, west of Mill Farm and north west of Chiddingstone Castle. The site was within the floodplain of the River Eden and *Oenanthe silaifolia* (Narrow-leaved Water-dropwort) grew close by.

(3) TQ 516 459 to TQ 517 458, flowering plants were recorded on 7 June as spread over the field side of a flooded area (more abundant at the western end) west of Moorden within the floodplain of the River Eden.

The hybrid is generally a larger plant than *Carex nigra* (Common Sedge), with broader leaves; and it usually has a lower bract more or less equalling the inflorescence, whereas that of *C. acuta* well exceeds it. The hybrid's



intermediacy is further shown by abundant stomata on both sides of the leaf surface – *C. acuta* has stomata only on the lower side and in *C. nigra* they are mostly restricted to the upper surface. The recorder considered that the cross may be fertile and reproducing at all three sites. A degree of fertility in this hybrid was suggested by Jermy (1967).

The second and third of these populations have been found before, but had been assumed to be *C. nigra*. **These records of *Carex acuta x nigra*, and previous sightings of the same populations are first records for vice county 16, West Kent.**

Carex acuta x nigra from (left) near Moorden; (centre) near Mill Farm; and (right) near Swan Nest Island, 7 June 2015. Photo © Stephen Lemon.

[*Carex nigra* (Common Sedge)^R. The record for this species given in Kent Botany 2014 for 3 May 2014 is withdrawn and replaced by the equivalent record for the hybrid above.]

Carex vulpina (True Fox-sedge)^R was found by SL on 26 April in a new monad north east of Hever, where one large deer-grazed clump was noted amidst *Juncus* spp., with inflorescences just starting to emerge. The site was a flooded marsh north bank of the River Eden, close to Swan Nest Island, TQ 46912 45533, and is of particular interest in that the habitat appears to have been newly created from farmed fields since 2009, so this provides evidence of fresh colonisation by this species.

Carex x boeninghausiana (the hybrid between Greater Tussock-sedge and Remote Sedges) was recorded by SL on 13 June at Furnace Pond, north west of Horsmonden, TQ 69348 41013. There was one plant in seed without a raised tussock (such as is possessed by the parent *C. paniculata*) growing with many of both parent plants in alder carr at the boggy pond edge of Furnace Pond. Conditions appeared suitable for its occurrence also in the much larger area of alder carr immediately to the west of the pond. There are very few records for this cross in Kent, mostly historic.

Catapodium marinum (Sea Fern-grass), normally a coastal plant, was found in several inland roadside sites, influenced by the presence of de-icing salt. These included an internal road of the Bluewater shopping complex (TQ 579 740, seen by GK and DS on 3 June) and spread along a road parallel to the A2 at Pepper Hills (TQ 6186 7252, noted by GK and LR on 4 June).

Cerastium brachypetalum (Grey Mouse-ear) is restricted in Britain to two areas, one of which is around Longfield. It is treated in Stace (2010) as introduced-naturalised, although Palmer (1994) made a case for relic native status in Kent. The latter contended that its proximity to railway land near Longfield should not raise a presumption of introduction, but that railway construction had operated to preserve chalk grassland where lost to ploughing elsewhere; and that, as the species was known to him on all accessible pieces of chalk grassland immediately west and north west of Longfield, albeit in fragmented populations, this was an indication that it was once more abundant. The case is perhaps best made by occurrences away from the railway, and there have been some recorded around Churchdown Wood, which extends to 1km away. To these may be added DS's discovery, on 28 April, of over 200 plants growing in a strip of some 30m x 0.5m along the arable field boundary adjacent to Churchdown Woods, TQ 594 681. They were on very dry chalky soil, with *Arenaria serpyllifolia* agg. (Thyme-leaved Sandwort) and *Sherardia arvensis* (Field Madder).

Cerintho major (Greater Honeywort) has a number of West Kent records on the BSBI database but unfortunately, except for finds by JRP and GK in 2007 and 2008 respectively, they completely lack any supporting data as regards status and as regards whether they were inside or outside gardens. So it is helpful that RMB, in relation to his finds on 13 April at Dartford gave a clear picture of one plant being discovered in an alleyway between houses of Princes Road, TQ 528 736, and another where the alleyway comes out into Heath Lane Open Space.

Coriandrum sativum (Coriander). Both RMB and GK separately recorded the presence of this species, probably as a crop residue, near Southfleet. RMB saw it on 17 June growing by a field edge at TQ 61690 71145, noting that there was a standing crop of 3-4 hectares some 500 metres to the east. GK came across it on 19 July at TQ 619 716, in a crop of *Trigonella foenum-graecum* (Fenugreek).

***Cyclamen coum*, 21 March 2015.
Photo © David Steere.**

Cyclamen coum (Eastern Sowbread) was discovered by EW on 21 March, near Hocker Edge, TQ 778 389, c.100 yds westwards into woodland from the nearest houses, with two flowering plants, apparently unplanted, found under trees on the south side of the footpath from Starvecrow. This species, a spring flowerer, is perhaps ten times less frequently come across naturalised in the wild, than is autumn-flowering *Cyclamen hederifolium* (Sowbread).



Cyclamen repandum (Spring Sowbread), not the hardiest of the genus, was recorded by SB on 11 April as comprising a well-naturalised spread of plants at TQ 5972 44974 just inside the entrance to Somerhill Park, Tonbridge. There were three large and four smaller patches with 15 seedling outliers spread over 10 x 10 metres on a sloping bank under tree cover and it was assumed that these originated from dumped garden waste, there being no plants in the gatehouse garden some 15m distant.

Dipsacus pilosus (Small Teasel)^R was noted by CC on 12 October as the dominant species along the west edge of Grubb's Wood, New Ash Green, TQ 6175 6507 to TQ 6195 6523, with scattered plants to the north and south and in the wood. This adds to the cluster of records which is building up in the Longfield – Hartley – Ash area.

Doronicum x willdenowii (*D. pardalianches* x *plantagineum*) was seen by GK and SK on 12 May as a well-established patch on a bank sloping down from Pilgrims Way north of Westerham, TQ 4346 5570. This appears to be a second record for vice county 16, West Kent.

Dorycnium hirsutum (Canary Clover). This silvery Mediterranean sub-shrub was encountered by GK and SK on 21 August in a levelled waste area of a former cement works between Botany Marshes and Swanscombe Marshes, TQ 6028 7586, with other hortal shrubs and trees originally likely either to have been planted, tipped or bulldozed to this location, but appearing to have spread in situ, several scattered plants being present. It was shown to a KBRG meeting later on.

Epilobium roseum (Pale Willowherb) was found by GK as a street weed at Beckenham (Blandford Avenue, TQ 5728 7187, on 12 May); at Cuxton (an alley off Woodhurst Close, TQ 7087 6658, on 30 July 2015); and at Sevenoaks (Avenue Road, TQ 5312 5551 on 25 August); and, less typically, at an access way junction in Darenth Wood, TQ 5728 7187, on 15 July.

West Kent continues to provide a national focus for its variety of Willowherb hybrids. *Epilobium x dacicum* (the cross between Short-fruited and Hoary Willowherbs) was found by GK and SK on 29 August in cleared chartland woods north of Crockham Hill, TQ 441 519, with numerous willowherbs including the parents present. *Epilobium x floridulum* (the hybrid between Hoary and American Willowherbs) was noted by GK and PA on 4 August amidst woodland brambles in Grosvenor and Hilbert Park, Tunbridge Wells, TQ5940; by GK on 5 August on a disused quarry slope near Westerham, TQ 4333 5398; and by GK and SK on 29 August in a forestry access and working area at Goodley Stock, TQ 4388 5207. *Epilobium x interjectum* (the cross between Broad-leaved and American Willowherbs) was recorded by RMB on 17 June – a many-stemmed plant against a wall in the angle of Woolwich Common and Academy Road, TQ 43087 77486, with just perceptible stigma lobes (the parents having respectively lobed and unlobed stigmas) and leaves intermediate in shape. *Epilobium x limosum* (the hybrid between Hoary and Broad-leaved Willowherbs) was recorded by RMB on 14 August at the edge of imitation turf in front of a house in Pinks Hill, Swanley, TQ 51586 67947; by GK and SK on 1 September by a pavement in Ash Road, Westerham, TQ 450 548 and on 5 September on a grave at Otford, TQ 5295 5928; also by GK on 15 October by an alley behind commercial buildings at Bat and Ball, Sevenoaks, TQ 5287 5712. This cross is characterised by well-formed stigma lobes, projected upwards at a 45° angle. *Epilobium x palatinum* (the cross between Hoary and Square-stalked Willowherbs) was found by GK and SK on 25 June in felled woodland west of Upper Halling and on 7 August on a semi-bare slope near Medway bridges, TQ 721 676. *Epilobium x subhirsutum* (the hybrid between Great and Hoary Willowherbs) was seen by GK on 5 August in a disused pit near Westerham, TQ 4333 5398, a vigorous clump with parents present. *Epilobium x vicinum* (the cross between Short-fruited and American Willowherbs) was noted by GK and SK on 29 August, with at least five plants present in cleared chartland woods north of Crockham Hill, TQ 444 518.



***Eryngium variifolium* Coss. (Moroccan Sea-holly).**

Two young non-flowering plants were seen by GK and PA on 4 August, in the gutter of the road Sandhurst Park, High Brooms, TQ 5949 4091. The white-veined leaves are distinctive for identification purposes, but mature flowering plants were also noted in the adjoining garden. This appears to be a **first record for vice county 16, West Kent**, and indeed, no other records for the British Isles have yet been traced.

Eryngium variifolium, 4 August 2015.

Photo © Geoffrey Kitchener.

Erysimum cheiranthoides (Treacle-mustard)^R has proved unexpectedly elusive in recent years, but a single casual plant was found by SB on 18 August at Nizels golf course, TQ 54642 50611, where it was growing on a rubbish tip.

Euphorbia oblongata (Balkan Spurge) was recorded by RMB on 17 June on the north side of Ship Lane, Sutton-at-Hone, where it passes through fields, TQ 5473 6956 to TQ 5475 6957, adding to a cluster of recent records in the Eynsford/Farningham area.

Ficaria verna subsp. *chrysocephala* is a large-flowered subspecies of Lesser Celandine found in gardens, although the plants noted by JS in March at Cooling Street, TQ 7443 7462, appeared to have escaped and were established in flower on an adjacent roadside verge. A return visit was made in May in order to confirm identity by the absence of bulbils in the leaf-axils. **This appears to be a first record for vice county 16, West Kent.**

Fumaria capreolata (White Ramping-fumitory) is in Kent mostly a plant of vc15, although there were a couple of discoveries in West Kent, vc16, in 2015. On 2 July, DS encountered a large flowering sprawling plant on fly-tipped soil by a bridge over the M2 near Strood, TQ 71037 68982. The species was also found in quantity by MR on 16 November, growing by the Thames Path north of Dartford and close to the Riverside Resource Recovery facility, TQ 49581 80758. It had been strimmed, but returned since. The initial identification was made by DS; the large sepals and greenish visible keel pointed to this species.

***Fumaria capreolata* habitat, 16 November 2015.
Photo © Mike Robinson.**

Fumaria vaillantii (Few-flowered Fumitory)^R is an Endangered species in England, and most of our relatively few recent records have come from RMB, who has now added a sighting on 21 June at the edge of an oat crop near Lusted Hall Farm, Biggin Hill, TQ 4072 5709.

Galium pumilum (Slender Bedstraw)^R, an Endangered species, had been feared lost to Kent (Philp, 2010), but now, not only is it known to persist in three East Kent sites, but we also have a completely new location in West Kent. On 28 May DS found over 20 small plants scattered in chalk grassland at Rectory Meadow, Longfield, at TQ 60336 68496 (Upper Meadow) and elsewhere. The site was re-



visited with GK on 4 June and the species was found to be fairly widespread within this two hectare local nature reserve, with at least four diffuse patches of plants, at TQ 60350 68576, TQ 60334 68561, and TQ 60350 68563 in Lower Meadow, and TQ 60327 68508 in Upper Meadow, in total amounting to a good spread through the more open areas of the reserve. Management with cutting back of grass and holding off further scrub encroachment seems likely to have encouraged the bedstraw, which presumably has long been overlooked in view of its inconspicuousness. It is accompanied by much *Genista tinctoria* (Dyer's Greenweed)^R.

***Galium pumilum*, 28 May 2015.
Photo © David Steere.**

Gnaphalium luteoalbum (Jersey Cudweed)^R is appearing increasingly as an urban casual, and this was the nature of RMB's record on 25 July of the species between paving blocks of an unused vehicle holding area at the east end of the freight terminal at the former Stone Marshes, Dartford, TQ 5776 7520.

Hieracium consociatum (Sociable Hawkweed) is one of the taxa which Sell and Murell (2006) recommended should be treated separately rather than as part of *Hieracium acuminatum* agg. (Tall Hawkweed) and it was recorded by GK on 23 July at Bitchet Common, TQ 5609 5359, by a trackway, not the only hawkweed present.

Hieracium pollichiae (Roffey's Hawkweed) was seen by GK and DS on 3 June, in scrubby grassland on top of chalk cliffs around Bluewater, TQ 5736 7334 in the south western corner of the site, an area not normally accessible, but attained as part of a permitted survey.

Hydrocotyle ranunculoides (Floating Pennywort), an invasive plant long banned from release into the wild but also prohibited from sale after April 2014, was seen by RMB on 8 August growing plentifully in a canal at Thamesmead from TQ 4660 8050 to TQ 4656 8060. The same species was also noted by SL on 22 August near



a lock on the western side of the River Medway, opposite the marina at Yalding, TQ 68623 50399, and so just within West Kent.

***Juncus x surrejanus*, 19 August 2015.**
Photo © Geoffrey Kitchener.

***Juncus x surrejanus* (the hybrid between Jointed and Sharp-flowered Rushes)** is found scattered across the British Isles, but appears to be unrecorded in Kent, except a claimed sighting in TR35, East Kent, at some time between 1950 and 1969, otherwise lacking details. It has now been found at Grosvenor and Hilbert Park, Tunbridge Wells by GK and PA on 4 August. This was unexpected: a stem was gathered for later examination in order to save time, on the supposition that it was either *Juncus articulatus* (Jointed Rush) or *Juncus acutiflorus* (Sharp-flowered Rush).



However, when subjected to the test given in Poland & Clement (2009) of counting the septa in a 5cm length of leaf (5-10 for the former; 1(2) for the latter), it was found to be intermediate (3 septa per 5cm), as were other characters. Capsules appeared generally sterile. The site was revisited by GK and SK on 19 August and the hybrid was recorded in two patches, one within a band of 10 x 1 m at TQ 5935 4079 and the other within 5 x 3m at TQ 5934 4077. Parents were also present at each patch and whilst the location appeared at a distance to be open dry acid grassland, some of the associated flora indicated damp ground conditions: *Agrostis canina* (Velvet Bent), *Alnus glutinosa* (Alder) seedlings, *Cirsium palustre* (Marsh Thistle), *Lotus pedunculatus* (Greater Bird's-foot-trefoil), *Ranunculus flammula* (Lesser Spearwort). The site is on or close to a seepage line apparently related to the junction of the Tunbridge Wells Sand Formation and Wadhurst Clay. This predilection for seepage zones is mentioned by Timm & Clapham (1940), as providing an intermediate habitat where *J. articulatus*, favouring wetter ground, is brought in contact with *J. acutiflorus*, favouring somewhat drier conditions. This is a **first record for vice county 16, West Kent**.

Ligustrum ovalifolium 'Vicaryi' is the name which we should now be applying to the version of Garden Privet formerly thought to be a hybrid, *Ligustrum x vicaryi*, but whose hybridity has been rejected after investigation by Edwards et al. (2015); and a large shrub was discovered on 4 August by GK and PA in Roundabout Wood, behind gardens of Sandhurst Close, Tunbridge Wells, TQ 5936 4097. The leaves resembled those of ordinary *L. ovalifolium* (Garden Privet), but were patchily somewhat yellowish, a character which has suggested *L. ovalifolium* 'Aureum' in the ancestry of what is now the cultivar 'Vicaryi'. Young shoots were somewhat pubescent, although this is not now considered to be indicative of hybridity between *L. vulgare* (Wild Privet) and *L. ovalifolium*.

***Lilium candidum* (Madonna Lily)** was a surprising plant to have been found, but RMB came across one on 19 May growing in Hatham Green Lane, Stansted, TQ 5951 6214, to the right of a pillar box by a field entrance in a rural lane, with a field behind. Whilst not obviously part of a planting scheme, it does not seem to be a location where garden refuse may have been dumped and the basis of introduction is uncertain. In the absence of further knowledge regarding its status, it is proposed to treat this as a **first record for West Kent, vice county 16**.

Oenanthe silaifolia (Narrow-leaved Water-dropwort)^R was only found in four tetrads in the Philp (2010) survey, but a further site was added by SL on 7 June near Chiddingstone Castle, TQ 491 457 / TQ 492 457, a marshy field corner (then dry underfoot), bearing about 50 flowering plants in several loose patches where *Juncus* spp. dominated. This is a monad where the species was known to FR.

Orobanche elatior (Knapweed Broomrape)^R was reported from KWT's Longfield Chalk Bank reserve in Kent Botany 2014, and DS on 20 June found a further plant in a quite different place here, at TQ 59645 69088. None of the plants seen in 2014 re-appeared, although this species is supposed to be perennial. On 26 June, he also came across three plants, gone over, north of Ranscombe, TQ 71019 68688, on the verge of the HS1 rail route, with a stunted host plant at the base of each; this appears to be a new record for hectad TQ76.

Orobanche hederæ (Ivy Broomrape)^R has been known for some time in the Stone area, but now seems to have spread to the old Mabledon hospital site, Darenth, TQ 56773 71844, where on 13 July DS found over 150 spikes, all in one area. The host was *Hedera hibernica* (Atlantic Ivy), as appears usual in Kent.

Parapholis incurva (Curved Hard-grass)^R was the subject of two roadside records, where the normal coastal distribution has been affected by the availability of inland salted locations. On 4 June, GK and LR recorded it along several metres of the A226 verge, Thames Way, Northfleet, TQ 6191 7372. On 11 June, RMB found more just inside the kerb curve of the north west angle of the A20 / Button Street junction, TQ 53352 67498.



***Plantago arenaria* (Branched Plantain)** is a plant of southern and central Europe, which has spread as a global weed, although not, until this point, in Kent. Five plants, however, were found by JC on 22 July as a pavement weed at Canberra Road, Charlton, TQ4139 7754. Stace (2010) considers it over-recorded for *P. afra* (Glandular Plantain), but this find, with dimorphic bracts and general lack of glandular hairs, was not the latter species. Interestingly, this is not the only global weed to be found in Canberra Road, over 300 plants of *Gnaphalium luteoalbum* (Jersey Cudweed) being recorded by JC on the same occasion. **The plantain is a first record for West Kent, vice county 16.**

***Plantago arenaria*, 22 July 2015.**

Photo © Juliet Cairns.

***Perovskia atriplicifolia* Benth. (Russian Sage).** A small (5cm+) seedling was found by GK on 15 July, at the kerb edging a car park at Bluewater, TQ 5834 7347, the cultivated parents being present in an amenity planting some 15m distant. The other British records for this species are all with undefined status so that the degree of naturalization elsewhere, if any, is unclear. This aromatic plant is frequently grown as a cultivar, 'Blue Spires' and this appeared likely to be the identity of the neighbouring planting here (which raises the possibility that the taxon is actually *P. atriplicifolia* x *abrotanoides*, albeit usually marketed under the species name). The sighting is a **first record for vice county 16, West Kent.**

***Pleioblastus viridistriatus*, 4 August 2015.**

Photo © Geoffrey Kitchener

***Pleioblastus viridistriatus* (Regel) Makino (Kamurozasa).** This short bamboo, with green and gold variegation, was seen by GK and PA on 4 August, in woodland of Grosvenor & Hilbert Park, Tunbridge Wells, TQ 593 409, growing behind houses of Sandhurst Close. There were a few straggly culms, appearing to originate from thrown-out material. It is a running bamboo, and therefore capable of outstaying its welcome in a small garden. **This is a first record for vice county 16, West Kent,** and apparently for the British Isles as a whole.



Polygonum rurivagum (Cornfield Knotgrass)^R has ostensibly undergone a massive decline between Philp (1982) and Philp (2010), when 90 tetrad records dropped to five. Whilst many arable weeds have been becoming scarcer, it may be that some of this change is an artefact of recording, in that it is not always straightforward separating this species from *Polygonum aviculare* (Knotgrass). Whilst it was recorded by MC in September 2010 from Grove Park cemetery (TQ4171), it has not been reported from classic arable habitat in Kent until 7 August, when GK and SK found it to be frequent in a crop margin at the top of a chalky field slope at Ranscombe Farm,

TQ 7070 6754, conspicuous with its intense red tepals, the nut being slightly exerted from the perianth with a gap between the upper parts of the perianth segments.

***Polygonum rurivagum*, 11 August 2015.**

Photo © Richard Moyse.

Polypodium cambricum (Southern Polypody) has been on the county 'probably extinct' list ('potential for re-discovery' section), with a last record of 1976, at Penshurst Place. It is predominantly a western taxon or elsewhere not far from the coast, hence favoured by a mild climate, and the Penshurst location is slightly anomalous. SL has for a couple of years been aware of inaccessible *Polypodium* plants along the upper half of the north east facing perimeter wall of Penshurst Place garden, i.e. the wall that faces the car parking area. On 5 July, however, he found some recently shed fronds below where the plants grow, spread between TQ 5290 4410 and c.TQ 5293 4405. On examination, these were found to match *P. cambricum*, with paraphyses and plenty of good spores present, and sporangia with 6-9 indurated cells and 3 basal cells. The recorder revisited on 3 September and noted the plants as comprising seven separated colonies spread along the wall, the smallest an outlier consisting of just one plant and the largest consisting of at least 10 plants. The most luxuriant were growing in the shelter of vine leaves. The species is now transferred from the 'probably extinct' list to the rare plant register.



***Polypodium cambricum*,**

3 September 2015.

**Photos © Stephen
Lemon**

Potamogeton trichoides (Hairlike Pondweed) is not on the rare plant register because of the quantity of records in the Romney Marsh area, but records for West Kent are very scarce, despite a find described in Kent Botany 2014. Now RMB reports a find on 27 August in a dyke at Stone, off a roundabout on the A206, TQ 57584 75096, identified with the benefit of its narrow, finely pointed leaves and characteristic leaf section.



Quercus x rosacea (the hybrid between Pedunculate and Sessile Oaks) is evidently under-recorded by us, and it is helpful that SL on 12 September added a sighting in the substantial woodbank of Blackhoath Wood, Chiddingstone Causeway which runs along the B2027 from its junction at TQ 5289 4650 to where the road bends at TQ 5297 4643. The KBRG meeting at Angley Wood on 12 July also noted two young trees by the path at TQ 76657 36519 with petioles of intermediate length between the parents (8-13mm long), and leaves auricled (as in *Q. robur*, but not in *Q. petraea*) with stellate hairs present on the reverse (as in *Q. petraea*, but not in *Q. robur*).

Rhinanthus angustifolius (Greater Yellow-rattle)^R was seen by RMB on 28 July by Lullingstone Park golf course, TQ 5203 6434, adding to his previous year's record in the adjoining monad, TQ5164. JP also saw it extending its range to the TQ4467 end of Jubilee Park, Petts Wood, on 26 June; and so both these records continue the series now beginning to build up for a spread across mown grassland in north west Kent.

Rosa

As mentioned in the general account earlier, the following determinations were (amongst others) made by Roger Maskew as regards West Kent (vc16) plants, omitting *R. x dumalis* records, which are included in the map given with that account under vc15 records:

At Whiteleaf Down and Haffenden Field, Kemsing on 10 August (RMA and GK):

- *Rosa canina* x *stylosa* (*R. x andegavensis*), the cross between Dog-rose and Short-styled Field-rose, noted at TQ 55176 59425 on downland scarp with pockets of scrub, *R. canina* being in the general vicinity and *R. stylosa* seen over 300m away. The direction of the cross was not readily ascertainable. The plant had short, glandular pedicels; styles shortly agglomerated; prickles of mixed type; and the proximal pair of leaflets was backwardly directed. The last Kent record for this cross was for East Kent (vc15), 1971-80, and the last record clearly assigned to West Kent (vc16) appears to be from 1925.
- (*Rosa x dumalis*) x *R. stylosa*, at TQ 55211 59115, a shrub with characters of these constituent taxa, *R. x dumalis* being present adjoining and in the general vicinity, *R. stylosa* present within 20m. From *R. stylosa*, the plant showed long pedicels, sub-foliar pubescence and somewhat columnar styles. From *R. x dumalis*, it showed the large foliose bracts; many hooked prickles; and some leaf resemblance.

At Ladd's Farm, Upper Halling, on private land with kind permission of Tarmac (formerly Lafarge) on 11 August (RMA, CJ & GK). This general area appears to have been historically interesting for *Rosa* taxa and this remains the case, assisted by some scrub clearance which has left, and made accessible, a variety of species (including an abundance of *Rosa spinosissima*, Burnet Rose) and hybrids:

- *Rosa canina* x *stylosa* (*R. x andegavensis*), the cross between Dog-rose and Short-styled Field-rose, in scrubby chalk grassland, TQ 67481 63018, a shrub with columnar styles and deltoid spines, with variable discs (flat to conical), and with leaves more ovate and closer set than those of *R. stylosa*.
- (*Rosa x dumalis*) x *R. stylosa*, a shrub in a patch of scrub on a chalk grassland slope, TQ 67498 63024, with characters of these constituent taxa, *R. x dumalis* being present in the immediate vicinity, and *R. stylosa* present in another hybrid. The peduncles were too short for *R. stylosa*, although stylar columns were present; in discs varying from flat to somewhat conical.
- ***Rosa micrantha* (f.) x *canina* (m) (*R. x toddiae*)**, the cross between Small-flowered Sweet-briar and Dog-rose:
 - (1) at TQ 67678 62992, on the wooded margin of a cleared area in Crookhorn Wood. The shrub possessed large hips in sizeable clusters; large leaves; *micrantha*-type glands, but in reduced quantity; *canina*-type prickles. **This appears to be the first record for West Kent (vice county 16).**
 - (2) at TQ67479 63036, on a grassland slope which had been subjected to scrub clearance. The second record for West Kent (vice county 16).
 - (3) at TQ 67476 63017, a further plant in which the *R. micrantha* characters were more dominant, and this may have represented a backcross.
- *Rosa tomentosa* (f) x *canina* (m) (*R. x scabriuscula*), the cross between Harsh Downy-rose and Dog-rose:
 - (1) in a woodland margin at TQ 68177 62776. The shrub was generally of *R. tomentosa* appearance, although the prickles were of heavier build; the contribution of the *R. canina* parentage was much more distinct than traces of introgression noted in a plant over 100m to the north east.
 - (2) at the junction of rough vehicular trackways on chalk, TQ 67545 63029, and climbing at least 20 feet up into a tree. It possessed *tomentosa*-type characters, but diluted by the relative anonymity of *R. canina*.
 - (3) in a trackside hedge at TQ 67821 63461.

At Trosley Downs on 11 August (RMA & GK):

- (*Rosa x dumalis*) x *R. micrantha*, a shrub with characters of these constituent taxa, *R. x dumalis* and *R. micrantha* both being present in the vicinity, a steep grassy downland slope, TQ 64812 61275.

At Ditton Quarry on 14 August (RMA). This site, a former ragstone quarry, now a nature reserve, presents some difficulties for interpretation of the status of records made here. Subsequent investigation by SB indicates that an area which now includes the rare (in Kent) species *Rosa agrestis* (Small-leaved Sweet-briar) was planted out by the owners, now Tesco Direct, in the early 2000s. Although *Rosa agrestis* looks 'natural' enough here and might be thought to be a surprising species to have planted (although RMB reports it on 28 July as found planted near the M25 south of Crockenhill, TQ 5105 6557), we cannot assume with confidence that its presence here is 'wild',

unless examples are found young enough to represent naturalisation, rather than planting. The rest of the quarry site was planted out in the early 1990s when quarrying had finished, and this included roses. We may surmise that this included *Rosa rubiginosa* (Sweet-briar), a popular subject for amenity plantings and which is plentiful here. With these caveats as regards the species present, which will have had opportunity to spread naturally, it seems reasonable to regard hybrids as having formed there on their own account. Records included:

- ***Rosa agrestis* (f) x *canina* (m) (*R. x belnensis*)**, the cross between Small-leaved Sweet-briar and Dog-rose, one bush at TQ 715 574. **This is a first record for West Kent (vice county 16).**
- *Rosa micrantha* (f) x *rubiginosa* (m) (*R. x bigeneris*), the cross between Small-flowered Sweet-briar and Sweet-briar, one bush at TQ 715 574, close to both parents, being the first vc16 record since 1894.
- *Rosa rubiginosa* (f) x *canina* (m) (*R. x nitidula*), the cross between Sweet-briar and Dog-rose, one bush at TQ 715 574, being the first vc16 record since 1895.
- *Rosa canina* x *stylosa* (*R. x andegavensis*), the cross between Dog-rose and Short-styled Field-rose, one bush at TQ 715 576.

Rumex x dimidiatus (the cross between Curled and Greek Docks) was seen by LR and GK on 4 June at Thames Way, Northfleet, TQ 6188 7374, one plant being present in rough grassland with both parents in the vicinity.

Rumex x dufftii (the hybrid between Broad-leaved and Wood Docks) was encountered by GK on a number of occasions: on 15 June at a roadside bank east of Wrotham, TQ 622 596; on 25 June north of Holly Hill, TQ6763, and on the same day in a field west of Upper Halling, TQ6864; and on 6 August with a KBRG meeting west of Edenbridge in a grassy field, TQ4346. In all cases, at least one, if not both, parents were also present.

Rumex x sagorskii (the hybrid between Curled and Wood Docks) was identified by GK on 16 June at Trosley Country Park, TQ 6474 6116; on 25 June at Great Buckland, TQ 6760 6436; on 5 August at a disused quarry, Westerham, TQ4353 and TQ4354; and on 6 August with a KBRG meeting at a golf course west of Edenbridge, TQ4288 4713.

Rumex x schulzei (the cross between Crisped and Clustered Docks) was seen by GK and SK by the RSPB car park at Cliffe Pools, TQ7275, on 14 December. The parents are the commonest docks in north Kent estuarial land.

Saxifraga granulata (Meadow Saxifrage)^R was the subject of several 2015 records in north west Kent, including updating records for Horton Kirby and Hayes churchyards – the species seems to have a predilection for churchyards, whether by virtue of the survival of old grassland or through introduction – and a sighting by EW on 11 May of a clump with many flowering stems at one of the cemeteries at Darenth Country Park, TQ 56970 72473. DS states that it has been wild here at least since the 1980s, and that on the same day he and EW noted a further plant at the second cemetery here, at TQ 56574 72552. The species was also seen by WW on 10 May at the edge of Darrick Wood, Farnborough, TQ 44025 64874.

Smyrniium perfoliatum (Perfoliate Alexanders), from southern Europe, which is as aggressive a spreader as the much more usual *Smyrniium olusatrum* (Alexanders), was seen by CM in May growing in quantity alongside a public footpath for about 50m through a woodland strip at Bore Place, TQ 51196 48125.

Solanum nigrum subsp. *schultesii* (a non-native subspecies of Black Nightshade) was reported from several north west Kent sites in 2015: from Bluewater shopping centre in the course of a general survey there by GK and DS on 3 June; and by RMB in the south angle of farm roads between Crockenhill and Lullingstone, TQ 510 656, on 28 July, as well as at Belvedere, TQ4980, on 12 September.

Sorbaria tomentosa (Himalayan Sorbaria) is the identity of a single shrub on open, dry scrubby ground near Cliffe Creek, TQ 71561 76906, seen before in an indeterminable state (in 2013) by SB and LR, but on 26 June encountered by a KBRG meeting with flowers which, when developed into follicles, allowed for determination as this species.

Sorbus hybrida (Swedish Service-tree) is in Britain an infrequently cultivated tree which even more rarely escapes. It had got away, albeit not very far, at Greenwich (TQ3979), where a young sapling was growing close to its planted parent in a shrubbery with trees planted in an island in the road, seen at an LNHS meeting by RMB, NB and GHo. This appears to be a second record for vc16, West Kent, following a bird-sown plant in a Stone chalk pit in 1988.

Taraxacum brachyglossum (Purple-leaved Dandelion). It is not often that we have any of the *Taraxacum* microspecies named in Kent, but RMB has identified this at Dartford Heath, TQ 52348 72942, on 1 May, and at Beacon Wood Country Park, TQ 5862 7178, in the course of a LNHS meeting on 16 May.

Trachystemon orientalis (Abraham-Isaac-Jacob) has been described for gardens as 'vigorous' and 'good for suppressing weeds' – perhaps danger signals borne out by the presence of the plants lining both banks of lane more or less continuously for 200 metres alongside the old Swayland School farm, near Penshurst, from TQ 5346 4271 to TQ 5355 4292, seen by SB on 11 March.

Trisetum flavescens* subsp. *purpurascens is a non-native subspecies of Yellow Oat-grass, from the Carpathians and the Alps, which has been included in grass seed mixtures in place of the native subspecies *flavescens*. Apparently unrecorded in Kent hitherto, it was found by DS and GK on 3 June on a grassy bank in the Bluewater shopping centre, TQ5773, presumably derived from sowing when the development was originally laid out. Then, on 4 December, GK and SK came across further plants by the HS1 rail link, north of Ebbsfleet station, TQ 6120 7460, on an embankment supporting footbridge approaches. The plants were much larger than subsp. *flavescens*, being c.70cm tall with a panicle 16cm long and leaves 8mm wide. Presumably the subspecies was originally introduced with the seeding of rail link land on construction, completed in 2007. These appear to be **the first and second records for west Kent, vice county 16.**



***Trisetum flavescens* subsp. *purpurascens*,
4 December 2015.**

Photo © Geoffrey Kitchener

Urtica dioica subsp. *galeopsifolia* (Stingless Nettle) was found by GK and PA on 4 August in Grosvenor and Hilbert Park, TQ5940, on damp ground in alder woodland; and by GK on 3 October in a damp part of Scord's Wood, in the course of a BPS meeting.

Valeriana officinalis (Common Valerian)^R. We have one 2015 record for vc16 taken to subspecific level (see comments under the vc15 account), a sighting by a KFC meeting on 27 June of subsp. *collina* as frequent on chalk grassland west of Holborough, TQ 683 628.

Valerianella dentata^R var. *eriosperma* is a very rare variety of Narrow-fruited Cornsalad described and illustrated in Kent Botany 2013. There has now been a further sighting, by LR, on 9 September when several plants were found in the margin of arable ground below the North Downs Way at Ranscombe Farm, TQ 70710 67532.

Vicia bithynica (Bithynian Vetch)^R was recorded near Spring Head, TQ6172, in 2008; and in following this up on 4 June, LR and GK found it still in that monad, although not at the original location, and it was also present in two places in the adjoining monad TQ6173. It was seen at TQ 6166 7337, in rough vegetation by a path east of the HS1 rail link, and at TQ 6167 7321, where plants were scattered over a 19 x 2m area of grassland also east of the railway. This area generally was notable for its legumes, with vast quantities of *Lathyrus aphaca* (Yellow Vetchling)^R. *V. bithynica* has also been reported from the Swanscombe peninsula, some 2-3km northwards, albeit without details yet.

Viola canina (Heath Dog-violet) ^R was found by SL on 10 May at Old Swan Farm, Lamberhurst Quarter, apparently the first record for the vc16 part of hectad TQ63. At least seven flowering plants were growing in short rabbit-grazed turf spread across a large area of field with a steep slope below the farm, TQ 650 387 (ten-figure grid references given for each). In another species-rich field to the west, at least a dozen further plants were seen, at TQ 648 387 and TQ 647 388. Both sites lay in the context of increasingly rare habitat, largely unimproved neutral and slightly acid grassland.

Viola canina, 10 May 2015.
Photo © Stephen Lemon



Viola odorata var. *subcarnea* is one of the colour variants of Sweet Violet, bearing reddish-purple flowers, and was found by GK on 5 April in quantity at a woodland edge on chalk and along woodland paths off Star Hill, Knockholt, TQ 4941 5847. This appears to be a first record for the variety in West Kent, vice county 16.

Viola palustris (Marsh Violet) ^R has nine tetrad records in Philp (2010), but a further one was located by SL on 13 June with plants found flowering and abundant in rough, acid grassland above the southern edge of Furnace Pond, Horsmonden, TQ 6928 4093.

Viola x bavarica (the hybrid between Early and Common Dog-violets), said to be 'notoriously difficult to identify' was recognised by BW on 21 May at Barming, TQ7155; and he was also able to identify it for a KBRG meeting on 12 July at Angley Wood, where there were a few plants in a boggy area at TQ 764 368, their seeds being transparent and empty.

References

- Bean, W.J. (1973). *Trees and Shrubs hardy in the British Isles*, 8th edition, vol.2.
- Edwards, E., Griffin, J.H.C. & Armitage, J.D. (2015). A molecular and morphological investigation into the origins of *Ligustrum x vicaryi* (Oleaceae) with consideration of its nomenclature. *New Journal of Botany* **5**: 101-118.
- Hanbury, F.J. & Marshall, E.S. (1899). *Flora of Kent*. London.
- Jermy, A.C. (1967). *Carex* section *Carex* (= *Acutae* Fr.). *Proc. Bot. Soc. Brit. Isles* **6**: 375-9.
- Palmer, J.R. (1994). *Cerastium brachypetalum* – status in W. Kent. *BSBI News* **65**:21-22.
- Philp, E.G. (1982). *Atlas of the Kent Flora*. The Kent Field Club, West Malling.
- Philp, E.G. (2010). *A New Atlas of the Kent Flora*. The Kent Field Club.
- Poland, J. & Clement, E.J. (2009). *The Vegetative Key to the British Flora*.
- Sell, P. & Murrell, G. (2006). *Flora of Great Britain and Ireland, vol. 4*. Cambridge.
- Southam, M. (1998). *Ferula – communis* and beyond. *BSBI News* **79**: 64-66.
- Stace, C.A., Ellis, R.G., Kent, D.H. & McCosh, D.J. (eds.) (2003). *Vice-county Census Catalogue of the vascular plants of Great Britain*. BSBI, London.
- Stace, C. (2010). *New Flora of the British Isles, 3rd edition*. Cambridge.
- Stace, C.A., Preston, C.D. & Pearman, D.A. (2015). *Hybrid Flora of the British Isles*. B.S.B.I., Bristol.
- Timm, E.W. & Clapham, A.R. (1940). Jointed Rushes of the Oxford District. *New Phytologist* **39**: 1-16.
- Weiss, J., Sagliocco, J.-L., Wills, E. (1999). A comparison between European and Australian populations of Horehound, (*Marrubium vulgare* L.). *Papers and proceedings of the twelfth Australian Weeds Conference*, Hobart, 596-600.