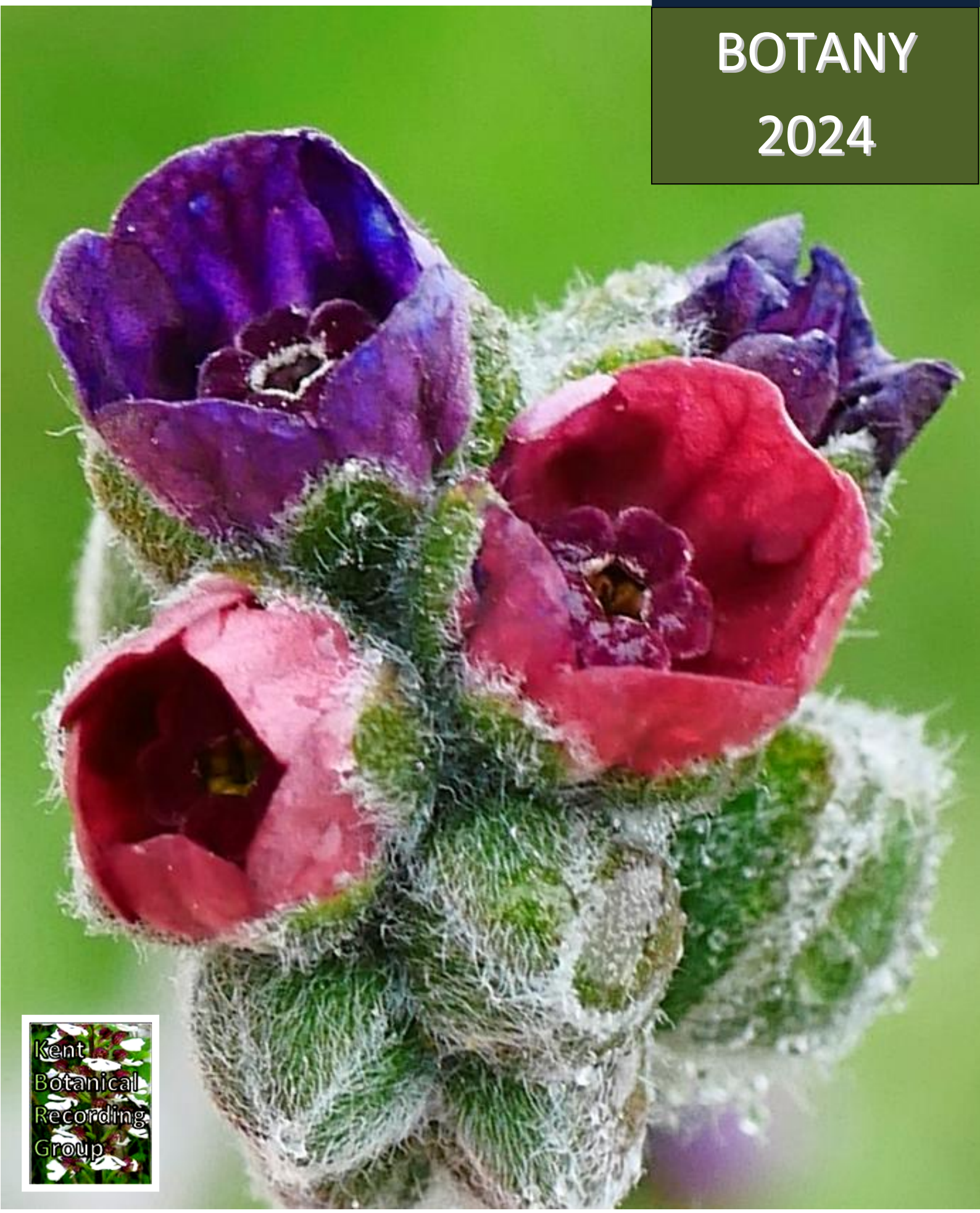
KENT

BOTANY 2024



Kent Botany 2024

Contents

Compiled by Geoffrey Kitchener
(January 2025, web version 1)

Front cover:
Cynoglossum officinale (Hound's-tongue), Old Park Hill, Dover, 31 May 2024. Photo by David Steere.

Introduction

Kent Botany 2024 continues the sequences of annual reports on Kent botanical records and developments generally, appearing on the Kent page of the Botanical Society of Britain & Ireland (BSBI) website, https://bsbi.org/kent and as hard copy in Kent Naturalist, with the on-line version to be regarded as the definitive one.

Highlights of 2024

- The transcription of Francis Rose's manuscript *Flora of Kent* which he worked on for over 50 years and which was later thought to be lost is now complete and available.
- *Lysimachia* x *doerfleri,* the cross between Scarlet and (true) Blue Pimpernels (*L. arvensis* and *L. foemina*) has been found twice in 2024, at Ranscombe Farm; the only previous British record was in 1950, in Warwickshire.
- *Alchemilla xanthochlora* (Intermediate Lady's-mantle), lost since 1976, has been restored to the Kent flora, with two patches found in Lyminge Forest.
- *Hieracium mammidens* (Breast-toothed Hawkweed), long without confirmed records in Kent, has been found by Tim Rich to be still extant in two West Kent sites.
- *Fumaria capreolata* subsp. *capreolata* f. *speciosa*, the version of White Ramping-fumitory which turns bright crimson on fertilisation, has been spreading through East Kent in recent years and now has reached West Kent (Gravesend).
- *Polystichum munitum* (Western Sword-fern) has been found naturalised in a Goudhurst lane, the first Kent record.
- *Vaccinium ovatum* Pursh (Californian Huckleberry) has been found growing wild near Ightham, perhaps the first such escape in Britain; it was probably bird-sown from a nursery c.300m away who listed it in a 1958 sale catalogue.

- Our duckweed flora is more diverse than was supposed, as alien species *Lemna turionifera* (Red Duckweed) and *Lemna valdiviana* (Valdivia Duckweed) have both arrived in East Kent ditches.

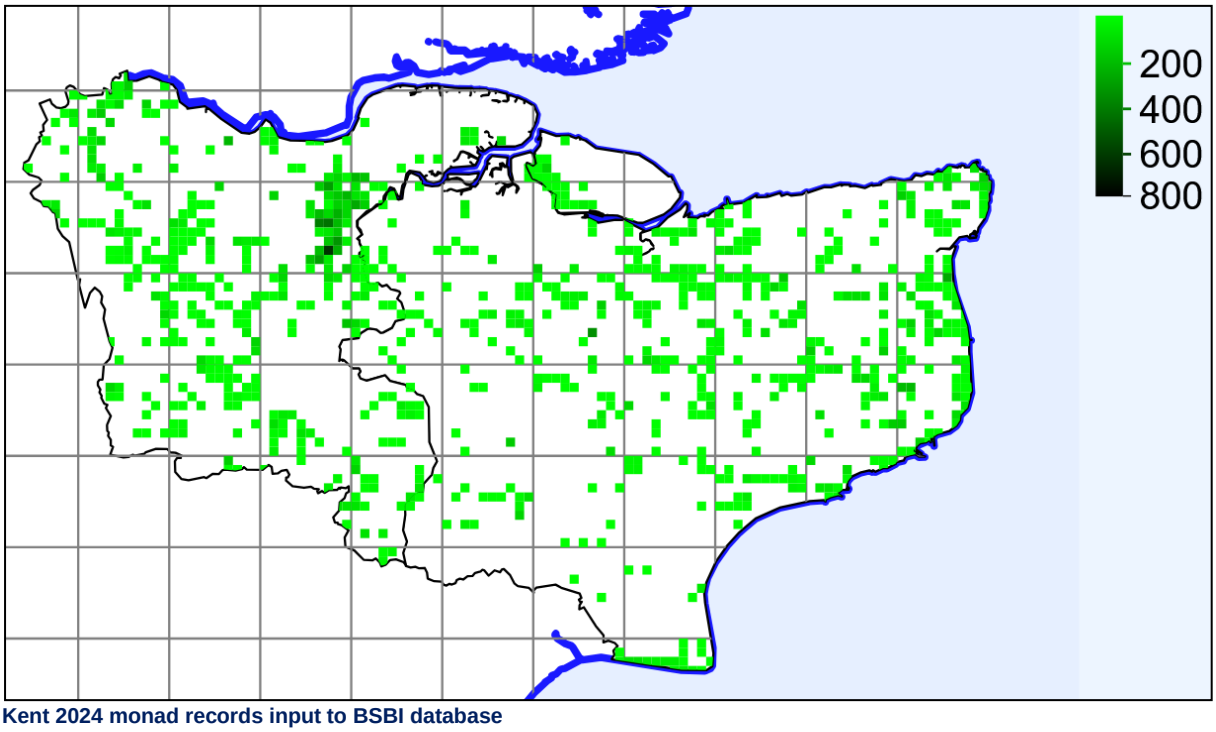
Botanical developments in Kent, 2024

Recording

Over 27,000 Kent records for 2024 were entered onto the main BSBI database by the beginning of 2025, a third more than the previous year. Most were made by, or reported to, Kent Botanical Recording Group (KBRG) members. However, as the BSBI have made available, with a time lag, iRecord and iNaturalist records, a start has been made on importing those which could readily be validated, beginning with about 700 from the first part of the year, the bulk deriving from iRecord. These are sources from which, time permitting, a fuller record flow could be developed.

The total number of taxa recorded was 1,346, from 847 monads. The most fully recorded monad was TQ6762, which covers parts of Holly Hill, Crookhorn Wood and Birling Hill and where 474 records were made. This was the consequence of two intensive surveys overlapping. One was by Lesley Mason and Lliam Rooney, which covered a considerable amount of terrain from here northwards via Upper Halling and Luddesdown as far as Camer Park and Ranscombe Farm, all west of the Medway gap. This provided a considerable amount of record data for the current position, where records had generally been piecemeal before. The other survey was by Geoffrey Kitchener on the Birling estate, working south-westwards from TQ6762 towards Trottiscliffe. Records from both surveys are given later in this report. Further surveys included those by Alex Lockton at Denge Beach, covering the full south-facing coastal strip at Dungeness; and by various recorders co-ordinated by Sue Buckingham in continuing the study of *Orchis purpurea* (Lady Orchid); and further orchid surveys in East Kent by (independently) Alan Blackman, Clive Nuttman, Jeff Edwards, also Steve Coates plus Mel Lloyd, all producing some very substantial numbers. KBRG held eleven recording meetings, ranging from the Surrey boundary at Beckenham in the west to north-easternmost Kent at Thanet. Two of these were themed meetings, held to explore the *Limonium* (Sea-lavender) microspecies unique to the county.

The extent of 2024 recording is shown in the accompanying distribution map, where all of the 847 recorded monads are given. It is fairly impressive coverage, even though it has to be said that 251 of those squares only generated one record each. And as with 2023, no-one succeeded in botanising at hectad TQ82, the Rother catchment bounded by Sandhurst, Wittersham and Rolvenden Layne.



Kent 2024 monad records input to BSBI database

There were seven plants recorded as new to East Kent and the remarkable total of 15 new to West Kent, although not all were 2024 records. They include foreign duckweeds appearing in our dykes (and perhaps indeed attributable to ducks), casuals, garden escapes and some difficult-to-spot hybrids.

Consultations and decisions

The development of Kent's Local Nature Recovery Strategy, replacing the former Kent Biodiversity Strategy, was co-ordinated by Kent County Council, and input regarding the interests of our county flora was provided by Sue Buckingham, Richard Moyse and, to a lesser extent, the writer.

Dover District Council granted planning permission for Quinn Estates' Seahive development at Betteshanger, to be located on Britain's second largest *Himantoglossum hircinum* [R] (Lizard Orchid) colony, despite representations regarding the exceptional wildlife value of the site. They thereby compounded their failure many years before to declare it a nature reserve, for which arrangements had been set up, with the reasons for failure to act having been lost with their paperwork. Amongst various conditions attached to the permission there is one saying "No development shall commence, including site / vegetation clearance, until details that a protected species licence has been obtained (issued by Natural England under Regulation 16 of the Wildlife and Countryside Act 1981 (as amended)), in respect of the impacts of the development on lizard orchids, have been submitted to and approved in writing by the Local Planning Authority".

Rare plant register (RPR)

The 2023 RPR was updated as at March 2024, accounts were supplied for additional species *Cyperus longus* [R] (Galingale) and *Populus nigra* subsp. *betulifolia* [R] (Black-poplar) and the full document was placed on the BSBI website. For the next edition, *Alchemilla xanthochlora* (Intermediate Lady's-mantle) is being considered for inclusion. Recording RPR plants continued as a priority, with 1,149 records made in 2024 (including some hybrids with RPR taxa), up by 25% from the previous year. A total of 176 different RPR taxa was recorded; the RPR list (2024 version) covers 330 plants and only a small handful, such as *Leymus arenarius* [R] (Lyme-grass) and subsp. *uliginosus* [R] of *Rumex crispus* (Curled Dock) have not been confirmed in recent years and may need moving to the 'probably extinct' list.

Publications

KBRG newsletter 17 appeared in October with accounts of all field meetings, reports on the former Kent Biodiversity Strategy priority species, and a transcript of part of an 1826 diary of a botanical visit to Kent. The issue of a transcript of Francis Rose's lost manuscript *Flora of Kent* is considered further below.

Dixon (2024) uses specimens in the Natural History Museum to 'push back' the dates of the first recorded vice-county occurrences of bellflower species as given in the BSBI database and in so doing, identifies 'first records' for East and West Kent. However, this says more about the limitations of the database than true first records. It is quite demanding just to keep the database up-to-date with new records, let alone old ones. The records identified will, if added to the database, enhance it, but are not necessarily true first records. The species given are as follows (the first date is Dixon's specimen date; any second date, in bold, is a known earlier record not mentioned by Dixon and not in the database): *Legousia speculum-veneris* (Large Venus's-looking-glass: vc16, 1906); *Trachelium caeruleum* (Throatwort: vc15, 1835); *Campanula glomerata* [R] (Clustered Bellflower: vc15, 1833); *Campanula medium* (Canterbury-bells: vc16, 1912); *Campanula persicifolia* (Peach-leaved Bellflower: vc16, 1914); *Campanula rotundifolia* [R] (Harebell: vc16, 1866, **1629**); *Campanula trachelium* (Nettle-leaved Bellflower: vc15, 1852, **1597**; vc16, 1838, **1597**); *Legousia hybrida* (Venus's-looking-glass: vc15, 1865, **1839**; vc16, 1949, **1597**); *Wahlenbergia hederacea* [R] (Ivy-leaved Bellflower: vc16, 1843, **1793**).

Lansdown (2024) summarises *Wollfia* records in Britain, including from Kent, and concludes that *Wolffia arrhiza* (Rootless Duckweed) may never have been native to, or actually occurred in, Britain, all recently confirmed records being of *Wolffia columbiana* (Columbian Watermeal). If present, *W. arrhiza* is likely to be rare and mixed with populations of other *Wolffia* species.

Moyse (2024) provides a methodology for assessing change in chalk grassland vegetation which, when applied over a period of four years to Brockles Field, Ranscombe (formerly arable, but put into set-aside in the late 1980s), showed an increase in species-richness and an increased presence of chalk grassland species.

The discovery of a triple hybrid dock, presumed new to science, written up in Kitchener (2024) is considered further below under the Plant Records for West Kent.

There are also a couple of recent publications which were overlooked for earlier issues of Kent Botany. One is Burton (2023), dealing with the discovery of *Artemisia austroyunnanensis*, details being given below under Plant Records for West Kent.

The other is 'The Burnt-Tip Orchid *(Neotinea ustulata*), future restoration in Kent' (Coles, 2022), which comprises 'research aimed to assess two areas of concern for the species [*sic*] long-term viability, the effects of anthropogenic climate change on it's [*sic*] pollination phenology and the potential for pollinator decoupling and the public perception of the species to develop an understanding of the species within the funding landscape'. It does not appear to be aimed at any particular restoration proposal. However, on the basis of responses by members of the academic community of the University of Kent to questionnaires comparing attributes and photographs of various plant species including *Neotinea ustulata*, it is considered that the latter would be beneficial to use as a flagship species for chalk grassland orchids. The study of pollination phenology was hampered by covid restrictions, so that the general lack of knowledge of pollinators is acknowledged and the thesis focuses on British insects which might be suitable pollinators. The effect of climate change in increasing springtime temperatures would appear to prompt both earlier flowering and earlier flight times for possible pollinators, so that it should not bring about a mismatch. It is concluded that although the Kent meta-population of *N. ustulata* is possibly functionally extinct, 'given the current state of knowledge surrounding *N. ustulata* pollination biology and wider ecology .... any restoration efforts are at risk of failure. As a result, further research is required to better understand the factors influencing the species' decline and the factors that may underpin successful future restoration efforts'.

Farewells

An obituary for Brian Woodhams (15 June 1947–17 August 2024) was included in KBRG newsletter 17. His herbarium was delivered into the custody of Oxford University by Stephen Lemon in January 2025.

Brian Woodham's herbarium being handed over to Oxford University, 18 January 2025. Photo by Stephen Lemon.

Francis Rose's Flora of Kent

Geoffrey Kitchener

With the distribution to KBRG members at the end of 2024 of a weblink to download the Flora came the end of a long period of work to make it available. Lost? Destroyed? No-one seemed to know after Francis Rose's death. And yet during his lifetime, some had seen it, thousands of pages, and had even borrowed (and returned) bits of it. After I became county recorder, I tried to track it down and, piece by piece, nearly all of it emerged. But it was, except for a few pages, hand-written and often very difficult to read, so I set about transcribing it and after eight years from the re-finding of the first fragments, it is now available on the BSBI website at https://bsbi.org/wp-content/uploads/dlm_uploads/2025/01/Francis-Roses-Flora-of-Kent-14N.pdf

But to go back to the beginning…. One day in 1946 or early 1947 – aged 25 or 26 and ten years after his first field meeting - Francis Rose took out his fountain pen and a notebook and began listing plants to look out for in Kent in 1947. He then referred to his ordnance survey maps and started drafting descriptions of the botanical areas into which it seemed appropriate to slot plant records: their boundaries, soils, best localities and special plants. He did this quite thoroughly to begin with, then more sketchily, and moved on to organising species accounts with loose sheets for each species onto which records could be entered against each numbered botanical area. The Flora of Kent had begun!

Since 1942 he had been liaising with other Kent botanists with a view to gathering Kent plant records together, which became a Kent Vascular Plant Flora project that he had hoped to complete by 1949 (Rose, 1949). Already by that year he had published the first part of a county Bryophyte Flora (Rose, 1949a). Over the years, the mass of collected records increased and publication kept on nearing and receding until in the late 1990s he began revising and getting typed out a final version, while in 2000 asking Kent botanists to check out some old sites for continuity of significant species. He died in 2006. The Flora had become legendary, but had apparently disappeared. Many had seen it during his lifetime. Peter Wilberforce remembers being shown the manuscript in Francis Rose's work room in the late 1960s: 'This consisted of thousands of foolscap sheets with hand-written notes scattered all over the place, together with herbarium sheets. To me it was in total chaos, but Francis seemed to know where everything was!'

David Pearman drew attention to its former existence and its disappearance (Pearman, 2011) – 'he had told me at least half-a-dozen times that he had a draft, and his next project was to finish it' – which helped raise awareness. This was about the time that I became Kent vice county recorder, and it was my hope that I could do something towards reconstituting the lost Flora. Many people helped in this. Rosemary FitzGerald and Joyce Pitt had photocopies of odd pages; Owen Mountford had notes regarding records relating to the Romney Marsh area; Phyllis Davis was able to locate the typescript which her late husband had prepared when Francis Rose began the final revision. But the real breakthrough was in 2017, when David Streeter and Andrew Rose found two of the four volumes of manuscript species accounts amongst those papers which had not gone with the main written archive deposited in the National Museum of Wales. This was followed in 2019 by Anna Rose's discovery of a third volume, leaving only one volume missing, plus the introductory chapters to the Flora. The latter were probably never written, but the substance of much of them is covered by Francis Rose's other publications.

The manuscript presented many challenges in interpretation. I got used to the handwriting, but disentangling records was often difficult because they had been added cumulatively from the 1940s/50s up to 2000, frequently shoe-horned into inadequate space, sometimes in a palimpsestic manner. The manuscript was mostly a set of jotted notes, certainly not a finished text, and it was necessary to work out his abbreviations: 'gsld' for grassland was relatively easy, 'cwf' for clay-with-flints was not! The loss of one of the volumes is compensated in that part of the contents is available either through photocopies of odd pages or through the typed revision which Francis Rose completed, covering ferns and fern-allies. Also, his annotations to his copy of Hanbury & Marshall (1899) have enabled much to be provided which would have been carried over into the missing species accounts, so the accounts in general are more than 90% complete. It is a dense text, full of references to Kent localities including names such as Cuckoldscoombe, Hearts Delight, Honeypot, Otty Bottom, the Startled Saint and (perhaps inevitably) Rose in Bloom. Kenticisms include the wonderfully self-deprecating name of Snodland Pride for *Mercurialis annua* (Annual Mercury).

So, what is the significance of the Flora as now available? It fills a gap in Kent botany between Hanbury & Marshall (1899) and the first atlas-based Kent survey (Philp, 1982) in dealing with the transformation from

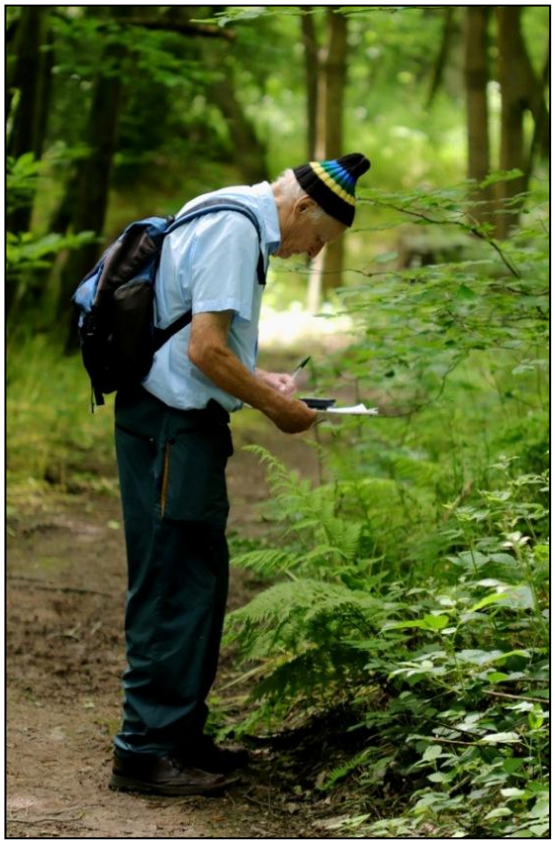
Victorian Kent - a period of major habitat changes in the countryside with increased mechanisation in agriculture; the beginnings of use of herbicides in quantity; the extension of cultivation in wartime and subsequent abandonment; and the effects of development generally, tempered by the introduction of town and country planning. The ecological observations for many species have wider significance than just for Kent. These are bolstered by frequent comparisons, not just with neighbouring counties, but also with France. He holidayed in north France, attended botanical meetings there and authored papers in both English and French on floristic comparisons between south-east England and north France which perhaps mean that his views on what is, or might be, a native plant should be afforded fuller recognition.

The transcript is not, for the most part, the Flora as Francis Rose would have revised and published, had he got round to it. I have, however, made some adjustments for the sake of getting it nearer a publishable state, while still making it clear exactly what is written in the manuscript. So we now have, accessible to all, the notes accumulated and re-worked over a period of decades towards an ambitious conclusion which was never reached, but still well worth having despite their state.

Queendown Warren, c. 1956, Francis Rose with Eric Philp and Victor Summerhayes. Photo by Owen Davis

Rodney McGuire Burton M.A., F.L.S. May 1936 – November 2024

Rodney Burton had a long life in botany, mostly based in West Kent, and as well as being a knowledgeable field botanist, wrote the *Flora of the London Area* (Burton, 1983)[1] and numerous articles and papers, and held many positions in a range of societies, including the presidencies of the London Natural History Society and the Wild Flower Society.



3 June 2018, Kemsing Hills. Photo by David Steere

He was born in Norfolk, his father being the county Assistant Education Officer. He was the third of his mother's three sons, the second since deceased and the eldest being Sir Humphrey Burton, former music television presenter and director. He was fortunate to survive the Baedeker raids of 1942, when Norwich was bombed, taking the roof off the family home with a direct hit on the house next door. Subsequently, his parents divorced and, his father having remarried, two half-brothers were born to that marriage. Rodney from the age of 6 to 14 went to the progressive co-educational school Long Dene, his mother being on the staff. This school was originally at Stoke Poges but moved to Chiddingstone Castle in 1945. From 1951 to 1954 he studied at Judd School, Tonbridge, where he took his A levels. His interest in plants developed early, perhaps from an enjoyment of making lists of things, and he chose as a school prize the latest standard British Flora (Clapham, Tutin & Warburg, 1952).

After A Levels came National Service (in 2022 he was able to recollect the location of *Umbilicus rupestris* (Navelwort) in Crockham Hill from working as assistant warden at the youth hostel in 1954 while awaiting call-up), for which he was based at RAF Butterworth, Malaya, engaged in the Joint Air Photograph Intelligence Centre at the time of the Malayan Emergency insurrection. On completing service, he read modern languages at Cambridge, in the middle of which he had a year off as an *assistant anglais* at the Lycée Louis-Barthou in Pau. He followed up his degree with a post-graduate Certificate in Education at Exeter. He then taught for two years at a boys' school at Weston-super-Mare, moving on to work with the Youth Hostels Association in London and thence, on the strength of his languages degree, to become in 1969 a cataloguer in the National Reference Library of Science and Invention which after various re-organisations was subsumed into the British Library. Rodney's role developed to become catalogue supervisor with responsibility for the acquisition of serial publications. These cataloguing skills would link with his interest in listing plants and managing botanical record data. Latterly, he was heavily involved with the transfer of the British Library to St. Pancras, until his retirement in 1994.

While leading a holiday for the Ramblers' Association in 1969, he met Yvonne Hissey, and they married the same year, moving to Eynsford in 1970. Their son Geoffrey was born in 1971.

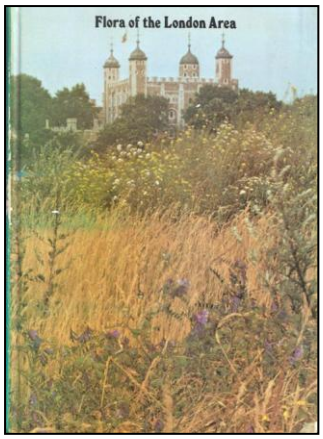
The first plant list that Rodney submitted to the London Natural History Society (LNHS) was for 1964 and Ted Lousley commented on it in *The London Naturalist* (Lousley, 1965). Rodney joined the LNHS as a result of coming across this periodical in Westminster Library and seeing a paper by Lousley in it. He also joined the BSBI in 1965, the Wild Flower Society in 1966 and the Kent Field Club c.1970. He was president of the Sidcup Natural History Society in 1966. The BSBI had recently published the *Atlas of the British Flora* (Perring & Walters, 1962) and Atlas mapping caught Rodney's attention. He opened correspondence with Franklyn Perring and sent him four or five hundred plant records which had not featured in the *Atlas*. His copy of the *Atlas* was

[1] The references in this obituary are given separately from those in the main reference section at p45.

heavily annotated with pencilled markings of the new records published in the BSBI's *Proceedings* which Rodney transferred with the use of gazetteers and Ordnance Survey maps. When the time came to prepare for the next Atlas (Preston, Pearman & Dines, 2002) Rodney was co-ordinator for London and the south-east (vice counties 15-24). His involvement with the BSBI included membership of the records committee, refereeing *Galium*, vice county recordership of Middlesex, and the publication of many articles and papers (see list at the end of this obituary).

From these articles and papers can be seen his interest at this time in plants of all sorts; the first sighting of *Solidago* x *niederederi* in Britain (his discovery above a railway at Swanley), and aspects of recording, such as the design of recording cards; the oddities of vice-county boundaries; and the reconciliation of D.H. Kent's plant nomenclature with that of J.E.Dandy.

His major publication was, however, the *Flora of the London Area* which arose out of the LNHS's project of recording for mapping purposes, begun in 1964 and taken over by Rodney from Peter Holland in 1973. The book was well received, both for the amount of effort which LNHS members had put into providing data, but also for the unconventional approach taken by the author in providing a continuous narrative, instead of a series of species entries. It has become a classic, still a book to resort to for reference. Publication coincided with the completion of his two-year term as LNHS president, in which he took the opportunity of delivering a presidential address on 'The function of a local natural history society' (Burton, 1983a). In this he argued for shrinking the recording area (a polygon of tetrads within 20 miles of St Paul's Cathedral) to coincide with local authority boundaries, absorbing local natural history societies as sections of the LNHS (which would enlarge the network of members from which records might be drawn) and the use of computers in keeping biological records. 'Having now turned one of your recorders into your president' he said (one senses a self-deprecatory smile here), '…you are getting what you deserve'.



But it was not until 1995 that he was able to have a bespoke database for LNHS botanical records, and he kept this going until he resigned as LNHS plant recorder in 2006. Thus ended thirty years of his annual plant records reports published in *The London Naturalist* (including the West Kent part of the LNHS area), a task which he as the journal's botany sub-editor had inherited on Ted Lousley's death at the start of 1976.

In addition to the LNHS and BSBI, he had involvement with Plantlife - the wild plant conservation charity, as a director 2000-2003; and with the South London Botanical Institute as a member from the 1960s; and, notably, with the Wild Flower Society (WFS) which he joined in winter 1966-67. The latter's activities of keeping diary records suited him and in his first year in Branch V he recorded 1151 plants becoming secretary of that Branch in 1972 and leading occasional WFS field meetings from 1975 onwards. He became an executive committee member in the mid-1980s and was for nine years committee chairman ('I believe' he said, 'those nine years were the most eventful in the Society's history'), followed by a one-year stint as president, 2002-2003. He was a committed chairman and began with a very thorough piece on how the WFS was perceived by its members and what changes might be made to its regulations (Burton, 1995). Following this there were changes to the WFS branch structure, the first issue of a publicity leaflet and the 'beginner's diary', the introduction of AGMs away from London and the offers of grants and bursaries. While appreciating the honour of being appointed president, into which he had been persuaded by Richard Fitter, he is on record as saying that he did not honestly think that he fitted the bill. He may not have been wholly comfortable with it, and a couple of his presidential letters in the Wild Flower Magazine dealing with approaches to him on plant queries suggest that those who approached him may not have been happy with the outcome. The presidency came in the course of a flow of articles by him, essentially about definitions, which was an area in which he was definitely comfortable. He dealt with 'What is a Wildflower' (Burton 2001b) and from 1997 to 2004 he provided a series of articles to the Magazine explaining technical terms relating to plant morphology.

His modern languages degree facilitated an interest in foreign botany and its literature, and he promoted a proposal (Burton, 1984) to the WFS that there would be a Foreign Holidays Secretary reporting annually on members' records made abroad on holiday, for which he volunteered. His first report (Burton, 1986a) included the 1985 Burton family holiday to Karpathos (his wife's choice) in which he was able to add several species to the known flora of the island, an achievement which he repeated in later years for various other Greek islands. His report also described the process by which he assembled lists of species to be seen in an area and how they

might be identified. He regarded this as sufficiently effective that in 1988 he was advertising his services in compiling and selling lists to members for their 'personal holiday flora'. The family frequently holidayed abroad; after his retirement Rodney and Yvonne often had three expeditions a year. The years 2004 and 2005, however, were the last for which he provided a WFS report.

Photo by Mick Massie

Rodney was the author of several plant names. *Allium circinnatum* subsp. *evae* R.M. Burton is a small *Allium* from Mugla, Turkey (Burton, 2006), the first record of *A. circinnatum* outside Crete and S. Greece. *Cirsium dirlmilense* R.M. Burton is a thistle from south-west Turkey (Burton, 1996). *Senecio* x *patersonianus* R.M. Burton, a hybrid ragwort growing near Kingsdown in East Kent, appears to be an invalid name as pre-dated by the name *S*. x *thuretii* Briq. & Cavil, although now that *Jacobaea* is the favoured genus, the name in use is *J*. x *thuretii* (Briq. & Cavil) B. Bock. *Amoria glomerata* (L.) R.M. Burton (syn. *Trifolium glomeratum* L.) and *Amoria suffocata* (L.) R.M. Burton (syn. *Trifolium suffocatum* L.) are two clovers which he felt would be better treated as part of splitting up the large genus *Trifolium*, and this was done through a note in the *Flora of the London Area*. The names are not employed in the main text of the Flora, nor have they come into common use. Unfortunately, both, in any event, were invalid as they had already been published elsewhere shortly before. *Erophila verna* var. *grandiflora* R.M. Burton was published in Burton (2021a), a Turkish variant of Common Whitlowgrass with petals c.8mm long (twice the size of var, *verna*). This last taxon was named in the context of a paper by him (in Turkish and English) summarising his most significant findings in the course of 19 weeks' travel in the period 1991-2002 and a couple of additional weeks more recently in south-west Turkey, extending considerably the state of knowledge of distribution of plants in that area. The paper seems to have been as near as he got to fulfilling an ambition to write a popular flora of south-west Turkey. Rodney's plant specimens were largely shared with Eric Clement, with whom he enjoyed friendship for over 60 years.

In 2010 he joined the Kent Botanical Recording Group (KBRG) as a founder member and provided much useful advice as regards the county rare plant register. He helped the Group in providing records for the BSBI's Atlas 2020 project, and from 2010 until his death produced over 25,000 records at monad level or finer resolution, mostly in or near metropolitan West Kent.

Rodney was good company on field surveying expeditions, but in other contexts his dry, measured style might strike some as a little forbidding until one got to know him. It was characteristic in his speech that sentences would pause while he searched for the clearest and most accurate way forward, but if there was a tendency towards over-precision, it was not at the expense of self-awareness or a sense of humour ('Thank you all for your forbearance of my pedantry' he wrote in his final WFS Magazine report, 2022). There were aspects of Rodney's life that will not necessarily have been apparent to botanists, such as his deep love of classical music, shown at his memorial service by the performance of some of remarkably mature teenage piano compositions and a choral arrangement made by him in later life (he was a member of several choirs). He was involved in many Eynsford village organisations.

He prepared thoroughly for winding down his botanical activities as age progressed. The disposal of some of his foreign floras and itineraries in 2011 was perhaps premature (his interest remained as he mentioned in 2022 that he was devoting 20 minutes a day to reading *Flora Gallica*), but the length of his annual lists of Kent plant finds reduced considerably in the 2020s. In spring 2023 he warned that his attendance at the KBRG AGM was almost certainly to be his last; in autumn, he said the same as regards a KBRG field meeting. In November 2024, his son visited and found him in good form, but he apparently collapsed and died that evening.

Yvonne died in 2012, her decreasing mobility had placed a considerable burden of care on his part, and Rodney is survived by their son, Geoffrey, and Rodney's elder brother and two half-brothers, to whom we convey

condolences. Looking back at his life, one cannot fail to be impressed by the breadth of his botanical knowledge, his helpfulness and the extent of his commitment to such a range of roles in the societies with which he was involved.

Acknowledgments

Compilation of this obituary has been greatly assisted by Geoffrey Burton; by the description of Rodney's early days in Wilson (1980); by an unpublished note by Rodney 'My Life in the Wild Flower Society; and by the provision of photographs, one by Mick Massie and another by David Steere, the latter taken in the course of a monad recording survey.

Publications

The following list of Rodney's publications includes those referenced above and others, but is not intended to be complete, especially as regards WFS and LNHS letters, reviews, administrative notices and reports.

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Hieracium mammidens Breast-toothed hawkweed in Kent

Tim Rich & Geoffrey Kitchener

Introduction

Hieracium mammidens is a rare English endemic hawkweed only known from Hampshire to Kent. It has been confirmed from about 11 or 12 sites and reported from another 3-4 sites, of which 7 are in Kent. All reported sites were searched as far as practicable on 29-31 May 2024 guided by data compiled from specimens in herbaria (**BM** = Natural History Museum, **CGE** = Cambridge University herbarium; **MNE** = Maidstone Museum) and the literature. As it flowers from late May, this is a good time to survey as few other hawkweeds are in flower at this time.

Pembury Hall Road. Photo by Tim Rich

Hieracium mammidens was recently described by Sell & Murrell (2006) and thus little is known about it. It is characterised by having unspotted, broad rosette leaves, 2-5 stem leaves with marked mammiform teeth, peduncles with numerous glandular and simple hairs, obtuse involucral bracts up to 11 x 1.5 mm wide with numerous glandular hairs and fewer simple hairs and stellate hairs, yellow styles and hairy-tipped ligules (Sell & Murrell 2006; Shaw 2020).

2024 Survey

Colt's Hill

Historic record: Colt's Hill crossroads, between Capel and Matfield, F. R. Browning, 21 May 1957 (**CGE**).

Eleven plants were refound on 30 May 2024 on Crittenden Road on the heavily shaded north bank within c. 30 m of junction in a dangerous situation with fast traffic in narrow lane! It transpired that this site had been visited by GK on 29 May 2019, but without being able to identify the species concerned, and had been recorded as TQ 6492 4384, Crittenden Road, just east of the junction with the A228, half a dozen plants on vertical south-facing road-bank, shaded.

Colts Hill. Photo by Tim Rich

Crockham Hill

Historic record: Crockham Hill, Westerham (TQ4352), C. West, 25 June 1957 (**MNE**).

Searched on 29 May 2024 without success and it is unclear where it may have occurred. The most likely place was Crockham Hill Common but this now dense woodland. Crockham Hill village itself had no obvious places. The road across Limpsfield Common in Surrey is too densely shaded.

Maidstone

Listed by Philp (2010) but no material seen and no details in Eric's card index which has a blank index card, so should be treated as unconfirmed.

Pembury

Historic records: Pembury, TQ6240, C. West, 7 June 1956 (**CGE**, holotype). C. West, July 1959 (**CGE**).

The holotype is labelled simply 'Pembury' and may relate to Pembury village itself or the following site just to the north. The Pembury area was searched by M. Shaw in June 2017 without success (Shaw, 2020), and there were no obvious places in the village to search in 2024.

Pembury Hall/Kent College/Kenward

Historic records: Kenward, bank, F. R. Browning, 5 June 1953 (**BM**). C. West & P. D. Sell, 1953 (**BM**). Kenwood, shady hedgebank, B. A. Miles, 30 June 1958 (**CGE**). Bank between Pembury Hall and Kent College North Lodge, F. R. Browning, 29 May 1956 (**BM**).

These records were interpreted as two sites on Pembury Hall Road, and are probably best regarded as subpopulations. On 31 May 2024, six plants were re-found on the east bank of the lane about 100m north of the Pembury Hall turning, opposite recently (2-3 years?) coppiced chestnut wood. Another 12 vegetative rosettes occurred in deep shade in old chestnut coppice between Kenward and North Lodge - it is very likely that these are *H. mammidens* but in their shaded vegetative state could not be confirmed.

Pembury Hall Road. Photo by Tim Rich

Parkwood, Swanley

Historic record: Swanley, 'Parkwood', F. R. Browning, 26 May 1945 (**herb. D. McCosh**).

The record is assumed to refer to the Parkwood area. Parkwood Hall Co-operative Academy is a private school with no access. Beechenlea Lane was searched on 30 May 2024 without success; at Parkwood the lane was heavily shaded, though the roadside banks to the north were more open with lots of *H. sabaudum* (Autumn Hawkweed).

Pembury Hall Road. Photo by Geoffrey Kitchener

Swanscombe

Historic record: Swanscombe TQ6074, J. R. Palmer, 25 May 1983 (**MNE**; Philp, 2010). John Palmer's notebooks indicate that he was recording in tetrad TQ67C and he recorded *H. pollichiae* (Roffey's Hawkweed) and *H. diaphanum* (Dark-leaved Hawkweed) in the chalkpit NW of Swanscombe (the latter presumably re-determined as *H. mammidens*).

The Swanscombe area was searched on 30 May 2024. There was no access to the two chalk pits NW of Swanscombe and so industrial areas and waste ground were checked; without success.

Discussion

Two populations were rediscovered on roadsides in Kent in 2024, doubling the number of known extant sites to four - it occurs on a roadside in West Sussex and on heathland in Hampshire (Shaw, 2020). However, given the lack of information about where it occurred in many of the historic sites, it could persist elsewhere as yet undiscovered.

The Kentish occurrences are placed in the context of the overall conservation status of the species in Rich, 2024.

British distribution of *Hieracium mammidens*

References

See at end of Kent Botany, p.45.

Plant Records 2024

Plant records: selection criteria and recorders

Kent Botany 2024 covers Kent plant records mostly made or reported in that year. 'Kent' for these purposes is the traditional botanical recording county, extending into the London Boroughs as far as Deptford / Rotherhithe and divided, mostly by the River Medway, into vice counties 15 (East Kent) and 16 (West Kent). Their boundaries may be viewed at: https://www.cucaera.co.uk/grpprev/.

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 and 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 register, but major surveys or re-appearances of them may be included. Plant names follow Stace (2019) unless otherwise indicated. All record dates given without the year are for 2024.

Recorders, referees and other persons mentioned in reports

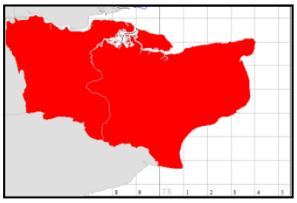
AB Alan Blackman	DH Damian Hone	JRP John Palmer	PDS Peter Sell
ACL Alan Leslie	DN David Newman	JS Judith Shorter	PH Pauline Heathcote
AG Alfie Gay	DS David Steere	KC Ken Chapman	PR Peter Robinson
AGo Alice Goodwin	GC G. Chapman	LC Lou Carpenter	RD R. Dix
AH Alan Heyes	GH Geoffrey Hall (BSBI vc55 recorder)	LM Lesley Mason	RM Roger Maskew (BSBI *Rosa* referee)
AJ Ade Jupp	GHi Gareth Hirons	LR Lliam Rooney	RMB Rodney Burton
AL Alex Lockton	GK Geoffrey Kitchener	MA Mrs M. Austin	RVL Richard Lansdown (BSBI aquatic plants referee)
AW Allan Ward	IH Ian Holt	ME Michael Easterbrook	SB Sue Buckingham
BB Ben Benatt	JA John Akeroyd, (BSBI *Atriplex* referee)	MH Martin Hall	SC Steve Coates
BH Brenda Harold (BSBI *Potentilla* referee)	JBo Jeremy Boulton	MK M. Knapp	SK Sarah Kitchener
CM Chris Metherell (BSBI *Euphrasia* referee)	JE Jeff Edwards	ML Mel Lloyd	SL Stephen Lemon
CN Clive Nuttman	JL James Lindesay	MR Mike Robinson	SP Sue Poyser
DC Danny Chesterman	JM Joumana Mobarak	OL Owen Leyshon	SS Susan Simcock
DCh David Chambers	JMou Jason Moule	PA Pat Acock	ST Sam Thomas
DG Doug Grant	JR James Rowland	PAH Paul Harmes	TO'M Tony O'Mahony (BSBI *Geranium* referee)
			WH Wendy Hockaday

Thanks are due to all these who have contributed records or identifications; and to the photographers credited (to whom copyright in the relevant images belongs); and to Charmian Clay for comments on the report presentation.

Other abbreviations or notation

BSBI = Botanical Society of Britain & Ireland (formerly Botanical Society of the British Isles)	RSPB =The Royal Society for the Protection of Birds
KBRG = Kent Botanical Recording Group	SLBI = South London Botanical Institute
KWT = Kent Wildlife Trust	s.s. = *sensu stricto,* in the strict sense
LNHS = London Natural History Society	SSSI = Site of Special Scientific Interest
Plant records which are marked ^{R} represent plants on the 2024 Kent rare plant register list	vc = vice county (plural, vcc)
RHS = Royal Horticultural Society	WFS = Wild Flower Society
RPR = Kent rare plant register	

Plant records across Kent (vice counties 15 & 16)



Allium siculum (Honey Garlic), a plant from the Mediterranean, Balkans and Turkey whose vernacular name seems to carry sensory contradictions (although one is unlikely to smell flowers and leaves at the same time), was seen by AJ on 13 June set back from the road at Covert Wood TR 1830 4907 and spread out as though having seeded there. The flowering of this species is impressive, with umbels emerging pendant from narrow upright buds and then twisting up vertically in fruit. It was also seen in West Kent, by GK on 7 May in a rough corner of Shipbourne Common, TQ 5947 5213, in bud only. The East Kent plant is likely to have been subsp. *siculum*, out of the two subspecies in cultivation, but intermediates are known.

***Allium siculum* in fruit, 13 June 2024. Photo by Ade Jupp**

Anacamptis pyramidalis (Pyramidal Orchid) is not uncommon across the county, but the numbers noted by CN on 12 June near Sandwich were remarkable. A total of 4,570 plants was recorded, starting from the Boys Hill junction with the A256, TR 30592 50407, and surveying a 20-30m roadside strip alongside the eastern side of the A256 northwards to TR 30616 51500, a distance of 1,092m.

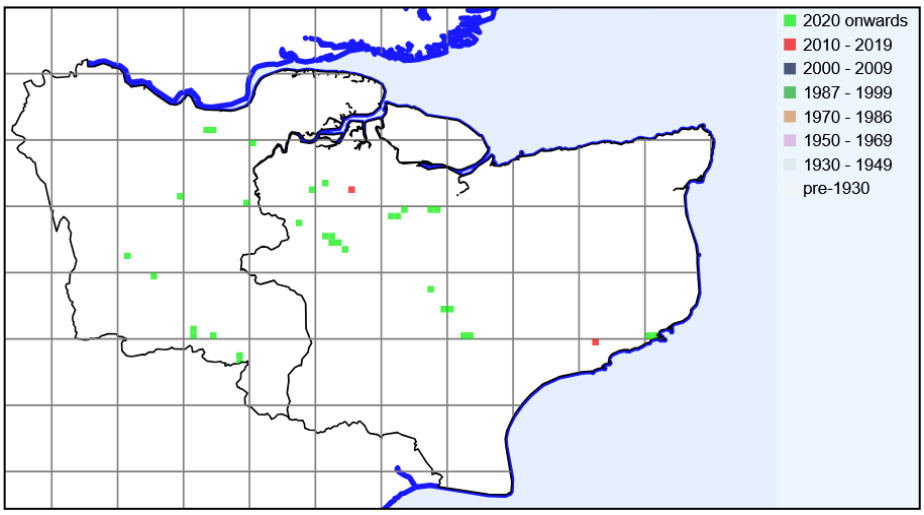
Across the other side of the county, suspending the mowing regime for part of the grounds of Lesnes Abbey, TQ 47989 7892, resulted in the appearance in June of a plant (reported by IH) whose labella are barely notched, corresponding to those from Sussex informally named as forma *emarginata* (Hoare, 1980).

***Anacamptis pyramidalis*, June 2024. Photo by Ian Holt**

Arum maculatum x *italicum*, the hybrid between Lords-and-Ladies and Italian Lords-and-Ladies, is rather patchily recorded across the country, notwithstanding that the latter as subsp. *italicum* is a widespread escape with plenty of opportunity to come into contact with the native species. New Kent records for 2024 began on 17 March with AL & JM recording at the Conyer brickfields, TQ 9627 6524, a patch of huge plants, some of which had hybrid characters (the weak white veining of some plants' leaves had been noted here ten years before, without being recorded as hybrid). On 3 April, GK found two sites near Edenbridge. One was at TQ 4371 4687, by a footpath alongside a copse and ditch, fenced off from a housing estate, where there was a large plant with pale white leaf veins (from *A. italicum*) and black blotching (from *A. maculatum*), in the presence of three *A. italicum* plants and several *A. maculatum*. The other site was a woodland boundary on the south side of Little Browns Lane, TQ 4317 4751, where there were five hybrid plants

or clumps with the parents present and another cross c.10m away next to *A. maculatum,* all hybrids being characterised by reduced white leaf venation, some with increased vigour.

Orchis anthropophora [R] (Man Orchid) is nowhere in Britain so well represented as in Kent, and for 2024 there were 32 records reported to or by KBRG members, not including KWT's annual count at Darland Banks, an astonishing 15,500 spikes. 'New' monads included Eynsford (TQ5465, 'one splendid man orchid in [a] front lawn', 7 June – this was the penultimate record from RMB before his death in November); Crowdleham at Kemsing (TQ5658, 17 June, JBo); Trottiscliffe (TQ6260 and TQ6561, 16 May and 20 June, GK); Silverhand, Luddesdown (TQ6665,18 June, LM & LR, two records); Manston (TR3466 and TR3565, May, JE); Sandwich Bay (TR3658, 20 May, SB); Pegwell (TR3665, 1 August, GC); Foreness Point (TR3871, 29 April, SC & ML); and North Foreland (TR3970, 13 May, SC & ML).

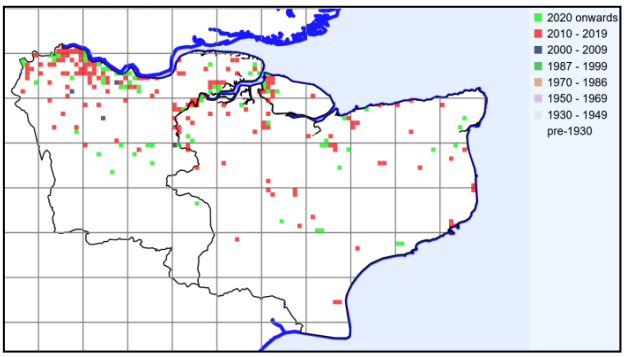


***Pastinaca sativa* subsp. *urens*, Kent distribution to 2024 (monad resolution)**

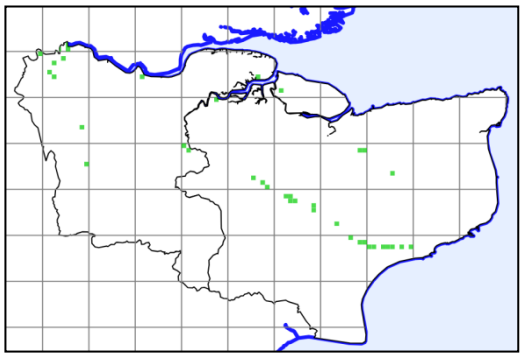
Pastinaca sativa subsp. *urens* (Eastern Parsnip) was first recorded in Kent in 2018 and has been spreading on our main road and motorway network with mentions in Kent Botany 2018, 2019, 2020, 2021, 2023. These have been scattered observations. With 19 records made in 2024, many of them the first in a 10km square (so raising its overall occurrence from eight hectads up to 2023 to 16 hectads now), it is clear that the species has taken off and is present on the M20 from Ashford to West Kingsdown; on the A21 from Lamberhurst to Hildenborough; and on the M2/A2 from near Faversham to the Gravesend Central junction (see distribution map). It is primarily present on centre reservations and is beginning to establish colonies which can be 100m long. There may be a degree of salt tolerance, but not so much as would enable it to colonise areas left bare by highway de-icing salt (in contrast with *Dittrichia graveolens* (Stinking Fleabane) – see account below). It is a submediterranean species and its Kent habitat may provide some microclimatic advantage as well as an ability to spread by seed along linear transport systems. In Germany (Gerstberger, 1995) it has been found to spread along roads and railways, usually growing in well-drained, coarsely gravelled or sandy-dry, often anthropogenically disturbed sites, with competitive advantages over other ruderal perennials, and generally assignable to drought-tolerant *Artemisia* communities.

Potentilla x *suberecta* (*P. anglica* [R] x *erecta* [R]), the cross between Trailing Tormentil and Tormentil, is uncommon, most (perhaps over 80%) similar hybrids being crosses between *P. anglica* [R] and *Potentilla reptans* (Creeping Cinquefoil). Two records were added for 2024, however, the first being at a KBRG meeting on 8 August when DN found a plant in grassland just on the Kent side of the vc14/16 boundary (the River Bewl) at Scotney, TQ 687 349, with both parents present. Then at a KBRG meeting on 16 August at King's Wood, Challock, TR0250, he found a couple of specimens which were confirmed as this cross by BH, the BSBI referee.

***Senecio inaequidens* 1999-2023 (monad resolution)**



***Senecio inaequidens* 2024 only (monad resolution)**



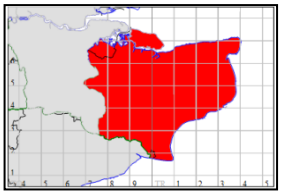
Senecio inaequidens (Narrow-leaved Ragwort) has been spreading in Kent since 1999. The records from then until 2023 are given in the first distribution map, which shows concentrations in metropolitan north-west Kent (the direction from which the spread began, probably from Essex) and the Medway estuary. The second distribution map for 2024 records puts a different complexion on this, in showing how far the M20 is acting as a vector for distribution. All the M20 records were made by SB on 15 October and represent abundant presence in the centre reservation, recorded from a moving vehicle and double-checked with binoculars the following day from various motorway bridges.

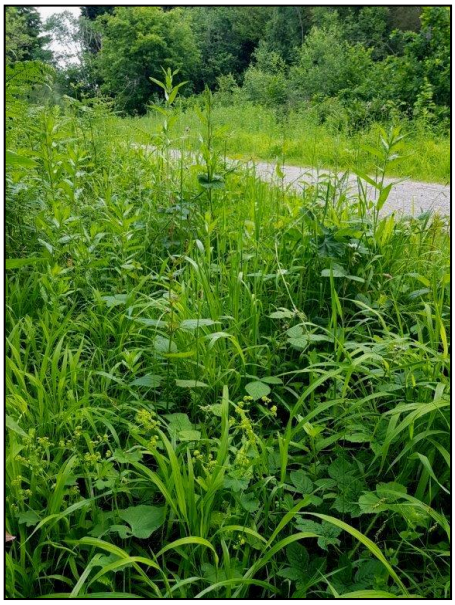
Trifolium squamosum [R] (Sea Clover) was recorded outside its usual north Kent coastal range (from Cliffe to Minnis Bay), in both East and West Kent. In the latter vice county, DCh on 9 June found an inland plant at the base of a roadside wall between Larkfield and East Malling, TQ 701 574. Presumably it had been brought on vehicle tyres.

Roadside *Trifolium squamosum*, 18 June 2024.
Photo by Michael Easterbrook

In East Kent, a patch c. 8m long was recorded by KC, confirmed by SB, on the clay river bank at Monks Wall Reserve, Sandwich, TR 3285 5894. There are historic records for outlying distribution in this area: in Sandwich salt marshes (1802), in marshes near Sandwich (c.1835), and similarly by David McClintock in 1937. It is possible that it represents a residual distribution from the period when Thanet was an island cut off by the Wantsum channel, which supplied a link between the flora of the north coast and Sandwich on the east - just as *Carex extensa* (Long-bracted Sedge) is now only present at what was the Wantsum's southern outlet, but was still present at the former northern end in 1861 (Anon., 1862).

Plant records for East Kent (vice county 15)





Alchemilla xanthochlora (Intermediate Lady's-mantle) is mentioned in Philp (1982) as represented in Kent by a single patch in Park Wood, Lyminge Forest found by 'R. Goorer'. This was Richard Gorer, presumably to be equated with the person whose interesting life is described at http://jtrails.org.uk/trails/Miscellaneous/articles/c-530/richard-gorer/ and would have been well capable of recognising that such a discovery was likely to have been unusual. From the BSBI database, the plant's identity was determined by Max Walters. Philp (2010) corrects the finder's name, gives the date, 1976, and says that repeated searches have failed to re-find it. The plant is not lost, however, nor confined to one patch, as on 6 June AJ found two, 133m apart. One was at TR 14896 44985, about 2m off the side of a forestry track in Park Wood and the other was in the next monad north at TR 14971 45095. Our other Kent Lady's-mantles are *Alchemilla filicaulis* subsp. *vestita* (Common Lady's mantle) and introduced *Alchemilla mollis* (Garden Lady's-mantle), but these Park Wood plants were distinctive with their epicalyx segments appearing somewhat shorter than sepals, pedicels and flowers glabrous, leaves glabrous above and spreading hairs on the petioles.

***Alchemilla xanthochlora*. Habitat photo by John Buckingham, 9 June 2024. Plant and close-up photos by Ade Jupp, 6 June 2024**

How have they proved so elusive? AJ considers that the absence of records since then may be explained by visits being made either too early in the season when flowers would not be present to catch attention, or too late, by which time the small plants would easily disappear under a mass of trackside vegetation. The present record, on 6 June, is very much the same time of season as the historic record, on 13 June 1976. Philp (2010) considered that the species was probably introduced in Kent by forestry work.

This may be so, and although it is primarily a plant of northern and western Britain and northern Ireland, it is also possible that it is a rare Kent native. There are historic Lady's-mantle records in various parts of Kent, but as they were generally treated under the umbrella name of *Alchemilla vulgaris*, it is not possible to be sure whether we had *A. xanthochlora* before and what are the chances of continuity. The current woodland here is planted *Pinus sylvestris* (Scots Pine) and *Pseudotsuga menziesii* (Douglas Fir). However, Park Wood has been woodland with rides at least back to the earliest published large-scale Ordnance Survey maps, and the Natural England designation is ancient replanted woodland, which gives some scope for long continuity with the rides (although there is a historical account of Lyminge Forest which says that the rides were choked with coppice to 1949). If we go back further, Hasted (1799) in describing Stowting parish says 'Above the hill is Stowting common, and a little further Limridge green; round both which are hamlets of houses. In this part the hills are very sharp

and frequent, the soil barren and very flinty, consisting either of chalk, or a poor reddish earth, mixed with quantities of flint stones; and here there is much rough ground and poor coppice wood, and a very comfortless dreary country, which continues for several miles northwards, on each side *the Stone-street way*, towards Canterbury'. So this gives scope, both for introduction with tree planting/forestry management, or for native survival on woodland rides or margins. There appears to be a reasonable case for inclusion of this species in the Kent rare plant register.

Allium trifoliatum (Hirsute Garlic) was recorded by ST on 10 May as spreading from a garden at Cleavers, Sissinghurst, TQ 79025 37695. Currently, this stands as the first vc15 record in the BSBI database, but due to the past confusion of this species with *Allium subhirsutum* (Hairy Garlic) and the continuing absence of *A. trifoliatum* from the MapMate species dictionary, there are a number of older records which need converting. For example, SP and DG saw *A. trifoliatum* near Bluebell Hill, vc15, in 2012.

Alopecurus aequalis [R] (Orange Foxtail) has re-appeared at Gibbin's Brook SSSI, Sellindge, where seen by AG on 26 June: seven plants around a drying pond margin at TR 11637 38627 and 54 plants in a former drainage ditch where sediment had been spread from pond deepening works in autumn/winter 2023, following clearance of over-shading willow scrub in winter 2022-23. This is a species which favours a degree of openness and a winter-wet muddy habitat which dries out in summer.

Gibbin's Brook pond, *Alopecurus aequalis* habitat, 6 August 2024. Photo by Sue Buckingham

Anemanthele lessoniana (Pheasant's-tail), an ornamental grass from New Zealand, named for Pierre Lesson, surgeon-naturalist, who visited there in the 1820s, was recorded by SB on 2 September as three small plants self-seeded on brick paving in an industrial estate car park at Minster (Thanet), TR 31426 66679, presumably from plantings elsewhere on the estate. A week later on 9 September, a KBRG meeting found plants established in several places alongside Beach Road in the vicinity of The Pines Garden, St Margaret's at Cliffe, TR 3667 4429. These are the second and third sightings in East Kent. As the species seeds readily and is widely grown in gardens, it is perhaps surprising that it is not recorded more frequently as an escape.

***Atriplex glabriuscula x prostrata, ex situ,* 24 October 2024. Photo by Alex Lockton**

Anisantha madritensis (Compact Brome), a Mediterranean grass, was noted by BB in May as occasional in rough grassland beside a track near Rushenden, TQ 905 714. This is a first record for Sheppey.

Atriplex glabriuscula x *prostrata*, the cross between Babington's Orache and Spear-leaved Orache, was recorded by AL on 24 October at the top of the shingle beach at Whitstable, TR1066, noticeable as still retaining colour when species plants had gone over, and as having lots of small, crowded fruits and the occasional larger, normal-sized, one. It was confirmed by JA, BSBI referee.

The occurrence of the hybrid is limited by the distribution of *A. glabriuscula*, which is much more limited than ubiquitous *A. prostrata* and may have been under-recorded. Its populations along the shingle beach between Dungeness and Jury's Gap have been assessed by AL in 2024. This was by way of dividing the beach into 250m long sections and counting all plants in a 10m wide transect in each, running from the sea inland to the Green Wall (a sea defence embankment). Each count was then multiplied by 25 to arrive at the total number of plants in each of the nine monads, producing an estimate of 341,475 *A. glabriuscula* plants.

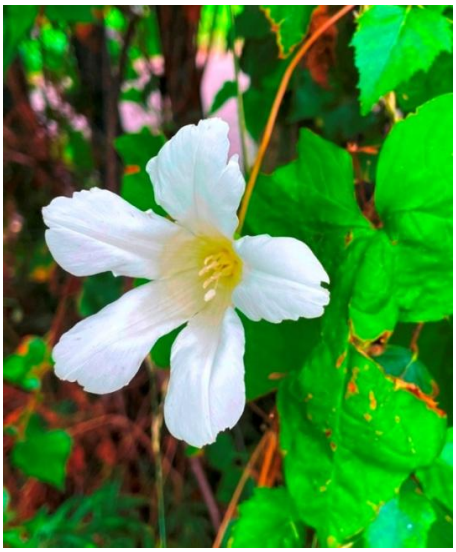
Bergenia crassifolia x *ciliata* (*B*. x *schmidtii*, Ciliate Elephant-ears) was recorded by a KBRG meeting on 26 June at North Foreland, TR 401 699, a large patch near the cliff-edge, presumed to be a former garden throw-out. The leaves bore stiff marginal hairs inherited from the *B. ciliata* parent.

***Bergenia* x *schmidtii*, 26 June 2024. Photo by Geoffrey Kitchener**

Calystegia pulchra (Hairy Bindweed). Widely recorded in Kent in the 1970s, it has attracted fewer sightings in recent years and was noted by SC on 21 August growing with *Lathyrus sylvestris* (Narrow-leaved Everlasting-pea) in thick bramble scrub between the Ebbsfleet Stream and a footpath, at Northfleet, TQ617 736. It is not the only pink-flowered bindweed, but is distinguished by the hairy pedicels with a wavy-edged wing near the flower head.

***Calystegia pulchra*, 21 August 2024. Photo by Steve Coates**

***Calystegia silvatica var. quinquepartita*, 18 July 2024. Photo by Danny Chesterman**



Calystegia silvatica var. *quinquepartita* demonstrates part of the range of variation of Large Bindweed, with the corolla split into five lobes. All *Calystegia* species have various flowering parts based on fives (five sepals, five stamens, five nectar lobes) and the corolla itself appears five-banded. The split-corolla variant was seen by DC on 18 July at Dane Valley, Margate, TR 36612 70036, growing in the Windmill Community Garden perimeter hedge. Staff informed him that it was not planted and was known to be present elsewhere locally.

***Campanula rapunculoides*, 23 June 2024. Photo by Ken Chapman**

Campanula rapunculoides (Creeping Bellflower) was mostly recorded escaped in Kent in the 1950s to 1970s, when it was more frequently grown in gardens, and ejected from them, a typical description being 'apt to spread too freely and difficult to repress'. Other bellflowers are now given preference in horticulture and, indeed, the RHS now lists only three suppliers of *C. rapunculoides*. However, it is still – rarely – about, and KC on 23 June noted a patch of flowering plants beside Monks Way, Great Stonar at TR 32664 59574.

***Chenopodium strictum* (Striped Goosefoot)** may be regarded as part of an aggregate *Chenopodium album* (Fat-hen), an extremely variable species in its own right. Recording in south-east England, however, has especially since 2015 been prepared to recognise it and with numerous records having been made in Surrey and Essex, it would be surprising if *C. strictum* were not present in Kent as well. A variable degree of stem striping of *C. album* agg., whether green or

red, seems not uncommon in parts of north-west Kent, but a plant found by GK on 7 October at the Stockbury M2 / A249 junction, TQ 8538 6194, was very distinctive in the extreme suffusion of red throughout stem and branches, accompanied by narrowly oblong, parallel-sided leaves. The location was by a drain leading into a lagoon constructed in 2024 as part of major road-works and the record appears to be a **first for East Kent**, **vc15**.

***Chenopodium strictum*, 7 October 2024. Photo by Geoffrey Kitchener**

Chenopodium vulvaria [R] (Stinking Goosefoot) was recorded by BB in May, three plants on a track by the old Sheppey Light Railway formation, TQ 915 725. The railway was closed in 1950 before the construction of Brielle Way (A249) which now bisects the old formation and, while *C. vulvaria* has been recorded before on the north-east side of the road, this is the first time that it has been noted on the south-west side, evidencing continuity along the old line. The wider occurrence of the species in the neighbourhood was also shown in the finding on 26 July by AL & MA of half a dozen plants on hardcore in a development site at Queenborough Road, TQ 9192 7182.

Coreopsis tinctoria (Garden Tickseed) has only two previous East Kent records on the BSBI database, both of which may be the same location, and a further new sighting was made by LR on 15 August, one plant growing from the roadside kerb on Stocker's Hill, Boughton, TR 05312 59580.

***Corydalis solida*, 8 March 2024. Photo by Danny Chesterman**

Corydalis solida (Bird-in-a-bush), although long cultivated in the British Isles (since before 1596) has hardly any Kent records as an escape, but was located in quantity by DC on 8 March in two monads at the alder woodland by Bog Farm, Brabourne Lees, which is known for a number of exotic plantings and escapes which have multiplied in favourable conditions. The main population, growing in a vegetative state, was around TR 08244 39981, upstream of the other introduced species and this location (together with the finding of four flowering plants at TR 085 400 on the road verge at the top end of the public footpath which meets Plain Road / Manor Leaze) points to the possibility of origin from houses along Plain Road further west. These back onto the sources of streams flowing down through the woodland bog to the main population.

***Cyrtomium fortunei*, 13 April 2024. Photo by Mel Lloyd**

Cyrtomium fortunei **(Fortune's Holly-fern**) has been spreading in West Kent, as featured in Kent Botany 2023, and now has been found in East Kent as well, by ML on 13 April. There were a couple of plants at the East Kent Railway Station, Shepherdswell, at TR 25840 48441 growing with much *Asplenium scolopendrium* (Hart's-tongue) in a well probably coeval with the East Kent line construction (opened 1916), although the *Cyrtomium* will be a relatively recent arrival in the UK (by the 1990s). This is not the well of Shepherdswell (there are supposed to be 13), but the place-name suffix appears to originate with weald or wald (woodland) rather than well, as has been preserved in the village's alternative name, Sibertswold. **This is the first record for East Kent, vc15**. The second record followed six months later, with SB locating on 17 September a single plant in a gully at the base of the north-facing wall of St Mildred's Church, Tenterden, TQ 88377 33393.

X *Dactylodenia heinzeliana* (*Dactylorhiza fuchsii* x *Gymnadenia conopsea* s.s.), the intergeneric cross between Common-spotted Orchid and Chalk Fragrant-orchid, was reported by AB as present on 13 June at Bonsai Bank, TR 1069 5145, where there were three plants at the X *Dactylodenia wintoni* site (see Kent Botany 2023 as regards other plants at this location originally determined as X *D. heinzeliana* in 2014 having been reassigned to the latter taxon).

Dactylorhiza x *grandis* (*D. fuchsii x praetermissa*), the cross between Common-spotted Orchid and Southern Marsh-orchid, was recorded by SL on 10 June at St. George's churchyard, Benenden, TQ 8081 3263, in unmown turf on the southern side of the churchyard by the grave of W.D. Stace. There was a cluster of eight long flower spikes with ring shaped spots on leaves, and two very pale *D. fuchsii* flower spikes were also seen nearby in the churchyard. This is the first record for hectad TQ82 and, indeed the cross is unrecorded for any of the neighbouring Kentish 10km squares as well, reflecting the absence or scarcity of the *D. praetermissa* parent there.

Dittrichia graveolens (Stinking Fleabane), a Mediterranean species, has been recorded along or near main roads, the first such Kent record being by LR in 2012. This habitat preference is related to its tolerance of salinity, and hence the effect of highway de-icing salt. Observations by Slovenian roads have shown that the saline opportunity habitat for *D. graveolens* is located only on a narrow strip 1 m or less from the road, up to the distance where the decline in salinity enables the native, more competitive species to begin to dominate the habitat (Šajna *et al*., 2017). LR's records continue with the finding on 27 August of 30+ plants by the A2, from TR 090 587 to TR 094 586, both along the roadside and in cracked concrete in a driveway from the Gate Services to Denstead Lane.

Elymus x *obtusiusculus* (*E. athericus* x *junceiformis*), the cross between Sea Couch and Sand Couch, grows where loose coastal sand favoured by Sand Couch meets slightly firmer ground in which Sea Couch may be growing. It was recorded by a KBRG meeting on 12 September at Louisa Bay, TR 397 674, at the back of the promenade in the presence of both parents and recognised by its vigour, the presence of some hairs on the free margin of the sheath and the reluctance of the spikelets to disarticulate. This is the first record for Thanet.

***Euonymus latifolius* (Large-leaved Spindle)** is a shrub cultivated for its autumn colour and fruits, and was seen by DS on 26 May growing at a farm near West Langdon, TR 3116 4729, where present on waste spoil piled up in a corner on an earth bank. It did not give the impression of being planted and there was a lot of imported soil for landscaping which had given rise to various casual species. The plant had leaves broader and flowers more greenish and pendant than with *Euonymus europaeus* (Spindle); they are usually separated on the basis of sepals (four in *E. europaeaus*, five in *E. latifolius*) and capsules (blunt-angled in the former, winged in the latter). This **is a first record for East Kent**.

***Euphrasia tetraquetra*, 29 May 2024. Photo by David Steere**

Euphrasia tetraquetra [R] (Western Eyebright) went through a long period without Kent records until seen near Dover in 2017, although not again up till now. On 29 May it was found by DS, who recorded several flowering plants on the north sides of the path by the railway line at Samphire Hoe, TR 28926 39010, determined from photographs by BSBI referee CM. This is the first record for hectad TR23 since 1950; it is currently otherwise known only in TR34.

Galium parisiense [R] (Wall Bedstraw) is being found increasingly in ruderal habitats and BB in May recorded its presence along a c.30m strip of dry grassland on both sides of the access track between the two bridges at Kingsferry, on the eastern side of the crossing from the mainland, TQ 9179 6989. This is the first record for Sheppey.

Geranium purpureum [R] (Little-Robin) was reported by GHi as seen on 19 July 2023 at Folkestone beach, TR 2320 3570, and being possibly subsp. *forsteri,* which is regarded as a sprawling plant of maritime shingle with fruit characters approaching those of *Geranium robertianum* (Herb-Robert) and recorded from the Channel Islands, Cornwall, Hampshire and (at least up to the 1960s) West Sussex. Plants have continued to be recorded on West Sussex shingle to 2014, but not to subspecific level. The

Folkestone site was visited by SB on 13 June 2024, locating a plant at TR 23191 35693 with the yellow undehisced anthers and small flowers of *G. purpureum* and with fruit characteristics that were difficult to interpret. Material was submitted to BSBI referee TO'M who considered that subsp. *forsteri* is merely a genetically modified version of subsp. *purpureum*, its few obvious characters being phenotypic responses to the harsh environment in which it grows. Confirmation would require cultivation in order to see if the prostrate habit, with a genetically determined horizontal leading shoot, is maintained. In the absence of this, we are left with the Folkestone records as being *G. purpureum* without subspecific determination, and with the likelihood that they have originated from coastal populations further west, whether by longshore drift or by seeds being transported by birds or humans due to adhesion by the mericarp fibres.

Folkestone *Geranium purpureum* fruits, 13 June 2024. Photo by Sue Buckingham

When subsp. *forsteri* was named (Baker, 1955), much was made of the fruit surface sculpturing as showing intermediacy and perhaps pointing towards an origin from subsp. *purpureum* and prostrate *G. robertianum*. This is a hypothesis which is not favoured by TO'M, whose experience with *purpureum/robertianum* crosses shows them to be morphologically identical with *G. robertianum*, including fruit surface sculpturing. Accounts of cultivating *G. purpureum* are summarised in Rich & Jermy (1998) and have not led to clarity in distinguishing the subspecies; indeed, subspecific status may not be warranted.

***Geranium purpureum*, 19 July 2023. Photo by Gareth Hirons**

Folkestone appears to be the first Kent find on maritime shingle. Records to date have largely been on railway ballast as a shingle proxy or in the vicinity of railways or roads. DC on 25 April added to earlier Faversham railway-related records with a sighting alongside School Road next to the railway at TR 00951 60962, but also found plants on the other side of town, for about 100 yards along the Western Link, TR 00510 62479. The Western Link crosses the railway, but the *G. purpureum* population was 1.5km away; it will be interesting to see if they can be linked.

Himantoglossum hircinum [R] (Lizard Orchid) was the subject of several East Kent reports, some with substantial counts. On 20 March, SB noted **410** rosettes in a 50-yard stretch of the northern verge of King's Avenue on the Sandwich Estate between TR 36188 57676 and TR 36231 57696. Each year these are mown off despite requests to leave them. Manston airport, where surveyed by JE in May, held **695** plants, of which 539 fell within TR3466 (including a road-verge population of 93 at TR 341 663) and the remainder within TR3366 and TR3465. On 13 June, AB recorded **1,176** flowering plants near Great Stonar, covering both sides of Monks Way from TR 334 589 to TR 326 596, and both sides of the A256 from TR 327 597 to TR 323 593. SC & ML on 17 May also surveyed much of the same area as the last, bearing witness to the abundance of plants along stretches of road constructed or upgraded c.2003, so that their total of **733** plants in TR3259 probably includes many comprised in the previous total.

Himantoglossum hircinum [R] **at roadside, 13 June 2024. Photo by Alan Blackman**

The following records represent sightings in monads for which we have no earlier records:

- TR 33834 52953, Northbourne (DS, 29 May): 11 spikes about to flower in short turf south-east of footpath
- TR 34023 53157, Northbourne (DS, 29 May): three spikes about to flower on the grassy verge south-east of a pathway
- TR 3707 6762, (AL & MK, 22 July): Millennium Way, Broadstairs
- TR 39741 70234 (eight spikes) and TR 39812 70121 (one spike), Kingsgate golf course, North Foreland (SC & ML, 13 May).

Hypochaeris glabra [R] (Smooth Cat's-ear) is readily overlooked, especially when not in flower, which is much of the day. In Kent it is found occasionally on parched sandy/shingly coastal ground south of Littlestone in conditions where competition is limited, assisting annual recruitment. On 20 August, AL & RD recorded what must be the southernmost occurrences of this species in the county, at Denge Beach, one at TR 0709 1675, south-west of the electricity substation and the other further west in monad TR0616.

Hypopitys monotropa [R] (Yellow Bird's-nest) has been known before at Knowle Wood, Barham, but recording by DH in 2024 yielded remarkable results, both in terms of quantity and its range throughout the wood. On 19 July he found some 300 to 400 spikes at TR 1937 5030 in deep leaf litter under heavy shade of beech, predominantly in an area 10 x 10m, but with outliers over c. 50 x 50m. Most plants were fresh, ranging from 5 to 15cm tall, but with some outliers already having gone over. The speed of appearance was notable, with spikes having sprung up in new places by the time of a revisit on 26 July. DH then recorded a further 626 spikes in six groups, present at TR 1962 5050, TR 1958 5042, TR 1939 5030, TR 1945 5036, TR 1949 5060 and TR 2001 5078. The overall total therefore is in the order of a thousand spikes. Colonies could be seen to be forming swathes or bands which presumably followed fungal hyphae associated with tree roots from which *H. monotropa*, lacking chlorophyll, derives its nutrients. A sample plant examined by SB had petals, carpels and stamens all glabrous and a style shorter than the ovary and so was identified as subsp. *hypophegea.*

***Hypopitys monotropa*, 26 July 2024. Photos by Damian Hone**

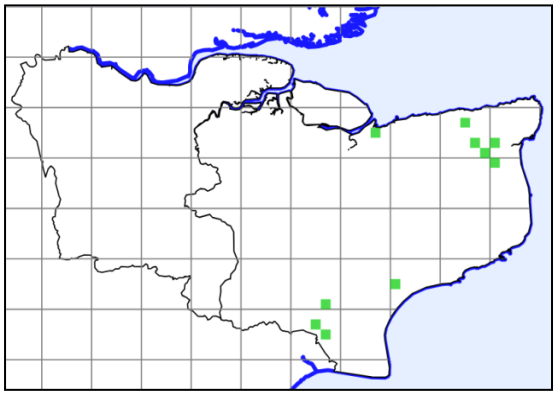
Kickxia spuria (Round-leaved Fluellen) occasionally has abnormal, peloric (from the Greek for monster) flowers in which bilateral symmetry is replaced in differing ways by radial symmetry. AW found an example of this at a field

margin near Crundale, TR 0735 4995, on 20 September. This had both normal flowers and ones with a long corolla tube topped from four to seven lobes. A wide range of variation in flower structure has been recorded in Wales (Shaw, 2011) and this is not an uncommon occurrence. East Kent finds go at least back to 1903 (specimen from Margate in **SLBI**).

***Kickxia spuria*, peloric form, 20 September 2024. Photo by Allan Ward**

Lathyrus hirsutus [R] (Hairy Vetchling) in Kent is very much a plant of estuarial or coastal defence embankments, generally protecting land inned from saltings, and AL's record on 5 August at Elmley, TQ 9572 6719 (one large patch near the path), is very much of this pattern, on the embankment protecting the south flank of Sheppey from the Swale.

***Lemna turionifera* (Red Duckweed)** is a widespread native of North America, Asia and Europe, but regarded as introduced in north-western Europe, other than Scandinavia. The first UK record was in Dorset in 2007 and now it has been recognised in East Kent in the course of Environment Agency surveys. From the extensiveness of 2023-24 records, shown in the accompanying map, it has probably been present in Kent unrecognised for some years. **The first records for East Kent, vc15**, and the county as a whole, were on 13 June 2023 by AGo at High Knock Canal, Stone Bridge near Stone-in-Oxney, TQ 94683 26461; and by WH at Minster Stream, Marsh Farm Road, TR30924 63606, at Goshall Dyke by Cooper Street Pumping Station, TR 31049 59728, at Richborough Stream, Lower Goldstone, TR 29723 61447 and at Ash Level Dyke by Plucks Gutter, TR 27190 63190. Records later that year and in 2024, by the same recorders, included the Wantsum, Snake Drove, TR 24342 66367; the Great Stour, downstream of Plucks Gutter, TR 27090 63281; White Drain, Seasalter Marshes, TR 06048 64003; White Kemp Sewer, Woolpack Bridge, Walland Marsh, TQ 97886 24491; Royal Military Canal by Aldergate Lane, TR 10812 34250; and Redhill Bridge sewer, TQ 93744 30242. It should now be considered as becoming frequent in dykes, often brackish, in the Stour and Rother catchments, with a presence on Romney Marsh. Growing with other duckweeds, it is about the size of *Lemna minor* (Common Duckweed) but has a row of almost equal bumps or papules along the length of the frond's upper side (*L. minor* has either unequal or no papules), with red colouration on the underside, at least around the base of the single root. Red colour can more widely suffuse *Lemna gibba* (Fat Duckweed), and the effect of the underside colouration in *L. turionifera* is to provide a somewhat 'dirty' appearance when viewed *en masse* from above.



***Lemna turionifera*, Kent distribution to 2024 (tetrad resolution)**

***Lemna valdiviana* (Valdivia Duckweed)** is an American species, introduced to Spain, Portugal and (at least since 2012) Great Britain. It was recorded by WH (confirmed by RVL) in tiny quantity on 24 September at Cradlebridge sewer, Redhill Bridge between Appledore and Reading Street. It was also considered possibly to be present at the Royal Military Canal near Aldergate, but the material collected was insufficient for confirmation. Technical confirmation of identity is related to the prominence and length of the frond's vein, but the plant is most easily spotted by its tendency to adhere in groups of two or four and to be somewhat asymmetrical, especially at the base. It may be found below, as well as at the water surface. This is **the first record for East Kent, vc15**, and for the county as a whole.

***Lemna valdiviana*, 24 September 2024. Photo by Wendy Hockaday**

***Lemna valdiviana* and habitat, 24 September 2024. Photos by Wendy Hockaday**

The appearance of these two non-native duckweeds in Kent (perhaps indeed brought over by wildfowl, given the locations where found, although origin with imported garden centre aquatics cannot be ruled out) follows quickly upon the discovery that our supposedly native *Wolffia arrhiza* (Rootless Duckweed) sites are now occupied by non-native *Wolffia columbiana* (Columbian Watermeal).

This is unlikely to be the end of such aquatic discoveries. The National Grid has consulted over the Sea Link project, a proposal to reinforce the electricity transmission network between Suffolk and Kent via a new, primarily offshore, cable link, from which funding was withdrawn in September 2024. The consultation included a summary of 2022-23 field surveys, containing a reference to *Salvinia molesta* (Giant Salvinia) in ditches especially in the west part of 'parcel 244', which seems to be a large area including TR 330 636 (not that the plant is necessarily just at that grid-reference), south-west of Sevenscore crossing, inland of Pegwell Bay. *Salvinia molesta* is, as with *Azolla filiculoides* (Water Fern), an aquatic free-floating fern and, although native to Brazil, has arrived in the Netherlands, Belgium and Germany; it is cultivated for ornament, but is invasive in many parts of the world. The survey record is not being included here as a first record, as it is unclear who undertook the survey and how far results may be relied upon. It will be of interest, however, to establish whether the species is indeed present and overwintering. We should also look out for *Wolffia globosa* (Asian Watermeal), which is present just 400m across the boundary with Surrey, vc17, near Haxted. This, at 0.5-0.8 x 0.4-0.6mm (measurements to be taken from a full-grown plant, e.g. at budding stage) is the smallest *Wolffia* species and the world's smallest flowering plant.

Lepidium heterophyllum [R] (Smith's Pepperwort) in Kent is primarily and most constantly a Dungeness plant. However, on 28 May DS recorded a large clump of plants in seed near Old Park, Dover, TR 3031 4357. The species has not been recorded in this part of Kent before, but the styles were exserted from the pods by 1-3mm, thus excluding *L. campestre* which had been recorded nearby in the past.

Lilium candidum (Madonna Lily) has only a couple of earlier East Kent records in the wild, and KC's find of 23 June on the central reservation of Monks Way at TR 3272 5953 seems to represent an improbable place for any deliberate planting, albeit near a road crossing.

***Lilium candidum*, 23 June 2024.**
Photo by Ken Chapman

Limonium (Sea-lavender) species received special attention from Kent recorders in 2024, with two KBRG meetings arranged in order to study the microspecies given in Sell & Murrell (2018) with the benefit of the illustrations and descriptions given in the RPR. Accounts of the meetings are given in KBRG Newsletter 17 (October 2024). The sites were also visited by PAH & ACL in August. The Sell & Murrell microspecies do not match up fully to the treatment in Stace (2019), nor are they currently included in the BSBI database. They derive from close study of populations which, at a very local level, have evolved to become to a degree distinct, but that is not to say that every individual can be placed with a name. Specimens illustrated below have been given names with varying levels of confidence.

Limonium altum P.D. Sell [R] (Tall Sea-lavender) is a Kentish endemic, known only from Broadstairs. PAH & ACL recorded it on 13 August, at the base of a wall at the undercliff path below Western Esplanade, Broadstairs, TR 3972 6675. The KBRG meeting of 12 September found nearby what was believed to be this species at the base of the chalk cliff where it meets a concrete platform at the back of the promenade, TR 39727 66769, three or four medium-sized plants with very long petioles growing in a loose clump. In addition, further north at TR 39944 68141, the base of a chalk cliff where it meets a snaking walkway up from the beach, there were several tall plants, up to 45 cm, and with multiple flowering stems bunched tightly together, all having very long petioles. Characters are set out in the table below, and the TR 39944 68141 plants appear more persuasive. One of the problems with *L. altum* is that the name leads one to expect that it will be tall, but there are other local species which are as, or nearly as, tall. Long petioles seemed a better guide to finding *L. altum*, being up to 50mm according to PDS's description in Sell & Murrell (2018) and at times even longer in material he had collected in the 1990s.

***Limonium altum*, 12 September 2024. Photos: habitat (East Cliff), Owen Leyshon; specimen (near Dumpton), Sue Buckingham**

Characters for *L. altum*	**Sell & Murrell description**	**2024 record TR 39944 68141**	**2024 record TR 39727 66769**
Flowering stem height	20-40cm	To 45cm	28cm
Branching	For most of stem, at 30-35°	Branching for most of the stem 25-34° with many flowering stems closely packed	Branching more or less from bottom, narrow, 20°
Leaf width	8-18mm	10-15mm	16-22mm
Leaf length	20-40mm	20-39mm	30-40mm
Petiole length	25-50mm, broadly winged	25-45mm	35-50mm
Stem diameter	1.7-2.0mm	1.5-2.0mm	2.0mm
Spikes	15-35mm	20-38mm	15-33mm

Limonium calcicola P.D. Sell [R] (Chalk Sea-lavender) is a Sussex/Kent endemic recorded by PAH & ACL on 12 August at the eastern end of Samphire Hoe, TR 28440 38780, at the base of a chalk cliff by the railway tunnel where also recorded (by PDS) in 2005. Although known further north-west, at St Margaret's at Cliffe, it was not recognised there by the 4 September KBRG meeting. A table of characters is given below, but no measurements are available for 2024.

Characters for *L. calcicola*	Sell & Murrell description
Flowering stem height	10-35cm
Branching	For 2/3 stem, at 40-50°
Leaf width	5-15mm
Leaf length	15-25mm
Petiole length	10-20mm, rather narrowly winged
Stem diameter	Up to 1.5mm
Spikes	12-35mm

Limonium cantianum (Ingr.) P.D. Sell [R] (Kent Sea-lavender) is endemic to East Kent and has been collected by PDS from Broadstairs in 1996. Its flowering stems are medium-height (taller than *L. binervosum* (Rock Sea-lavender) and much *L. calcicola*), forming a dense cushion and are not side-swept as with *L. sanctamargaritense*. (St. Margaret's Bay Sea-lavender). It was recorded by PAH & ACL on 13 August at TR 39961 68138, below the chalk cliffs on the side of the undercliff access path, below Eastern Esplanade, Broadstairs. This is more or less where PDS originally collected it. The KBRG meeting on 12 September found plants at Broadstairs which seemed to match *L. cantianum*, examined and collected from the chalk cliff face at TR 3990 6855 and also at TR 39925 68824 where they were growing at the base of the cliff and the top of the sea wall. It appeared to be the common species from Stone Bay to Dumpton Point. Many plants otherwise appearing good for *L. cantianum*, however, had longer petioles than might be expected from the Sell & Murrell description and from specimens which PDS collected in compiling that description. A comparison table follows.

***Limonium cantianum*, 12 September 2024. Photos: habitat (East Cliff), Owen Leyshon; specimen (East Cliff), Sue Buckingham**

Characters for *L. cantianum*	Sell & Murrell description	2024 records TR3990 6855 and TR 39925 68824
Flowering stem height	20-30cm	25cm; another at 30cm
Branching	For most of stem, at 30-35°	For most of stem at 25-30°
Leaf width	10-20mm	12-17mm
Leaf length	22-40mm	20-32mm
Petiole length	15-20(25)mm, broadly winged	16-38mm, broadly winged
Stem diameter	1.7-2.0mm	2.0mm and another at 2.2mm
Spikes	15-30mm	12-18mm

Limonium sanctamargaritense P.D. Sell [R] (St. Margaret's Bay Sea-lavender) is a Kentish endemic, with only two recorded locations, one at St Margaret's Bay and the other at Oldstairs Bay. It is characterised (and readily recognised) by having tall stems with flowering branches all turning to one side as well as ascending or curving at a close angle. It was recorded by PAH & ACL on 13 August on chalk cliffs at the southern end of the beach, St Margaret's Bay, TR 3674 4428, close to where recorded by PDS in 1996. The KBRG meeting on 4 September saw plants that appeared to match on chalk cliffs at the southern end of St Margaret's Bay: an accessible clump

at TR 36758 44316, three clumps together in a shallow cave at TR 36754 44289 and 45-50 clumps at TR 36754 44289 on the cliff face south of the end of the beach promenade. Accessible plants examined were conspicuously tall at 39-42 cm, with sterile branches reaching low down and all branches turning to one side at a close angle to the stem, c. 30 degrees. Other characters are given in the table below.

***Limonium sanctamargaritense*, 4 September 2024.**
Photos: plant and habitat, Owen Leyshon; specimen, Sue Buckingham

Characters of *L. sanctamargaritense*	**Sell & Murrell description**	**2024 records**
Flowering stem height	30-40cm	39-42cm
Branching	Sterile branches reaching low down; all branches turning to one side, at close angle to stem	Sterile branches reaching low down; all branches turning to one side, at close angle to stem, c.30°
Leaf width	8-15mm	6-16mm
Leaf length	20-40mm	20-37mm
Petiole length	20-50mm, broadly winged	26-45mm, broadly winged
Stem diameter	1.8-2.0mm	1.5-2.4mm
Spikes	18-25mm	c.20mm

Myosurus minimus [R] (Mousetail), which returned to the Kent flora in 2021 after a long gap, has been found in a further new station, near Rhode Common, TR 06122 56732, one plant seen flowering in a wet sward on disturbed ground in an orchard and reported by MH for 5 May, the third Kent site this century.

Ophrys sphegodes [R] (Early Spider-orchid) at the former rifle range at Kingsdown has had to face works of repair to the sea wall, as a result of which (SB, 4 May) the largest concentration of 16 plants, TR 38064 47184, were all trampled and did not flower; 14 plants which were a little further from the path between TR 38068 47212 and TR 38065 47178 did manage to flower; and the population further south on the range (TR 3803 4752) was destroyed as part of the works. See further under *Peucedanum* below.

***Orobanche minor* subsp. *maritima*, 29 May 2024.**
Photo by David Steere

Orobanche minor subsp. *maritima* [R] (Carrot Broomrape) is usually parasitic on *Daucus carota* subsp. *gummifer* (Sea Carrot) which limits

the range of its occurrence in Kent to parts of the east coast. On 27 May, DS found it on a wall of Dover Castle at TR 3271 4163 associated with a stunted but flowering Sea Carrot plant. While within the Kent range of both taxa, they are new to this monad (TR3241), and the broomrape record was only the seventh for Kent this century. He also recorded eight spikes in a known area at Samphire Hoe, TR 2827 3873, on 29 May. There is good news for the broomrape at Aycliffe, where JMou notes that an area which yielded only one spike in 2022 was cleared of rank grass and bramble in winter 2023-24 by White Cliffs Countryside Partnership volunteers and on 12 June held 18 plants. Of those, 15 were in St George's Field (viz. 12 at TR 30437 40226, two at TR 30595 40308 and one at TR 30614 40300) and in St David's Field there were two at TR 30344 40068 and one at TR 30350 40069.

Oxybasis glauca [R] (Oak-leaved Goosefoot) is now very much a north Kent plant and although already fairly well known from Sheppey, it was seen in a number of new places on the island. BB on 18 September saw a single plant on bare mud by a scrape at Straymarsh, TQ 9261 7039, new to the monad. AL provided four Sheppey sightings, of which TQ 919 718 (seen with MA, 26 July, off Queenborough Road) and TQ 930 689 (4 September, in a ditch at Elmley) were new to their respective monads.

Parentucellia viscosa [R] (Yellow Bartsia) is in Kent normally a species of damp sandy ground, so it was a surprise that DS on 28 May found a single plant on open chalk grassland at Old Park Hill, Dover, TR 302 435. Nationally it has been encountered increasingly in re-seeded amenity grasslands and waste places, thriving on disturbance; and at Dover it may be associated with increased management activity by KWT at this reserve in recent years.

Peucedanum officinale [R] (Hog's Fennel), a rare coastal species of East Anglia and north Kent, has made appearances along the east coast, at least some of which appear to be associated with the use of earth-moving equipment. A rosette was found by OL in May 2023 at Lydd-on-sea, TR 08807 19274, which flowered and seeded in 2024. Then there are two further plants which have appeared on the Dungeness RSPB reserve. One was in the edge of the Hanson/ARC car park, TR 06306 19746. The other was by a Bramble bush on the bridleway and edge of the sandy track at Hookers Pit, TR 06043 18855 (SS, 24 May). OL advises that the RSPB have used a heavy machinery company to grade the main track into the reserve. It is possible that this is the same company which was earlier working in the Old Rifle Range at Kingsdown, where SC on 13 April found six plants by road rubble dumped on vegetated beach shingle, TR 38039 47756. This last location is close to where *Bupleurum tenuissimum* [R] (Slender Hare's-ear) was discovered in 2023 (reported in Kent Botany 2023). As *P. officinale* has been until now a north Kent coastal plant and the habitat and range of *B. tenuissimum* overlaps considerably, it is likely that both species have been brought to the Kingsdown SSSI from the Thames estuary.

Phalaris minor (Lesser Canary-grass) is seldom recorded in Kent but was found by BB in May on the A249 road verge at the island side of the crossing onto Sheppey, TQ 9228 7028. *Phalaris* is surprisingly well-represented on Sheppey, other than *Phalaris arundinacea* (Reed Canary-grass), paradoxically in view of the number of ditches in the south of the island. There is: *Phalaris aquatica* (Bulbous Canary-grass), plentiful in places, probably sown originally; *Phalaris canariensis* (Canary-grass), recorded as a casual; and *Phalaris paradoxa* (Awned Canary-grass), very widespread. The last of these is very different from the others in flower structure; and *P. aquatica* and *P. canariensis* both have anthers ≥ 3mm, whereas those of *P. minor* are 1.3-2.1mm (in this case measured at 1.4mm).

Ranunculus hederaceus [R] (Ivy-leaved Crowfoot) has only two sites from which we have recorded since 2010, so it is welcome news that JR recorded it on 4 May near Appledore Heath, TQ 95751 30226, at a pond in a field corner by a public path. The geology appears to be alluvium over Tunbridge Wells Sand. It is possible that this represents continuity from a record for TQ93K in Philp (1982).

Rostraria cristata (Mediterranean Hair-grass) has had until now only one East Kent record, given in Lousley (1961) as *Koeleria phleiodes* without date or precise location, possibly found by David McClintock, and originating from the use as an agricultural fertiliser of wool shoddy, the cleanings of impurities such as seeds from imported wool in preparation for cloth manufacture. It seems unlikely that there is continuity from such usage to account for BB's discovery in May of the grass on the A249 road verge at the island side of the crossing onto Sheppey, TQ 9214 7018, confirmed by GK. Although Stace (2019) refers to origins from bird seed and other sources, it may be that here it has arrived with vehicle tyres. Formerly treated as being within *Koeleria*, it is distinguished from that genus by its annual nature and having 5-veined (rather than 3-veined) lemmas.

***Rostraria cristata*, May 2024. Photos by Ben Benatt**

***Salvia hispanica* (Chia)** was recorded for the first time in West Kent vc16 in the previous year (see Kent Botany 2023) and **the first East Kent vc15 record** for this central American health 'superfood' species has now followed, on 13 August. It was seen as a casual by PH & ACL at the base of a wall on the undercliff path below the Western Promenade, Broadstairs, TR 39795 67414. The species' ability to grow to maturity has been considered marginal in the British climate, unless with selected strains. Both West and East Kent records have been in climatically favourable conditions – the former having a Thameside location with the London 'heat island' effect, the latter as coastal with an eastern aspect backed by walling.

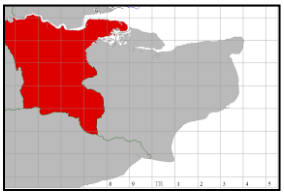
Spiranthes spiralis [R] (Autumn Lady's-tresses) has a site on a private lawn at Kingsdown Leas which has been recorded before, but is worth mentioning for the 2024 count undertaken by SB & SC on 21 August, yielding a total of 10,040 flowering spikes. The lawn is regularly mown and has no chemicals applied other than, occasionally, sulphate of iron to control moss. A further 928 spikes were counted on the mown grass outside, adjoining the road, giving an overall total of 10, 968.

Taraxacum nordstedtii (Nordstedt's Dandelion), named as with so many dandelions after a Swedish botanist, was found by JR on 20 April, at Bromley Green, TQ 99630 36961. The last Kent record was 1976, but older records may be affected by the former wider concept of what the species covered. It is scattered in south-east England, mostly confined to wet meadows. The present find was heavily rabbit-grazed grassland transitional to woodland from which it was carved out perhaps a century before as a long garden strip. The geology is Weald Clay and the associated flora includes *Agrostis capillaris* (Common Bent), *Anemone nemorosa* (Wood Anemone), *Holcus mollis* (Creeping Soft-grass), *Potentilla erecta* [R] (Tormentil), *Veronica officinalis* [R] (Heath Speedwell) and *Viola riviniana* (Common Dog-violet), so this is not a typical wet meadow at all.

***Taraxacum nordstedtii*, 20 April 2024. Photo by James Rowland**

Tetragonia tetragonioides (New Zealand Spinach) has occasionally reached our shores, apparently with the tides (now having a global distribution, albeit native in Australasia and far eastern Asia), and AL & RD on 4 August found three plants on the beach towards the west end of Lydd ranges, TQ 9986 1791. This is within the administrative county of East Sussex, although in vc15, East Kent, for botanical purposes.

Plant records for West Kent (vice county 16)



Acorus gramineus 'Variegatus' (Slender Sweet-flag), first introduced into cultivation in Britain in 1786, was noted by GK & SK on 4 March, a patch nearly 1m across at the stream bed of a spring feeding into the River Cray near Poverest, TQ 4689 6736. It was assumed to have originated as a garden throw-out.

Amaranthus blitoides (Prostrate Pigweed), a North American species with very few Kent records, was found by GK & SK on 3 August by the kerb at Lambarde Road, Sevenoaks, TQ 521 562, a small casual patch with no obvious origin; birdseed is sometimes mentioned as a source for this species.

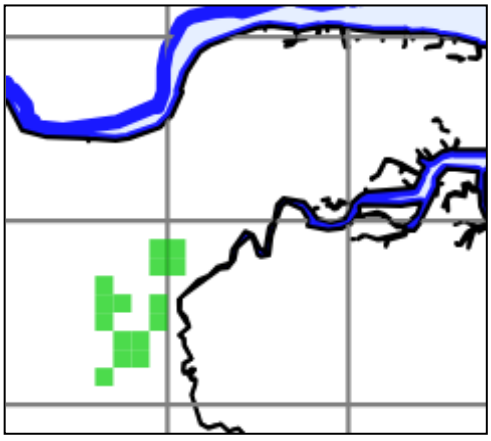
***Artemisia austroyunnanensis* Y. Ling & Y.R. Ling (Giant Mugwort)** is not the result of a 2024 observation, but was seen by a KBRG meeting on 4 August 2016 and subsequently identified and written up by RMB (Burton, 2023), although overlooked for inclusion in Kent Botany 2023. Two plants were seen in a car park at Dartford Marshes, c. TQ 543 771, the larger one being remarkable for its height and width. The area was cleared of all plant material and surface by the end of October, so that all that remained were photographs taken at the time and a small amount of collected material. The plant did not seem to correspond to any *Artemisia* known in Britain and it was only much later that RMB succeeded in putting a name to it from the *Flora of China* (Ling *et al*., 2008). There are 56 Chinese species in Sect. *Artemisia* alone, and these include our native *Artemisia vulgaris* (Mugwort). The Giant Mugwort can be keyed off from this by having leaves obviously white or brown gland-dotted, with concave reticulate venation or glands, glands deciduous (not: leaves without concave reticulate venation, usually not gland-dotted). From this point, the key includes four species capable of reaching 200cm in height, including *A. austroyunnanensis* (one of these being *A. argyi*, used in drug manufacture and able to reach 250cm), so the Giant Mugwort is not the only Chinese giant. The 2016 sighting was **a first record for West Kent, vc16**, and it has not otherwise been recorded in the British Isles.

***Artemisia austroyunnanensis*, 4 August 2016.**
Photo by Lliam Rooney

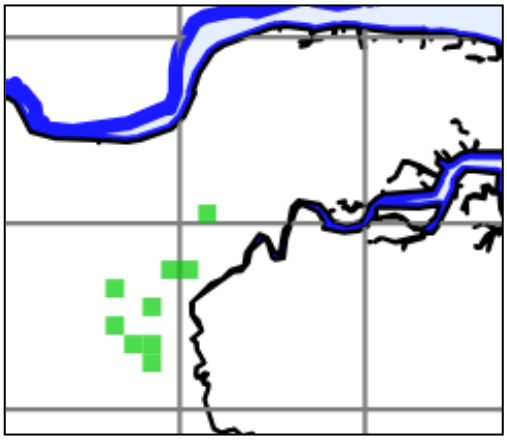
Bunias orientalis (Warty-cabbage) was found by PH and JS, the sole participants in a KBRG meeting on 31 July, at Hartley Wood, TQ 619 677, where there were two fruiting plants. The fruits are characteristically warty, and there have been only seven other Kent records this century. The species has long had a London-focussed distribution and it is perhaps no surprise that the find location was formerly a refuse tip for Southwark Council which probably points to the origin of the species here and is an example of its known ability to persist.

Campanula glomerata [R] (Clustered Bellflower) has an unusual distribution in Kent, restricted (except for introductions) to the chalk of the west side of the Medway gap, even though spread along the North Downs

continuation in Surrey. Some of this disjunctive occurrence relates to the loss of quality downland along the west Kent downs scarp since the 19th century. In 2024, Medway gap surveying by LM & LR provided a reassessment of this plant's current status, providing 15 records across nine monads. This compares well with recording 2010-23. Although *C. glomerata* was not recorded for all the 2010-23 monads, new ones were added.



***Campanula glomerata* 2010-23 (monad resolution)**



***Campanula glomerata* 2024 (monad resolution)**

Cichorium intybus [R] **subsp. *foliosum*** (Hegi) Janch. is not the usual Chicory of Kentish fields and roadsides, but is normally a market garden plant grown for salad leaves. On 4 August, AH found a plant at the Barden Lake nature reserve, Haysden, TQ 5717 4610 in an area heavily disturbed in 2023 by footbridge construction. The stem measured a remarkable 277cm and was profusely branched (17 upper branches spaced 9-16cm apart), carrying broad lettuce-like leaves diminishing in size up the stem. The species is in the rare plant register, but we have not normally been recording to subspecific level.

***Cichorium intybus* subsp. *foliosum*, 11 August 2024. Photos by Alan Heyes**

The subspecies present problems. Stace (2019) says that our commonest wild plants are subsp. *silvestre* with deeply dissected lower leaves and the cultivated salad plant is subsp. *intybus*; nothing is said about subsp. f*oliosum*, which is given in Sell & Murrell (2006). The latter say that subsp. *silvestre* is a possible native; that subsp. *intybus* is the crop plant, noting that it may be grown for root or seed; and that subsp. *foliosum* may be grown as salad or vegetable; but all three may occur in wildflower seed. It is not clear what the status is of the frequent agricultural sowings of the plant, not as a crop, but alongside grass and legume sowings as a soil conditioner, due to the deep taproot, or to contribute to grazing or for game cover.

BSBI maps do not have many subspecific records, and any statements about which is the most frequent subspecies ought to be tested, as it is possible that botanists have made assumptions about what is to be expected. Future Kent recording could be undertaken against the following table of characters.

***Cichorium intybus* subspecies characters**

Character	silvestre	intybus	foliosum
Inner involucral bract length and shape	10-12mm, linear-lanceolate	13-15mm, oblong-lanceolate	10-12mm, linear-lanceolate
Height	to 100cm	to 150cm	to 200cm
Basal leaves	deeply divided	undivided, but may be toothed	lettuce-like, broadly ovate to reniform

The Haysden find is our **first record for West Kent, vc16**, for subsp. *foliosum*, supposedly up to 200cm (but in this case much exceeded) and with10-12mm linear-lanceolate involucral bracts (recorded in this case by AH as at 11mm).

Cyperus longus [R] (Galingale) was added to the rare plant register in 2023 as a result of an East Kent find with a good claim not to have been of anthropogenic origin. New records arise, not obviously planted, but where the assumption is that they must have arrived through human intervention. SL on 11 May noted a large patch along the north side of the road verge at the junction of Cryals Road with the A21 near Kipping's Cross, TQ 6482 3974. It is not a garden boundary, and water accumulates here in wet weather. On 4 June, he found a further patch, non-flowering and running 4m along the south side of Philpots Lane, west of Hildenborough, TQ 551284 8856. Being above a ditch, its location was again road-related and damp.

Dryopteris x *deweveri* (*D. carthusiana* x *dilatata*), the hybrid between Narrow and Broad Buckler-ferns, bears a name which pteridologists will tell you is pronounced as '*devereri'* if one is to take account of Dutch pronunciation of 'w', given that it is to honour the Dutch botanist de Wever. Kentish records are fairly few, but AH found a plant on 18 October at Barden Park, Tonbridge, in a wooded area near the railway, TQ 5784 4611, confirmed by PA.

Ehrharta erecta Lam. (Panic Veldtgrass) is a perennial native to East Africa and the Arabian Peninsula, but is widely naturalised elsewhere. It has been described as one of the most invasive plant species in the world (Stinca & Mei, 2019), but the vernacular name 'panic' is not intended to describe how one should react to its appearance. Rather, it is related to its nomenclatural history: it was once part of the genus *Panicum* and has also borne the suffix *panic-* in former names. There is as yet limited evidence for spreading tendencies in the British Isles, although there have been four London records from 2021 onwards. In addition to these, PR on 11 September 2022 saw it at Kidbrooke Gardens, Blackheath, TQ 4019 7648, where numerous plants had escaped onto the pavement from a garden where it was growing in quantity, perhaps deliberately cultivated, although the species does not seem to be sold as an ornamental. In Italy, it is hypothesised that it may have arrived as a soil contaminant in pots of exotic plants (Stinca & Mei, 2019). This is a **first record for West Kent, vc16**, and for the county as a whole.

***Ehrharta erecta*, 11 September 2024. Photos by Peter Robinson**

Erodium triflorum (Cav.) Cav. (Pelargonium Heron's-bill) is an infrequently grown ornamental plant (the RHS lists only two suppliers), native in north Africa and known as an escape in Cambridgeshire, and casual in Sussex, but scarcely elsewhere. It was seen by GK & SK on 10 April, well naturalised at Gordon Promenade East, an industrial access at Gravesend, TQ 6592 7427, and growing with the *speciosa* form of *Fumaria capreolata* (see below). It looks much like a *Pelargonium*, and there is a closely related plant, *Erodium pelargoniifolium*, which is separated by its mucronate sepals and reflexed immature fruits; the latter is also cultivated, but both species have been confused in horticulture. It was recorded as an escape in 2017 in East Kent; it is possible that it may

have been seen before in west Kent, but I cannot trace record and this sighting is taken as a **first record for West Kent, vc 16**.

***Erodium triflorum*, 10 April 2024.**
Photos by Geoffrey Kitchener

***Euonymus fortunei* 'Emerald 'n' Gold' (Fortune's Spindle)** is a widely grown trailing shrub, grown for the variegated gold foliage (the flowers are insignificant and seldom seen); there are other cultivars with wholly gold or silver-bordered leaves. On 28 April AH noted three small plants growing through grass by Barden Lake, Tonbridge, TQ 5757 4638. It appears that they would have arrived inadvertently with soil imported from Tonbridge cemetery and used as infill to stabilise the lake bank. This is the only Kent record for the species in the BSBI database, although the LNHS record cards show that JRP was aware of the species for many years in Darenth Wood (apparently not this cultivar) which was first thought to be *E. japonicus* (Evergreen Spindle) until 1988, then *E. radicans* var. *carrierei,* then *E. fortunei* var. *carrierei*, still thriving in 1992. It is not clear whether the Darenth Wood plant was a survivor of planting in the former hospital grounds here ('deep' in the wood suggests perhaps not), but if the first species record belongs to JRP, **the first West Kent, vc16, record** for the cultivar 'Emerald 'n' Gold' is the Tonbridge find.

***Euonymus fortunei* 'Emerald 'n' Gold', 28 April 2024.**
Photo by Alan Heyes

Euphrasia nemorosa x *pseudokerneri* [R], the cross between Common and Chalk Eyebrights, is being found increasingly on the North Downs scarp, especially in West Kent. Recording is related to the time of survey, given that plants are most obvious as having flowers larger than those of *E. nemorosa,* but flowering well before the season for *E. pseudokerneri* [R]. GK on 20 June added a sighting at the Birling Estate's land north of Pilgrim's Way, TQ 661 615. Hybrids were growing with *E. nemorosa* on the lower scarp slope; it was possible to find flowers within the size range of *E. pseudokerneri* [R] on plants which had evidently been in flower for some weeks, whereas the latter's flowering period is normally July-September.

Euphrasia officinalis subsp. *anglica* [R] (English Eyebright), an Endangered species, was seen by SL on 20 June at Brakeybank Wood, south of Tudeley, TQ 6172 4369, where there were several flowering patches for 10m along a wide, open track running downhill.

***Fumaria capreolata* subsp. *capreolata* f. *speciosa*, 10 April 2024.**
Photo by Geoffrey Kitchener

Fumaria capreolata* subsp. *capreolata* f. *speciosa is a form of White Ramping-fumitory in which the flowers turn brilliant crimson after fertilisation. It has been known from the Channel Islands and sporadically around the Mediterranean; most mainland British records are now in Cornwall and, since 2012, East Kent. On 10 April, GK &

SK encountered it in great quantity along some 40m of Gordon Promenade East, an industrial access at Gravesend, from TQ 6591 7427 to TQ 6596 7427. This is a **first record for this form for West Kent, vc16.**

Guizotia abyssinica (Niger) is a constituent of bird seed, sometimes the only one, and two large plants were recorded by AH on 24 September growing at the edge of Barden Lake, Tonbridge, TQ 5738 4608, where heavily frequented by waterfowl and presumably also by those who enjoy feeding the birds.

Jacobaea* x *ostenfeldii (*J. vulgaris* x *aquatica* [R]), the cross between Common and Marsh Ragworts, may be identified initially in a mixed population by the degree of dissection of the leaves, but this is difficult to quantify and other characters need examining. On 18 August GK & SK reviewed a *J. aquatica* [R] colony in a damp valley in Whitley Forest, TQ 5080 5315, at a point where *J. vulgaris* takes over. A few intermediates were present and sampling one plant showed a large terminal leaf lobe but higher dissection of the leaves in comparison with *J. aquatica* [R], fruiting capitula 8mm across (i.e. smaller than *J. aquatica* [R]), one of which contained 80 flowers (i.e. more than *J. vulgaris*), and apparently irregular achene development, mostly sterile but an anomalously well-formed achene being fairly pubescent (from *J. vulgaris*). This is a **first record for West Kent, vc16**.

Juniperus communis [R] (Juniper). A female tree c.4m high was found on 20 June by GK on ungrazed chalk downland which has been scrubbing over since the 1960s, north-east of Trottiscliffe, TQ 6589 6151. It was sheltered by a yew and possessed a trunk initially leaning down the scarp slope, early forking into two. Surprisingly in view of thoroughness with which our Kent junipers are recorded, there seems to be no earlier record of this. As it is an isolated tree with no pollinator plant nearby, regeneration is unlikely to occur.

Kickxia elatine (Sharp-leaved Fluellen*)* does not seem to attract observations of peloric flowers as does *Kickxia spuria* (Round-leaved Fluellen), mentioned under East Kent records above, but has a level of variation in general growth which does not seem so well remarked, and to which LC has drawn attention in relation to three fields at Marden, TQ7544 and TQ7545, described, in their stubble state, as corn grattens. She says:

> 'From my observation of what we have, there seem to be two different forms of it – one of which....is most regularly seen in arable crops here within a brief window between harvest and sowing, where the plant whizzes into flower almost as the combine goes out of the field – it's a really delicate, not very hairy thing, although with long horizontal shoots, quickly forming large mats. The more upright, darker green leafed, hairier plants seem to take a bit longer to get going, meaning we're only really seeing them because of this extended period with no arable crop, no cultivation and no herbicide. I haven't seen them flower. When these two forms start growing they look incredibly different, it's only when the more upright form swaps its initially oval leaves for hastate/toothed and starts throwing out side shoots that you catch on [that the latter is *K. elatine* as well]'.

***Kickxia elatine*, young plant of upright form, showing non-hastate leaves and early secondary branching, 1 November 2024. Photo by Lou Carpenter**

There are hardly any British observations about subspecific variation in *K. elatine*, but Sell & Murrell (2009) separate two subspecies:

- subsp. *elatine*: weak and decumbent with acute, mostly hastate leaves; sparsely hairy; usually without secondary branches; supposedly not at all common; and
- subsp. *crinata* var. *prestandrae*: ascending, stout, with obtuse leaves, the lower ones ovate to indistinctly hastate and middle/upper ones usually hastate; with secondary branching, densely hairy; probably our usual plant.

It may well be that what has been observed at Marden can be related to this subspecific division, but this is against expectations of what would be the usual or unusual subspecies. Stace (2019) suggests that the considerable variation in leaf-shape, pubescence and flower characters is probably best recognised only at varietal level, in any event.

***Lepidium virginicum* (Least Pepperwort)** is a north American species found in Britain as a rare casual, generally from birdseed, although Stace (2019) refers to an origin from floral displays. This last possibility is backed up by internet sites offering cut stems for florists, where the rows of developed fruits can add interest to a display. As early as 1 January, AH found a plant in flower growing through the brick paving of a walkway at Sainsbury's car-park, Tonbridge, TQ 5901 4616. This was revisited on 16 January to collect a few fruits for

further confirmation. The fruits were clearly *Lepidium*, rather than *Iberis* (Candytuft); and related *L. densiflorum* (Apetalous Pepperwort) has petals reduced or absent, and so could be discounted. The location suggests a supermarket origin, with a bouquet perhaps more likely to spill seed than a sealed packet of birdseed. This is a **first record for West Kent, vc16.**

***Lepidium virginicum,* flowers 1 January 2024, fruit 16 January 2024. Photos by Alan Heyes**

***Lysimachia* x *doerfleri* (*L. arvensis* x *foemina*[R])**, the hybrid between Scarlet and Blue Pimpernels, is extremely rare. The account of this cross in Stace *et al*. (2015) was only able to mention one confirmed British occurrence (from an arable field in Warwickshire, 1950) and there does not seem to have been any since. Convincing evidence would be needed to support a further find. The possibility of its having been seen in Kent in 2024 was suggested by LR, who considered that this might be better supported by extended investigations, but in the light of evidence already available there is a good case for publishing the record now.

***Lysimachia foemina* and *L. arvensis* at Ranscombe, 24 July 2012. All photos by Lliam Rooney**

On 29 July, LR and LM were surveying at Kitchen Field, Ranscombe. The presence here of *L. foemina* (Blue Pimpernel) goes back a long way. According to Hanbury & Marshall (1899) a specimen from a cornfield between Cobham and Cuxton was in the herbarium of John Stuart Mill (1806-1873); that location would match Kitchen Field. LR & LM found it still present, recording it at TQ 69814 68079, TQ 69811 68078, TQ 69789 68103 and TQ 69818 68073. These points all lie along the north-eastern field boundary, covering a length of 42m. Both Scarlet and Blue Pimpernels grow together here and are shown by a photo in the county rare plant register (reproduced here) taken by LR at the same site as far back as 2012.

No thought crossed the minds of either surveyor at the time that hybrids might be present. However, LR mentioned that a good way of telling Blue Pimpernel apart from the blue form of Scarlet Pimpernel (*L. arvensis*

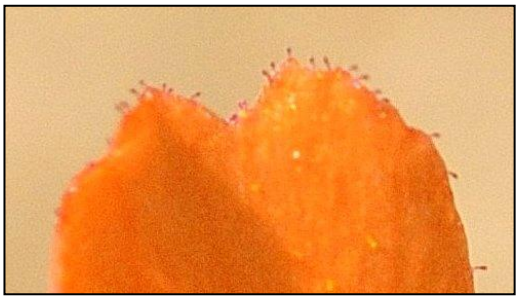
var. *caerulea*[2]) was that Blue Pimpernel did not have the petals overlapping and the sepals are clearly visible between them. This difference is apparent from the 2012 photo, where of course *L. arvensis* is represented by the usual scarlet-flowered variety. In seeking to demonstrate this, LR found a scarlet-flowered plant but this anomalously did have gaps between the petals. His assumption at the time was that perhaps this character was not a consistent differentiator between the species, but he took material home to examine.

Another difference between the two species relates to the minute glandular hairs on the fringes of the corolla lobes, as illustrated in Stace (2019). In Scarlet Pimpernel they are frequent and short (three-celled); in Blue Pimpernel they are relatively infrequent and slightly longer (four-celled). The material examined appeared to show intermediacy in length and distribution of hairs. The flower colour was not intermediate, but apparently the hybrid involving scarlet-coloured Scarlet Pimpernel usually follows that parent (Stace *et al*., 2015).

With the possibility of hybrid presence now crystallising, LR returned the following week, on 5 August, to seek further evidence. No Blue Pimpernels could then be found in flower, but a further scarlet-flowered plant was found with non-contiguous petals in the vicinity of the previous find, c. TQ 69812 68075. It had undeveloped fruits, in contrast with other plants in the neighbourhood. Stace *et al*. (2015) cite various sources for the recognition of sterility in the hybrid *L*. x *doerfleri*. From this second plant LR took photos of the flower (which was not in ideal condition but adequate for study) and an undeveloped fruit (both given here). He collected the flower for microscopic examination which supported earlier observations on the diagnostic corolla lobe hairs, but the photographic results did not produce the clarity of resolution which he had hoped to achieve. However, when GK requested to see these, a photo was forthcoming (given here with interpretive drawing by GK) which indicates at least one four-celled glandular hair present, a feature which can only be attributable to genetic contribution from Blue Pimpernel.

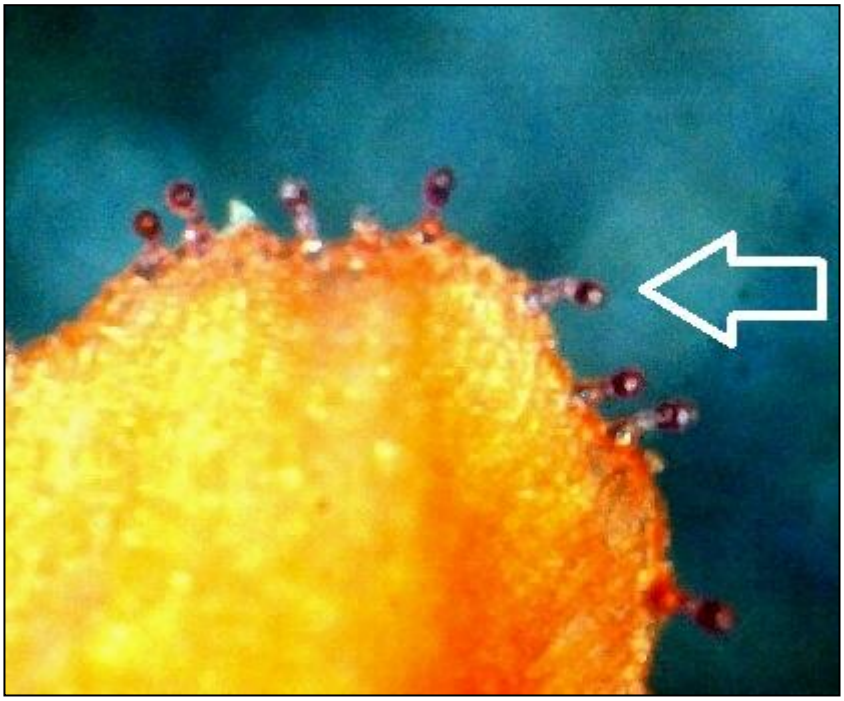
***Lysimachia x doerfleri,* flower with non-contiguous petals, August 2024**

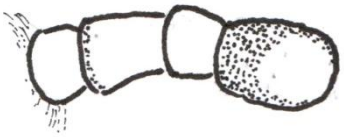
***Lysimachia x doerfleri,* undeveloped fruit, August 2024**



***Lysimachia x doerfleri,* distribution of hairs on corolla lobe margin, August 2024**

[2] Named as a separate species in the light of molecular data, viz. *Lysimachia loeflingii* F.J.Jiménez-López & M.Talavera (see Jiménez-López, F.J. & Talavera, M., 2022).





***Lysimachia x doerfleri,* glandular hairs, August 2024, with interpretive drawing to show four cells including apical gland**

So the following findings provide support of identity of this rare hybrid:

- the presence of the putative parents growing together;
- the apparent sterility of the hybrid;
- the combination of scarlet-coloured flowers (characteristic of Scarlet Pimpernel) with the following features characteristic of Blue Pimpernel:
    - non-contiguous petals, separated sufficiently to show the sepals between,
    - the presence of four-celled glandular hair(s) on the corolla lobe margin (this is diagnostic);
- the intermediacy of the appearance and distribution generally of the marginal hairs.

Why is *L*. x *doerfleri* so rare? The Blue Pimpernel parent is itself nationally scarce, with presence in only 44 hectads in Great Britain for 2000-19 (Stroh *et al*., 2022). Presumably there is a level of genetic incompatibility, endorsed by the results of hybridisation experiments summarised in Stace *et al*. (2015), and reinforced by the recognition that both Pimpernels are to be treated as separate species (Blue Pimpernel was long regarded as a subspecies of Scarlet Pimpernel). There is also an open question as regards how far pollinators may be disposed to select preferentially one colour over another in their visits. Ortiz *et al*. (2015) found that, in a Mediterranean context, solitary bees were the main pollinators of Scarlet Pimpernel; and that they perceived blue flowers as contrasting more against the background than red; and they had a preference for blue flowers in their visits. (The comparison was between colour morphs of Scarlet Pimpernel, but one might suppose the same factors to apply if the blue flowers were those of (true) Blue Pimpernel). Pollination preference, however, is unlikely to be a factor as significant as genetic incompatibility. The finding of two hybrid plants is a **first record for West Kent, vc16,** and the second for Great Britain as a whole.

Medicago sativa subsp. *falcata* [R] (Sickle Medick) is nationally scarce and apparently declining; its Kent occurrences are limited and mainly in the north-west. MR on 17 September saw a couple of plants beside the Thames path between Crossness and Erith, TQ 493 807. It is sometimes regarded as impersistent, but a sighting by GH & JL on 4 August at Woolwich Common, TQ 42757 717 – a patch 3m x 1m – quite likely corresponds to a record 13 years earlier.

***Polystichum munitum* (Western Sword-fern)** is abundant in North America and has been cultivated in the British Isles since 1839. It seldom escapes, however, and the sighting on 23 May by DN of a large specimen on a shady roadside bank at Maypole Lane, Goudhurst, TQ 72682 37863 is **a first record for West Kent, vc16**, and for the county as a whole. It appears to have arrived by spore rather than being discarded, and was accompanied by much *Polystichum aculeatum* (Hard Shield-fern).

***Polystichum munitum*, 23 May 2024. Photos by David Newman**

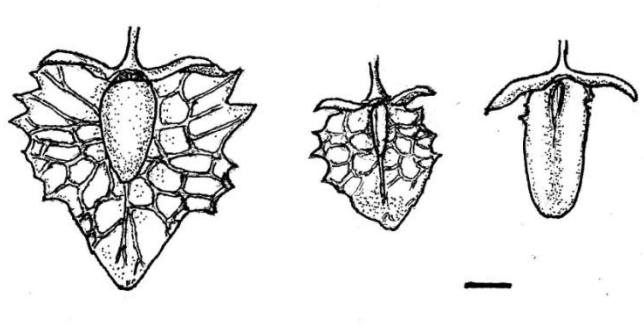
***Rosa* x *hemitricha* (R. *corymbifera* x *squarrosa*)**, the cross between Hairy Dog-rose and Glandular Dog-rose, was found by GK on 28 August on waste ground at Sundridge, TQ 4851 5570, confirmed 'on balance' by BSBI referee, RM. There were five bushes at this grid-reference, all looking similar, and another about 80m away. Use of these species names entered British mainstream botany with Stace (2019), although they had been employed by Continental botanists before, and they are part of the splitting up of *R. canina* (Dog-rose) into three constituents. RM comments that 'the species and their hybrids in subsection *Caninae*, are without doubt the most difficult of all roses to separate and identify'. The rose found was notable for having a hairy leaf midrib underneath and a hairy petiole/rachis (pointing to *R. corymbifera*) and plenty of glands on the petiole/rachis but not the pedicel (pointing to *R. squarrosa*). Hairs and glands are possessed by other species, of course, but for various reasons they can be ruled out, e.g. as regards *R. tomentella* (Round-leaved Dog-rose), which is hardly found in Kent, and which would have had fully glandular bi/multiserrate leaves, very curved acuminate prickles and biserrate sepals. This is a **first record for West Kent vc16** and for Kent as a whole.

***Rosa* x *hemitricha*, 28 August 2024. Photos by Geoffrey Kitchener**

Rosa x *toddiae* (*Rosa canina* x *micrantha*), the cross between Dog-rose and Small-flowered Sweet-briar, in which the apple scent of the *R. micrantha* foliar glands is diluted by the influence of the other parent, was noted by LM & LR on 18 June south-west of Luddesdown, TQ 661 655.

Rumex x *ruhmeri* (*R. conglomeratus* x *sanguineus*), the hybrid between Clustered and Wood Docks, is capable of being overlooked as it is not a conspicuous cross but in any event the parents occupy habitats which are mainly distinct. However, one plant was seen by GK on 11 August between Chipstead and Sundridge, TQ4967 5598, at the damp edge of a field near the River Darent lined with the parents, the hybrid plant being noticeably infertile, with the perianths showing influence from both parents.

***Rumex sanguineus* x (*R.* x *lousleyi*)**, a triple hybrid in which Wood Dock was found to have crossed with a hybrid between *R. cristatus* (Greek Dock) and *R. obtusifolius* (Broad-leaved Dock) in a wooded part of garden grounds in Halstead, TQ 4896 6112, recorded by GK in June. The find is written up in more detail in the context of triple hybridisation in docks generally, in Kitchener (2024). There were two plants, resembling giant *R. sanguineus*, four times the usual height, and having somewhat leathery leaves (from *R. cristatus*) with papillae present on the underside of the leaf midrib (from *R. obtusifolius*). They were apparently female-sterile, with perianths showing a range of variation between the parents, but generally dropping undeveloped. The origin of the complex cross appears to have been wind-pollination of *R. sanguineus* from plants growing some 30m away which were the progeny of *R.* x *lousleyi* introduced some 20-30 years previously. This is **a first record for West Kent vc16** and the cross is considered to be new to science.



***Rumex sanguineus* x (*R.* x *lousleyi*), variation in tepal shape. Scale bar 1mm. Drawing by Geoffrey Kitchener**

***Salvia forskaehlei* L. (Indigo Woodland Sage**) is a plant of the Balkans and Turkey, but is fairly widely cultivated, although the BSBI database has only one record, from Cambridgeshire. The plant name is as given by Kew's plants of the world website, although the issue of how to transliterate the name of Helsinki-born botanist and explorer Peter Forsskål has resulted in variant spellings for the plant. It was seen by DCh and ME in 2023 cultivated on a bank outside a garden at Pilgrim's Way near Trottiscliffe, TQ 652 613 (and not reported because of its cultivated status), but a further visit on 23 August 2024 resulted in a record of several plants in a semi-natural area at least 40m away from the garden bank and was interpreted as spread from that location, perhaps derived from deposited garden waste. This is a **first record for West Kent, vc16**, and for the county as a whole.

***Salvia forskaehlei*, 2024. Photo by Michael Easterbrook**

Saxifraga granulata [R] (Meadow Saxifrage) was not shown at all in Philp (2010) for the Darent Valley north of Riverhead, in spite of the number of records made since, to which needs to be added the lawn area between Lullingstone Castle gatehouse and the church, TQ 5295 6443. Here several patches were seen by GK & SK on 11 May in an area left unmown for orchids later. Earlier in the year, the known distribution on the Folkestone

Sand Formation between Ightham and Borough Green was refreshed and extended by DN (travelling by train) and GK, with 11 grid-reference points established between Fen Pond Road and just east of Wrotham Road railway bridge.

***Saxifraga granulata*, Lullingstone, 11 May 2024. Photo by Geoffrey Kitchener**

Scilla bithynica (Turkish Squill) was seen by GK on 15 March well naturalised down a steep wooded road-bank on the south side of the A21 near Farnborough, TQ 4504 6439. Investigation showed that the plants had seeded down from a large colony at the top, spread from a neighbouring garden. At first glance, it might have been supposed to be *Hyacinthoides hispanica* (Spanish Bluebell), but was flowering too early for this.

***Scilla bithynica*, 15 March 2024. Photo by Geoffrey Kitchener**

***Scutellaria altissima* (Somerset Skullcap)** was found by ME & DCh on 13 June, in a small wood opposite Aylesford Priory across the River Medway, TQ 724 587, where there was one plant. This is a seldom cultivated species originating from eastern central Europe to the Caucasus (the reference to Somerset in its English name is to a location where it was found naturalised in 1929); the gardens nearest to the find spot were c.50m away and no other garden plants were seen in the vicinity. The flowers have a similar 'snapdragon' shape to those of our native *Scutellaria* species and are not especially showy, but give place to rows of distinctive disc-shaped fruits. These seem to have elicited little or no horticultural comment but are quite attractive. The only other Kent record has been some roadside plants at Boughton Street, vc 15, so this is a **first record for West Kent, vc16**.

***Scutellaria altissimaa* flowers and fruits, 13 June 2024. Photos by Michael Easterbrook**

Sisymbrium irio (London-rocket) was seen by GH & JL on 7 April, a large stand of about 50 plants in an open area in front of a block of flats at the junction of Artillery Place and Rushgrove Street, Woolwich/Charlton, TQ 4296 7851, with more scattered along Artillery Place. There may, at a stretch, be a relationship with the first

unequivocally Kentish record, a note by Samuel Doody (1656-1706) that it was found 'in the land going to Blackheath a little beyond the stile y^{t} goes to Charleton y^{e} upper way'.

***Vaccinium ovatum*, 6 October 2024. Photos by Geoffrey Kitchener**

***Vaccinium ovatum* Pursh (Californian Huckleberry)** is native from West Canada to California, and is elsewhere grown as an ornamental shrub with attractive black edible berries. It is not, however, frequently grown in the UK, the RHS listing only four suppliers. On 27 July GK & SK found a large bush in Fishponds Wood, Ightham, TQ 579 553, growing with *Vaccinium myrtillus* (Bilberry) on the acid sands of the Folkestone Formation. It is possible that it was originally bird-sown from Reuthe's nursery ('the Lost Gardens of Sevenoaks'), located just over 300m away. The nursery business has long specialised in ericaceous plants and their 1958 catalogue (G. Reuthe Ltd, 1958), which was issued when the firm was located at Keston but had also run the Ightham branch since 1926, offered 16 species of *Vaccinium*, including *V. ovatum* at 7s/6d. This is **a first record for West Kent, vc16**, and it does not seem to have been found as an escape in the British Isles before.

Valerianella dentata [R] (Narrow-fruited Cornsalad) is an Endangered species, one of the arable weeds that has declined drastically with the use of agricultural herbicides. It is a Kent axiophyte, indicative of good arable plant habitat, and found on shallow chalk soils in the county. It has been recorded before from arable below the Halling to Trottiscliffe escarpment SSSI, but received a more systematic survey from GK in 2024. Remarkable quantities were recorded on the Birling estate below Pilgrims Way east of Trottiscliffe, along the northern field boundaries from TQ 6526 6126 eastwards, petering out around TQ 6650 6169 about 1.3km away. Over much of this length, a broad conservation strip has been maintained with light cultivation, no herbicide and no crop sowing. The result has been a wide band in which *V. dentata* appears to be dominant over wide areas.

Conservation margin dominated by *Valerianella dentata*, 13 August 2024. Photo by Geoffrey Kitchener

On 28 August an assessment was made of its density in a 50x50cm sample plot at TQ 65532 61316, in an area where *Valerianella* cover appeared completely dominant. Ninety plants were counted, equating to 360 per square metre. An extrapolation was made for the field, whose boundary ran for 0.58km. Even making allowance for such dominant cover not existing throughout the length of the field (although in some places it was dominant across a 10m width, and a 5m stretch in such a place will have held 18,000 plants), a conservative estimate produces hundreds of thousands of plants; including other fields the total must be in millions.

The impression of dominance is given by the netting effect of the wiry stems criss-crossing, above which little other vegetation emerges. In fact, below the network of *Valerianella* stems other weeds had not been totally suppressed, and in the sample plot was counted: *Lysimachia arvensis* subsp. *arvensis* (Scarlet Pimpernel, 1 plant); *Anisantha sterilis* (Barren Brome, 1 plant); *Fallopia convolvulus* (Black-bindweed, 1 plant); *Geranium dissectum* (Cut-leaved Crane's-bill, 7 plants); *Lapsana communis* (Nipplewort, 1 plant); *Kickxia elatine* (Sharp-leaved Fluellen, 1 plant); *Medicago arabica* (Spotted Medick, 1 plant); *Papaver rhoeas* (Common Poppy, 1 plant); *Plantago major* (Greater Plantain, 6 plants); *Sherardia arvensis* (Field Madder, 2 plants); *Sonchus asper* (Prickly Sow-thistle, 1 plant).

***Valerianella dentata* near-suppressing other flora, 13 August 2024. Photo by Geoffrey Kitchener**

This was a relatively concentrated assessment. Looking at the wider spread, LM & LR surveyed much of the arable habitat on the eastern side of the Medway gap in June-August, identifying 13 sites from Upper Halling to Luddesdown to Ranscombe, with records in monads TQ6664, TQ6665, TQ6666, TQ6764, TQ6765, TQ6863, TQ7067, and TQ7167, indicating that at least this element of our arable flora is well represented

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[3] Alexander Irvine and William Pamplin, according to Hanbury & Marshall (1899).