

# KENT

## BOTANY

### 2017



Kent  
Botanical  
Recording  
Group

# Kent Botany 2017

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Compiled by Geoffrey Kitchener  
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Front cover: *Filipendula ulmaria* (Meadowsweet) near Tenterden.  
Photo 23 September 2017 © David Steere.

## Introduction

Current botanical developments in Kent are brought up to date with this issue of Kent Botany 2017. It is issued primarily as a web version, maintained on the Kent page of the Botanical Society of Britain and Ireland (BSBI) website, <http://www.bsbi.org.uk/> and this should be regarded as the definitive version. The web version is more extensively illustrated than the hard copy version issued in the Kent Field Club Bulletin, but the text in both cases is substantially similar.

## Highlights

Highlights for 2017 included the following.

- *Eleocharis quinqueflora*<sup>R</sup> (Few-flowered Spike-rush), believed extinct in the county for 140 years, was re-found at Ham Fen, where last recorded no later than the 1830s.
- *Euphrasia tetraquetra*<sup>R</sup> (Western Eyebright), not recorded in the county since before 1981, was found still present on the Dover cliffs, where targeted by a Kent Botanical Recording Group (KBRG) meeting.
- *Sibthorpia europaea*<sup>R</sup> (Cornish Moneywort) has been discovered new to Kent as a potential native in woodland near the Sussex border, which suggests an analogy with the few Sussex Wealden sites, although introduction cannot be ruled out at present.
- *Trichomanes speciosum*<sup>R</sup> (Killarney Fern), in its gametophyte form, now appears to extend outside the Weald, having been located on sandrock at Oldbury near Ightham, a relic of climatic conditions long since vanished.

Eighteen taxa new to East Kent (vice county 15) and eleven new to West Kent (vice county 16) were recorded.

## Recording in Kent, 2017

The KBRG has diligently pursued county recording, both through individual effort and its programme of fifteen field meetings. The group was featured in very favourable terms by the BSBI in its News and Views blog (<http://bsbipublicity.blogspot.co.uk/2017/11/spotlight-on-bsbi-local-groups-number.html>), *Spotlight on BSBI Local Groups Number One*, as 'One of the most vibrant local groups'. This feature was twinned with David Steere's account of how he acquired his botanical skills (Eyes Wide Shut – a Botanical Awakening, Parts One, Two and Three), to which membership of the recording group contributed. His plant photographs, as with Liam Rooney's, are increasingly being seen in national contexts.

The recording priorities of the Kent Botanical Recording Group (KBRG) are currently to ensure good county recording coverage for the period 2010-19 inclusive and as needed for the BSBI's next national plant atlas, which

is to cover the period 2000-19. The KBRG's AGM on 1 April endorsed the position and noted the desirability of searching for taxa which had been recorded at 10km square level in the previous national plant atlas, but which had not been found since. Lists of 'missing plants' for any specified 10km square have been made available to recorders on request.

The total of records for 2017 entered on the county database by 1 January 2018 was c. 58,000, a very substantial amount. The overall 2010-2017 dataset amounts to c. 354,700 records, although it has to be said that this does not appear to reconcile fully with the corresponding data on the BSBI database, which will require investigation. The totals for previous years were increased substantially by the receipt of further back records, in particular from Colin Osborne for East Kent and from Judy John for the Greater London Flora Project (which aims to record the flora of Greater London and its environs, eventually for the purposes of publication). The restated totals for previous years in the county database are:

- 2010 – increased from 21,300 to 21,800;
- 2011 – increased from 28,600 to 29,200;
- 2012 – increased from 28,000 to 28,750;
- 2013 – increased from 37,700 to 41,700;
- 2014 – increased from 62,100 to 66,200;
- 2015 – increased from 53,600 to 57,200;
- 2016 – increased from 50,000 to 51,850.

Again, there are reconciliation issues with BSBI database data, but counting from the county database, some 73,000 records for 2010-2017 were added in the course of the year.

Membership of KBRG stood at 124 at the end of 2017. The group's field meetings included sessions focussing on ferns; urban botanising; Wealden ponds; arable weeds; and glassworts. The arable weed meetings, which have become a regular part of our programmes, are conducted with the co-operation of Natural England and the farmers concerned. We have been given to understand that our survey data are some of the most useful which Natural England has in connection with Kent agricultural stewardship schemes and leveraging the funds which support them. Meetings were held to re-find *Hypericum montanum* (Pale St John's-wort) and *Euphrasia tetraquetra* (Western Eyebright): both objectives were successfully achieved. Unfortunately a meeting to re-find *Blysmus compressus* (Flat-sedge) had to be cancelled, due to frisky cattle. All meetings were reported in the KBRG newsletter of October 2017.

Kent botanical works appearing in 2017 included the following:

- An introduction to Blackheath's Clovers and Allies (a project by Joe Beale, created in association with The Natural History Museum's Identification Trainers for the Future programme, June 2017) - <http://www.nhm.ac.uk/content/dam/nhmwww/take-part/identification-trainers/introduction-to%20-blackheaths-clovers-and-allies.pdf>. This illustrated guide includes photos of clovers including *Trifolium tomentosum* (Woolly Clover), one of Juliet Cairns' finds which drew attention to the continuing botanical value of Blackheath, reported in Kent Botany 2012.
- Heather Silk's Wild Flowers of Kent Downland: A Photographic Guide. This illustrates about 70 species to be found on our chalk slopes, as also in equivalent habitat elsewhere in the UK.
- Ilse Hendriks-Beven's MSc thesis, the Hybridisation status and morphometric characteristics of native *Crataegus* species in Kent (Manchester Metropolitan University). This study finds that *Crataegus x media* (Hybrid Hawthorn), which was encountered in all the 14 monads specially surveyed, is significantly under-recorded in Kent, although more widespread than one parent, *Crataegus laevigata* (Midland Hawthorn) and locally more common than the other, *Crataegus monogyna* (Hawthorn). No conclusive evidence was found that pure populations (as distinct from individual specimens) of either species still exist in the county, at least from the surveyed monads; and hybridisation had occurred particularly at the expense of *C. laevigata*, which faces an uncertain future generally. Whilst the three taxa are often distinguished on leaf indentation alone, four other vegetative features are considered by the study to be statistically more significant. These are: the ratio between lower leaf lobe width and length; the leaf margin (degree of serration); vein curvature direction; and leaf lobe apex shape (obtuse to acute). Whilst plants with a *C. laevigata* morphology and one style (or a mixture of one and more styles) should be recorded as the hybrid, crosses which are close to *C. monogyna* are harder to identify. Indeed, probably because backcrossing results in a wide range of appearance, hybridisation may be more extensive than can be detected by morphological analysis. There are as yet no formal online

publication arrangements for this thesis, although a copy may be obtained from Ilse or from Geoffrey Kitchener.

- A partial transcript of Francis Rose's MS Flora, which went online in February 2017. The increased awareness arising from this publication resulted in the discovery of several hundred pages more of the missing manuscript, thanks to the assistance of David Streeter and Andrew Rose. From a position where only a fraction could be reconstituted from fragments, we now probably have at least half of the species accounts. The intention is to transcribe these over a period and to release extended versions of the transcript online from time to time.

## Kent rare plant register (RPR)

The RPR species accounts held on the BSBI webpage were updated in February 2017 and expanded so as to include up to Part M. Part N and the beginning of Part O were issued to KBRG members in March on a consultation basis. The list of RPR taxa was reissued and will be extended in the light of 2017 recording so as to include newly discovered (or rediscovered) *Eleocharis quinqueflora*<sup>R</sup> (Few-flowered Spike-rush), *Euphrasia tetraquetra*<sup>R</sup> (Western Eyebright) and *Sibthorpia europaea*<sup>R</sup> (Cornish Moneywort). As a result, we now have 326 plants on the list – not all of our rarest plants, as the listing does not include aliens, other than long-naturalised introductions regarded as having archaeophytic status such as *Glebionis segetum*<sup>R</sup> (Corn Marigold). It is a difficult task to find many of these plants – see the West Kent report below for *Teucrium botrys*<sup>R</sup> (Cut-leaved Germander), where we seem to be down to a single surviving plant in 2017; and we may not be able to re-find some taxa during the current recording period, 2010-19 inclusive. However, during 2017 out of the total of 326 taxa, 1,596 records were made for 102 different rarities.

The 2017 records include some indications that *Anacamptis morio*<sup>R</sup> (Green-winged Orchid) should no longer be considered a declining species of old grassland: not least in that it was found on a carport roof! An addition to the three extant colonies of *Arabis hirsuta* (Hairy Rock-cress) has been discovered at land being acquired by the Woodland Trust as an extension of the Hucking estate. We have some special discoveries at Ham Fen – including long-missing *Eleocharis quinqueflora*<sup>R</sup> (Few-flowered Spike-rush) plus *Carex panicea*<sup>R</sup> (Carnation Sedge) and *Carex rostrata*<sup>R</sup> (Bottle Sedge). *Erodium maritimum*<sup>R</sup> (Sea Stork's-bill) was very surprisingly found to be not just a seaside plant, but had also reached Hothfield near Ashford. Not only is *Euphrasia tetraquetra*<sup>R</sup> (Western Eyebright) still present, after a long gap in records, at Dover, but it also appears to be part of a hybrid complex there which has added to the difficulties in recording the species; plants included hybrids new to Kent. Some of the 2017 discoveries have been spectacular: *Fumaria parviflora*<sup>R</sup> (Fine-leaved Fumitory), a Near Threatened species in England, was found in thousands on a wide arable margin a kilometre in length at Malmaains Farm. More records were made of *Parapholis incurva*<sup>R</sup> (Curved Hard-grass) during the year than had been in the whole period since 2010. Endangered species *Ranunculus tripartitus*<sup>R</sup> (Three-lobed Crowfoot) has a new site in a couple of ponds near Bethersden, discovered by a KBRG meeting. Consistently with previous observations, the most RPR records are attributable to species which are designated because of the speed of their national decline: *Fragaria vesca*<sup>R</sup> (Wild Strawberry) with 106 records, *Oxalis acetosella*<sup>R</sup> (Wood-sorrel) with 88 records and *Knautia arvensis*<sup>R</sup> (Field Scabious) with 63 records. Despite the number of *Fragaria vesca*<sup>R</sup> records coming in, there are still quite a few tetrads where 1987-99 records exist which have not been replicated more recently.

## Plant records: selection criteria and recorders

Kent Botany 2017 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). The area is more extensive than the administrative county of Kent plus Medway Council unitary authority's area. The vice county boundaries may be viewed at [Cucaera.co.uk](http://Cucaera.co.uk).

The record selection criteria are flexible, but they focus on plants which are unusual in Kent, or where the plant's location, habitat or population characteristics are unusual. Preference is given to publication of new discoveries, particularly those which do not correspond with a tetrad recorded in Philp (2010). Taxa which are new to vice county 15 or 16 are given in **bold**. Records of known populations of RPR species will usually be carried through for publication in the draft register, and are not necessarily set out in these records.

Nomenclature follows Stace (2010).

All dates given in the records are for 2017, unless otherwise indicated.

#### Recorders, referees and other persons mentioned in reports

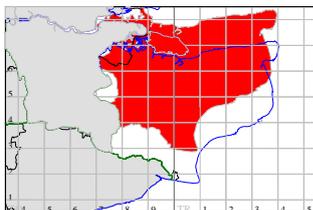
AB Alan Blackman	DM Daphne Mills	JC Juliet Cairns	PA Pat Acock
AD Aaron Davis	DMC David McCosh	JLJ John Llewellyn-Jones	RMa Roger Maskew
AG Alfred Gay	DN Dawn Nelson	JM J. Mobarak	RMB Rodney Burton
AL Alex Lockton	DP David Pearman	JP Joyce Pitt	RS Ray Stephenson
BB Ben Benatt	DS David Steere	JPu John Puckett	SB Sue Buckingham
BT Barry Taylor	DTS David Streeter	JS Judith Shorter	SC Steve Coates
BW Brian Woodhams	EGP Eric Philp	JT John Tebbit	SK Sarah Kitchener
CB Caroline Bateman	FJR Fred Rumsey	LR Lliam Rooney	SL Stephen Lemon
CM Chris Metherell	FOH Fred O'Hare	MA Martin Allison	SP Sue Poyser
CO Colin Osborne	FR Francis Rose	ML Mel Lloyd	TCGR Tim Rich
CR Chris Rose	GK Geoffrey Kitchener	MR Mike Robinson	TH Trevor Hatton
DC Danny Chesterman	HS Heather Silk	MS Mike Shaw	
DG Doug Grant	JA John Akeroyd	MW Mike Wilcox	
DJ David Johnson	JArm Jan Armishaw	OL Owen Leyshon	

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

#### Other abbreviations or notation

BSBI = Botanical Society of Britain and Ireland (formerly Botanical Society of the British Isles)	MNE = Maidstone Museum herbarium
KBRG = Kent Botanical Recording Group	RSPB = The Royal Society for the Protection of Birds
KFC = Kent Field Club	Plant records which are marked <sup>R</sup> represent plants on the current draft Kent rare plant register list.
KWT = Kent Wildlife Trust	sens. str. = <i>sensu stricto</i> , in the strict or narrow sense of the plant name
LNHS = London Natural History Society	vc = vice county
MOD = Ministry of Defence	

## Plant records for East Kent (vice county 15)



*Abies nordmanniana* (Caucasian Fir) is becoming increasingly used as a Christmas tree, in preference over *Picea abies* (Norway Spruce), so what happens to them after Christmas? A small tree at the edge of a cornfield behind Abbey Fields, Faversham, TR 02385 61488, recorded by LR on 23 May must afford one of the answers – clearly thrown out rather than planted, it has become established, a legitimate way of becoming part of our flora and hence treatable as a **first record for vc15, East Kent**.



*Allium cristophii* Trautv. (syn. *A. albopilosum* C.H. Wright) (Star of Persia) has a number of UK records on the BSBI's database, but they can probably nearly all be discounted as lacking evidence of being found outside gardens. However, OL noted it growing on the grassy inland side of Dymchurch sea wall, TR 12118 31281, on 3 June; and a record on 6 June by LR & TH was convincingly out of range of garden planting, being six plants growing in long grass on waste ground at the Discovery Park near Sandwich, TR 33194 59084. A native of Iran, Turkey and central Asia, it is much grown in UK gardens and its genes have contributed towards development of some of the larger-headed ornamental alliums. These are **the first and second records for vc15, East Kent**.

*Allium cristophii*, 6 June 2017. Photo © Liam Rooney

*Allium oleraceum*<sup>R</sup> (Field Garlic) was recorded by BW at Boxley, TQ7758, on 21 July, where it was growing at the edge of an overflow churchyard; and on 26 October, when it was flowering late on a road verge south of Coxheath, TQ7350. Otherwise, our recent sites for this species have been somewhat thin on the ground.

*Allium tuberosum* (Chinese or Garlic Chives) are grown less frequently than *Allium schoenoprasum* (Chives) and are a more tender plant. They are accordingly less likely to escape, and there are few records of such occurrences nationally. However, a plant has succeeded in reaching the edge of the pavement outside a garden gate at Queenborough, Sheppey, TQ 9095 7224, (too close to the garden step to suggest any attempt at planting) where seen by DC on 27 August. Most of our white-flowered alien *Allium* species are relatively early flowerers, so that as an August flowerer, this is exceptional. The recorder tested the plant for taste and found it distinctly garlicky. This is a **first record for vc15, East Kent**.

*Allium tuberosum*, 27 August 2017. Photo © Danny Chesterman

*Ambrosia artemisiifolia* (Ragweed) continues to make the odd



casual appearance, as seen by AL at Seasalter on 30 July (one plant by the crossroads, TR 090 646); and by SB at Kingsdown on 1 October (one plant in flower on disturbed ground in an alleyway at TR 377 488). If it became more than casual in Britain, there would probably be concern about its allergy-inducing pollen.

*Amsinckia micrantha* (Common Fiddleneck) was added to the list of unusual plants at Betteshanger Country Park, by DC on 31 May, with a sighting at TR 359 541. It was also seen later independently by SB on 8 June: hundreds of plants at TR 3551 5402, on a massive bank of soil, presumably excavated for new visitor centre foundations. Plants also extended into the adjoining monad, at TR 3612 5425, being dominant over a large area of introduced and levelled soil covering c. 100 x 100m, where thousands were in fruit accompanied by a mixture of arable and garden annuals. From being a fairly scarce Kent species, with only two records in Philp (2010), it is now being more frequently encountered. AL & JM also saw it on 18 April on disturbed ground by Whitstable golf course, TR 101 660.

*Anacamptis morio*<sup>R</sup> (Green-winged Orchid) has shown unexpected versatility in recent years with the speed of its colonisation of new territory through the deliberate spread of hay with its fruiting spikes. But even more surprising was its appearance on the sedum-covered roof of a carport in Mill Close, Headcorn, TQ 830 446, discovered by JT (confirmed by JS). This is not without precedent, however, given that *Dactylorhiza fuchsii* (Common Spotted-orchid) has been reported as colonising a green-roofed carport in Herefordshire. Perhaps the outlook for *Anacamptis morio* (classified as Vulnerable to the risk of extinction in England) is better than we had been supposing: in that vein, DS noted on 2 April a single flower in a neglected front garden between Broadstairs and Ramsgate, apparently a first record for Thanet.

*Arabis hirsuta*<sup>R</sup> (Hairy Rock-cress) has in recent years been limited in Kent to sites at Stockbury, Dover and Kingsdown, but its former sites included Rumsted Court, Hucking, where seen by FR in 1986. It was re-found by MA on 17 May, north of Rumsted Lane, TQ 845 598, on a steep east-facing grassland slope with chalk flora, a short way above the road (where it has a more southerly aspect). It may readily be overlooked here, as it was, a fortnight later, when GK & LR, unaware of the find, surveyed the same spot in search of *Polygala amarella* (Dwarf or Kentish Milkwort) for which there is historic record in this vicinity – but without seeing the Rock-cress.

*Atriplex glabriuscula* x *prostrata* (the hybrid between Babington's Orache and Spear-leaved Orache) was discovered by BB on 1 September in the course of a survey of Lydd ranges prior to Environment Agency works. The strandline vegetation was found to be overwhelmingly dominated by *Atriplex glabriuscula* which exists in some quantity along most of the frontage from Jury's Gap to the Ness, but in some places in more luxuriant vegetation further back on the rear face of the coastal embankment (e.g. TQ 99307 18000) there were Orache plants far more upright in habit, and of a darker, less glaucous green. In view of the intermediacy of the bracteole characters, material was sent to the BSBI referee, JA, who confirmed it as hybrid, commenting: "the small crowded fruiting bodies are distinctive. The leaves look right as well, and the bracteoles seem variably fused". This appears to be a second vc15 (East Kent) record although its presence elsewhere has been suspected.

*Atriplex micrantha*, 19 October 2017. Photo © Sue Poyser

***Atriplex micrantha* Ledeb. (Twoscale Saltbush)**, a Russian plant, has been seen on Cambridgeshire roadsides (A14 and A1307) in 2009 and 2014, and by the A13 in Essex also in 2009 (re-determined in 2018); but



otherwise its older UK records have origins in cotton or wool waste, as with its presence 1971-80 at Wateringbury, West Kent, resulting from the spread of wool shoddy. That agricultural practice has long since ceased and its associated flora has virtually disappeared as well. However, *A. micrantha* has been spreading on Continental motorways, with a strong presence in Germany, passing thence to Belgian motorways (at least from 2003) and encouraged by the salt tolerance of this species (see Bellanger, 2012, and literature cited there). It

has now been found associated with the M20, suggesting the likelihood of transmission by Continental traffic from Dover or Folkestone.



The find was made by SP & DG on 19 October by the riverside footpath between Aylesford and the Malta Inn, TQ 7432 5828. At this point, there is sheltered waste ground below the M20, which bridges the river and also provides scope for seed to drop from the motorway. This suggests that the species is likely to be elsewhere along the motorway, particularly along the central reservation if Continental experience is anything to go by; but observation at road level is extremely difficult at this point. There were several plants, the tallest being well over 2m high.

*Atriplex micrantha* habitat, with (now dead) stem being supported by Doug Grant, 2 November 2017.  
Photo © Sue Poyser

*Atriplex micrantha* bracteoles enfolding seed, 2017.  
Photo © Sue Poyser



The identification has been confirmed by JA, BSBI referee, stating that 'The orbicular bracteoles readily distinguish it from *A. oblongifolia* or *A. sagittata*. The leaves are sharply toothed rather than sinuate-dentate as in *A. oblongifolia* (and they are broader). Its halophyte tendencies may mean we'll be seeing more of it along major roads!' This (by a few metres) is a **first record for vc15, East Kent**.

***Berberis wilsoniae* (Mrs Wilson's Barberry)** should have been reported earlier as **new to East Kent, vc15**, as it was seen in a roadside hedge on chalk near Kingsdown, TR377465, by SB, LR, RMa and GK, when it was taken to have been bird-sown.

***Brassica juncea* (Chinese Mustard)** was found on 4 June by DM: four plants on disturbed ground alongside River Medway towpath near Aylesford, scattered between TQ 73619 58654 and TQ 73758 58733. They resembled var. *japonica*, otherwise Mizuna Greens, cultivated

especially for stir-fries, although Mizuna Greens is a name which has other applications, and this record is best (per TCGR) treated as part of the *Brassica juncea* complex. It is a **first record for vc15, East Kent**.



*Brassica juncea*, 4 June 2017.  
Photos © Daphne Mills

*Brassica oleracea* var. *capitata* (Cabbage) growing wild (as distinct from Wild Cabbage, var. *oleracea*) is not often met with outside cultivation, but was encountered on Maidstone roadsides, TQ7554, TQ7655, on 5 July and 9 November respectively by BW, who conjectures as regards whether birds have a part to play in this distribution.

*Bupleurum tenuissimum*<sup>R</sup> (Slender Hare's-ear) has a high proportion of its British records along the north Kent coast, so distributional evidence is particularly welcome. AL on 10 August found a few roadside plants in Valkyrie Avenue, Whitstable, TR 1009 6514, the previous records for the hectad being historic. His neighbouring record, on 11 August, of a couple of patches on the side of the Faversham Road, Seasalter, TR 0922 6517, is also new for that tetrad. These records demonstrate a degree of habitat versatility beyond the Hare's-ear's usual association with the grassland at the base of sea walls.

*Cannabis sativa* (Hemp) was noted by LR on 22 July, a solitary casual on a pile of earth at Syndale near Faversham, TQ 9888 6093, apparently the first East Kent record for over a dozen years.

*Carex panicea*<sup>R</sup> (Carnation Sedge). Although FR in his MS Flora of Kent gave this sedge as present at Ham Fen 1946-62 (and 1991), we lack recent localised records, so it is useful to have SB & SL's record of populations seen around TR 3305 5529 and elsewhere within an area of wet calcareous peat.

*Carex x pseudoaxillaris*, the hybrid between False Fox-sedge and Remote Sedge, was recorded on 4 June in the course of a KFC meeting at Monks' Wall reserve, Sandwich, TR327 593. Of the putative parents, only *C. otrubae* (False Fox-sedge) was seen.



*Catabrosa aquatica*<sup>R</sup> (Whorl-grass) is regarded as Vulnerable to the risk of extinction in England, with evidence of a decline in Kent, so its appearance in several places in hectad TR06 is very welcome, especially in the light of the absence of TR06 records since before 1970. On 23 May, LR found two patches in a dyke within a solar farm east of Faversham: a large colony at TR 02973 61796 by a footbridge and another smaller colony at TR 02985 61821. A further small patch was also found in a dyke in the neighbouring monad at TR 03782 61779.

***Catabrosa aquatica*, 26 May 2017. Photo © Liam Rooney**

*Cerastium arvense x tomentosum* (the name *C. x maureri* is invalid), the hybrid between Field Mouse-ear and (introduced) Snow-in-summer, was recorded by SB on 28 April while investigating sites where Philp (2010) had noted *C. arvense* (Field Mouse-ear). Plants grew scattered along a dry roadside bank in Westcourt Lane west of Shepherdswell from TR 2489 4835 for about ten metres. The colour of the plants was intermediate between parents and their indumentum was a mix of three sorts in varying proportions within the population: long crinkled white hairs (from *C. tomentosum*), shorter straight hairs and a scattering of short glandular ones (from *C. arvense*). The verge is close to the village and to roadside populations of *C. tomentosum* (Snow-in-summer). There were also plants for several metres along Barfrestone Road east of Shepherdswell with the habit of *C. arvense* but with indumentum from both parents, and a very large spreading patch (with the habit of *C. tomentosum*) at TR 2624 4866. *C. tomentosum* was abundant in the vicinity. SB considers that *C. arvense* has disappeared from both localities and is now represented by the hybrid.

*Chenopodium hybridum* (Maple-leaved Goosefoot) seems to balance persistence and unpredictability, and was found by CO on 3 July near St Nicholas at Wade, where there were up to 100 plants along a potato field edge at TR 2595 6730, suggesting the build-up of a seed-bank; and by SC & ML on 30 July on a refuse heap at Canterbury Hospital, TR1556.

***Chenopodium hybridum*, 3 July 2017.**  
Photo © Colin Osborne



*Clematis tangutica* (Orange-peel Clematis) was seen by DC on 5 September at Seasalter beach, TR 08674 65169, growing over an old catamaran on the shingle and not looking planted nor, given that gardens do not abut the beach at this point, straying from the end of a



garden. It is the second vc15, East Kent, record for a species which readily produces seed in cultivation and retains the fluffy seed-heads over winter before they break down and disperse.

***Clematis tangutica*, 5 September 2017.**  
Photo © Danny Chesterman

*Cordyline australis* (Cabbage-palm) seedlings on pavements are becoming more frequently observed, and do not seem to have difficulty in surviving at least one or two winters. GK & SK noted on 14 February seedlings at a pavement edge in Spring Lane, Canterbury, the presumed parent being cultivated in a nearby garden. On 6 May, they also saw a pavement seedling in Harvey Road, Rainham, TQ8165, the nearest cultivated adult appearing to be some way off, in Maidstone Road; and on the same day, a large seedling in front of a disused garage at Seasalter Close, Warden, Sheppey, TR0271. LR

also found on 9 April a plant growing from the base of a wall along Faversham Road, Seasalter, TR 076 650; there were mature flowering plants in gardens further along the road. He also saw, on 7 September, a seedling growing on the shingle beach further east towards Seasalter/Whitstable, TR 095 654.

*Cuscuta campestris* (Yellow Dodder), a North American parasitic scrambler, was noted by DG on 3 August as apparently growing on *Verbena bonariensis* in his garden. It was thought to be a contaminant of *Guizotia abyssinica* (Niger) birdseed. There appear to be no other recent records for East Kent, but more have turned up in West Kent – see report below.

***Cuscuta campestris*, August 2017.**  
Photo © Sue Poyser



*Cuscuta epithymum*<sup>R</sup> (Dodder) appeared from Philp (2010) to have been lost from the East Kent downs. Evidence continues to emerge that this is not wholly the case. On 1 June, SB found it present in a few places in chalk grassland at Bulltown Corner and on Aldglose Down, e.g. at TR 08659 43676, at TR 0843 4373 at the foot of the down by a cattle drinking container, and also at TR 0840 4380.

*Cyperus longus* (Galingale) was recorded on 10 September by CO, a large 2m diameter patch at the edge of an old pool on the former Herne Bay golf course (closed November 2011), TR 1735 6685. This is likely to have had a planted origin, but the best candidate for native status in Kent, which was near Hythe, seems to have gone. The position was investigated by SL this year. It was originally recorded by G.E. Smith in 1829 'spread over a confined, black, boggy tract at Whiting Brooks, above the Warren, Seabrooke', and he collected it here also in 1836. In 1954 FR recorded it as re-found 'at Whiting Brooks Wood...the only locality in S E England. The plants here are in heavy shade and were not flowering this year'. In his MS Flora, however, FR was a bit more circumspect: 'the habitat is unchanged, except that it is overgrown, and a large cyperaceous species, which could be *C. longus*, still exists here, but never produces inflorescences'. SL searched the site and found wet boggy peat with flushed ground arising at the junction of the Sandgate and Folkestone Formations. However, considerable change appeared to have taken place here with the Sene Valley Golf Club having constructed a 16<sup>th</sup> hole and hardcore track, destroying a significant portion of the wood, and applying herbicide. There seems little prospect that native Galingale remains or will return.

### ***Dittrichia graveolens* (Stinking Fleabane) in Kent**

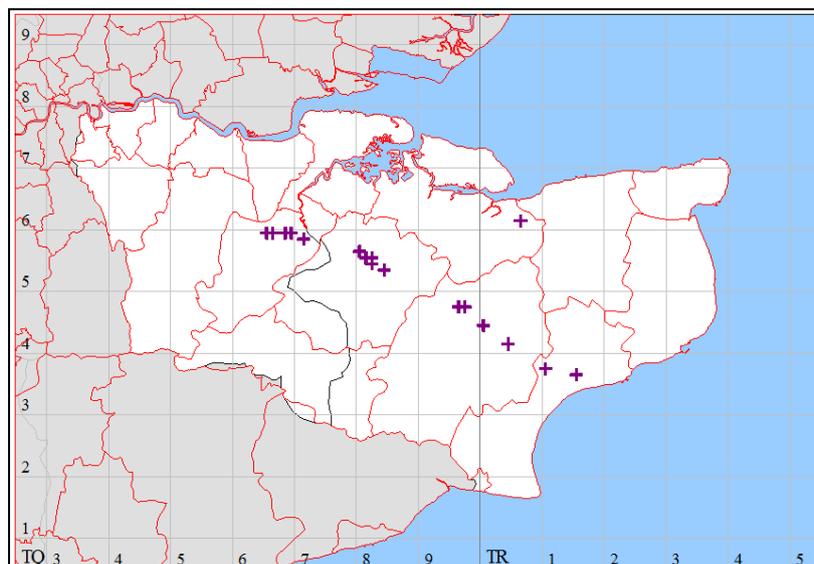
This species, a rather weedy-looking plant with yellow flowers often closed up, was formerly a shoddy alien in Kent fields, but was first found here in a roadside habitat by LR (by the A299, Thanet Way) as reported and illustrated in Kent Botany 2012. This East Kent find was followed by a West Kent record on the M20, reported in Kent Botany 2013. There have been no other records until 2017, but it has become a widespread plant, unnoticed because of difficulty in observing it. The distribution map below shows 15 more monad records added in 2017, all on or in the vicinity of the M20.

It is not easy to record, because most occurrences are in the central reservation of the motorway, where there is the double difficulty of spotting it (although the seeding heads are conspicuous in autumn) and then ascertaining in which monad it is growing. Places where it was more easily observed include the roundabout above the M20 at junction 8, Hollingbourne, TQ8254, and its slip-road to the M20: although these areas are under motorway regulations, it is possible to drive at slower speed! Also at junction 4 with the A228, Leybourne, TQ6959, it was found to be accessible on foot for about 25m along the inside of the roundabout above the motorway. The fourteen M20 records for 2017 were all added by GK, and there is no doubt that the presence of *Dittrichia* is more continuous than these monads indicate: in effect, they are samples where their location could be identified.



*Dittrichia graveolens*, 2012. Photo © Lliam Rooney

#### **Recorded distribution of *Dittrichia graveolens*, 2012-2017**



*Dittrichia* is native to the Mediterranean, but has been noted spreading along motorways or main roads in central Europe, notably in Germany, from which it appears to have extended to Austria, Switzerland, Slovenia, Slovakia, the Czech Republic and Poland, especially since 2000 (summarised in Kocián, 2015). The speed of spread has been rapid, but it may escape attention until it is ubiquitous: in Slovenia it was detected for the first time in Summer 2008 and systematic mapping in September of that year showed that it was already present along most of the

Slovenian highways (Frajman & Kaligarič, 2009). It is accordingly perhaps not surprising that we have suddenly become aware that it is growing along much of the M20 in Kent (see distribution map), presumably originating with Continental lorry traffic, even though there does not yet seem to be awareness of presence in relation to the French motorway network feeding to the M20.

One of the 2017 records requires interpretation to fit this pattern: the discovery on 12 September by SC of over 100 plants at the top of the high speed rail cutting and beside the footway north of Saltwood, TR 15773 36961. At this point, however, the rail cutting directly adjoins the M20, so the likelihood of introduction via trains (although it has been seen in railway yards in Belgium) is very low in comparison with the potential for seeds to blow a few metres from the M20.

The motorway habitat is particularly suitable for *Dittrichia* because of its salt tolerance. Research in Slovenia (Šajna et al., 2017) showed an increase in plant height, density of occurrence and reproductive capacity according to salinity of the roadside, from use of de-icing salt. Coupled with the ability, as an annual, to avoid the immediate direct effects of winter de-icing salt, it is able to take advantage of a linear disturbed habitat where there is reduced competition from less tolerant plants. Such species have been called 'Autobahn-Pflanzen' or motorway plants. It is scarcely coincidence that the spread of *Dittrichia graveolens* along the M20 appears with the finding of *Atriplex micrantha* associated with the same motorway (see above): these species are often coupled together in studies of motorway flora, e.g. Kocián, 2014.

*Dryopteris aemula*<sup>R</sup> (Hay-scented Buckler-fern) has been re-found at a number of its historic Wealden sites, and this now includes SL's locating on 4 March a single plant at Finchbourne Wood, TQ 9084 3162, where recorded by FR in 1966. It was growing in the western ghyll, on a north-facing vertical cliff of Ashdown Sandstone forming a narrow 10+ metre deep gorge with waterfall; there were possibly two or three further inaccessible plants high up on the cliff face.

*Eleocharis quinqueflora*<sup>R</sup> (Few-flowered Spike-rush) has hardly any historic Kent records and, indeed, was regarded as extinct in the county since 1875. However, on 19 July it was rediscovered by SB, SL et al. at Ham Fen KWT reserve, a site with no records since the 1830s. It was spread over an area of about 2 x 4m of calcareous peat at TR 33165 55164.



*Eleocharis quinqueflora*, fruit from Ham Fen, 19 July 2017.  
Photo © Stephen Lemon

The re-appearance of the Spike-rush is a tribute to KWT management. The relevant part of the reserve was, when taken over by KWT some years before, a field of undistinguished rank 'improved' grassland sloping down to a stream. Since then, KWT has scraped off soils in the parts nearest the stream, lowering by up to 30cm, with the resultant exposure of the peaty substrate. The original derivation of this substrate will have been from peat formation associated with incoming drainage from the chalk and with freshwater lakes related to the Great Stour estuary, which originally was very extensive, and cut off the

Isle of Thanet. The scraping and re-profiling was directed towards enabling fen/marshland communities to re-assemble, recognizing that the peat had in places mineralised due to desiccation caused by agricultural land drainage. This work seems likely to have exposed the seed-bank, which was since recognized with the recording of *Anagallis tenella*<sup>R</sup> (Bog Pimpernel) and *Baldellia ranunculoides*<sup>R</sup> (Lesser Water-plantain), and which may have applied to *Carex rostrata*<sup>R</sup> (Bottle Sedge) – itself a notable find in its own right – discovered in the vicinity on the same occasion as the Spike-rush.

*Eleocharis quinqueflora*, 26 July 2017.  
Photo © Sue Buckingham

Water levels have become higher with the introduction of beavers in 2001, active further south along the stream. Their ecological impact has become apparent since 2006-2007 when numbers



began to increase, and they have completely transformed more-or-less secondary woodland into an uneven-aged fen mosaic. This is likely to have encouraged the Spike-rush, which provides evidence for the success of KWT's conservation approach.

The species has now been transferred from the county 'probably extinct' list to the rare plant register.

*Elytrigia x acuta* nothosubsp. *obtusiuscula* (the hybrid between Sea and Sand Couch) was recorded on several occasions. First, by GK & SK on 20 August at Sandwich Bay, TR3560, at the back of the foredunes, where the more seaward parent *E. juncea* (Sand Couch) came into contact with *E. atherica* (Sea Couch). Then on 19 September GK & LR explored the shingly upper beach (with varying sand content) at Warden, Sheppey, from which five specimens gathered along the stretch TR 0247 7160 to TR 0273 7133 were determined as this taxon by MW. Two more (determined by MW) were also located by them between Leysdown-on-Sea and Shellness, Sheppey, within the stretch of shelly sand beach TR 0488 6891 to TR 0491 6885. The objective had been to search for what has been called *Elytrigia campestris* subsp. *maritima* (Neglected Couch), but the supposed characters of that taxon appear to be mimicked by several couch taxa as a result of growth conditions. Potential candidates were subsequently determined by MW as *E. atherica* and (south of Leysdown-on-Sea at TR 04716927) as *Elytrigia x drucei* (the hybrid between Common and Sea Couch). This result is similar to that of other searches outside Kent, and it looks increasingly as though Neglected Couch may not be a meaningful taxon and does not actually exist.

*Erodium maritimum*<sup>R</sup> (Sea Stork's-bill) is normally a coastal plant and as such we have known it in Kent, historically at Deal and more recently at Dungeness. There have been a few inland records in the British Isles, notably on sandy commons in north Worcestershire in the nineteenth century, and on 8 August HS discovered over 20 inland plants at Hothfield, TQ 9705 4600. This, however, is not a relict inland commons record, but is associated with a sandy bank which was constructed in 2013 when the adjoining land ceased to be a car park. The tarmac/gravel surface was then scraped off and used to create this bank; two or three years later a neighbour supplemented it with additional sandy material. It looks as though either the *Erodium* came in with imported sand, or it was present on the former car park gravel surface, having arrived as seed on footwear of visitors to the RSPB reserve at Dungeness moving on to the KWT reserve at Hothfield.

*Erodium trifolium*, April 2017. Photo © Liam Rooney

***Erodium trifolium* (Cav.) Guitt. (Pelargonium Heron's-bill)** appears to have about five UK records and is an attractive, but little grown, garden plant, much confused with *E. pelargoniflorum*. They are separated by *E. trifolium* having a sepal mucro not more than 0.5mm; also by having reflexed flower stalks after flowering but erect immature fruits; and some lower leaves of *E. trifolium* are divided to the base. *E. pelargoniflorum* (supposedly less common in cultivation) has a sepal mucro of c. 2mm; its flower stalks are reflexed after flowering and immature fruits are usually reflexed also; and all leaves of *E. pelargoniflorum* are simple. *E. trifolium* was found by LR & JArm in late April well naturalised in Davington churchyard, TR0161, self-seeding prolifically within the beds and the lawn with plants at all stages of development. This is a **first record for vc15, East Kent**.



*Erysimum x marshallii* (Siberian Wallflower) was recorded by CO on 10 June at Herne Bay, TR 170 673, where there were five scattered plants on rough ground adjoining a fly-tipping area. The only previous East Kent record appears to be given in Philp (1982), although one could not ascertain this from that publication which does not give the location; EGP's record cards, however, show it was TQ85G (Leeds).

*Euphrasia tetraquetra*<sup>R</sup> (Western Eyebright) was by the time of Philp, (1982) only known in the county from grassland on chalk cliffs above Dover Harbour (TR34G), although it was surmised that it could perhaps be expected in similar habitats nearby. However, a dearth of subsequent records resulted in the species being placed on the county 'probably extinct' list until the KBRG meeting on 4 August. At this session several plants were identified as *Euphrasia tetraquetra* by FJR in an area (TR 339 423 – TR 340 423) of cliff overlooking Dover Harbour, where the ground had been levelled off as part of railway construction at the end of the nineteenth century, so as to form what is now a grassy plateau about 80m above sea level, with chalk cliffs both above and

below. They grew in a southerly aspect, exposed to wind and sun, both in short chalk grassland turf and in barer areas near the cliff edge. Plants were also accompanied by *Euphrasia nemorosa* (Common Eyebright) and Eyebrights with a range of variation which rendered determination of individual plants in the field not straightforward, especially as *E. nemorosa* is supposed to be capable, in exposed coastal situations, of mimicking the growth form of *E. tetraquetra*.



Samples of material which did not seem to be straightforward *E. tetraquetra* were sent to CM, BSBI referee. He confirmed *E. nemorosa* and several plants of the hybrid ***Euphrasia nemorosa* x *tetraquetra*** as well as some plants which may have been towards the *nemorosa* end of a hybrid spectrum. He also confirmed other material as being on balance the hybrid ***Euphrasia pseudokernerii* x *tetraquetra***, and suggested that what was involved was a hybrid swarm involving the three species, *nemorosa*, *pseudokernerii* and *tetraquetra*, in the centre of which it is likely that there would be plants with a complete mix of characters produced by crossing and backcrossing. This might also explain the comparative rarity of *E. tetraquetra* itself as, in effect, 'hybridised out'. **The two hybrids would appear to be first records for vc15, East Kent.** *Euphrasia tetraquetra* itself is now being placed on the county rare plant register.

***Euphrasia tetraquetra*, 4 August 2017. Photo © Liam Rooney**

*Fatsia japonica* (Fatsia) was recorded on 2 April by GK & SK on the southern edge of the Royal Military Canal west of Hythe, TR 171 347, growing close to water level, a location difficult to access and not readily seen, being hidden by a tree, so it was unlikely to have been planted.

*Fumaria bastardii*<sup>R</sup> (Tall Ramping-fumitory) has, until recent years, apparently been long absent from Kent. It is possible that it has been overlooked and there is now greater local awareness of the potential for a Fumitory with an upper petal lacking a dark blotch to be this species. Four new records were added in 2017, so that the rare plant register status of the species moves from rare to scarce. On 2 May, SB spotted a few plants north of Sandwich, TR 3341 6113, on sand at the foot of a metal fence on the east side of the A256. On 4 May, with LR, a further find was recorded, at Tyler Hill, Canterbury, TR 1415 6103, where there was a small patch on sandy soil by the side of a lane. On 15 May, SB found flowering and fruiting plants on a sandy roadside bank at Saunders Lane near Ash, TR 2984 5809, and extending over two metres; *Fumaria muralis* (Common Ramping-fumitory) was also present. Then on 26 September she found it in plenty near Wingham, TR 2519 5933, along the base of a hedge on sandy soil and with *Fumaria officinalis* (Common Fumitory).

*Fumaria parviflora*<sup>R</sup> (Fine-leaved Fumitory) was seen by the KBRG meeting on 6 July, with thousands of plants spread over a 100 x 1000m arable margin on shallow chalk soil at Malmains Farm near Eythorne, from around TR 299 490 to TR 303 498. Malmains Farm is operating a stewardship scheme with Natural England and the plot was drilled with a grass/brassica mixture and left unsprayed. This scarce Fumitory was also seen by SC and ML on 4 July, near West Langdon, TR3247.

*Galanthus elwesii* (Greater Snowdrop) was recorded by DC on 10 February at Hothfield, TQ 970 465. It is often not easy to be sure about the status of Snowdrops which have got away, but this was on a grassy verge separating the main road from a service road at least 20m from the nearest house or garden.

*Galium parisiense*<sup>R</sup> (Wall Bedstraw) is regarded as a species Vulnerable to the risk of extinction in England, but in Kent it has turned up many times since Philp (2010) gave only three sites. On 10 June, SL noted plants at Tutt Hill, Hothfield, TQ 9776 4641, where they were spread over a few metres on hardcore and sand next to the fence line where the HS1 railway embankment runs along the edge of a public footpath by a large arable field. Presumably the source here was the construction of the railway. Plants were seen here by the KBRG meeting on 16 July.

**Geranium 'Johnson's Blue'** (= ***Geranium pratense* x *himalayense* = *G. x johnstonii* P.D. Sell**), although widely cultivated, has very few British records as an escape. This may in part reflect the fact that it is normally sterile (which results in persistent flowering), so escape may be a matter of being cast-out; also, it may reflect issues of identification. LR on 16 May recorded two clumps in a field away from houses at Boughton, TR 06773

58304. Identification features included the leaves being divided more than  $\frac{3}{4}$  way to base (as with *G. pratense*) but with sepal points less than  $\frac{1}{2}$  as long as main part (as with *G. himalayense*). This is a **first vc15, East Kent, record** of this taxon in the wild.

*Geranium* 'Johnson's Blue', 16 May 2017. Photo © Lliam Rooney

*Geranium purpureum*<sup>R</sup> (Little-Robin) is scarce in Kent and so far as concerns East Kent, there has only been an unconfirmed record; but now LR has found, on 22 May, seven plants on the west side of a footbridge over the railway line at Faversham train station, TR 01704 60862. There is also a railway association with the current West Kent records (except for one, which is nevertheless less than 80m from a railway line), but what is actually responsible for the coincidence of distribution is unclear, perhaps related to railway ballast (although the species does not seem to be recorded from the main suppliers' quarries) or to its storage locations. It seems that this railway association is not unique to the British Isles (Pyšek, P. et al., 2012). This appears to be a **first confirmed record for vc15, East Kent**.



*Geranium purpureum*, 22 May 2017. Photo © Lliam Rooney

*Gnaphalium luteoalbum*<sup>R</sup> (Jersey Cudweed) as an urban invader seems to be extending its range, with the sighting on 7 September by DG & SP of 50+ plants at St Mary's Island, Chatham Maritime, growing among block paving at TQ 7706 7084 over c. 20 square metres, with singletons at TQ 7716 7024 and TQ 7717 7061.

*Guizotia abyssinica* (Niger) is mentioned elsewhere in this report in relation to *Cuscuta campestris*, and in contexts where Niger seed has been spread. A less obvious origin must be attributed to CO's record on 17 August of two full grown plants in a *Vicia faba* (Broad Bean) field pre-harvest at Boyden Gate, TR 2280 6535. No other aliens were present.

*Himantoglossum hircinum*<sup>R</sup> (Lizard Orchid) was noted by AB on 16 May 2016 as eight plants on the road verge and adjacent area of the A256 near Discovery Park, Sandwich, about two miles from the large Sandwich golf course colonies. When he visited again on 8 June 2017, the colony had expanded to a remarkable 133 flowering plants between TR 321 591 and TR 328 597. This offers a parallel to the recent explosive expansion of the Boxley roadside colony.

*Hypericum montanum*<sup>R</sup> (Pale St John's-wort) has been lacking recent records in the county, and the KBRG meeting on 25 July addressed this gap by finding nine plants scattered over c. 10m of mostly bare unshaded ground at Snowdown, TR 2509 5005, at the edge of a wood and above a deep railway cutting. Plants varied in height from c. 15 to 40cm and were mostly in fruit. The soil is sand over chalk (very much as with other, older Kent records) with a thin layer of humus from a nearby beech tree. This narrow strip of ground appears to be cut regularly as part of routine railway maintenance, keeping it from scrubbing over.

*Lathyrus hirsutus* (Hairy Vetchling) is an introduced annual with relatively few records in Kent, and one would expect persistence to be accompanied by a habitat which is sufficiently open to enable annual re-establishment, as with the eroding cliffs at Warden. On 22 June, DC recorded it at TQ 919 656, for 200 yards along the Milton Creek sea wall towards Kemsley Paper Mill, Sittingbourne. This potentially ties in with a 2014 record by CO in the neighbouring tetrad to the south west, TQ9174, when it was found to be locally abundant along the creek embankment near the sewage works. It is possible that the establishment of the country park here may have involved legume sowing with the Vetchling as a constituent, perhaps a contaminant.

*Malva pseudolavatera* (Smaller Tree-mallow), whether native or introduced (and there have been different views) is a plant of the Channel Islands and south-west England on the edge of its more southerly range

(indicated by its synonym *Lavatera cretica*, Cretan Mallow). Its discovery in Kent on 14 November by SB was therefore unexpected. About a dozen flowering plants were seen at Westgate-on-Sea scattered between TR 32586 69338 and TR 32581 69216 on an arable margin alongside Minster Road. The species closely resembles *Malva sylvestris* (Common Mallow) – which was also present at the site – and could readily be overlooked for that species. Its indumentum is greyer; the flowers are somewhat lilac rather than pink-purple (although *M. sylvestris* can vary in colour); its peduncle hairs are stellate rather than simple/patent; and its petals are usually smaller (10-20mm v. 12-30mm). **This is a first record for vc15, East Kent, and for Kent generally.**

*Malva pseudolavatera*, 14 November 2017.  
Photo © Sue Buckingham



*Mentha pulegium*<sup>R</sup> (Pennyroyal) has very few current Kent records and these are likely to be of grass seed contaminant origin. The only recent East Kent sighting is that of LR on 7 August, when he discovered two plants growing from the kerbside of Arthur Salmon Close, Faversham, TR 0072 6112, where the likelihood must be of an escape from cultivation.

*Mentha suaveolens* (Round-leaved Mint) was recorded by LR on 16 August as four plants in a field away from houses, Boughton, TR0677 5830; their origin may have some connection with the record of *Geranium* 'Johnson's Blue' nearby (see above). They were the cultivar 'Variegata' (Pineapple Mint).

*Oenanthe pimpinelloides* (Corky-fruited Water-dropwort) continues to spread in West Kent, but is hardly present in East Kent, so a find by SB & JPu of 14 plants in privately owned unimproved meadow near Herne Common, TR 1678 6461 is significant for that vice county.

*Origanum majorana* (Pot Marjoram) is unlikely to be anything other than casual with us; its north African and south-west Asian origins mean that it is seldom seen out of its pot. However, on 5 September, DC found a



couple of mature plants on shingle at the edge of Seasalter beach, TR 0949 6545, their identity confirmed by LR, who subsequently visited, finding some seedlings present as well, at TR 09539 65473. This is a **first record for vc15, East Kent.**

*Origanum majorana*,  
5 September 2017.  
Photos © Danny  
Chesterman



*Osmunda regalis*<sup>R</sup> (Royal Fern) in Kent has really never recovered from the raiding of wild plants in the nineteenth century, added to which its natural range is predominantly western in the British Isles. Philp (2010) considered its native status in Kent now to be debatable. Perhaps our best current case for native status is a find

by AG on 15 October of a very old plant in wet woodland at Orlestone Forest, TQ9766 3593. This was growing in a dried-up peaty pool with *Hottonia palustris* (Water-violet), at the edge of *Carpinus betulus* (Hornbeam) woodland. SB visited on 22 October, recording the fern as 2-3 m across but made up of a ring of eight individual tussocks with bare peat at the centre, from which the plant had presumably grown outwards. It is not easy to track down data on the rate of spread of individual *Osmunda* plants, although they apparently have the potential to live for centuries. The age of this plant should not be greater than that of the pond system here, which appears to go back at least well into the nineteenth century. However, there is mention of the species in FR's MS Flora of Kent at Longrope Wood, part of the same woodland complex. In the version which he revised c. 2000, it is said to be locally plentiful; the unrevised original had simply said 'reputedly planted'.



*Phormium tenax* seedling, 2 April 2017.  
Photo © Sarah Kitchener

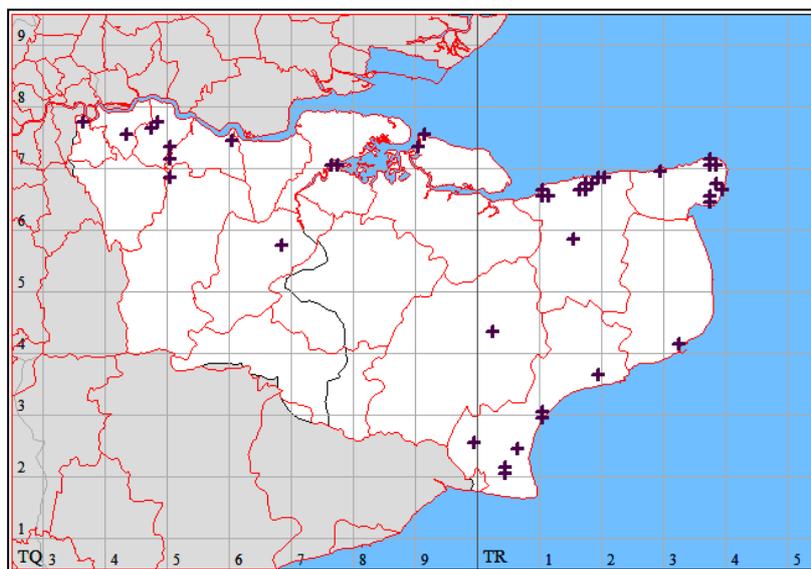
***Passiflora caerulea* (Blue Passionflower)** is widely cultivated and the production of large egg-shaped fruits suggests potential for spread. However, it has not been until 2017 that it has been recorded for East Kent. On 27 July, AL found it well established on the pavement edge in William Street, Whitstable, TR 107 665. Shortly after, on 12 August, GK & SK found a large plant scrambling over coarse vegetation east of Wing Road near its junction with Seaview Avenue, Leysdown-on-Sea, TR 0380 7015: it looked unplanted, although there was housing opposite. These are the **first and second records for East Kent, vc15**.

***Phormium tenax* (New Zealand Flax)** is widely grown as a number of cultivars, but appears to have lacked East Kent records as an escape. On 2 April, however, GK & SK saw a seedling at Marine Parade, Hythe, TR1634, at the junction of a garden wall and the pavement, with purplish leaves (and so presumably to be treated as part of the Purpureum Group of cultivars); adult plants were cultivated in neighbouring gardens. **This is a first record for vc15, East Kent.**

*Polycarpon tetraphyllum*<sup>R</sup> (Four-leaved Allseed) shows how difficult at times it can be to credit how quickly a plant's distribution – or at least, our knowledge of it – can change. A distribution map was given with Kent Botany 2015, in order to demonstrate a light scatter of records since the first publication (in Kent Botany 2012) of a record for the county. Now we have moved on significantly from 2015, with 40 monad records for East and West Kent shown on the accompanying distribution map, well spread across the county – there were 24 sightings in 2017 alone.

#### Recorded distribution of *Polycarpon tetraphyllum*, 2012-2017

Recording is of course a matter of sampling, and is dependent upon a botanist being able to recognise a taxon, so any such snapshot of distribution will have a built-in time lag; but even with these limitations, the expansion of *Polycarpon* to such a wide-spread presence has left behind the standard Flora of the British Isles, which recognises it in the Channel Islands, the south-western English counties and only casual elsewhere. Our 2017 records



continued to come from pavements, road gutters and house drives, especially those with brick pavers. It went onto the rare plant register originally as a nationally rare plant, but that status must warrant revision.

*Polygonum rurivagum*<sup>R</sup> (Cornfield Knotgrass) is somewhat enigmatic in its Kent distribution, the drop from 90 to five recorded tetrads as between Philp (1982) and Philp (2010) being surely at least in part an artefact of recording rather than a decline in actual occurrence. Whilst records have been coming in for West Kent, it has been little recognised in East Kent recently. DS's record on 19 November of the Knotgrass by arable near Nashenden, TQ 731126 5658, at least places it on the East Kent side of the Medway valley, but one would hope that there is scope for further recording.

*Populus x canadensis* (Hybrid Black-poplar) is widely planted in the county. As at the end of 2017, we have 53 records from 2010 onwards, of which 16 are given the status 'planted' or 'surviving' (from being planted); five records from their related comments are planted or likely to be; two records are of sucker growth from planted trees; four records could well have been dropped branches which have rooted; 23 records have no information which would help as regards status. This leaves three records which were possibly of seed origin. To these we may add a more definite sighting, by LR on 22 April, of one self-sown sapling growing from the bridge over the M2 motorway near Faversham, TR02545 59527. Planted *Populus x canadensis* will be clonal material of a particular cultivar, and each cultivar will always be of the same sex, whether male or female. The Faversham sapling was close to trees planted as a wind break which included two different cultivars offering both sexes.

*Ranunculus tripartitus*<sup>R</sup> (Three-lobed Crowfoot) is an Endangered species with only three localities in Philp (2010) to which may now be added the finding by the KBRG meeting on 23 May of a dominant spread in a small peaty pond in grazing pasture south west of Bethersden, TQ 9111 3874, and a presence in quantity in a nearby pond at TQ 9104 3862.

*Rumex acetosa* subsp. *ambiguus* (Garden Sorrel), growing some 120cm high, was seen on 12 June by GK & MS (and by other botanists this season) growing scattered on embanked ground affected by the construction of New Court Road, Burham, TQ 732 614, at least half a dozen plants being present. There must be some suspicion regarding the status of these plants, given that other species indicative of wildflower seed mix sowing were present in other areas affected by the road (and may require review of the status of the Burham *Glebionis segetum* (Corn Marigold) recorded in 2015). However, it is not a taxon which would be expected as part of a wildflower seed mix; plain subsp. *acetosa* would be normal.

*Rumex palustris*<sup>R</sup> (Marsh Dock) is present in Kent as a scattering along the north coast and rare in the south east, so that SB & OL made a new hectad record in finding four small flowering and fruiting plants in a low-lying area of the Walland Marsh, TQ 9952 2288.

***Rumex sanguineus* x (*R. crispus* x *obtusifolius*)** – a triple hybrid between Wood, Curled and Broad-leaved Docks – was found on 15 September by GK & SK (determined by GK, BSBI referee) between The Moor, Hawkhurst and Sandhurst Cross, TQ 7729 2864. In general, triple hybrid docks are very rarely recorded, not just because they are uncommon, but particularly because of the difficulty in evidencing the features of three different species in one plant, without the characters of one being submerged in the others.

***Rumex sanguineus* x (*R. crispus* x *obtusifolius*). Tepals. 15 September 2017.**  
**Photo © Geoffrey Kitchener**

A single plant was noted, its main growth and basal leaves having already decayed, but secondary growth had thrown up a further fresh shoot, 107cm high. This is a character often shown by hybrid *Rumex* in late season, presumably related to the failure to set seed fully earlier on. The



plant was located in a hedge gap between two fields, one with maize and the other laid to grass. The only other docks in the vicinity were one plant of *R. sanguineus* and several *R. crispus* x *obtusifolius* (*R. x pratensis*). The triple hybrid was notable for its weak growth and apparent sterility: tepals were dropping before full development, and the most developed flowers seemed unlikely to set seed.



The characters of the putative parents were manifested as follows. *R. crispus* (Curled Dock) was indicated by the cringing of the remaining leaves, although largely decayed; also tepals were basically ovate-cordate, although there was a degree of variation to reflect the contribution of the next species. *R. sanguineus* (Wood Dock) was indicated by the tendency of many tepals to take a somewhat lingulate form. It was difficult to identify any tothing on the tepals from *R. obtusifolius* (Broad-leaved Dock), and this character had apparently been sunk in the hybrid; but a scattering of small papillae was observed on the underside of the leaf midribs, so as to confirm the genetic contribution of that species.

***Rumex sanguineus* x (*R. crispus* x *obtusifolius*) showing leaf midrib papillae from *R. obtusifolius*. 15 September 2017.  
Photo © Geoffrey Kitchener**

Triple hybrids involving *R. x pratensis* are in general the most likely to arise, because of the frequency of the occurrence of *R. x pratensis* and its relatively high fertility. Possible candidates for this particular triple hybrid have been observed by GK in Kent before, but this is the

first in which all parental characters have been so distinct. It is a **first record for vc15, East Kent**, and apparently for the British Isles; no other records for anywhere in the world have been traced.

Other *Rumex* hybrids: *Rumex x dufftii* (the cross between Broad-leaved and Wood Docks) was found by GK & SK north of Elham, TR 1901 4420, on 27 July with its parents in the rough grass of a field corner, and on 15 September east of The Moor, TQ 7629 - one large roadside plant, the parents being the only other docks in the vicinity. This tends to be a hybrid of wood or field borders, where *R. sanguineus* (Wood Dock) grows along the edge. More characteristic of damp coastal areas is *Rumex x schulzei* (the cross between Curled and Clustered Docks), whose distribution reflects that of the wet-loving *R. conglomeratus* (Clustered Dock). This was recorded by GK & SK on 12 August at Leysdown country park, Sheppey, TR0469, with the parents in coarse grassland.

*Santolina chamaecyparissus* (Lavender-cotton) has been unrecorded as an escape in East Kent other than on the shingle of Dungeness, but on 22 June a large clump was found by AL at the back of some beach houses, adjacent to the golf course at Seasalter, TR 099 657.

*Silene noctiflora*<sup>R</sup> (Night-flowering Catchfly), an arable weed vulnerable to the risk of extinction in the British Isles, was noted by SB on 17 July, a single plant at Malmaims Farm, south west of Eythorne, TR 2779 4842, near the margin of a sown area of *Phacelia tanacetifolia* (Phacelia).

*Solanum triflorum* (Small Nightshade) is an annual North American species whose only previous Kent record appears to have been a 2004 sighting at Dungeness, reported in Kent Botany 2011. A further find has now been made, by DC on 28 October near Lydd, TR 05062 21738, confirmed by OL. Five plants were seen in sandy ground, growing at the mouth of a rabbit hole.

***Solanum triflorum*, 28 October 2017.  
Photo © Danny Chesterman**



*Sutera cordata* (Bacopa) is an often-planted constituent of containers and hanging baskets and escapes accordingly.

Plants were noted by SB on 2 January in Minster High Street, TR 3096 6471, flowering on the pavement a few yards from hanging baskets then empty of contents. Also, off Whitstable High Street, TR 107 664, AL on 16 August spotted a couple of plants in an alleyway.

*Tetragonia tetragonioides* (New Zealand Spinach) has had only three East Kent coastline records, all in recent years, to which may be added a find by GK & SK on 21 November of one plant on the concrete surface near the seaward end of the east pier, Ramsgate Royal Harbour, TR 38554 64295, over 400m out to sea. This is quite a challenging habitat for any vascular plant, and presumably it was a very large wave which washed the original seed onto a surface crack.



*Tolmiea menziesii* (Pick-a-back-plant) has become widely naturalised in damp shady places following its horticultural introduction in 1812, but inexplicably has not been recorded in East Kent until 11 June, when DS found it off Cox Street, Scragged Oak, TQ 804 600. There were numerous flowering plants in a large patch in recently coppiced woodland, away from houses and roads, with no obvious source of introduction. Once there, it will have spread, of course, via the plantlets which form at the leaf bases. **This is a first record for vc15, East Kent.**

*Tolmiea menziesii*, 11 June 2017. Photo © David Steere

*Umbilicus rupestris*<sup>R</sup> (Navelwort) is in the rare plant register and so treated as a native but it is difficult, as mentioned in Philp (2010), to be sure about the status of any plants, although some can seem genuinely wild. DC on 27 August recorded several plants growing on a shaded part of a concrete path through docklands at Sheerness, TQ 90686 73243, nowhere near housing or any obvious point of origin.

*Urtica membranacea* (Membranous Nettle) was reported in Kent Botany 2016 as then found in West Kent, and now it has appeared in East Kent as well. It was discovered by JLJ who, considering it to resemble plants which he had seen in Italy,

brought an unidentified specimen on 3 May to KWT. Suspecting the Mediterranean species *U. membranacea*, GK & SK visited the site at Rainham on 6 May and confirmed identity. Many plants were growing at High Street, Rainham, TQ 81557 65977. They occupied the base of a south-east facing wall at right angles to High Street and bounding the forecourt of a florist (Floral Times), extending also along the florist's frontage and the adjoining optician's shop. By 3 June, when visited by GK & LR, it had gone from in front of the optician, and there were only a few plants at the wall base. The location is urban, as is characteristic of an increasing number of British occurrences. It could have arrived with traffic from the adjoining busy road, but it is interesting to note, given the proximity of the plants to a florist (and the presence of the West Kent find in a planted street container), that Verloove (2016) in a Belgian context suggests the horticultural trade as a vector. **This is the first confirmed record for vc15, East Kent.**

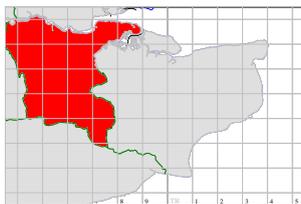


*Urtica membranacea*, 6 May 2017.  
Photo © Sarah Kitchener

*Verbascum chaixii* (Nettle-leaved Mullein) was seen by DC (confirmed by LR) on 29 June flowering on a farm track near Ospringe, TQ 98847 60880, the second record for East Kent (the first, reported in Kent Botany 2016 at Queendown Warren, continues to flourish, according to BT).

*Vicia bithynica*<sup>R</sup> (Bithynian Vetch) is Vulnerable to the risk of extinction in Great Britain and had only three current tetrad records in Philp (2010). However, eight were given in Philp (1982), including the tetrad within which DC on 21 May recorded the species on the north side of Swale Way, Kemsley, TQ 917 657, where two large patches were growing below the bank. This road was in the course of construction in 2010-2011, so that, but for the existence of the earlier record in the neighbourhood, one might have supposed that the appearance of the plant was due to sowing the banks.

## Plant records for West Kent (vice county 16)



*Acacia dealbata* (Silver Wattle or Mimosa) is a somewhat tender tree or shrub, better suited to metropolitan West Kent than to other parts of the county, and has a number of vc16 records in the BSBI database, but it is possible that these were no more than plantings in gardens. However, RMB & JC on 8 September found it growing outside a garden at Highmore Road, Blackheath, up to 120cm high. The difficulty in assessing the status of this record is that the species is capable of spreading by seed, but also is known to sucker strongly if the roots are damaged, and this may have been the case if the roots had spread far enough. The recorders found it not possible to determine whether this was evidence of spread by seed, or direct growth from the same plant as was planted in the garden. The latter case would not be nearly so valuable in indicating what may be regarded as becoming part of our flora, but it is useful that the recorders included comment on that uncertainty in their record.

*Allium carinatum* (Keeled Garlic), a southern and central European species with purplish flowers, was seen by RMB on 1 July just outside the garden of 160 Summerhouse Drive, Joyden's Wood, TQ 5066 7163. Whilst not infrequent in gardens, it has only one other Kent record outside (also RMB's).

*Anagallis arvensis* subsp. *arvensis* f. *carnea* is a variant with pink or flesh-coloured flowers which, in the circumstances, might be inappropriate to be called Scarlet Pimpernel, and was recorded by DS on 27 August on an arable field edge at Sole Street (TQ6567) growing next to the usual scarlet form.

*Anagallis arvensis* subsp. *arvensis* f. *carnea*,  
27 August 2017. Photo © David Steere



*Arabis caucasica* (Garden Arabis) is occasional as a garden escape, although little noted in recent years in Kent, but got away surprisingly well for DC's sighting on 24 March of a single flowering plant in the saltmarsh on the west side of the Medway, just north of the Rochester Bridge and viewable from the footpath that runs along the bank, TQ 724 673. It was unlikely to be a garden throw-out, being about 40 yards from the bank.

*Berberis gagnepainii* (Gagnepain's Barberry) was noted by GK & SK on 17 April, a bush south east of Meopham, TQ 6578 6534, in chalk scrub bordering a footpath dividing it from a garden where a large planted bush was present, so there was an appearance of derivation from this. Although the plant's status was to a degree uncertain, other vc16 records in the BSBI database lack any assurance that they were present outside gardens at all, their detail being more related to socio-economic aspects of the associated housing.

*Berberis wilsoniae* (Mrs Wilson's Barberry) was recorded by GK on 30 November as a seedling on Hewitts Chalk Bank KWT reserve, TQ4763. As it is one of the more common cultivated *Berberis* species, it is perhaps surprising that it is not found escaped more frequently. Records for the 1980s from the same tetrad in Pratts Bottom do not relate to this location, but to a (now overgrown) bank in TQ4662.

*Bupleurum rotundifolium* (Thorow-wax) was seen on 5 July by GK at Beckenham Place Park, TQ3771, spreading on its own account around a tennis court, presumably originally planted in neighbouring borders. The status may accordingly be regarded as one of a garden escape. The only other means of encountering this species in Kent (extinct as an arable weed) would appear to be from wildflower seed sowings. The Tunbridge Wells sighting reported in Kent Botany 2015 has since become more obviously of this latter category, with the appearance of obviously sown 'wildflowers' in the general area.

*Calystegia soldanella*<sup>R</sup> (Sea Bindweed) had been supposed to be absent from West Kent (in so stating, however, the rare plant register had omitted reference to its being detected on the Isle of Grain in the late 1940s, but not afterwards). It now transpires that it is a West Kent plant after all, as BB in the course of a permitted survey on the MOD Yantlet range at Grain found on 28 July a good-sized colony within a strip of shingle/dune vegetation on an east-facing beach at TQ 88280 77610. It looks as though the location and habitat has some similarity to the nearest East Kent site, some 15km away, on an east-facing beach at Shellness, Sheppey.

*Cannabis sativa* (Hemp) has fewer casual records than in former times, particularly in the 1970s when refuse tips were conducted differently, so BW's Maidstone (TQ7555) sighting on 6 August was relatively unusual. This was on disturbed ground, possibly of bird seed origin, not a product of illegal cultivation. Its origin in the county has usually been from such sources or from Hemp seed fishing bait, as noted in Philp (2010), although it has also been observed as deriving from use of material originally grown for medical research purposes as manure.

*Carex echinata*<sup>R</sup> (Star Sedge) has a limited presence in Kent but thanks in particular to SL's researches, it is known to be more extensive than indicated by Philp (2010). It has for some time been undetected on the Folkestone Formation in West Kent, although FR knew it from the border of peaty ponds at 'Rose Wood', Ightham 1944-62. SL on 27 August found the sedge by the fourth pond south of the main road at Fish Ponds Wood, Ightham Common, TQ 5793 5541. FR's use of the name Rose Wood may have been an approximation; that wood is over 800m to the south east.

*Carex elongata*<sup>R</sup> (Elongated Sedge) had only one record in Philp (2010), but this overstates its scarcity, particularly in the light of discoveries by SL, who has now added a new hectad record between Scotney and Kilndown. On 12 August, he recorded c. 20 scattered tussocky plants in a small basin-shaped ghyll bordering the western edge of Kilndown Wood, TQ 69372 35487. This had steep sides and a wide flat floor, with a chalybeate spring at the junction of the Tunbridge Wells Sand and Wadhurst Clay Formations, producing a very wet alder carr with *Scirpus sylvaticus* (Wood Club-rush), *Carex remota* (Remote Sedge) and *Carex vesicaria*<sup>R</sup> (Bladder-sedge) about 120m from the vice county boundary, the River Bewl.



*Carex elongata*, 12 August 2017.  
Photo © Stephen Lemon

*Carex panicea*<sup>R</sup> (Carnation Sedge) has proved to be fairly elusive, although not as rare as might be supposed from Philp (2010). SL has been looking out for it since 2007 at Chiddingstone Old Clay Pits (Chiddingstone Nature Reserve) and is now able to confirm its presence. Several patches were recorded fruiting on 4 June in an area of flushed ground in the north-western corner of a clay pit at TQ 51112 47104. The cutting back of shading tree growth since 2007 and a more consistent annual cut and rake of

the sward since 2012, preventing a build-up of thatch and *Juncus* spp. domination, has presumably either resulted in resurrection from the seed-bank or enabled the sedge to become more noticeable.

*Carex x boenninghausiana* was found by the KBRG meeting on 10 May on the north bank of Furnace Pond, Cowden, TQ 4534 3995: a single waterside tussock of this hybrid sedge. One of the putative parents, *C. remota* (Remote Sedge), was close by and the other, *C. paniculata* (Greater Tussock-sedge), was in the general vicinity. The long inflorescence resembled the latter's to a degree, but with the spikelets well spaced out and a long bract at the lowermost spikelet, as with the former. The same hybrid, with parents nearby, was also noted on 17 June by SL at Angley Wood, TQ 76523 36816. This was in a dense area of *Scirpus sylvaticus* (Wood Club-rush) in alder carr, near a junction of streams. It had last been recorded here in 1957 during a KFC meeting.

*Chenopodium bonus-henricus*<sup>R</sup> (Good-King-Henry) is, it would seem, a very unfashionable plant, given the difficulty of putting together any current records for the rare plant register. BW, however, recorded it on 5 July at Maidstone, TQ 751 549, on disturbed ground around a new railway footbridge. There were other plants present which suggested a wildflower seed mix, although this species would not be a normal component of such mixes.

*Chenopodium vulvaria*<sup>R</sup> (Stinking Goosefoot) is an Endangered species in England, but present (although scarce) by Kent's north coast. To our current records, BB added on 28 July a sighting on Grain during a survey of MOD land: five or more plants on a patch of disturbed ground at a demolition site, TQ 87631 78155, with 30+ plants of *Chenopodium glaucum* (Oak-leaved Goosefoot), which favours similar habitats.

*Choisya ternata* (Mexican Orange) is an American evergreen garden shrub which has been well established in some Kent locations mentioned by Clement & Foster (1994), but the BSBI (non-KBRG) records almost all lack status details and may be no more than plants in gardens. It is possible for seedlings to appear outside, however, and BW noted on 1 October a small seedling by the river at Maidstone, TQ7556.

*Cordyline australis* (Cabbage-palm) pavement seedlings were recorded in metropolitan West Kent, where urban temperatures may assist survival (although see the vc15 report for instances elsewhere in Kent). On 8 April, GK noted a 35cm seedling in a crack in roadside concrete, close to the vice county boundary near the Horniman Museum. The KBRG Honor Oak meeting on 22 April found a couple of seedlings at Buckthorne Road, TQ 3624 7451, without an obvious parent nearby. More were found on the pavement outside 92 Grierson Road, TQ 3607 7432 where a large plant was present in the garden, one of the seedlings looking at least two years old.

***Crassula ovata* (Mill.) Druce (Jade plant)**, remarkably, was found by CR on 24 February in paving at the north (stub) end of Townley Road, Bexleyheath, TQ 49066 75229 by a closed restaurant opposite The Mall shopping centre. From its size and general appearance it had clearly been growing there since before the onset of winter, although normally of course a house plant, not a garden plant. There are comments on the internet claiming that the species has overwintered in Scotland grown in a pot with shelter, but this would appear to be the exception. CR surmises that the most likely explanation of how it got here is that a fragment broke off a plant bought from a market stall round the corner, and it took root. It is well known for its ease of propagation, even from stray leaves. It is possible that this is a first British record. There is a Cornish record for *Crassula sarmentosa*, which is a name sometimes used as synonymous with *C. ovata*, as in Clement & Foster (1994), although they cite an invalid name for the latter: the Cornish record may or may not be for the same species as this. It is, at any rate, a **first record for vc16, West Kent.**



*Crassula ovata*,  
24 February 2017.  
Photo © Chris Rose

*Cuscuta campestris* (Yellow Dodder) was noted by BW on 6 August as uninvited in his garden at Maidstone, TQ7555, parasitic on *Guizotia abyssinica* (Niger), both apparently deriving from birdseed. Also, on 19 August a KFC meeting found it in abundance, again on *Guizotia abyssinica*, but this time the latter had been sown to provide winter seed for birds, at Mill Farm, north west of Marden, TQ 7325 4546. Niger is imported as bird seed from India and other countries where *C. campestris* is known to grow as a crop contaminant. This is a sufficient problem that sterilisation is required before import of Niger to the USA and Canada. Although it is sometimes said that Niger imported to the UK is also sterilised, there appears to be some confusion on the part of seed retailers who believe that sterilisation is for the purpose of preventing Niger from germinating and becoming a nuisance, rather than what comes with the Niger. In any event, it is obvious from these finds of *C. campestris* that effective sterilisation is not undertaken.

*Cyrtomium fortunei* (Fortune's Holly-fern) is, as mentioned in Kent Botany 2016, becoming the most frequently naturalised Holly-fern with us. A further record was made by PA (confirmed by FJR), starting off the year on 1

January, with the discovery of a plant at Scadbury Park Nature Reserve, TQ 45887 69951, in humus over clay in woodland close to the ruins of Scadbury Manor, the nearest house being at least 100m away.

*Epilobium* hybrids were recorded by GK very much in accordance with the expectations one might form of the usual frequency of the different hybrids. The most common were *Epilobium x interjectum*, the cross between Broad-leaved and American Willowherbs (seen at Biggin Hill, Polhill and near Fordcombe on 22 July, 13 September and 15 October); and *Epilobium x vicinum*, the cross between Short-fruited and American Willowherbs (seen at Farningham Wood, near Horsmonden and near Brenchley, the first on 11 August and the others on 13 August). There were two sightings of *Epilobium x floridulum*, the cross between Hoary and American Willowherbs: at Chipstead Lakes on 25 July and Leybourne Lakes on 2 August. Then singletons were noted of four other taxa, none especially rare although not recorded frequently on a national basis: *Epilobium x limosum* (the cross between Hoary and Broad-leaved Willowherbs) at Kemsing on 29 July; *Epilobium x dacicum* (the cross between Hoary and Short-fruited Willowherbs) by Farningham Wood on 11 August; *Epilobium x mentiens* (the cross between Square-stalked and American Willowherbs) and *Epilobium x palatinum* (the cross between Hoary and Square-stalked Willowherbs), both at Nepicar on 11 August. As usual, the most frequent partner in these crosses is *Epilobium ciliatum* (American Willowherb).

*Epipactis helleborine* var. *chlorantha* Verm. (Broad-leaved Helleborine), sometimes treated as var. *viridiflora*, is an unusual variety of this orchid which lacks anthocyanin pigment, so that the normal purple tinge to the plant is missing. DJ says that until 2017 he had only been aware of one Kent occurrence. However, by a remarkable coincidence, it was found on consecutive days in West Kent. DS on 17 July found a plant at Dry Hill, Sevenoaks, TQ 50029 55207, where there are well over 100 spikes of the normal plant in most years. Then on 18 July, three or four such plants were found by FOH amongst a large group (50+) of helleborines well known to him on Hayes Common, TQ 411 649.

***Epipactis helleborine* var. *chlorantha*,  
18 July 2017. Photo © Fred O'Hare**



*Epipactis purpurata* f. *chlorophylla* (Seeland) P. Delforge (Violet Helleborine) is a green coloured form similar to that mentioned above for *Epipactis helleborine*, and there has been report of a specimen three feet high near Vigo village. This was investigated on 31 July by DS who failed to find it, but he located two smaller plants, lacking the usual purple colouration in both flowers and stems, at Whitehorse Wood, TQ6561. This form does not appear to have been recorded before in Kent, except for a 2009 sighting by DJ at Trosley.



***Epipactis purpurata* var. *chlorophylla*,  
31 July 2017. Photo © David Steere**

*Euphorbia characias* subsp. *veneta* (Mediterranean Spurge) appears to be less common, both in and out of gardens, than the usual subsp. *characias* and is distinguished by the inflorescences (technically cyathia) having nectar glands which are yellowish with long points, not reddish-brown with short points. Several plants were found by GK on 13 April on open, sandy grassland north of Leybourne Wood, TQ6858, which suggests that they were spreading here.

*Euphorbia maculata* (Spotted Spurge), a prostrate weedy introduction first reported for the county in Kent Botany 2016, was recorded by MR on 4 August at Bedonwell Road, West Heath, TQ4877.

***Euphorbia myrsinites* (Broad-leaved Glaucous-spurge)** is a southern European or central Asian species grown in gardens for the waxy, scale-like, blue-grey leaves. It was recorded by BW on 9 September 2016 as a seedling garden escape between paving slabs, in north-west Maidstone, TQ7356. Its

West Kent records in the BSBI database lack any assurance that they were present outside gardens or planted borders at all, so that this is **the first clearly stated wild/escaped record for vc16 West Kent**, followed by RMB's find on 1 July 2017 of a small seedling in front of a garden wall, 17 Brackendene, Joyden's Wood, TQ5171, the cultivated parent being some 2m away, in the garden.

*Filago minima*<sup>R</sup> (Small Cudweed) has a distribution in Kent which normally tracks the sands of the Folkestone Formation in a narrow strip across the county. However, some anomalous sites were recorded in 2017 – sand bunkers on disused golf courses, suggesting that their contents were originally sourced from quarries where this species was present. On 5 July, GK found six plants on an old bunker at Beckenham Place Park, whose golf course was closed at the end of 2016. On 13 August, GK & SK came across numerous plants in bunkers on the former Moatlands golf course between Brenchley and Paddock Wood, TQ 6739 4302 and TQ 6731 4293; this closed in October 2008.

*Galanthus nivalis* x *plicatus* (the hybrid between Snowdrop and Pleated Snowdrop) was noted by BW on 4 March, as a garden throw-out growing at the edge of woodland near Barming, TQ7255.

***Galanthus plicatus* subsp. *plicatus* (Pleated Snowdrop)** is a little more common than subsp. *byzantinus* as a recorded escape, but neither subspecies is frequently recorded, the first Kentish record for the latter being given in Kent Botany 2015. Now confirmed subsp. *plicatus* has been found, by GK & SK on 12 March, two or three clumps at edge of woodland between Crouch and Platt, TQ 620 561, associated with garden refuse, which was presumably their origin. Identification was determined by the BSBI referee, AD, who stated that the leaves were much greener than typical variants of this taxon (which are somewhat glaucous). This appears to be **a first record of this subspecies for West Kent, vc16**, and Kent generally, although records of plain *Galanthus plicatus* may very well have been subsp. *plicatus*.

***Galanthus plicatus* subsp. *plicatus*, 12 March 2017. Photo © Geoffrey Kitchener**



*Geranium macrorrhizum* (Rock Crane's-bill) is occasionally recorded as an escape, but RMB's record on 23 May of a plant of 'Ingwersen's Variety' rooted in moss on roof of the Olive Seal church hall, Eynsford, TQ5465 puts a new perspective on what may be achieved in escaping. There is a good patch growing on the ground in front of the hall as a potential seed source and perhaps the plant is using the same strategy of dispersal as may in southern Europe enable it to reach rock face crevices.

*Gnaphalium luteoalbum*<sup>R</sup> (Jersey Cudweed) in metropolitan West Kent has received the attention of MR in documenting its expansion. He made ten records over the period July-August in the Bexleyheath / Welling / West Heath areas (TQ4876, TQ4776, TQ4877) generally as a street weed or in paved front gardens (or, in the case of the roundabout at Long Lane and Pickford Lane, Bexleyheath, which is surfaced with pavers, a habitat which combines both characteristics).

***Gnaphalium luteoalbum*, at Okehampton Crescent, Welling, 14 August 2017. Photo © Mike Robinson**



*Hibiscus syriacus* L. (**Syrian Ketmia**) is said by Clement & Foster (1994) to have been observed in the British Isles only as a garden relic, with self-sown seedlings being restricted to gardens. With virtually all BSBI database records omitting any details of status, it is unclear whether any previous vc16 records have actually been noted outside gardens, but the following records were:

- Havisham Rd, Chalk, Gravesend, TQ 6727 7299, where numerous small shoots were present along the pavement at the base of a tall garden wall, a cultivated shrub growing in the garden behind, seen by GK & SK on 2 May ; and
- Brangbourne Road, Beckenham, TQ 3822 7134, where a seedling grew in the street gutter; a cultivated plant being present some metres away in a neighbouring garden, seen by GK on 7 July.

So these appear to be **the first vc16 (West Kent) records** of unequivocal status.

### **Hieracium (Hawkweed) recording in Kent**

Some three dozen species in this difficult genus are mentioned in Philp (2010), although not all were recorded in the survey period covered by that work. Hawkweeds were studied carefully for that survey, and it was possible to take into account the revised treatment of the genus introduced by Sell & Murrell (2006). Nevertheless, it cannot be claimed that Philp (2010) will have captured all the hawkweeds of Kent, and some records were known in any event to warrant re-evaluation. An initial survey was undertaken in June and July 2017 by MS, as part of preparation for a potential future account of Hawkweeds in south-east England, in part of which he was joined by GK, who proposed some sites for inclusion and also contributed some independent gatherings for identification by MS. Most determinations of species were subsequently reviewed by DMC. The following records are from West Kent; two East Kent sightings with previous records are not dealt with.

*Hieracium argillaceum* (Southern Hawkweed) is a species which, before Sell & Murrell (2006), was with others recorded under a different name; there are three records in Philp (2010). The 2017 survey found it in six places, four of them on lanesides of the chartlands north of the Greensand ridge, between Westerham and Sevenoaks; one on the chalk at Polhill, Dunton Green and the other on acid terrain at Joyden's Wood.

*Hieracium calcaricola* (Toothed Hawkweed) has no Kent records since 1991, but following up an old record for *Hieracium* agg. at Hollows Wood, Shoreham Lane, MS & GK found it there on a woodland roadside (TQ 49247 63215).

*Hieracium cantianum* (Kent Hawkweed). Within its recognised Kent range on the Tunbridge Wells Sand Formation, MS found 10-20 plants by Park Lane near Bedgebury Pinetum (TQ 72198 33692).

*Hieracium cheriense* (Cher Hawkweed) was found in seven locations. Most were, as with *H. argillaceum*, related to the Greensand ridge and lanes to the north, including Toy's Hill, Brasted Chart and Whitley Forest, but there were also plants at Joyden's Wood and Beacon Hill country park.

*Hieracium consociatum* (Sociable Hawkweed) has one record in Philp (2010), from near Brasted, and a further one was added by GK by the B2042 near Whitley Forest, TQ 5057 5363.

*Hieracium exotericum* (Jordan's Hawkweed) was seen by MS & GK by a lane through Great Sandhurst Wood, Kipping's Cross, TQ 63754 38733. Plants similar to this species present difficulties of naming, and *Hieracium exotericum* agg. was the name given to finds in three other locations: Toy's Hill, Platt and (in thousands) Farningham.

*Hieracium grandidens* (Grand-toothed Hawkweed) was found flourishing on top of the ragstone south-eastern wall around Knole House, TQ 5419 5390; it is not the only species on the walls' circuit.

*Hieracium lepiduloides* (Irregular-toothed Hawkweed) is the name given in 2015 to what used to be called *Hieracium lepidulum* from a Swedish species which is now regarded as distinct. In the present survey, it was found by MS at Goodley Stock Road, Westerham, as also *H. argillaceum* (above). The location appears to be that of the sole record of *Hieracium surrejanum* (Surrey Hawkweed) in Philp (2010) – but that record should be treated as incorrect.

*Hieracium sabaudum* (Autumn Hawkweed), unsurprisingly, was found to be frequent, with 11 records, including some unusually robust plants at Farningham Wood, looking very different from roadside plants usually encountered.

*Hieracium trichocaulon* (Hairy-stemmed Hawkweed) was recorded at Joyden's Wood, Pembury and Shoreham Lane, Riverhead. This last site was the station for *Hieracium cambricogothicum* mentioned in Philp (2010), but material in **MNE** so labelled has since been determined as *H. trichocaulon* (see Kent Botany 2014).

***Inula racemosa* Hook. f. (Pushkarmool)** was found by GK & SK on 13 August to be present in several places along the road between Brenchley and Castle Hill, TQ6842, where it runs between fields east of the junction with Knowle Road. This species is difficult to miss, being showy in flower and over 2m high, and it spreads readily by seed, just as *Inula helenium* (Elecampagne); so it is perhaps surprising that this appears to be a first British record – hence, obviously, a **first for vc16, West Kent**. It is a native of India, and seldom grown in UK gardens, in comparison with other *Inula* species.

***Inula racemosa*, 13 August 2017.**  
Photo © Sarah Kitchener

*Ipomoea purpurea* (Common Morning-glory) was noted by BW on 1 October at Maidstone, TQ7555, as a garden escape; this has not been recorded recently in West Kent, other than where it may have been in gardens, its behaviour in the British Isles being considerably less invasive than in other climates.

*Isatis tinctoria* (Woad) was seen by CB on 2 June at Harmony Street, north of Toad Rock Retreat, Rusthall, TQ 5681 3966, where it had self-sown on the roadside below a retaining wall above which it had presumably been originally planted (before 2015, to judge from the date of Google Earth street view imagery, on which an overhanging plant may be seen).

*Lactuca saligna*<sup>R</sup> (Least Lettuce), an Endangered species in England with one colony in East Sussex, another in Essex and two in Kent, has been found by BB on 17 August, in the course of a survey of MOD land, to be present in a further monad at Grain marshes, east of the known population along the sea wall here. Three plants were recorded at TQ 87558 78286, by Cocksleshell Beach.



***Lathyrus heterophyllus*, August 2017.**  
Photo © Rodney Burton

***Lathyrus heterophyllus* (Norfolk Everlasting-pea)** has only a handful of records nationally, including from West Norfolk, where it was first recorded in the British Isles, being a native of south-west Europe. It has similarities to both *Lathyrus latifolius* (Broad-leaved Everlasting-pea) and *Lathyrus sylvestris* (Narrow-leaved Everlasting-pea): its flower size is within the range of *L. sylvestris*, and the flowers have something of that species' greenish-pink hue but are more brightly coloured; its stipules are the larger size of *L. latifolius*. It was recorded by RMB (confirmed by DP) on 22 July on the east side of the A225 south of the M26, far from houses, TQ5258; it could not be re-found on 31 August. North east of this discovery on 2 August he also found several plants on the bank by platform 2 of Otford station, TQ5359. Both finds

relate to var. *unijugus*, which has leaflets in pairs and is the variety to which other British specimens relate. Its origin is mysterious: it is not normally cultivated, at least under this name, and it could easily be overlooked. **This is a first record for vc16, West Kent.**

*Malcolmia maritima* (Virginia Stock), a widely grown annual from the Balkans, was noted by DS on 16 April as an escape growing in dry, sandy soil on the road side of a garden hedge at Speldhurst, TQ5541, with no sign of the species in that garden. Surprisingly, there is only one other West Kent record in the BSBI database, but with no indication of status so as to show that it was outside a garden, although the species appears from Stace et al. (2003) to have been recorded before in vc16.

***Oenothera x britannica* (the hybrid between Small-flowered and Large-flowered Evening-primroses)** was recorded by BW on disturbed ground at Maidstone, TQ7555, on 11 July. Our tools for identifying such plants are much improved by the publication of the BSBI handbook (Murphy, 2016), which the recorder followed. Some taxonomists sink the parent *O. cambrica* (Small-flowered Evening-primrose) into *O. biennis* (Common Evening-primrose), in which case this cross would be treated as included within *O. x fallax*. If one does not follow that course, however, then this record may be regarded as **a first one for West Kent.**

*Oreopteris limbosperma* <sup>R</sup> (Lemon-scented Fern) was characterised by Philp (2010) as showing a serious decline, with only eight Wealden sites left, and its former presence on the sands of the Folkestone Formation gone. Even making records in the Weald is now not straightforward, but SL reported the fern as present at Ashour Wood, Bidborough (on 11 March in an open area of woodland track west of a stream, TQ 5457 4379); in Angley Wood (on 17 June in various locations along tracks in both TQ7536 and TQ7636); and in Kilndown Wood (on 12 August, along a woodland ditch at TQ 69281 35010 to TQ 69307 35035, and at TQ 69339 35071). His records for Chingley Wood (where it was abundant in various locations within TQ6833 and TQ6933) follow up those made by JP in 2012. The KBRG Bedgebury meeting on 17 August also found plants at the margin of two wide rides at TQ 7252 3247, TQ 7276 3237 and TQ 7288 3239.

*Orobanche crenata* (Bean Broomrape) still persists in West Kent, attacking *Vicia faba* (Broad Bean) crops in the same general area, but not necessarily the same fields. It was seen at the KBRG meeting on 22 August, an infestation on a broad bean crop south of Meopham, TQ 644 641; and by DN on 24 July near Holly Hill, where there were over 50 plants, exhibiting a range between two colour forms, on the west and north edges of a bean crop from TQ 66718 62612 to TQ 66809 62600 (also seen in this area on 18 July by AG, LR & OL).

*Orobanche crenata*, 24 July 2017. Photos © Dawn Nelson



*Orobanche hederæ*<sup>R</sup> (Ivy Broomrape) was seen by RMB north west of Erith, TQ5078, and although the species was already known recently from that monad, one of his records (on 8 July, by Corinthian Manor Way, TQ 5089 7876) was unusual in that the plant was not obviously related to any host plant and no *Hedera* was present. He also saw the Broomrape on 27 July on variegated ivy, south west of Bluewater at TQ 57249 73159. Both this last record and the next are in the general vicinity of Stone, which has held scattered populations for some years. An extension into TQ67 is a find by GK & SK on 1 March near Swanscombe of a linear colony of hundreds of spikes on *Hedera helix* sens. str. (Common Ivy) along a footpath beginning as Pilgrims Road, between A226 and Manor Road, between c. TQ 6063 7503 and TQ 6052 7493. This follows what was presumably the original land level before chalk was quarried away alongside. Well outside the species' normal Kent distribution, however, was SL's discovery on 12 August of five dead flower spikes growing through a 2m carpet of *Hedera helix* sens. str. at Rogers Rough Road, Kildown, TQ 70440 34957; a further sighting was also made to the east in the same monad.

*Paulownia tomentosa* (Foxglove-tree) will, if given a chance, reach 12m high in our climate. Unlikely to achieve this, however, was an 8 cm seedling seen on an LNHS meeting (per RMB) on 19 August at Lesnes Abbey, TQ 47919 78780, some 60m away from the parent tree. This seedling probably does not have a future as any trees which attempt to grow on the ruins are likely to be weeded away. The BSBI database holds one other vc16 record, but it is possible that this was no more than a garden planting, so the current record falls to be treated as a **first record for vc16, West Kent**.

*Persicaria capitata* (Pink-headed Persicaria), an Asian ornamental with some of the spreading ability possessed by other *Persicaria* species, was recorded by DS on 16 March at Hartley Post Office, TQ 60463 67572, where it had self seeded in the cracks between a vertical wall of the Post Office and a tarmac path alongside Culvey Close. It has since been wiped out with weedkiller.

*Petrorhagia saxifraga* (Tunicflower) is a rock garden plant with a *Gypsophila*-like appearance, and it was noted by RMB on 8 July on the grass between pavement and road between 42 and 44 Saddlers Park, Eynsford, TQ 539 652. There were no other aliens there and none of this species in nearby gardens, but it must be taken to be a garden escape. This was a decidedly casual record, the plant being gone within a month, but is apparently a **first record for vc16, West Kent**.

*Portulaca oleracea* (Common Purslane), a frost-tender succulent weed which is not so common at all despite the English name, was seen by MR on 7 July, a few plants at Abbott's Walk, West Heath.

*Portulaca oleracea*, 7 July 2017.  
Photo © Mike Robinson



*Rosa x toddiae* (the hybrid between Dog-rose and Small-flowered Sweet-briar) was recorded by GK & SK on 13 September at the Polhill Bank KWT reserve, TQ5060. Both parents were present and the apple-scented glands of *R. micrantha* were much diluted in the hybrid, through the effect of *R. canina*, being sparsely present on the pedicels and not at all

on the hips; the leaves had a degree of intermediacy, perhaps tending towards those of *R. canina*, but with pubescence below probably derived from *R. micrantha*.

*Rumex* hybrids recorded, in addition to the ubiquitous *Rumex x pratensis*, were:

- *Rumex x abortivus* (the cross between Clustered and Broad-leaved Docks), found by GK on 31 July with the parents near a stream north of Sevenoaks, TQ 5283 5783;

- *Rumex x sagorskii* (the cross between Curled and Wood Docks), seen by GK on 24 October at Nepicar, TQ 627 583; and by GK & SK on 11 September near Crockham Hill, TQ 456 503, both records being with the parents at the edge of grassy fields (a marginal habitat characteristic of the *R. sanguineus* (Wood Dock) parent);
- *Rumex x schulzei* (the cross between Curled and Clustered Docks), encountered by GK & SK growing with the parents by a ditch in Medway valley pasture south east of Penshurst, TQ 535 420 (the damp habitat being characteristic of the *R. conglomeratus* (Clustered Dock) parent).

*Ruppia maritima*<sup>R</sup> (Beaked Tasselweed), now Near Threatened in England, was recorded by BB in the course of a survey of MOD land on Grain, occasional in a brackish coastal waterbody, TQ 86556 78489.



*Sedum hispanicum*, 19 February 2017 and Summer 2016. Photos © Mike Robinson

***Sedum hispanicum* L. (Spanish Stonecrop)** was found by MR in the Belvedere/Erith area, growing in quantity beside a footpath leading from Norman Road North to the Thames Path, c. TQ 497 805, in Summer 2016, but given closer attention by him later on 14 February. Photos were sent to RS, the BSBI Sedum referee, who confirmed them as this species and commented: "Despite its name, it grows in the Eastern Mediterranean (not Spain). The 6-7 partite flowers are a telling characteristic. Most books say *S. hispanicum* is perennial but this is not so. Most plants are biennial but because it has the ability to germinate both in autumn and spring, colonies give the impression of everlasting plants. In fact it acts as a winter annual in the driest parts of its range but with ample irrigation quickly forms a permanent colony. The species has previously been reported as a hemiagriophyte often growing on stone walls and as it is regularly offered by trade outlets, it does escape. It grows in far harsher spots in its natural habitat compared to the UK so its existence isn't surprising." The find was featured in the *Sedum Society Newsletter* (March 2017) and is a **first record for vc16, West Kent**.

***Sibthorpia europaea*<sup>R</sup> (Cornish Moneywort)** is a small, creeping perennial, which grows in damp acidic habitats in south-west England, Wales and Ireland and in the Channel Islands. The only exception to this distribution has been the Sussex Weald, where it may be regarded as part of the western Atlantic flora which has persisted in appropriate microhabitats. It has never been known in Kent other than, for a while, a (probably introduced) lawn weed. On 13 August, SL discovered it to be plentiful in Chingley Wood, south west of Kilndown, from TQ 69147 34163 to TQ 69107 34226. The site comprises acid woodland managed as Sweet Chestnut coppice, on Tunbridge Wells Sand Formation. The *Sibthorpia* was confined to a 90 or 100 metre stretch of a wayleave area below power lines, which had been kept open by mowing, where it flowered abundantly, in places forming sprawling patches up to a couple of metres across, particularly on barer soil around vehicle tracks. Despite the Sweet Chestnut plantings, Chingley Wood appears to be ancient woodland, the wood name going at least back to the first half of the sixteenth century and woodland being depicted here in the 1797 Ordnance Survey drawings. A factor against native status for the *Sibthorpia* is its reliance on a habitat maintained artificially and which presumably did not exist before the power lines; the species could not be found in flushed streamside habitats in the wood which might be supposed to afford a more 'natural'





environment, nor in tracks leading to them. On the other hand, introduction on equipment used in the maintenance of the power lines and their associated wayleave area, would require seed transmission from one of the very few Sussex sites, or otherwise from as far away as Somerset. This is not impossible, although fairly unlikely. Disregarding the earlier lawn weed occurrence, this is **a first record for West Kent, vc16**, and the species is being added to the rare plant register.

*Sibthorpia europaea*, August 2017. Photos © Stephen Lemon

*Silene noctiflora*<sup>R</sup> (Night-flowering Catchfly) was seen by an LNHS meeting (per RMB), which came across one plant in a flower bed at Lesnes Abbey, TQ 4786 7879, reported to have been present in the area before creation of the bed.

*Spiranthes spiralis*<sup>R</sup> (Autumn Lady's-tresses) was recorded by DC on 20 August at Grain, TQ8876, near the picnic tables next to the coast car park, the first record for the Isle of Grain and hectad TQ87.

*Teucrium botrys*<sup>R</sup> (Cut-leaved Germander) has in Kent long been restricted to a single site, in a chalk pit near Upper Halling, TQ6965, from which recent confirmed records have been lacking. However, a single plant was found on 18 July by LR after prolonged search by AG, LR & OL. It was

growing on bare chalk, which constituted over 80% of the surface area of the 1m square within which it was located. Amongst its immediate associates were *Campanula glomerata*<sup>R</sup> (Clustered Bellflower), *Fragaria vesca*<sup>R</sup> (Wild Strawberry) and, within 10m, there was also *Clinopodium acinos*<sup>R</sup> (Basil Thyme). It is worrying that this species is now only just hanging on (a search in 2016 failed to find any plants); and the site could benefit, not just from some scrub clearance, but also from ground disturbance to encourage germination.

*Thelypteris palustris*<sup>R</sup> (Marsh Fern) has very few Kent sites indeed and over the years attempts have been made to re-find it at Angley Wood, Cranbrook, without success. From research undertaken by SL it was recorded there in 1955 (Rose, 1956) by FR & DTS, and DTS recalls that the patch was then 65 yards in circumference with a range of associated species indicating that fairly open conditions existed. The latest subsequent record appears to have been by a KFC meeting in 1996 when JP showed it after a trek through murky undergrowth and treacherous mud (Badmin, 1997). It appears that this area, Tuckers Pond, has since become *Alnus glutinosa* (Alder) woodland with an understory dominated by plants such as *Scirpus sylvaticus* (Wood Club-rush). However, the fern has been re-found by SL on 17 June by a junction of streams in the wood at TQ 76489 36834. There were c. 60 small- to medium-sized fronds, confined to a 6 x 5m area of damp ground less dominated by *Scirpus sylvaticus*: a shaded location but adjacent to an opening in the canopy.

*Tilia cordata*<sup>R</sup> (Small-leaved Lime) is in Kent a rare constituent of ancient woodland, but there are occasional plantings although other Limes have been more favoured. A discovery by JP on 17 July at Paxwood guide camp, Rowhill, TQ5271, raises the question of status: a relict coppice stool, estimated at least 100 years old. Although much fragmented, the woodland here is part of Local Wildlife Site DA09, which is considered to be ancient broadleaved woodland similar in character to nearby Joyden's Wood, mainly on dry acid soils derived from Tertiary pebbles and sand, with some clay.

*Trichomanes speciosum*<sup>R</sup> (Killarney Fern) is described in Kent Botany 2016 as new to Kent from finds of gametophytes in three localities by SL. To these he added a discovery on 17 April, at Oldbury Hill SSSI, on a wooded scarp slope facing north east with outcropping rocks of Oldbury Stone from the Folkestone Formation that incorporate possible Palaeolithic rock shelters. Gametophytes were observed at TQ 584 565, where the rock face held a large cave at the southern end (possibly excavated in the Palaeolithic era) and showed honeycomb weathering along the lower half. There were small broken patches of gametophyte (pure patches no more than 1-2cm wide) on the northern half of the rock face in dark sheltered narrow crevices below overhanging rocks and further around the rock face in a wider crevice. Also at TQ 583 565 a low linear rock face with a small cave contained a large, almost pure, mat of gametophytes covering a couple of square feet of the back wall, c. 2m in from entrance, with sparse amounts of the moss *Pseudotaxiphyllum elegans* and the liverwort *Calypogeia arguta* mixed with it. The presence of 'Atlantic' bryophytes echoes the situation at the other, Wealden sites, and

is likely to reflect the existence of a sheltered microclimate which has enabled the very long-term survival of species from a wetter climate era. *Trichomanes* has not been found on any of the Kent sandrocks which have been subject to historic quarrying (although it is close to rocks which have been worked on at Hungershall and Redleaf), creating new surfaces which will have post-dated a wetter climate era; but Paleolithic excavations will have amply preceded and do not appear to be shunned by the gametophytes. Sandrock surfaces here have a honeycombed weathering, which in conjunction with the presence of *Trichomanes* may well indicate no significant change since the last ice age. The find is markedly disjunct from the earlier discoveries in the south west of the county, where the gametophytes grow on Ardingley sandstone, but the sandrock at Oldbury, although part of a different geological formation, appears to possess the same qualities of porosity. It is a layer of about 15 ft depth, and the harder Oldbury stone immediately above, which is also exposed here, does not seem so suitable although it facilitated cave formation from the softer rock beneath.

*Trifolium subterraneum* (Subterranean Clover) has a very distinctive distribution, as mapped in Philp (2010), with some coastal occurrences on gravelly or sandy soils, and a swathe across the county following the sands of the Folkestone Formation, although petering out in West Kent. RMB found that it is possible to extend that geologically related distribution, by virtue of his discovery on 11 June of many plants in the grass in front of the old Sevenoaks Hospital building, TQ 5318 5662, by a semicircle of paving. This is a new hectad (TQ55) record.

*Umbilicus rupestris*<sup>R</sup> (Navelwort) was found by MR on 9 September at Erith, TQ 50912 78036, a small population on a retaining wall beside Frazer Road opposite commercial premises. It is a location where it is difficult to conceive of intentional planting and the origin of the species here is mysterious, as with the Sheerness sighting given in the East Kent records above.

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