Sussex Botanical Recording Society

Newsletter

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THE COVID-19 LOCKDOWN SPECIAL ISSUE

It has been, at best, a peculiar summer. We were at first virtually confined to home and garden and, even later when we were allowed to go farther afield, few of us ventured away on long trips. Botanists are fortunate – however restricted we are there is always something of interest and delight to be found – but we have missed our friendly and often fascinating field meetings. So, to cheer you up and to remind you that the SBRS is still alive and well and doing its thing, we are bringing you this special issue of the Newsletter with tales of some members' activities in Spring and Summer 2020. We hope that you enjoy it. Photos are by the authors unless credited otherwise.

Chairman's Foreword

Nick Sturt

We emerged from Binsted Woods onto the A27 just west of Arundel, crossed both empty carriageways and plunged back into the trees on the north side constituting part of the Rewell Wood complex. In many ways that was for us the defining experience of our prescribed excursions during Lockdown into a local world unruffled by the roar of continuous road traffic and the skies innocent of vapour trails. Of course, the A27 is now back to its manic norm and there would be absolutely no chance of reaching the central reservation alive to search for halophytes on a Saturday afternoon, or any time at all come to that. Looking back to the weeks in April and May when the world was quieter, the experience of nature seemed magnified or, rather, intensified. Elisabeth and I took advantage too of *The Butterflies of Sussex* and mixed up our plant hunting with some lepidoptery – Green Hairstreaks at the farther end of Arundel Park, Duke of Burgundies and Small Blues above Storrington and Pearl-bordered Fritillaries back in The Rewell. The remoter spots we reached were not crowded but it was noticeable how there were more people out enjoying the landscape and nature, and it is to be hoped that there will be a legacy of a wider interest in the natural history of our county and a greater concern to preserve it

A few weeks ago Elisabeth reflected that of all the activities which have had to be put on hold or modified since the advent of the pandemic, field botany has arguably suffered less in that it can be enjoyed safely as a solitary pursuit or in small socially-distanced groups. While the local choir and branch of the Arts Society have had to go into a state of limbo (apart from some zoom sessions), at least she has been able to enjoy the local flora, the radius of which gradually grew as restrictions were lifted. Of course, her enjoyment has been tempered with the random musings of her husband beside her, so some of you may well count yourselves fortunate that your own plant studies were conducted in peaceful solitude! But then again there is nothing like botanising in a jolly band, sharing finds, exchanging identification skills, and, well, badinage. I look back to merry occasions in the past, for example when we all got our cameras ready because we were convinced that Paul Harmes, in his bold quest for a sample of *Carex elata* (Tufted-sedge), was about to fall into the upper Adur with a magnificent splash; or when Roy Wells deployed his exceptional personal skills to defuse a highly explosive farmer on Thorney whose arable margin we were rifling for weeds; and perhaps I had better not remind you of the Fulking Escarpment debacle in which your Chairman refused the plaintive requests of several members to investigate a suspicious umbellifer that turned out to be *Bunium bulbocastanum* (Greater Pignut)! So we do look forward to business as usual for the SBRS and we shall endeavour to keep in touch through the website, our social media off-shoots and general emails and communications – with our fingers crossed that we shall be able to be less solitary or socially-distanced in 2021. I can assure you that there has been much plant recording going on across our county and there are some notable finds to share with you now and in the Newsletters to come.

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The mention above of *Bunium bulbocastanum* which was chanced upon in 2018 during a field meeting brings me to one of the most surprising stories of this past year. You may recall that just eleven flowering plants were found in that first year when – eventually – the Chairman was persuaded that the members of his meeting had discovered something remarkable and so returned with our President and Elisabeth to look more carefully. In 2019 we had the pleasure of our Treasurer for company and in the course of a painstaking search of the small piece of downland turf centred on the 10-figure grid reference it was he who lighted upon the only two plants we could find. It is now evident that we were, in a manner of speaking, barking up the wrong tree.

Fast forward to June 2020 and an email from the redoubtable pan-recorder Graeme Lyons who had been surveying some land on top of the downs very close to our site. He says that at first he thought the several hundred or so white umbellifers spread over the field could be *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort), but realised that this would be extremely odd and emailed photos to Frances. She suspected that he might have found *Bunium* and more emails flew. It turned out that he had come upon a large population of Greater Pignut – just a 100 or so metres from the 2018 site. With the guidelines at the time permitting small-scale socially-distanced botany, David, Trevor, Elisabeth and I made the ascent of the scarp again from the under-hill lane. The richness of the flora never makes this a wearying climb. Once through the horse-fly belt – how they love to ambush you as you wriggle through the gate! – there are old banks embroidered with a colourful array of chalk-loving flowers, while friendly rivalry demands that someone be the first to spot more subtle species such as *Carex caryophyllea* (Spring Sedge) or *Danthonia decumbens* (Heath-grass). The butterflies on these slopes are also worthy of celebration, for example in good years little clouds of Adonis Blues.

For some reason, nearing the top we veered eastwards. I think I had in mind the field meeting at the same location many years ago when the late Ernie Sears – who had an eagle eye – was dispatched in that direction to find for the party *Tephroseris campestris (*Field Fleawort) in the fine turf beside the ancient ridgeway. By this minor detour we would approach Graeme's field from the east… but not before on the open downland we had seen hundreds of flowering plants of Greater Pignut. From a distance the plant is deceptively like *Pimpinella saxifraga* (Burnet-saxifrage) (well, I would say that, wouldn't I) – close in height and branching, but as those so perceptive SBRS members had pointed out to me two years before, in contrast to the *Pimpinella* this plant sports bracts and bracteoles; it is also somewhat earlier into flower. David had brought his ecological apparatus and busied himself with tape measures, angle-finder, astrolabe and suchlike while the rest of us tried to gain an overview of the site and take photographs to commemorate it. After some time spent taking it all in, a herd of red-brown Sussex bullocks arrived and began to graze but their attentions made little impact on the plentiful Pignut. After that we walked west towards the grid reference supplied by Graeme and admired his equally large population occupying the field adjacent to the open downland. He has been monitoring this field for some years but never seen the Pignut.

As I write this David is engaged in research towards a properly scientific paper on the occurrence of the plant here, well away from its HQ in Bedfordshire and surrounding counties. From the number of plants visible this year the implication could be that Greater Pignut has been here, apparently unobserved, for some years. The original find in 2018 now looks like an outpost of the main population. We know that the species occurs not too far away across the Channel in France and that there it is more of an arable weed which can linger when grassland re-establishes. But we must leave David to his ponderings which we shall read with great interest in due course. We had our own ponderings as we descended by the chalky track on that sunny Summer afternoon. The Weald lay spread out before us with its small fields hedged in attractively. A tractor was busy with silage and the world of Covid seemed far away. And we had enjoyed a fascinating day together in the field.

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This 'Covid Extra' publication cannot, of course, make up for the twelve or so full field meetings which we have missed in 2020 – or the local ones which have also become a feature of Society activities, or indeed for the Autumn Get-together which is a fixture beloved of the membership. But I hope that items collected here will remind you that there are other botanists out there in the county who share your enthusiasm, and with whom you will be reunited in the fullness of time. Each item here speaks for itself and there is no real need for me to hold you up any longer with this introduction. It would be remiss of me, however, if I were not to thank all of the contributors for putting virtual pen to paper on our behalf and also Frances for editing the whole with her usual finesse. I should like to take a little credit myself for urging her to include her own piece on the Wey and Arun Canal. As editor she felt it might not be quite proper to feature her own item: I, on the other hand, was confident that you would all want to read it! Enjoy!

My home tetrad
Peter B. Smith

Faced with Lockdown, I realised that it created an opportunity to look more intensively at what could be found by walking out of my own front door. We were all encouraged to walk, and I did that in an SBRS sort of way. My home tetrad is TQ50D, centred on the village of Selmeston. It is predominantly arable and pasture, but includes a substantial area of long-established woodland on gault clay. Unusually for East Sussex it has an area of lower greensand, some of which was quarried in the past, and part of which is the basis of a turf farm. The *Flora* records 363 species present, the great majority recorded earlier by persons other than me. When I became an active recorder some years ago, I needed to add only 23 more records before the cutoff for record submissions to the *Flora*. This year I have recorded 381 species, with 40 of the earlier records no longer found, but 58 new ones added. Some of these differences are no doubt attributable to my having missed what was present, and some are due to my having recorded rather more casual species derived from gardens and agriculture than was the practice in earlier times. Here I focus on what seem to me the more interesting finds and changes, some good, some not.

Cricket is said to have been played in the village for more than 150 years. The pitch is on greensand and is normally close mown, but COVID delayed that process this year, and that enabled me to scrutinise the outfield more thoroughly. Early in the year I found extensive areas of *Montia fontana* (Blinks) and a hands and knees search revealed a good colony of *Moenchia erecta* (Upright Chickweed). The boundary of the cricket field has also been undisturbed for a long period, and in spring had new records for *Carex caryophyllea* (Spring Sedge) and *Viola canina* (Heath Dog-violet). Later in the year, there are *Silaum silaus* (Pepper-saxifrage), *Genista tinctoria* (Dyer's Greenweed) and *Achillea ptarmica* (Sneezewort). Nearby are the disused sandpits. In the past these have been a treasure trove for small clovers, with one of few inland Sussex sites for *Trifolium scabrum* (Rough Clover). Unfortunately the best area has become overgrown with brambles and this species, as well as *T. subterraneum* (Subterranean Clover) and *T. ornithopodioides* (Bird's-foot Clover), appears lost. *Lemna minuta* (Least Duckweed) has reached a pond in one of the pits and *Dactylorhiza fuchsii* (Common Spotted-orchid) does well nearby. The flora of the turf farm follows the cycle of turf removal and subsequent reseeding. This year there was a wonderful mass of *Spergula arvensis* (Corn Spurrey, and a new record for *Spergularia rubra* (Sand Spurrey).

Upright Chickweed at Watersfield

Photo: Nick Sturt

The churchyard is managed with conservation in mind, and continues to feature a spreading colony of *Hermodactylus tuberosus* (Snake's-head Iris), and varieties of *Ulmus* agg. whose identities I have not explored. There has been extensive forestry work in part of the woodland area in recent years, and this has opened up some areas, for instance with *Galega officinalis* (Goat's-rue) and *Hypericum hirsutum* (Hairy St John's-wort). Perhaps due to the forestry work I could not find *Platanthera chlorantha* (Greater Buttterfly-orchid) or *Orchis mascula* (Early-purple Orchid) this year, but I do not think that they have been lost. A damp ride revealed *Carex strigosa* (Thin-spiked Wood-sedge). There are no recent records for this species here, but some rather implausible old records for two tetrads further south. It has most likely long been present in this wood.

The verge of the A27 provides a further distinctive habitat. *Beta vulgaris* ssp. *maritima* (Sea Beet) has become extensively established on the roadside verge in this section, along with the usual salt-tolerant suspects, *Cochlearia danica* (Danish Scurvygrass), *Spergularia media* (Greater Sea-spurrey) and *Plantago coronopus* (Buck's-horn Plantain).

Current agricultural practices are making arable margins more accessible than they used to be. This may account for some of the new species that I was able to locate. For instance, I found two separate populations of *Euphorbia platyphyllos* (Broad-leaved Spurge) and noted that *Phalaris paradoxa* (Awned Canary-grass) has become widespread round several fields. One definite loss is *Ranunculus tripartitus* (Three-lobed Crowfoot), which I found a few years ago in a former farmyard pond that later became a neighbour's garden pond. The house recently changed hands and the new owner has filled in the pond. Overall, I find it rather alarming that there should be such a rapid turnover in the species present as these results suggest. Native species are being lost, and replaced by non-native species. The process continues and is being aided and abetted by farmers sowing field margins with exotic seed-mixes.

Maudlin Pond 2020
Howard Matcham

It is two years this autumn since Maudlin Pond was excavated to a depth of c.15ft and the excavated soil used to berm the surrounds. There have been losses, for example Coot and Moorhen have gone as no nesting sites remain; Little Egret spent a great deal of last summer and early autumn on the mud exposed by the dry summer, occasionally with a pair of Grey Heron.

Botanically the pond was a floristic disaster with a very small amount of the formerly abundant *Ranunculus aquatilis* (Common Water-crowfoot) along the western edge, and the berms were colonised by *Conyza sumatrensis* (Guernsey Fleabane), docks and precious little else.

Welcome to 2020: spring and the entire surface of the pond was covered with *R. aquatilis* a beautiful sight indeed, Water Starwort (*Callitriche* sp.) reached for the sky and the dreaded *Lemna minuta* (Least Duckweed) was completely absent and has remained so; the berms were a floristic delight with complete coverings of competing *Lythrum salicaria* (Purple-loosestrife); *Lycopus europaeus* (Gypsywort) and *Mentha aquatica* (Water Mint) all in vast numbers with *C. sumatrensis* forcing its way in between. Other species flowered prolifically. So all is not lost.

Currently the surface is clear over most of the pond but there is, for the very first time, a cyanobacteria bloom of the toxic alga *Anabaena circinalis*.

Anabaena circinalis Photo: Chris Carter

Rorippa palustris (Marsh Yellow-cress) which colonised the berms in 2019 was seen for the first occasion on the mud of the floor of the pond in the autumn of 2017, where it occurred with the terrestrial form of *Ranunculus aquatilis* which has much larger flowers than the normal aquatic form; this year *Rorippa palustris* has become extensive on the northern berm. It was a new tetrad record in 2017, belatedly sent in by me last year.

The liverwort *Riccia cavernosa* (Cavernous Crystalwort), discovered by me in October 2003, covered the mud of the entire dried out pond with thousands of individual thalli. At the time this was the most prolific site for this species in southern England and probably throughout the British Isles; it is unlikely that it will be seen in such numbers again, if at all.

Surrounding willow trees were all grubbed out, which was unfortunate as they were clothed with bryophytes and one had a resupinate fungus (*Peniophora rufomarginata*) that was believed to be in its only extant site in VC13 West Sussex. It has not yet been seen in VC14 East Sussex.

It's worth pointing out that the pond does not have ingress or egress either by ditch or by the usual Victorian clay drainage pipes and it fills by rainwater and fluctuating water table. Yes, there are irreplaceable losses of some bryophytes, fungi, and of the algal flora but as in all things natural it is evolving, and newly recorded species undoubtedly will be found. In this awful time I found looking at the vibrant colours of the three species, Purple-loosestrife, Gypsywort and Water Mint therapeutic indeed.

Early Lockdown: Water-crowfoots, Water-starworts and *Viola lactea*

Jacqui Hutson

22 March

Early Lockdown walks had to be near home so we were limited to already well-known footpaths. One of these passed a chalk-stream-fed pond and I noticed it was covered with masses of *Callitriche* with long leaves. I did not recognise it as *C. stagnalis* (Common Water-starwort) so I retrieved a sample and took it home. I have never tried to identify *Callitriche* species because I have never found one with flowers or fruit, which were needed according to Stace. I examined the specimen but couldn't find any flowers or fruit even with a microscope and the help of Stella Ross-Craig's detailed drawings. I floated the specimen into a shallow tray of water and contacted Elisabeth Sturt with a photograph to ask advice. Elisabeth said that it looked like either *C. platycarpa* (Various-leaved Water-starwort) or *C. obtusangula* (Blunt-fruited Water-stsrwort) and to keep the sample captive in the hope that it produced pollen.

16 April

I accompanied my husband, Tony, to our local sand quarry (no longer worked and partially flooded) where he has done regular bird counts. It is frequented by dog walkers and wild swimmers so I tend to avoid going there although it does have some good plants, including masses of the pale form of *Ophrys apifera* (Bee Orchid) in season. Tony said there was some Water-crowfoot in some of the shallow pools. I took some photographs and a specimen - there were numerous plants spread over a large area. I used Stace to identify it at home. It took a while because I had a lot of difficulty in deciding whether the nectar pit was circular or not - it was surprisingly difficult to determine even with a microscope. I doubted my identification of the specimen as *Ranunculus aquatilis* (Common Water-crowfoot) because *The Flora of Sussex* suggests that it may be extinct in East Sussex. My specimen had only capillary leaves but the *Plant Crib* says that laminar leaves develop during the summer in response to long photoperiods.

17 April

After sending a description and photographs to Nick Sturt and Nevil Hutchinson, who in turn sent them on to Matthew Berry and Mike Shaw, I was advised to ask the opinion of Richard Lansdown, BSBI referee.

18 April

Great to hear from Richard that the record for *R. aquatilis* was confirmed (not extinct in East Sussex after all).

21 April

In the past I had found non-flowering plants of a water-crowfoot on Chailey Common and I wanted to check the species, given that they should now be in flower. Early this morning I drove to Chailey Common to see what I could find (a couple of miles but had been reassured that it was OK to do this for exercise purposes as long as the exercise took longer than the drive). Heading for the largest pond

Ranunculus aquatilis flowering in a partially flooded sand quarry in East Sussex

on Pound Common I found it to be covered with masses of flowering water-crowfoot. I collected a sample and headed back to the car - recording a few plants on the way. These included numerous flowering individuals of *Genista anglica* (Petty Whin) in an area that seemed to have been cleared recently. By the side of a narrow path through low vegetation I saw some violets and kneeling for a closer look thought they must be *Viola lactea* (Pale Dog-violet) with their pale flowers and narrow triangular leaves. I didn't collect any of course but instead told Paul Harmes.

At home I identified the water-crowfoot as *R. peltatus* (Pond Water-crowfoot) and Nick was happy with that.

22 April
Paul Harmes visited the violet site, had the identification confirmed, and took photographs that were far better than mine. The last records from Chailey Common were in 2011 in a different site.

7 May
My captive *Callitriche* produced pollen at last, as Elisabeth had said it probably would, and she had sent me some useful scanned pages from Lansdown's book re identification. Under the microscope the pollen grains were elliptical, measuring 50 x 25 microns. I told Elisabeth and she said the specimen must be *C. obtusangula* because it is the only one with such huge grains. Elisabeth suggested that I could amuse myself by looking for the stellate hairs/scales on young leaves and stems, which can help distinguish between some species. I did eventually find some at a magnification of x400 and by focusing up and down through squashed tissue. Very satisfying.

9 May
Another local walk found *Ranunculus peltatus* colonising a recently dredged pond in an arable field on the nearby Hook Estate. That pond will be worth keeping an eye on.

Recording in Lewes 2020

Paul Harmes

During the preparation of *The Flora of Sussex*, I managed to unearth Thomas Woollgar's unpublished *Flora Lewensis*, mentioned in Wolley-Dod (1937), which Brad Scott and I are hoping to publish. As part of this project, it will be important to make comparisons between the plants known to Woollgar and those which remain to this day. Therefore some fieldwork would be needed and, given that it was unlikely I would be travelling abroad leading tours in the short term, there was no time like the present.

At the turn of the nineteenth century Woollgar resided in the Cliffe area of Lewes, to the east of the town. He would have been familiar with the Downs, including Cliffe Hill, Malling Hill, Bible Bottom, Oxteddle Bottom, Malling Down and Southerham in the east, Landport Bottom and Offham Hill in the west, site of the Battle of Lewes, as well as the River Ouse and the Levels stretching south towards Newhaven and north towards Malling.

In March of this year I was leading a botanical tour in Andalucia, southern Spain. After four days my group and I were confined to our hotel due to Covid-19, before returning, early, to the UK. Once home I had to self-isolate for two weeks, as the UK went into lockdown. After this period of quarantine, I began to go out for a walk for an hour, in the early morning. Not content with just walking, I began to take a closer look at the flora of Lewes as I went. I decided to record more widely than just the area that Woollgar would have been most familiar with, in the hope that the additional information gathered will lead to either a new Flora of the town, a checklist or a 'Wildflowers of Lewes' type of publication. As yet, I am undecided which. The area covered lies within six tetrads: TQ30Z, TQ31V, TQ40E, TQ40J, TQ41A & TQ41F.

The chalk grassland on the peripheries of the town has all the species one would hope for. Principal among these being *Phyteuma orbiculare* (Round-headed Rampion), *Cerastium arvense* (Field Mouse-ear), and *Clinopodium acinos* (Basil-thyme), together with *Gymnadenia conopsea* (Fragrant Orchid), *Spiranthes spiralis* (Autumn Lady's-tresses), *Succisa pratensis* (Devil's-bit Scabious), *Ophrys apifera* (Bee Orchid), *Helianthemum nummularium* (Common Rock-rose), *Campanula rotundifolia* (Harebell), *Plantago media* (Hoary Plantain), *Pimpinella saxifraga* (Burnet-saxifrage) and *Sagina nodosa* (Knotted Pearlwort).

Cerastium arvense near Lewes

On the 1795 Figg and the 1817 Edwards maps of Lewes extensive pastures, crossed by drainage ditches, are evident to the south of the town, and to the north, between the Cliffe and the (then) village of Malling. Although this northern section is now largely developed, the area would have been very familiar to Woollgar, together with its flora.

For many years there have been regular records for *Apium graveolens* (Wild Celery) from the banks of the tidal Ouse, from Southerham into the centre of the town. This is very much still the case, although it would appear it is now spreading northwards along the river towards Landport and Hamsey. Another Umbellifer which likes the riverbanks, although out of reach of the high tides, is *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort), which has extensive populations either side of the urban area. In addition, the levels to the south have produced some exciting finds. These include *Catabrosa aquatica* (Whorl-grass), *Potamogeton natans* (Broad-leaved Pondweed), *Stratiotes aloides* (Water-soldier), *Ranunculus baudotii* (Brackish Water-crowfoot) *Hippuris vulgaris* (Mare's-tail) and *Veronica catenata* (Pink Water-speedwell), along with *Stukenia pectinata* (Fennel Pondweed), *Sparganium erectum* subsp. *oocarpum* (Branched Bur-reed), *Utricularia australis* (Bladderwort) and *Carex acuta* (Slender-tufted Sedge). The Levels to the north of the town have two locations for *Rumex hydrolapathum* (Water Dock), one site each for *Potamogeton lucens* (Shining Pondweed) and *Potamogeton crispus* (Curled Pondweed) and *Veronica anagallis-aquatica* (Blue Water-speedwell), *Berula erecta* (Lesser Water-parsnip) and *Veronica beccabunga* (Brooklime).

An urban flora is always going to produce opportunists and colonists which adapt to this artificial habitat, as well as numerous garden escapes. For example, the wide verges of the suburban areas, the five churchyards, town cemetery and parkland produced extensive populations of *Ranunculus bulbosus* (Bulbous Buttercup), *Rumex acetosa* (Sorrel) and *Taraxacum* agg. (Dandelion), *Anthriscus sylvestris* (Cow Parsley), *Jacobaea vulgaris* (Ragwort) and a good selection of grasses. During the recent Covid-19 lockdown, all the verges in Lewes were left untended, so many grass species were able to come to flowering. This meant it was possible to identify those that would normally have been mown regularly.

The area around the ruins of the Priory of St. Pancras has produced a couple of intriguing plants. We have known for some time that *Lepidium latifolium* (Dittander) has occurred to the south of the site, along the banks of the Cockshut. Our chairman wrote an article on this plant (BSBI News 58, page 23) in which he refers to passages in *Naturalis historiae* (Natural History) by the Elder Pliny, who prescribes Dittander for the treatment of 'Leprous sores'. The Priory was associated with St Nicholas Hospital, thought to have been founded by William De Warrenne, 1st Lord of the Barony of Lewes, 1st Earl of Surrey, to treat the poor. This was also known as the 'Leper House' (Whittick, Sussex Archaeological Society 2020). So it not impossible that the Priory gardens may have cultivated Dittander for use in the hospital. The second species is *Atropa belladonna* (Deadly Nightshade), found within the Priory grounds, also known to be cultivated by monks for medicinal use.

Lepidium latifolium in Lewes

Aliens are always present in an urban flora, especially plants which have escaped from our gardens or from cultivation, as well as those species long established in our flora, and Lewes is no exception. Familiar species such as *Reynoutria japonica* (Japanese Knotweed), *Acer pseudoplatanus* (Sycamore), *Erigeron karvinskianus* (Mexican Fleabane), *Epilobium ciliatum* (American Willowherb), *Pentaglottis sempervirens* (Blue Alkanet), *Polypogon viridis* (Water Bent), *Populus* x *canadensis* (Hybrid Black-poplar), *Cochlearia danica* (Danish Scurvy-grass), *Campanula portenschlagiana* (Adria Bellflower), *C. poscharskyana* (Trailing Bellflower) and the usual array of shrubs, including *Cotoneaster* and *Cornus* species, escaping naturally or bird-sown, to name but a few. In addition *Cotula austriaca* (Austrian Chamomile), a new county record, has an extensive established population, together with *Rostraria cristata* (Mediterranean Hair-grass) in the roads around The Grange. *Euphorbia oblongata* (Balkan Spurge), *Lonicera japonica* (Japanese Honeysuckle), *Rumex cristatus* (Greek Dock), *Symphytum orientale* (White Comfrey), *Allium subhirsutum* (Hairy Onion) and *Allium roseum* (Rosy Garlic) all occur regularly, with occasional records for *Symphytum caucasicum* (Caucasian Comfrey), *Lonicera* x *italica* (a Garden Honeysuckle), *Pyracantha coccinea* (Firethorn) and *Phlomis russeliana* (Turkish Sage).

Acknowledgements
When his work commitments permit, Nevil Hutchinson has joined me for some 'social-distancing' botanical recording and Alan Leslie and Matthew Berry have offered assistance and guidance with the identification of garden/alien species.

NB. Plant names listed here follow Stace (2019)

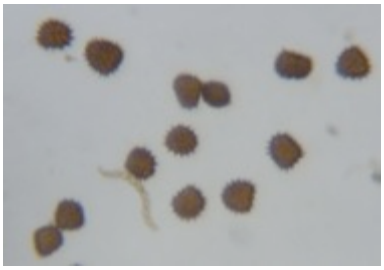
Local delights

Brad Scott

The recent months have been scattered with early morning walks with a friend who has been keen to get to know the habitats and flora of the area around Forest Row. Lying on the northern edge of Ashdown Forest astride the river Medway, the village is surrounded by a pleasing mixture of different landscapes, shaped by the underlying geology, each offering contrasting botanical catalogues to discover.

While peering at my local natural history during the lockdown period, I can imagine that I have not been the only person to rediscover the joy and richness of where I live, having slightly forgotten its singularity amid the usual busy events and routine of normal life, and, in so doing, find new treasures and topographies nestling within a place I believed I knew exceptionally well.

The Kid Brook rises on the Forest only about 3 km from the house, flowing through Hindleap Warren, then descending towards the village, with a lovely area of bog to its west. Over the summer, among the steadily-dominating *Molinia*, the spikes of *Narthecium ossifragum* (Bog Asphodel) stand there like beacons, pointing the way to mats of *Drosera rotundifolia* (Round-leaved Sundew) on the *Sphagnum*. It is an excellent spot for the bog-mosses, with 13 different taxa in the bog and nearby birch and pine woodlands. Like Ashdown Forest generally, the tetrad TQ43B is extraordinarily well recorded for bryophytes, so it was a pleasant surprise to find the small lettuce-like liverwort *Fossombronia pusilla* (Common Frillwort) as a casual coloniser of some of the sandy soil in a wet gulley when Sue Rubinstein and I showed a visiting American bryologist some of the Sussex sites earlier in the year. Plants of this genus can only be determined from the microscopic examination of the spore decoration, which is not as hard as it sounds, and those fine spores brought the tetrad bryophyte total to 138, which is a very high number for Sussex.



Spores of the liverwort *Fossombronia pusilla*

Away from the Ashdown Formation, to the north of Forest Row the geology changes to the mudstone of the Wadhurst Clay which is home to some very different plant communities, most strikingly in the small patches of ghyll woodland. About five years ago I found a large previously-unrecorded coppiced *Tilia cordata* (Small-leaved Lime) in Hazel Wood, which is within Tablehurst Farm, a community-supported agriculture enterprise about 20 minutes' walk from the house. I took my friend to see that in the spring once it came into leaf and we looked at the emerging flora of the surrounding W8 (*Fraxinus excelsior – Acer campestre – Mercurialis perennis* woodland) assemblage, as described in the National Vegetation Classification.

This got me wondering whether there were any other potential sites for *Tilia cordata* nearby, and I have since focussed on Spanden Wood, which lies just to the west and contains a beautiful and remarkably difficult-to-access ghyll that leads into the Medway. I had previously found some relatively noteworthy plants on the wood's fringes, such as the liverwort *Porella platyphylla* (Wall Scalewort) on Ash, and, nearer the stream, the chunky moss *Rhytidiadelphus triquetrus* (Big Shaggy-moss), which is more typical of chalk and calcareous woods, yet realised I hadn't recorded the area properly. And, looking at the bryophyte and vascular plant data for the tetrad it seemed like no-one else had either.

A visit in May revealed the particular pleasures of Spanden Wood; the understorey was dotted with thousands of spikes of *Orchis mascula* (Early-purple Orchid) among the *Hyacinthoides non-scripta* (Bluebell), and *Crataegus laevigata* (Midland Hawthorn) was not uncommon. Away from the single path through the wood, and keen to get to the bottom of the ghyll, most of that morning's walk was a slow struggle, gingerly edging down some very slippery steep muddy slopes, which were often coated in brambles. By the stream, the botanical bounty was apparent, with many brilliant yellow spikes of *Lamiastrum galeobdolon* (Yellow Archangel) and abundant stands of *Dryopteris borreri*.

Spanden Wood in May

Several nice bryophytes caught my eye too, such as *Orthotrichum stramineum* (Straw Bristle-moss) with its dark tipped capsules on its sporophyte, and some mats of the liverwort *Plagiochila porelloides* (Lesser Featherwort), but the biggest delight was in finding multiple patches of the white-flowered *Cardamine amara* (Large Bitter-cress) threading down the ghyll for at least 200 m.

Six weeks later, another visit aimed to be a more comprehensive recording session, which ticked off a good number of the species in the Floristic table of the W8 community in the National Vegetation Classification, while giving opportunity to feast on supremely ripe and locally abundant *Ribes rubrum* (Red Currant). Still, the valley floor still needs more careful exploration, while avoiding the deep mud and gloop, but as yet I've not found any more *Tilia cordata*; another similar-looking wood to the west beckons, so that can be the target for next year.

Botanical adventures in the Hastings area

Jacqueline Rose, Judy Clark, Ellen Campbell, Lys Muirhead

Judy only just escaped from Melbourne to arrive back in Hastings in time for lockdown. With all our anticipated botany outings scrapped for a while we had to be content with sharing photographs of 'flower of the day', which marked the progress of the season while keeping us on our botanical toes!

Ellen showed us *Lathraea squamaria* (Toothwort) in Old Road Ghyll, Early-purple Orchid (*Orchis mascula*) round the back of Tesco, and Spring Sowbread (*Cyclamen repandum*), a cyclamen from Europe that has established itself in the churchyard at Church-in-the-Wood. Judy contributed some common woodland species that grow in her garden, including *Cardamine bulbifera* (Coralroot) while Jacqueline looked up and took photos of oak, holly and willow flowers, adding some early grasses *Anthoxanthum odoratum* (Sweet Vernal-grass) and *Alopecurus pratensis* (Meadow Foxtail) for good measure.

Just 100m down the road Jacqueline spotted a stonecrop (*Sedum*) growing in the retaining wall of the East Hill and looking very much at home. It keyed out easily in Stace, *Sedum kimnachii* (Lesser Mexican-stonecrop), but with a note 'all sites need checking for possible occurrence of true *S. confusum'*. That was it – no detail! Matthew said 'try the BSBI referee, Ray Stephenson'. He replied: 'living up to its name, Clausen confused *S. confusum* for a 2nd species which was later described as *S. decumbens.* Unfortunately this name had already been used for a distant relative. Clausen then produced a paper pointing out his error. This publication is extremely rare and difficult to acquire but the upshot is that the earlier works are easily accessed and the name *Sedum confusum* appears to be the name of your plant but is not... *Sedum decumbens* was renamed for Myron Kimnach. It rarely rises more than 30 cm and is often decumbent. I have no doubt you have encountered *Sedum kimnachii.'* All was explained!!

Sedum kimnachii in Hastings

In between trying to grow veggies among the wildflowers on her allotment Judy spotted a bizarre two-headed *Taraxacum* agg. (Dandelion), but she never did conjure up any *Cuscuta campestris* (Yellow Dodder). Following Jacqueline's finding out that *its seed has* been found as an impurity in *Guizotia abyssinica* (Niger) seed sold as bird food, she purchased a packet, broadcast the lot and carefully transplanted some seedlings into her carrot patches. Alas, no parasitized carrots, but she did discover that Niger is worth growing in its own right.

The double-headed Dandelion!

Judy also turned her attention to trying to convince her neighbours that yes, the 'weeds' growing on the pavement really are biodiversity, and wouldn't it be nice to let at least some of them stay. She was more successful in this than in persuading Hastings Borough Council to do a bit less mowing on the West Hill. Thanks to lockdown the vegetation had been allowed to grow longer than usual, resulting in such a glorious patch of flowering *Rumex acetosella* (Sheep's Sorrel) that Judy's partner (who is not a botanist) was moved to ask her what it was. The *Petroselinum segetum* (Corn Parsley) that just manages on the bank at the top of the wall flourished like she has never seen it before. But, despite her best efforts, by the end of May everything had been mown to within an inch of its life by grounds maintenance.

Petroselinum segetum

Oh the excitement of being allowed out all three of us together again! It was Hastings Country Park for us, doing reconnaissance for our annual vegetation monitoring work. In the first compartment, which was luckily within walking distance, we found *Aira caryophyllea* (Silver Hair-grass) growing with *A. praecox* (Early Hair-grass), *Aphanes australis*

(Slender Parsley-piert) and other species happy in the free-draining sandy soil – nice news for the management!

Next compartment on, in a hedge, was where we found the Triffid, a huge *Sonchus* (Sowthistle), about 2.5 m tall and with leaves to 50 cm. We got very excited - could it be the elusive hybrid between Smooth and Prickly Sowthistle (*S. oleraceus* and *S. asper)*? Stace says that most records of this are doubtful or erroneous, but our plant did have a long pointed tooth on the otherwise rounded and dentate leaf auricles. However, the hybrid is sterile, so we had to be patient and wait to see what if anything our Triffid produced.

Sonchus achenes proved to be fascinating. We collected them from both species and from the Triffid. *S. oleraceus* achenes are transversely rugose, a character easily seen with a hand lens. The Triffid's achenes were not rugose, so we hadn't found a *S. oleraceus* that was trying to break the height record for the species. But were they sterile? Unfortunately no. Rather than being 'small, white and abortive' (Sell and Murrell vol. 4) Jacqueline and Judy had to agree that they looked all too similar to achenes that they had collected from various specimens of *S. asper*. In the meantime Jacqueline had found a couple more similarly large *Sonchus* in the same area. What we had found seemed to be unusually tall *S. asper.*

But wait. According to Sell and Murrell *S. asper* has two subspecies, ssp. *asper* and ssp. *glaucescens*, and their achenes are subtly different. The former has 'achenes with sparse spicules on margins and ribs' while the latter (a plant of south west and central Europe) has 'achenes with dense recurved minute spicules on the ribs and margins'. Minute definitely, dense hmmm - to be certain we probably need a higher magnification microscope.

Then came a message from Chairman Nick – the farmer from Banks Farm in the High Weald would like to know what wild flowers are growing in his meadows. What a treat! By now we were travelling together by car. Four visits later we had found a good diversity of species including *Danthonia decumbens* (Heath-grass), *Potentilla anglica* (Trailing Tormentil), *Linum bienne* (Pale Flax), the rayed form of *Centaurea nigra* (Common Knapweed), and *Chara vulgaris* (Common Stonewort) in the pond; and been rewarded with a jar of honey each from the bees kept by the farmer's wife. James Fraser, the farmer, is really interested in wildflowers, so it was a satisfying project. We hope to arrange an SBRS meeting there... one day...

Back in Hastings Country Park, we looked at some heathy areas. A new site for *Carlina vulgaris* (Carline Thistle) was a nice surprise, and the field where cuttings from Ashdown Forest had been strewn a few years back was developing nicely, with a couple of new introductions to HCP, *Erica tetralix* (Cross-leaved Heath) and *Solidago virgaurea* (Goldenrod). Surveying the field was a prickly business as the gorse is a problem yet to be resolved, but a reward was finding thirteen *Argiope bruennichi* (Wasp Spiders) suspended in their webs.

Then it was Freedom to Choose.

The first place we visited was the verge within the Dungeness, Romney Marsh and Rye Harbour SSSI, where we have found so many rare and interesting plants. To our dismay it had suffered from overspill from Camber, parking, barbecues and the like, and the area of greatest interest, the thin gravelly soil, where we had hoped to find *Scleranthus annuus* ssp. *polycarpos* (Annual Knawel) again, and where numerous tiny species of clover (*Trifolium)* appear in spring, was ground down. Plants survive the most damaging conditions, we can only hope!

And of course we went to Norman's Bay. We were rewarded by numerous plants of *Galeopsis angustifolia* (Red Hemp-nettle) in full flower. Just past the saltmarsh Jacqueline spotted *Bupleurum tenuissimum* (Slender Hare's-ear) in fruit, a nice refind from the *Sussex Plant Atlas*.

Bupleurum tenuissimum in fruit at Norman's Bay

Battle Great Wood was still colourful with *Succisa pratensis* (Devil's-bit Scabious), at least three species of mint (*Mentha)* – and we spotted *Radiola linoides* (Allseed) beside a damp ride, which Jacqueline remembers seeing there on one of her first SBRS outings, led by the much-loved Alan Knapp.

Our visit to Pett Level stirred some memories for Ellen, who writes: It is many years ago that I found this special ditch while out walking between Pett Level and Winchelsea Beach. As I was peering into the shallow water where the edge had been trodden down by the cattle, a strange plant caught my attention. I returned with Jacqueline who identified it as *Triglochin palustris* (Marsh Arrowgrass), which caused great excitement. It was the first of many exciting finds and the beginning of a long association with this ditch, which was affectionately nicknamed E.F.D. (Ellen's Favourite Ditch) by a member of the old Hastings Botany Group. Many years later we saw the *Triglochin* fruit which had split from below, creating a distinct arrow shape which must be why the plant is so-called. From repeated visits I have many memories, like the out-of-reach *Hippuris vulgaris* (Mare's-tail) which seemed to show red marks under the whorls of leaves, probably the red anthers of the male flowers. On another occasion *Elodea nuttallii* (Nuttall's Waterweed) was in flower, a large patch with what looked like tiny white moths hovering

over the water, a beautiful sight. This year, despite the gloom of lockdown, E.F.D. surpassed itself, with 23 wonderful blooms of *Utricularia australis* (Bladderwort), as well as *Hydrochaeris morsus-ranae* (Frogbit), *Sagittaria sagittifolia* (Arrowhead), *Samolus valerandi* (Brookweed), *Oenanthe fistulosa* (Tubular Water-dropwort) etc. etc. – too many to mention here. Lots of people have visited with us to enjoy its delights, so perhaps it should now be known, more appropriately as "everybody's favourite ditch"!

Triglochin palustris in fruit near Pett Level

One of the visitors who joined the group was Lys Muirhead, who writes: 'Having been out of the country for over a month I started my year list during lockdown. I recorded plants locally round the village where I live and added to my knowledge. I thought *Lamiastrum galeobdolon* (Yellow Archangel) was a nice find on a roadside verge. There were masses of *Cardamine pratensis* (Cuckooflower) and I discovered some interesting roadside ditches. There was even a *Vicia faba* (Broad Bean) at the edge of a field! While out on my daily exercise I had brief chats with people I'd never met before, exchanging some information on wildlife, but it was not the same as being with other botanists. As the restrictions eased I received some curious looks as I wondered through various National Trust gardens with my wildflower books, or was seen on my hands and knees apparently examining patches of 'lawn' with a hand lens! I was very pleased when Nick kindly put me in touch with the local SBRS group in Hastings and I have been lucky enough to join in on several outings. Our visits to wetland, saltmarsh (tucked away behind the beach at Pevensey), shingle beach and sand dunes have been interesting and fun. A 'carpet' of *Euphorbia paralias* (Sea Spurge), much *Cynoglossum officinale* (Hound's-tongue) in the sand dunes, *Cakile maritima* (Sea Rocket) in flower and *Triglochin palustris* with its elongating inflorescence were some of the flower highlights for me. Reference to *The Flora of Sussex* on my return home showed how special these habitats are. Above all though, it was just good to be out with fellow enthusiasts, enjoying the plants and camaraderie while hunting for them together.'

A strange time! Frances Abraham wrote in a recent email, 'Am thankful to be a botanist....'. So are we!

Carex vulpina on the Wild Brooks

Richard Robinson

Why is it that certain plants become 'must sees'? Is it because of their rarity, their beauty or are they the final one of their genus to be seen? For whatever reason I have longed to see *Carex vulpina* (True Fox-sedge). I cannot claim that when we moved to Amberley fourteen years ago it was to satisfy this need, but certainly our view over the Wild Brooks – one of its few remaining strongholds - was a decisive factor.

Initially the house and garden required much attention but with time I was able to explore more fully the botanical potential of my surroundings. In this I was in due course educated by the SBRS.

I became familiar with *Carex otrubae* (False Fox-sedge). I began to examine its finer details. This was not always easy. One such specimen clearly visible lay just out of reach on the opposite bank of a water-filled ditch. Leaning forward to check more closely its leaf sheath, my centre of gravity gradually passed the point of no return. As I toppled into the water I had a split second to decide between my camera held in one hand and my watch on the other. I chose wrongly and, in due course, at the Camera Shop learnt that when water gets into the electronic circuitry a camera is irreparable. My watch was a fraction of the value of the camera. Anyway it turned out that once again it was *Carex otrubae*.

Time passed. I began to doubt its existence. We have recently learnt that 500,000 plant species are in danger of extinction. Was *Carex vulpina* one of them?

I have recently made the acquaintance of a relatively new, but very keen botanist in Amberley. He has urged me out into the field during Lockdown and we have made several socially distanced expeditions. This has been very good for me. He is unwilling to accept 'jizz' identifications and demands to know why a plant is such and such. Much keying out therefore with David Streeter's marvellous *Field Guide* has been going on.

Learning has been a two-way street, as are all the best educational processes. For example, I have learnt about Procrustes, a mythological Greek figure who abducted travellers and either chopped or stretched them to make them fit his bed. We abhor Procrustean analysis and do not force a square plant to fit into a round hole. Instead we continue to interrogate until we either arrive at a satisfactory conclusion or refer to a higher power such as Nick or Sue Denness.

Thus it was that I introduced him to the delights of Amberley Wild Brooks. He is a cultured fellow and held forth on the finer points of John Ireland's music. I sometimes find myself struggling to keep up. We found ourselves contemplating this sedge. I was holding forth on the distinction between *Carex otrubae* and *C. vulpina*, only to realise with mounting excitement that what I was seeing fitted exactly the defining characteristics of *C. vulpina*. There was the transversely wrinkled, glandular leaf sheath

opposite the leaf blade. There was the characteristic ligule, there were the darkly marked auricles. Joy unbounded. Possibly I danced. I cannot remember.

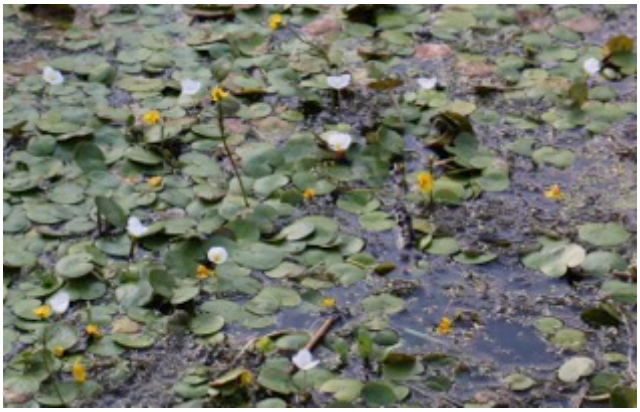
Subsequently I have learnt that there exists on the Wild Brooks a hybrid between *Carex otrubae* and *C. vulpina* with intermediate features. It is rapidly becoming another 'must see' which will compel me out of bed and into the countryside of our marvellous county.

The Wey and Arun Canal

Frances Abraham

In August Nick received an intriguing email from the Surrey botanist Richard Bullock. Richard and his wife had been walking part of the towpath which borders a restored section of the Wey and Arun Canal near Loxwood. They had found a Bladderwort in flower which they did not identify to species but suspected to be *Utricularia australis*. There was also *Hydrocharis morsus-ranae* (Frogbit). Neither is shown in that area in *The Flora of Sussex* (2018). The only native site known for *U. australis* in West Sussex is Amberley Wild Brooks, but it has not been seen there for some years.

I shot off to Loxwood and in no time was admiring hundreds, possibly thousands, of flowering spikes of *U. australis*. The flower shape of a fresh specimen distinguishes it from *U. vulgaris* (Greater Bladderwort), confirmed by the differing distribution of glands within the spur. I find the latter character excruciating but not quite impossible to investigate. There were quantities of Frogbit. Westwards from Loxwood, both species occur sporadically from the village right into Ifold, sometimes in abundance. East of the village, there are gaps along heavily shaded stretches but elsewhere they extend to Drungewick Lane. I had no high hopes of the easternmost length of the Canal from Drungewick Lane to Drungewick Lock as it has been largely drained for repairs this year. However, where a little open water remained, there they both were again. Altogether three tetrads have been added to the Sussex distribution: TQ03F, TQ03K and TQ03Q.



Frogbit and Bladderwort in flower Photo: Richard Bullock

Other open water species included *Potamogeton natans* (Broad-leaved Pondweed), *Nuphar lutea* (Yellow Water-lily), *Spirodela polyrhiza* (Greater Duckweed) and *Persicaria amphibia* (Amphibious Bistort). Except in the most shaded parts, the margins and banks were colourful with *Lythrum salicaria* (Purple Loosestrife), *Lysimachia vulgaris* (Yellow Loosestrife), *Stachys palustris* (Marsh Woundwort), tousled heads of *Scirpus sylvaticus* (Wood Club-rush) and much more.

The submerged leaves of Bladderwort

Photo: Richard Bullock

A few years ago I saw the eastern stretch from a narrowboat with Mary Briggs. Her sight had almost gone but she was keen to hear what plants were visible, and delighted that *Rorippa amphibia* (Great Yellow-cress) was frequent. I couldn't find it this time but in general I see from my old notebooks that the flora of the Canal has not changed greatly since I first visited in the 1990s.

The apparently sudden arrival of these two distinctive species in such great quantity is curious. Richard speculates that the lack of canal traffic in this strange year may have something to do with it. The canal is certainly quieter than normal and the vegetation more luxuriant. There was no boat traffic except for occasional kayakers peacefully paddling. *Utricularia* is a sporadic flowerer and could have been overlooked, although the submerged leaves are clearly visible from the towpath. The *Flora* shows no *Hydrocharis* in the hectad to the south either, but this year I have seen it in numerous places both elsewhere in the Canal and in the R. Arun in TQ02L, TQ02S and TQ02T. Of course nowadays one must bear in mind that many people think that they are doing a good deed if they introduce any old species native to the UK into areas of countryside where they may or may not occur naturally.

Introduction does not seem likely here, but we will probably never have a certain answer to the riddle. Whatever, this is a delightful walk, filled with interest. Just keep one eye on the plants and the other on the path as you pick your way through the dog mess.

Bladderwort flowers with the leaves of Frogbit

Photo: Richard Bullock

A Botanist's life in Lockdown

Helen Proctor

Firstly, how pleased I was to have had the opportunity to address some of you on the subject of conservation of burial grounds at Adastra and to greet you at the AGM just before Lockdown!

In early March, my new neighbour started major reconstruction work on his house. By the time that Lockdown placed restrictions on our lives, staying indoors meant listening to ear-splitting banging and hammering as the roof was demolished and rebuilt with part of the pitch raised. The front lawn was ripped up, trees removed and an excavator deafened the neighbourhood. The radio played and the contractor's dog demonstrated his powerful bark. Impending insanity loomed. Staying at home, indoors or in the garden was just not an option.

My local walks turned up some interesting finds. Close to home, I discovered one tall stem of *Dactylorhiza fuchsii* (Common Spotted-orchid), hiding behind a 'wall' of *Epilobium hirsutum* (Great Willowherb) just outside the local school's boundary fence. From a footpath down a steep hillside I counted over 100 plants of *Ophioglossum vulgatum* (Adder's-tongue). The tenant farmer takes a hay cut in late summer and then occasionally grazes sheep, though not intensively. Later on, other local fields turned up *Genista tinctoria* (Dyer's Greenweed), *Silaum silaus* (Pepper-saxifrage) and *Scutellaria galericulata* (Skullcap) in quantity, not previously noticed, and a new site for *Achillea ptarmica* (Sneezewort). Another walk on Milton Hyde revealed a wet patch with *Veronica anagallis-aquatica* (Blue Water-speedwell. Many more plants of *Pedicularis sylvatica* (Lousewort) had benefitted from brush-cutting in a previous year.

The furlough scheme kept some of the local school's groundsmen from mowing the sports fields quite so frequently. One day I counted 133 plants of *Ranunculus bulbosus* (Bulbous Buttercup)) which had been allowed to flower. I returned the same way in the afternoon and found that all had been mown off!

Michelham Priory was closed to the public and to all volunteers. The resident Head Gardener was left to manage the grounds single-handed. Clearly he could not! By the third week in April a plea had gone out for help and I was one of two volunteers allowed entry for some solitary gardening. James brought the tools I needed to me and brought me mugs of tea. I felt like royalty but it didn't last! This was a good opportunity to study the weeds, sorry, wild flowers. *Atriplex prostrata* (Spear-leaved Orache) filled every space in the large herbaceous bed and seeds kept on germinating for several weeks. *Galium aparine* (Cleavers) strangled every garden plant. *Urtica dioica* (Nettle) sent its roots under the *Alliums.* The huge bonus was the utter peace. I sat by the moat with a robin for company. I watched the few ducks and saw a Heron flying over. A Jackdaw flew back and forth to a hole in a tree. I watched a family of Canada Geese grow up. Being able to escape the noise at home on up to three days a week was a godsend.

I started my own mini-project at Michelham where the land is always accessible. An unloved rectangular flowerbed near the mill was populated only by *Myosotis arvensis* (Field Forget-me-not). Deciding that arable weeds would be appropriate near the water mill, I sowed seeds from half a packet of cornfield annuals in late June. Despite watering in the seeds, these germinated on only one half of the flowerbed. None of the 'nurse' grasses germinated but robust plants of *Avena fatua* (Wild-oat) appeared instead. *Agrostemma githago* (Corncockle) was the first to germinate, followed by *Calendula arvensis* (Corn Marigold) and *Anthemis arvensis* (Corn Chamomile) but no plants of *Papaver rhoeas* (Corn Poppy) appeared. Other weeds that had been 'waiting in the wings' included *Amaranthus retroflexus* (Common Amaranth), *Sonchus asper* (Prickly Sowthistle), *Senecio vulgaris* (Groundsel) and *Euphorbia peplus* (Petty Spurge). Every now and then I dig out surplus *Sonchus asper* but leave the other plants undisturbed.

The school's plan to turn the field behind the village into junior football pitches was put on hold. The school had, by default, created a 'meadow' which has attracted lots of nectaring insects and provided food for birds. I may be the only village resident who appreciated the value of 40 plants of *Trifolium pratense* (Red Clover) earlier in the year, then the flowering plants of *Cirsium arvense* (Creeping Thistle), *Epilobium hirsutum, Dipsacus fullonum* (Teasel) and *Rumex crispus* (Curled Dock) now in seed and food for Goldfinches! Nature is not tidy but I know that!

I wrote a chapter on churchyards for a book on 'Meadow Folk'. A photograph of the author was required. In late May, I could be seen peering at a group of 200 flower stems *of Dactylorhiza fuchsii* in a corner of a churchyard. Three of us, the photographer, the book's editor and me made a huge equilateral triangle in the burial ground. I had complained that I had not been able to visit a hairdresser so Iain brought me a sunhat with the largest brim ever to cover my mop! When the photographer was too far distant, he asked me to use my white recording sheet to reflect light on to my face! You will have to wait until next year to see the result!

In mid-June, Peter and I started recording local tetrads for the next decade. Social distancing involved driving in separate cars to venues. A warm, dry and sunny day made an exploration of Cradle Hill's flowers a delight. *Gymandenia conopsea* (Fragrant-orchid) was plentiful and *Anacamptis pyramidalis* (Pyramidal Orchid) was coming into flower. After careful searching, we eventually counted five plants of *Orchis ustulata* (Burnt Orchid). They were quite hard to spot as they were only 1" high! Further on we found five flowering plants of *Ophrys apifera* (Bee Orchid). *Thesium humifusum* (Bastard-toadflax) was in bud. I noticed an object coloured pink and orange which turned out to be a possible Small Elephant Hawkmoth.

On June 22nd our venue was the Seven Sisters Country Park. Winter storms and the lack of action by the Environment Agency had led to the natural restructuring

Gymnadenia conopsea on Cradle Hill

of the shingle bank which was now furrowed on the inward side and two ridges had effectively been created. Seawater flowed through pools from west to east. *Frankenya laevis* (Sea-heath) was flowering well at the west end of the shingle bank and one plant of *Limonium binervosum* (Rock Sea-lavender) was already in bloom.

Another Monday found us near Milton Gate where cattle-trampled unimproved, spring-fed marshy ground gave us *Stellaria aquatica* (Marsh Stitchwort), and the leaves of *Hydrocotyle vulgaris* (Marsh Pennywort) and *Silene flos-cuculi* (Ragged-robin) amongst other species.

Sundays and evenings were the only time when I could enjoy my garden in relative peace. I discovered that *Kickxia elatine* (Sharp-leaved Fluellen) was in residence in the back garden and *K. spuria* (Round-leaved Fluellen) in the front garden. Plants of *Misopates orontium* (Weasel's-snout) which I introduced from my aunt's garden in Ringwood a long time ago still survive. In the front garden, lack of attention allowed *Helianthus annuus* (Sunflower) in miniature to grow out of the kerbs at the lawn edge as well as *Centaurea nigra* (Common Knapweed), *Malva sylvestris* (Common Mallow), *Torilis japonica* (Upright Hedge-parsley) and the dreaded *Equisetum arvense* (Field Horsetail)!

All the necessary social distancing measures in place, more garden volunteers returned to Michelham and the gate was opened to the public in July. With the public and a take-away cafe, 32 Mallard ducks returned, eager to be fed!

Most of the construction work next door has been completed. The scaffolding which was due to be removed on April 30th is still in place over my path and causing an algal species to grow where rainwater drips off the poles!

Looking forward to seeing you all eventually!

Ophrys apifera on Cradle Hill

Lockdown musings

David Streeter

However much Covid-19 may have curtailed normal botanical activity during this challenging year, one thing that it doesn't seem to have impeded is the relentless growth of the inbox. What follows, therefore, consists of a number of random musings provoked by various botanical emails received during lockdown.

Early July was marked by a request for help from a distinguished insect ecologist, an old friend (strictly in the long-standing sense) whom I hadn't heard from for a while, who had been asked for help in identifying some plant photos taken on a river bank in Somerset. The plant in question was clearly an umbellifer but the puzzle was that it didn't seem to fit any of the usual suspects – *Sium*, *Berula*, *Apium* (sorry, *Helosciadium*), etc. It was quite luxuriant and there was concern that it might be invasive. I have to confess that it took a few minutes for the penny to drop. The plant was *Aegopodium* (Ground-elder). So, that was fine; relieved that reputation still intact and friend duly grateful. But the incident had set in train a number of thoughts. For a start, why had a common familiar plant caused such a problem for a highly experienced field naturalist? I think that part of the answer lies in the way that we subconsciously go about recognising species. The clue lay in, 'it didn't seem to fit any of the usual suspects'. Had the plant been found growing on a village hedgebank rather than the more remote riverbank, recognition would have been immediate. That led me to wonder whether there are two varieties of us; those with a more ecological and those with a more taxonomical approach to field identification. The first, when meeting a new specimen, mentally conjures up a list of what it might be based on where it is growing, the latter asks 'what buttercup is that?' undistracted by the location. Both approaches can lead one astray and always need to be tested against the alternative criteria. I know which variety I belong to. On a recent walk with two botanical friends on Thursley Common we came across a tall cudweed. *Omalotheca sylvatica* (Heath Cudweed) the ecological me was automatically insisting. Don't think so, my more taxonomical friends cautioned. They were right. It was *Laphangium luteoalbum* (Jersey Cudweed)! Assuming the expected can lead one astray when confronted by the wholly unexpected.

Having *Aegopodium* thus forced upon my consciousness led me off down a different byway. Richard Mabey has described it as 'the most obstinate and detested weed in the nation's flowerbeds'. How did such an unwelcome plant come to join the nation's flora? The widely accepted story is that it was introduced by the Romans for culinary and medicinal purposes and the archaeological evidence certainly seems to support a Roman responsibility. Insight into a plant's history can often be gained by the number of folk names that it has acquired. Goutweed and Ground-elder are familiar but Roy Vickery records a total of twenty more in his *Folk Flora*. He quotes records of a cure for gout by taking an infusion of the leaves twice a day and Geoffrey Grigson claims that it makes spicy and tolerable eating if the leaves are boiled like spinach. The interesting thing from a botanical point of view is that its native distribution has become so obscured by its spread in cultivation and as a weed that it is not at all clear from where the plant originally came. The *New Atlas* quotes its native range as 'central Europe'. This is a frequent problem not only with archaeophytes like *Aegopodium* but with crops too, some of which are unknown as native wild plants, e.g. radishes, parsley and coconuts!

September brought a message from our chairman. Business matters about meetings arrangements but there tucked in the middle, almost as an aside, was the fascinating piece of botanical meat. 'What is your ecologist's view of *Petroselinum/Sison segetum*? We see it', he says, 'at the top of the saltmarsh around Chichester Harbour but it is also a weed of arable. Can you shed light on this combination of habitat'? The honest but impossible answer was 'No'! Because of where we live, our experience of Corn Parsley is indeed largely as a coastal plant. In East Sussex I am familiar with it on the sea wall of the Ouse below Lewes and on the banks of drainage dykes on the Pevensey Levels. Frances' account of its ecology in *The Flora of Sussex* is particularly comprehensive and informative and the distribution map clearly supports the coastal affinity. However, a glance at the *New Atlas* reveals a widespread distribution south and east of a line from the Humber to the Severn – a common pattern shown by many species with a generally southern distribution. So, what of the chairman's question? A close read of Mervyn Southam's notes to the *New Atlas* map reveals a recurring ecological theme: 'grassy ***banks***, ***roadsides***, railway ***banks***, river ***banks***, sea ***walls***.' Now look again at Frances' account in the Sussex *Flora*: 'ditch and flood defence ***banks***, sea ***walls***, road ***verges*** and ***banks***'. Is there also a second theme in these descriptions? How about 'arable field margins, drained estuarine marshes, occasional garden weed' (*New Atlas*), 'chalky arable' (Sussex *Flora*). This indicates to me an ecology that could be summarised as a preference for a neutral (estuarine, chalky), fertile (arable, garden weed, drained estuarine marshes), well-drained (banks, walls) soil with little competition (arable, weed). This could suggest that the plant's frequent association with coastal habitats might actually have little to do with specifically maritime factors. Out of interest, I consulted the data set of plant properties used extensively by botanical surveyors called the Ellenberg's indicator values, and under salt tolerance (S) the plant scores 0, indicating 'no tolerance of salt'. *Sison segetum* is one of those plants that we are always pleased to see and it may be that its rather patchy occurrence is simply a reflection of the fact that its particular set of requirements are themselves rather infrequently met and, when they are, they are often near the coast.

The Corn Parsley question prompted a return to a similar but trickier problem. I have long been intrigued by those plants that have a distinctive coastal distribution but do not appear to be salt tolerant or indeed form part of any maritime communities. The obvious example is *Smyrnium* (Alexanders), another Roman introduction that was widely cultivated until replaced by celery in the Middle Ages. The notes on its ecology in the *New Atlas* say that 'there is no satisfactory explanation for its predominantly coastal

distribution'. Reflecting its general southern distribution on the continent it occurs in coastal areas as far north as north Norfolk and north Wales, thence becoming increasingly scarce and almost absent from Scotland. However, in some areas it does spread a considerable distance inland, but a look at its map reveals that in almost all these cases the land is low-lying with no high ground between it and the sea, such as East Anglia, the Thames Estuary and the Somerset Levels. So, the puzzle is, is there some air-borne maritime influence that the plant is responding to? The obvious candidate is salt spray in the atmosphere but why and how the plant should be responding to this is not clear. It is not salt-tolerant in the conventional sense. Some years ago, I happened to find myself analysing the chemistry of the waters of Wicken Fen in Cambridgeshire. Unexpectedly I found that the proportion of sodium to magnesium in the water was rather different to what was expected but was similar to that in seawater. Wicken is 58 miles from the sea, is not tidal and has no brackish influence. This suggests that in low-lying areas some maritime influences in the atmosphere could be felt quite a distance inland but it still doesn't explain how this might be reflected in the plant's distribution. Any suggestions?

Another email in September with attached photo from a lady in Fife. 'Please could you help with the identification of the attached photo of a plant that has come up among night-scented stocks in my vegetable patch?'. The photo was of a plant that I have never seen growing in the wild. Nevertheless, I had seen illustrations of it and met it in keys often enough to have had a pretty good idea of what it was. It was Bullwort, *Ammi majus*, an annual umbellifer with distinctive long, finely branched bracts. The literature describes it as a wool shoddy or birdseed alien from southern Europe. However, two things about that email made it especially notable. First, its first British record from the wild happened to be from Sussex and was made by William Borrer in 1845, who recorded it from Hove. Second, the lady from Fife who sent the photo was one of our (Sussex University) first cohort of biology students, re-establishing contact after 55 years.

Reviewing these jottings, I see that they are, by chance, yet again umbellifer dominated. Perhaps that's not altogether surprising. Historically the family has always been of particular interest to physicians and herbalists, with its large number of medicinal and culinary species. Morison's *Plantarum umbelliferarum distributio nova* of 1672 was the first ever family monograph.

Escape! a Treasurer's ramblings

Trevor Lording

Oh the excitement, third week in July and we were driving to West Wiltshire for two nights away and the plan was for a day on the Wiltshire Downs! Journey extra good as not much traffic to clog the M25 or M4. Weather excellent so after breakfast a short drive to a picnic site car park and then a walk for a couple of miles to a north-west facing steep downland slope, on the top *Cirsium acaule* (Stemless Thistle), a quarter of the way down *Cirsium* x *medium* (the hybrid between Stemless and Tuberous Thistle and then, joy of joys, lower down the slope in longer grass *Cirsium tuberosum* (Tuberous Thistle) which was scattered across the slope and in flower. Also scattered across the slope was flowering *Phyteuma orbiculare* (Round-headed Rampion) which of course reminded me of Sussex!

On my walk back to the car I popped into the Wiltshire Wildlife Trust's Morgan's Hill Reserve as I had, from the *Wiltshire Rare Plant Register*, details of various orchids. I thought I may be a little late but being so close, the Reserve was literally just above the footpath, it was worth a look. After a little searching I found what I was looking for, an old chalk pit, and there on the steep side facing north-west was a lovely patch of short downland turf on which I found my main quarry *Herminium monorchis* (Musk Orchid) in green fruit, and there were about five small clumps fairly close to each other. Also growing there, which surprised me, was *Epipactis palustris* (Marsh Helleborine) on dry chalk downland, a definite first for me in such a habitat! All in all a very interesting first escape from Crowborough, especially when on reporting back to the Vice County Recorder I was told that the *Herminium* had not been reported from the site since the late 1980s.

Our next staying away trip was to North and South Devon for eight nights – such excitement! Braunton Burrows was the main focus for North Devon, with extra days in case of bad weather. Day One caught in thunder storms whilst on the Burrows so sheltering under willow scrub with forays out between showers. First population of *Teucrium scordium* (Water Germander) in tight bud, previous visits had been earlier in the year at best when it was tight buds or later in the year at best one or two flowering, so I wondered would I ever see the plant in good flower. As the rain eased I went across the Burrows to a second site I knew. On arrival the rain started again so I stood head bowed until the rain stopped and then was able to gaze on several patches of the *Teucrium* in perfect flower – persistence rewarded!

On another day I went looking for *Scilla autumnalis* (Autumn Squill), with no success but I did see *Artemisia maritima* (Sea Wormwood) growing in clefts in rocks close to the sea, a habitat in which I had never before seen the plant. On the same day in a marshy field I saw *Cyperus longus* (Galingale) in a native site. Later in the holiday *Scilla autumnalis* was found. Further excitements, such as a *Molinia caerulea* (Purple Moor-grass) tussock marsh on a coastal slope, with me deciding my tussock-hopping days were now over, will have wait for another time!

Photo competition 2020

Peter B. Smith

We had 30 entries, submitted by ten contestants. There were two winners of Class A with equal numbers of votes for Dawn Nelson's fine photo of Green Hellebore and for Alison Minns' equally fine close-up of Marsh Cudweed. The winner of Class B was Wendy Tagg with her delightful picture of the Canary-grass in her garden. The winners will receive a small prize and the photos are shown overleaf. Congratulations to all contestants for sustaining botanical photography in Sussex in these trying times.

Photo competition 2020 – the winning pictures

Joint winner of Class A for a close-up of a plant
Helleborus viridis (Green Hellebore) by Dawn Nelson

Winner of Class B for a weed in the garden
Phalaris canariensis (Canary-grass) by Wendy Tagg

Joint winner of Class A for a close-up of a plant

Gnaphalium uliginosum (Marsh Cudweed) by Alison Minns