

KENT

BOTANY 2018

The logo for the Kent Botanical Recording Group, featuring a small image of a plant with white flowers and green leaves. The text "Kent Botanical Recording Group" is overlaid on the image in a white, sans-serif font.

Kent
Botanical
Recording
Group

Kent Botany 2018

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Compiled by Geoffrey Kitchener
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Front cover:

Chenopodium foliosum (Leafy Goosefoot) at Upchurch.
Photo 17 October 2018, © David Steere.

Introduction

Kent Botany 2018 summarises current botanical developments in Kent, setting out the most interesting of many thousands of records contributed in 2018 by resident and visiting botanists. It is issued primarily as a web version, maintained on the Kent page of the Botanical Society of Britain & Ireland (BSBI) website, <https://bsbi.org/kent>, and this should be regarded as the definitive version. The text, substantially the same, is also published as hard copy within the Kent Field Club (KFC) Bulletin.

Highlights

Highlights for 2018 included the following.

- *Alopecurus x plettkei*, a hybrid grass carrying the genes of *Alopecurus bulbosus*^R (Bulbous Foxtail), was found to be widespread over the north Kent grazing marshes.
- The sole Kentish location for putative native *Arum italicum* subsp. *neglectum* (Italian Lords-and-Ladies), last noted in the 1960s, was rediscovered.
- *Erophila majuscula* (Hairy Whitlowgrass), first found in Kent (and Britain) in 1724, and hardly recorded since in the county, has been reported from Lullingstone and Orpington.
- Endangered species *Lactuca saligna*^R (Least Lettuce) has been credited with a previously unknown population at Allhallows Marshes.
- *Turritis glabra* (Tower Mustard), last seen in Kent in 1964, has been found flourishing by the ruins of Lesnes Abbey.

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

Recording in Kent, 2018

The Kent Botanical Recording Group (KBRG) had 134 members as at 31 December 2018, a net increase of ten over the year. The Group's recording strategy continued to be to seek good overall county coverage for the current ten-year recording cycle while trying to fill in gaps on the maps which will go into the new national atlas (Atlas 2020), being planned by the BSBI to cover plant distribution up to the end of 2019.

By 31 December 2018, over 43,000 records for that year had been added to the county database and passed on to the BSBI. This is less than the totals for each of the years from 2014 onwards, but more than the totals for each of the years from 2010 to 2013. Further 2018 records have arrived since and equally there have been records received which relate to earlier years. Datasets of woodland recording by Philip Sansum (over 7,000 records) and old records assembled by Rodney Burton (c.700) were passed on to the BSBI without going through the county database, in order to resolve compatibility issues. It remains difficult to reconcile totals on the county

database with what the BSBI's database gives as having received from it for 2010-18 (viz. 389,600 records excluding 'duplicates', which comprise some records that are not true duplicates). The total over nine seasons of networked recording, however, well exceeds the 250,000 or so records over 15 years of solo recording which went into Philp (2010).

KBRG has held 16 field meetings during 2018, including sessions held jointly with the BSBI, KFC, Surrey Botanical Society and Sussex Botanical Recording Society. Themed meetings to encourage identification skills were held on glassworts, grasses and willows. Other meetings set out to target locations and/or species where further records were needed for county coverage and for Atlas 2020. All were reported in the Group's October 2018 newsletter, published at <https://bsbi.org/kent>.

Most recording has been by individuals, rather than meetings, and surveys by KBRG members have uncovered some interesting habitats. A survey by Stephen Lemon for Kent Wildlife Trust (KWT) in the Kings Hill area provided records for a calcicolous relict heathland community, exceptional in Kent, where lime-hating and lime-loving plants were growing side by side. Repeated visits by Liam Rooney and Danny Chesterman to a site near Oare Marshes which had been subject to soil and rubble deposition and movement produced records of a nature that used to be found at refuse tips before waste management controls. An area of dry, sandy grassland at Eureka Park, Ashford known for its good native flora was found to be harbouring yet more rare sand specialities when scrutinised on independent visits by Danny Chesterman and Sue Buckingham. Inaccessible islands in the Medway estuary, subject to strong tidal influence, were visited by Chris Cook, who took his sailing boat out twice, once overnight, to make many records of saltmarsh plants; it is a very long time since a botanist visited.

Kent rare plant register (RPR)

The RPR species accounts held on the BSBI webpage were updated in February 2018 to take account of 2017 records. New accounts were supplied to KBRG members on a consultation basis in March 2018 so as to complete Part O (which contains some important Kent plants under *Ophrys*, *Orchis* and *Orobanche*) and to begin Part P, as far as *Polygala*. The list of RPR plants was reissued and will be extended in the light of 2018 recording so as to include newly discovered (or rediscovered) *Arum italicum* subsp. *neglectum*^R (Italian Lords-and-Ladies); *Erophila majuscula*^R (Hairy Whitlowgrass); and *Turritis glabra*^R (Tower Mustard). Out of the records for 2018 submitted before year end, there were 1,006 representing 185 different taxa from the total RPR list of 329 plants, including recent additions to the list.

We extended our knowledge of the distribution of RPR species with a number of discoveries which were exciting and unexpected. *Anagallis tenella*^R (Bog Pimpernel), found by Jackie Langton by a chalk stream near Charing, could not have been predicted. *Carex elata*^R (Tufted-sedge), discovered by Lesley Mason near Smarden, is far from the only other Kent records. *Eleocharis uniglumis*^R (Slender Spike-rush), spotted by Stephen Lemon at Dungeness, is remote from all other recent occurrences, but with a twist that the sole historic record for the area may well be a mis-identification. Some finds may have been prompted by the year's weather: the long dry spell in summer will have increased draw-down in habitats subject to fluctuating water levels, perhaps contributing to the number of records of *Rumex maritimus*^R (Golden Dock) and its hybrids. One surprise which we did not see coming was that the former arable weed *Lithospermum arvense*^R (Field Gromwell) has had a reversal of fortunes and is now a specialist crop in its own right, whose seeds yield oil used in health food supplements. So the odd plant of *L. arvense* can still be a source of botanical enthusiasm, but a field full may be greeted with indifference.

Recording in Kent, 2019

2019 is the final year in the current date class, a ten year period used to compare with previous periods for evidence of trends in changes in plant distribution. It is also the last year of gathering records for the BSBI's Atlas 2020, which will collate records over the 20 year period since the last Atlas. This means that recording in 2019 is best directed towards finding plants which have not been seen in a 10km square since 2000 (10km square lists can be obtained from <https://database.bsbi.org/>), or towards visiting areas which have received limited botanical attention from 2000 onwards.

Plant records: selection criteria and recorders

Kent Botany 2018 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, reaching northwest into London as far as Deptford. The vice county boundaries may be viewed at Cucaera.co.uk.

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

Nomenclature follows Stace (2010).

All dates given in the records are for 2018, unless otherwise indicated.

Recorders, referees and other persons mentioned in reports

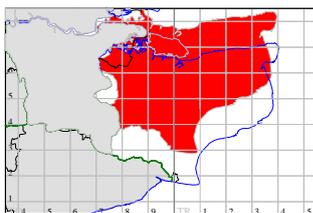
ACL Alan Leslie	DP Diana Poulton	LS L. Simmons	RL Richard Lansdown
AF Alan Ford	DS David Steere	MC Max Coleman	RMB Rodney Burton
AW Tony Witts	EGP Eric Philp	MF Michael Fray	SB Sue Buckingham
AY Andrew Young	GH George Hounsome	MH Mark Hows	SC Steve Coates
BS Barry Stewart	GK Geoffrey Kitchener	ML Mel Lloyd	SK Sarah Kitchener
BW Brian Woodhams	HS Heather Silk	MP Mike Porter	SL Stephen Lemon
CC Chris Cook	IH Ian Holt	MPi Matthew Pickard	SP Sue Poyser
CR Chris Rose	JL Jackie Langton	MS Mike Shaw	TB Tristan Boulton
DC Danny Chesterman	JP Joyce Pitt	OL Owen Leyshon	TCGR Tim Rich
DG Doug Grant	JW Janet Whitman	PG Phil Green	
DM Daphne Mills	LM Lesley Mason	PS Paul Stanley	
DMC David McCosh	LR Liam Rooney	PW Phil Williams	

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 & Ireland (formerly Botanical Society of the British Isles)	LNHS = London Natural History Society
cv. = cultivar	NNR = National Nature Reserve
det. = [identity] determined by	Plant records which are marked ^R represent plants on the current draft Kent rare plant register list.
KBRG = Kent Botanical Recording Group	RSPB = The Royal Society for the Protection of Birds
KFC = Kent Field Club	s.s. = <i>sensu stricto</i> , in the strict or narrow sense of the plant name
KWT = Kent Wildlife Trust	vc = vice county

Plant records for East Kent (vice county 15)



Abutilon theophrasti (Velvetleaf) has various sources of introduction, of which bird-seed may be the most relevant to its discovery by LR and DC on 16 July, one plant on dumped soil near Oare Marshes, TR 0089 6411, in former gravel workings. This site has contributed many records to this report and has some of the floral characteristics of refuse tips in the days when their manner of operation was not so tightly regulated. *A. theophrasti* has not otherwise been reported in the county for 17 years and this is only the third East Kent record.

Agrostis vinealis^R (Brown Bent) has been sought by us on heathland or dry sandy grassland and is likely to be materially under-recorded in the county. Its discovery by TCGR on 29 August at Dover, TR3242, an area of chalk geology, was a surprise. The recorder was understandably expecting *Agrostis capillaris* (Common Bent) and concluded that here it must have been a relict from lawns: it is said to make a reasonable drought-resistant lawn grass.

Alopecurus x plettkei (*A. bulbosus* x *geniculatus*) in Kent

Alopecurus x plettkei, the hybrid between *Alopecurus bulbosus*^R (Bulbous Foxtail) and *Alopecurus geniculatus* (Marsh Foxtail), has until now only been recorded once in East Kent, at Seasalter, and once in West Kent, at Halling. A series of records during 2018, however, has transformed our knowledge of its presence in the county and indicated that rare plant register species *A. bulbosus*^R must have had, if it does not continue at all locations for the hybrid, a materially wider distribution than has been supposed. For convenience the East and West Kent 2018 discoveries will be considered here together.

Alopecurus x plettkei, habitat,
Great Clane Marshes, 4 August 2018.
Photo © Geoffrey Kitchener

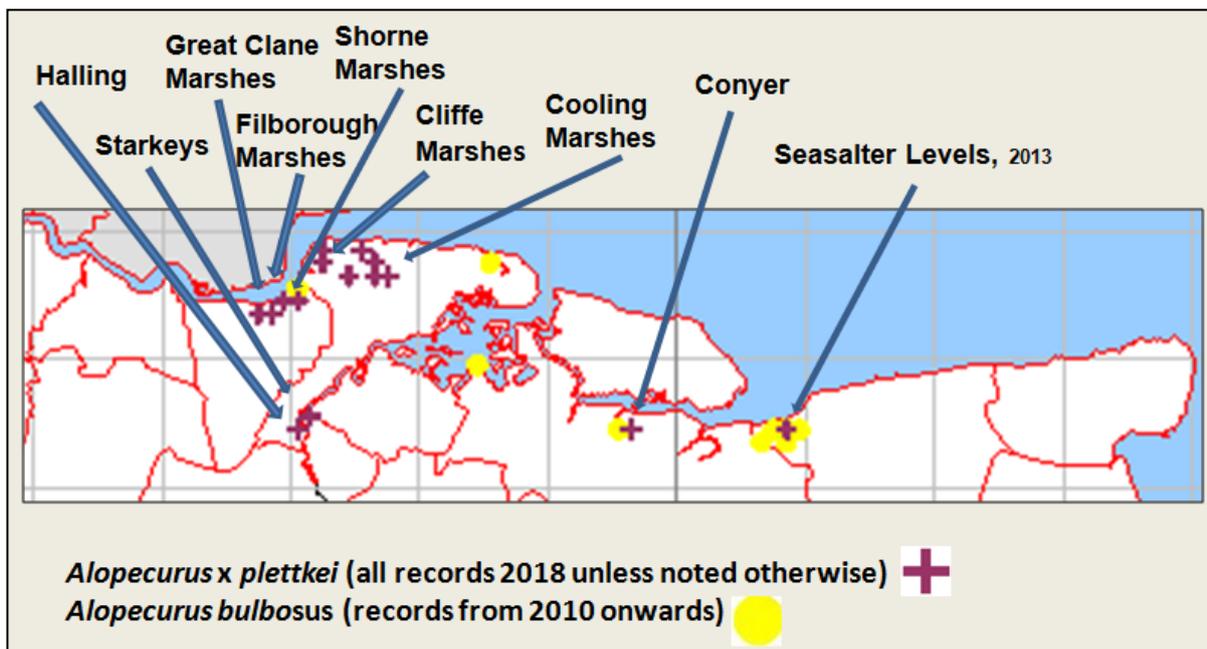
A. bulbosus^R is a grass of unimproved grazing marshes, largely confined to the south coast of England and Wales. Populations in north Kent are an outlier of national distribution. It is best sought when in flower, in the last two weeks of May and the first week of June; it ceases growth in July when the panicles have broken up. In contrast, its hybrid with *A. geniculatus* then starts new growth, and all our 2018 hybrid records were made in late July and through August into September. The hybrid was noticeable as showing long decumbent growth and was very glaucous, almost blue-metallic.



Generally, *A. x plettkei* tends to resemble one or other parent more, rather than being exactly intermediate. Because of overlapping measurements, the hybrid is easier to identify when closer to *A. geniculatus*, especially when the culm has more than 8 nodes and is over 38cm long, for these characters exceed both parental ranges. Most records were made with material fulfilling these criteria, although some relied on other characters (given in tabular form in Rich & Jermy, 1998, and in Trist & Wilkinson, 1989).

The hybrid's habitat was typically on grazed fields with some brackish influence, in stock-trampled areas subject to seasonal flooding. Such areas might be the edges of broad depressions, as at Great Clane Marshes, Shorne Marshes and Halling Fresh Marshes. More frequently the habitat was the stock-trampled margins of ditches,

particularly in areas where these flattened out; or the summer-dry, sinuous rills or runnels which show the historic pattern of saltmarsh drainage before the inning of the land brought it into usage as pasture. In these sites, *A. x plettkei* is probably demonstrating long-term continuity and may not be maintained through fresh hybridisation events so much as reproducing through nodal rooting and establishment of broken-off fragments. However, there is clearly more flexibility in the hybrid's strategy, as finds at Cooling Marshes (in the RSPB Northward Hill reserve) were made in grazing land which had been converted from arable (aerial photos from 1990 show arable cultivation). The arable farming seems not to have removed all the ground surface irregularities and it is possible that the hybrid and/or its parents had survived at the margins or within the connected marsh drainage system and had been brought back to its original habitat, borne by winter flooding.



***Alopecurus x plettkei*, 4 August 2018, Cliffe Marshes. Photo © Geoffrey Kitchener**

Our 2018 records include much more data than can be given here, but in summary they comprise, from west to east: (all finds by GK except where otherwise indicated):

- Great Clane Marshes, TQ6773, surrounds of shallow depression on clay, horse-grazed, 4 August
- Filborough Marshes, TQ6873, bases of shallow (winter-flooded) ditches, 4 August
- Shorne Marshes, TQ6974, surrounds of shallow depression, horse-grazed, 4 August
- Halling Fresh Marshes, TQ7064, abundant above winter-flooded depression, 27 July
- Shorne Marshes / Higham Common, TQ7074, several sites in shallow depressions and at cattle-trampled (winter-flooded) channels, 4 August
- Wouldham Marshes, Starkeys, TQ7165, four sites in cattle-trampled old sinuous drainage runnels, 27 July
- Cliffe Marshes, TQ7277, shallow (winter-flooded) sheep-trampled runnel, 7 August
- Cliffe Marshes, TQ7278, margins of artificial (winter-flooded) horse-trampled depression and two shallow runnels or ditches, 7 August



- Cliffe Marshes, TQ7476, shallow (winter-flooded) horse-trampled channel draining down to marsh dike, 7 August
- Cooling Marshes, TQ7578, artificial (winter-flooded) depression, apparently scraped out since 2000, 7 August
- Cooling Marshes, TQ7676, several sites in shallow depressions, found at KBRG meeting, 18 September
- Cooling Marshes, TQ7677, in shallow depression, found at KBRG meeting, 18 September
- Cooling Marshes, TQ7776, in shallow depression, found at KBRG meeting, 18 September
- Conyer, TQ9664, shallow (winter-flooded) horse-grazed depressions, 2 August; grazed off by 4 October and not re-found.

Associated flora generally included *Bolboschoenus maritimus* (Sea Club-rush), *Ranunculus sardous* (Hairy Buttercup) and *Rumex conglomeratus* (Clustered Dock), all species capable of coping with brackish conditions and tolerant of seasonal flooding. The presence of *Bolboschoenus maritimus*, however, could lead to *A. x plettkei* being out-competed, so stock-grazing is part of maintaining appropriate habitat.

Amaranthus bouchonii (Indehiscent Amaranth) has been very little seen in Kent but was found on 16 July by LR and DC on waste ground at former gravel workings, Oare Marshes, TR 0030 6422. It is closely related to the common *Amaranthus hybridus* (Green Amaranth), but its fruits do not split transversely as with that species.



***Amaranthus cruentus* (Purple Amaranth)** is also related to *Amaranthus hybridus* and may be conspecific with that species. It was recorded by DC on 16 October at St Margaret's at Cliffe, TR 36828 44504 (and also seen later by DS). It can be introduced via bird seed or grain, but in the find locality it is perhaps more likely to be an escape from cultivation. Leaves and seeds are supposed to be edible, but the purple colour of all parts of the plant renders it attractive as an ornamental. **This is a first record for vc15, East Kent.**

***Amaranthus cruentus*, 16 October 2018.**
Photo © Danny Chesterman

Anagallis tenella^R (Bog Pimpernel) has a tale of decline in Kent, due to loss of habitat, so it is significant that a distinctly new site has been found, by JL and LS, on 3 July. This was on the bank of a small chalk stream to the south of the former Swan Hotel, Charing, TQ 9470 4945, arising from the junction of chalk and gault, analogous to habitats at Brook and Etchinghill, where it has not been seen for some time.

***Angelica archangelica* (Garden Angelica)** has long been cultivated, but any significant presence as an

escape in Kent seems not to have developed until the 1970s, when it began building up as a drift-line plant along the Thames (Palmer, 1973 and 1980). **In vc15, East Kent, however, the first record** appears to be that of BW on 30 May, when he found it as a garden escape on the narrow verge of a lane west of Chart Sutton, TQ7850.

***Arctium x nothum* (*A. lappa* x *minus*, the hybrid between Greater and Lesser Burdocks)** was seen by the KBRG meeting (det. LR) on 21 July at Ham Fen, TR 3345 5469, where there were at least two plants, clearly intermediate, in a colony of both parents. They are illustrated in *KBRG Newsletter no. 11* (October 2018) and are **the first record for vc15, East Kent.** It is a cross infrequently recorded in the British Isles (most likely due to reluctance on the part of recorders), except for East Anglia.

Arum italicum subsp. *neglectum* (Italian Lords-and-Ladies) is a British native, found mostly in southern England from West Sussex westwards to Cornwall and in the Channel Islands. It has slightly pale leaf veins, but nothing like the whitish veins of its companion subspecies, *italicum*, which is frequent as a garden reject, normally as cv.

'Marmoratum'. Although Hanbury & Marshall (1899) treated it as a Kent native, investigations by Francis Rose and C.T. Prime in the 1950s led to the rejection of this claim. However, the discovery of the relevant part of Francis Rose's Flora manuscript showed that both he and C.T. Prime recognised a 1960 find at Brockhill School as being true *neglectum*. After May 1962, when the KFC visited Brockhill, its existence seems to have fallen from view. Details were published in the county 'probably extinct' list in February 2018, as a result of which *neglectum* has been re-found by SL, on 9 November.

***Arum italicum* subsp. *neglectum*, 9 November 2018.
Photo © Stephen Lemon**

This was optimum timing for finding fully expanded leaves (*A. maculatum* does not flush until early spring). The find was made at Brockhill Country Park, Saltwood, at a wooded stretch of the Brockhill Stream, opposite the south eastern corner of the lake, TR 14705 35756 to TR 14707 35767. Plants were confined within a 30 metre stretch of the eastern bank of the stream, roughly between two weirs. They occupied a shallow sheltered slope a few metres wide between the stream edge and a much steeper slope that ascends above the tree cover into the scrubby pasture above. The soil is assumed to derive from a downwash of the Hythe Formation over the Atherfield Clay, with outcropping ragstone rocks present on the slope. The base content of ragstone will be sufficient to afford some similarities to West Sussex habitats on chalk or other calcareous soils. A few plants were seen along the scrubby edge of the stream immediately below the downstream weir where the stream flows over the Victorian 'cascade', but no plants were detected anywhere along the landscaped western side of the stream or for 200 metres upstream or downstream of the colony. These factors are consistent with native status although the possibility cannot be entirely discounted that Victorian tree- or shrub-plantings on Brockhill Estate may have brought in the *Arum*. The taxon now moves from the 'probably extinct' list to the rare plant register.



Atriplex micrantha Ledeb. (Twoscale Saltbush). Since the first sighting of this species in East Kent, by SP and DG, reported in Kent Botany 2017, further searches have been made by the finders and by GK. As a result, it is now known that the original discovery of the plant below the M20 bridging the Medway is indeed reflected in the presence of plants on the motorway almost immediately above. It also grows in various places along the M20 centre reservation, at least from the East Kent side of the Medway westwards to beyond Ryarsh, and has reached the minor road network near Aylesford. At the end of August it could be observed in the centre reservation by car, as growth was quite high, and vehicle slipstreams would bend over the leaves so as to



expose the silvery underside. Later in the season it turns pinkish, and may not be so obviously different from *Atriplex prostrata* (Spear-leaved Orache), which shares its habitat. Being salt-tolerant, the species clearly has potential to spread along the motorway and, indeed, may well already be elsewhere to the east as a Continental arrival, subject to the effect of the 2018 works along much of the length of the M20.

***Atriplex micrantha* on M20, 31 August 2018.
Photo © Geoffrey Kitchener (note silvery leaf underside)**

East and West Kent records are taken together in this report. M20 records made by GK on 31 August comprise: (1) TQ 6666 5937, west of Ryarsh, seen

from Roughetts Road overbridge; (2) TQ6759, just east of Old School Lane overbridge, Ryarsh, seen from car; (3) TQ 6973 5917, east of Leybourne, seen from Lunsford Lane overbridge; (4) TQ 70374 58986, Larkfield, dominant over a long stretch of centre reservation east of New Hythe Lane overbridge, from which it was viewed; (5) TQ7158, Ditton, seen from car; (6) TQ7258, Aylesford, seen from car; (7) TQ 74346 58304, several plants under the barrier between the M20 main westbound lanes and the Aylesford exit lane, where the motorway bridge over the R. Medway begins (these are within 25m of the plants below the bridge seen in 2017). There were also non-M20 sightings by GK at TQ 74168 58726 and TQ 74135 58734, by Forstal Road (heavily trafficked by lorries for industrial estates). M20-related sightings were made by SP and DG on 3 September as follows: (1) TQ 72041 58612, Aylesford, from about 30m east of Teapot Lane footbridge stretching eastwards; (2) TQ 71762 58729, Aylesford, one plant east of Station Road overbridge; (3) TQ 71465 58798, Ditton, several plants on both sides of footbridge.

***Atriplex micrantha* on M20, 31 August 2018.**
Photo © Geoffrey Kitchener



Brassica juncea (Chinese Mustard) is an occasional constituent of game bird seed mixes, as well as being sometimes grown as a crop in its own right, which may explain the scattered plants in arable margins at Perry Court Farm, TR 038 472, recorded on 16 July by LR and DC, the second record for East Kent. This was followed by sightings by DC at Wye (arable margins, 26 September) and Harrietsham (waste ground, 9 November).

Bromus hordeaceus subsp. *thominei*^R (Sand Soft-brome), found by SB on 18 May at Sandwich Bay Bird Observatory's Restharrow Field, around rabbit burrows at TR 364 570, is worth mentioning: not that it is an unexpected locality, but we still do not seem to be recording as much of this subspecies in the Deal-Sandwich and Dungeness areas as may be expected from past records.

***Calendula arvensis* (Field Marigold)** is relatively unusual in Britain outside the Isles of Scilly, but a couple of plants were encountered on 16 July by LR and DC along a trackway in former gravel workings subject to tipping near Oare Marshes, TR 00424 64131. **This is a first record for vc15, East Kent, and for Kent as a whole.**

Cannabis sativa (Hemp) has only sporadically been seen in recent times, but SP and DG on 1 September found a couple of large plants at the rear of a spent compost heap at the edge of a farm field south east of Bearsted, TQ8053. This is the second record in as many years from an agricultural context.

Cardamine impatiens^R (Narrow-leaved Bitter-cress) has most of its recent records from the Eden catchment or the Medway near Haysden. It was once more extensive along the Medway, and a former site by the river near the Station Road overbridge at Aylesford (until recently affected by overgrowth), TQ 7305 5882 and elsewhere, was visited by several botanists in May with success. A new Medway site, however, was found by SL and BW on 21 April, with at least a dozen non-flowering plants located near the river where a sunken path runs into Bydews Wood, Tovil, TQ 74649 54505, with an outlier plant not far off.

Carex distans (Distant Sedge) is in Kent usually a plant of habitats associated with sea or estuarial walls or with brackish or fen conditions. Finding it inland, at Monkton chalk pit, TR2865, by SB on 31 May and by a KFC meeting (noted by DG) on 10 June, might seem anomalous. There are, however, precedents for this, such as chalk pits at Eccles (1953) and Swanscombe (1947).

Carex echinata^R (Star Sedge) was unmapped in Philp (2010) on the basis that there were only five tetrad records in the period of survey (an ostensible decline from Philp (1982) and Francis Rose's earlier record set). We now have 16 tetrad records (20 monads), however, for the period from 2010, which include finds by SL on 18 August at the western quarter of the KWT Bigbury reserve: a sprawling patch on wet ground at TR 10994 57600, and two

small clumps at the edge of a boggy spring flush on a north-facing slope, TR 11005 57642, where found by Francis Rose in 1954.

Carex elata^R (Tufted-sedge) has in Kent generally been reckoned as confined to the Worth/Hacklinge area, although in recent years it has also been found in Preston Marshes and Dungeness. A discovery by LM in July 2017 and followed up by LM and SL (confirmed by MP, BSBI referee) on 21 May 2018, however, has given an unexpected twist to its distribution by locating it also at Dering Meadows, north of Pluckley Road, Smarden. It was found in a group of three ponds, TQ 8945 4317, TQ 8953 4323 and TQ 8954 4319: two in a hedge-line dominated by *Salix* spp. (Willows) and a larger pond next to them, dominated by high canopy trees. There were 20 tussocks growing on the flooded peaty bottom of the more southerly of the two hedge-line ponds; and at least 25 tussocks in the more northerly one, many in *Salix* shade, but very robust ones on a floating peat mat at the



edge of open water. The largest pond held three large tussocks along its southern edge; its suitability may have been affected by past clearance removing peat and steepening the edges. Aerial imagery shows some variation in tree cover around the ponds back to 1940, although always some open water. A complex of ponds is shown in the 1898 ordnance survey; the 1871 survey just shows trees here. So the habitat is of fairly long standing, but not necessarily very long term. There is no evidence of the sedge ever having been planted here, although this cannot be ruled out, unlikely though it is. The colonies are not in fen habitat as with other Kent occurrences; but in Britain as a whole it accommodates to a wider range of conditions (SL having seen it in comparable habitat in Cheshire).

Carex elata, 21 May 2018.

Photo © Lesley Mason

Carex rostrata^R (Bottle Sedge) used to be known from the East Kent fens and was listed as locally abundant around Hacklinge (Rose, 1950), but is unmentioned for the area in Philp (1982, 2010). It was, however, confirmed from Ham Fen KWT reserve, TR 3319 5512, in July 2017 by SL and SB. This year, 2018,

saw knowledge of its presence extended into a neighbouring monad, about 900 metres south east, as SL found it on 21 June abundant for 15 metres along a ditch in rough pasture on the reserve, from TR 33767 54410 to TR 33777 54410. The KBRG/KFC meeting on 21 July viewed both areas.

Carthamus tinctorius (Safflower) was in Kent very much a species of refuse tips in the 1970s, ultimately deriving from bird seed, but is now seldom seen. A spoil heap in former gravel workings near Oare, TR 00278 64174, however, yielded a plant seen by LR and DC on 25 October.

Cerastium arvense x *tomentosum* (the hybrid between Field Mouse-ear and Snow-in-Summer), sometimes, but invalidly, called *C. x maueri*, was found by SB on 18 May to be widespread in Restharrow Field, Sandwich Bay, TR 3629 5719. Both parents were in the vicinity.

Chaenorhinum origanifolium^R (Malling Toadflax) is, although a non-native, included in the county rare plant register as a heritage plant, due to its long association with West Malling, its traditional site. We have very few records elsewhere in the county – it is seldom grown in gardens, from which it might escape – but it was reported on 1 June by DP (confirmed by GK) from Westbere, where it was well naturalised along about 20 feet of the listed brick wall constituting the southern boundary of the churchyard, TR 1923 6106. This is only the second East Kent record.

***Chara connivens* (Convergent Stonewort)** is a rare, Endangered charophyte with no records for south east England since a Sussex sighting in 1961. It is therefore exceptional that this should have been found in shallow water at the edge of Barge Pit, Dungeness RSPB reserve, TR 0588 1828. This is a 2017 (8 July) record by SL

which did not appear in Kent Botany 2017, but which has been published separately (Lemon, 2018). The pit is man-made, and the stonewort was growing on the gravelly pit bed and submerged roots of *Phragmites australis* (Common Reed) at an inlet which seems to have been created in the last ten years. It is commonly supposed that birds play a part in the dispersal of charophytes; accordingly, fresh aquatic habitat in a bird reserve, before rooted vascular plants have taken over, has potential to accommodate long-distance dispersal.



Chenopodium foliosum, 17 October 2018.

Photo © David Steere

Chenopodium foliosum (Leafy Goosefoot) is not a species given in Stace (2010). It is likely to be taken for *Chenopodium capitatum* (Strawberry-bite), because in fruit both look as though they have small strawberries growing up the stem, and the latter species has a more extensive recording history, especially from the days when wool shoddy was spread as fertiliser. A crucial difference, however, is the presence of bracts all the way up the inflorescence of *C. foliosum* (hence the name, leafy),

which are lacking in the upper parts of *C. capitatum*. It was discovered by MH on 6 October and investigated by DS on 17 October. On the latter date, there were 12 plants growing along a predominantly *Leylandii* hedge bounding an apple/pear orchard near Upchurch, from TQ 8331 6739 to TQ 8324 6740. The orchard flora was otherwise unexceptional, although including *Amaranthus hybridus* (Green Amaranth). Seeds of *C. foliosum* are sold as Strawberry Spinach, which may be a possible origin, otherwise it is supposed to be a rare grain or esparto grass casual, unlikely to be applicable here. The location is not particularly near housing, but the other side of the boundary hedge is a small dead-end road leading to what from 1960s maps appears to have been a refuse tip. **The record is taken as a first for vc15, East Kent**, although there is an earlier one, dated 17 July 2017, which was not published as such because found in a garden (at Little Uplees), although the recorder (AW) noted it as appearing spontaneously following clearance of an area which had lain undisturbed for many years.

Chenopodium foliosum, 17 October 2018.

Photo © David Steere

Cladium mariscus^R (Great Fen-sedge) was seen by the KBRG/KFC meeting on 21 July at Ham Fen. It has long been known here, representing the last remains of what were once extensive colonies in fens between Deal and Sandwich, but had not been seen in recent years where now found: some 30 spikes at TR 33176 55162; five at TR 3313 5516; and one at TR 3316 5515. The plants were in an area of calcareous fen peat which was re-profiled 15-20 years ago by KWT in order to keep it wet. *Cladium* has not been recorded from this monad in recent years and so could be supposed to have arrived in response to the re-profiling. The long-known location for the species at Ham Fen is some 330 metres south west, in TR3354.



Colutea x media (*C. arborescens* x *orientalis*, Orange Bladder-senna) is a garden shrub whose orange-bronze flowers are derived from the *C. orientalis* parent, although otherwise it is much like the relatively common *C. arborescens*, including as to its inflated bladder fruits. On 17 July, SB found three flowering and fruiting

bushes scattered along the Ramsgate cliff edge around TR 3759 6421 with one more at the foot of the cliff at TR 3772 6425. It looks as though at least one bush would have arisen as a seedling from original planting, which would then be a **first record for vc15, East Kent**.

Cordyline australis (Cabbage-palm) was recorded by GK and SK on 7 June, a large plant, maybe 5 years or so old, self-sown in paving seaward of Deal Castle, TQ3752, the parent flowering in a bed some 30 metres away.



***Cucumis melo* (Melon)** was noted by LR and DC on 16 July, about three plants on a spoil heap in 19th century gravel workings near Oare Marshes, TR 0029 6419. This appears to be **the first record in the wild for vc15, East Kent**.

Cucumis melo, 16 July 2018.
Photo © Liam Rooney

***Cucurbita maxima* (Pumpkin)** and *Cucurbita pepo* (Marrow) were both present at the Oare Marshes site mentioned in the last entry, when explored by LR and DC on 18 June. One plant of *C. maxima* was noted on a spoil heap (TR 0028 6418) and there was a further plant on dumped soil at TR 00484 64232, on 22 August. These are **the first and second records for *C. maxima* in vc15, East Kent**. As regards *C. pepo*, on 18 June it was recorded on a spoil heap at TR 0028 6418; on dumped soil at TR 00490 64231; and, in a form resembling an Acorn Squash, on a bank at TR 00482 64281.

***Cucurbita moschata* Duchesne (Winter Squash)** is scarcely recorded in the British Isles, and even then, some existing records may not be of plants in the wild (the first non-cultivated record in Britain appears to be from Norfolk in 2016 – see Berry, 2017). One of the difficulties of recording is the extent of development of cultivars, so

that squashes are more likely to be looked for under *Cucurbita pepo*, which includes marrows as well. However, *C. moschata* seems genuinely much less cultivated in Europe generally (cf. Verloove, 2014, in which Scandinavian records and one from Belgium are noted). It is characterised by soft hairs and by leaves which are often spotted or marked with white along the veins. The white markings appear helpful in identification, although it seems that not all plants of this species may have them (Berry, 2018). Among the bewildering variety of cucurbits present on dumped rubble and soil at the old gravel workings at Oare mentioned in the last two entries were (at TR 0050 6423)) a soft-haired plant seen by LR and DC on 25 October with winter squash-type fruit and, elsewhere at the same site, at TR 0029 6418, on 18 July, a plant with typical *C. moschata* leaf markings. These constitute **the first record for this species in vc15, East Kent**, and indeed for Kent as a whole.

Cucurbita moschata, 18 July 2018.
Photo © Liam Rooney

Cucurbita pepo (Marrow), apart from being seen by LR and DC as mentioned above under *C. maxima*, was also recorded by them on 16 July on a spoil heap on Perry Court Farm, Wye, TR 0386 4733, but rather than being a marrow cultivar, it was probably a variety of ornamental gourd being sold in the farm shop.



Cynodon dactylon (Bermuda-grass) is in Kent an infrequent introduction, at least in one case as a possible bird seed contaminant. There is a history of the spread of seeds with wool shoddy as an agricultural fertiliser, which has long since ceased. However, the discovery by SB on 27 September of this grass as an apple orchard weed at Selling, TR 03908 56289, raises the question as to whether this ultimately has a wool shoddy origin, as there is considerable continuity of fruit growing in this area.

Daucus carota subsp. *gummifer*^R (Sea Carrot) has appeared long gone from Thanet, where (between Ramsgate and Margate) it was collected by F.A. Hanbury (1839-1878), fifth cousin of F.J. Hanbury (of Hanbury & Marshall, 1899). However, on 17 July SB found a single plant with a distinctly convex fruiting head at the base of Ramsgate cliffs, TR 3733 6414, so extending its current known distribution (Folkestone to St Margaret's at Cliffe).

Dipsacus pilosus^R (Small Teasel), while long-persistent in some places, also appears to be a come-and-go plant, perhaps affected by habitat changes. Investigations by LR and DC showed an extreme example of interrupted persistence, with the finding on 20 June of plants at Badgin Wood, south of Faversham, over 50 at the eastern margin, TR 00320 58047, and several more on the northern margin, TR 003 579. LR points out that the species was first recorded in this area by Jacob (1777), who knew it by the road leading from 'Plomford to Badgen Downs' (Plumford Road is currently the eastern boundary of part of Badgin Wood); and that there does not appear to have been further record after the Rev. H.A. Stowell's citation (in Stowell, 1857) of its presence in an old gravel pit between Porter's Lane and 'Badging Wood' (there are old chalk pits shown in the area by the 1896 Ordnance Survey). The only other East Kent record we have for 2018 was on the Medway banks at Tovil, Maidstone which perhaps echoes a Tovil record by Henry Lamb in Hanbury & Marshall (1899). Here on 21 April, SL and BW found a large broken patch of riverside plants at Bydews Wood, TQ 74550 54212.

Dittrichia graveolens (Stinking Fleabane) was reported in Kent Botany 2017 as a motorway plant in course of spread. A further link in the chain of records along the M20 was made by GK on 18 January with the recognition of many dead plants in a linear strip on the south western side of the slip road from the A229 to M20 westbound, TQ7558. This road is under motorway regulations and the sighting was made from a car.



Eleocharis uniglumis, 9 June 2018.

Photo © Stephen Lemon

Eleocharis uniglumis^R (Slender Spike-rush) was found by SL (confirmed by MP, BSBI referee) on 9 June in damp grassland near Barge Pit at the RSPB reserve, Dungeness, TR 05878 18310, with *Eleocharis palustris* (Common Spike-rush). The site was formerly part of a larger field much affected by gravel extraction and the location appeared subject to some calcareous influence. The only previous record for this area was cited by Hanbury & Marshall (1899) as at Denge Marsh, 1861, a specimen from the herbarium of J.S. Mill. That herbarium is now part of the Kew holdings, and SL has examined the specimen there. Mill had written '(perhaps)' against his identification as *Eleocharis uniglumis* and the sheet is labelled by C.B. Clarke as *Eleocharis palustris*. This re-determination is more likely, but the condition of the material is such that it cannot readily be ascertained one way or the other, so continuity of presence has not been proved. Definite continuity, however, was demonstrated in the area of Ham / Hacklinge, where SL found the species on 17 June in cattle-grazed pasture west of the A258, at TR

339 543 / TR 339 544 / TR 338 545. *E. uniglumis* was known to Francis Rose in the 1940s and 1950s at Hacklinge Marshes, and the present site appears to correspond with one which he said was in part dominated by *Blysmus compressus* (Flat-sedge) – yet to be re-found – and *E. uniglumis* (Rose, 1950). SL also found *E. palustris* growing here with intermediates, which had the lowest glume almost encircling the spike base,

combined with the two lowest glumes being empty/infertile. It seems likely that these were hybrids, although there has generally been reluctance to determine *E. palustris* x *uniglumis*, not least because S.M. Walters, who had much studied this genus, stated in 1975 that there were no definite records of hybrids, in spite of having reported from Hacklinge Marshes plants which were both morphologically and cytologically intermediate, in his PhD thesis (1950), according to Stace, Preston & Pearman (2015).

Epilobium x *dacicum* (the hybrid between Short-fruited and Hoary Willowherbs), *E. x floridulum* (the hybrid between Hoary and American Willowherbs) and *E. x vicinum* (the hybrid between Short-fruited and American Willowherbs) were all recorded by GK and SK on 2 August at the former brickworks, Conyer, TQ9665, when the willowherbs generally were looking very drought-stricken on the rubbly surface, although hybrids were more persistently flowering than were the parent species, presumably through failure to set seed.

***Eragrostis curvula*, November 2018.**
Photo © Owen Leysion

Eragrostis curvula (African Love-grass) was found by OL (det. GK) on 13 November as a single clump on the east (sea) side of the kerb of The Parade, opposite Romney Tavern and at the edge of Greatstone Dunes, TR 08241 21948. This grass appears to have remained unrecorded in Kent since before 1960; Lousley (1961) states that an East Kent specimen was held in his herbarium, an alien introduced through the spreading of wool shoddy as an agricultural fertiliser. Such an origin cannot apply here, but the plant is likely to be derivative from cultivation as an ornamental grass for gardens, especially gravel gardens. Its drought resistance would enable it to grow, as here, on consolidated sand/shingle. The finder fairly described it as looking like *Deschampsia*, but not quite right.



Euphorbia maculata (Spotted Spurge), with a sighting by SB on 6 September at Harman's Corner, Borden, TQ 8887 6286, has now been recorded six times in Kent during the period 2016-18, whereas it was unknown before. Either it is spreading, or our recognition is improving. Elsewhere in Britain, there seems to be an association with nurseries and garden centres which suggests that it has been imported. This is likely to be with garden plants of Mediterranean origin, notwithstanding that it is a North American species. At Borden it was a pavement weed and also on a nearby block-paved drive, a habitat which is presumably beneficial in terms of microclimate and drainage as well as limiting competition to other species which also flourish despite being trodden upon.

Fumaria bastardi^R (Tall Ramping-fumitory) has in a few years gone from being a plant with no recent Kent records to one with a small, but wide, scatter of records in East Kent, perhaps aided by increased awareness. To these, DC added on 21 July a sighting at Broadstairs station car park, TR 39070 68039. A key feature of this fumitory is that the upper petal does not have a dark tip.

Galanthus elwesii (Greater Snowdrop), a handsome snowdrop with wide glaucous leaves, was recorded by SB on 6 February at Sandwich Bay, TR 3607 5725, several patches amongst a large quantity of *Galanthus nivalis* (Snowdrop) in the wooded area known as The Elms.

***Galanthus plicatus* subsp. *plicatus* (Pleated Snowdrop)** is distinguishable from its fellow subspecies, *byzantinus*, by its inner tepals having a green patch at the apex only. It was recorded by SB on 12 February at Chillenden, TR 2706 5353, where there were many patches spreading over several square metres of scrubby

roadside verge. These plants were presumed to have arisen from garden waste from The Griffin's Head opposite, where the snowdrop was in cultivation very abundant and spreading. **This is a first record for the subspecies in vc15, East Kent.**

Geranium purpureum^R (Little-Robin) in Kent normally has an association with railways, as yet not fully explained. A different type of habitat was encountered by DC on 20 April when he found five plants growing in a freshly pebbled driveway at Hackington Road, Tyler Hill, TR 14064 61030, (with a sack of pebbles/ballast still on the driveway). This suggests that the pebbles at some stage were associated either with a south coast maritime locality (perhaps Sussex) where the species grows naturally, or with railway-served premises where there is a derivative population.

Glandularia speciosa hort. is a name which could probably be improved upon, but which we are applying to a discovery by LR and DC on 13 September at dumped ground in old gravel workings at Oare Marshes, TR0064. This was a violet-blue flowered garden plant scattered over a local area and corresponding well to what is sold as *Verbena speciosa* 'Imagination'. The name for this 'species' appears never to have been validated; and, indeed, the registration details for the cultivar 'Imagination' regard it as a hybrid of undisclosed parentage.

Gnaphalium luteoalbum^R (Jersey Cudweed) has been spreading, at Dungeness and (largely as an urban weed) in north west Kent. HS's observations, however, have extended its known range, with a new 10k square record on 27 August of several plants at Ilex Road, Folkestone, TR 205 367. More related to the north west Kent spread was SP and DG's sighting of the species growing between block paving on a garage forecourt at Palmerston Road, Chatham, TQ 7578 6584.



Groenlandia densa, 8 September 2018.
Photo © Danny Chesterman

Groenlandia densa^R (Opposite-leaved Pondweed) has been a matter for concern, with no East Kent records reported since 2005, against a background of general decline. DC, however, has now (8 September) found it growing in a flooded pit in the dunes at Sandwich, TR 35632 57904, where there were several patches in clear water. What is surprising is that the pit, which probably provides water storage for the golf club to use on the greens, seems to have been excavated only recently, at some time between 2013 and 2017. The recorder

does not recollect seeing the Pondweed here in 2017, so its growth must be very recent. There has been a 2003 record just over 1km away, and other old sightings in the general area, so it is not impossible that it is still present in the neighbourhood and has been brought to this pit by wildfowl or on golf club tools or equipment.

***Gunnera tinctoria* (Giant-rhubarb)** does not seem to naturalise with us as it does in milder, wetter parts of the British Isles, especially in Cornwall, west Scotland and Ireland, which is what went towards justifying EU-wide invasive plant controls for this species. LR and DC on 8 June noted several clumps around the southern middle fishing lake at Oare Marshes, TR 0066 6423. They were originally planted but seemed to be naturalising around the edge of the lake, and smaller plants were noted. This is perhaps as far as the species is going to 'escape' in Kent (although there is a comparable 2011 sighting in West Kent, from a KBRG meeting at Bedgebury Pinetum), and the status is fairly marginal; but on the basis that the naturalisation was not taking place in a park or garden, then this may be credited as **a first record for vc15, East Kent.**

Hydrocotyle ranunculoides (Floating Pennywort) is an invasive non-native aquatic, whose sale or release into the wild is forbidden. Somehow, however, it has got out into the tidal Medway and a large patch has appeared on the submersible mud of an inlet for former wharves downstream of Allington Lock, TQ 74145 58545, where it has been seen by various botanists, including GK on 31 August. It is known to cope with tidal conditions, although our other Kent records are for fresh or brackish waters only.

Hyoscyamus niger^R (Henbane) is regarded as Vulnerable to the risk of extinction, although the longevity of seed viability is such that a seed-bank may persist where none was suspected. On 11 September, SB found two

colonies near Challock which may or may not represent a re-appearance, given that Philp (2010) shows a record for this tetrad. One colony was represented by hundreds of non-flowering rosettes on otherwise bare ground alongside the public footpath at TR 0042 4928. It was tempting to suppose that their presence could possibly be connected with pheasant breeding as there were huge numbers of birds around. However, it is not a normal constituent of game bird seed mixes, and is likely to be toxic to birds in any event (hence the name, Henbane). A further colony was seen at the corner of a maize crop at TR 0132 4842, where there were about 20 flowering and fruiting plants near a very large mound which could have been a long-term farm waste tip.

Ipomoea purpurea (Common Morning-glory) has only a couple of East Kent records and may have various sources as an escape; it is not the only *Ipomoea* species in cultivation. A plant was noted by LR and DC on 16 July by a trackway in old gravel workings at Oare Marshes, TR 00435 64218.

Isolepis cernua^R (Slender Club-rush), first recorded as a Kent native in 2003, was found in a further part of the Worth/Hacklinge area, within the KWT Ham Fen reserve. First, SL came across two groups of plants in cattle-poached bare ground by a ditch at TR 33819 54463 and TR 33805 54450, on 17 June. Then on 21 July a KBRG/KFC meeting recorded at least 40 clumps of plants in an area of cattle-poached peat at TR 3379 5444. All three records are within about 40 metres of each other.

Lapsana communis subsp. *intermedia*, 4 June 2018.
Photo © Sue Poyser

Lapsana communis subsp. *intermedia* is an introduced subspecies of Nipplewort, from south east Europe and south west Asia, with flowers which can be twice the size of our native subspecies. From a distance it can look somewhat like a *Hieracium* species. On 4 June it was found by SP and DG beside a footpath at the edge of Coney Banks, Chatham, TQ7572 6562. There are only a couple of other Kent records, and this is **the first for vc15, East Kent**.



Lathyrus grandiflorus (Two-flowered Everlasting-pea) looks somewhat like *Lathyrus odoratus* (Sweet Pea), but is perennial and unscented. It was recorded by BW on 26 June in a laneside hedgerow near Boughton Monchelsea, TQ7650, and presumed to have got away from a garden further down the road.

Lathyrus hirsutus (Hairy Vetchling). While this legume has been known from the area of Warden, where a KBRG meeting came across it on 13 August (at TR 0244 7161), no such records have previously been reported from Kingsferry, where on 15 July AY found two small clumps in the middle of the footpath on the estuary defence embankment, a few hundred yards from the Sheppey crossing, TQ 910 695. We have had only a handful of recent records, all related to the north Kent coast and generally on or near sea defence embankments.



Lithospermum arvense, 16 April 2018.
Photo © Sue Buckingham

Lithospermum arvense^R (Field Gromwell). Given that this is an Endangered species, the sight of hundreds of thousands of plants along field margins, seen by SB on 16 April, promised to be revelatory for the purposes of the county rare plant register. So it was; but for unexpected reasons. This enormous population stretched for more than half a kilometre of cereal field margin at the Lees Court estate from TR 0322 5603

northwards to TR 0316 5650 and then westwards along the northern margin for about a hundred yards until reaching a shaw. It was, however, later found to be a relict from a crop of 'Ahiflower' which was sown here the previous year by Lees Court Farm. This has been cultivated on the estate from about 2010, initially in a development phase, and then under commercial contracts with an American company, the seed originally deriving from a series of eastern European collections, including the Russian steppes (Sondes, 2015). The use of Ahiflower is as a nutritional supplement containing omega-3, -6 and -9 fatty acids from oil obtained from pressing the harvested seeds; the yield from the 2016 harvest was 0.3t per hectare. Lees Court estate is fairly adventurous in its non-food crops, but it is possible for escape from cultivation to be more widespread, given that some 5,000 acres was said to be grown by some 30 licensed farmers in the UK around 2015, and it has been grown at least in Essex, Gloucestershire, Lincolnshire and Scotland. This does not seem to have been recognised by botanists generally: a 2015 record from Mid-Perth, for example, was accompanied by the comment 'Abundant over entire field. Not known if planted'.

Medicago minima^R (Bur Medick) is, now that the effect of introductions through wool shoddy has apparently worn off, more or less a coastal plant in Kent. However, a find on 5 May by DC off Trinity Road, Ashford, TR 00793 45022, in short turf on very sandy soil, which is known for its interesting flora, raises the prospect that this species is here of inland native occurrence.

Neotinea ustulata^R (Burnt Orchid), on the rare occasions when it flowers in the county, threatens to be doing so for the last time; and its reappearance on the Lydden NNR in 2018 was the first since 2013. It was found independently by several botanists, and was hand-pollinated, which may assist its survival, since it can scarcely constitute a sustainable population at present.

Neottia nidus-avis^R (Bird's-nest Orchid) is not now often encountered in large colonies, but about 7.5km from the big population at Woolage, ML and SC on 21 June found over 120 spikes near Tilmanstone, TR 306 521.

Nerine bowdenii (Bowden Lily) is not in the usual British Floras, being supplanted by *Nerine sarniensis* (Guernsey Lily) because of the latter's history of cultivation in the Channel Islands, following a perhaps apocryphal tale as regards its appearance there in the 17th century following shipwreck; but *N. bowdenii* is hardier and now more widely cultivated. On 9 October, DC found three flowering plants at Beltinge, TR 20988 68570, on a field boundary road-verge, opposite houses. There was no obvious planting scheme, and the plants are assumed to have been thrown out with garden refuse, in which case they can be considered as a second record for East Kent, the first being given in Kent Botany 2015.

Nicotiana x sanderae (*N. alata* x *forgetiana*) is the most widely cultivated tobacco plant in the UK (for the flowers; the nicotine concentration in leaves is low), but is seldom recorded outside gardens. LR and DC, however, on 16 July found it on waste ground near Kingsferry, TQ 9168 6947, and several scattered plants of various colours on waste ground in former gravel workings near Oare Marshes, at TR 005 642 and TR 004 642.

Oenanthe pimpinelloides (Corky-fruited Water-dropwort) would, if the county rare plant register had been constructed as separate registers for East and West Kent, be a candidate for inclusion in the East Kent version. Although it is spreading in north west Kent, there are very few records to the east, so it was with considerable interest that the KBRG/KFC meeting on 12 July found hundreds of plants in a dry grassy field at Potman's Heath, TQ 8730 2820. SL's researches later pointed to the field having been brickworks back at least to the 1870s. He also drew a connection with mention in Francis Rose's manuscript Flora of the plant's occurrence in damp clay pits at Potman's Heath where abundant in 1955, thought to have been destroyed in 1961, but still present in 1980. It is possible that the movement of materials in relation to the original brickworks operation was responsible for introduction.

Oenothera lindheimeri, 13 September 2018.
Photo © Liam Rooney

Oenothera lindheimeri (Englm. and A. Gray) W.L. Wagner and Hoch (Lindheimer's Beeblossom) is perhaps better



known as *Gaura lindheimeri*. It was transferred into *Oenothera* in 2007, although not to be found in the BSBI *Oenothera* handbook (Murphy, 2016): perhaps because at the time of its publication there had been no records in the British Isles as an unequivocal escape, which may yet have been the case until 2018. A few plants were found by LR and DC on 13 September on a bank along a track in old disused gravel workings near Oare Marshes, TR 0043 6416, where dumping has brought in many plants of cultivation, of which this is one. Now widely grown here, it is a native of Texas, named after Ferdinand Lindheimer, the 'Father of Texas Botany'. This is a **first record for vc15, East Kent**, and indeed for Kent as a whole.

Orobanche caryophyllacea ^R (Bedstraw Broomrape) has a population at Royal St George's golf course which is probably the most important in the British Isles and so warranting survey to keep track of numbers. SB undertook a count on 13 June, across monads TR3558, TR3567 and TR3568. The results were considered best to state as an estimate of 1,000 plants on the beach dunes and up to 400 on the roughs of the golf course.

***Orobanche crenata* (Bean Broomrape)** has, since 2000, only been reported from South Essex and West Kent, and in the latter it has been confined to agricultural land from Snodland to Harvel. It has now, however, been found over 5km away, east of the Medway, by MF on 15 June. He found six spikes c. 60cm tall growing in a patch of (mainly) red clover on an arable field verge at Nashenden, TQ 730 658. The usual host plant, *Vicia faba* (Broad Bean), does not seem to have been present, but the Broomrape has been seen elsewhere as a marginal plant where a bean crop has been grown previously. **This is a first record for vc15, East Kent.**

Orobanche crenata, 15 June 2018. Photo © Michael Fray



Orobanche minor var. *compositarum* is a variety of Common Broomrape with sub-erect corollas more or less appressed to the stem, known to parasitise *Brachyglottis x jubar* (Shrub Ragwort). Amenity plantings of *Brachyglottis* at the Westwood Cross shopping centre at Broadstairs accounted for the presence of the Broomrape discovered by PG on 18 June. He first saw it as 250+ spikes in a 14 x 0.25m flower bed, then scattered in various car parks wherever there was bare soil amongst *Brachyglottis* plantings. We have sample locations of TR 3632 6760 (several sites) and TR 3660 6789; and TR 3666 6790 was noted by SB on 21 June. These records were supplemented by OL's find on 9 August of 88 dried up spikes amongst three bushes of *Brachyglottis* in the landscaped planting of Unit 1 of Mountfield Industrial Estate, Mountfield Road, New Romney, TR 07375 24807.



Orobanche minor
var. *compositarum*,
21 June 2018.
Photos © Sue
Buckingham



Oxalis incarnata (Pale Pink-sorrel), a South African species, is by no means as widespread as some of the other Pink-sorrels, and is seldom recorded in Kent, although well distributed along the coast of Cornwall, Hampshire and Sussex, where it is increasing. Not the only *Oxalis* species there (see below), it was amongst dumped soil

near Oare Marshes, TR 009 641, seen by LR and DC on 16 July. If it gets to spread, it will be from bulblets formed in the stem axils; it does not set seed.



***Oxalis tetraphylla* 'Iron Cross' (Four-leaved Pink-sorrel)** is the cultivar of this Mexican species which is usually encountered here. The 'Iron Cross' is the form of purple splash appearing at the base of each leaflet. The species is also encountered without purple colour, or with a purple band forming a circle across all four leaflets. It was discovered by LR and DC on 20 June amongst rubble in former gravel workings at Oare Marshes, TR 00444 64294. **This is a first record for vc15, East Kent, both as to species and cultivar.**

Oxalis tetraphylla, 20 June 2018.
Photo © Liam Rooney

Pastinaca sativa subsp. *urens* with seven rays,
21 July 2018. Photo © Geoffrey Kitchener



***Pastinaca sativa* subsp. *urens* (Eastern Parsnip)**

is a Continental subspecies which is beginning to be found on English roads and railways, mainly in East Anglia, especially where there is a relationship with a port. In France it is a native growing in riverine woodland habitats, but with secondary associations with warm wasteland resulting in expansion along traffic routes. In 2017, PS reported having seen it while travelling along the A20 near Folkestone,

and GK investigated on 21 July 2018, finding it present along the A20 dual carriageway at TR 2284 3935, south of Hawkinge. This is a route which takes traffic from Dover port to the M20. Identity was confirmed by ACL, whose paper (Leslie, 2017) gives much information on the taxon, with the characters by which it may be separated from our usual plant, subsp. *sylvestris*. These characters include umbels with 5 to 8 rays (subsp. *sylvestris* often has 10 or more); stems rounded or shallowly grooved with dense, short, greyish hairs (subsp. *sylvestris* is less greyish and often has some longish stem hairs). This is a **first record for vc15, East Kent** and, indeed, for Kent as a whole. There is every prospect that more may be found along the A20 and M20.



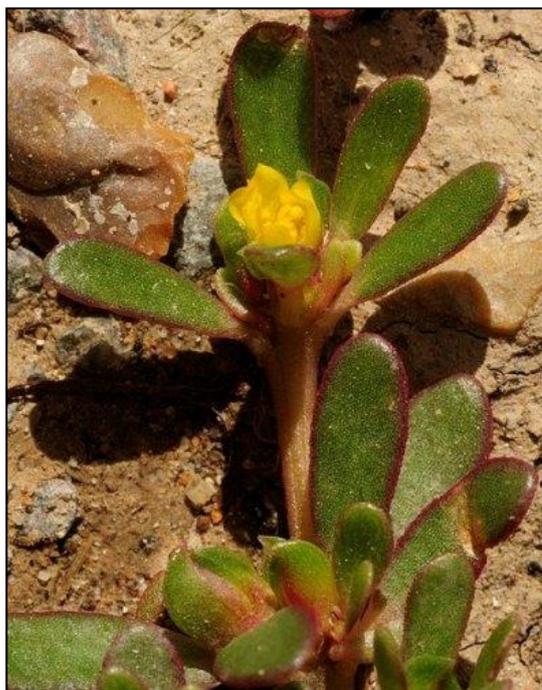
***Physalis philadelphica* (Large-flowered Tomatillo)** has only a handful of records in the British Isles, including from habitats such as tips, sewage works and pavements, to which may now be added LR and DC's find on 16 July in former gravel workings at Oare Marshes of four plants around the bottom of a spoil heap, TR 00278 64174, and a plant on dumped soil, TR 005 641. Supposedly suitable for salsas, sauces and guacamoles, Tomatillos are frost-tender and not necessarily easy to grow, although this find was flourishing. **This is a first record for vc15, East Kent,** and, indeed, for Kent as a whole.

Physalis philadelphica, 16 July 2018.
Photo © Liam Rooney

Polygonatum multiflorum (Solomon's-seal) seems to have diminished in East Kent since 1971-80, and only three of the 16 tetrads given for this species in Philp (1982) have recent records. One of these repeats is a tetrad covered by ML and SC on 26 August where they noted over 100 plants in TR2545 and over 200 in TR2445, in woodland alongside Wickham Bushes Road, Lydden Hill; here on chalk, rather than the sands and gravels preferred in West Kent. The site was not given in Philp (2010), although undoubtedly the plant would have remained present.

Portulaca oleracea (Common Purslane), an alien succulent, has only been recorded a couple of times before in East Kent, and several plants were noted by GK on 1 August growing together on the pavement at the junction of Imperial Drive and Jetty Road, Warden, TR 02370 71788, where appreciated by a KBRG meeting later that month.

***Portulaca oleracea*, August 2018.
Photo © Liam Rooney**



Potamogeton pusillus^R (Lesser Pondweed) provided an example of how readily birds may spread pondweeds. It was recorded by SB on 17 September in a pool at Royal Cinque Ports golf course, Sandwich, TR 3677 5584, which had only been created the previous year, authorised by Natural England and much visited by birds. It is also a welcome record for this taxon, not easy to identify, for which Philp (2010) had only five confirmed tetrad records, whereas we have it noted in 11 tetrads since 2010, although there is still no recent evidence of it in West Kent, where Philp (1982) showed it as scattered.

Ranunculus tripartitus^R (Three-lobed Crowfoot) was given only three Kent sites in Philp (2010), but SL has added a further one, a first record for TQ84, in a pond at the edge of pasture by Sherway Road, east of Headcorn, TQ 86652 44401. It was a small patch of floating plants (not rooted) in poor condition. Key characters included the very small, non-contiguous petals with reflexed sepals and the presence of both laminar and capillary leaves, although the flowers were atypical as regards the nectar-pits which are normally lunate and here were difficult to interpret as other than circular – a form that belongs to *Ranunculus aquatilis* (Common Water-crowfoot), which this plant was not. Identity was confirmed by RL (BSBI referee).

Rubus caesius x *ulmifolius* (the hybrid between Dewberry and Elm-leaved Bramble) was noted by LR and DC on 8 June, growing as extensive patches either side of a path around a fishing lake near Oare Marshes, TR 00237 64388. There were pruinose stems with a good mixture of 3- and 5-foliolate leaves, some showing the 'pinched over' trait of *R. ulmifolius*. Flowering shoots ranged from having fruits with many drupes with a glaucous bloom to only a few drupes, lacking bloom, with others showing intermediate mixtures. *R. ulmifolius* was present but it was not possible to tell if non-hybrid *R. caesius* was present. Indeed, recording *R. caesius* is often far from straightforward, since fruit is really required in order to check that it has not hybridized with some other bramble. Many of those leaf-only or flower-only *R. caesius* records may be questionable!

Rumex maritimus^R (Golden Dock) was recorded by OL on 6 July, at least 60 flowering and fruiting plants around the edge of a cattle-poached pond, one of a group of three, west of Lydd Golf Club, TR 0514 2228. These plants included one which, although immature, was a good candidate for *R. x knafii*, the hybrid with *Rumex conglomeratus* (Clustered Dock), which was also present (det. GK). On a further visit on 28 July, OL found large numbers around two of the three ponds. The site has formerly been subject to gravel extraction and landfill, and the ponds appear to have taken their current shape around 2007. *R. maritimus* thrives on ground kept open by seasonally fluctuating water levels and ground disturbance and has probably arrived with birds; it is surprising that this appears to be the first record for the Romney/Lydd/Dungeness area since Lady Davy's 1899 sighting at Littlestone.

Rumex sanguineus x (*R. crispus* x *obtusifolius*). The account of this triple cross near Hawkhurst in Kent Botany 2017 stated that no other occurrences had been traced. Since then, a description of this cross (called *Trirumex*

Guétrotio) has come to light, at p.113 of Guétrot, M. (1929), in which a somewhat crude tepal illustration is given. This illustration is not readily distinguishable from *R. sanguineus x obtusifolius*, although it was considered that the plant described was derived either from (*R. crispus x sanguineus*) *x obtusifolius* or from (*R. crispus x obtusifolius*) *x sanguineus*, which suggests that *R. sanguineus x obtusifolius* was not considered to be present. However, the plant's leaves were described as 'marginē nec undulata nec crispa' (with margin neither undulate nor crisped), which is consistent with *R. sanguineus x obtusifolius* and makes it difficult to see how the supposed genetic contribution of *R. crispus* is evidenced; so there is some doubt attached to this French triple cross claim.

Ruppia maritima^R (Beaked Tasselweed), an aquatic of near-coastal waters, has but few recent Kent records, and it was useful to learn that in the course of a cable route survey on 17 July BS and MPi found it in pools at Pegwell Bay at TR 344 636, where frequent, and TR 345 637, where locally frequent.

Salicornia fragilis^R (Yellow Glasswort) and *Salicornia pusilla*^R (One-flowered Glasswort) were included in the rare plant register on the basis of national scarcity, although well represented in Kent. The position is complicated somewhat by the former appearing to intergrade at times with *Salicornia dolichostachya* (Long-spiked Glasswort), although this is not apparent with records where both species are given and intermediates are not commented on. Our coverage of the *Salicornia* species was extended in 2018 to some of the saltings surrounded by mud and cut off by creeks on the vc15 side of the Medway estuary, such as Burntwick Island and Greenborough Marshes, which can only be accessed by boat. CC sailed there on 25 and 26 September; and his records included *S. fragilis* in TQ8671, TQ8672, TQ8769 and TQ8770; and *S. pusilla* in TQ8671, TQ8672, TQ8770 and TQ8771. He also found *Salicornia x marshallii* (*S. pusilla x ramosissima*, the cross between One-flowered and Purple Glassworts), at Burntwick Island, TQ 8645 7234.

Scabiosa 'Butterfly Blue' appears to be the identity of a couple of Scabious clumps, seemingly garden throw-outs since naturalized, on coastal banks at Hamptons, TR 153 677, and recorded by DC on 7 November. While there are other blue flowered cultivars (although notoriously a plant being sold in 2012 as 'Kingfisher Blue' was thought by some to be the same, but with a new name put on it), this seems a good match. As the cultivar is a sterile hybrid, involving *Scabiosa columbaria* (Small Scabious), its opportunities for spread in the wild are limited.

Scleranthus annuus^R (Annual Knawel) is an Endangered species of sandy soils, with few recent Kent records. A record was added by SB on 7 June at Eureka Park, Ashford, which also has other rare natives (see, e.g. *Medicago minima*^R above; *Filago minima*^R (Small Cudweed) and *Vulpia ciliata*^R (Bearded Fescue) were also present). *S. annuus* was growing on the sands of the Folkestone Formation in dry grassland through which the monad boundary runs: 100 or more plants were in an area 3m x 3m at TR 0076 4497; and a few metres away, at TR 0078 4501, were at least 50 more plants. The find was of subsp. *annuus* (larger ripe achene, with divergent sepals).

***Sedum dasyphyllum* habitat, December 2018. Photo © Lliam Rooney**



Sedum dasyphyllum (Thick-leaved Stonecrop) appears to have had only one East Kent location, evidenced by an 1860 specimen gathered by J.S. Mill mentioned in Hanbury & Marshall (1899) as on a wall at Faversham. On 21 May, LR found it growing on a wall along Brent Hill, bounding the Stonebridge allotments, Faversham, TR 01261 61682. This is a long and distinctive late 18th / early 19th century brick wall, certainly present at the time of Mill's

record, and long enough time to have elapsed then for weathering to permit the establishment of plants on it. LR points out that there is a contemporary reference which fixes the location as the same wall, viz. 'On a wall on the left, near Davington church, while ascending the hill from the creek, *Sedum dasyphyllum* was detected in considerable abundance' (Anon, 1861). This was part of an account of three or four hours' botanising in Faversham by a botanist who had stopped off in the course of a rail journey from London Bridge to Canterbury, and considered that, even then, the *Sedum* had long been settled there. It is a remarkable instance of continuity, evidenced by LR's rediscovery and research.

***Sedum* 'Herbstfreude' (Autumn Stonecrop)**, otherwise 'Autumn Joy' although the cultivar name should not really be translated, is a garden hybrid between *S. spectabile* and our native species, *S. telephium*. While it resembles *S. spectabile*, it differs in having some leaves alternate and they are narrower. The first British record as an escape is from West Kent (John Palmer's at Kemsing, 1988), but there appear to be no East Kent records before that of LR and DC on 23 May by a track at former gravel workings near Oare, TR 00435 64213, where there has been a lot of moving of soil and rubble with what appears to be a random distribution of introductions having come in with these materials; so this is to be treated as **the first record for vc15, East Kent**.

Solanum laxum, 24 September 2018.
Photo © Danny Chesterman

***Solanum laxum* Spreng. (syn. *S. jasminoides* J. Paxton) 'Album' (Potato Vine)** is a South American plant fairly widely grown in gardens, and the UK records on the BSBI database may well largely, if not entirely, represent sightings in gardens. However, a fine specimen was noted by DC on a footpath outside a garden at Lower Herne, TR 17975 66289, on 24 September, the presumed parent plant being inside the garden. **This is a first record for vc15, East Kent**.



***Veronica austriaca* (Large Speedwell)**, unsurprisingly, comes from Austria but is fairly widely cultivated, although not often escaping. It was found by DC on 15 May well naturalised by the edge of an old track at Yorkletts, south west of Seasalter, TR 08795 63541. **This is a first record for vc15, East Kent**, and indeed for the whole of Kent.

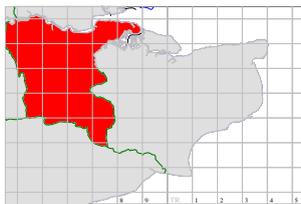
Veronica austriaca, 15 May 2018.
Photo © Danny Chesterman

Veronica x lackschewitzii (the hybrid between Blue and Pink Water-speedwells) with its rambling inflorescence branches was recorded by DM on 7 August west of Langley Loch, TQ 79049 51097, where several large plants were growing in a ditch associated with a fairly new-dug pond.

Zostera noltei^R (Dwarf Eelgrass) is, because growing out on estuarial mudflats generally well away from shore and submerged by tides, particularly difficult to record. Even floating detached fragments are of some help, as indicating presence in the general neighbourhood. These were observed by CC on 25 September from his sailing boat at anchor off

Slaughterhouse Point, TQ 8751 6977; as well as in Sharfleet Creek, TQ 8653 7146, where also cast up on shore. He surmised that they may have been washed in from further west, Half Acre Creek or Bishop Ooze.

Plant records for West Kent (vice county 16)



***Acorus gramineus* (Slender Sweet-flag)** is an Iris-like plant related to the aroids, although the flowers lack an obvious spathe. It is native to Japan and Korea but cultivated here in water gardens. A well-naturalised patch over 1m x 2m in extent was found by GK on 12 April in an acid stream in the south western corner of Millpond Wood, Greatness. The usual cultivar is a golden variegated form, but this had silver and cream striped leaves and was cv. 'Variegata'. It is a **first record for this species in vc16, West Kent.**

Acorus gramineus, 12 April 2018.
Photos © Geoffrey Kitchener



Arum italicum x maculatum, the hybrid between Lords-and-Ladies and Italian Lords-and Ladies, was recorded by DC in the Whitley Forest area, at TQ 50800 53134. This has also been known to GK and SK since 2012, but without recording it: both parents are here, plus two or three hybrid plants with large leaves and suppressed pale veining (deriving from the strong white veining of *A. italicum*), in a small hillside quarried area. The location seems remote in the forest, but there are the remains of old buildings in the neighbourhood, lost some time after 1940, which may point to the origins here at least of *A. italicum*.

Bromus lanceolatus (Large-headed Brome) begins life looking much like *Bromus hordeaceus* (Soft-brome), but then develops very long contorted awns, which give the grass an attractive appearance. It was found by GK and SK on 31 July near Lullingstone, TQ 52355 63378, by a footpath leading into a cereals field, and was sporadic for 15 metres from the junction with Redmans Lane, afterwards giving way to the more-to-be-expected *Bromus commutatus* (Meadow Brome). RMB advises that nearby Castle Farm some years ago operated an ornamental dried grasses business and grew this species, amongst others. This is likely also to explain the record at Dunstall Farm, Shoreham given in Kent Botany 2012.

Catapodium marinum (Sea Fern-grass) gave rise to inland roadside records by GK on 25 June at the verge of the A228 near Chattenden, TQ 7614 7193; and by the same road, but well distant, on 27 July at TQ6756 and TQ6856 (West Malling bypass).

Chenopodium glaucum^R (Oak-leaved Goosefoot) continues to be found extensively on the Hoo Peninsula and by the Swale, and on 4 August GK noted 38 plants by Shornmead Fort, TQ 6927 7471, a first record for TQ67 and the furthest up the Thames on the Kent side for many years. They were in their usual habitat of dry rutted cindery ground, whereas a find by DS on 8 July at Stoke Road, North Street, Hoo, TQ 816 740 was in a somewhat different habitat, the edge of a bean field. This latter record does not appear analogous to the historic



inland records, when the species followed manure heaps or shoddy spreading onto agricultural land, but is probably a reflection of the species' presence on waste and compacted ground in the neighbourhood.

Chenopodium glaucum, 8 July 2018.

Photo © David Steere

Cirsium acaule (Dwarf Thistle) would, on the Kent chalk, not normally attract particular remark, unless one were to sit on it. However, it was a surprising find by SL, as part of a survey by SL on 4 August on land west of Bancroft Hill in the housing estates of Kings Hill, TQ 682 549. Here the geology (head deposits over Hythe Formation, a sandy soil) would not have led one to expect this species. There were several colonies within a

calcareous relict heathland community, formerly part of Canon Heath. This is an extremely rare type of habitat in Kent. Other calcicolous species included *Viola hirta* (Hairy Violet) and *Blackstonia perfoliata* (Yellow-wort) (although this latter species can accommodate to a wider range of habitats). Calcifuge species included *Calluna vulgaris*^R (Heather) and *Erica cinerea*^R (Bell Heather). These should not normally be growing together, of course.

Cuscuta epithymum^R (Dodder) has now been known for some years in the chalk grassland of KWT's Polhill Bank reserve, where it can grow abundantly. The reserve now includes a grassland extension below, which was an arable field some 15 years before. When surveyed by GK on 10 June, the extension showed a remarkable quantity of this species, widely spread, in both TQ5060 and TQ5160. This must now be the best site for Dodder in Kent, after Dungeness, although in general it is more thinly spread there.

Cynoglossum officinale^R (Hound's-tongue) was seen by CR at the Thames Road Wetland, Barnes Cray, TQ 52965 75300 on 7 June, not normally a metropolitan West Kent species but here presumably either derivative via rabbits from undetected railway land plants, or brought in by ponies from elsewhere.

Descurainia sophia^R (Flixweed) was recorded by GK on 27 June at the former Broke golf course, Halstead, where there were plants on disturbed ground and in two sand bunkers, TQ 4852 6267, TQ 4851 6256 and TQ 4867 6255. It is possible that the bunker sand may have brought in the species, which now seems to have vanished from nearly all its north Kent localities.

Dipsacus pilosus^R (Small Teasel), mentioned above in East Kent records as by the Medway near Maidstone, was found on 18 August by GK and SK scattered along some 700 metres of the West Kent bank upstream near Nettlestead in a series of locations: TQ 68671 52156, TQ 68701 51461, TQ 68719 51497, TQ 68725 51510 and TQ 68762 51700. Presumably there is transmission of seeds in times of flood.

Dittrichia graveolens (Stinking Fleabane). A further sighting on the M20 of this motorway species was made by GK on 31 August near Ryarsh at TQ 6666 5937, viewed on the centre reservation from Roughetts Road overbridge.

Epilobium hybrids recorded by GK in West Kent were: *Epilobium x floridulum* (the cross between Hoary and American Willowherbs) at Romney Street (TQ5461, 2 August), Four Elms (TQ4647, 23 September), Bough Beech (TQ4946, 16 September), Nettlestead (TQ6852, 18 September) and Kings Hill (TQ6755, 27 July); *Epilobium x mentiense* (the cross between Square-stalked and American Willowherbs) and *Epilobium x palatinum* (the cross between Hoary and Square-stalked Willowherbs), both north of Hildenborough (TQ5650, 25 August); and *Epilobium x vicinum* (the hybrid between Short-fruited and American Willowherbs) at Bough Beech (TQ4946, 16 September).

Epilobium tetragonum subsp. *lamyi* (a subspecies of Square-stalked Willowherb, at times treated as a separate species, *E. lamyi*) is a somewhat enigmatic taxon, unrecorded in Kent for many years. It appears to be in some

respects intermediate between *E. obscurum* (Short-fruited Willowherb) and *E. tetragonum* subsp. *tetragonum* (the usual subspecies of Square-stalked Willowherb), and its ancestry may be of a stabilised hybrid. Several plants were found by GK and SK on 27 September in a formerly cultivated field left to its own devices, at Romney Street, TQ 549 613. They were conspicuous by their large (petals up to 10.5mm) rose-coloured flowers, somewhat suggestive of an *E. parviflorum* (Hoary Willowherb) hybrid, but fully fertile. Characteristic of subsp. *lamyi* were the distinctly petiolate upper leaves, with hairs on midribs and elsewhere, and the abruptly attenuate calyx bases, with no glandular hairs. There were also plants with shorter petals which appeared to be 'lamyi intermediates' and may correspond to the transitional types mentioned by Bomble (2008). It is curious that there seems to be no particular pattern nationally to its occurrence, other than that it is basically a southern taxon; and there are no habitat preferences, beyond what is generally applicable to *Epilobium* species, which would enable one to look out for it.

Erophila majuscula (Hairy Whitlowgrass) was first recorded in the British Isles in 1724, from Woolwich: there is a specimen in Dillenius' herbarium at Oxford identified as this by TGCR. Otherwise, the only localised Kent records are for Bexley Heath (1867) and Keston Common (1924). There is a very sparse scatter of records across the British Isles and it seems genuinely elusive, although picking out non-standard *Erophila* species from ubiquitous *Erophila verna* (Common Whitlowgrass) can be an unrewarding occupation. Now, however, we have two sightings by RMB. The first was on 18 April, of plants with densely hairy leaves and stem-base, and distinctively short petioles, found by the track crossing the river from Lullingstone Roman Villa just north of Newbarn Farm, recorded as in TQ5365, although perhaps just in TQ5364. The second was on 17 May, of plants with similar leaf, stem and petiole characters, on the verge of Lynwood Grove, Orpington, TQ 4550 6623. These finds make a case for inclusion of the species in the county rare plant register from 2019.

***Eucalyptus urnigera* (Urn-fruited Gum)** is a native of the south eastern mountains of Tasmania, and in the UK is grown as an ornamental tree. There are ten UK records on the BSBI database not marked as planted, although it seems possible that all, bar one, were. Five young self-seeded plants were seen by GK and SK on 4 September, growing in a sand bunker of a disused golf course at Broke, Halstead, TQ 48396 62171. The juvenile foliage, very different from that of adult trees, did not help much with identification; but the presence of the adult parent a few metres away provided young fruits, from which the species' name arises. **This is a first record for vc16, West Kent**, and, indeed, for Kent as a whole.



Eucalyptus urnigera,
4 September 2018.
Photos © Sarah Kitchener
(in situ plant) and
Geoffrey Kitchener (adult foliage).

***Euphorbia mellifera* (Canary Spurge)** can be a 2m high cultivated shrub, but the seedling or seedlings seen by an LNHS meeting (noted by RMB) on 17 May at the pavement's edge in Lynwood Grove, Orpington, TQ 4551 6620, although then reaching 20cm, are unlikely to reach full size. The parent plants were a few metres away, on the other side of a domestic drive. Although the BSBI database holds a number of West Kent records, it is possible that none of these is other than of a cultivated plant in a garden; so this record, relating to an escape, may be treated as **the first for vc16, West Kent**.

Euphorbia mellifera, 17 May 2018. Photo © Rodney Burton

Geranium purpureum^R (Little-Robin) has a relationship with railways which is continued by the discovery by an LNHS meeting (when noted by RMB) on 17 May of three plants against railings by an access road to the station staff car park, Orpington, TQ 4549 6602, plus one at the crossing of an alleyway and Dale Wood Road, east of the railway, TQ 453 662.

Hieracium lepiduloides (Irregular-toothed Hawkweed) was remarked upon in Kent Botany 2017 as present at Westerham (the name was new to Kent, but plants previously called *Hieracium lepidulum* are likely to be this). Material gathered on 14 August 2017 (by MS, with GK) under conifers in Joyden's Wood, TQ 50034 71296, has been determined as this (det. MS, confirmed by DMC), after it had been grown on. The location is within a tetrad for which EGP (Philp, 2010) recorded *H. lepidulum*.

Lactuca saligna^R (Least Lettuce) occurrences in Kent are important, given that this Endangered species only has populations elsewhere in Britain at Rye Harbour in East Sussex and Fobbing in Essex. On 19 August DS found a new site on Allhallows Marshes, at TQ 86516 76722, where there were at least 20 plants. The recorder considered it possible that there were other plants in adjoining monads, but it was not until this colony was reached, that the identity became apparent, largely because of the linear leaves with their sagittate base and light midrib. Although the record could be regarded as related to the Grain population along Yantlet Creek, it is about 1.4km distant from the nearest Grain plants, is on the 'mainland' side of the Creek, and is in a different tetrad; so this is a significant extension of occurrence. The location is the grassy sea defence wall adjoining Yantlet Creek, not well visited because of the distance required to reach this section, which is part of a convoluted cul de sac of footpaths constrained by the winding creeks and fleets of the area which formerly separated off Grain as an island.



Lactuca saligna leaves. 19 August 2018.
Photo © David Steere

Medicago polymorpha^R (Toothed Medick), normally a coastal species, was seen by an LNHS meeting on 11 August at Parish Wood, a park at Blackfen, TQ4574. There were four plants in otherwise barren parched grassland, and RMB considers it possible that a dog had stopped there for a scratch after previously walking at a seaside place where the species is native.

Orobanche hederæ^R (Ivy Broomrape) has something of a hotspot in TQ57, especially between Stone and Swanscombe, but a couple of new monad records were made: first, on 13 January by GK and SK (16 dead spikes near the Asda store, TQ 582 750 in rough vegetation cut back to expose a thin growth of *Hedera helix* s.s. below); and then on 28 July by RMB (on the north side of Lower Station Road, Crayford, TQ 5126 7427 - under *Buddleja davidii*, but with some Ivy present at the east end of the population).



Parentucellia viscosa^R (Yellow Bartsia) was found by GK on 22 June on land in course of layout for commercial development south of North Street in the Hoo Peninsula, close to the former Bee Ness Jetty supply route. The terrain here has seen many changes and its saltmarsh origins are not particularly discernible. This first find was of some 125+ plants (subsequently counted) along c.15 metres of semi-bare (unsown) embankment, not long created, at TQ 8144 7344. A follow-up on 25 June located a great number of plants from TQ 81529 73459 to TQ 81647 73473, over some 120 metres of the northern side of a brackish lake, which appeared to have been created between 2011 and 2013. While some plants had dried up away from the water, those on the still-damp part of the draw-down zone were flourishing, and grew well-branched, up to an extraordinary 90cm high (Stace, 2010, gives a 50cm maximum).

***Parentucellia viscosa*, 25 June 2018.
Photo © Geoffrey Kitchener**

Polypogon monspeliensis^R (Annual Beard-grass), primarily a coastal plant in Kent, often in brackish grazing marshes, occasionally makes appearances inland. One such, a first record for TQ54, was seen by GK and SK on 24 September under the A21 where it bridges the Medway at Haysden, TQ 562 458. The gravelly ground, saline from highway de-icing salt, provides a proxy for the species' more natural habitats. A coastal, or rather estuarial, habitat was encountered by GK on 22 June, at the Hoo Peninsula's London Medway Commercial Park, plot 2B (to be developed) centred on TQ 8148 7333. This plot was a cleared gravelly area, evidently subject to winter flooding from brackish water (up to the 1960s, at least, it appeared to have been in saltmarsh), and the *P. monspeliensis* plants there, ranging from large to minute, must have numbered in millions. Among these were a few specimens of *X Agropogon lutosus*, the inter-generic hybrid with *Agrostis stolonifera* (Creeping Bent), which was also present.



Polystichum x bicknellii (the cross between Hard and Soft Shield-ferns, *P. aculeatum x setiferum*) was found by the KBRG/KFC meeting of 24 March at Stock Wood, Chiddingstone, TQ 48714 43812, where a large single plant was growing on the gill slope beside a stream on Wadhurst Clay in the vicinity of the parent ferns.

***Polystichum x bicknellii*, 24 March 2018. Photo © Stephen Lemon**



Portulaca oleracea (Common Purslane), a supposedly edible plant but not so tempting when it escapes onto pavements, was recorded by an LNHS meeting (noted by RMB) on 11 August outside 11 Fair Oak Drive, Avery Hill, TQ4474, where there was a 30cm diameter plant at the junction of drive and pavement.

Ranunculus attenuilobus A.C. Leslie (Beautiful Goldilocks Buttercup) was published in Sell and Murrell (2018) as part of a series of splits of the *Ranunculus auricomus* (Goldilocks Buttercup) complex, whose breeding system is such that numerous distinct local races have formed, which may be treated as species in their own right. *R. attenuilobus* was described by ACL from a 1980 Surrey specimen, but he has advised that he also

found it in April 1976 at a streamside at Crockham Hill. It was re-found by GK and SK on 5 May, several plants growing with alders in a woodland strip along Kent Brook, TQ 4381 5076. It has fairly slender lobing to the basal leaves, at least in their fullest manifestation, as there is always a range of shape on the same plant: different species need to be compared each with their full range of leaf shapes.

Ranunculus peltatus^R (Pond Water-crowfoot) has been proving fairly elusive in West Kent, despite the number of historic records. It was, however, recorded by SL and AF on 19 May, shortly after its discovery by AF, in a small field pond east of Damper's Wood, Bough Beech, TQ 5001 4790 where there was a small patch of flowering plants growing among *Glyceria fluitans* (Floating Sweet-grass). This follows clearance the previous year of blanket cover of *Salix cinerea* (Grey Willow). The pond itself did not appear on Ordnance Survey maps until the 1907 survey.

Rumex maritimus^R (Golden Dock) was found by the KBRG meeting of 18 September to be well scattered across the grazing marshes in the RSPB's Northward Hill reserve TQ7676, TQ7777 and TQ7877, especially in semi-bare areas of the grassland where drainage runnels had dried out in summer and had received some cattle-trampling. Hybrids (*Rumex x knafii*) with *Rumex conglomeratus* (Clustered Dock), the usual species of wet areas in the grazing marshes, were found at TQ 77844 77500, TQ 7793 7753 and TQ 7805 7755. They had noticeably less compact and poorly developing inflorescences.

Silybum marianum (Milk Thistle) has a fairly unpredictable distribution, partly dictated by bird seed spreading and garden escapes, and our 2018 West Kent records comprised a sighting on 26 February by GK and SK of several plants on a soil heap near tipping at the old Greatness clay works, TQ 537 576; and on 8 December JP recorded two well-developed young plants in grass of a recreation area at Crockenhill, TQ5068.



Teucrium botrys,
22 May 2018.
Photo ©
Danny Chesterman

Teucrium botrys^R (Cut-leaved Germander), present in only a handful of British sites, has a classic location at White Pit, Halling, in the vicinity of which it was first recorded in 1894, but where it has been little seen in recent years. In 2017 only one plant could be found, probably because of the absence of disturbance which would assist germination. Its status appeared less bleak in 2018, as on 22 May DC found 15 young plants in a small

area of bare chalk which had been disturbed by a bonfire. Then on 23 July, GK, PW and JW counted in the same locality at TQ 69384 65091 some 26 plants, ranging from multi-stemmed 28cm high to single-flowered 3.5cm high, setting good seed. A further singleton was present at TQ 69399 65075, again in an area of bare chalk (>80% of the ground within 1 m square being un-vegetated). Clearly there is a seed-bank here, but the future of the species at this location is threatened by increasing scrub cover and by the lack of disturbance.

***Turritis glabra*, 4 September 2018.**
Photo © Ian Holt

Turritis glabra (Tower Mustard) has been on the county 'probably extinct' list, with a last sighting in 1958, according to Philp (2010); a sowing of seed by Francis Rose in 1964 at Leybourne Wood does not seem to have come to anything. In the 18th to mid-19th century it was not uncommon on sandy ground in metropolitan West Kent, although regarded by Hanbury & Marshall (1899) as rare and decreasing by the end of the 19th century. On 2 September it turned up unexpectedly in plant borders near Lesnes Abbey ruins, TQ 47863 78793, when it was found in the course of a 'Botany for Beginners Day' run for the Lesnes Abbey Conservation Volunteers. Its location had been previously disturbed considerably by the demolition of an old lodge and toilet block followed by the construction of a new lodge; TB considered that unrecognised plants had been present at least during the construction about three years before. Identification was by TB and GH; and IH reported some 10-20 plants, although others may have been weeded out earlier. The long, thin fruits appressed together and maturing to light brown are distinctive. The origin of the species here is enigmatic.



Although anything in a flower bed must be under suspicion of introduction, and *T. glabra* is fairly attractive, it is not a plant normally cultivated, other than by a few botanists. Flower bed maintenance probably assists, if weeding is not too intensive, as it is a biennial requiring open ground for germination. The border itself appears to date back at least to the 1940s. Prior to the site's purchase by London County Council in 1930 it had been farmland, but with the abbey ruins exposed by excavations 1909-13. The absence of historic records militates against the long-term survival of a seed-bank of natural occurrence here. However, there is an outside chance of long-term survival from a botanist's introduction. W.H. Griffin, who was responsible for introduction of *Galium parisiense* (Wall Bedstraw) to Lullingstone in 1904, contributed a record of *T. glabra* to the Woolwich Surveys (Bevis & Griffin, 1909): 'In patches on Hayes Com. and as a garden weed, '05, W.H.G.'. While the locality of the 'garden weed' is not stated, it is possible that Griffin could have taken it from there to the Lesnes Abbey Excavations run by the Woolwich Antiquarian Society, which also provided archaeological input to the Woolwich Surveys.

Ulmus glabra x *minor* (*Ulmus* x *hollandica*) is the identity, determined by BSBI referee MC, of an elm found by SL and AF on 19 May at Kilnhouse Farm, Damper's Wood, on the east side of Bough Beech Reservoir, at TQ 499 480 and TQ 499 479. It was first seen by AF in 2017. *Ulmus* x *hollandica* is normally seen as a planted tree, often a recognisable clone such as 'Vegeta' or 'Major' (otherwise 'Hollandica' or Dutch Elm), but this find appears to be a spontaneous F1 hybrid and akin to woodland elms described by Oliver Rackham as 'lineage elm' (Rackham, 1980). The parent *U. glabra* appears to have been a native of long standing and, although a number of other elm species have been recognised in Britain, there is a case for regarding them as capable of being

subsumed under a broad treatment of *U. minor*, which probably arrived in the Bronze Age and has resulted in a complex mix of elms through hybridisation. The discovery was of widespread trees appearing to be part of the natural flora, both as understorey and occasional canopy trees; there was little evidence of suckering or coppicing. Damper's Wood was mapped on the 1798 Ordnance Survey drawing of the area and is connected to a wider patchwork of woodland shaws with ancient woodland indicator species that include *Sorbus torminalis* (Wild Service-tree). No old coppice stools or obvious planted broadleaves/conifers were seen in the wood, which is privately owned and probably sheep-grazed until recently. MC summarised the evidence of identification as follows. The leaves are too big for *U. minor*. However, the petioles are too long for *U. glabra*. The really useful evidence we have is the seeds as they show an intermediate state between *U. minor* and *U. glabra*. The key thing to look for in the seeds is the position of the seed in relation to the wing. In *U. glabra* the seed is central and not in contact with the apical notch. In *U. minor* the seed is obviously displaced towards the apex of the wing and is normally in contact with the apical notch. The hybrid is intermediate.

***Ulmus glabra x minor*, material gathered
19 May 2018. Scan © Stephen Lemon**

Verbena rigida (Slender Vervain), a South American perennial which is normally grown as an annual in British gardens, was found on 12 August by GK at St Mary Cray, TQ4767, a small roadside plant at the edge of the pavement. This is the third West Kent record; surprisingly, since it is not uncommonly grown and, for comparison, *Verbena bonariensis* (Argentinian Vervain) from about 2004 has escaped increasingly, with 16 Kent records in 2018.



Vicia bithynica^R (Bithynian Vetch) is very scarce with us, although Kent (with south Essex, Dorset and the surrounds of the Bristol Channel) is still one of the areas in Britain with the best chance of its being found. A new site was discovered by SP and DG on 8 June on the Saxon Shore Way near Hoo St Werburgh, TQ 7937 7170, an estuarial embankment habitat.



Viola odorata var. *praecox* is a variety of Sweet Violet which flowers early and is fairly widespread in the British Isles, with a concentration in Surrey and Sussex. It seems not to have been previously recorded for Kent, but was found by GK on 27 December, an extensive patch at the edge of a copse facing onto amenity area south of The Warren, Singlewell, Gravesend, TQ 65997 71519. It appeared to have been in flower for some time (var. *praecox* starts in November) and showed other characteristics of this variety: the leaves are small and orbicular; the flowers are a deep violet-purple. Further *Viola* colonies were seen about 80 metres west on 4 January 2019; although apparently not with such small leaves, but nonetheless flowering strongly. **This is a first record for vc16, West Kent and for Kent as a whole.**

***Viola odorata* var. *praecox*, 4 January 2019.
Photo © Geoffrey Kitchener**

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