

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

KENT

BOTANY

2019

Kent Botany 2019

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Compiled by Geoffrey Kitchener
(January 2020, web version 1)

Front cover:

Raphanus raphanistrum subsp. *maritimus*^R (Sea Radish) at Minster (Sheppey).
Photo 4 July 2019, © Liam Rooney

Introduction

Kent Botany 2019 is the tenth report in the Kent Botany series, reporting on current botanical developments in the county. It represents a significant milestone, as 2019 brings to an end ten seasons of recording by the Kent Botanical Recording Group, founded in March 2010. It is also the end of the Botanical Society of Britain & Ireland's (BSBI) date class 2010-19, a ten-year period for the assemblage of records which may be compared with previous ten-year date classes, to identify trends in the distribution of our flora. In addition, it is the end of the BSBI's Atlas 2020 project, which seeks to map the current status of the British and Irish flora, following up the last mapping (Preston *et al.*, 2002), twenty years before.

This report is issued primarily as a web version, maintained on the Kent page of the 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 2019 included the following:

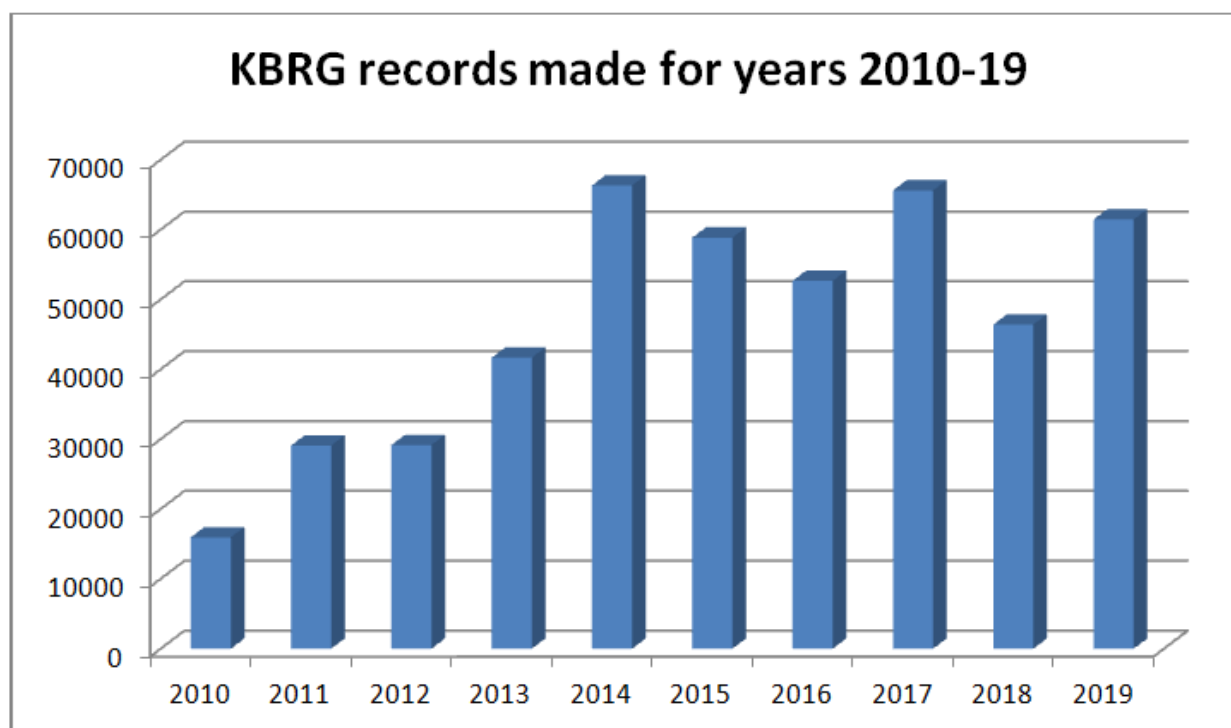
- *Juncus ranarius* (Frog Rush) has been restored to the Kent flora, with the discovery of a population at Crossness;
- *Juncus x surrejanus* (*J. acutiflorus* x *articulatus*, the cross between Sharp-flowered and Jointed Rushes), not recorded in East Kent for over 50 years, appears to be plentiful and overlooked, at Hothfield;
- *Parapholis incurva*^R (Curved Hard-grass) has been re-found in its 1632 location at Margate;
- *Raphanus raphanistrum* subsp. *maritimus*^R (Sea Radish) is now being found on the Kent coast;
- *Tragopogon porrifolius* subsp. *australis* (Salsify) has been recorded in Kent, an overlooked subspecies which may be widespread;
- *Verbena incompta* (Purpletop Vervain), an invasive plant in various parts of the world but unrecorded in the British Isles, has been found in East Kent.

Ten seasons of recording

A comprehensive study of changes in floral distribution over the period 2010-19 requires further time for analysis; for validation of existing records; and for a comparison with the wider position across the British Isles that the BSBI's

Atlas project should afford. Nevertheless, it is clear that our knowledge has increased considerably and that there are changes which are not just a product of our increased awareness, but also reflect genuine changes in the flora around us in Kent.

Our increased knowledge arises from the network of recorders in action. Membership of the Kent Botanical Recording Group (KBRG) has risen from 35 on formation in March 2010 to 141 at the end of 2019. Not all members are active recorders, but many are so, knowing that their botanical records contribute to a larger picture at county and national level. Those botanical records, for 2010-19, amounted to 467,219. These year totals are taken from the BSBI national database, to which our records are forwarded, in its state at year end. For these totals, I have not sought to reconcile fully the national and county databases, and the BSBI summaries strip out what are considered to be duplicates. It also needs to be taken into account that the BSBI database totals include about 19% of additional records which have reached the BSBI otherwise than via the KBRG, so that the BSBI database total for the period is 572,982 (West Kent 283,698; East Kent, 289,284).



Comparing this position with the past, until the publication of Philp (1982) we knew relatively little (other than at a 10km square level) about the mapped county flora, but 265,511 tetrad records then became available for 1971-80. The New Atlas of the Kent Flora (Philp, 2010) added over 250,000 more tetrad records for the period 1991-2005: a monument of a single recorder's endeavours, although lacking some of the benefits which network recording provides. Recording reported to the BSBI for 2010-19 has accordingly provided more than both those previous surveys together. It has also done so at a finer level of detail, which is particularly important for the rarer species. Recording by tetrads was an advanced method at the time of Philp (2010). However, recording by monads (or finer), which is what we have done since 2010, provides data which are four times more accurate: one is comparing a record within a 4 x 4km square with one at least within a 1 x 1km square. In 2019, 93% of records submitted nationally to the BSBI database were at monad (or finer) resolution, so this is the *de facto* standard of recording precision.

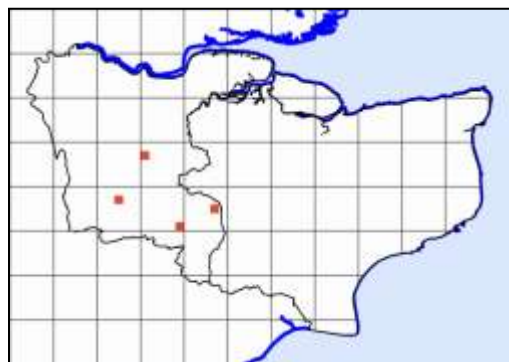
Recording at this finer level of detail has also provided encouragement to visit more of our county. Instead of being content to find a representative range of habitat within a 4 x 4km square, which may not have involved visiting more than one out of the four monads, we have tried to visit as many monads as we could. The total number of Kent monads is, according to different sources, 4,484 or 4,494 (these figures are computed from East Kent and West Kent

separately so as to treat a monad which is in both of them as two monads, but we have treated these separately for recording purposes anyway). We have recorded in over 94% of all monads, a degree of completeness which could not have been expected when we began in 2010. (The actual percentage is even higher than this, because we may have been in the East Kent part of a monad, but not the West Kent part, and yet both count as separate monads.) Recording in all these monads is of course not the same as surveying each of them: the number of different plants recorded for 2010-19 in each varies from 418 (TR1065 at Whitstable, a tribute to the thoroughness of Alex Lockton's searches as well as the variety of habitat) to one (in 22 monads: generally because an interesting plant has been noted in passing, in many cases *Cochlearia danica* (Danish Scurvygrass), which can of course be observed from a travelling car).

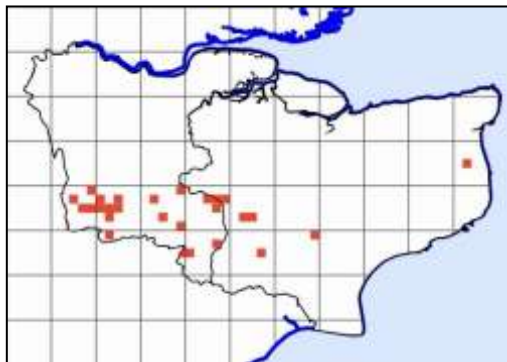
The increased knowledge acquired from these ten seasons of recording has in some cases given a different picture of the status of a species, not necessarily because of any change in its presence in the field, but rather because of the intensity of recording.

This is particularly evident from the impetus given by Stephen Lemon to recording from the Weald. Perhaps the most interesting discovery of his was of gametophytes of *Trichomanes speciosum*^R (Killarney Fern) in crevices and caves at Stridewood Rocks, Hungershall Rocks, Redleaf Rocks and Oldbury Hill. These represent the persistence of the fern in an immature state in a microclimate that enables survival, but not the production of fronds. The latter would require a mild, wet climate such as obtains in parts of Wales and Ireland, so *Trichomanes* may well have been here for thousands of years dating from when climate was suitable. We also now have a much greater knowledge of the distribution of *Carex* (Sedges) in the Weald. For example, Philp (2010) gave only four tetrad records for *Carex vesicaria*^R (Bladder-sedge), but for 2010-19 we have 28 tetrad records (32 monads) so that, far from being scarce, it is a not uncommon plant of ditches, pond and stream margins, wet grazing fields and woodlands. The sedge being patch-forming and growing in places where there has not been major habitat change, it is unlikely that there has been any real gain between 1987-2009 and 2010-2019, other than as regards our knowledge.

Carex vesicaria^R (tetrad data) 1987-2009

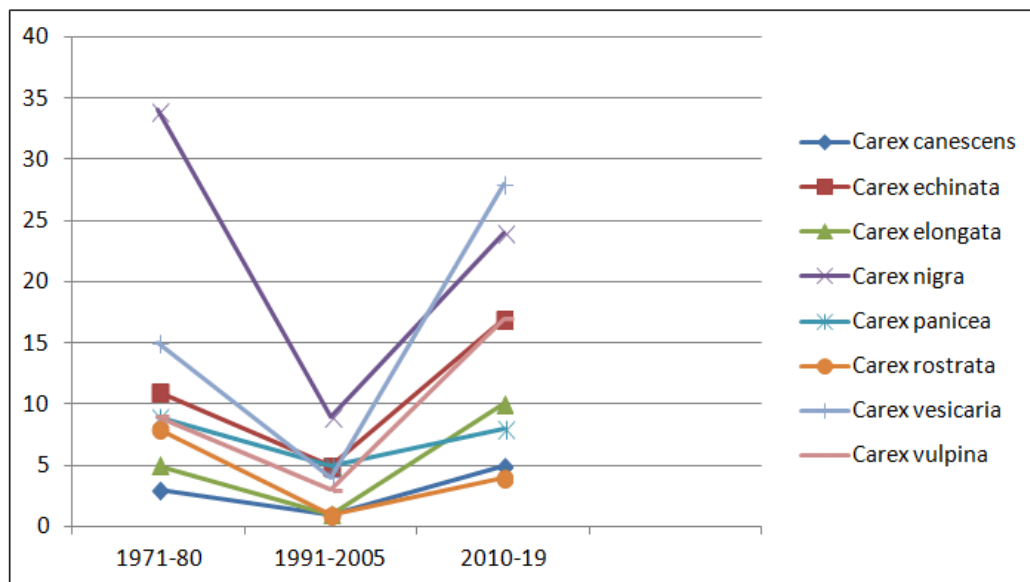


Carex vesicaria^R (tetrad data) 2010-2019



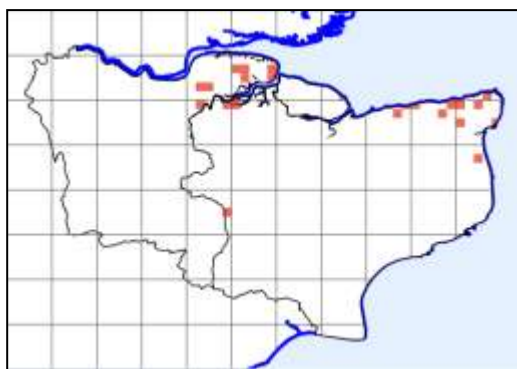
The position is comparable for *Carex echinata*^R (Star Sedge) where there are five tetrad records in Philp (2010), 17 during 2010-19; for *Carex elongata*^R (Elongated Sedge), where there is only one tetrad record in Philp (2010), ten during 2010-19; and *Carex vulpina*^R (True Fox-sedge), where there are only three tetrad records in Philp (2010), 17 during 2010-19. The strength of *Carex vulpina*^R occurrences is particularly important, given the limitation of its national distribution largely to the Kent and Sussex Weald, and the status of the sedge as a UK Biodiversity Plan priority species. Many of Francis Rose's sites were rediscovered, and evidence found of the sedge's ability to colonise new sites. So the 2010-19 records have given us a new perception of the status of the Kent flora, refining that recorded in Philp (2010). In some cases this has indicated that an apparent decline since Philp (1982 was probably an artefact of recording – the difference between networked recording in 1971-80 and 2010-19, and 'single person' recording in 1991-2005. These and other Wealden sedges are given in the accompanying chart, where all show an apparent 'recovery' in records after a dip in 1991-2005: more than this, all except *Carex nigra*^R (Common Sedge) and *Carex panicea*^R (Carnation Sedge) show an increase since 1971-80 as well.

Trends in records (tetrads) of Wealden Carices

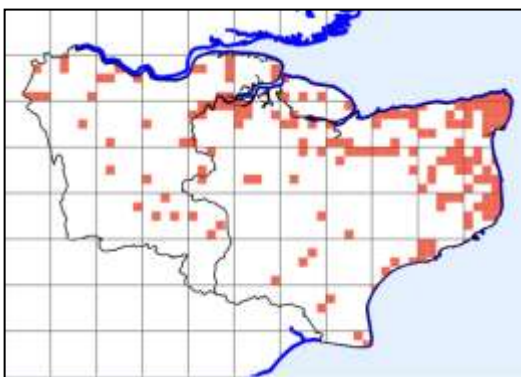


The ten-year period has also captured examples of change in plant distribution, some dramatic. These changes may reflect a direction of spread where our Kent data support a national picture. Plants with a previously limited distribution in south west England, such as *Poa infirma*^R (Early Meadow-grass) and *Polycarpon tetraphyllum*^R (Four-leaved Allseed) have spread rapidly into the south east. *Poa infirma*^R was first recorded in Kent in 1999. It is now fairly ubiquitous, apparently spreading via vehicles and footwear, and Kent is now a national 'hot-spot' (that may literally be so, if the cause is climate change).

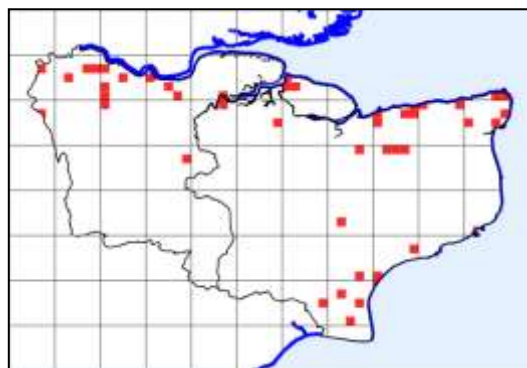
Poa infirma^R (tetrad data) 1999-2009



Poa infirma^R (tetrad data) 2010-2019



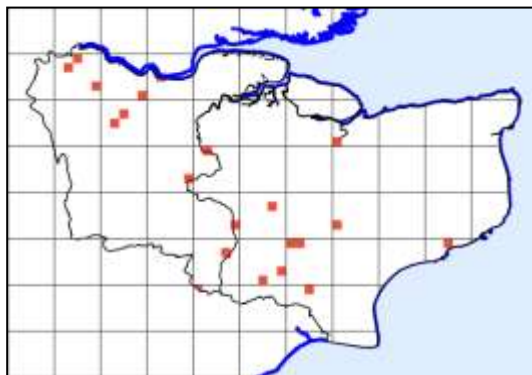
Polycarpon tetraphyllum^R (tetrad data) 2011-2019



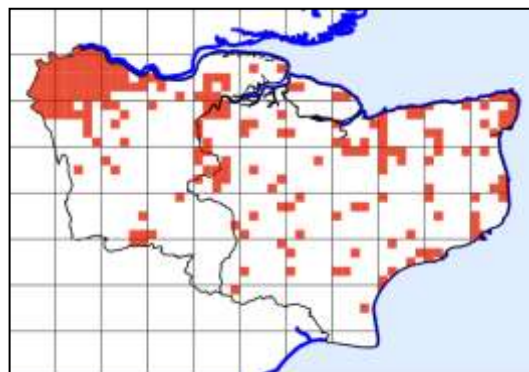
Polycarpon tetraphyllum^R was first recorded in Kent in 2011, although thought to have been present at least from 2008. Virtually all our records relate to urban and coastal street pavements and gutters, and to block-paved drives, forecourts and car parks. These all have a warm microclimate and it may be that plants have arrived, not through gradual spread from south west England, but as a series of introductions through the horticultural trade importing containers of Mediterranean plants, such as olives, figs and palms.

Yet another Mediterranean species, spreading up western Europe, and now much more widespread in the British Isles than the former two species, is *Polypogon viridis* (Water Bent). This is most frequently found in urban situations: streets, front gardens and their drives, and its initial spread may also have been with imported plants, the first Kent record being from a garden centre in 1997 (setting aside a couple of records between 1960 and 1986, with incomplete details).

Polypogon viridis (tetrad data) 1997-2009

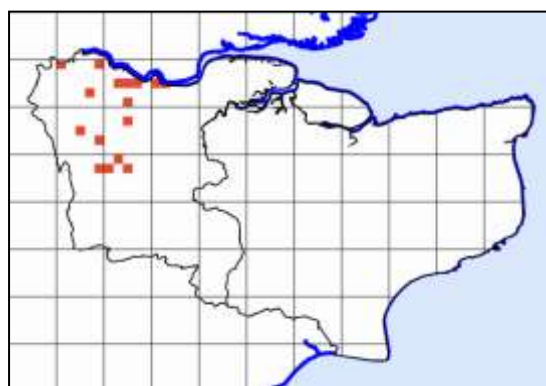


Polypogon viridis (tetrad data) 2010-2019

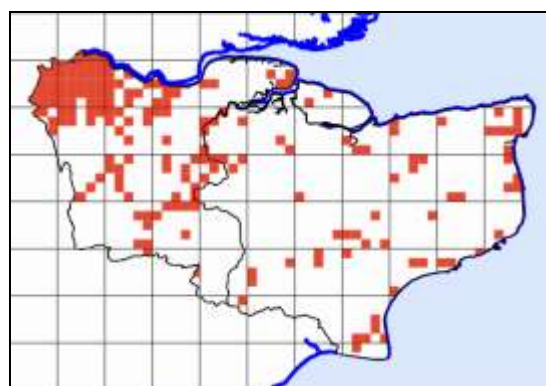


As with the last species, *Erigeron (Conyza) floribundus* (Bilbao's Fleabane) is a fairly cosmopolitan plant, spreading in Europe. It originates from South America, and was preceded by *Erigeron (Conyza) sumatrensis* (Guernsey Fleabane), also widespread. It was first recorded in Kent in 2009, when already well established, and it shows a similar distribution to *Polypogon viridis*, in having a strong metropolitan West Kent presence and being widely scattered elsewhere. The similarity of distribution does not extend wholly to the habitat, however. It may be found in urban gardens and streets as well, but is recorded from waste ground and from rural locations to which seed has been wind-blown.

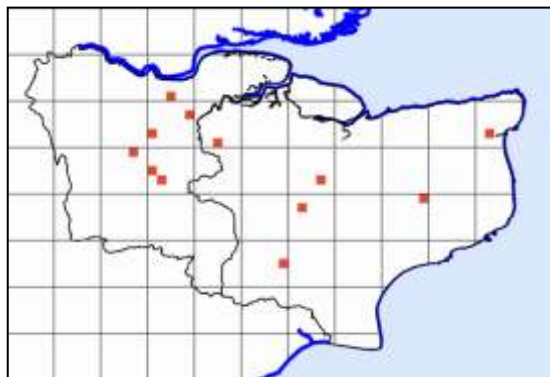
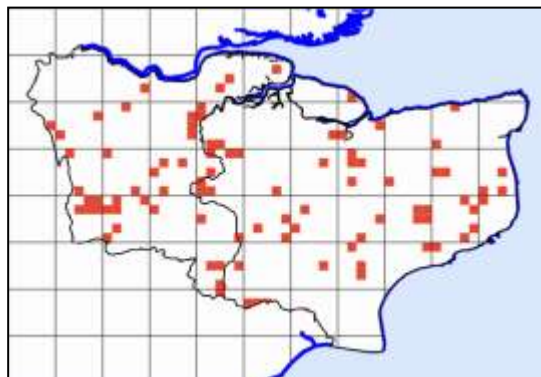
Erigeron floribundus (tetrad data) 2009



Erigeron floribundus (tetrad data) 2010-19



All these, together with *Laphangium (Gnaphalium) luteoalbum*^R (Jersey Cudweed), are 'weedy' species, primarily of urban or disturbed habitats, and have spread very rapidly from their recent first appearance in the county. *Bromus secalinus*^R (Rye Brome), however, has been with us for a long time, the first record being surmised to be 1632. In the nineteenth century, it was scattered across the county, perhaps kept going by introduction with clover crops, but towards the end of the twentieth century it became very sparse. Our 2010-19 records show a considerable revival in its fortunes without any particular pattern, other than that it is normally seen on the margins of cereal crops. This expansion lacks an obvious explanation, although recognition has undoubtedly improved, and some of its presence may be attributable to inclusion in seed mixtures used for conservation schemes.

Bromus secalinus^R (tetrad data) 1987-2009*Bromus secalinus*^R (tetrad data) 2010-2019

Another type of change in our flora is the introduction from mainland Europe of 'motorway plants', species particularly tolerant to the highway salt and other stresses which affect life on the centre reservation and margins of main roads. The M20 provides the main link for arrival of such species as *Atriplex micrantha* (Twoscale Saltbush), first recorded in 2017; *Dittrichia graveolens* (Stinking Fleabane), first recorded in 2012; and *Pastinaca sativa* subsp. *urens* (Eastern Parsnip), first noted in 2017. The spread may well be held back by M20 roadworks 2018-20, especially where these have resulted in the removal of the centre reservation.

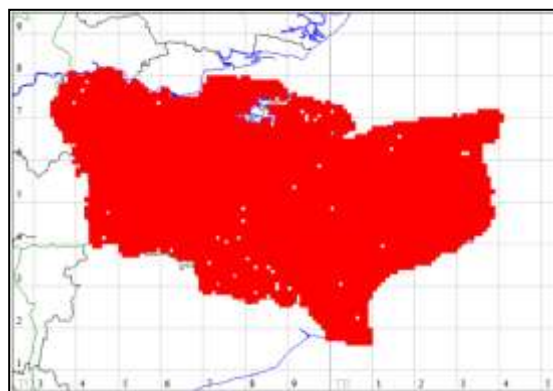
Botanical developments in Kent, 2019

For the final year of the current ten-year recording cycle, the KBRG added over 61,400 records to the BSBI database. Twenty taxa new to East Kent were recorded (although not all for 2019) and nine for West Kent. The KBRG programmed fifteen field meetings during 2019, of which one had to be cancelled due to high winds. There were sessions held jointly with the BSBI, Kent Field Club, Surrey Botanical Society, Sussex Botanical Recording Society and the Wild Flower Society. We had meetings targeted for winter twig identification, willows, glassworts, *Sium latifolium*^R (Greater Water-parsnip), and arable weeds; and we visited locations such as Hothfield reserve, South Norwood Country Park, Bewl Water and several areas in the Low Weald which were lacking records but in the event produced some spectacular finds such as *Carex elongata*^R (Elongated Sedge), *Ranunculus arvensis*^R (Corn Buttercup), *Ranunculus tripartitus*^R (Three-lobed Crowfoot) and *Thelypteris palustris*^R (Marsh Fern).

An early-year concern was a report of introduced *Proserpinaca palustris* (Mermaid-weed) in a ditch off the Royal Military Canal and, indeed, when visited by Kent botanists this looked very much like a potentially invasive alien not yet encountered in the wild in Britain. Fortunately it turned out to be an unfamiliar growth stage of *Rorippa palustris* (Marsh Yellow-cress), to the great relief of all.

2010-19 recording: monads visited shown red

There was a major focus on surveying monads which had not yet been visited and about 270 were given records thanks to the diligence of many recorders including, in addition to the vice county recorders (Geoffrey Kitchener and Sue Buckingham): Steve Coates and Mel Lloyd; Doug Grant and Sue Poyser; Jacky Langton; Joyce Pitt; and David Steere. By the end of the year, our monad coverage was substantially complete (see map). There remains a scatter of unvisited Wealden locations: this is partly an issue of access, but also may reflect the remoteness of this part of the county from recorders' homes. The scatter in Sheppey is largely due to difficulty of access.



Habitat studies received a boost with Alex Lockton's *Flora of Hothfield Heath* which may be accessed at <https://bsbi.org/kent>. This is a comprehensive collation and updating of botanical records for Kent's most important heath and bogland site with new quadrat-based surveys of the vegetation communities there. Alex has taken nothing for granted in his 2019 surveys, which have produced overlooked taxa such as *Juncus x surrejanus* (mentioned earlier) and *Salix x multinervis* (the cross between Eared and Grey Willows), and has provided a challenge to confirm various plants which have been supposed to be present, such as *Ulex gallii*^R (Western Gorse) and *Erica cinerea*^R (Bell Heather). Historic records of *Ranunculus hederaceus*^R (Ivy-leaved Crowfoot) are suggested to have been *Ranunculus tripartitus*^R (Three-lobed Crowfoot). This is avowedly a provisional report which may be expected to be developed with reactions and further information. Also published in 2019 was David Johnson's *Wild Orchids of Kent* (Johnson, 2019) which sets out many years' work on the county's orchids and includes records from the current recording cycle, as far as 2016. This has been very favourably reviewed and we may expect it to encourage further sightings, particularly of the range of variation to be encountered in many species, with which the book deals thoroughly. Also, in 2019 a further extended transcript (163pp) of Francis Rose's manuscript *Flora of Kent* was issued online, also at <https://bsbi.org/kent>. Since then, more of the manuscript and associated papers have come to light with the help of Anna and Andrew Rose and David Streeter. Transcription has continued and the next version to be placed online will have an enlarged introduction and will exceed 210pp.

Kent rare plant register (RPR)

The RPR documentation was updated online in March 2019: this included the register list of 327 rare plants (after *Arum neglectum* subsp. *neglectum*^R (Italian Lords-and-ladies) had been added), the list of 'probably extinct' plants and all the species accounts, reflecting new discoveries during 2018. More species accounts were drafted, so that online accounts covered to the end of Part P. An interim draft of most of Parts Q & R was circulated to KBRG members for consultation. Names in all documentation were converted to the nomenclature of Stace (2019), which results in many changes, due to the evidence of plant relationships provided by the increasing number of studies based on DNA sequences. Recording, however, stayed in line with Stace (2010) so as to avoid any confusion before the ten-year cycle ended at 31 December 2019. Ideally, the RPR project should have been completed within the ten-year recording cycle 2010-19, so as to inform the final stages of recording. However the standard of production adopted has taken up much time: each species is treated with a full historical account from the first find, through trends in distribution, to the current position, with recent records set out in full (or mapped, where these are numerous), including ecological information and observations relevant to the species' performance in Kent, and with photographs (where obtainable) of close-ups, whole plant and habitat. The objective has been not only to make accessible information about the current county status of the 327 rare plants, but also how that status has evolved; what might be the reasons for changes in rarity (e.g. changes in pollinators; coppicing cycles; development; climate; atmospheric nitrogen deposition), and what may help or hinder the plant in Kent.

The listing of plants has changed over the ten-year period. Some have been added as overlooked in the original compilation: *Salix purpurea*^R (Purple Willow) and *Polygonum oxyspermum* subsp. *raii*^R (Ray's Knotgrass). Over twenty more have been included as a result of discovery or re-discovery including such exciting finds as *Crepis foetida*^R (Stinking Hawk's-beard), thought to have become extinct in the British Isles. Some plants have been removed, as investigation has shown that they were commoner than was thought: *Epilobium roseum* (Pale Willowherb), *Erodium moschatum* (Musk Stork's-bill) and *Plantago major* (Greater Plantain) subsp. *intermedia*. Others remain on the register, largely because of outdated national status, but have spread so as to be unworthy of continued attention, e.g. *Poa infirma*^R (Early Meadow-grass) and *Laphangium (Gnaphalium) luteoalbum*^R (Jersey Cudweed). Numerous additions were made in 2014 as a result of the reassessment of plant conservation status in England, when many relatively common plants, such as *Cruciata laevipes*^R (Crosswort) and *Fragaria vesca*^R (Wild Strawberry), were found to be in steep decline and so worth keeping an eye on. Some rarer species may yet have vanished from Kent, with a possible need to be transferred from the rare plant register to the 'probably extinct' list –: the dates of our last records for the following plants are receding: *Callitriche truncata*^R (Short-leaved Water-starwort) 2008; *Iberis amara*^R (Wild Candytuft) 2001; *Persicaria minor*^R (Small Water-pepper) before 1999; *Phelipanche (Orobanche) purpurea*^R (Yarrow Broomrape) 1992; *Pilosella peleteriana*^R (Shaggy Mouse-ear-hawkweed) 2001; *Rumex crispus* (Curled Dock) subsp. *uliginosus*^R before 2005; and *Sparganium natans*^R (Least Bur-reed) 2002.

The total number of RPR records for 2019 was 1,312, including some hybrids with RPR species as parents. *Juncus ranarius* will be added to the list for 2020, as a result of its discovery by Rodney Burton at Crossness. *Lathyrus*

hirsutus will be added likewise, as a result of a national study suggesting that its status around the Thames was sufficiently long-term that it should no longer be disqualified, on the basis of being an introduced species, from having a conservation status.

Records included:

- the re-finding of *Helosciadium (Apium) inundatum*^R (Lesser Marshwort) at Romney Marsh after over 30 years;
- surprising appearances of *Himantoglossum hircinum* (Lizard Orchid) in West Kent: the first in the Dartford area since 1921, and the first in the London Borough of Bromley;
- *Neotinea ustulata* (Burnt Orchid) still hanging on (just) in the county, with two flowering spikes this year;
- a report of *Polygala amarella*^R (Dwarf or Kentish Milkwort) as responding well to conservation measures at Godmersham Downs, with 196 plants recorded in May;
- the finding of Critically Endangered *Ranunculus arvensis*^R (Corn Buttercup) at a new site in the course of a KBRG meeting;
- the discovery of two colonies of *Salicornia obscura* (Glaucous Glasswort) at Conyer, a species which has been obscure for too long;
- the appearance of *Thelypteris palustris*^R (Marsh Fern) at a Headcorn pond, to add to the sites at Angley Wood, Dungeness, Ham Fen and Seal.

Corrections to Kent Botany 2018

- *Geranium purpureum*^R (Little-Robin) at Tyler Hill, 20 April 2018 (Kent Botany 2018, p.14): this record has been withdrawn.
- *Abutilon theophrasti* (Velvetleaf) and *Amaranthus bouchonii* (Indehiscent Amaranth) at Oare: the find date was 25 October 2018.
- *Brassica juncea* (Chinese Mustard) at Perry Court and *Cucurbita pepo* (Marrow) at Wye: the find date was 26 September 2018.
- *Calendula arvensis* (Field Marigold), *Cucumis melo* (Melon), *Ipomoea purpurea* (Common Morning-glory), *Oxalis incarnata* (Pale Pink-sorrel), and *Physalis philadelphica* (Large-flowered Tomatillo) at Oare: the find date was 22 August 2018.
- *Cucurbita maxima* (Pumpkin) and *Cucurbita pepo* (Marrow) at Oare: the find date of 18 June should have been 18 July 2018.
- *Dipsacus pilosus*^R (Small Teasel) at Faversham and *Oxalis tetraphylla* 'Iron Cross' (Four-leaved Pink-sorrel) at Oare: the find date was 25 July 2018.
- *Nicotiana x sanderae* at Kingsferry and Oare: the find dates were 13 and 17 September 2018.
- *Rubus caesius x ulmifolius* (the hybrid between Dewberry and Elm-leaved Bramble): the find date was 18 July 2018.
- *Sedum dasyphyllum* (Thick-leaved Stonecrop) at Faversham: the find date was 27 June 2018.
- *Sedum* 'Herbstfreude' (Autumn Stonecrop) at Oare: the find date was 16 July 2018.

Plant records: selection criteria and recorders

Kent Botany 2019 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 <https://curaera.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 (2019).

All dates given in the records are for 2019, unless otherwise indicated.

Recorders, referees and other persons mentioned in reports

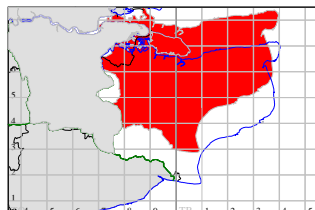
AG Alfred Gay	DR D. Reed	JH John Horder	PH P. Hooks
AH Tony Howard	DS David Steere	JHw Jane Howard	RG Roger Golding
AJ Ade Jupp	DW Dave Walker	JL Jacky Langton	RL Richard Lansdown
AL Alex Lockton	DWe David Welch	JP Joyce Pitt	RM Roger Maskew
AM Alison Mitchell	EGP Eric Philp deceased	LR Lliam Rooney	RMB Rodney Burton
AOC Arthur Chater	ES Ewan Shilland	MA Martin Allison	SB Sue Buckingham
BW Brian Woodhams	EW Elizabeth Winterbourne	MB Mervyn Brown deceased	SC Steve Coates
CC Chris Cook	FJR Fred Rumsey	MH M. Harris	SD Stephanie D'Agorne
CD Christopher Dixon	GH Graham Harlow	ML Mel Lloyd	SK Sarah Kitchener
CH Claire Horder	GK Geoffrey Kitchener	MR Mike Robinson	SL Stephen Lemon
DC Danny Chesterman	GSJ Geoff Joyce	MS Mike Shaw	SP Sue Poyser
DG Doug Grant	IVB Irina Belyaeva	MW Mike Wilcox	TC Tom Cope
DJ David Johnson	JB Jon Bramley	NG Nick Green	TCGR Tim Rich
DM Daphne Mills	JC Juliet Cairns	OL Owen Leyshon	

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

Other abbreviations or notation

BPS = British Pteridological Society	NMW = National Museum Wales herbarium
BSBI = Botanical Society of Britain & Ireland (formerly Botanical Society of the British Isles)	NNR = National Nature Reserve
CGE = University of Cambridge herbarium	pers. comm. = personal communication
cv. = cultivar	Plant records which are marked ^R represent plants on the 2019 draft Kent rare plant register list
KBRG = Kent Botanical Recording Group	RHS = Royal Horticultural Society
KFC = Kent Field Club	RNSS Cottages = Royal Naval Shore Signal Cottages
LNHS = London Natural History Society	RSPB = The Royal Society for the Protection of Birds
MOD = Ministry of Defence	vc = vice county

Plant records for East Kent (vice county 15)



***Allium carinatum* (Keeled Garlic)** is a native of central and southern Europe and also Turkey, and is cultivated in the British Isles, usually as subsp. *pulchellum*, which enjoys an RHS Award of Garden Merit. Some 50 plants were noted by LR on 27 June on a rough grassy bank along South Road, Faversham, TR 0100 6116. They seemed well



naturalised and not part of any planting scheme; whether deliberately or accidentally introduced in the first place. At the time of finding, the plants had not come to full flower, when they should display pink flowers on pedicels which eventually curve downwards. The beginnings of flowering are shown in a photograph of later date, which also shows the presence of bulbils, indicating subsp. *carinatum*, little grown because of its weedy habit. This appears to be a **first record for East Kent, vc15**.

***Allium carinatum*, 2 July 2019. Photo © Liam Rooney**

Alopecurus x plettkei (*A. bulbosus*^R x *geniculatus*) continues to be found (see also Kent Botany 2018 as well as West Kent records below) on the north Kent grazing marshes, apparently in the absence of the rare *A. bulbosus*^R (Bulbous Foxtail). On 22 August, GK and LR found several flowering plants at the edge of a seasonally flooded depression, part of the sinuous drainage channels which are relicts of the saltmarsh origins of the grazing land of the Great Bells RSPB reserve, TQ 97987 68805. Their survey was continued by GK on 23 September, locating further plants nearly 2km to the south east, in a semi-bare saline depression in grassland near a dike just outside the reserve, TQ 99205 67273.

Amaranthus albus (White Pigweed) has not been recorded in East Kent for over 60 years, but LR on 8 September found a single plant growing from paving slabs on a path leading from Bysing Wood Road to Blaxland Close, Faversham, TR 00602 61988.

Amsinckia micrantha (Common Fiddleneck) is by no means common in Kent, but when it does occur, there seems to be no discernible pattern. There have been no Dungeness / Romney marshes sightings before 2019, but around 50 plants were found in the unmanaged grassy back garden of the RNSS Cottages by DW on 23 May, confirmed by OL as at TR 08512 17260 the next day.

Anthemis tinctoria (Yellow Chamomile) was noted by DG and SP on 15 October as a garden escape west of Snoadstreet, TQ9852; they were also the last people to record it in East Kent, five years before.

***Avena barbata* (Slender Oat)** is a rare grain-alien, very sparsely recorded in England although naturalised in the Channel Islands. It has, however, now been seen by the A2 east of Boughton, from TR 09561 58688 to TR 09614 58675. LR recorded a large amount on the roadside verge and hedgeline of the coast-bound carriageway on 7 December, having first seen it in summer, a little early then to detect the disarticulation of the individual florets with their basal scar which, with the lemma veins extending up into long bristles and the general hairiness are distinctive characters. This is a **first record for East Kent, vc15**, and for the county as a whole.



Avena barbata, 7 December 2019. Photos © Liam Rooney

Berberis wilsoniae (Mrs Wilson's Barberry), a Chinese species named after the plant hunter's wife, is quite frequent in cultivation, but now recorded for only the second time in East Kent as an escape: a single bush on a chalk grassland slope at the Sunny Hill MOD training area, TR 2698 4329, surveyed by SB and AG on 31 May, with permission.

Brachypodium rupestre (Tor-grass) replaced the name *Brachypodium pinnatum* for general recording purposes after adoption in Stace (2010); and use of the name *Brachypodium*

pinnatum (Heath False-brome) became restricted to a grass generally of clay soils which, in that strict sense, has not been recorded for East Kent. MW reviewed Tor-grass material gathered by SB in August from chalk cliffs near Dover, Folkestone and St. Margaret's at Cliffe. While this would all be classified as *B. rupestre*, it encompassed a range of variation which does not well fit the key in Stace (2019) for separating the two species. *B. pinnatum* spikelets are supposed to be usually hairy and *B. rupestre* usually glabrous: all the material sampled had hairy spikelets. *B. pinnatum* is supposed to have abundant minute prickle-hairs between the veins on the lower side of the leaves and *B. rupestre* is supposed to have few prickle-hairs (N.B. this is a change in Stace (2019) – previously, Stace (2010) had maintained that prickle-hairs were only present in *B. pinnatum* and this was diagnostic): the material sampled varied in having prickle-hairs more or less absent, or very frequent, or patchy in their presence. All material, however, had the fairly thick-textured inrolling leaves of classic Tor-grass. Recorders always have the option of not distinguishing between the two species, and recording *B. pinnatum* agg.!

Bupleurum rotundifolium (Thorow-wax) was seen by LR and DC on 1 June, one plant on a spoil heap in a former gravel pit at Oare, TR 00305 64182, presumably originating from garden material, its days as an arable weed being now long gone.

Bupleurum tenuissimum^R (Slender Hare's-ear) was noted by SB on 4 October west of Newchurch, Romney Marsh, TR 0489 311520, where there were 20 to 30 fruiting plants on a fairly bare roadside where vehicles are likely to have parked. The origin of these coastal plants is mysterious, however, not just because the site is over 5km inland, but also because it is over 13km from the nearest coastal colonies which themselves are not conventionally accessible to vehicles, being within Lydd Ranges MOD land. SB points out that there are historic records for the coast between Hythe, Dymchurch and Romney given in Hanbury & Marshall (1899) so it is possible that the species still survives undetected somewhere around Dymchurch, from which it has been brought on tyres to Newchurch.

Cannabis sativa (Hemp) was an unexpected find by DS on 25 August by the side of a road/ditch near Appledore, TQ 962 288, accompanied only by native plants and so giving no clues as to origin. He notes that after an image was posted on Twitter, he was inundated with requests for its location, far more than would be the case even for orchids; evidently there is a latent public interest in botany which is releasable by particular stimulation.

Carex elongata^R (Elongated Sedge) was found by a KBRG meeting on 23 May at Paul's and Plurenden Woods, near Bethersden, TQ 9329 3810. There were nine clumps on an island in the middle of a well-lit peaty pond near the woodland edge. There are records from the 1970s and 1980s for this scarce sedge from woods in the neighbourhood, including the west end of Plurenden Wood, but not this new site.

Centaurea solstitialis (Yellow Star-thistle) was recorded by DC on 30 July in a field east of Wye, TR 06448 46728, where a single plant was growing where *Trifolium pratense* (Red Clover) had been sown. Always rare in Kent, the last records were in Philp (1982), where given as a garden weed in Stansted and at the edge of arable near Paddlesworth. Hanbury & Marshall (1899) found it to be usually introduced with clover and lucerne crops, and it is

surprising, given modern seed cleaning techniques, that this occurrence suggests that such introduction may still occur. The winged stems and decurrent leaves separate it from the similar species *Centaurea hyalolepis* (Eastern Star-thistle).

***Centaurea solstitialis*, 30 July 2019. Photo © Danny Chesterman**

Cerintho major (Greater Honeywort), whose popularity as a garden plant began about 2000, has a few Kentish records as an escape, but the first for south Kent is by OL on 5 May, when he found three plants by a lay-by/gateway at the east end of ARC/Hanson pit, Dungeness RSPB reserve, TR 07457 19143.

Cordyline australis (Cabbage-palm) escaped seedlings have been noted increasingly in Kent in recent years, but a single plant sprouting up in the dirt edge of a parking lay-by on Mountfield Road, New Romney, TR 07367 24819, found by OL on 31 August 2019, appears to be the first seen in the south east of the county.

Corylus avellana x *maxima* (called Kentish Cobs, but this name may also cover non-hybrid plants) has been recorded in many parts of the British Isles but ironically not hitherto, it appears, in Kent. Many of those wider records are, however, of planted specimens and this may be an explanation of other records which lack details of status. The hybrid is claimed to be self-fertile and should also be capable of back-crossing with *C. avellana* (Hazel). BW noted the hybrid on 19 September as being present at Heath Road, Coxheath (TQ 7366 5136 or thereabouts), with a plantation on the north side of the road and possibly self-sown plants in the hedging on the south side. Plants showed intermediacy in the characters of the nuts and their enclosing bracts (bracts fused for much of their length in *C. maxima* and extending, narrowed, beyond the end of the nut; bracts divided more or less to base in *C. avellana* and, if extending to end of the nut, not narrowed beyond), and they varied in those characters on the same plant. This variation ought to be significant in assessing potential hybridity, given that presumably the large-fruited variants of *C. avellana* mentioned in Stace (2019) as confusable with the hybrid should be more constant in their characters on the same plant. Because of the uncertainty of status regarding the Coxheath hedge plants (as planting cannot be ruled out), this record is not being treated here as a 'first' for East Kent. But it is certainly worth looking for potentially self-sown hybrids elsewhere, noting the suggestion in Wilcox (2013) that these could have longish bracts which on the same nut may be both fused for most of their length on one side, and divided almost to the base, although overlapping, on the other side).



Cynara cardunculus (Globe Artichoke) was noted by DM on 19 March at Pratling Street on a roadside verge by fields, TQ 74326 59870, where she has known it since 2012, which would have been on a par with the first East Kent record.

Dittrichia graveolens (Stinking Fleabane), a South European plant normally found with us alongside main roads or motorways, was found by SB on 30 September east of Shadoxhurst, TQ 9513 37973, at a field gateway, where there were three flowering plants on a soil mound, presumably introduced.

Dracunculus vulgaris (Dragon Arum) was recorded by LR and DC in a tipped former gravel pit at Oare, TR 00488 64366; its mottled stems being evident at that time of year; DC noted it as flowering on 3 June (the spathe is an eye-catching purple, and the odour is vile). A further plant was seen on 6 April by AJ at Mersham, TR 052 397, on waste ground close to the village shop which until a few weeks before was thick bramble cover and had been so for several years.

Dryopteris affinis subsp. *paleaceolobata* (T. Moore) Fraser-Jenk. was one of the Scaly Male-ferns which did not transfer from Stace (2010) into Stace (2019), apparently because the logic of its inclusion would then point to admitting this and other recognisable *D. affinis* variants as separate (agamo-)species, where our knowledge is insufficient, although species recognition 'might well be desirable'. It is, however, treated as a separate species in Sell & Murrell (2018), viz. *D. paleaceolobata* (T. Moore) P.D. Sell (Greater Scaly Male-fern). No records seem to have been made formally in Kent, but RG has now provided a photograph as evidence of its finding by a BPS meeting on 22 September 2007 at Covet Wood, TR 173 488. This taxon is a robust fern, with a very glossy frond, and the pinnules are markedly crimped in at the sides, curved up at the ends and twisted away from the rachis in a characteristic manner. This is **the first record for East Kent, vc15**, and for Kent as a whole. There is potential for it to be found elsewhere, although it favours a more northern and western climate with relatively high rainfall; an unconfirmed sighting of what may be this has been noted on a roadside near Park Gate Down nature reserve.



Dryopteris affinis subsp. *paleaceolobata*, 22 September 2007. Photo © Roger Golding

Echium pininana (Giant Viper's-bugloss) is a plant endemic to the Canary Islands and cultivated in milder parts of the British Isles, attaining up to 4m when flowering, after which adventitious seedlings tend to appear in following years. These have not been recorded outside East Kent gardens until 2019, when there were two sightings. The first was on a KFC meeting on 29 June, when a singleton was seen at the foot of a spoil heap in a tipped former gravel pit near Oare, TR 0030 6418. The second was by DC on 31 October, a record of several young plants together on the upper edge of the beach at Herne Bay, TR 17403 68333. Adult plants were being grown in the neighbouring Waltrop municipal gardens, Central Parade, and were presumably the source of the juveniles. **These are the first and second records for East Kent, vc15.**



Echium pininana, 31 October 2019.
Photo © Danny Chesterman

Eleocharis uniglumis^R (Slender Spike-rush) was reported in Kent Botany 2018 as found by SL at the RSPB reserve, Dungeness. Further populations were located by him on 7 July about 750m north, these being along the southern edge of a pond north west of Hamilton Farm, TR 0598 1911 and TR 0606 1900. They were growing with *Eleocharis palustris* (Common Spike-rush) and intermediates were present which warrant further investigation.

Eleogiton fluitans^R (Floating Club-rush), a plant of peaty water, has in Kent for some time been known only from

Bedgebury Forest. It had not been reported from the Appledore area since Philp (1982), but SL on 7 July found it on The Dowels, north east of Appledore, from TQ 9613 3000 to TQ 9615 2991, where growing in a north-south drainage ditch separating sheep-grazed rushy pastures immediately south of the Royal Military Canal. The Dowels is notable for the thickness of its peat near the surface, its generally low-lying nature (being one of the last parts of Romney Marsh to be drained) and for the diversity of its flora.

Epilobium x mentiens (*E. tetragonum* x *ciliatum*, the cross between Square-stalked and American Willowherbs) was seen by GK and LR on 22 August in the course of a survey of the RSPB reserve at Eastchurch Marshes, TQ9768.

Epipactis palustris^R (Marsh Helleborine) is in Kent now limited to Sandwich Bay and our population assessments were becoming dated, but a survey by SB on 6 July provided counts as follows: 570 flowering spikes in a dune hollow at TR 3550 5956, on the west side of the road leading to Prince's Golf Clubhouse; 48 flowering spikes in an old dune slack by the public footpath between golf courses at TR 3538 5916; 33 flowering spikes alongside Prince's 'old practice range' at TR 3521 5919; and 10 spikes beside a newly created wetland close by, at TR 3513 5914. Also, a colony on Bird Observatory land, TR 35803 57536, which was described as a 'small colony' in 2011, has since grown to comprise 1,672 flowering spikes (as counted by the warden).

Fumaria bastardii^R (Tall Ramping-fumitory) continues to pop up after a long absence of Kent records: SB as early as 25 January found many flowering and fruiting plants by the BMX bike track and playing field at Hersden, TR 2016 6206, and also beside a lane at TR 2097 6231; and DC on 11 May found a magnificent specimen 6 feet high on a roadside at Boughton-under-Blean, TR 061 584.

Fumaria capreolata subsp. *capreolata* f. *speciosa* featured in Kent Botany 2012 as a Mediterranean form of White Ramping-fumitory, whose upper petal turns brilliant crimson after fertilisation, and which had been recorded in the Channel Islands but had just been noticed at Dungeness. Since then, Kent Botany 2014 remarked on it at Appledore and a number of Cornish records have been made. It now appears more widespread in East Kent. SB on 1 March found three flowering plants at the base of a low wall by the promenade below the Leas Cliff gardens, Folkestone, TR 2259 3553. More plants were found flowering within the gardens as shrubby weeds at TR 2262 3559 and on disturbed ground below the Leas Cliff theatre at TR 2251 3550. On 11 June she also found a few flowering plants on disturbed ground beside the new Leisure Centre at Whitfield, Dover, TR 3125 4437.

Glebionis segetum^R (Corn Marigold) occurrences appear all too frequently to be from wildflower sowings, rather than as a relict arable weed. Persuasively unsown, however, was a tall flowering plant and a rosette found by SL on 22 June in a wheat crop with an uncultivated margin at Tutt Hill, TQ 974 466 to TQ 975 466. OL had also found a couple of plants here in 2016, and as it is a site for *Silene gallica*^R (Small-flowered Catchfly) – see Kent Botany 2016 – with a history of good arable weeds, this must be 'genuine' *G. segetum*. Natural England have since approached the farmer as regards maintenance of an uncultivated strip here.



Helosciadium inundatum^R (*Apium inundatum*, Lesser Marshwort) was found by DM at a KFC meeting on 7 July north east of Appledore. There were two patches in a ditch on the north side of the Royal Military Canal, TQ 97466 31021 and TQ 97426 30975. A previous record for this tetrad is given in Philp (1982), but it has not been recorded since; it could readily be overlooked as young *Helosciadium nodiflorum* (Fool's-water-cress). This provides a second current Kent station for what is a Vulnerable species in England.

Helosciadium inundatum, 7 July 2019. Photo © Daphne Mills

Hylotelephium telephium (*Sedum telephium*, Orpine) has two main subspecies in the British Isles: subsp. *telephium* and subsp. *fabaria*, although we have tended

not to distinguish them in our county recording. Indeed, they may not always be clearly distinguishable, but subsp. *fabaria* should have follicles not grooved (although plants often grow in shade which discourages flowering/fruitlet), and leaves tapering to a cuneate base, the lower ones often stalked; subsp. *telephium* should have grooved follicles and usually sessile leaves tapering to a truncate base. On 7 July DS recorded **subsp. *fabaria*** at Dargate, TR0861, as an unplanted garden throw-out, which in terms of the BSBI database appears to be **a first record for East Kent, vc15**. The previous year, on 21 October 2018, he had recorded **subsp. *telephium*** at Sheldwich, TR 01546 56107, a single plant in newly coppiced woodland, not planted. That, similarly, appeared to be **a first record for East Kent, vc15**. Whilst it is thought that subsp. *telephium* is less likely to be a British native, Orpine goes in and out of gardens, so creating uncertainty as regards status; this and the potential for overlap between the subspecies may have discouraged recording until now.

Hylotelephium telephium subsp. *fabaria*, 7 July 2019.
Photo © David Steere



Hylotelephium telephium subsp. *telephium*, 21 October 2018.
Photo © David Steere



***Hypericum forrestii* (Forrest's Tutsan)** is a species named after the plant explorer George Forrest and is by no means a plant of forests, although known from pine forest margins in China. On 17 October, LR noted three self-sown plants growing from the base of a garden wall outside 10 & 12 Saint Mary's Road, Faversham, TR 01772 61187. Identification was made from the nearby garden parent, taking care to distinguish from the similar *Hypericum x hidcoteense*. **This is the first record for East Kent, vc15.**

Hypopitys monotropa^R (Yellow Bird's-nest) is not well represented in far eastern Kent, with the BSBI database having held no records for TQ35, although Hanbury & Marshall (1899) have a record for Northbourne from the Rev. Samuel Cooke, who died in 1877, and Francis Rose's MS Flora refers to Miss B. Nash having found it in Tilmanstone Wood in 1860. This wood was investigated by ML and SC in 2018-19 (*Neottia nidus-avis*,^R Bird's-nest Orchid, being reported in Kent Botany 2018). Following the find of 23 spikes of *H. monotropa* by GH on 11 August under *Acer pseudoplatanus* (Sycamore) at TR 30634 51763, they assessed its wider presence in the woodland as follows: 51 spikes at TR 30665 52016, again under *A. pseudoplatanus*; 31 spikes at TR 30670 52049 and 45 spikes at TR 30671 52064. The proximity of *Neottia nidus-avis* is intriguing, both species being achlorophyllous and growing in deep shade. However, appropriateness of habitat also requires mycorrhizal presence and the fungal partners for *H. monotropa* and *N. nidus-avis* are supposed to differ (*Tricholoma* v. *Sebacinales*).

Juncus x surrejanus (*J. acutiflorus* x *articulatus*, the cross between Sharp-flowered and Jointed Rushes) was only recorded in Kent as recently as 2015, at Tunbridge Wells, and may easily be overlooked, as its hybrid character, with seed capsules not filling out properly, becomes gradually apparent and may not be particularly evident until late season. AL, in the course of studying Hothfield Common, has found considerable quantities there, in bog 4, TQ9646, and in bog 2, TQ9645. It appeared that all the jointed-type rush observed was the hybrid. Both parent species are given in the Hothfield reserve list compiled in Philp (1975) and have been recorded there since. They may still be

present, as well as the hybrid, but no fully dated species records have been made since early August in any year, so it may be that hybridity would not always have been readily ascertainable.



Lathyrus grandiflorus (Two-flowered Everlasting-pea), a cultivated species from south Europe, was found, a large and well established plant, next to the remote railway crossing near Fairfield, Romney Marsh. TQ 96119 26885 by OL on 27 May.

***Lathyrus grandiflorus*, 27 May 2019. Photo © Owen Leyshon**

Limnanthes douglasii (Meadow-foam) is a garden plant with only one previous record as an escape in East Kent. Over ten plants were recorded by LR and DC on 19 April on waste ground south west of Mersham, TR 04860 39022, originally found by DC and determined by LR when in flower.

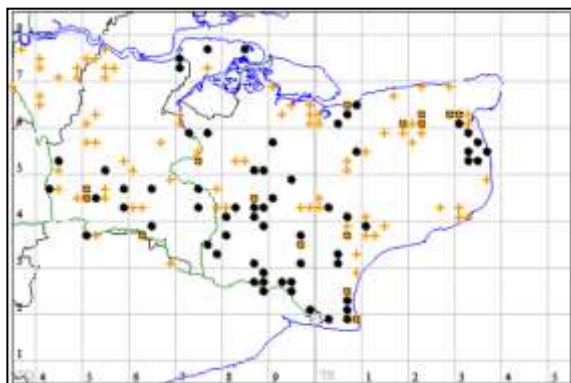
Matthiola incana (Hoary Stock) is usually a coastal plant, but we have an inland record from DG and SP on 12 May, as a garden escape on a path at Milton Regis, TQ8964.

***Melica altissima* (Siberian Melic)** is a grass occasionally grown in gardens, but seldom seen outside (there are only three or four such records nationally). It was, however, seen by DM on 28 June 2018 on a roadside at the edge of woodland backing onto Cobtree Park, TQ 74281 59392, although it could not be found again in 2019. This attractive purple-flowered species is usually grown, as in this case, as cv. 'Atropurpurea' (there is purportedly a white-flowered form sold in commerce as 'Alba', which looks very much like *M. uniflora*, Wood Melic). **This is a first record for East Kent, vc15.**

***Melica altissima*, 3 July 2018. Photo © Daphne Mills**



***Myosotis x suzae* (*M. laxa* x *scorpioides*, the cross between Tufted Forget-me-not and Water Forget-me-not)** should, setting aside any hybrid barriers or limitations in recognition, be capable of being found in Kent, given that both parent species grow in fertile wetland sites across the county and their distribution coincides, at least at tetrad level, in a number of places – see distribution map



Kent tetrad distribution of *Myosotis laxa* (black dots) and *Myosotis scorpioides* (orange crosses), 2010-19

The first record for East Kent, vc15, and for Kent as a whole was made by AL, PH and DR on 13 June: a good patch in wet woodland at Stodmarsh NNR, TR 2227 6100. Lockton (2017) treats *M. laxa* as frequent in ditches, woodland and swamps at Stodmarsh, and *M. scorpioides* as occasional in ditches and swamps. DWe (BSBI referee) confirmed the determination, noting the absence of seed developing and the shape of the calyx-teeth being right for the hybrid (*M. scorpioides* has them equilateral-triangular; *M.*

laxa has them isosceles-triangular). However, he considered the fruiting pedicels to be unusually long (up to three times the length of the calyx) and the styles likewise in exceeding the calyx, which may reflect a long-styled form of *M. scorpioides* as parent.

***Myosotis x suzae*, 13 June 2019. Photo © Alex Lockton**

Nepeta racemosa (Eastern Cat-mint) was seen by LR and DC on 1 June at a tipped former gravel pit near Oare, TR 00473 6437. This species is much less seen, in and out of gardens, than *Nepeta x faassenii* (Garden Cat-mint), which has this as one of its parents. The species may be distinguished from the hybrid by its wider leaves, cordate (not truncate or cuneate) at the base: leaf characters are the only ones called for by Thornton-Wood (2000) in the *European Garden Flora*. Stace (2019) also keys out the species by requiring the stamens to be exerted from below the upper corolla lip: LR remarks that this was not particularly evident in the plant found, nor are they exerted in many images purporting to be of this notoriously variable species.



Oenanthe pimpinelloides (Corky-fruited Water-dropwort) is very uncommon in East Kent (in contrast with West Kent, where it has been spreading on mowers) and a new sighting has been made by JL and MH on 22 May in a farmyard, Tearnden Farm, Bethersden, TQ 901 402. Identification was checked by a later view of the fruits. It is not the only *Oenanthe* with corky-thickened fruits, and it is curious that such an ostensible adaptation to seed dispersal by water should be so strongly present in a species found more in dry places than so many other *Oenanthe* species.

Ophrys sphegodes^R (Early Spider-orchid) has been unrecorded along the coast between Folkestone and the single Dungeness plant (currently in its tenth season, according to DJ), but now that gap has been plugged by DS and EW on 27 April finding plants near the sea wall at Littlestone: four at TR 08738 25953; another four around TR 08758 25960; and one at TR 08749 26012. OL followed up the next day, seeing 12 spikes along both the sea wall and golf course sides of the coastal track at the same location.

Orobanche caryophyllacea^R (Bedstraw Broomrape), the East Kent rarity, has been well recorded in recent years at Sandwich and Folkestone, but with something of a gap where there have been historic records, such as in 1860 when the Broomrape was said to be very abundant on the waste ground between the Abbot's Cliff and Shakespeare Cliff railway tunnels, which has been extended seawards by the construction of Samphire Hoe, completed in 1994. The Broomrape has now arrived on Samphire Hoe, first seen by CH and JH on 16 May at TR 2866 3882, spread over a grassland area 2 x 3m (where 26 spikes were counted later on 4 June) with a further three spikes at TR 2915 3910. In both cases the host plant *Galium album* (Hedge Bedstraw) was present in the sward. AG passed on these records with a note of a fourth spike having appeared in the latter location by June and as regards some plants on the cliff near the Abbot's Cliff tunnel eastern portal which are visible with binoculars. AG also reported a plant on 7 June at East Wear Bay, TR 2435 3746 (confirmed FJR), a site which was under Buddleja and hawthorn until 2013-14, but has been opened up as part of a grassland restoration programme, which has presumably encouraged the appearance of the Broomrape.



***Orobanche minor* subsp. *minor* var. *flava*, 11 June 2019.
Photo © Christopher Dixon**

Orobanche minor subsp. *minor* var. *flava* is a form of Common Broomrape with yellow stems, corollas and stigmas, instead of the usual purple-tinged colouration. It was seen by CD on 11 June beside the

caravan park just west of Seasalter, TR0865, by a rich flood-dyke with *Linum bienne* (Pale Flax), *Peucedanum officinale* (Hog's Fennel) and copious *Orobancha minor*, among which was one yellow individual, starting to go brown with age. It transpires that DS had photographed a similar plant at Sandwich on 30 July 2016 which was parasitising Clover, and these sightings are the **first records for vc15, East Kent** of which we are aware.

***Osmunda regalis*, 17 September 2019. Photo © Sue Buckingham**

Osmunda regalis^R (Royal Fern) at Orlestone Forest was mentioned in Kent Botany 2017, and now a further discovery has been made, this one by NG on 2 July around a pond on Forestry Commission land at Birchett Wood. The site was visited by SB on 17 September, when nine plants were counted in three locations around the pond margin: six at TQ 99091 35311, two at TQ 99090 35316 and one at TQ 99079 35320. The pond is well lit as a result of clearance of spruce trees in 2017. A number of old, apparently dead, rhizomes around the pond margin suggest that plants have been there for some time.



***Osteospermum jucundum* (Cape Daisy)** was recorded by LR on 30 May, as one plant growing from a wall by steps on the south side of South Road, Faversham, TR 0093 6115. Planting seemed unlikely, although many cultivated plants have sufficient hybridity in their ancestry to be sterile and hence unlikely to spread unless their roots are translocated. Subject to any uncertainty attached to the status of this find, it would appear to be **a first record for East Kent, vc15.**



***Osteospermum jucundum*, 30 May 2019. Photo © Liam Rooney**

Oxybasis glauca (*Chenopodium glaucum*^R Oak-leaved Goosefoot) has a recent Kent distribution confined to northern coastal areas, although Philp (2010) included some inland records from the 1990s, thought to be a relict of former treatment of fields with wool shoddy. A further inland record was made by DC on 30 July, when he found six plants on a farm fertiliser patch east of Wye, TR 06545 46918.

Parapholis incurva^R (Curved Hard-grass) was found by GK and SK on 16 July near Margate lifeboat station, TR 35445 71295, a location which corresponds to Thomas Johnson's 1632 site for *Gramen parvum marinum spica loliacea*, which was presumably the first British record. Pearman (2017) attributed Johnson's record to *Parapholis strigosa* (Hard-grass), but has since agreed (pers. comm.) the greater likelihood of *P. incurva*. The 2019 sighting was of two clumps on sandy ground by the promenade below the chalk cliffs. Of course, the area has changed considerably since Johnson's day, when 'we sallied forth as far as a fort set on a steep promontory, fortified by nature more than art, and collected on the shore and on the steep cliffs' (translation: Gilmour, 1972). While sea defence works have altered the transition from cliffs to shore, however, some of the character of the locality remains, and Ian Tittley mentioned in the 2019 Kent Wildlife Conference that the seaweed flora recorded by Johnson can also still be found. The survival of an annual here for over 380 years is remarkable.

Parapholis incurva, 16 July 2019.
Photo © Sarah Kitchener

Pastinaca sativa subsp. *urens* (Eastern Parsnip), a Continental subspecies spreading by roads, was first noted in the county in Kent Botany 2018. On 21 July DC saw a large patch (30 plus plants) on the edge of the new road leading up to the Waterbrook lorry park south of Ashford, TR 02975 40149. The plants were huge (at least 8 feet and still going), all with 5-6 rays to the umbels and greyish hairs on the stems which were shallowly grooved. There were more plants along the side of the track on the other side of the road. The road is used by all the lorries coming off the M20 via the A2070 to go to the lorry services (Ashford International Truck Stop).



The next day he saw a plant in the central reservation of the slip road from the A249 to the M2 eastbound (J5 M2 / Stockbury roundabout), TQ 855 623, directly below the M2, with the potential for seed origin from there. This location is under motorway regulations and so inaccessible, but the subspecies has a distinct jizz by which it may be recognised from a car.



Pastinaca sativa subsp. *urens*, 21 July 2019. Photo © Danny Chesterman

Philadelphus coronarius (Mock-orange) was recorded by LR and DC on 4 September at a former gravel pit near Oare, TR 00509 64264. There was a single bush on a bank which was considered to have probably been brought in through tipping of material over many years. This appears to be a **first record for East Kent, vc15**.

Poa bulbosa^R (Bulbous Meadow-grass) can spread through detachment of the basal 'bulbs', but may also do so via production of plantlets from the spikelets, when the lemmas and glumes revert to the leaflets which were the evolutionary origin of those structures. Such prolific plants have been named var *vivipara*, and DM on 29 April recorded this at the edge of Running Horse roundabout, Sandling, TQ 75425 58268, itself an unusually far inland site. It is unclear if there are earlier Kent records for this variety, it is not offered as a

working recording option on the BSBI database.

Poa bulbosa var. *vivipara*, 29 April 2019. Photo © Daphne Mills

Ranunculus arvensis^R (Corn Buttercup), a Critically Endangered species in Great Britain, barely retains a toehold in Kent after a severe decline common to many arable weeds, but at a KBRG meeting on 14 June at Swift's Green, OL discovered a single flowering plant at TQ 87484 44059. The group then found six more a few metres away. They were growing near a public footpath across a large grass field. Associated species, which include other arable weeds of good quality, were: *Lysimachia* (*Anagallis*) *arvensis* (Scarlet Pimpernel), *Anthemis cotula*^R (Stinking



Chamomile), *Euphorbia platyphyllos* (Broad-leaved Spurge), *Ranunculus sardous* (Hairy Buttercup) and *Stachys arvensis*^R (Field Woundwort). Apart from these seven 2019 plants, only seven more, in two locations, have been reported in Kent in the last ten years.

***Ranunculus arvensis*, 14 June 2019. Photo © Owen Leyshon**

Ranunculus parviflorus^R (Small-flowered Buttercup) has a Kent distribution focused on Dungeness, Deal and the Medway Valley. A new 10km record was made by LR and DC on 1 June as regards plants at a former gravel pit near Oare: a singleton at TR 00316 64198 and a scattering from TR 00480 64351 to TR 00488 64366.

Ranunculus tripartitus^R (Three-lobed Crowfoot) is an Endangered species of shallow acid wet places such as pond margins. The finding of this species near Bethersden in 2017 by a KBRG meeting was followed, two years later to the day, by a further meeting on 23 May which found more at a site 2.2km away, at Paul's and Plurenden Woods, TQ 9321 3808. There was a small patch of flowering and fruiting plants at the margin of a large puddle in a woodland track, with a few scattered plants alongside. There is still a 1971 record from Bethersden yet to be re-found, so there is the prospect that some of the myriad of local ponds may harbour it as well.

Raphanus raphanistrum subsp. *maritimus*^R (Sea Radish), very seldom seen in Kent, had escaped being recorded since 1991-98. However, in 2019 we had two sightings. The first record was made by SB and LR on 26 June, of many thousands of plants at Minster (Sheppey), where known over 20 years before. They grew on shingle just above high tide mark at the base of the London Clay cliff from TQ 9606 7355 to TQ 9614 7350. Most were yellow-flowered but about 10% were white-flowered. Also present were some pink-lilac flowered *Raphanus* plants which may or may not be this taxon. TCGR, BSBI referee, commented that he had not seen pinkish flowers in *maritimus*, this being more characteristic of *Raphanus sativus* (Fodder Radish), for which basal leaves and an ovule count would be relevant to determination, and introgression was a possibility for this population. The second sighting was by OL, on 24 August, when he found a single plant on the shingle strandline at Greatstone, TR 08392 21520, perhaps from seed carried from Sussex on the prevailing tidal currents (identity confirmed by SB, 8 September).



***Raphanus raphanistrum* subsp. *maritimus* at Greatstone, with Owen Leyshon, the finder, 8 September 2019. Photo © Sue Buckingham**

Rosa recording in Kent for 2019 has largely continued on the previous basis, but new names appeared in Stace (2019) and the basis of recording going forward is given in KBRG newsletter no. 12 (October 2018). *Rosa canina* (Dog-rose) has been split, although if recording is undertaken using the traditional *R. canina* 'groups', then these are translatable into the revised nomenclature. *R. canina* Group 'Pubescentes' becomes *R. corymbifera* (Hairy Dog-rose): we have recorded this in five East Kent monads in 2019 and 14 West Kent monads. *R. canina* Group 'Dumales' becomes *R. squarrosa* (Glandular Dog-rose): we have recorded this in two East Kent monads in 2019 and five West Kent monads. *R. canina* Group 'Lutetiana' is true *R. canina*, and it

looks as though Group 'Transitoriae' is generally also this: during 2019 we have recorded these groups in four East Kent monads and 20 West Kent monads.

The position regarding what we have been recording as *Rosa x dumalis* since the visit of RM, the national *Rosa* referee, in August 2015 (and for which we have 311 different monad records since then) is more complicated. This name still exists, and applies to hybrids between *R. squarrosa* and *R. vosagiaca* (Glaucous Dog-rose, a northern species which has only one claimed record in Kent, but whose genes have reached here probably through the spread of *R. x dumalis*, which is a fertile hybrid and behaves like a species). But the name does not apply to hybrids between true *R. canina* and *R. vosagiaca* (*R. x subcanina*), which are probably just as common with us, and which we've also been including under the name *R. x dumalis*. In 2019 we have one record in each of East and West Kent noted as true *R. x dumalis*, and two records in West Kent plus one in East Kent of *R. x subcanina*, but actually we had at least 40 sightings which should have been capable of being divided up between one or other of these. Distinguishing between them is described in KBRG newsletter no. 12. It may be that our first ***R. x subcanina*** record (near Otford, TQ 521 597, the common '*R. x dumalis*' type rose along field boundaries, seen on 5 November) should be treated as a **first West Kent named record**, and a rose at Shirley Moor, TQ9232, seen on 16 November should be treated as a **first East Kent named record**, although current database taxa lists do not seem capable of using this name, and BSBI database records do not separate the name from *R. x dumalis*. RM has helpfully commented on a verbal description of a distinctive rose seen frequently by GK on north Kent estuarial marshes (e.g. Erith and the Hoo peninsula) which seems to be *R. x subcanina*, but with introgression probably from *R. corymbifera*.

Rubus spectabilis (Salmonberry), an American bramble grown for its ornamental pink-purple flowers, is well naturalised in the Sandling/Saltwood area, but ML and SC on 21 April found an extensive colony in woodland near Postling Wents, TR 1457 3783, some 1.2km away; the fruits are taken by birds and so plants may spread accordingly.

***Rumex x weberi* (*R. hydrolapathum* x *obtusifolius*, the cross between Water and Broad-leaved Docks)** was found in the course of the KBRG meeting at Oare on 6 October in a drainage ditch south of a path across the marshes, TR 01318 64258. The meeting attendees were looking for the hybrid between *R. hydrolapathum* and *R. crispus* (Curled Dock), reported here in Kent Botany 2011. Plenty of *R. hydrolapathum* was present in the ditch, and where the 2011 hybrid plant was expected there was a dock showing poor development of fruits, many of which were dropping early before maturity, contrasting with the neighbouring species docks, whose panicles still retained mature fruit. Its tepals did not match those of the cross being sought, and were found to have small teeth, pointing to derivation from *R. obtusifolius*, rather than *R. crispus*. The original *crispus* hybrid (*R. x schreberi*) was then found a few metres further on. This record of *R. x weberi* is a **first for East Kent, vc15**.

Sagittaria latifolia (Duck-potato) has been found increasingly in Kent in the last two or three years, with a further record made by LR and JB on 31 August, a large patch well established on the northern side of the Stour at Ashford, TR 00181 42358. Since 2010 it has been prohibited from release in the wild, due to its potentially invasive status through clonal growth of the rhizomes (potatoes).

***Salicornia* sp., 18 October 2019. Photo © Lliam Rooney**

Salicornia sp. (Glasswort). It is not always possible to name every Glasswort plant: they vary in their response to environmental factors, and many of the characters used to define species can overlap. Hybridity is currently seldom invoked as an explanation for unusual specimens, although it is accepted as taking place in the case of *S. x marshallii* (*S. disarticulata* (*pusilla*) x *ramosissima*) because of the obvious consequences of crossing a plant having its flowers in groups of three per segment with a plant having solitary flowers per segment. Both Dalby (1975) and Stace, Preston & Pearman (2015) reject all hybrids (except *S. x marshallii*),



apparently on the basis that they do not represent a helpful explanation when species vary so much anyway. However, there seems no inherent reason why crosses other than *S. x marshallii* may not occur. The specimen illustrated was found by LR on 18 October growing in a mixed population of *Salicornia dolichostachya* (Long-spiked Glasswort) and *Salicornia europaea* (Common Glasswort). With its long terminal spike and bulging segments it seems to exhibit intermediate characters, and this was so in the context of the population as well, but whether this is a product of natural variation or of hybridity, it is impossible to be sure on morphological grounds alone. An illustration exists in Moss (1914) of purported *S. dolichostachya* x (under the name of *S. herbacea*) *europaea*, but *S. dolichostachya* was a name of wider application then and the illustration is not particularly convincing and does not show so long a spike as this.



Salicornia obscura, 23 October 2019. Photo © Liam Rooney

Salicornia obscura^R (Glaucous Glasswort) has proved very elusive in Kent, with records from the Medway (1951), Elmley (1994) and Oare (2011 and before). To these may be added a sighting by LR on 23 October at Conyer Creek, TQ 96165 65554, of a small colony on the very edge of the saltmarsh. Plants were very glaucous and matt green with mostly simple branches and very little secondary branching, distinctly turned up distally and much less than half the length of the main stem. On 26 November LR and DC came across a small colony further west, at TQ 95837 65226, with a couple of plants about ten metres further west still. They had turned a dull yellow-green colour and were the only glassworts still in a presentable state, each had the characteristic upturned branches. All the plants looked at had narrow scarious margins with very obtuse angles. The cymes varied, however, from segments with rather equal flowers (some with lateral flowers touching) to unequal but none seemed to look like typical *S. europaea* (Common Glasswort), which is the closest in appearance to this species.

Salix x fragilis L. f. *vitellina* (L.) I.V.Belyaeva (Golden Willow) was the name given by BSBI Salix referee, IVB, to a 19 August 2018 find by SL of three small trees at Aylesford gravel pits, TQ 73463 59209. This attractive willow, whose twigs (conspicuous in winter) are both egg-yolk coloured (vitellinous) and reddish, is in Stace (2019) given as *Salix alba* var. *vitellina*. However, Belyaeva *et al.* (2018) pointed out that the naming is based on what Linnaeus described as *S. vitellina* and which in his herbarium shows characteristics of both *S. alba* (White Willow) and *S. euxina* (Eastern Crack-willow). It is accordingly the part of the range of variation shown by the hybrid between those species, *S. x fragilis* (Hybrid Crack-willow), and the yellow twig character is best accommodated by treating it as a form, forma *vitellina*. There is another yellow twig version of this hybrid, var. or nothovar. *basfordiana*, which Belyaeva *et al.* (2018) treat as synonymous with var. *vitellina*, which at least makes identification of yellow twig willows easier. The same taxon (then recorded as *S. alba* var. *vitellina*) was also recorded by GK by another gravel pit to the west, TQ7359 in 2013.

Salix x multinervis (*S. aurita* x *cinerea*, the cross between Eared and Grey Willows) appeared to be the identity of a few small plants at Hothfield Heath, TQ 9697 4568, recorded by AL on 1 July. It is notable that such a well-known reserve as this should still have some surprises (see also *Juncus x surrejanus*). *S. aurita* itself was not found and is unlisted here in Philp (1975) although E.S. Marshall recorded it at The Street, Hothfield.

Salvia pratensis^R (Meadow Clary) has very long-term sites at Ranscombe and Queendown Warren: elsewhere, such as at Dover, its status is questionable. New sites have now been discovered by AJ on the hot, dry south-facing grassy banks of the HS1 railway line. The first of these was found on 3 June south of Mersham, TR 056 389, detected with binoculars. This was followed on 16 June by three other clumps on the banks further east, at TR 061 387, TR 063 386 and TR 064 385. There is a native record for a meadow at Mersham Hatch, found in 1878; but Hanbury & Marshall (1899) describe it as extinct there, having been ploughed up and turned into a hop garden. Although potentially suitable grassland appears to have been present before rail construction, the lack of any

sightings of this conspicuous species in the area since the nineteenth century makes it improbable that there is continuity with the present finds, which may well have arisen from seed contamination in the sowing of the banks as part of railway construction. Some of the railway grassland is still subject to an annual cut-and-removal regime, which may afford the opportunity of spread on machinery.



Salvia pratensis, 3 June 2019. Photos (habitat and binocular view) © Ade Jupp

Schoenoplectus x kuekenthalianus^R (*S. tabernaemontani* x *triqueter*, the hybrid between Grey Club-rush and Triangular Club-rush) has long been considered to be present on the tidal Medway, as having replaced *S. triqueter*, probably last seen in 1938. The hybrid, however, is seldom recorded, as it requires access by boat. RL has reported that such access was achieved in August 2018, when material was collected from a plant forming part of a clump on the outer edge of a band of *Phragmites australis* (Common Reed) growing in deep, soft mud on the eastern river bank opposite Snodland, TQ 715 614. The plant strongly resembled *S. tabernaemontani*, but with the shoot sub-triangular in cross-section immediately below the inflorescence.

Scilla forbesii (Glory-of-the-Snow) is a cultivated bulbous plant from montane habitats in Turkey, where it indeed experiences snow in which to glory. OL found the first East Kent record at Greatstone (Kent Botany 2013) and has followed this up with the discovery on 22 March of four plants in a shingle hollow next to the main car park, Dungeness, TR 08840 16981.

***Setaria verticillata*, 23 September 2019. Photo © Liam Rooney**

***Setaria verticillata* (Rough Bristle-grass)** is much less frequently encountered by us than *Setaria pumila* (Yellow Bristle-grass) and *Setaria viridis* (Green Bristle-grass). From both of these it is distinguished by having the single bristles below each spikelet with (usually) backward-directed barbs. A sighting by LR on 23 September of a large clump by the side of Homestall Lane, Faversham, TR 03887 60257, appears to be **a first record for East Kent, vc15**. The location was once a hedgerow that was grubbed out a few years before, and *Datura stramonium* (Thorn-apple) was also growing there; both can have bird-seed origins. The hairy sheath margins of the plant found also distinguished it from the nationally rare *S. adhaerens* (Adherent Bristle-grass), for those who care to separate them as species.



Silene conica^R (Sand Catchfly) at its Greatstone Dunes site, TR0823, had the benefit of a count by SD, yielding a total of 2,520 plants, both flowering and non-flowering.

Symphotrichum laeve var. *concinnum* (*Aster concinnum*, **Delicate Michaelmas-daisy**) is the name perhaps best given to a plant found by AL at Stodmarsh, TR 2302 6285, on 10 October with pale, relatively small flower heads (not exceeding 20mm diameter) and fairly narrow leaves just clasping the stem which has lines of hairs from the nodes. There are few British records for this taxon, including notably two long-established colonies in Cardiganshire (Chater, 2010), and AOC has agreed from photographs that the Stodmarsh plant looks just like the Cardiganshire plants, although with slightly paler flowers. **This is a first record of the taxon for East Kent, vc15**, and for the county as a whole.

Symphotrichum laeve var. *concinnum*, 10 October 2019
Photo © Alex Lockton



Thelypteris palustris^R (Marsh Fern) has now been found in a new site by SL on 23 April, viewed by a KBRG meeting on 14 June, north east of Little Luckhurst near Headcorn. This was the largest of four ponds within an old claypit, bordered by ancient woodland, TQ 86056 44484 to TQ 86090 44486. There were nine colonies, although perhaps all constituting one sprawling clone, spread across the pond, which was filled with peat and *Salix* swamp. The largest colony grew along a bund forming the pond's southern edge, TQ 86072 44469 to TQ 86067 44476.

Tragopogon porrifolius subsp. *australis* (Salsify) has ligules only half as long as the phyllaries; in the supposedly commoner subsp. *porrifolius* they are more or less equal. Salsify subspecies have not been well recorded in the British Isles, and subsp. *australis* has only three records in the BSBI database, all for Surrey. LR has now shown us that it is present in Kent and, indeed, may prove to be widespread, if recording attention is given. **The first named East Kent, vc15, record** was made by him on 22 May along Dawes Road, Dunkirk, TR 0677 5942, and along a farm track under pines, TR 0675 5957: it was, he considered, the common subspecies of Salsify found in the neighbourhood. On 9 June with JB he also recorded it at Allhallows Marshes, TQ8578 (where subsp. *porrifolius* was also present) which constitutes **the first named West Kent, vc16, record**; and on 26 June with SB at Minster (Sheppey), at the foot of the clay cliffs above the promenade. It was then seen by LR and GK on 22 August at the RSPB reserve at Eastchurch Marshes, also on Sheppey, on a dike bank in the grazing marshes. Thus far, records have been in areas where Salsify is generally frequent (the north Kent coast). The BSBI database has over 190 Salsify records for 2010-19 which were not named to subspecies level, although we may assume that *Tragopogon porrifolius* subsp. *porrifolius* would have figured strongly in this. This subspecies was noted by LR on 22 May at Boughton, TQ0759, and with JB on 9 June as mentioned above. These may be taken as the **first named records for vc15, East Kent, and vc16, West Kent** respectively, although doubtless seen before, unnamed as such.



Tragopogon porrifolius subsp. *australis*, 22 May 2019.
Photo © Lliam Rooney

Trifolium incarnatum subsp. *incarnatum* (Crimson Clover) made an appearance, albeit a single plant, in the front of the RNSS Cottages, TR 08502 17228, after mechanical work was done to strip off vegetation for new pipe work. It was found by DW on 20 June and later confirmed by OL.

Umbilicus rupestris^R (Navelwort), whilst frequent as a native in the West Country, is uncommon with us and may be suspected of having been introduced to many of its wall sites. However, a

record by SB on 1 March (and re-visited later) of a cluster of plants on the roof of St Mary and St Eanswythe's church, Folkestone, TR 2297 3587, seems scarcely likely to represent a human introduction. It was not seen on any old walls in the vicinity and may well have arrived with droppings from a bird travelling from the west.

***Umbilicus rupestris*, 9 March 2019. Photo © John Buckingham**

Urtica membranacea (Membranous Nettle), a Mediterranean species with only a couple of Kent records, was noted by AL on 14 May, one plant growing at Sea Wall outside the Grain Store, Whitstable, TR 1066 6687.

***Verbena incompta* P.W. Michael** (Purpletop Vervain) seems not yet to have been reported under this name from the British Isles, but two plants apparently corresponding to this taxon were found by LR and DC on 4 September at a tipped disused gravel pit near Oare, TR 0046 6422. *Verbena bonariensis* (Argentinian Vervain) was also present, for comparison. This location carries a remarkable range of plants introduced during the course of tipping over many years, but provides no clues for the source of the South American species *V. incompta*.

It was first described nearly 25 years ago (Michael, 1995) from south eastern Australia, where it is naturalised, as also in many other sub-tropical or warm-temperate parts of the world, including North America (where it is treated as an invasive species), South Africa and Indonesia. Before being named by Michael, it was noted by Yeo (1990) as present in the University Botanic Garden at Cambridge, but Yeo treated it as part of the variation of *Verbena brasiliensis* (Brazilian Vervain), which he considered could have both clasping and cuneate leaves, whereas Michael separated off the clasping-leaved plants as *V. incompta*. Yeo examined various British specimens listed by Lousley (1961) under the name *Verbena bonariensis* as introduced wool aliens, and assigned plants from Maulden (Bedfordshire), Kirkheaton (Yorkshire) and Shipley (SW Yorkshire) to his concept of *V. brasiliensis*. But as Yeo stated that all had semi-amplexicaul leaves, they would have been what is now *V. incompta*. Some taxonomists would place all three species, *V. bonariensis*, *V. brasiliensis* and *V. incompta*, under a wide concept of *V. bonariensis*, but the varying taxonomic treatments have been considered by Nesom (2010) for the purposes of *Verbena* accounts in the *Flora of North America* and he endorsed the separation of *V. incompta*.

V. bonariensis is now familiar to us in and out of gardens. It first became popular at the end of the 1990s, but Philp (2010), covering the period 1991-2005, could only cite one escape in Kent. KBRG members have reported 109 instances of escape during the period 2010-19. Whether any of those records were actually the more weedy-looking *V. incompta* is an open question, but it is not reported widely in Europe apart from being naturalised massively and in the course of expansion near the French borders, in Italy and Spain (Tison & Foucault, 2014). There is a single record from Belgium (Verloove, 2018), vector unknown. It is a species more or less intermediate between the showy garden plant *V. bonariensis* and the weedy *V. brasiliensis*, having the semi-amplexicaul leaves of the former, and the small, unshowy corollas and elongating spikes of the latter. Verloove (2011) provides a key for the three species:

1 Leaves (sub-)petiolate, distinctly tapering to base. Corollas not showy, limb c. 2.75 – 3.75mm wide, tube 2.75 – 3.25mm long, hardly exerted from calyx tube. ***Verbena brasiliensis***

1 Leaves sessile-amplexicaul, not tapering to base; corollas either inconspicuous as above or showy. **2**

2 Corollas not showy, limb c. 2.75 – 3.75mm wide, tube 2.75 – 3.25mm long, hardly exerted from calyx tube; mericarps 1.2 – 1.5mm long; inflorescence spikes slender and subcylindrical, usually up to 5(– 7)cm long. ***Verbena incompta***

2 Corollas showy, limb c. 4.25 – 5.5mm wide, tube 5.5 – 7mm long, well exerted from calyx tube; mericarps 1.5 – 2.1mm long; inflorescence spikes usually short and thick, frequently congested at maturity, rather rarely more than 1.5cm long. ***Verbena bonariensis***



This is a first record for East Kent, vc15, as well as for Kent as a whole.



Verbena incompta, 4 September 2019. Photos © Danny Chesterman

Plant records for West Kent (vice county 16)



Acorus gramineus cv. 'Variegatus' (Slender Sweet-flag) is a silver-striped cultivar of a garden plant with leaves that fan out somewhat like a *Carex* tuft, but totally unrelated. The first West Kent find in the wild was illustrated in Kent Botany 2018; the second was recorded by GK on 20 September in a shaded ditch by Hawksbrook Lane at the wooded north end of Langley Park golf course, Beckenham, TQ 3845 6727, looking unplanted, but already comprising a patch 2 x 1m.

Alopecurus x plettkei (*A. bulbosus*^R x *geniculatus*). As a follow-up to the Kent Botany 2018 report of this hybrid at Cooling Marshes (the RSPB Northward Hill reserve, TQ7676), a further visit by GK on 3 June (peak flowering time for *Alopecurus bulbosus*^R) only revealed the hybrid. This raises a number of issues. One can infer that hybridisation is no longer taking place in situ, but that the hybrid spreads/maintains itself on its own account. This may largely be by rooting at the nodes, although there is also potential for fragments to be broken off, e.g. by cattle, and to be spread by winter flooding. Winter flooding may be responsible for the presence of the hybrid here given that the relevant area is arable reversion. It may be that the hybrid survived the period of arable farming in corners or at ditch margins and then spread out when conditions became more favourable with the RSPB takeover; the actual hybridization event(s) could long have preceded this. The impression one has from earlier studies/records of British *A. bulbosus*^R is that, although the species is nationally scarce, its hybrid is very much scarcer, albeit existing in large populations in some places. In Kent, however, it looks as though the hybrid is more frequent than its *A. bulbosus*^R parent and is likely to have a level of adaptability which enables it to survive through events (e.g. cessation of grazing or conversion to arable) which *A. bulbosus*^R does not. The Northward Hill population provides useful evidence towards this.

[*Bistorta officinalis* (Bistort): the record (as *Persicaria bistorta*) from Avery's Wood, Bullingstone given in Kent Botany 2016 has been withdrawn.]

Brassica juncea (Chinese Mustard) was recorded by GK on 29 August, south of Wrotham Heath, TQ6357: a single flowering plant, presumably a crop relict or escape on a cultivated field margin of a farm specialising in salad crops

Bromus hordeaceus* subsp. *molliformis is a Soft-brome of the Mediterranean and North America, short and with a very compact, erect and hairy panicle, known sparingly in the British Isles as a casual from grass-seed and other sources. It was found by BW on 16 June under a garden bird table, doubtless the means of introduction. Although the status of the record is not particularly 'wild', it appears to be **a first for West Kent, vc16**.

Bromus x pseudothominei (Lesser Soft-brome) was seen by a KBRG meeting on 9 July, found by CC, on an arable margin at Home Farm, Chevening, TQ 4900 5837. This followed a record by GK on an arable margin near Marden Thorn, TQ7543. Our relatively few other records are generally also for sown grassland or field margins, so it appears likely that there is an agricultural seed mix which includes this grass.

Bromus ramosus Huds. subsp. *benekenii* (Lange) H. Lindb.^R (Lesser Hairy-brome) is in Stace (2019) named as *Bromopsis benekenii* (Lange) Holub, but we have not followed that naming due to the degree of intergrading between *B. ramosus* (Hairy-brome) and *B. benekenii*. The latter was recognised by MB in 2014 as present in a couple of locations in the Darent valley (near Lullingstone and Shoreham), and these have now been added to by GK and SK. On 24 August they found plants south west of Shoreham at TQ 5111 6124, by the wooded edge of the terrace path on the valley chalk slope, and about 300m away at TQ 5085 6113. On 1 October, they found about 16 more plants,

spread out on a bank in partial shade under beech trees by a public footpath from the A225 to Lullingstone, TQ 53413 64669. MB also considered that the grass was to be found on steep, shady lanesides on the Hythe Beds of the Lower Greensand, and sought to demonstrate this to GK some years ago from the lanes around the Golding Hop inn at Plaxtol. Just such a habitat, less than 3km away, provided a record for GK on 1 October with several scattered plants on the shaded west side of the lane to Napp Farm, off Long Mill Lane, Platt, TQ 6230 5625. *Bromus ramosus* subsp. *ramosus* was also present, as is often the case.



Carex elongata^R (Elongated Sedge) was recorded on 11 May by SL in a group of ponds along the railway embankment near Duckhurst Farm, Staplehurst: 18 tussocks in *Salix* carr over the peat-filled interior to the westernmost pond at TQ 77403 44587; one tussock at TQ 77412 44572; two tussocks on a small peaty island at TQ 77411 44573; and another at a similar island at TQ 77412 44576. The habitat is characteristic, the species needing an absence of competition, root access to water, but without waterlogging. The KBRG meeting a week later was able to view most of these plants.

Carex elongata^R habitat, 18 May 2019. Photo © Owen Leyshon

Carex x boeninghausiana (*C. paniculata x remota*, the cross between Greater Tussock-sedge and Remote Sedge) was found by GK on 29 May in a small valley near Capel, carrying what the Ordnance Survey marks as Alder Stream, which originates further west in the Pembury Walks area. There were at least three plants, at TQ 64180 43867, TQ 64172 43878 and TQ 64184 43881, in a *C. paniculata* swamp, with *C. remota* present in the drier surrounds. The swamp was also of interest in bearing a colony of at least 28 plants of *Carex echinata*^R (Star Sedge), scattered in places where the vegetation was lower and less dense.

Carex x pseudoaxillaris (*C. otrubae x remota*, the cross between False Fox-sedge and Remote Sedge) is perhaps our most frequently recorded hybrid sedge, albeit with records for only ten monads, 2010-19. It is characterised by fairly stout stems, as with *C. otrubae*, but with the spikes more spaced out at the top than that species, reflecting the widely spaced spikes of *C. remota*, from which a long bract is also derived. A plant was found with the parents in a ditch by SL on 11 May at Staplehurst, at the junction of George Street with the A229, TQ 78520 44622. It was viewed by a KGRG meeting a week later. A KBRG meeting on 14 June at Swift's Green, Headcorn also encountered a single plant in a ditch at Bedlam Lane, TQ 8704 4436.

Catapodium marinum (Sea Fern-grass) continues to be found increasingly on salted inland roadsides, where its characteristic stiff curved panicles may be seen in the absence of competition, turning brown and reddish as the season progresses. It was found by GK inland along Thong Lane, Gravesend (TQ6771); A25, Bessels Green (TQ5055) and between Seal and Ightham (TQ5755); A244, Badger's Mount (TQ4962); A21, Haysden (TQ5745), Riverhill (TQ5341, TQ5451) and Kipping's Cross (TQ6440); and B2162 between Lamberhurst and Horsmonden (TQ6828).

Clinopodium nepeta^R (Lesser Calamint) is Vulnerable to the risk of extinction in England, and there was a welcome new find by JP on 2 September of one or two plants at Nine Hole Wood between Eynsford and Farningham, TQ5466. This wood was planted up with trees to mark the millennium, the 'nine holes' reflecting an earlier history as a golf course, after which the land became subject to agricultural use. There is a 1998 record from an embankment at Farningham Road station which has otherwise been the nearest.

Cotoneaster conspicuus (Tibetan Cotoneaster) is usually grown as a low, arching cultivar 'Decorus', although this name appears to be used for a range of selections. The red berries are spectacular in autumn, and might be supposed to attract birds for dispersal, even though in Tibet wild plants were seen not to be particularly effective for this purpose. On 29 October GK and SK saw several plants in a localised area on chalky waste ground of the Swanscombe peninsula, TQ 600 759.

Dactylorhiza x wintoni (*D. incarnata*^R x *praetermissa*, the cross between Early and Southern Marsh-orchids) was recorded by DS on 28 May, with the parent species close by (as also was *Dactylorhiza x grandis*, showing greater hybrid vigour than this), at Holborough Marshes, TQ 706 624 . He is aware of this having been present from 2016 onwards; the last previous sighting (at Snodland) having been by EGP in 1980, but it has apparently gone unregarded by other botanists, in spite of the attention which this reserve receives.

***Dactylorhiza x wintoni*, 28 May 2019. Photo © David Steere**

Epilobium (Willowherb) hybrids have been recorded in West Kent as follows:

- *Epilobium x floridulum* (*E. parviflorum* x *ciliatum*, the cross between Hoary and American Willowherbs) at Culverstone Green (GK and SK); Bromley (GK); South Norwood Country Park (KBRG meeting); Sevenoaks (GK); Wrotham Heath (GK); Belvedere (GK and RMB).
- *Epilobium x haussknechtianum* (*E. montanum* x *tetragonum*, the cross between Broad-leaved and Square-stalked Willowherbs, named after the *Epilobium* monographer, Carl Haussknecht) at Sevenoaks (GK).
- *Epilobium x interjectum* (*E. montanum* x *ciliatum*, the cross between Broad-leaved and American Willowherbs) at Bewl Water (KBRG meeting) and Eynsford (RMB).
- *Epilobium x limosum* (*E. parviflorum* x *montanum*, the cross between Hoary and Broad-leaved Willowherbs) at Penge (GK).
- *Epilobium x mentiens* (*E. tetragonum* x *ciliatum*, the cross between Square-stalked and American Willowherbs) at Tonbridge (GK); South Norwood Country Park (KBRG meeting); and Sevenoaks (GK).
- *Epilobium x palatinum* (*E. parviflorum* x *tetragonum*, the cross between Hoary and Square-stalked Willowherbs) at South Norwood Country Park (KBRG meeting); Tonbridge (GK); and Sevenoaks (GK).
- *Epilobium x semiobscurum* (*E. obscurum* x *tetragonum*, the cross between Short-fruited and Square-stalked Willowherbs) at Sevenoaks (GK); this is not a straightforward taxon to identify, being much like *E. obscurum*, but exhibiting hybrid sterility.
- *Epilobium x vicinum* (*E. obscurum* x *ciliatum*, the cross between Short-fruited and American Willowherbs) at Southborough, Sevenoaks and between Lamberhurst and Horsmonden (all GK).



Epipactis purpurata (Violet Helleborine) is in Kent, as remarked by Johnson (2019) 'almost exclusively a woodland plant', but also 'legendary for its persistence'. These two statements are reconcilable in relation to the finding by GK on 29 May of a compact clump of seven stems, remarkably in open grassland south east of Capel, TQ 6466 4380. Google earth historical imagery shows an orchard here 1990-2005, apparently increasingly overgrown, cleared out leaving fairly bare ground by 2007 and thereafter becoming grassland. Presumably the plant established in the overgrown period and persists as a survivor of a long vanished habitat.

***Eryngium bourgatii* (Mediterranean Sea-holly)** has less than a dozen British records, at least half of which must be doubtful as to whether found outside a garden. DS, however, on 21 June came across several plants growing on railway land north west of Longfield, TQ 5980 6963, looking neither planted nor fly-tipped, and situated on railway land remote from houses and gardens. Hortal selections have been made from this Spanish species, generally for an intensification of the blue colour, e.g. 'Picos Blue'. **This is a first record for West Kent, vc16**, and for the county overall.

Eryngium bourgatii, 21 June 2019. Photo © David Steere

Galanthus woronowii (Green Snowdrop) has West Kent records on the BSBI database, but it is difficult to evaluate their status, being likely to be plantings in gardens or churchyards. Even outside such locations it may not be easy to form a view, as with the plants found by GK and SK on 22 January at Pinkham, East Peckham, TQ 6704 4851, where they were growing at the side of a lane by a fenced-off electricity compound, a possible place for dumping garden waste, but if planted, then they are established. It is worth looking out for snowdrops with unusually fresh-looking green leaves, which may be this species.

Glebionis segetum^R (Corn Marigold) is now generally seen as a consequence of wildflower sowing, but this seems unlikely to be the case for a sighting by SL on 9 August, west of Harper's Farm, Winchet Hill, TQ 7229 4062. There was a single plant flowering with *Tripleurospermum inodorum* (Scentless Mayweed) in rough grassland on the south side of the River Teise, previously arable, although an uncultivated ox-bow up to the 1960s.

Gunnera tinctoria (Giant-rhubarb) looks aggressive, and its sale is prohibited on the grounds of invasiveness, but its Kent behaviour is relatively docile. It was unusual that a couple of patches were located by DS on 17 November on the banks of a dammed ditch at TQ 5386 3775, likely to have escaped from where planted upstream at Groombridge Place.



Hedera algeriensis (Algerian Ivy) is generally grown as variegated cultivars, but on 19 January GK and SK encountered a non-variegated plant growing on an inaccessible fenced railway embankment between Elmstead Woods and Grove Park, TQ4171, where the River Quaggy emerges from under the railway, a location not near houses or any plantings. Another non-variegated record was made by GK on 13 December at Pettebridge, TQ 664 408, at a roadside wood edge, probably originating from dumped garden waste but now well spread.

Hibiscus syriacus (Rose of Sharon) was noted by GK on 20 September as a street seedling at Park Langley, Beckenham, TQ3867, the parent being present in a garden a few metres away. Clement & Foster (1994) say that self-sown seedlings are restricted to gardens, but this is no longer the case.

Hieracium spp. (Hawkweeds) at Knole House, Sevenoaks, have previously been recorded when growing on accessible parts of the ragstone boundary walls (cf. *Hieracium grandidens*, Grand-toothed Hawkweed, in Kent Botany 2017). Now that there is a degree of public access to Lord Sackville's private garden, it is apparent that there are hawkweeds in abundance in parts of the grounds, as well as on the inside face and buttresses of the walls. On 16 May, GK and SK found plants subsequently determined by MS as *Hieracium argillaceum* (Southern Hawkweed), albeit with slightly fewer stellate hairs than usual on the phyllaries, *Hieracium sublepistoides* (Grey-bracted Hawkweed), both TQ5453, and *Hieracium spilophaeum* (Spotted Hawkweed) at TQ 53878 54040. This last is not the only Kentish hawkweed with spotted leaves, and what was presumably the same taxon was recorded on the outside of the wall by GK in 2004 as *Hieracium maculatum*, a name then commonly used for most leaf-spotted *Hieracium* species. (One of the other leaf-spotted species is *Hieracium pollichiae* (Roffey's Hawkweed), recorded by BW on 7 August, along a bridleway off Harple Lane, Detling, TQ7958, in the general area where the Detling record in Philp (2010) was located.) Staying with Sevenoaks, *Hieracium lepiduloides* (Irregular-toothed Hawkweed) was found by

GSJ on 6 June at Woodside Road, TQ 52657 55803; this was also determined by MS, the species only having received its name in 2015.

Himantoglossum hircinum^R (Lizard Orchid) made a couple of unexpected new appearances in West Kent. The first was the find by ES on 13 February of a single rosette of basal leaves on a public open space near Chelsfield station, TQ 46736 64101. While it was remarkable to have recognised it for what it was so early in the year, the plant became more conspicuous when it flowered, only a metre or so away from a well-used public footway. Maintenance contractors for the London Borough of Bromley adjusted their maintenance regime to take account of its presence. The nearest seed source is Lullingstone Park, over 5km away. The second new discovery was by DS on 14 June, a flowering spike in chalk grassland bordering the HS1 railway north west of Longfield, TQ 59783 69612. This is over 9.5km from the Lullingstone Park colony, which may be the wind-borne seed source. Although British records began in the Dartford area in 1641 and continued in various sites until 1921, DS's find is the first since, and is at a new location.

Juncus ranarius (Frog Rush) has now been restored to the Kent flora, following discovery by RMB in the West Paddock of Crossness Nature Reserve (sample grid reference TQ 4939 8048). The last find noted in Philp (2010) was in 1862 at Deal, but there is a 1947 specimen at NMW from Sandwich Bay. The species had narrowly escaped detection in 2013, when an LNHS meeting recorded what it supposed to be *Juncus bufonius* (Toad Rush) at the Crossness site, and in 2018 a specimen gathered here by RMB was mislaid before identification. On 7 August 2019, RMB and JC visited the site, which is a slightly brackish, horse-grazed enclosure near the Thames, partly subject to seasonal flooding, and it appeared to them that the plant, which grows quite extensively around the edges of muddy depressions, was indeed *J. ranarius*, not easy to separate from *J. bufonius*, because of the plasticity and overlap of their distinguishing characters. At a further visit on 20 August (RMB and GK) material was gathered which provided a confirmatory determination by BSBI referee TC, based on 'the blunt inner tepal, blunt capsule (perhaps a little too



short) and dumpy barrel-shaped seeds'. As an annual, the rush clearly benefits from the open ground, with limited competition, provided by the fluctuating water levels. The brackish nature of the site was also apparent from the finding of *Puccinellia fasciculata*^R (Borrer's Saltmarsh-grass). RMB points out the potential for further discoveries along the Thames estuary, given that it has also been recorded as abundant over a wide area of saline marsh at Aveley Marshes, on the Essex side of the river. It is not just saline marsh where it should be sought. Also, although not bordering the Thames, Essex discoveries at Jaywick in 2007-08 point to compatibility with more developed habitats: inside the sea wall adjoining a holiday park and a car park, and on a pavement. The rush will now be transferred from the Kent 'probably extinct' list to the rare plant register, where there is a fuller account. This is a **first record for West Kent, vc16**.

Juncus ranarius, 7 August 2019. Photo © Rodney Burton

Lathyrus hirsutus (Hairy Vetchling) is now being given rare plant register status, in view of the case made by Rumsey (2019) for recognising its long-term occurrence by the Thames estuary. It is therefore timely that, although a few odd plants have been found before on the Swanscombe peninsula, DS on 23 August found hundreds of plants, mostly in seed, at TQ 608 759, TQ 609 758, TQ 610 761 and TQ 609 761 to TQ 608 760. As they were concentrated on the east side of the peninsula where sand and aggregates have long been off-loaded, there is a possibility of association with that activity. However, the peninsula has a complex history of uses and much of it comprises various dumped substrates over what was tidal saltmarsh in the 1940s, so whether *Lathyrus hirsutus* may have had a long, but unrecorded presence, or has arrived with whatever accounts for the extraordinary quantity and range of legumes here is an unanswered question. As regards the future, the theme park development proposals for the peninsula (which seemed to founder in 2017) have not gone away and now comprise the London Resort project.

Lysimachia (Anagallis) arvensis subsp. *arvensis* f. *azurea* (the blue form of Scarlet Pimpernel) was recorded by AM on 25 June in the course of a survey for Plantlife's Colour in the Margins project at an arable margin near Farningham, TQ5466. The only other recent record we have had of this was by OL at Brookland, East Kent, in 2014.

***Lysimachia (Anagallis) arvensis* subsp. *arvensis* f. *azurea*,
25 June 2019. Photo © Alison Mitchell (Plantlife)**

Myosotis secunda^R (Creeping Forget-me-not) is scarce in Kent, and MA's record from the margins of Decoy Pond, Pembury Walks, TQ 61920 42389, represents a first record from TQ64, although known to him for many years there.

Nardus stricta^R (Mat-grass) has very few sites in Kent, being restricted to open acid grassland of long continuity. The rare plant register contains details of one location at Knole Park; GK and SK on 28 July found another, about 1.6km away. In effect, both are off each end of Chestnut Walk; this one at the eastern end, from TQ 5514 5355 to TQ 5520 5359, in a strip 10m wide for about 70m, in part dominant.



Ophrys apifera (Bee Orchid) belongs to a genus whose species are notoriously variable, and AJ on 6 June noted at Ranscombe, TQ697681, a group of plants, of which three were an unusual (and apparently unnamed) variant in which the labellum is largely yellow, with a dark thin central stripe, and dark colour at the bottom.



***Ophrys apifera* variant, 6 June 2019. Photo © Ade Jupp**

Orobanche hederæ^R (Ivy Broomrape) was noted by RMB on 2 August, about 400 stems along the north side of Mavelstoke Road, Bickley, TQ 4220 6979 for a stretch of about 18m, this being a first record for hectad TQ46, although we have been seeing a sprinkling of metropolitan West Kent records since 2010. These include a sighting by MR on 17 July near the Upper Bedom Stream, Belvedere, TQ 4928 7788, where there were nearly 100 spikes.

Poa bulbosa^R (Bulbous Meadow-grass) was found by GK and SK on 5 May at the junction of Queen Street and Pikefish Lane, south of Laddingford, TQ 69062 46347. There were patches along 1.5m of the dusty road-verge, with a few flowering culms. These are quiet country lanes, remote from the usual coastal habitat of this grass and it is assumed it must have been introduced by car.

Pyrola rotundifolia^R (Round-leaved Wintergreen) at Eastern Quarry, Ebbsfleet has fallen out of sight in recent years following major earthworks associated with development, but DS on 26 August found that it still retained a presence in damp areas on chalk, with at least 100 flowering plants seen in TQ6072 and 50 in TQ5972, many non-flowering rosettes also being present.

Reynoutria japonica (*Fallopia japonica*, Japanese Knotweed) was seen by GK and SK near the Thames east of Greenhithe, TQ 578 752, on 13 January 2018 in seed. All of the usual tall var. *japonica* in the British Isles is a single female clone, so seed will be of hybrid origin. A sample was taken home and sown, and by September 2019,

following germination, plants had developed somewhat rambling stems and leaves narrower than the Knotweed parent. It has been known since 1984 (Bailey & Conolly, 1984) that *R. japonica* is capable of hybridizing with *Fallopia baldschuanica* (Russian-vine), the cross between these parents being *X Reyllopia conollyana*. In spite of *F. baldschuanica* not being seen in the vicinity, the cultivated material was a good match for the cross, with leaves of intermediate shape, and stems neither erect nor vine-like. Since the only 'wild' aspect of the find was the seed embryos prior to germination, the hybrid cannot yet be treated as part of the Kent flora, so this account is provided for interest, and also to encourage the examination of patches of *R. japonica* for the presence of small scrambling plants in the vicinity. The hybrid appears to have been found very seldom in the wild in the British Isles, although greater potential is suggested by the germination of plants from the soil bank of field trial plots used to test *R. japonica* control methods in South Wales (Hocking *et al.*, 2019). It has been suggested, however, that germinating seed may not survive winters well, through damping off rather than cold (Bailey & Spencer, 2003).

***X Reyllopia conollyana*, 13 September 2019.**
Photo © Geoffrey Kitchener



Rosa x toddiae (*Rosa canina* x *micrantha*, the cross between Dog-rose and Small-flowered Sweet-briar) was first noted by SL in 2015 at Chiddingstone Nature Reserve, Birch Marsh, TQ 51056 47105, growing on the edge of a path and small pit, when thought to be another hybrid taxon. However, material gathered by SL on 18 August was confirmed by BSBI referee RM as this cross, having regard to the sweet-briar glands on the pedicels and undersides of leaflets. It is an unexpected location, on Weald Clay, given that our other records are on chalk where *R. micrantha* usually grows, although there are very occasional recent records of *R. micrantha* on Weald Clay or the Tunbridge Wells Sand Formation, and quite a number of Wealden records in Philp (1982), if those are to be relied upon.



***Rumex crispus* subsp. *robustus*, 27 June 2019.**
Photo © Geoffrey Kitchener

***Rumex crispus* subsp. *robustus* (Curled Dock)** is a subspecies which has been listed as part of the British flora in Stace (2019) as a result of inclusion in Sell & Murrell (2018). Not all the docks given in Sell & Murrell (2018) are likely to become generally accepted names or identifications, and in the case of subsp. *robustus* this is complicated by Peter Sell's own identified material in CGE having somewhat smaller tepals than the key and description in his account. Nevertheless, the subspecies, which was first described from Austria (and has probably arrived as an introduction in Belgium and England) appears fairly distinct, at 2m high being the size of *Rumex patientia* (Patience Dock) and having much larger tepals than the usual *R. crispus* subsp. *crispus*. Such a dock was found by GK on 27 June in a layby on the A21 south east of Tonbridge, TQ 5716 4515. It was 2.10m high with large panicles and with entire tepals mostly (4.5-)5mm wide x 5mm long but up to 6 x 7mm and bearing one well-formed tubercle only. Usual tepal measurements for subsp. *crispus* are up to 4.5mm wide x 5mm long. Sell & Murrell (2018) state that subsp. *robustus* should have three tubercles, but Groom (2012) allows one tubercle for plants introduced in Belgium. The A21 plant, being on disturbed ground by a transport corridor, may be presumed to have been introduced, but the absence of any other records in this part of England does not allow any further conclusion as

regards status or trends. **This appears to be a first record for West Kent, vc16**, and for the county as a whole. By early December the site had been tipped with highway maintenance materials.

***Rumex sanguineus* x (*R. crispus* x *R. obtusifolius*)**, a triple hybrid between Wood, Curled and Broad-leaved Docks, was found by GK and SK on 31 July east of Colliers Green, TQ 76254 38841. There were at least two plants at a wood margin with mostly *R. sanguineus*, a little *R. obtusifolius*, and some *R. x pratensis*. They were highly infertile, with varying development of tepals, mostly somewhat lingulate (from *R. sanguineus*) but also with small teeth (from *R. obtusifolius*). Leaves were narrow and crisped (from *R. crispus*), with some scabridity on minor veins underneath (from *R. obtusifolius*); scabridity on midrib underside was less well observed, perhaps due to leaf decay, but was definitely present to a degree. This is **a first record for West Kent, vc16**; it was reported for East Kent in Kent Botany 2017

Sisymbrium irio (London-rocket) has been little seen in Kent, recent sightings being virtually restricted to Whitstable, but on 29 March RMB encountered a few plants, one just coming into flower, at the edge of the roadway above the river wall at Rosherville, TQ 635 744.

***Sisyrinchium bermudiana*, 13 July 2019. Photo © Tony Howard**

Sisyrinchium bermudiana (Blue-eyed-grass) has not been recorded escaped in West Kent for over 50 years and some was found by JHw and AH whilst recording for the National Trust on 13 July in a woodland ride at the Scotney Estate near Kildown, TQ 69670 35393. Whilst this is well away from any possible source of introduction, the co-presence of *Alchemilla mollis* (Garden Lady's-mantle) amongst an otherwise native flora confirms that garden material has got here somehow.



Symphytum caucasicum (Caucasian Comfrey), with its blue flowers, the short calyx teeth extending to the end of the corolla tube, is a taxon seldom recorded in Kent, and was noted by GSJ on 10 May, on roadside banking at the Back Lane triangle, Goathurst Common, TQ 49693 52922.



***Vicia pannonica*, 16 May 2019. Photo © David Steere**

Vicia pannonica (Hungarian Vetch) was first recorded in Kent by GSJ in 1977 on a motorway slip road east of Dartford, and described in Philp (2010), from a pre-2000 record, as still present on the verges of the approach road to Dartford Tunnel. On 16 May, DS found it to be frequent further south, with hundreds of plants on the chalk banks on both sides of the B260 from its bridge over the A282 Dartford Tunnel Approach eastwards to Blackdale Farm, TQ 557 728 to TQ 558 727. The bridge and the present alignment of the B260 are the product of works carried out which were authorised by the Dartford-Thurrock Crossing Act 1988. DS recalls these works, which involved major earth movements resulting in sandy soil around the bridge, reverting to thin turf over chalk away from the bridge. A consequence could well have been the carriage of seed from the original location, a junction which was originally constructed with the first Dartford tunnel, opening in 1963 and which was further altered with the advent of the Dartford-Swanley section of the M25, 1974-77. It is the M25 construction which is likely to have involved seed sowing on the banks with *V. pannonica* as a contaminant, spotted in 1977. It is not impossible, of course, that further amenity seed sowing on completion of the 1988 authorised works could have introduced the species afresh - and this might be supported by the co-presence here of *Lathyrus aphaca* (Yellow Vetchling) - but this is such a rare introduction (Berry (2019) mentioning only two other post-2010 records) that such an occurrence would be highly improbable. The current record is of subsp.

annonica, with its brown-veined off-white flowers; other subspecies (subsp. *striata* = *purpurascens*) have purplish flowers.

Viola tricolor^R (Wild Pansy) was found by GK on 15 September near Crockenhill, TQ 4985 6627, where there was a scatter of plants, at least 30, in corner of a field, formerly arable but grassing over, although fairly open because of sandy/pebble nature (Harwich Formation). There was one plant with the dimensions and morphology of *Viola arvensis* (Field Pansy), but with indications of introgression; and a subsequent visit by JP, who remembered *V. tricolor* here from the 1980s, yielded a number of small-flowered plants with slightly curved faces (*V. tricolor* is normally flat) which appeared to be the hybrid, *V. x contempta*.

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