



KENT BOTANICAL RECORDING GROUP

**OCTOBER 2020
NEWSLETTER No. 13**

Published by the Kent Botanical Recording Group: Cromlix, Otford Lane, Halstead, Sevenoaks, Kent TN14 7EB

Kent Botanical Recording Group website: hosted by the Botanical Society of Britain & Ireland at <https://bsbi.org/kent>

Related website (Facebook) <http://www.facebook.com/pages/Kent-Botany/223421087698067>

Front cover: *Lactuca coronavirosa* (L.) Kitch. (sp. nov.) Based on photo of *Lactuca virosa* by Brian Pitkin.

In this issue:

Ten years of the KBRG	p.1
2020 field meeting reports	4
Some historic field meeting 'reports': 1629, 1714, 1838	7
Kent Biodiversity Strategy plants	14
Will you sign up for recording? <i>Orchis purpurea</i> (Lady Orchid) monitoring	14
Recording Common Knapweed in Kent (and Hertfordshire!)	16
Lockdown botany	18
Plant portrait: <i>Polygala calcarea</i> (Chalk Milkwort) in Kent	19
Pokeweeds like buses	21
Dry and droughty Dungeness – Autumn Lady's-tresses	21
Giant Viper's-bugloss competition	22
The AGM that wasn't	23
Walking in the footsteps of John Stuart Mill	27
Next year's field meetings	31

Ten years of the Kent Botanical Recording Group

In the afternoon of 13 March 2010, I was joined by thirty-six invited Kent botanists at Tyland Barn to consider how botanising in Kent should go forward. We agreed to form the Kent Botanical Recording Group. The attention of the nation was then focussed on preparations for a general election: Gordon Brown was prime minister, with a 70-seat majority, soon to be lost to a hung parliament governed by coalition.

Roll on, 13 March 2020, and the first coronavirus death in Scotland took place; the overall UK risk had just been raised from moderate to high; government advice was issued for self-isolation for those showing symptoms; and Public Health England gave up contact tracing, as widespread infections overwhelmed capacity. A sombre background for what would have been KBRG's tenth anniversary, to be celebrated at the (cancelled) AGM later that month...

Back to 13 March 2010, the inaugural gathering did not just happen out of the blue. It followed on from much preparation after I had been appointed county recorder by the Botanical Society for the British Isles, as it was then called, following the resignation of Eric Philp, after nearly 40 years as recorder. As part of my appointment, I was given to understand that what was needed would include a rare plant register and a more networked approach to county recording.

Eric had an amazing memory of plants and their locations, but the information was in his head. In terms of published data, the records were of presence in a tetrad, generally with no precise locational information or details of population size. So I began by drafting out a list of possible candidates for a rare plant register, bearing in mind Joyce Pitt's vascular plants section of the *Kent Red Data Book* (2000). I then sent the list and the register proposals round to several Kent botanists and revised it in the light of feedback. Members were to produce records and photos; and I would try to turn this into species accounts. We chose a 'gold standard' of completeness of accounts, time-consuming (!), which is why this is still work in progress – nearly there...

The 'networked approach' to county recording is our recording group: anyone can join, and we have had (pandemics permitting) our field meetings programme each year, latterly run by Sue Buckingham (who became joint BSBI recorder for East Kent early on) and Owen Leyshon. We have had so many enjoyable sessions over the years, and here are some reminders:

Geoffrey Kitchener

The first field meeting, on 5 June 2010, at Littlestone and Greatstone. A typical botanists' grouping, in which we all try to get as close to the ground as possible, in order to look at something very small and dried up.





Our then President, Eric Philp, leads a meeting on *Salicornia* (Glassworts) at Oare, 5 October 2011. A Glassworts session later became an annual tradition, in which Liam Rooney (left) took over Eric's role as leader.

At Gibbin's Brook, June 2013: we start the tradition of tea and cakes to end the meeting.



Shellness, Sheppey, 12 April 2015, too early for stripping off.



Not every meeting is bright and sunny! Who remembers trying to eat lunch in the pouring rain at a joint meeting with Surrey Botanical Society at Crockham Hill, 8 May 2014 (above)? Or braving the fog at Iden, 13 March 2016 (below)?

21 July 2015 at Hatch Park: this was supposed to be a short cut, but we nearly got lost in the bracken!





Re-finding *Euphrasia tetraquetra* (Western Eyebright) and making the first East Kent records for two of its hybrids: at Dover, 4 August 2017



The path down to Folkestone Warren, 19 June 2018



Scotney estate, 15 May 2016



Guardians of the way at Trosley Country Park, 29 June 2018



Finding *Ranunculus arvensis* (Corn Buttercup) at Headcorn, 14 June 2019



Warden Bay, 13 August 2018

2020 field meeting reports

All field meetings after the first one were cancelled due to the coronavirus pandemic, so we have only one report of a full KBRG meeting, plus an impromptu staging of what would have been the final meeting of the year's programme.

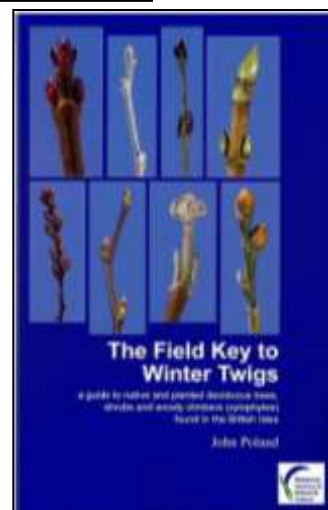
TWIG MEETING, COBHAM MANOR PARK, MAIDSTONE, Sunday 23 February

As I drove up the M20 from Dungeness early on Sunday morning for the first field meeting of the KBRG season titled Winter Twigs and led by the legend John Poland - I was trying to remind myself -

What is a Twig ?

Well in John's book - a Twig is defined as the 1st year shoot. The first thing to look for is whether the buds are alternate or opposite and the number of bud scales. However, it does not stop there and you can move onto stipule scars, lateral buds, the pith, the branchlets, prickles or thorns and the bundle scars – the list is endless – in the attempt to identify trees in the winter months.

The Kent Botanical Recording Group were privileged to welcome John, when 14 members met in the Cobtree Manor car park on a blustery Sunday morning with the aim to identify trees using just the twigs, or bark and or shape of the tree.



The site had been chosen by Sue Poyser and Doug Grant. They had done a recce in recent weeks and a route had been worked out, which zigzagged across the parkland in a loose loop. In such a habitat of planted parkland there was no shortage of trees for the group to examine and identify. There was a mix of planted ornamental trees with natural native species as well.

John kicked off with the first few trees next to the car park which were the Italian Alder (*Alnus cordata*), Rowan (*Sorbus aucuparia*) and then a group of Turkish Hazels (*Corylus colurna*). Nearby, John helped the group identify a large clump of Sorbaria (*Sorbaria sorbifolia*) which Sue Buckingham reminded us we had recorded at Cliffe on a KBRG Field Meeting a few years ago.

Photo by Owen Leyshon

As the morning progressed John showed and worked his way through a range of tree and shrub species namely Elms (*Ulmus*), Hornbeam (*Carpinus*), Forsythia (*Forsythia x intermedia*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Oak (*Quercus*), Ash (*Fraxinus excelsior*), Sweet Chestnut (*Castanea sativa*) and Sycamore (*Acer pseudoplatanus*).

The trees included ones which are a little bit more unusual and unfamiliar to some of the group like the Caucasian Wingnut (*Pterocarya fraxinifolia*), Ashleaf Maple (*Acer negundo*) and the Persian Ironwood (*Parrotia persica*). We all have different ways to learn and John was excellent in getting across the ID features and explaining the important bits to the whole group. Occasionally through the day, John would dive off to grab a sprig of any conifer we came across - as he continues to work on a conifer book at the moment - which he said is a challenge.

As a little shower came and it was past the usual 'lunchtime time zone', we retired for sarnies in the shelter of the former llama stables, another reminder of the park being the site of the old zoo. Straight after lunch we dived into yet more tree identifications with Limes (*Tilia*), Birches (*Betula*) plus a fine selection of Golden Weeping Willows (*Salix x sepulcralis* 'Chrysocoma') and Dogwood (*Cornus sanguinea*) around a pond. As we headed back down the slope gathering momentum we added Tree of Heaven (*Ailanthus altissima*) and Aspen (*Populus tremula*).

By mid afternoon we made it back to the car park for welcome refreshments of tea, coffee and the traditional Welsh cakes. Some Kentish ales and a pack of Welsh cakes formed a presentation to John as a way of thank you for leading our well-received first (and only) field meeting of 2020.

Owen Leyshon

SEASALTER, Friday, 11 September

2020 is a year we will certainly remember. Ten meetings had originally been scheduled for the year but after the Winter Twigs meeting at Cobtree Manor Park, Aylesford all the remaining meetings were cancelled due to the restrictions put in place because of the Covid-19 outbreak.

Liam Rooney, as a break from the usual Glasswort meetings, was to lead a walk from the Sportsman pub, Seasalter, along the South Swale Nature Reserve to Castle Coote and back again. The walk was intended to find the coastal specialities along the beach and then those along the landward side of the seawall on the return. Because of the cancellations Liam had completely put the meeting out of his mind but Caroline Ware suggested that we do the walk anyway on an unofficial basis now that restrictions were relaxed. Liam met with Caroline who was joined by the encouragingly loquacious John Puckett and so the three of them set off along the beach.

This stretch of beach is known for its rarities and it wasn't long before we found the first Rare Plant Register (RPR) plant *Lepidium latifolium* (Dittander) closely followed by *Glaucium flavum* (Yellow horned-poppy) now showing its long arching seed-pods. *Sedum acre* (Biting Stonecrop) and *Sedum album* (White Stonecrop) were rather plentiful on the higher parts of the beach as was another RPR species *Artemisia maritima* (Sea Wormwood) which always warrants a rub of the foliage to bring out its lovely aroma. The rather attractive *Atriplex laciniata* (Frosted Orache) was dotted along the strandline, happiest on the bare sand, whilst *Crithmum maritimum* (Rock Samphire) was more at home on the artificial rocks of the concrete sea defences. Soon we came across three other RPR plants: *Limbarda crithmoides* (Golden Samphire) and *Eryngium maritimum* (Sea-holly), which we expected to see, but rather unexpected was *Carex divisa* (Divided Sedge) growing from the gaps of the concrete sea defence. Ordinarily this is found on the other side of the seawall but it seemed happy enough to run its rhizomes along the cracks, forming a line of plants.

Crithmum maritimum. Photo by Caroline Ware

John Puckett spotted a bee which he quickly identified as *Bombus sylvarum* (Shrill Carder Bumblebee) making use of the fading flowers of *Echium vulgare* (Viper's-bugloss). This is perhaps the rarest bumblebee in the UK and perhaps rather ironically it was the most common species of bee we saw that day!



As the tide was fully out it offered the chance to walk out onto the bare mud and look at the Eelgrasses. *Zostera marina* (Eelgrass) was abundant, but the narrower-leaved *Zostera noltei* (Dwarf Eelgrass) was also present. Both are RPR plants and are made a meal of later in the year by Wigeon and about two thousand Brent Geese.

We had reached Castle Coote and decided to have our lunch before entering. Unfortunately John had to leave after lunch due to bat duties but Caroline and I carried on. Castle Coote is not open to the public as it is an important site for nesting and roosting birds but we had permission from the Kent Wildlife Trust to enter. It is primarily a large area of saltmarsh contained within an impressive sweeping arm of a high cockleshell shingle bank. We walked along the northern edge hoping to find a single plant of *Eryngium maritimum* (Sea-holly) which Caroline had found the previous year but were unsuccessful. As we went round we dipped in and out of the saltmarsh every time we saw an opportunity to look at Glassworts. The first Glasswort to be found was *Sarcocornia perennis* (Perennial Glasswort), an RPR plant. *Salicornia ramosissima* (Purple Glasswort) was present as expected, but not too common. *Salicornia europaea* (Common Glasswort) was quite common but Liam found plants that had terminal spikes measuring 9cm, 3cm longer than the maximum given in Stace! These long-spiked plants may relate to the Mediterranean *europaea* group which has a species which has these measurements. Not all authorities recognise a separate species, although containing it within the spectrum of characteristics known to the group. However, even with this in mind one would have to rewrite the book on *S. europaea*!



Castle Coote. Photo by Caroline Ware

Salicornia dolichostachya (Long-spiked Glasswort) was very common and, as per usual, plants were found seemingly intermediate between this and the RPR plant *Salicornia fragilis* (Yellow Glasswort) and therefore couldn't be named. *S. fragilis* was eventually found, as was another RPR Glasswort, *Salicornia disarticulata* (One-flowered Glasswort). At the end of the saltmarsh against the shingle bank a small colony of Glassworts were found which seemed at first to resemble a diminutive *S. dolichostachya*. On closer inspection they had purple colouring around the flowers and along with the measurements of the lower fertile segments made a good candidate for *Salicornia emerici* (Shiny Glasswort). This has only been found once in Kent – at Oare Marshes in 2011 – and so would be a great find if this was a new stable population. Liam and Caroline planned to go back in late October to see if the plants are really this or were just a colony of very young *S. dolichostachya*.¹

Close by these plants on an area of high dry saltmarsh was a large population of *S. ramosissima* plants which were very small and unbranched. This growth formation is typical when this species grows in such a habitat and also typical is that is often accompanied by *S. disarticulata*. Liam thought he had found this last species as plants resembling its size and jizz could be seen, but when he inspected the plants they all had three flowers. The fertile segments were very distinctive with the lateral flowers bulging out over the sides of the segments, something not seen before. It is quite normal to find the odd plant that can't be named but to find a whole colony all the same which can't be named is a call for further serious investigation. There is a Mediterranean Glasswort which has these characteristics but it is supposedly endemic to that region. Liam wondered if migratory birds from Africa flying over the Mediterranean to reach their nesting site along the Swale could have brought seeds with them and along with a milder climate have such plants survived? Again, Liam and Caroline were to return in late October to further assess the plants and along with the help of Fred Rumsey hopefully solve the identity of these mystery Glassworts. They may prove to be a new UK species but they may just be lumped together as a local 'sort'.²



Mystery *Salicornia*. Photo by Liam Rooney

We headed back the way we came, still hoping to find the Sea-holly but instead we found a new RPR species, *Salsola kali* (Prickly Saltwort), about three plants in total. We climbed over the seawall to the landward side and were rather disappointed to see the grass had been mown. We were hoping to see such RPR plants as *Bupleurum tenuissimum*

¹ Identity was subsequently confirmed by Fred Rumsey and Martin Rand from photographs. There will be a fuller account in Kent Botany 2020.

² Again, there will be more in Kent Botany 2020 about the outcome, which looks as though it may have restored *Spartina maritima* (Small Cord-grass) to the Kent list.

(Slender Hare's-ear), *Trifolium squamosum* (Sea Clover), *Peucedanum officinal* (Hog's-fennel) and large swathes of *Carex divisa* (Divided Sedge), but sadly to no avail. I will also note that we purposely looked for *Polygonum oxyspermum* (Ray's Knotgrass) along the beach where it has been known for many years but failed to find any. We also failed to find the single plant each of *Ononis spinosa* (Spiny Restharrow) and *Rosa agrestis* (Small-leaved Sweet-briar) recorded here, both on the Rare Plant Register. The former may have been overlooked in the long grass which had escaped mowing, but as for the latter, I am hoping this was due to us nattering!

Near to the Sportsman pub we looked into a dyke and found our last RPR plant *Hydrocharis morsus-ranae* (Frogbit) along with the usual suspects. It was a shame we didn't find more of the plants we were expecting to see and perhaps with more eyes we would have done so. However, it was an enjoyable day and a welcome reminder of the days we had with the Kent Botanical Recording Group.

The one thing we really did miss though was Owen Leyshon and his Welsh cakes!

Liam Rooney

Some historic field meeting reports

Kent has always attracted botanists and many have left accounts of their meetings and tours (it is not always easy to distinguish between the two, as before railways people travelled long distances over difficult roads to view unfamiliar locations, and might spend several days exploring). Early botanising was by herbalists and apothecaries, with a focus on the contribution of plants to medical knowledge, although no doubt some of them loved plants for their own sake. There is a transition from herbalising to the non-medical scientific study of the identity and distribution of plants, which is represented by these 'reports', from 1629 to 1714, to 1838.

The Worshipful Society of Apothecaries, July 1629

Thomas Johnson, herbalist and apothecary, died in 1644, having been shot while defending Basing House from the parliamentarians during the Civil War. He published accounts of expeditions undertaken with others connected with the Worshipful Society of Apothecaries, to study plants, the first of which was in Kent, in 1629. This account of this extended field meeting (*Iter plantarum investigationis ergo susceptum*) was in Latin, and translated extracts are given here³. The Latin plant names given by Johnson were of course pre-Linnean and sometimes their equivalent modern Latin names may be difficult to assign, but we have the advantage of Francis Rose having expressed his opinion on their identity. This expedition and a further one in 1632 accounted for about 330 plants which had not been recorded in Kent before, many of which were first records for Britain.

Botanising then was not straightforward, although the hiring of horses and boats seems not to have been problematical, nor the finding of accommodation at inns. But this expedition had not only to surmount severe weather, but also unhelpful tides, the suspicion with which strangers were greeted on Sheppey, and the desolation of the countryside at Grain.

Johnson: A few years ago there grew up among the students of herbalism the truly laudable custom of undertaking, twice or more often each year, a three or four days' journey for the purpose of discovering plants. This year the Society decided to travel through part of the County of Kent. The day, July 13, was fixed. Mindful of the date, there assembled early in the morning in St. Paul's Cathedral Master Jonas Styles, William Broad, John Buggs, Leonard Buckner, Job Weale, Robert Larking, Thomas Wallis, two Edward Browns (one of them the apprentice of William Broad) and myself. Then hurrying to the river's bank we hired two boats to take us to Gravesend, but as we left the bank,

suddenly clouds take sky and day away from our eyes: dark night rests on the sea. It thunders from the pole, and the aether flashes thick fire, and all things threaten immediate death to men. (Virgil *Aeneid*, book 1.)

From *Ships in a storm*, Ludolf Bakhuizen, late 17th century



³ Having regard to the admirable translation by Canon Raven in the 1972 facsimile reprint edited by J.S.L. Gilmour (1972).

with three or four of us. We agreed and entering his house, we returned his friendly greeting. Then he addressed us in these words:

'The ancient kings of this realm granted great and far-reaching privileges to this borough, so that we might the more securely protect our small island from injury. It is given to me (being at this time entrusted with the public protection of this place), to find out the cause of your journey to this island of ours. It is not that I see anything in you to give me grounds for suspicion, but because it has always been our conviction that it is not in accordance with the duties of our Mayors to allow so great a number of men to stay here without knowing their motives. Tell us therefore in all friendliness your plans in coming over.'

Then briefly answered John Buggs – for this business had been given to him:

'Sir, I will expound to you the reason for our journey, though it is scarcely worthy of your attention. We are attached to the study of the science and material resources of medicine. That is why we have come to this place to discover the rare plants that grow here in your island. This, and for no other reason, is why we have completed this great journey from London as far as this on foot.'

Then Master Styles said:

'Another reason besides that stated by my colleague has influenced me – to have the opportunity of seeing a man of such merit as yourself, especially as I know you are so knowledgeable in maritime matters' (for he was a Captain of the Royal Fleet). 'It is especially agreeable to me to become acquainted with so eminent a man.'

So by these and suchlike words the Mayor was entirely satisfied.⁴ He discoursed briefly about medical and naval affairs; he offered us some excellent beer and, as is customary, drank our healths. Encouraged by this geniality we thanked him, left his village, and gathered at the Castle, once very strongly fortified, the work of King Edward the Third....

We left the Castle on whose summit we collected *Asplenium ruta-muraria* (Wall-rue); we then went quickly to the seashore and to our usual task; and on the way we collected: *Atriplex portulacoides* (Sea-purslane); probably *Spartina maritima* (Small Cord-grass); probably *Salicornia ramosissima* (Purple Glasswort); *Suaeda maritima* (Annual Sea-blite); *Limbarda crithmoides* (Golden-samphire); *Atriplex* sp. (Orache).

On the shore itself grew: *Crambe maritima* (Sea-kale); *Glaucium flavum* (Yellow Horned-poppy); *Cochlearia anglica* (English Scurvygrass); *Euphorbia paralias* (Sea Spurge); *Honckenya peploides* (Sea Sandwort); *Spergularia* sp.; *Eryngium maritimum* (Sea-holly)...[Whilst most, if not all, of these species may still be found on Sheppey, the shell-sand beaches which the party is likely to have encountered around Sheerness have been affected by dock development and are now better represented at Leysdown/Shellness. There is still a small shingle beach with some sand/shell content to the east of Garrison Point, Sheerness, and one plant of *Crambe maritima* (August 2020)!]

Then, hiring a small vessel, we set course to the Isle of Grain opposite to us; and after leaving the little ship we walked five or six miles without seeing anything which could give us any pleasure. The road ran along the water's edge and in the heat of the day we were tormented like Tantalus with a misery of thirst in the midst of waters (for they were salty). We were equally affected with hunger in that barbarous wilderness where there was no town nearby, no smoke to be seen, no barking of dogs to be heard, none of the usual sight of habitation by which we could raise some hope for our fainting spirits. But at last we overcame our difficulties and, faint for weariness, arrived at Stoke. Once dinner had been prepared and served, the whole company (with the exception of Styles and me) boarded a brewer's dray travelling to Rochester. So we, the remainder of the company (now that we had entrusted our colleagues, ensconced among the barrels in the wagon, to the care of the drivers), set out from Stoke through High Halstow and the hamlet of Cooling and a castle of that name now ruined by age, and made our way to Cliffe. [Johnson and Styles diligently recorded on the way, but the party was now split up and the others returned to London separately, except for Thomas Wallis, who caught up with Johnson and Styles at Gravesend, from which they returned to the Bull at Dartford on hired horses. They then botanised both chalky and heathy areas around Dartford, taking supper with the vicar of Dartford (probably a relative of Thomas Wallis). The next day they travelled on to Erith, where they hired a boat to London.]

James Sherard and James Petiver, 1714

James Sherard (brother of William Sherard, after whom *Sherardia* is named) was trained as an apothecary and built up a

⁴ So this exchange of courtesies brought about a satisfactory outcome, where the islanders' suspicion of newcomers could be assuaged. The mismatch between Queenborough's pretensions and its reality was also apparent to Daniel Defoe, less than a century later, when he wrote in *A tour thro' the Whole Island of Great Britain* that it was 'a town memorable for nothing, but that which is rather a dishonour to our country than otherwise: Namely, Queenborough, a miserable, dirty, decay'd, poor, pitiful, fishing town; yet vested with corporation privileges, has a mayor, aldermen etc. and his worship the mayor has his mace carry'd before him to church, and attended in as much state and ceremony as the mayor of a town twenty times as good: I remember when I was there, Mr. Mayor was a butcher, and brought us a shoulder of mutton to our inn in person, which we bespoke for our dinner, and afterwards he sat down and drank a bottle of wine with us.'

a very successful London medical practice. This would have required good botanical knowledge, but his interest increased, as indicated in a letter from 1716:

'of late the love of Botany has so far prevailed, as to divert my mind from things I formerly thought more material [this may refer to music: he was an accomplished violinist and composer], and has put me upon making excursions into the country some distance from London, where I have met with a great many of Mr. Ray's Topical Plants upon the spot, and some few not known before to grow in England...Mr. Petiver and Mr. Rand have hitherto been so kind as to go out sometimes for ten or twelve days with me...'.⁵

Sherard acquired a property in Eltham where he cultivated an extraordinary range of rare and exotic plants: it became known as one of the finest gardens in England.

James Petiver (a kinsman of Sherard, although the nature of the relationship is not known) is being celebrated by the Royal Society (see <https://royalsociety.org/blog/2020/05/remembering-james-petiver/>), marking the 300th anniversary of his death in 1718. He was a London apothecary who assembled a global network of contributors of natural history specimens. An analysis of Petiver's plants in Sir Han Sloane's herbarium in the Natural History Museum suggests that there are over 21,000 gatherings by him.⁶

August 15th, 1714⁷. – Soon after four o'clock this afternoon Mr. Sherard (James) and I (James Petiver) left London by Bromley Riverhead, Maram's Court,⁸ for Sevenoaks, where we halted for the night.

Dr Fuller's house and garden, 1719

August 16th. – About eight o'clock this morning we visited Dr.Fuller⁹, where we were courteously received and hospitably entertained. In the Doctor's garden we saw many choice and curious plants, and from his summer-house, which is an octagonal structure erected on an artificial eminence, we had fair prospects of the grand family-seat of the Earls of Dorset, Knowle, with its park, woods and trees, and extensive views of the surrounding country. The Doctor regaled us with cold venison, pastry, and extraordinary good strong beer. [They reached Tunbridge Wells by noon, thence into Sussex, only returning into Kent on August 20th by chaise via Camber Sands.]



August 20th. – We then drove on the sands, between the beach and the sea, for two miles, and then entered Romney Marsh. In six or seven miles we came to Lyd, a pretty market-town; the roads were extraordinarily good, and the fields all thereabout overspread with *Caryophyl. marinus* [*Armeria maritima*].

About three miles further we baited at New Romney...From hence we had eleven miles, some parts very sandy, and other parts very stony, upon the banks of the sea to Hythe, where we dined and went to the beach, but could find little worth our notice in the marshes between the town and the beach, where we met with *Anthoxanthum* [*Rumex maritimus*], and in the street near the church *Mercurialis* [*annua*]...Here we first observed *Cannabis sativa*, but afterwards very frequently in E. Kent¹⁰. After dinner we travelled two miles to Sandowne Castle. *Zyris* [*Iris foetidissima*?] grows plentifully all thereabouts, and mounting the hills we met with *Rubia cynanchia* [*Asperula cynanchia*].

In two miles we came to Folkestone, a base rugged town, inhabited chiefly by fishermen; thence we had seven miles by the downs and cliffs to Dover. From these cliffs we could easily see the coast of France, though late in the evening. We lay at the King's Head at Dover Pier.

⁵ J. Nichols (1817), *Illustrations of the literary history of the eighteenth century*, vol. 1, pp.403-4.

⁶ C.E. Jarvis (2019). 'The most common grass, rush, moss, fern, thistles, thorns or vilest weeds you can find': James Petiver's plants. *Notes and Records* (Royal Society) **74** (2): 303-328.

⁷ The text of Petiver's account is taken from a transcription published in *Phytologist* (1862) **6**: 114-120, to which notes have been added, and modern versions of plant names.

⁸ This was the standard route from London, the Bromley road descending the North Downs via Knockholt and Star Hill (Morants Court Hill, alias Maram's Court).

⁹ Both being eminent physicians, it is not surprising that Sherard and Fuller may have had a degree of acquaintance. Dr. Thomas Fuller lived and practised at The Red House, Sevenoaks High Street, now solicitors' offices. He published various collections of prescriptions, including in 1710 an English edition of his *Pharmacopoeia Extemporanea*. As would then be normal, it included many plant-based receipts, e.g. for a Stupor or Sleepiness, one should take 'white Bryony Root new digged up (or if it be dried, then the powder of it', adding black soap, pickled herrings and salt; and binding these ingredients as a cataplasm 'to the Soles of the Feet, and changed every 12 Hours'.

¹⁰ Cannabis was grown for the fibres, to make rope and textiles.

August 21st. – We visited the cliffs and found *Limonium minus* [the Dover form of *Limonium binervosum* agg.], *Brassica arborea* [oleracea], *Crithmum*, *Gentianella*, *Orchis*, [Calystegia] *Soldanella*; on the cliff from the east, *Lychnis Dubrensis* [the Dover form of *Silene nutans*], *Verbascum flo. amplo* [a *Verbascum* with great flowers], and in the cornfields, going up to the castle, *Mercurialis [annua]* among the corn. *Rubia Cynanchia* [*Asperula cynanchia*] on this side of the castle hill. On the beach and seashore we gathered *Brassica monosperma* [*Crambe maritima*]. At noon we returned to our lodgings, where a friend was to dine with us. In the evening we went to Knowlton Place, one of the seats of Thomas D'Eath, Esq., about eight to nine miles from miles from Dover...

August 22nd. – We spent this day at Knowlton, where we met not only with a very kind and hearty reception, but most gentle and generous entertainment. The house is noble and large, and when the alterations now making are completed, it may vie with most seats in this part of Kent...

In the evening we took a turn into the woods, where on the right-hand of the walk, by the parson's house, we found *Helleboraster* [*Helleborus viridis*]. *Herba Paris* we were informed grows here, but we could find no remains of it. Here it must be very good simpling¹¹ in the woods and groves, but also on the banks of the chalk pits and hollow ways, where we found the remains of a great many scarce plants. The corn fields produce a sort of *Ladanum* [a hemp-nettle, possibly *Galeopsis ladanum*, for which this would be the only Kent record, but more likely *G. angustifolia*, then a wide-spread arable weed], so large that it seems a sort different to that about London....

August 23rd. – This morning Mr. D'Eath was so kind as to give us his company to Deal, about six miles from Knowlton. By the way we found *Vinca pervinca major*. From Deal we sent our servant before, and kept near the sea, in order to walk four or five miles to Sandwich. On the sandy downs near Sandowne Castle we met with *Oleaster* [*Hippophae rhamnoides*] and the *Salix* [*S. arenaria?*] mentioned by Mr. Ray, *Anonis mar.* [*Ononis repens*], *Kali spinosa* [*Salsola kali*], *Eryngo mar.* [*Eryngium maritimum*], *Junc. capitulis*, *Sorghi* [*Juncus acutus*],¹² *Ononis spinosa*.



Ononis repens (Common Restharrow), from James Sherard's garden at Eltham, pictured in Dillenius, J.J. (1732) *Hortus Elthamensis*

The whole downs are covered with *Spartium* [*Cytisus scoparius*], a great quantity of which we saw laid to dry on the beach, in order to make Bas belts¹³. After a tiresome walk we came to Sandwich, where on the walls of the town we observed *Matricaria flore albo*.

After dinner we crossed into the Isle of Thanet. Near the ferry we found in great quantity *Halimus capsulis cordatis* [*Atriplex pedunculata*], *Bupleurum*, etc.¹⁴ On our return, we found a servant of Mr. D'Eath's attending at our inn to conduct us to his house that night again.

August 24th. – Left Mr. D'Eath, and in eight or nine miles reached Canterbury, and stayed an hour or two to see the town and cathedral. On top of the church walls we saw very large *Trichomanes*. Nine miles further reached Faversham, where we dined. We observed [*Sambucus*] *Ebulus* plentifully near a town¹⁵ about three miles before we came to Faversham, and [*Campanula*] *Trachelium majus* by the roadside for twenty miles.

At Faversham we went to the marshes, intending to visit the seashores, and would have gone to Sheppey¹⁶, but by mistake we took the wrong side of the river and had to return again *re infecta*¹⁷, by reason of impassable ditches. We found *Peucedanum officinale*, *Statice Limonium* [*Limonium vulgare*], *Aster Tripolium*, etc.

In the evening, six or seven miles furth to Sittingbourne, where we lay that night. By the way to Beacon Hill we found *Triorchis* [*Spiranthes spiralis*] in plenty and *Linum angustifolium* [*Linum bienne*].

¹¹ Suitability for the gathering of herbs for medicinal purposes.

¹² It is possible, depending upon how one interprets reference to a rush near Sandwich in Johnson's *Descriptio Itineris* (1632) that this may be the first Kent record for this species, although the odds are in favour of Johnson.

¹³ 'Bas' relates to plant fibres, and those derived from broom are capable of being used in textile manufacture.

¹⁴ Until a bridge crossing was constructed (which was begun in 1759, following an Act of Parliament in 1755), the nearest way of reaching Thanet from Sandwich was to take a ferry across the Stour, which accessed a 'horse road' via Stonar towards Ebbsfleet. Evidently the saline ditches and saltmarshes here were favourable for *Atriplex pedunculata*, last seen in the Ebbsfleet area in 1924 or 1930, regarded as extinct in the British Isles from 1938, but refound in Essex in 1987 and Critically Endangered.

¹⁵ Doubtless Boughton Street, where *Sambucus ebulus* still grows.

¹⁶ Presumably via Harty ferry.

¹⁷ Without having fulfilled what was intended.

August 25th. – On the road to Rochester we gathered *Saponaria* [*officinalis*], *Mentha spicata glabra*. We also saw frequently *Hieracium majus* [? *Sonchus arvensis*], and on the hill before we came to Chatham *Gentianella* [*amarella*], *Rubia Cynanchia* [*Asperula cynanchia*] in great plenty, and on Rochester Castle *Caryophyllus simplex flore minore* [*Dianthus caryophyllus*].¹⁸

At Northfleet we dined, and about the chalk hills met good store of *Gentianella* very large and also *Conyza flor. ferruginea*; *Foeniculum* [*vulgare*] and *Sinapi siliquis* [*Brassica nigra*], and hoped to find *Orchis flore glomerata* [*Anacamptis pyramidalis*?], but were too late for this and other scarce and curious plants. This night we finished our journey.

On the banks of the deep way, near the gravel-pits on Blackheath, we observed *Hyacinthus* [*Scilla*] *autumnalis*¹⁹ in seed, and the flowers all gone.

Botanical Society of London, 1838

The Botanical Society of London was established in 1836 by a meeting of “the Practical Botanists” at the Crown and Anchor Tavern, Strand and numbered 100 members by 1838, having formed a herbarium, library and museum. Membership cost one guinea a year, half for corresponding members, and ladies were admitted on the same terms as gentleman. Most of the Society’s activities appeared to be indoor meetings at which papers were read out, but there were excursions, including one in 1838 which was written up as a *Botanical Excursion to Cobham and Cuxton, Kent* undertaken by several members:

On the first of these excursions I proceeded from Woolwich by way of Plumstead-Common, Welling, Bexley, Crayford, Dartford Heath, Wilmington, Sutton at Hone, Darent, Stone and Northfleet; and on the second, when I had the pleasure of being accompanied throughout by our Curator²⁰, our route was by way of Plumstead Marshes, Wickham, Welling, Dartford, Darent, Longfield Hill, and Merstead [= *Nurstead*?] to Cobham....

Polypogon Monspeliensis [*Annual Beard-grass*]. We found this rare and beautiful grass growing abundantly on the banks of ditches, and in boggy places in the Marshes East of Woolwich, particularly in front (i.e.) south of the Butt or Mound in the Plumstead Practice-ground.

Polypogon littoralis [not then recognised for what it is, the hybrid between *Polypogon* and *Agrostis stolonifera*, *Creeping Bent*.] “Near the Magazine, four miles below Woolwich,” has often been referred to as one of the few places for producing this species, and Sowerby has figured a specimen from that locality; I have, however, often searched for it there in vain, and was therefore greatly delighted at finding it associated with the former species in the bay, immediately in front of the Butt to which I have before alluded.....

“*Polypogon littoralis*” from Sowerby’s *English Botany 1791-1814*.

On Dartford Heath, *Ulex nanus* [*minor*] and *Genista anglica* were seen between the Folly House and Wilmington Workhouse²¹, and *Bupleurum rotundifolium* on the other side of a lane between Mount Pleasant²² and Northhell’s Farm, both near Wilmington. Passing from this lane towards Sutton Church through some chalky corn-fields called the Hollow Denes, I observed *Foedia* [*Valerianella*] *dentata*, *Bromus erectus* [*Bromopsis erecta*] and *secalinus*, *Agrostis* [*Apera*] *spica-venti*, *Plantago media*, *Linaria minor* [*Chaenorhinum minus*], *L. [Kickxia] elatine* and *L.*

[*Kickxia*] *spuria*, *Euphorbia exigua*, *Cistus Helianthemum* [*Helianthemum nummularium*], *Adonis autumnalis* [*annua*] and *Ajuga chamaepitys*, all of them common plants in the neighbourhood.²³



In addition to most of these, *Galium tricorne*, *Anagallis caerulea* [*Lysimachia foemina* or *L. arvensis* var. *azurea*], *Papaver hybridum* [*Roemeria hybrida*] and *somniferum*, were also found in the first corn-field to the left of the Fox and Hounds²⁴ at

¹⁸ Clove Pink had been known here since 1666 and survived until very recently indeed, until exterminated by English Heritage conservation works.

¹⁹ Last seen here (and in Kent generally) in 1884.

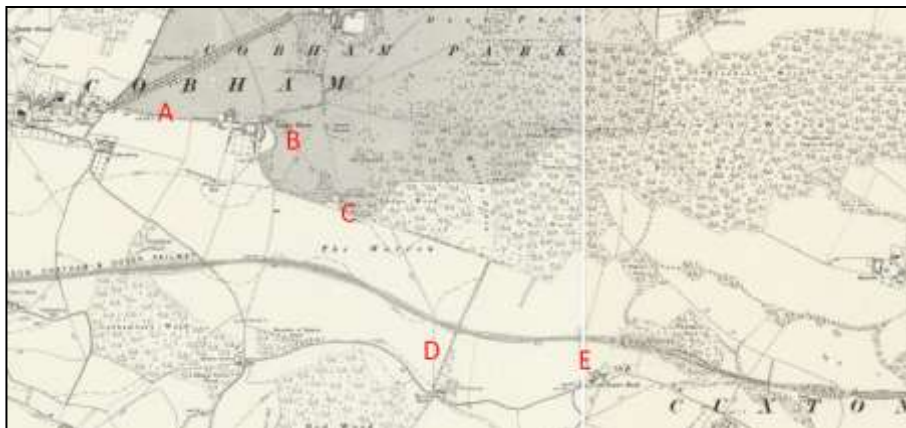
²⁰ Daniel Cooper, author of *Flora Metropolitana or Botanical Rambles within thirty miles of London*, 1836.

²¹ The workhouse was in Common Lane, and so not far from the still-known site for *Genista*; *Ulex minor* is also still present.

²² This was at the junction of Barn End Lane and Shirehall Road.

²³ Common no longer(!) although *Chaenorhinum*, *Kickxia* and *Plantago* might be findable.

Darent Lane's End, while the wood above this field afforded *Astragalus glycyphyllus*, *Asperula Cynanchia* and *Rubus caesius*? on its borders. Leaving this productive spot, and returning to the high road, we saw the white cliffs of Northfleet varied with the red and yellow flowers of *Valeriana rubra* [*Centrathus ruber*] and *Crepis biennis*.



This map represents a conjectural reconstruction of first excursion route to find *Salvia pratensis*. The railway line would not then have been present.

The approach of night prevented my observing any other plants between Northfleet and Cobham; but the following day, in company with several members, we found *Brachypodium pinnatum* and *Dianthus Armeria* on the side of the road leading from Cobham to the Park [A on map]; and crossing the Park by the first path on the right [B on map], we entered the small copse by which this portion of it is skirted, and about a chalk pit [C on map] near the gate observed *Bromus erectus*, *Orchis* [*Gymnadenia*] *conopsea*, *Listera* [*Neottia*] *ovata*, *Astragalus glycyphyllus*, and a variety of *Origanum vulgare* with white flowers, and in the field below *Papaver hybridum* and *somniferum*, with *Bupleurum rotundifolium* and *Foedia dentata*, while the hedge bordering this field afforded *Rosa spinosissima* and *Campanula trachelium*²⁵. Leaving this field and passing by the footpath towards Cuxton, we found in the field above the lodge [D on the map]²⁶ near the style adjoining the high road, so much of the *Brachypodium pinnatum* that the turf was coloured of a beautiful pale green by its abundance, and on the bank bordering the corn-fields at the back of the lodge, *Atropa Belladonna* and *Marrubium vulgare* occurred plentifully.

In a hilly field immediately behind Brick House Farm [E on the map] on the Cuxton Road, which has recently been converted into a fir plantation, we found *Salvia pratensis* and *Rosa Rubiginosa*, particularly at the upper part of the field about forty paces from the hedge bordering it on the left. All over this field *Campanula glomerata* and *Chlora* [*Blackstonia*] *perfoliata* were abundant..

Following the line of road pursued in our second excursion, I may remark that...we found...at Cobham, *Althaea hirsuta* and *Salvia pratensis* in a different spot to that formerly described...

"Near the junction of the three parishes of Cobham, Cuxton and Stroud" has long been the direction given for finding these rare plants. Its inefficiency is proved by the circumstance of five individuals who were present in our first excursion having sought for it in this direction in vain, I shall therefore note the line of road by which we discovered them. Entering the Park by the gate nearest to Cobham, we passed by the road near the Mausoleum to the large beech tree which forms the point of junction of the three parishes I have named, following this road to the border of the wood, we inclined to the right, along the upper edge of the field to which it leads, and here in a spot directly North of Cuxton Church, both plants occurred in abundance.

[This second route is evidently not the same as than that given for the first excursion, and not so readily identified, in spite of the pains taken by the author of the account, who was much vexed by the difficulties of working out plant locations. How much he would have appreciated the assistance of GPS!]

The very general and indefinite manner in which our Florae refer to the localities producing the plants they describe, has rendered a more particular and exact directory necessary for the purposes of the practical student, whose object is not merely to amass a certain number of species, but also personally to visit and investigate the locality in which each is produced.... everyone...who like myself has often spent hours in the unsuccessful search after plants whose place of growth is described in some such general terms as "Tonbridge Wells", "about Dartford" or "between Cobham and Cuxton,"

²⁴ The Fox and Hounds, which ceased trading in 2011 afterwards becoming a small housing estate, was on Green Street Green Road near its junction with Darenth Hill, along which this journey must have been made, from Sutton-at-Hone Church. The wood above is part of Darenth Wood.

²⁵ *Rosa* and *Campanula* are still at Mill Hill Wood; *Bupleurum* has long been extinct as a Kent arable weed.

²⁶ It is assumed that Warren House, the game-keeper's dwelling, is here called the lodge.

will at once admit, that with reference to those plants which occur only in one or two localities, even those directions are by no means sufficiently precise and exact.

And I would ask, why is not the habitat of a plant pointed out with as much precision as the position of a rock? and why is not the former discovered by the Botanist as readily as the latter is avoided by the navigator. It is simply because the Botanist has hitherto been contented with a mere verbal description of the locality to which he referred, while the mariner has by means of a compass laid down on his chart, the exact relation of the spot he describes to some of the known objects by which it is surrounded, and by which it may certainly be recognized by subsequent observers.

These remarks ...were suggested to me by the difficulty we experienced in discovering the *Althaea hirsuta* and *Salvia pratensis* in our late excursions to Cobham, and I have been induced to contrast their inaccuracy with that of the mariner, in order more clearly to point out the advantages which would result from making the compass the companion of the vasculum, and to justify me in suggesting that in all our future attempts to describe localities we should carefully select two of the more conspicuous objects in the neighbourhood, and accurately note their relation (as ascertained by the magnetic needle) to the spot described.

(ed.) Geoffrey Kitchener

Kent Biodiversity Strategy plants

We are currently giving special attention to the monitoring of these plants, i.e. *Carex vulpina* (True Fox-sedge), *Orchis purpurea* (Lady Orchid) and *Polygala amarella* (Dwarf or Kentish Milkwort). See why, at p26 below. Our *Carex vulpina* progress is being assessed. We have a report below for *Orchis purpurea*. As for *Polygala amarella*, this was searched for by Joyce Pitt and Geoffrey Kitchener at Magpie Bottom; its usual site was becoming overgrown and the ground was very dry – no plants were seen. It was present at Purple Hill, but the survey was incomplete and a repeat visit with The Species Recovery Trust could not be organised in time.

Will you sign up for 2021 recording?

Orchis purpurea (Lady Orchid) monitoring report 2020

Fortunately, the strict lockdown measures eased in May just in time to allow for some Lady Orchid sites to be visited by those of us who live reasonably near. The main purpose of the survey is to collect data on the population size of at least 20 of the larger colonies in Kent over a 5-year period. We agreed to take this on under KCC's Kent Biodiversity Strategy. We also regard it as an opportunity to try to learn more about this most iconic of Kent plants which is suspected of being in gradual decline.

With that in mind the recording form has additional space to record type of habitat, associated species, degree of shading, number of non-flowering (blind) plants, evidence of rabbit or slug grazing, current state and management etc. We hope to gain some useful information about the species and its requirements so that we might consider it sufficiently worthwhile to continue over a 10-year period with at least the larger sites visited every year or two.

[Ladies on the street: Palmstead](#)

With this spring's hot and dry weather, the first site to get a visit was a steep slope in woodland on Burham Down where Daphne Mills counted 307 plants on May 5th in four scattered sites. 168 were flowering and the remainder were blind with evidence that trampling in the area may be affecting the colony. A previous population count on this site was similar.

My first visit was to Bonsai Bank on May 18th where, armed with the kind of gadget that airline stewards have for counting people onto planes, I came up with a count of 1,550 flowering spikes and probably at least twice that many blind rosettes. I won't forget the pleasure of being with all those lovely ladies in the sunshine and not a thought of social distancing! In 2013 Alfie Gay counted 3,481.



At Yockletts Bank *Orchis purpurea* thrives in its full variety of habitat types. On the northern part of the reserve plants were flowering out in the open and around the margins of a sunny sloping glade (although not so many this year as I can remember there in the past). They were accompanied by typical chalk grassland species. Many orchids had been bitten off by rabbits. In the southern part of the reserve, by way of contrast, very tall robust Ladies were flowering in poor light under mature beech trees with little more than dead leaves for company. I found the largest number of flowering spikes amidst a great sea of Dog's Mercury and Ivy under lighter shade from Ash and Sycamore. I counted a total of 320 flowering spikes from the range of habitats.



Ladies in the shade: Yockletts Bank



Despite a very busy work schedule Alfie Gay was able to visit three sites on the Wye Downs NNR and come up with a total of 34 flowering plants. He also surveyed a colony at Covet Wood where Lady Orchids grow in a mature beech plantation with Fly Orchid, Bird's-nest Orchid and White Helleborines. This colony has fluctuated dramatically over the past 30 years: in the 1990s up to 3,000 flowering plants were recorded in some years by Francis Rose, but numbers crashed for a period from 2007 to 2012 when very few Lady Orchids were known to flower. There has been a partial recovery in recent years, with Alfie's count this year of 361 flowering Lady Orchids comparing to an estimate of 200 flowering plants in 2019, and a count of 426 flowering plants in 2018.

Ladies in the sun: Bonsai Bank

The chart shows all of the sites visited this year and the number of flowering spikes counted. Bearing in mind that we have just over 100 locations where *O. purpurea* has been recorded in the county, I welcome any assistance from

KBRG members with this project, especially with the larger colonies. You'll notice that well known sites such as at Ranscombe, Bredhurst Woods, Stockbury Hill, etc. were not visited with recording forms this year and there are very many locations where just a few plants have been found or where there are no recent records at all. In putting a list of sites together it was apparent that data on the size of the Kent colonies is very patchy and post-2010 confirmation of some is required. **If you think you can help by visiting a site or sites next year please let me know and I will e-mail the full list with grid references and data going back to 1970 for each and a simple recording form.** Then you can look forward to next May and enjoying being in the company of some lovely Ladies.

Sue Buckingham

Sites visited in 2020

Tetrad	Site	No. of plants counted	Recorded counts since 1970
TQ46Q	Rushmore Hill and Lattice Coppice	0	Last records from 2 separate sites dated 1991 & 1987-99
TQ76G	Burham Downs	168 flowering + 139 blind	285 plants in 2013, half flowering
TR04U	Warren Wood east	18 flowering + 2 blind	40-50 recorded in 2010
TR04U	Warren Wood west	4 flowering + 10 blind	Small colony remaining
TR04X	Wye Downs	34 flowering	Scattered colonies
TR14H	Spong Wood	7 flowering	Small colony remaining
TR14I	Yockletts Banks	320 flowering + >100 blind	505 flowering plants in 2013.
TR14U	Palmstead/Lynsore Bottom	54 flowering + 9 blind	Roadside and wooded bank colony
TR14U	Covet Wood	361 flowering	Approx. 200 flowering plants in 2019, 426 flowering in 2018, up to 3000 flowering in the 1990s.
TR15	Bonsai Bank	1550 flowering + >2,000 blind	3481 counted (A. Gay) in 2013
TR15	Denge Wood (Woodland Trust)	34 flowering + >20 blind	A population just north of Bonsai Bank & might be included with it.
TR15	Whitehill Wood	4 flowering	Small colony remaining
TR24	Cannon Wood	33 flowering + 17 blind	400 flowering plants in 2003

Recording Common Knapweed in Kent (and Hertfordshire!)

Our Common Knapweed illustrates how difficult it is sometimes to be sure what is or is not a species. Current treatment recognises *Centaurea nigra* (Common Knapweed) as a grassland species of heavier soils, but distinguishable from *C. debeauxii* (formerly *C. nemoralis*, or *C. nigra* subsp. *nemoralis*), which is called Chalk Knapweed, but actually is not confined to chalk. Also in this mix, sometimes, is the introduced species, *C. jacea* (Brown Knapweed), whose genes may survive in hybrid populations. Eric Philp, in *A New Atlas of the Kent Flora* (2010) considered that there was a whole range of intermediates between the named taxa in Kent, and so just mapped the Common and Chalk Knapweeds together, all under *C. nigra*. That was the current practice, but in 2010 the publication of Clive Stace's *New Flora of the British Isles* revived the separation of these two as distinct species.

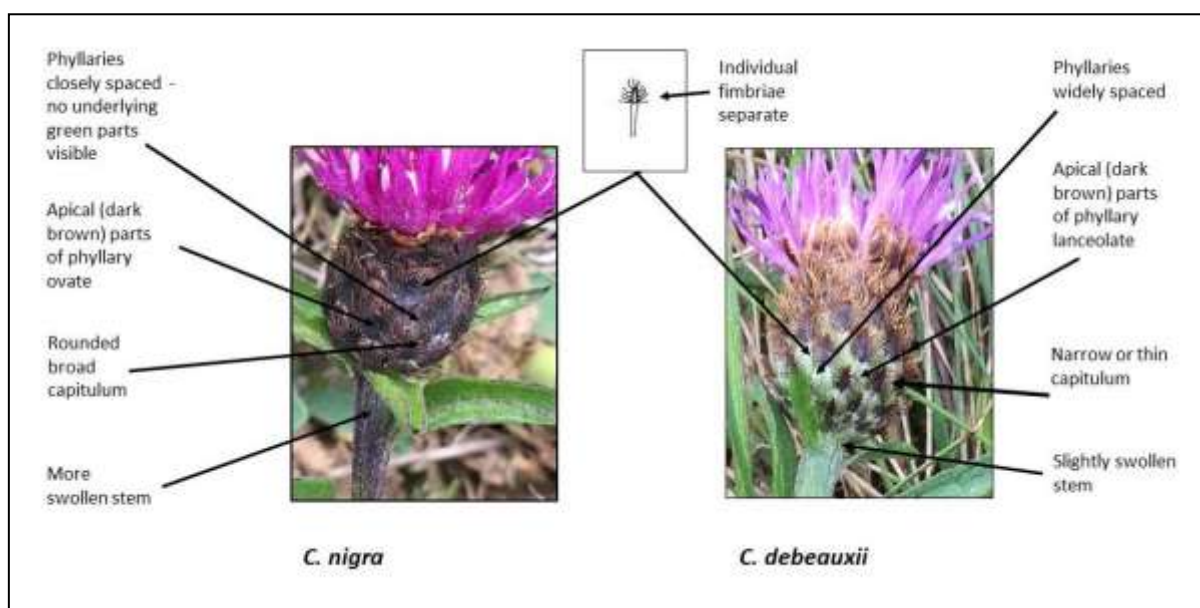
The way we have coped with this since is to record *C. nigra* and *C. debeauxii* as separate species when we are confident about the plant's identity (or can be bothered to distinguish!); but otherwise record as *C. nigra* agg. (i.e. the plant is part of the aggregate of the two species and their hybrids). So from 2010 to October 2020, our county database has 1481 *C. nigra* agg. records, 129 *C. debeauxii* and 389 *C. nigra*. As over 40% of the *C. nigra* total was for 2010-11, when we were just realising that the New Flora of the British Isles had split off *C. debeauxii* from *C. nigra*, it is probable that many of those 2010-11 records didn't distinguish between them, and should have been *C. nigra* agg. So the overwhelming majority of our 2010-20 records are just vague Common Knapweed records.

If you look at the key in *The New Flora of the British Isles*, it all looks so straightforward!

- Capitula (excl. flowers) mostly 15-20mm across; peduncles markedly swollen immediately under the capitula; central undivided part of each phyllary ovate in shape: **C. nigra**.
- Capitula (excl. flowers) mostly 9-14mm across; peduncles slightly swollen immediately under the capitula; central undivided part of each phyllary lanceolate in shape: **C. debeauxii**.

And yet, time and again, in the field, the plants do not seem quite to match up fully. This is partly due to fuzzy species boundaries; but it also looks as though there is extensive hybridisation between the species which obscures the overall picture.

Margaret Harris looked at this problem in Hertfordshire as part of her MSc dissertation and published her findings (M. Harris (2017) A morphological analysis of *Centaurea nigra* and its associated taxa in Hertfordshire, *New Journal of Botany* 7: 169-181). She followed this up with another paper, *Centaurea nigra* – not so common in Hertfordshire? in *Transactions of the Hertfordshire Natural History Society* (2018) 50(1): 48-57. Jacky Langton has kindly arranged with Margaret and the HNHS for permission to quote from this last paper, which is very illuminating about how to go about separating species and hybrids.



The species, at their most typical, are well shown by Margaret's photos (above), with *C. nigra* generally flowering June-July and *C. debeauxii* late July - September. But because of wide variability within some populations, there is a case for sampling in order to get a better understanding of what is present. This is the recommended approach.

1. Select a minimum of 10 plants, at least 2m from each other.
2. Sample the terminal capitulum of each plant.
3. Measure the spacing of the phyllaries (these are the scales on the side of the 'hardhead') **on the third row from the base** using the lower row of the following scale

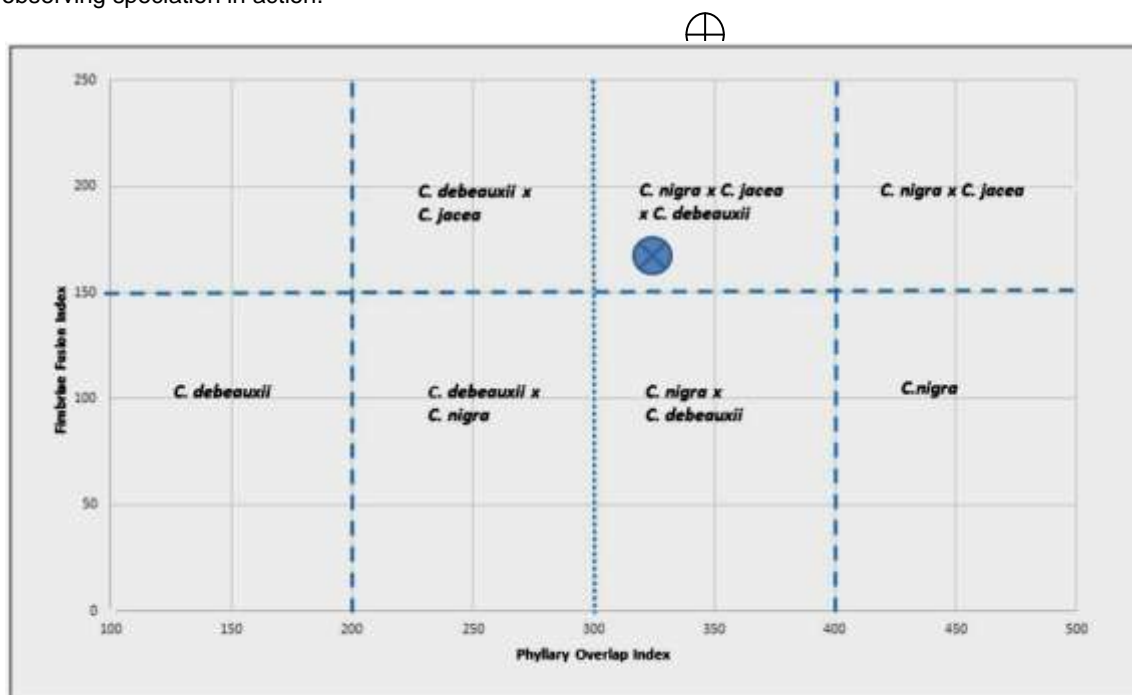
	1	2	3	4	5	6	7
Fimbriae Fusion							
	None	Few fused	Most fused at base	Most fused, some to half way	Some fused more than half way	Most fused over half way	Margins almost entire
Phyllary Overlap							
	None	Touching	Partial Overlap	Overlap	Complete Overlap		

4. Measure the degree of fusion of the fimbriae (these are the fringes) for phyllaries **on the third row from the base** using the top row of the scale.
5. Insert results in the table below, which has been filled in by way of example. In the example, the 10 specimens were assessed so that in column B, only one capitulum matches scale 1 for phyllary spacing (and so this was 10% of the population sample for insertion in column C); two matched scale 2 (and so were 20% of the population sample); and so on. Similarly, in column F, five capitula match scale 1 for fimbriae fusion (and amount to 50% of the population sample for column G); and so on.

Phyllary spacing				Fimbriae fusion			
A	B	C	D	E	F	G	H
Scale	Capitula	% population	% x scale (A x C)	Scale	Capitula	% population	% x scale (E x G)
1	1	10	1 x 10 = 10	1	5	50	1 x 50 = 50
2	2	20	2 x 20 = 40	2	3	30	2 x 30 = 60
3	3	30	3 x 30 = 90	3	2	20	3 x 20 = 60
4	2	20	4 x 20 = 80	4	0	0	0
5	2	20	5 x 20 = 100	5	0	0	0
				6	0	0	0
				7	0	0	0
Total col. D =			320	Total col. H =			170

6. Complete the table by multiplying each of the entries for columns A and C to produce the column D entries. Do the same for columns F and G to produce H.
7. Take your totals from columns D (**the phyllary overlap index**) and H (**the fimbriae fusion index**). Scores below 200 on the phyllary overlap index indicate *C. debeauxii*. Less than 175 would be consistent with the chalk downland ecotype. Scores above 400 indicate *C. nigra*. Populations lying between 200 and 400 on the phyllary overlap index are hybrid in character. Under 300 denotes a population closer to *C. debeauxii* (*C. debeauxii* x *C. nigra*) and above 300 will show *C. nigra* dominance (*C. nigra* x *C. debeauxii*). Scores above 150 in the fimbriae fusion index indicate the presence of *C. jacea* genes; the higher the score, the greater the degree of influence.
8. You can place your score as a dot on the following graph. In the example given in the table above, a score of 320 in the phyllary overlap index and 170 in the fimbriae fusion index appears as a dot in a graph box showing quite a complicated hybrid ancestry (*C. nigra* x *C. jacea* x *C. debeauxii*).

It would be interesting to see what using this technique suggests as regards knapweed populations in Kent. In Hertfordshire, nearly all populations assessed turned out to be hybrid, generally crosses between *C. nigra* and *C. debeauxii*. Indeed, there was only one Hertfordshire population with reasonably strong *C. nigra* characters. There were a few *C. debeauxii* populations on chalk, possibly maintained as relatively pure by their isolation. But the idea of purity of a species is our own construct, and the knapweeds seem not well differentiated as species in any event: we may be observing speciation in action.



Is anyone up for testing the Kent position!?

Thanks are due to Margaret Harris and the Hertfordshire Natural History Society for permission to quote from the 2018 paper, and to Jacky Langton for facilitating this.

Geoffrey Kitchener

Lockdown Botany

Botanising in 2020 was certainly very different! As the first (and only) field meeting assembled on 23 February at Cobham Manor Park, the unlucky 13th case of coronavirus in the UK was confirmed. By 16 March, with over 1,500 cases confirmed, the national advice was to avoid all non-essential travel and contact with others, and the most vulnerable were to shield themselves. New rules were announced on 23 March, effective from 26 March, with lockdown requiring that we stay at home, except for very limited purposes, including outdoor exercise. Whilst we have been confronted with a range of subspecies or varieties of lockdown, that most restrictive early version, before the ability to travel by car for exercising with a start point away from home became recognised, was the most challenging for botany. But it was memorable in letting us focus close to home and, with so many fine spring days, see the flowers develop over time. As Jan Armishaw put it, 'It has been wonderful seeing the flower seasons gradually unfold from the primroses and wood anemones, then bluebells to the profusion of Lady Orchids in Denge Wood'.

Exercise during lockdown brought a series of records from David Newman, as he cycled past (and noted) plants such as *Lathraea squamaria* (Toothwort), *Orchis mascula* (Early-purple Orchid), *Ranunculus auricomus* (Goldilocks Buttercup) and *Sanicula europaea* (Sanicle), giving particular attention to those growing where previously unrecorded.

Several members tried to nail dandelions down to species (after all, there are plenty of them each April, although usually ignored as too challenging). David Steere and Elizabeth Winterbourne had *Taraxacum gelertii* confirmed by the BSBI referee; Fred Rother found what was probably *Taraxacum pseudohamatum*, albeit without expert confirmation; and I came across *Taraxacum oxoniense*, a neat little plant growing on chalk downland.

Liam Rooney, being obliged by the pandemic measures to queue to go into a Faversham supermarket, used that opportunity to record a single plant of *Laphangium luteoalbum* (Jersey Cudweed) which was also distancing itself nearby. Rodney Burton has been taking the opportunity of lockdown to find what he can in four Eynsford monads, so as to be able

to compare with previous records from the same monads. What was most concerning to him was the apparent disappearance, one hopes not permanent, of *Saxifraga granulata* (Meadow Saxifrage) from Farningham churchyard (together with its 'conservation area' notice). But as a counter-balance to this, *Galium parisiense* (Wall Bedstraw) was doing better in Farningham than it has done for many years.

Sarah and I walked all the footpaths reachable from home and were particularly conscious of the flowering of the various violet species in sequence: *Viola odorata* (Sweet Violet) and its varieties (var. *odorata* and *dumetorum* being commonest with us); then *Viola reichenbachiana* (Early Dog-violet), followed by *Viola riviniana* (Common Dog-violet). There was also the occasional exceptionally floriferous patch of *Viola x bavarica* (*V. reichenbachiana* x *riviniana*) which seemed to keep going, frustrated by inability to set normal seed.

Viola x bavarica at Halstead. Photo by Sarah Kitchener

Other member activities are reported elsewhere in this newsletter, and more will be given in Kent Botany 2020, covering the full range of the year.

Geoffrey Kitchener



Plant portrait:

Polygala calcarea (Chalk Milkwort) in Kent

Polygala calcarea (Chalk Milkwort) is a delightful plant of chalk grassland, the flowers varying in colour but generally with us a very intense blue. This should stand out in late April/early May, a time when the bluebells are also beginning to open, but they do so generally on the clay-with-flints capping above the downs, with the milkwort on the chalk down slopes. It's not a rare plant register species, but it's a Kent axiophyte and so a worthy plant indicative of good habitat.

Magpie Bottom, photo by David Steere, 21 April 2019

It's one of those plants where, after ten years of KBRG recording, one can look back and say: yes, all well and good, but is there actually more of it around? This came home to me in the course of lockdown, when I looked at our records for 2010-19, shown here as monads



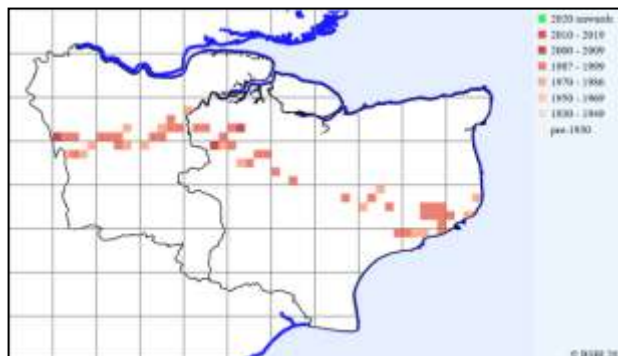
2010-19

If you compare these with tetrad records for 1970-2009 (below), then we seem to be missing a lot. The tetrad records partly look more substantial because they are bigger squares (we cannot compare with monads, as the latter weren't used much as a recording unit then); but clearly there were a great deal more of them.



1970-2009

Another view of the past is given by Francis Rose's manuscript Flora. For my local patch, the chalk country west of the Medway, he cited records at Darwin's Bank, Downe; below Hazel Wood, Cudham; near The Saltbox, Biggin Hill,; Downs N. of Pilgrim House, Westerham; Downs in Chevening Park; Downs below Polhill Arms, near the tunnel mouth; Morants Court Hill chalk pit; Downs W. of Shoreham; Timberden Bottom; The Nower, Brasted; E. of Lattice Coppice, Pratts Bottom; Betsoms Hill scarp; Knockholt (below Lattice Coppice, Rushmore Hill); Down E of Meopham ; Steels Wood/Downs SE of Meopham; S. of Beesfield, Farningham; Paddlesworth, Birling; S. of Meopham Green; High Castle Wood; Magpie Bottom; SE of Luddesdown; Coomb Hill, Meopham; Shoreham Rifle range; Cuxton; chalk turf S. of Great Wood, Cuxton; Southfleet; Cobham; Otford and Shoreham; Mount Ephraim, Snodland; Upper Halling Downs; Downs N of Crookhorn Wood, Snodland; Holborough Knoll, Snodland; Downs above Birling; Ryarsh; Near Pilgrim House, Trosley; E. of Wrotham; W of Wrotham; Downs N. of Kemsing village; Downs NE of Otford; E. of Shoreham Station; Preston Hill; E of Lower Austin Lodge, Eynsford.; Round Hill, Romney Street; Wrotham By Pass.



2020 only

As a list of what has at some time been chalk grassland, this is hard to beat! So as part of our lockdown exercise, Sarah and I started visiting west Kent chalk grassland. Some of the old sites had scrubbed over and were now woodland; some had suffered agricultural 'improvement'. But enough remained to produce a substantial spread of green monad squares on the map above. We even found some 'new' locations, not included in the 1970-2019 records



(new is probably a misnomer in that Chalk Milkwort appears to be a plant of ancient chalk grassland, so that it is more likely that it has missed being recorded than that it has colonised new territory).



Magpie Bottom, photo by David Steere, 21 April 2019

So, why is it being missed? Part of the answer is no doubt that all recording is a matter of sampling: you cannot be everywhere! Another answer is that it is all too easy to arrive at a site, record *Polygala vulgaris* (Common Milkwort) and then assume that all the rest of the *Polygala* there is the same species. Before one gets one's eye in, it is a painstaking process to examine each plant to see if it has the false rosette and somewhat obovate larger leaves going down the stem which characterise the Chalk Milkwort.

The distribution maps show a gap between populations in west / mid-Kent, and those in the far east near Dover. Francis Rose considered that:

'it seems to be absent from a stretch of chalk country 18 miles long from W. to E., between Westwell and Alkham. About Alkham and Dover *Polygala calcarea* is known in four stretches of downland, and is locally very abundant; but here it is a small, more or less prostrate, plant, with stems 1½ to 3 inches long, and smaller, paler, though still bright blue flowers, though white forms are rather common. The leaves are also smaller and thinner in texture than those of the mid- and west-Kent plant. It seems possible that this east Kent plant has been isolated for a long time, and is in the process of subspecific differentiation. It may have been derived from a population isolated on the coastal cliffs during the phase of maximum forest development.'

Our 2010-19 records have not shown clearly the current extent of that gap, and some spring recording might help clarify. Presumably Chalk Milkwort should still be recordable on the downs east of Maidstone to Westwell, e.g. at Charing Hill. And then does it pick up where previously seen at Wye Crown and the chalk valleys on the dip slope around Hastingleigh and Yockletts, where Francis Rose did not seem aware of it; and do plants there match the Alkham/Dover populations?

Pokeweeds like buses



Botanising in 2020 was certainly very different!

During lockdown in the spring I was cycling up into New Romney for provisions with Lorna when we rounded a corner and there was a large white flowered bush sprouting out of the junction of the base of the pavement and the boards of a plot of land. Always a good feeling – looking at a plant you recognise which is new or in my case just didn't recognise.

I was unfamiliar with the bush but it was distinctive and I was confident I could put a name to it later on. The sprig went in Lorna's bike basket and later I had keyed it out to Indian Pokeweed (*Phytolacca acinosa*). I kept an eye on it and checked the fruits several weeks later which are the distinctive feature here and, although they had not ripened and were not yet black, they had already developed on some branches.

Two months later another post-lockdown walk with Lorna, this time in Sandwich, and we were walking along the shared cycle lane adjoining houses and gardens by the River Stour – and there it was again, the Indian Pokeweed, sprouting out from the base of a wooden fence. This time it was very much in fruit, making identification easier.

There are three species of Pokeweed (*Phytolacca*) which are keyed in Stace and are on the BSBI database. Indian Pokeweed (*P. acinosa*) which can be identified through its non-fused carpels (see photo – these develop into distinct black drupelets) is the most widespread. It may be compared with the others which have smooth berries: American Pokeweed (*P. americana*), and the close relative Chinese Pokeweed (*P. polyandra*) which differ from each other in stamen numbers and arrangement and tepal size.

There are not many records (a light scatter) for East and West Kent of Indian Pokeweed (*P. acinosa*) and I don't think there are any Kent records for the other two species.²⁷

However, it is amazing how often you find a new species and then very quickly you come across it again in a new setting.



Owen Leyshon

Dry and droughty Dungeness – Autumn Lady's-tresses

The rainfall totals for Dungeness this spring and summer have been low (as I write this in early October and the rain is lashing on the windows) – with the six months from April to September recording 216.5mm compared to 252.5mm in 2019. Dungeness has experienced very long dry and hot weather this year, which has resulted in a brown and parched landscape across the area. These hot days and weeks have crisped up the shingle vegetation and as a result many late spring flowers just frazzled, namely clovers and trefoils and slightly later flowers like *Vicia lutea* (Yellow Vetch).

As a result, the late summer plants on Dungeness which are monitored like *Spiranthes spiralis* (Autumn Lady's-tresses) have collapsed and have seen a 90% decline. There are four areas where the Autumn Lady's-tresses are found on Dungeness Point within the National Nature Reserve and in 2019 up to 241 spikes were counted – while this autumn only 25 spikes. I looked at some literature while typing this small note and it is known the reasons are complex for the varying flowering numbers of this orchid, but mild winters and wet springs help the tresses. We had the mild winter, just not the wet spring. Research has found there are up to nine types of fungi associated with *Spiranthes spiralis* and a fungal root

²⁷ A record for *P. polyandra*, however, was reported in October and will appear in Kent Botany 2020. Records coming like buses, indeed!

associate is necessary for seed germination. So it is complex to look at the reasons for the fluctuating flowering numbers; it is not necessarily just climate; it is what is happening below in the earth and how the actual vegetation is changing as well.

As a result, to keep a shortish turf sward and help the rabbits out – we mowed and raked off the vegetation in one of the main areas on the Pilot Path at Dungeness with a lawnmower which I have done for a number of years now with volunteers. Fingers crossed for next year and some rain at that right time.

Conservation works at Dungeness. Photo by Owen Leyshon, October 2020

It would be interesting to find out what other places/lawns in Kent have fared this year for the orchid.

Owen Leyshon



Giant Viper's-bugloss contest

Giant Viper's-bugloss, *Echium pininana*, is native in La Palma in the Canaries where it has become very rare due to a decline in its natural habitat of native laurel forests. In Britain it is grown as a garden plant and particularly in mild coastal areas. After producing its spectacular spike of flowers many seedling plants occur in the vicinity of the parent. Reports of naturalised seedlings outside of gardens were mostly from the southwest but with milder winters, records have come from other parts of the country and last year there were two sightings of plants in Kent (see Kent Botany 2019). These were first and second records for East Kent, vc15.

In August 2018 Sue took some *Echium pininana* seedlings from a parent plant in her garden to a KBRG meeting at Chingley Wood, near Kildown, and they went out to first comers. The plants are either biennial or triennial and they managed to survive two winters in KBRG members' gardens before flowering this spring, when it was good to have some light relief. The flowers keep local bee populations happy for months before the whole plant dies. Sue's plant didn't survive the winter by the way, but she enjoyed progress reports and photos.

Owen's was tallest, final height of 13 feet. The ladder was to get an accurate measurement and he hadn't just fallen off!



Judith's finally reached 12 feet



Daphne's at 11 feet



Doug's at 10 feet 10 inches

Sue Buckingham

[Editor's note: I will have to claim the booby prize, with a greenhouse-grown plant flowering at only some 30cm high. However, an outdoor plant did reach 1.2m, having survived the depredations of deer, and growing at an inhospitable elevation of over 170m.]

The AGM that wasn't, March 2020

Regrettably, our AGM had to be postponed, as a precaution, when the growing coronavirus pandemic began to impact on activities generally. Alternative options were considered, including a virtual meeting, but clearly we were not going to get the social gathering which means so much to an AGM. Postponement initially did not preclude a meeting later in the year, but clearly risk levels are not going to permit this. We had no need of committee or officer elections or the like, so it was not vital to hold a meeting this year. But an AGM also provides an opportunity to update as regards activities over the previous year and what may be anticipated going ahead. However, we need not miss out: here are reports which would have been provided, if it had gone ahead at the original time, so they deal with the position as it was in March.

Geoffrey Kitchener



1. MATTERS ARISING FROM 2019 AGM

The only actions arising from the 2019 meeting were:

- Relating to use of a room at Tyland Barn for the AGM (no longer relevant).
- We'd noted that the fourth edition of Clive Stace's *New Flora of the British Isles*, as well as introducing a lot of new names, had some difficult changes in the treatment of roses, which we needed to take on board. This was covered by newsletter 12, in October 2019
- As regards introducing plants deliberately into the wild, in particularly bodies with conservation interests wanting to do so for quick results in 'wildening' land, there was an action for the chairman to write to KWT. This was along the lines that while recognising valuable work of KWT in maintaining the habitats of its reserves, KBRG suggests that KWT considers carefully the appropriateness of planting or sowing wildflowers in the countryside and giving the public the impression that this is desirable. I have to say that (except as regards Maureen Rainey) the exchange of correspondence was not particularly satisfactory. The approach of KWT appears to be that the urgency of restoring biodiversity and maximising bio-abundance requires that they need to do this in any way they think fit, including planting. However, they have at least said that they will put their guiding organisational principles as regards species re-introduction and reinforcement on the KWT

website and this will include who they inform and when. I'm hoping that this will not get forgotten with the impact of the pandemic on KWT's activities; and that it will at least result in information flowing through to the rare plant register. If not, then – if we as a group remain concerned about the issue – we may need to think about taking it further.

On this subject, anyone who has read the RPR account for *Salvia pratensis* (Meadow Sage) will recognise (a) what excellent work Richard Moyse and Plantlife have done at Ranscombe in encouraging Meadow Sage to generate seedlings in situ and (b) how difficult the introduction by the National Trust of cultivated Meadow Sage at Dover in cages in 2005 has made it to assess whether there are any native plants there at all – only the fact that they kept very detailed records enables one to form any view now.

2. TEN SEASONS OF RECORDING



For our first season of recording in 2010 we had many good finds; perhaps plant of the year was *Galium pumilum* (Slender Bedstraw) as Eric Philp couldn't find it for his second Kent Atlas and Fred Rumsey photographed it at Purple Hill in 2010. Plant of the year 2019 might be regarded as Rodney Burton's *Juncus ranarius* (Frog Rush), hardly ever seen in Kent and then a long time ago. Since 2010 we've restored or added dozens of plants to the Kent list.

On 1 January 2020, we finished recording for three things: the first ten years of this group's existence; the BSBI's 2010-19 date class by which plant

distribution trends are measured; and the twenty years which the BSBI's national plant atlas is to cover. I've reported on this in Kent Botany, headlined by our achievement of 467,219 records (this is misleadingly precise, of course, but everyone who has sent in records is to be congratulated on their contribution).

It's quite difficult to take in the enormity of that achievement. I've no verifiable feeling for how you can represent the effort, but if each record took five minutes to find, note down, enter up and verify, this would take one person four and a half years to achieve, night and day, without stopping! What has been particularly constructive is that different botanists have taken the lead in various parts of the county, so as to give us a chance of reasonable overall coverage

Things to come out of this are:

- the number of proficient Kent botanists, who have developed or increased skills in recent years and shared them with others; but indeed also the number of people overall who have been taking an interest in our county flora generally
- good information about the remarkably quick spread across the county of species such as *Polycarpon tetraphyllum* (Four-leaved Allseed),



Ten years is actually no time at all for a plant's distribution to change completely. There was more about this in Kent Botany of course.

- The increased level of understanding we now have by recording in 1km squares, rather than 2 x 2km squares, and the extra information we've accumulated to re-find and understand the needs of rarer plants.
- the knowledge that sometimes Eric Philp's first Kent Atlas is more to be relied on than the second in assessing the status of our rare plants (that is because the first Atlas data had many contributors). There was more about this in Kent Botany, especially as regards Stephen Lemon's finds of sedges in the Weald, but there are other gaps in Eric's second Atlas, good though it is.

3. MEMBERSHIP

Net membership increase has slowed down a bit, as at March 2020 just a couple more than last year; but we are now up to 140 members, something I'm sure none of us would have expected when 36 botanists gathered here with me in March 2010 to



form the recording group.

4. MEETINGS

Last year we held 14 field meetings, including sessions in which other societies joined in: the BSBI, KFC, the Wild Flower Society, Surrey Botanical Society and Sussex Botanical Recording Society. The meetings included some very successful targeting of areas which needed records for the closing stage of the BSBI national atlas project and the end of the current ten-year recording period. While Owen Leyshon and Sue Buckingham put much effort in assembling the 2020 programme, it is very disappointing that only one meeting could be held. Hopefully the missing meetings can be re-programmed when circumstances permit.

5. PUBLICATIONS

What have we had since the last AGM?

As regards new items, we've had:

- Newsletter no.12, circulated to members last October
- Kent Botany 2019 with all the latest discoveries, circulated to members this January
- A further instalment of the transcript of Francis Rose's unpublished Flora of Kent. Following a visit I paid to the Roses' house in Hampshire last year, we have now recovered three of the four manuscript volumes of species accounts plus some associated papers. So the current version on our website now has all of volume 4 transcribed, some of volume 1 and the beginning of volume 2. It also has some of Francis's working papers for the introductory essays, and more detail of how its publication was attempted and failed; so that's nearly 50 pages more (total 212).

- More rare plant register species accounts: two new ones for existing parts of the register: *Juncus ranarius* (Frog Rush) discovered by Rodney Burton and *Lathyrus hirsutus* (Hairy Vetchling), which is now thought to have a near-native status. Then there are 6 new accounts to finish off Parts Q and R; and 17 new accounts sent out this March to start off Part S, a total of 23. All the earlier accounts have been revised to include members' 2019 records.
- Alex Lockton's Flora of Hothfield



So we have available, on our website, publications from over the last ten years comprising: nearly 2,000 pages of information on Kent plants: as you can see, about half on rare plants and another quarter on keeping up-to-date – that is to say, newsletters and reports. You may think this is much more than you'd ever want to know about, but I think the following points need to be made:

- The number of pages should not be daunting when you have the internet ability to dip in and out wherever you like;
- Online research and publication makes things comparatively easy to produce;
- The regular updating means that it's possible for people to know and follow up things they are interested in. When I began botanising there was very little available to show you what was common or rare in Kent, and even once Eric's first Atlas was published, there was nothing to alert you to anything new afterwards, other than personal contact or if someone put an exhibit into the Kent Field Club Annual Exhibition.

And before we finish on publications, I should of course mention David Johnson's *Wild Orchids of Kent*, not a recording group publication, but our role in providing records is handsomely acknowledged. If you haven't acquired it yet, do!

6. FINANCES

There remains no current need to have a treasurer, bank account or membership subscription. If you take occasions like the winter twig meeting in February, when attendees donated towards John Poland's travelling expenses from Hampshire, so

long as we can manage anything like that ad hoc, we can remain on the present informal basis

7. RARE PLANT REGISTER



I've already mentioned the new accounts issued recently and I've reported generally in Kent Botany on register progress over the last ten years. What is rare over the last ten years has changed, and what we know to be rare has changed as well. We had a good number of records in 2019.

As regards the most recent draft accounts, thank you to those who have sent comments as regards improving them. Finishing off Part Q & R with *Rumex* and *Ruppia* gave the chance of using some of Liam Rooney's wonderful photographs of Spiral Tasselweed with its spiralling peduncle.



Part R became useful for research purposes earlier this year when Richard Lansdown was enquiring about Kent records of *Ranunculus tripartitus* (Three-

lobed Crowfoot) and I could refer him to the RPR; it was gratifying that said this was a wonderful account. Part S of course includes the Salicornias, and it would certainly not have been possible to do them justice without the encouragement which Liam has given to us. There is a long account of *Salvia pratensis* (Meadow Clary) which I've mentioned earlier in the context of trying to work out what is a native population when cultivated plants have been introduced – and I'm afraid that the captions have got mixed up, so I'm showing here what they should be.



8. LOOKING AHEAD

Rightly, much of the 2020 AGM would have involved looking back over our achievement over the last ten years since this group was founded. But it is always important to be looking forward: and this is what we expect to be doing (as mentioned in my email circular of Friday 13 March!).

While it is still fine to send in general records, and it's a new ten-year recording period of course, we will be concentrating on:

- survey of the three Kent Biodiversity Strategy species (more about these below).
- update of rare plant register records and further search for re-finding old sites.
- following up any issues arising from 2010-19 records which emerge from analysis of the Atlas 2020 data, e.g. has a plant really gone from an area where it used to be?

:Kent biodiversity strategy: plants to be surveyed

The Kent Biodiversity Strategy is to be found on Kent Nature Partnership's website at <http://www.kentnature.org.uk/biodiversity-strategy.html>

The object of this is, and I quote, the aim to deliver, over a 25- year period, the maintenance, restoration and creation of habitats that are thriving with wildlife

and plants and ensure that the county's terrestrial, freshwater, intertidal and marine environments regain and retain good health.

There was a public consultation last year via the KCC on updating the strategy and formally adopting that update, and as a result of that consultation a gap was identified, that there was no botanical target and indicator species included. We were then approached to nominate three plants as indicator species which had to fulfil certain criteria, including that they should be species for which Kent is a stronghold and would benefit from particular attention. Initially we weren't sure about getting involved in this, as KCC were also looking for champions for the species, which is a role which might better belong to a conservation organisation which could actually influence habitat management. However, we were assured that a monitoring body could be a champion. So we've accepted that role for the three plants we've proposed and which are now part of the strategy:

- *Orchis purpurea* (Lady Orchid)
- *Polygala amarella* (Dwarf or Kentish Milkwort) and
- *Carex vulpina* (True Fox-sedge).



There are no arrangements as yet for a 2021 AGM.

Geoffrey Kitchener

Walking in the footsteps of John Stuart Mill

A report of a botanical walk around Kent is included in *The Phytologist* edition of 1861.¹ A phrase that caught my eye was 'we lighted on a fine colony of young plants of *Lavatera arborea* (all seedlings), produced from the *rejectamenta* of the adjoining gardens... The *Lavatera* will probably remain undisturbed in this locality, and it would be gratifying to learn (if any reader of this who resides near Walmer, or ever goes thither to botanize would inform us) that it is still growing in that place.'

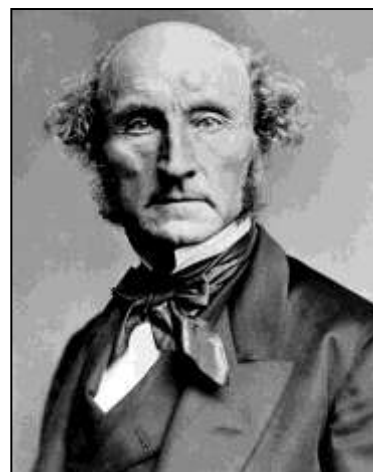
I have lived near or in Walmer for thirty-odd years and am pleased to confirm that there are indeed a couple of strong colonies of Tree Mallow on shingle beside the path between Walmer and Kingsdown, presumably descended from the plants seen 160 years ago.

The precautionary restriction on travel and meetings caused by the coronavirus this year provided a little spare time, so Mel and I decided to investigate this walk and to retrace parts of it at a similar time of year, the first week of September. This is not the best time for botanical exploration as admitted by the report but it would be good to see what has changed and what has remained the same.

An initial problem was the identification of the writer—teasingly attributed to 'A Correspondent'—, but this was solved by Liam Rooney who told us that it was none other than John Stuart Mill (1806-1873), the pre-eminent liberal political philosopher of his age and a keen botanist. He was observed in his later years with '... his trousers turned up out of the mud, and armed with the tin insignia of his craft, busily occupied in the search for a marsh-loving rarity...'²

His biographer wrote that 'Mill would fill his pockets with wild violet seed, and scatter them in the hedgerows to help them flourish. For the young utilitarian radical, even hedges could be improved'.³

Mill's companion was discovered in Mill's correspondence⁴, as Alexander Irvine (1793-1873), the editor of *The Phytologist*.



The walk stretched from Canterbury to Folkestone with overnight accommodation at these towns and at Sandwich and Deal, and the pace was punishing. Suffice to say, we covered the route partly on foot, partly by bicycle and mostly by car.

The first day - Monday 3rd September 1860

The two botanists left on the train to Canterbury from the **terminus of London Bridge station**, stopping for the afternoon at Faversham. Mr Mill comments that there had already been a thrice-told tale of the botany of **Faversham** (by Jacob, Cowell and Stowell) and he did not wish to add extensively to the list; I shall also avoid reporting unnecessarily on the town as it has a present-day recorder working hard to update the earlier literature.



[Davington Church with *Calamintha nepeta*, September 2020](#)

However, we can say that of the particular species which Mill and Irvine found during their quick stop, *Peucedanum officinale* (Hog's fennel) remains proud on the marshes although not so close to the town as previously; *Tripolium pannonicum* (Sea Aster) is still in the town creek, growing to an impressive height with its roots in the mud; *Sedum dasyphyllum* thick-leaved stonecrop thrives on the same wall as in 1860; and Lesser Calamint, 'the rare *Calamintha Nepeta*', is still abundant in the lightly-managed churchyard at Davington, presumably assisted by the work of a character who accosted us like the Ancient Mariner, and who told us he keeps the place tidy.

Cuscuta epithymum (Mill's Clover Dodder, then called *Cuscuta Trifolii*), which was in a clover field near Davington church, has of course disappeared long ago under housing, but we were pleased to note that the above-mentioned recorder has re-found the plant nearby.

The gentlemen returned to the station bound for a night in Canterbury, where they enjoyed the sights, especially the 'magnificent' cathedral.

Second day – Tuesday 4th September

This day was a long one, and in the evening, Mill wrote to Helen Taylor from the Bell Hotel in Sandwich, 'We have got here from Canterbury today, having spent eight hours on foot, walking and botanizing, besides seeing Canterbury Cathedral & Richborough by the way. Though these two days journeys were by far the least promising botanically speaking, of our whole route, we have found a great many plants, and though there is not yet much that is quite new to me, I have filled up an immense number of the gaps in my Kent Flora.'

The **road from Canterbury** does indeed cross some relatively dull land, although often with good views across east Kent. The beginning and end of the walk are the most interesting, with the sand of Old Park giving them *Dipsacus pilosus* (Small Teasel) which regrettably is there no longer, possibly a victim of ribbon development or road widening.

On the way Mill notes some of the few arable weeds of the report: *Linaria [Kickxia] elatine* (Sharp-leaved Fluellen), *Stachys arvensis* (Field Woundwort), and *Anthemus arvensis* (Corn Chamomile) were found in plenty, which begs a question why he did not comment on other similar plants that must have been seen.

The stroll through the village of **Ash** was notable for the stonecrop *Sedum reflexum [Petrosedum rupestre]* on roofs and walls, which led us latter-day travellers to consider which of the buildings would have been in place when the botanists walked by. No *Sedum* was seen by this present writer.

The last part of the walk is across the **Sandwich polders**, and they collected an impressive variety of water plants that would be a commendable haul these days – '*Utricularia vulgaris* [Greater Bladderwort], *Hydrocharis Morsus-ranae* [Frogbit], in flower. This fine floating species flowered very sparingly during the past season. In these ditches *Lemna trisulca* [Ivy-leaved Duckweed] abounded, with *Ceratophyllum demersum* [Rigid Hornwort], *Ranunculus circinatus* [Fan-leaved Water-crowfoot], *Myriophyllum verticillatum* [Whorled Water-milfoil], *Oenanthe fistulosa* [Tubular Water-dropwort], *Typha angustifolia* [Lesser Bulrush], *Scutellaria galericulata* [Common Skullcap], and other more or less common aquatic plants.'

Third day – Wednesday 5th September

The pair were sent off on the day's walk by the stories of the 'worthy (jocular?) host' of The Bell at Sandwich [presumably Robert Westell from the 1861 census] who described a shrub with a poisonous berry which had attracted a party of fifty botanists to the area in the last year. Mill speculates that this could have been *Hippophae rhamnoides* [Sea Buckthorn].

The day's walk started at Ham's 'celebrated ponds' which from his description sound like the current KWT beaver reserve, where they found less than expected but still recorded 'plenty of *Hottonia palustris* [Water-violet, last recorded in the area in 1993] still in flower... *Menyanthes trifoliata* [Bogbean]', 'and other commoner aquatic plants... in abundance'.

After a late breakfast they walked north across the shingle spit of Stonar to Pegwell Bay 'celebrated among gastronomical enthusiasts for its shrimps and shrimp sauce', sadly now long gone, 'but we saw what pleased us much more, viz. myriads of *Medicago minima* [Bur Medick] and *Trifolium scabrum* [Rough Clover]'.

Medicago minima, September 2020



They crossed the Stour by a ferry, which must have been an infrequently-used business, to the sandhills that stretch down to Deal, and which now host three golf courses, but it would be another 28 years before Royal St George's would be established. The walk to Deal had been described to them as 'a painful and very dreary walk' but they (like modern-day botanists) found it 'most agreeable, interesting and instructive'. The variety of plants growing variously on the sea and land sides of the dunes is described, with most remaining in place today – for example '*Honkenya peploides* [Sea Sandwort] and *Salsola Kali* [Prickly Saltwort] grew sparingly, and on the dry sand- hills, *Hypochaeris glabra* [Smooth Cat's-ear] and *Silene conica* [Sand Catchfly], the former plentiful, and the latter sparingly. Three or four patches were all that appeared in our way between the preventive-houses and Sandown Castle.'

There is, however, no mention of what is now one of the most notable plants of the sandhills, *Himantoglossum hircinum* (Lizard Orchid). Admittedly this was not a good time of year for it, but it was not known at the sandhills in the nineteenth century, although Dr. R.E. Hunter claimed it for Thanet in the 1790s, and a dozen miles away inland at Broome Park, G.C. Oxenden recorded it on 25 June 1860, publishing the record on 1 September 1860, the same week as the walk.

On their arrival at the Old Haven, an attempt to reach the sea from the port of Sandwich, Mill and Irvine digressed into a discussion of the gradual growth of the Sandwich spit that eventually destroyed the town as a port – and how it was told that Tenterden church was responsible, as the bishop of Rochester was said to have diverted funds from works on a coastal barrier to the building of the church steeple. The two men clearly enjoyed a wide-ranging conversation, as Mill writes to his step-daughter:

'The time has passed very pleasantly. Mr Irvine is a very agreeable companion and seems to me very sensible and right thinking and feeling on things in general; and with the novelty to me of botanizing with a good botanist & the quantity of botany I learn, no excursion that we do not make together could pass more pleasantly.'

Fourth day – Thursday 6th September Deal, Dover, Folkestone

'At Deal we refreshed and rested for the night' but frustratingly we are not told where they stayed.

The fourth day was when he found and commented on the Tree Mallow and recorded other quite unusual plants that are still in place today. This part of the walk 'would amply repay the labour of investigation.... about Midsummer or at the beginning of July'.

'On Walmer's shingly beach' we re-found *Medicago denticulata* (Toothed Clover, recently re-discovered by Sue Buckingham) on which Mill expounded upon at length, the *Lavatera arborea* as mentioned above and *Crambe maritima* (Sea-kale).



Lathyrus maritimum [*Lathyrus japonicus*, Sea pea] is described as close to Kingsdown so it must have moved a mile or so north towards Deal since then. Mill gives a precise location for this rare plant despite the chance of collectors damaging it as 'the roots of the Sea Pea run so far among the shingle that the plant can protect itself from the ravages of rapacious plant seekers, and the greediness of plant sellers'.

Linaria vulgaris, September 2020

Soon afterwards he mentions *Linaria vulgaris* (Common Toadflax) which he collected (for science – he was not a greedy plant seller) and the specimen remains in the herbarium at Kew: <http://herbariaunited.org/specimen/370083/>

The track under the cliffs from Kingsdown to Dover was feasible in the 1860s, but as the tide was coming in they had to walk over the cliffs from St Margaret's Bay, giving them the chance to see *Silene nutans* (Nottingham

Catchfly) which is abundant there still and which should thrive on the new land under the stewardship of the National Trust, and *Gentiana* [*Gentianella*] *amarella* (Autumn Gentian). Mill saw some large specimens of the latter and asked 'is this the variety or species called *G. germanica* [Chiltern Gentian]?' The latter is present just over the channel above Boulogne, so it is possible, but current opinion is that East Kent finds of this character have been, if anything, hybrids between the two species.



The views into Dover receive a complimentary description but no plant records, as they hurried on over Shakespeare Cliff with the sun setting. Light was fading as they reached the top of the zig-zag path down to the Warren but undaunted they descended only to find that it was too dark to 'distinguish the tall Sow-thistles and the wild Lettuce from the equally gigantic black Mustard'. They were helped along the beach 'by the combined exertion of plucky resolution and strong thews, and by the useful aid of the coastguard force, who kindly pointed out our way. We reached our destination rather late, and in a rather weary plight.'

Despite the long day, Mill still managed to write to Helen:

'Yesterday and today have been splendid days of walking & botanizing; yesterday was equal in number of new plants to almost any day I ever had even on the Continent & today not very much inferior. I had no idea that Kent was so rich or that there could be such botanizing in it. What contributes as much to make it pleasant is the very great pleasure Mr Irvine takes in it. The country is all new to him and he says he never had so pleasant & altogether so successful an excursion.'

The final full day – Friday 7th September was another long one; they were abroad soon after six o'clock retracing their steps back towards Dover to look at the extensive undercliff of **East Wear Bay**. This is described as possessing greater variety of soil and probably bearing a richer flora than Kingsdown; it 'possesses ponds, and has rills of fresh water trickling here and there down the cliff'.

The flora listed from the undercliff is, however, not extensive, apart from *Cakile maritima* (Sea Rocket), *Crithmum maritimum* (Rock Samphire) – eliciting the usual remarks about Shakespearean samphire-gatherers, although there were none but themselves – and *Frankenia laevis* (Sea-heath), the last of which still flourishes at points between Dover and Folkestone. They also collected some large plants of *Orobanche caryophyllacea* (Bedstraw Broomrape); Croydon-based botanist Arthur Bennett wrote in *Science-Gossip* in 1901⁵ that the coal workings at Shakespeare Cliff had reduced this species to just two plants.

Mill and Irvine realised it was time for breakfast and they hastened up the 'four hundred and forty-four' steps to Capel and thence down to Folkestone; it must have been at least midday by this time.

We retraced the trip down the 444 steps, 'inclined planes and all' down to the Warren and saw no broomrapes or orchid spikes but enjoyed patches of rich chalk downland flora including many short *Gentianella amarella* (Autumn Gentian). We also saw large plants of *Rubia peregrina* (Wild Madder) beside the path which they would no doubt have commented upon if they had seen them.

The afternoon walk took the pair along **Folkestone undercliff** 'which has now become less productive, in a botanical sense, than in the time of Rev. G.E. Smith, who botanized here about thirty years ago. Enclosures and cultivation have produced this alteration' – welcome to our world, Mr Mill. There remains some of the 'raised beach well covered with grassy turf' between Folkestone and Sandgate, but nothing but concrete now from there on. Notable on this turf they saw large examples of Bird's-foot Clover *Trifolium ornithopodioides*, 'at least a foot long'.

Finally, the two of them embarked on a long search of the 'unpromising warren-hills' of **Seabrook** for Galingale *Cyperus longus* which had been clearly described by the Rev Smith in the 'Botany of South Kent' as near the 'black boggy track' of Whiting Brooks. Despite recalling the description well, they had to conclude that the plant was, 'in dog-Latin, *non est inventus*'.

The present writer also searched for the plant and walked the black boggy track of the stream through two woods, but also without success, although the woods have become overgrown by Himalayan Balsam *Impatiens glandulifera* and copious clumps of Pendulous Sedge *Carex pendula* which has a broadly similar shape and form to Galingale, and therefore made the search more onerous. Some judicious management of the wood, which is old with some later chestnut coppice, would improve the variety of flora along the path of the stream but could also presumably result in more disturbance from visitors.

Despite the failure to find Galingale (which was in fact viewed by the present writer by the Old Haven at Sandwich Bay, where Mill would have passed a couple of days earlier) the wood gave up a treasure.... Cyclamen, the note on which Mill ended the account of his walk, wishing he had been able to confirm a tradition of its occurrence in woods or copses not very far from Hythe.

Cyclamen hederifolium, September 2020



Steve Coates

Bibliography

1. *The Phytologist 1861* ed. Alexander Irvine, variously available online, including <https://www.biodiversitylibrary.org/item/55341>
2. Quoted in *John Stuart Mill: Victorian Firebrand* by Richard Reeves 2007
3. *The Life of John Stuart Mill* by M. St-J. Packe 1954
4. *The Collected Works of John Stuart Mill XV The Later Letters*, hosted by The Online Library of Liberty - oll.libertyfund.org
5. Bennett, A. (1901). Destruction of rare British plants in Kent. *Science-Gossip: new ser.* 8 (no.87): 93.

Next year's field meetings

We hope that the situation may allow for us to hold meetings safely next year. If it does, then we intend to roll out more or less the same programme that we had planned for this year with whatever changes to days and venues that are necessary but we will not plan a meeting before May. We may find that even a May start is optimistic but by March hopefully we will have a better idea of where we stand with this and the position can be updated. Even so, it is possible that 2021 meetings are announced piecemeal as and when they become feasible. We can then review how far pre-booking, number limitations and any other procedures may be needed.

Contributions and photographs for the next newsletter will be welcome!

- The editor will be glad of articles, letters, queries, comments and photographs, etc.
- Whilst KBRG does not produce a research journal as such, there may also be scope to put articles of a substantial nature and other papers onto the website by way of publication, as an alternative.
- If sending photographs for inclusion in the newsletter by email, please provide at reasonably high resolution.
- All contributions should be sent to Geoffrey Kitchener, contact details below.

Web version 2

Thanks to all contributors to this issue, both authors and photographers, and to Sarah Kitchener for reviewing this newsletter.

Contact details for Geoffrey Kitchener:

Email: geoffreykitchener@yahoo.com ☎ 01959 532282
Cromlix, Otford Lane, Halstead, Sevenoaks, Kent TN14 7EB

The editor, Geoffrey Kitchener, wishes to draw attention to the fact that neither he, nor the Kent Botanical Recording Group, are answerable for opinions which contributors may express in their articles; each author is alone responsible for the contents and substance of their work.