PRESIDENT'S LETTER

As I write this in February, I am very much looking forward, in March, to the launch of the new two volume *Plant Atlas 2020*. This will be a significant update for the mapping of the flora of the British Isles. I well remember, while I was still a student, helping to provide locations for the first *Atlas of the British Flora* and a mapping field trip with the editor, Frank Perring. This was published in 1962 and I see that my copy of it cost me £5 and 5 shillings, a pricey sum then for a student, but well worth it. The first edition did not include any microspecies and so the 1968 Supplement was very helpful when it included 500 new maps of microspecies, varieties and hybrids, including such difficult genera as *Alchemilla, Euphrasia, Hieraceum* and *Sorbus*. I particularly liked the taxonomic notes and comments about each taxon which really helped anyone studying these difficult groups. Then in 2002 the magnificent, thicker and heavier *New Atlas of the British Flora* was issued, edited by Preston, Pearman and Dines. This version also had notes about all 2,412 flowering plants and ferns that were mapped. These notes included details of habit, habitat, overall distribution, analysis of change over the forty year period between the two issues and even a list of important references about each taxon that was extremely useful. It also had an innovation for that time from the electronic age, a most useful CD-ROM. I have always felt grateful to the many people who provided the data for these maps and to the editors of each volume who put them together so well. I am now looking forward to the 8th March when the new Atlas 2020 comes out with maps of 2,700 species including native, alien and hybrid species. I will be watching the post each day waiting for the arrival of the copy I have ordered in advance and when you read this it will be readily available from the BSBI.

Atlas 2020 may cause some alarm as it will assess some of the threats to our flora such as habitat loss, pollution and climate change. The availability now of a series of three issues of Atlases enables most useful comparisons over a sixty-year period. A notable feature is the spread of several alien species. The new atlas will be an essential tool for conservation of the wild flowers that we love so much. Don't forget to look at the Plant Atlas website that will be launched at the same time as the book.

GHILLEAN PRANCE

Photo: BSBI

EDITORIAL

Well, here it is, my final magazine as editor. I write that statement with a tinge of regret because I have enjoyed the last six years editing the Wild Flower Magazine. It has been a challenge at times, sometimes frustrating but always ending up rewarding. The thing I shall miss the most is the contact I have had with the many contributors who have made the magazine what it is. I have never been short of copy and people have always responded positively when approached to write an article. So my thanks must go to everyone who has written an article or report, submitted a picture or produced a botanical key. It is **your** magazine at the end of the day. I hope you have enjoyed reading the articles as much as I have enjoyed the challenges of being the editor. Please continue to supply this interesting material for my successors, Ken Southall and Sue Grayston.

My thanks must also go to my excellent support team, namely Dennis Kell, Rodney Burton, John Swindells and Sheila Wynn who have been my proof-reading team, spotting all the mistakes I have overlooked and Sue Poyser who provides an up-to-date membership list every quarter.

As many of you know I am hoping to spend some more time on our boat over the next few summers. Sadly, botany and sailing don't mix too well, although I will still be exploring the various harbours that we visit, with my trusty hand lens and flora in my pocket. Maybe I need to extend my knowledge of the plant world to marine algae, quite a lot of which seem to establish themselves on the hull! With luck (and careful planning) we may be able to combine landings with coastal WFS meetings and we can catch up with the group at these events. Rye (venue for the 2023 AGM) certainly has a wonderful drying harbour right in the centre of town.

In this magazine you will find reports from a couple of researchers who have received grants from the Society which should give you a feel for the diverse range of topics that we support. Also included are the final field meeting reports for 2022 and the results of Autumn Hunt. I always read the meeting reports with a little regret and envy, wishing I could have joined the event. They are enjoyable as much for the social side as they are for the wonderful botany.
Happy botanising in 2023.

ANNE KELL

Copy date for Summer magazine
1st May 2023

Please note the email address to contact the new editor has changed.
Please use
wfs.magazineeditor@gmail.com

NOTICES

The Dent Award
This year we have introduced a new initiative, the Dent Award. This is to be an annual award of £50, available to a young person aged 11 – 18 who has been involved in a wild flower conservation project. We invite nominations of anyone who has made an outstanding contribution to such a conservation project (including research, education or outreach).

Nominations should include details of the young person's contribution and reasons for the nomination. Please submit nominations by the beginning of November for projects in the previous summer. They should be sent to Sheila Wynn at wfs.gensec@gmail.com.

English plant names
You may have noticed that a lot more hyphens have started to appear in the English names of plants, both in the magazine and on the website. This is because, in line with the BSBI, we have adopted Clive Stace's format for plant names. This means that most names are in two parts, so for example, Common Spotted Orchid becomes Common Spotted-orchid because there is also the Heath Spotted-orchid, similarly Early Purple Orchid is Early-purple Orchid.

Also, apostrophes are used for anything belonging to something, like Meadow Crane's-bill, Dove's-foot Crane's-bill etc. Bird's-foot Trefoil is Common Bird's-foot-trefoil because there are other species of Bird's-foot-trefoil, such as Greater Bird's-foot-trefoil.

If you are writing a report or an article for the magazine it would greatly help the editor and the proof-readers if you could put the English names in your reports in this format, please. Just check with the format given in Stace 4.

WFS Safeguarding Policy
In line with the Charity Commission guidelines, the WFS now has a Safeguarding Policy and two Safeguarding Officers.

The purpose of the policy is to set out the behaviour we expect of our members as well as to ensure that our meetings provide a safe environment for everyone, including any children and young people who may attend and for any adult who may be at risk of abuse.

For the full statement of our expectations, definitions of 'adult at risk' and 'abuse', as well as the procedures to be followed in the event of a complaint, you will find the policy on the WFS website.
The Safeguarding Officers are, Janet John, wfs.meetings@gmail.com and Peter Llewellyn, wfs.chair@gmail.com

GRANTS AWARDED

Every year the Society awards grants to a range of different organisations and individuals to help them pursue their botanical goals. Many of these grants are to Wildlife Trusts so they can carry out training programmes or to people wishing to attend botanical courses. Some of these grants are to individuals so they can undertake an area of botanical research. One stipulation for the award of a grant is that the individual or organisation provide a brief report on the use to which the money was put. Below are two reports from recipients of grants awarded in 2022.

THE MYSTERIOUS SEDGE OF THE RIVER NAVER

The UK has arguably one of the most intensively studied floras in the world. This makes it all the more exciting when a new coloniser is discovered on our beautiful isles. Nestled away in the north-west of the Scottish highlands amongst the rolling mountains and beguiling lochs, a small sedge species has made Scotland its home.

Carex salina Walenb. or commonly the Saltmarsh Sedge, is a stable hybrid species which derives from its closely related parents, *C. paleacea* and *C. subspathacea*. It's a small to mid-sized species (10 – 30cm in height) and distinguishable from others outside the section via its biconvex utricle shape and two stigmas. All three species have a fascinating trans-Atlantic distribution and experience a typical range, spanning the north-eastern seaboard of North America, across to Scandinavia and stretching further east to Russia. Until 2006 none of the three species had been recorded from Britain.

However in 2004, while undertaking a saltmarsh survey at Morvich for National Trust Scotland, Keith Hutcheon found a new and unidentifiable *Carex* species. After review by a team of experts, this new, plucky, little plant was confirmed as *C. salina* and thus the search for more populations was afoot. By 2012, five additional Scottish populations of this sedge had been identified: Strontian and Loch Sunart (VC97), Loch Nevis (VC97), Loch Long (VC105) and Invernaver (VC108).

During surveying in 2018, immediately after having sampled the majority of other UK *C. salina* populations, Paul Ashton, Professor of Botany at Edge Hill University, Lancashire, surveyed the population at Invernaver. Observations of overall morphology led him to question whether this sedge species was indeed *C. salina*. Upon further inspection, Dr Mary Dean, another sedge enthusiast who earned her PhD studying this group of sedges, and Paul Ashton proposed that this population wasn't that of *C. salina* at all, but rather a closely related species called *C. vacillans* or Swinging Sedge. If this were to be the case, then it would be yet another new coloniser of the UK.

However, there have been some conflicting opinions regarding this Invernaver sedge. Samples sent to Scandinavian *Carex* expert, Prof. Reidar Elven, led him to identify it as Common Sedge *C. nigra*. In contrast, UK *Carex* referee Mike Porter contested the latter identification as "not like any *C. nigra* [he had] ever seen". Thus, a research opportunity was born! To establish the true identity of this mystery *Carex* species situated on the north coast of Scotland, through means of not just morphometrical, but also genetically based identification techniques. Before I could do this, however, I first needed some plant material.

The drive from Edge Hill University to Invernaver is a long one. However, it is far from tedious as it's a journey of exceptional viewpoints and wholesome eateries certainly making the drive an enjoyable part of the whole botanical expedition. After a couple days of travel and a total of eleven hours driving, my marvellous field assistant and photographer, Mark Ashton and I, finally made it to the River Naver, our home for the next few days.

Travelling 18 miles from Loch Naver, the river meets the sea at Bettyhill, a small village situated nearby. A Special Area of Conservation, the river Naver is home to two Annex II species, Freshwater Pearl Mussel and Atlantic Salmon and, unsurprisingly, is considered one of Scotland's best rivers for salmon fishing. Encapsulating the sea mouth are highly resistant metamorphic rocks of the Moine (c. 420-415 Ma old), as well as Moine Schists making up the glacially scoured bedrock ridge in the centre of the bay, a goldmine of interest for any geologist.

Photo: Mark Ashton

Bettyhill provided an excellent base as surveying next to the sea mouth was more appropriate due to the increase of salinity, something this group of maritime sedges appreciates. Our mystery *Carex* has established itself on both sides of this river and since the extensive survey in 2018 is showing no signs of a decline. This is important given that we wanted to collect leaf material for DNA analysis without harming the population. In addition to collecting leaf samples, physical characteristics

of a good sample were also needed for morphological analysis.

As part of her PhD, Mary Dean collected a wealth of measurements from six species belonging to the *Carex* section *Phacocystis,* the group to which *C. salina* and *C. vacillans* belong. It was this dataset that enabled us to make the comparison between the morphological measurements of each species. Following Mary's approach, we spent three days randomly selecting individuals and measuring each for 21 different morphometric characters, from stem length to utricle beak size. Once we had collected and collated our data, we slowly travelled back to the university via the north-west coast and a couple of island hops to Lewis and Mull; these detours served as a chance to investigate the Water Sedge *C. aquatilis* populations growing here, but that species is a different story all together!

Upon our return, data analysis ensued. The morphometric measurements were easy enough in themselves, as, thankfully, data analysing technology can do almost anything (as long as you input the data correctly in the first place). The genetic side, alas, takes a few more steps from the initial DNA extraction, through to gene amplification, sequencing and finally raw data input. Thankfully, this was done with relative ease and once I've collated all of the genetic information from samples collected from Norway, a genetic comparison can be made. For now however, the morphometric information has yielded some insights though still leaves some questions unanswered.

To tackle the genetic aspect of this identification quest, two approaches have been taken. Firstly, DNA samples of the Bettyhill *Carex* and other close relations (such as *C. salina* and *C. vacillans*) have been analysed using microsatellites. These are typically utilised when investigating aspects such as pollen movement, long distance dispersal and the relatedness of individual plants in the same population.

The other method will involve analysing specific segments of chloroplast DNA (cpDNA). This differs from the nucleic microsatellite DNA in that this special cpDNA only exists inside the chloroplast organelles within the plant's cells. Mutations within cpDNA are much less common than those in microsatellites, as it is a more slowly evolving gene. As cpDNA is only maternally inherited, it is a useful tool when wanting to investigate aspects relating to genetic heritage.

A final thread of evidence comes from the work of Edge Hill University dissertation student Andy Weaver, who is investigating leaf anatomy as an added source of information. When we combine the DNA approaches, alongside the morphological data this will hopefully finally provide an indication of what species is growing in the mud at Invernaver.

So alas, at this stage we still don't have the definitive answer. However, we are definitely closer than we were this time last year (and will hopefully have a more satisfying end to this question very soon!). Thus we owe a great debt of gratitude to the Wild

Flower Society for funding this research, enabling us to travel to the Highlands and complete our data collection. Areas of research such as this greatly benefit from the assistance and funding of organisations such as yours and make a real difference to advancing our understanding of the natural world (and by helping researchers accomplish and enjoy something we truly love!). Thank you for all of your support!

JENNIFER CLAYTON-BROWN

Jennifer hopes to have finished the analysis this summer and has promised to keep us updated as to the identity of this mystery sedge. With luck we should be able to give you the results in the autumn issue of the Wild Flower Magazine.

Below is an abridged report received from David Roberts on his observations on the pollinators of Burnt Orchid.

OBSERVATIONS ON INSECT VISITORS TO BURNT ORCHID

Although small in stature, Burnt Orchid *Neotinea ustulata* is, at least in my opinion, one of the UK's most beautiful orchids. Unfortunately, it is also one of the UK's most threatened orchids having suffered significant declines across the country, with fewer than ten sites having more than 200 flowering individuals. In Kent this species has declined to a single site where only two individuals are known to have flowered in recent years. However, Parsonage Down in Hampshire is home to much of the UK population with an estimated 30,000 flowering individuals. While, *N. ustulata* is of conservation interest, being listed as Nationally Scarce, it is also of evolutionary interest due to its flowering behaviour, having an early and late flowering form (*N. ustulata* var. *ustulata* and *N. ustulata* var. *aestivalis* respectively), with the former being far more common than the latter. What drives this divergence is unclear. However, it is thought to be differences in pollinator communities, with recent studies implicating two fly species (*Tachina fera* and *Nowickia ferox* respectively) in the divergence; although a variety of insects are known to be occasional pollinators. The purpose of this study, funded by the Wild Flower Society, was to provide further understanding of the pollination ecology of this rare and curious orchid in a UK context.

Burnt Orchid

Photo: Ken Southall

This involved pollinator observations at the Mount Caburn population, near Lewes, of *N. ustulata* var. *ustulata* and the High and Over population, near Seaford, of *N. ustulata* var. *aestivalis*.

Observations

The early flowering form, at Mount Caburn, was visited in late May to early June where approximately 130 flowering individuals were recorded. During this period it was reported that a number of plants had been illegally dug up from the population, although no evidence was found. During 58.5 hours of inflorescence observations, a wide range of insect taxa were recorded, although the majority were flies. The 14 visitors included ten flies, a beetle, possibly the Small Copper butterfly and an *Andrena* bee species, resulting in a visitation rate of 0.24 visitors per hour.

Interestingly, one visitor, a male *Sarcophaga* sp., was observed to be carrying what looked like pollinia on the end of its abdomen. While pollinia were observed, for a taxon to be considered a pollinator, pollinia must be recorded to have been removed and deposited. In this case, neither event was observed. However, we can be confident the pollinia were of *N. ustulata* var. *ustulata*, as the only other orchid flowering at the same time was the larger Chalk Fragrant-orchid *Gymnadenia conopsea*.

At the High and Over population, near Seaford, approximately 40 plants of the late flowering form were recorded at the beginning of July. During 52.0 hours of inflorescence observations, a much more restricted visitor community was recorded. All visitors were diptera. Of those that could be identified (eight out of ten) all were of the Calyptratae and all but one from the closely related families of the Tachinidae and Sarcophagidae. Based on these observations, the visitation rate was 0.19 visitors per hour. None carried pollinia, although two visitors were *Nowickia ferox*, a known pollinator of the late flowering form.

In both cases, no reward in the form of nectar was observed and the low visitation rates, far lower than those observed in related *Orchis* species in the UK, suggest that pollination is likely to be through deception. Further, it has recently been suggested that the 'burnt-tip' serves a biological function in attracting flies. However, it is interesting to speculate whether the 'burnt-tip' serves as food-deception for the adult fly or brood-deception as a place to lay eggs by the adult flies.

If we assume *N. ustulata* is predominantly fly-pollinated by Tachinid and Sarcophagid flies, this raises an interesting conservation question. Tachinid flies are parasites of other invertebrates, while Sarcophagid flies' larvae feed, as their name 'flesh flies' suggests, on carrion, as well as faeces and associated bacteria films. This is a far cry from the more charismatic insect fauna, such as bees and butterflies, and given their more putrid ecology is likely to make them a conservation challenge!

DR DAVID L ROBERTS

FIELD MEETINGS 2022

MORAYSHIRE
6th - 8th JULY

Wednesday 6th July - Forres
Today, our leader, Ian Green, took us to five separate locations to the south of Forres. The weather was a little cool with only the odd spot of light rain. We began by walking along a dramatic gorge where the River Findhorn rushes through the narrow channel known as Randolph's Leap, a beautiful place to walk. Highlights included Wood Fescue *Drymochloa sylvatica* (unusual to find it this far east in Scotland), Oak Fern *Gymnocarpium dryopteris* and Scottish Laburnum *Laburnum alpinum* (just a single raceme still in flower). Growing together, we saw Upland Enchanter's-nightshade *Circaea x intermedia*, Shady Horsetail *Equisetum pratense* and Wood Stitchwort *Stellaria nemorum*. We also found huge examples of Sitka Spruce *Picea sitchensis* and Douglas Fir *Pseudotsuga menziesii*, estimated at about 200 years old, growing side by side. As we climbed back out of the gorge, leaves of Wood-sorrel *Oxalis acetosella* covered the ground in great swathes below the pines.

Our second stop of the day was to Loch of Blairs. We walked through woodland, taking care not to step on the numerous toadlets and froglets, to a small patch of Coralroot Orchid *Corallorhiza trifida*. Ian had counted 24 in flower earlier in the year with just six stems found in fruit today. Ian informed us that this species is sometimes called the banana orchid in Sweden because the fruits are said to resemble bunches of bananas. (Not to be confused with the Banana Orchid from the Cayman Islands.) Back near the picnic site and board walk we were shown Various-leaved Pondweed *Potamogeton gramineus* and Least Bur-reed *Sparganium natans*.
After a pleasant lunch stop, watching


Wood Stitchwort

Photo: Peter Llewellyn

the Sand Martins, Swallows and dragonflies skimming the loch, we drove to our next site, north west of Loch of Blairs. Ian led us along forest tracks and paths down to a sheltered and picturesque spot on the River Findhorn. Here there were about ten plants of Green-flowered Helleborine *Epipactis phyllanthes* in flower bud. Ian discovered them here in 2012 (the first record for this species in

Photo: Sue Grayston

Scotland) when they were not in flower and he initially thought they were Broad-leaved Helleborine *E. helleborine*. They are now found at several locations along this river. Most of the group then moved on and saw Common Gromwell *Lithospermum officinale* in flower, the only site for this species in N.E. Scotland. A few stragglers lost sight of the main group at this point so missed out on the Gromwell (so easy to lose people in these woods!). On the walk back we saw a few plants of Common Twayblade *Neottia ovata* in flower. There are only about ten sites for Common Twayblade locally, the Lesser Twayblade *N. cordata* being more common here.

It was then a short drive to see a pretty patch of Maiden Pink *Dianthus deltoides* growing on a bank inside the entrance to the, now closed, Dallas Dhu Distillery. This was a garden variety with flowers a deeper pink than the native species, the plants being discovered when the verge was left unmown in 2020. Some were lucky enough to see a Hobby fly almost overhead here. In a stream behind the distillery was a good display of Monkeyflowers. Some were the more commonly found Monkeyflower *Erythranthe guttata* but there was also an unidentified garden variety which had larger flowers that were coloured yellow and orange. Also here was Peppermint *Mentha x piperita* and a hairy variant of Spearmint *Mentha spicata.*

Our last stop of the day was Muiry Wood, located between Forres and the village of Rafford. Here we found Chickweed-wintergreen *Lysimachia europaea*, although the flowers had unfortunately gone over. Quite a large amount of naturalised Prickly Heath *Gaultheria mucronata* was present which had numerous bell-like white flowers. Ian took us through woodland to a patch of Intermediate Wintergreen *Pyrola media*. The flowers had gone over but we could still see the long styles that are characteristic of this species. We briefly managed to lose part of the group on the way back to the cars but were soon reunited. It's certainly a difficult task keeping botanists together! This had been another very enjoyable day of botany and beautiful scenery. We are very grateful to Ian for showing us these special plants.

SUSAN AND TOM SIMCOCK

Thursday 7th July - Darnaway Forest

This was our first stop of the day where a short walk, past the dead stems of last year's Birds-nest Orchid *Neottia nidus-avis*, brought us to a loch that supported an interesting

hybrid Water-lily, a Spatter-dock x Yellow Water-lily hybrid *Nuphar advena x Nuphar lutea.* This had been confirmed by DNA analysis by Richard Lansdown. The edge of the loch was extremely soggy and inclined to give way underfoot so only the intrepid few (with wellies) ventured in to get a better look. We were rewarded by a close-up view of the hybrid Water-lily flowers, plus Bladderwort *Utricularia australis* flowers and one flowering stem of the hybrid Bulrush x Lesser Bulrush *Typha x glauca*. Of course with any of our botany trips there are always people with other interests and a few of us eagerly spied two common slime moulds, Flowers of Tan and Wolf's Milk.

Our second stop in Darnaway Forest involved a walk through the forest to the river where we descended into the ravine carved out by the River Findhorn. This was a wonderful place, full of interest. Wood Vetch *Ervilia sylvatica* and Mountain Melick *Melica nutans* clung to the steep sides along with Maidenhair Spleenwort *Asplenium trichomanes* ssp. *trichomanes*. Rough Horsetail *Equisetum hyemale* clustered in a wet hollow and on the shore we found Alpine Lady's-mantle *Alchemilla alpina*. During our lunch stop one of our party went for a paddle whilst looking for interesting bryophytes and the rest of us watched a group of people on the opposite bank spraying an infestation of Giant Hogweed *Heracleum mantegazzianum* plants which were trying to take over the world. Mention must be made of a wonderful moth, a Beautiful Yellow Underwing *Anarta myrtilli* that had fallen into a puddle on the shore and proceeded to swim his way to a rock and crawl out of danger. The walk back to the cars offered plenty of breathtaking views down the ravine. Certainly a day out to be remembered.

Some still hadn't had enough and managed to see yet more plants at the local castle whilst another group drove over 40 miles up the coast to see Oysterplant *Mertensia maritima*. A big thank you to our leader Ian Green for sharing his knowledge of the interesting and rare plants and their locations.

SUE GRAYSTON

Friday 8th July - Findhorn

We have all been there before: the leader asks for someone to write a report on the day and everyone examines the ground as if a rare flower is about to spring up. Who would crack first? This time, me.

Most of the day was spent at Findhorn on the coast, at one time a small fishing village, now a seaside resort, but perhaps best known for the Findhorn Foundation nearby. We met at the RSPB reserve at low tide and set off for our first target, Dwarf Eelgrass *Zostera noltei*. Eelgrasses are the only flowering plants that grow entirely submerged by the sea, with the stamens emerging just before the tide comes in, and there was plenty of it around in the shallow pools. From there, Ian took us on a long walk around the bay to find Heslop-Harrison's Eyebright *Euphrasia heslop-harrisonii*. En route we found a large number of Scots Lovage *Ligusticum scoticum*, to my surprise, as I've only associated it with cliff sides, leaning over edges rather precariously to try for a decent

Photo: Sue Grayston

photo. Another find to bring joy to one of the group was Baltic Rush *Juncus balticus*, very much a northern species, distinguished from Hard Rush *J. inflexus*, by growing in quite obvious rows. But in due course, we found our first Eyebright, recognised by its lop-sided fruit and, having found one, many others emerged. It was determined first by J.W. Heslop-Harrison in the days when he was behaving himself properly, as a professor of botany should. Only later did he tell fibs, especially when he 'discovered' rare plants on the Isle of Rum, entirely to support his pet theories. Normally, I would add 'allegedly' in case lawyers acting for his estate are reading this, but I was told it was all laid bare in a book, *A Rum Affair*. To catch up, I ordered a copy from Ebay as soon as I returned to the car park. Apparently even the hyphen in his name is faked, added to make him sound more distinguished.

And thence into the coastal village itself. Small Adder's-tongue *Ophioglossum azoricum* is found scattered around the UK coastline, but is surprisingly difficult to spot. The wonderful thing about a WFS field trip is that you can wax lyrical about the joy of *Rumex* without causing eyes to roll or glaze over. (In this instance, *R. x hybridus*, the cross between Northern Dock *R. longifolius* and Broad-leaved Dock *R. obtusifolius*, seen that morning near Alves church, with its delightful variety of tepals.) But, in addition, many eyes make sight work: it was in the vicinity of the ladies' toilets that Sue Grayston managed to spot a single Moonwort *Botrychium lunaria*. Soon we were all loitering around the toilets and before long Jane Lowe espied the Adder's-tongue. A group effort disentangled five of them from the grasses. Ian Green did a great job over the four days and fittingly the last two plants have special meaning for him. Back in 2004 he was invited to survey a piece of sand dune before the erection of beach huts. Nothing of botanical worth was in the way, but nearby he found Dune Fescue *Vulpia fasciculata*, at its most northerly point, not just in the UK, but in the whole world. Could it be seen again? The short answer, because you must be tired of reading by now, is yes. And the other find, again after a seven year gap, was its hybrid with Red Fescue *Festuca rubra, x Festulpia hubbardii*. According to Ian's app., the nearest such hybrid was 380Km away. The Red Fescue elements in the cross are the narrow leaves and for the Dune Fescue the one-sided seed head. Altogether an excellent meeting, due in no small part to our leader Ian; our special thanks for all the effort he put into the planning and the way he shepherded a rather wayward flock of botanists around each day. DAVID HENRI-CAALS

BURHAM DOWNS AND ANGLEY WOOD, KENT
22nd - 23rd JULY

Friday 22nd July - Burham Downs
A group of ten of us met at Tyland Barn KWT, Sandling, near Maidstone. The weather was pleasant, the recent heatwave having passed, thankfully. Priscilla Nobbs had been forced to change the meeting point at the last minute due to road closures, which had been difficult, but Tyland Barn was a good place to meet with a large car park and (the all-important) toilets.

After making introductions we got back into our cars and drove to a nearby lay-by off the A229. It reminded us of all those times when you drive past verges full of tantalizing flowers but can't stop - but this time we did! The area was rich with plants but we had particularly come to see the Broad-leaved Helleborine *Epipactis helleborine* of which there were some fine examples. We also had a look at Hoary Ragwort *Jacobaea erucifolia* (a late flowering ragwort), Betony *Betonica officinalis*, Tall Melliot *Melilotus altissimus*, Carline Thistle *Carlina vulgaris*, Chalk and Greater Knapweed *Centaurea debeauxii and C. scabiosa.* Showing us a flower head, Steve Clarkson explained that Black (Common) Knapweed *C. nigra* had been reclassified as it predominantly grows in the northern half of Britain and that down in the south we tend to find Chalk Knapweed. Steve said to identify the differences look at the lowest row of bracts (phyllaries) only. In chalk Knapweed, the shape of them is an isosceles triangle, dark-coloured and they have little wings projecting off the side (fimbriae). They are spaced such that you can see the green receptacles beneath. The width of the receptacle is about 5-9mm. This contrasts with Common Knapweed *C. nigra* where the phyllaries are oval-shaped and touch or overlap each other and the width of the receptacle is 9-14mm. (See Stace 4 p.735 and Harrap p.260.)

We then drove on to Burham Marshes, parking outside the ancient church of St Mary. We had a quick look inside the church which was built on the Pilgrim's Way in Norman times with Gothic alterations and is now classified as redundant but is still fascinating to visit. In the churchyard we looked at a Great Lettuce *Lactuca virosa* which must have been 2m tall. Walking on down to the marshes we saw Welted Thistle *Carduus crispus*, Vervain V*erbena officinalis,* Wild Teasel *Dipsacus fullonum* and Weld *Reseda luteola*. On reaching the edge of the marsh we found Marsh-mallow *Althaea officinalis* and Helen Dignum then spotted the Marsh Sowthistle *Sonchus palustris* which was a highlight as Priscilla hadn't seen any on her recce with Gareth Bursnall. We fought our way through the vegetation to get a closer look at both these marsh specialties. On our way back to the cars we spotted a Garden Tiger Moth *Arctica caja* which was very striking.

Back in the cars our final destination was a nearby residential road from where we walked into an arable field

Marsh-mallow

Photo: Sandy Terry

and examined the scarce Rough Poppy *Roemeria hispida* with its deep pinkish-red flowers. We walked up the steep side of the field and stopped at the top (wonderful view) for a well-earned picnic lunch, during which it decided to drizzle but not enough to dampen enthusiasm!

After lunch we went into another nearby arable field with an uncultivated patch at the top which had a surprising variety of plants including Stinking Camomile *Anthemis cotula*, Dwarf Spurge *Euphorbia exigua*, Narrow-fruited Cornsalad *Valerianella dentata*, Sharp-leaved Fluellen *Kickxia elatine* and Small Toadflax *Chaenorhinum minus*.

We entered Burham Downs Reserve and soon found emerging flower heads of Autumn Gentian *Gentianella amarella* and Ploughman's-spikenard *Inula conyzae*. On the return footpath at the bottom of the Reserve was a large bush of Juniper *Juniperus communis* on the steep chalk bank.

Walking on over very chalky terrain we saw, what was for me, the plant of the day - small clumps of Ground-pine A*juga chamaepitys* with its delicate, pale yellow flowers. Nearby we spotted some Basil Thyme C*linopodium acinos*. We also looked at Common Cudweed *Filago germanica* (listed as Near Threatened, so not so common!).

It was a day of surprisingly varied habitats and the flowers listed are only a small sample of the vast array of chalk downland plants we were lucky enough to see, especially in view of the dry summer.

Thank you for a wonderful day Priscilla and Gareth and for researching it so thoroughly. Thanks also to everyone for being so friendly and generous in sharing information.

SANDY TERRY

Saturday 23rd July - Angley Wood
Seven people met the leader, Stephen Lemon, at the entrance to Angley Wood. Stephen chose this habitat, an ancient wood on sandy acid soil with clay, as a contrast to Burham Downs and Marshes. The cool walk along paths under Sweet Chestnut *Castanea sativa* trees was a wonderful relief from all the heat.

By the path we found low-growing Tormentil *Potentilla erecta* with its four yellow petals and sessile leaves cut into three with two stipules resembling small leaflets. We were able to contrast this later with Trailing Tormentil *P. anglica* (four or five

petals, the stalked leaves having three-five leaflets) and Hybrid Cinquefoil *P. x mixta* Trailing Tormentil x Creeping Cinquefoil *P. anglica x P. reptans (*four or five petals, very sterile, with leaves of three or four leaflets and petioles all the same length).

Stephen, who is an excellent teacher, showed us that Green-ribbed Sedge *Carex binervis* has green utricles, matt leaves above, shiny below and a flat papillose ligule. In contrast, the similar Smooth-stalked Sedge *C. laevigata* has a distinctive ligule. Remote Sedge *C. remota* has long bracts. In wetter areas we found Common Yellow-sedge *C. demissa* and Bladder-sedge *C. vesicaria.* To his surprise, Stephen cut himself as he pulled at a Bracken *Pteridium aquilinum* frond and needed a plaster for all the blood!

There were many Hard-ferns *Blechnum spicant* (with distinctive fertile leaves) growing by the path. Soon Stephen led us off into the undergrowth; we felt like intrepid explorers plunging into the unknown, over and under trees, and being attacked and caught up in dangling brambles. He showed us the leathery Hard Shield-fern *Polystichum aculeatum* with the distinctive 'thumb' of the leaf rachis by the pinna rachis. Twice Stephen made us wait whilst he went off to hunt out the rare ferns. It was well worth it to be able to examine Marsh Fern *Thelypteris palustris* growing on permanently damp peat and later Lemon-scented Fern *Oreopteris limbosperma* with minute glands on the lower side of the pinnae giving a distinctive lemon scent when crushed. Its pinnae narrow towards the base, almost to nothing, contrasting with the fuller fronds of Lady-fern *Athyrium filix-femina.* There were some magnificent specimens of Golden-scaled Male-fern *Dryopteris affinis* ssp. *affinis.* Narrow Buckler-fern *D. carthusiana* and Hay-scented Buckler-fern *D. aemula* added to the growing list of different ferns. It was an eye-opener for one participant who said; "I have never before studied ferns!"

We ate lunch in the middle of nowhere sitting round a wet bog! Stephen had only found this area during the pandemic. It was hard finding the fruiting stalks of tall Heath Spotted-orchids *Dactylorhiza maculata* which had been in full flower a month previously. We also hunted for the minute flowers of Marsh Pennywort *Hydrocotyle vulgaris.* After lunch we walked back to the wood entrance coming across Lesser Skullcap *Scutellaria minor* and a magnificent display of yellow Goldenrod *Solidago virgaurea* with dozens more about to burst into flower.

A nearby farm shop provided restorative tea, ice-cold drinks and cakes, whilst Gareth Bursnall worked his way through a 500ml pot of Stem Ginger Ice-cream! The day, unexpectedly, turned out to be a highlight for me. Many thanks, Stephen, from everyone, for all your expertise – finding and teaching about the plants. Walks with Stephen are always instructive – and most of all - fun!

PRISCILLA NOBBS

THE PITFALLS AND JOYS OF LEADING A MEETING

Two days before my WFS Burham Downs meeting on 22nd July I rang the local baker to order some bread. "On Friday? I think the road is going to be closed!" We needed that road for access to the Village Hall. I quickly emailed everyone with the new venue – Tyland Barn, Kent Wildlife Trust Headquarters. One person cancelled, another rang to say she could manage the road to Burham, but not the fast roads at Tyland Barn. I arranged for Georgina Hopkins to meet us later at Burham Church, on the marshes.

Gareth Bursnall and I arrived at Tyland Barn on Thursday evening. Shock, horror, the Barn was empty – no shop, no café where I had planned to finish the walk. We could, however, use the toilets! I had already told the group we would not see any of the spring-flowering plants listed in error in the Year Book but would see other special flowers.

The lay-by for the Broad-leaved Helleborine *Epipactus helleborine* was closed, so I switched to one opposite the Lower Bell Pub. Whilst looking at the plants Gareth had a phone call and I later found a text message, but we could not locate the sender who could not get to the Village Hall (two people had not turned up). I felt dreadful all day – lesson learnt, make sure you have the mobile phone numbers for all the participants. (We met up the next day, she was very forgiving and had visited Sissinghurst, on her 'hit' list, instead. I have promised a personal walk in the future. The other person had only booked for the following day's walk.)

We continued to old Burham Church where Georgina was happily sitting on a bench and pointed out the huge Great Lettuce *Lactuca virosa* in the churchyard, towering above people's heads. We continued to the edge of the River Medway where the previous evening Gareth and I could not find the rare Marsh Sowthistle *Sonchus palustris.* Gareth had lacerated his legs ploughing through the overgrown vegetation on the towpath to the usual flowering place. In a different area Helen Dignum suddenly saw some tall yellow flowers in the

Examining the Great Lettuce

Photo: Sandy Terry

distance. Steve Clarkson used his binoculars, and, yes, there was the plant. Helen borrowed Georgina's stick and gingerly made her way into the marsh getting close to the very tall flowers and also near the soft Marsh-mallow *Althaea officinalis.*

We managed to find parking places on the side roads and walked up to Burham Reserve for a variety of chalk loving plants. Back on the main path, I asked people for the only time on my walks this year, "What was their plant of the day?" Replies included - "Broad-leaved Helleborine, Marsh Sowthistle, Marsh-mallow, Small Toadflax, Stinking Chamomile, Rough Poppy, Dwarf Spurge" and "all the small arable weeds in the corner of a field".

We then continued to the 'star' plant – would it be there after all the hot weather? What a relief and joy when we found the small yellow flowers of Ground-pine *Ajuga chamaepitys* – a new plant for most of the group.

PRISCILLA NOBBS

NORTH YORKSHIRE 6th - 7th AUGUST

Saturday 6th August - South Gare
South Gare is a man-made promontory at the southern edge of the Tees estuary, built to enable the River Tees to be navigated by larger ships. It is a fascinating site with a large variety of different habitats, both natural and man-made, resulting in a huge diversity of plant species. Dave Barlow, the county recorder for VC62, has amassed a great amount of knowledge of this area and we much appreciated him showing us some of the highlights. The summer heatwave had brought an early finish to many of the flowers but there was still much to be found on this fine, sunny day. The yellow flowers of Perennial Wall-rocket *Diplotaxis tenuifolia* brightened up the roadside where we parked. Exploring the beach and dunes to the east of the site, we saw Grass-leaved Orache *Atriplex littoralis*, Frosted Orache *A. laciniata* and Babington's Orache *A. glabriuscula,* although we were too early to see the distinctive seeds of this last species with their horn-like projections. In flower, between the beach and the dunes, were several plants of Sea-holly *Eryngium maritimum,* an uncommon plant on the east coast, especially in northern England. Dave explained that many coastal plants exist here in an isolated pocket. You would have to travel south to the Humber or north to Northumberland to find the nearest suitable habitat for many of the maritime plants found on South Gare.

For some plants, it is a mystery how they arrived at the site. Uig Hawkweed *Hieracium uiginskyense* was first recorded here in 2004 and appears to be thriving. One possibility is that seeds came from ships moving up the Tees estuary. The flowers had all gone to seed, so we had to imagine the 'blaze of colour' we would have seen a month or two ago. We moved from the dunes to an unusual man-made habitat consisting

of an extensive area of ridges made from slag from the iron and steel works, dumped here around the 1860s. The lack of soil and the leaching of calcium from the slag has enabled a good selection of calcicole (lime-loving) plants to establish, often growing alongside plants typical of acidic soils. Plants we saw today included Proliferous Pink *Petrorhagia prolifera,* Blue Fleabane *Erigeron acris*, Lesser Meadow-rue *Thalictrum minus* and a white-flowered form of Harebell *Campanula rotundifolia.* Proliferous Pink is rare in the U.K. being mainly found in the 'Brecks' in Norfolk and we will probably never know how it arrived at South Gare. It had mostly gone to seed, with just one or two flowers hanging on.

Moving on to a grassland area, I was pleased to see many plants of Lesser Centaury *Centaurium pulchellum*, growing on and alongside the paths, a rare plant in the north of England. The tiny pink flowers were a real treat. After lunch was another plant that's not commonly seen, Frog Rush *Juncus ranarius*, growing in damp parts of the path. Nearby was Slender Spike-rush *Eleocharis uniglumis*.

We then moved to the west side of the Gare, to a small bay where Dave pointed out *Limonium x neumanii,* the hybrid between Common Sea-lavender *L. vulgare* and Lax-flowered Sea-lavender *L. humile.* I was pleased to see two Grayling butterflies feeding on the sea-lavender flowers. Other plants here included Lesser Sea-spurrey *Spergularia marina* and, what was probably, Purple Glasswort *Salicornia ramosissima*. Further on we were shown *Atriplex x hulmeana* the hybrid between Spear-leaved Orache *A. prostrata* and Grass-leaved Orache *A. littoralis*.

We then drove a short distance down the road to admire the large inflated seed pods of Orange Bladder-senna *Colutea x media*. We ended the day by driving a little further on to see Tunicflower *Petrorhagia saxifraga* which was growing not far from some Wild Clary *Salvia verbenaca*, both of which probably arrived as garden throw-outs. This is a truly unique site and I'm sure I will be back to explore at a different time of year.

Some of the above information has been taken from *Flora of the South Gare*, written by Dave Barlow, which can be downloaded as a pdf from https://bsbi.org/north-east-yorkshire.

SUSAN SIMCOCK

Sunday 7th August - Whitcliffe Scar
Whitcliffe Scar is a very impressive Carboniferous Limestone escarpment in Swaledale, Yorkshire. As we set off down a steep track skirting the edge of the escarpment, the roadside was awash with the sky-blue flowers of Meadow Crane's-bill *Geranium pratense* behind which was a stand of Rosebay Willowherb *Chamaenerion angustifolium*, an amazing colour combination.

17 people eagerly set off led by Linda Robinson, the BSBI Recorder for VC65, an expert on the plants in this area. Some of us climbed up the scree slope to see the delightful

Brittle Bladder-fern *Cystopteris fragilis* with the rachis green above and brown below, the basal part easily snapping, hence the name. Also present were several grass species looking rather forlorn after the warm weather including Early Hair-grass *Aira praecox*, Quaking-grass *Briza media* and False Brome *Brachypodium sylvaticum.*

It was a joy to see Harebells *Campanula rotundifolia* fluttering in the breeze plus Small Scabious *Scabiosa columbaria* and Carline Thistle *Carlina vulgaris.* Also noted were Mouse-ear-hawkweed *Pilosella officinarum* with its hairy leaves and lemon-coloured flowers and Lesser Hawkbit *Leontodon saxatilis* with Y-shaped hairs on the leaves. Wild Thyme *Thymus drucei* was also present.

Photo: Peter Llewellyn

Meadow Crane's-bill

Beneath the escarpment on the spring line was Water-cress *Nasturtium officinale* agg. and the hairy-stemmed Hoary Willowherb *Epilobium parviflorum*. The more agile members veered off over a wire fence to see Grey Sedge *Carex divulsa* ssp. *leersii.* The less agile members ('oldies' including me!) went into the woodland where we were rewarded with several excellent specimens of Small Teasel *Dipsacus pilosus* plus Lesser Burdock *Arctium minus*, Wild Basil *Clinopodium vulgare* and Yellow Pimpernel *Lysimachia nemorum*.

Several of us then proceeded up to the moorland at Hurst on Marrick Moor. Here, as mentioned in the BSBI Viola Handbook p.116, is the newly found probable hybrid pansy between Mountain Pansy *Viola lutea* and Field Pansy *V. arvensis*. This was easy to find as it was along all the road verges nearby. What an amazing end to the day.

Oh, I almost forgot. At one part of the escarpment was a tunnel leading under the ground. Local archaeologists dated it to Neolithic times (even older than most of our members!). What was it for? It could have been a refuge from enemy tribes, to escape wild animals or to keep food cool. I really like the idea of a Neolithic refrigerator.

Very many thanks to Linda Robinson and her stalwart group of helpers, so knowledgeable, friendly and enthusiastic, making it a very memorable day.

GARETH BURSNALL

AUTUMN HUNT 2022

		TOTAL	
Barbara Allen	Lancashire	107	
Caroline Bateman	Surrey/London	166	
Mary de Carteret	Jersey	58	One day only
Julie Clarke	Cumbria/Lancashire	84	
Heather Colls	Monmouth	89	
Anthony & Rita Grainger	Yorkshire	107	
Ian Green	Moray, Scotland	164	
Susan Grimshaw	Berkshire	96	
Helen Jackson	Midlothian/East Lothian	101	
Anne & Dennis Kell	Suffolk	111	
Barbara Mathews	Suffolk	115	
Nicki Mottram	Warwickshire	105	
Priscilla Nobbs	Surrey	69	One day only
Sue Poyser & Doug Grant	Kent	117	
Dorothy Ross	Lancashire/Cumbria	89	
Susan Simcock	West Yorkshire	73	
Tom Simcock	West Yorkshire	58	One day only
Allison Singleton	Jersey	84	'Mind over Madder' Team
Pauline Wilson	South Gloucestershire	79	

This season the weather in most parts of the country was mild and warm encouraging some of us to go outside and search for wild plants that might be in flower. The total number of different plants found by those participants was 434. Hogweed *Heracleum sphondylium,* Annual Meadow-grass *Poa annua,* Groundsel *Senecio vulgaris* and Herb-Robert *Geranium robertianum* were found by all participants.

Barbara from St.Helens in Lancashire felt quite lucky with the weather this year. She was able to venture out three times finding several plants completely over whilst others, like Lesser Stitchwort *Stellaria graminea,* were giving a wonderful display. Barbara commented that she may not have ever counted this species for the Autumn Hunt before. Other surprises were Common Stork's-bill *Erodium cicutarium* and just one Hare's-foot Clover *Trifolium arvense* growing on the Sutton Mill Dam banking. She also observed Water Bent *Polypogon viridis* spreading along the roadside where the workmen had missed spraying. The most striking plant found was Golden Alison *Aurinia saxatilis*, a garden escape growing in the pavement giving a wonderful display.

Caroline writes that all the garden escapes found had well and truly escaped. She commented about the unseasonably warm weather and the number of plants lingering and others flowering out of season. She did not expect to see Cherry Plum *Prunus*

cerasifera and Early Dog-violet *Viola reichenbachiana* flowering and Caroline was the only person to include those in her list this season. She had to look very hard for flowers on the Spotted Spurge *Euphorbia maculata* explaining that, as it is such a tiny plant, she had to lie almost flat on the pavement to get a photo of it! Caroline thinks that it might be a plant on the move thanks to the trade in potted plants and this is the third time that she has seen it. A good observation. Hopefully, it will reach Worcestershire as it is one I have not seen.

Mary sent her list from Jersey with plants recorded on one day which included Tamarisk *Tamarix gallica* and Spanish-dagger *Yucca gloriosa,* both plants not recorded by anyone else.

Julie compiled her plant list whilst walking in the area of Morecambe Bay to villages Silverdale, Carnforth and Morecambe, all in Lancashire, and Arnside, Sandside and Grange-over-Sands in Cumbria. Sandside is on the estuary near Arnside and an old railway route runs alongside, which is very useful for plants. The weather was pleasant, with rain at times, and no frosts leading up to the Hunt. Julie felt Grey Field-speedwell *Veronica polita* was a good find as she usually only records Green Field-speedwell *V. agrestis.* Chinese Mustard *Brassica juncea* was a new plant.

Heather recorded locally whilst walking her dog. She highlighted the Meadow Saffron *Colchicum autumnale* on a lane-side hedge bank which gave a good show. Heather is familiar with many of the perennial plants and noted Crown Vetch *Securigera varia* but others had gone over earlier this season, such as the Cotton Thistles *Onopordum acanthium.*

Anthony and Rita did much of their flower hunting around Horsforth in Leeds and visited St. Aidan's RSPB wetlands where 'heavy rain brought the bonus of an Osprey at very close range'. Hundreds of Yellow-worts *Blackstonia perfoliata* were seen on the site. Fine weather enabled them to hunt over four days. They were the only people to find Kidney Vetch *Anthyllis vulneraria*. They also did well to find Green Field-speedwell *Veronica agrestis* which they tell me is rare in the north. This only has glandular hairs on the capsules. Kirkstall Forge Railway Station had some wild areas including a gravel patch where they found Small Toadflax *Chaenorhinum minus*.

Ian really enjoyed the week getting out for at least 30 minutes each day, whilst the weather was mild and stayed dry. He took his local botany group out, near Elgin, finding Green Nightshade *Solanum nitidibaccatum* and Small Nettle *Urtica urens* in a potato field and, on some waste-ground, they had one plant of Tall Fleabane *Erigeron annuus*. A surprise was finding Raspberry *Rubus idaeus* still with two flowering stems.

Susan completed her urban hunt locally around Cox Green, Maidenhead which included a variety of habitats such as farmland, ancient woodland and a water-course. Her highlights included Thorn-apple

Datura stramonium, Jersey Cudweed *Laphangium luteoalbum* and Burnet-saxifrage *Pimpinella saxifraga* amongst her usual finds.

Most of **Helen's** finds were on roadsides or beside good paths, but she found some interesting places to search on harbour walls and dunes. Helen was the only person to find Sea Rocket *Cakile maritima*, on the beach by the mouth of the River Esk in Musselburgh. She also found Japanese Rose *Rosa rugosa* and Burnet Rose *R. spinosissima* on the dunes.

Photo: Peter Llewellyn

Burnet Rose

Anne and Dennis found their flowers in South Suffolk and North Essex. Anne commented upon the amazing autumn temperature this year and was quite pleased with their total, although there were several species they might have expected to find but did not this year. The most surprising find was Blackthorn *Prunus spinosa.* Anne commented that "they appeared to have missed out winter and gone straight into spring". They were interested to see adjacent bushes either in fruit or in flower.

Barbara found many of her records over four days within three miles from home in Felixstowe. She visited a variety of habitats including footpaths, tracks, hedge banks, pavements, gutters and around the beach. Barbara comments that Landguard Common and adjacent vegetated shingle were still very brown and dry from the lack of rain this year and were only just starting to recover. She found Black Spleenwort *Asplenium adiantum-nigrum,* Maidenhair Spleenwort *A.trichomanes* and Wall-rue *A. ruta-muraria* all on the walls at the back of Felixstowe museum and Landguard Fort. Barbara observed that some plants were scarce this year with no flowers found on Periwinkles *Vinca* sp. or Radish *Raphanus* sp. or, as with the Common Field-speedwell *Veronica persica,* only recorded in one place. In contrast, the Annual Wall-rocket *Diplotaxis muralis* and Shaggy-soldier *Galinsoga quadriradiata* were found in hundreds. Barbara was disappointed when she visited Old Felixstowe Church that two men were strimming everything. This also happened along the side of the narrow road to the docks and the river Orwell, both usually very good for recording.

This was **Nicki's** first Autumn Hunt and she searched around her hometown, Kenilworth, in

Warwickshire. During half term week Nicki was able to find an occasional hour to search specific locations, as well as just observing when out for family exercise. Nicki also noted that the extensive excavations and soil disturbances relating to HS2 have resulted in many 'weeds of disturbed ground flowering a bit later than expected' or 'maybe, it is a second flush following the dry summer'. Nicki was the only person to record an escaped Broad Bean *Vicia faba* and Brooklime *Veronica beccabunga*.

Priscilla records on the same day each year following her same local route near Salfords Station. She had three new plants this year, Cleavers *Galium aparine*, Small-flowered Crane's-bill *Geranium pusillum* and Procumbent Yellow-sorrel *Oxalis corniculata.* Priscilla has recorded 127 different flowering taxa over the years.

Sue and Doug enjoy walking around their home town of Rochester, Kent. The weather was very mild for the whole week this year and they found plants flowering with moisture in the soil after the hot, dry summer. They were pleased to find Wild Clary *Salvia verbenaca* in the local cemetery for the first time as it does occur in a number of churchyards in the area. They also found one or two flowers on Allseed *Linum radiola* which is spreading in the cracks on Doug's patio. They were not sure how it got into the garden but think it must have been in a pot bought from a nursery.

Dorothy recorded her flowers in Lancashire and Cumbria where she experienced some wet and windy weather which she thought impacted on the number of flowers; 'one of her lowest numbers ever'. She found some interesting marine flora at Lytham, notably Seaside Daisy *Erigeron glaucus,* Soapwort *Saponaria officinalis* and Hare's-foot Clover *Trifolium arvense* on the dunes, plus a perfect specimen of Cow Parsley *Anthriscus sylvestris,* complete with fruit. Clitheroe's Crosshill Quarry is always worth a visit and she was pleased with Harebell *Campanula rotundifolia,* one of Dorothy's favourite plants, plus Wild Strawberry *Fragaria vesca* and Square-stalked St. John's-wort *Hypericum tetrapterum* found at the edge of a car park. However, as Dorothy notes, the weather may not have been ideal but there was no frosty weather to kill off the flowers.

Susan and Tom participated in the Autumn Hunt for the first time and walked locally in Bingley, West Yorkshire. They noted pavement weeds and garden escapes. A particular surprise was seeing Garlic Mustard *Alliaria petiolata* as it looked like one of the plants that had flowered in spring had sprouted new leaves and flowers. They were also pleased to find Water Bent *Polypogon viridis* and Black Nightshade *Solanum nigrum*. Susan and Tom mentioned that by participating in the Autumn Flower Hunt it had focused their attention on plants that previously they might have missed.

Allison with Team 'Mind over Madder' found five different fern species, Black Spleenwort *Asplenium adiantum-nigrum*, Wall-rue *A. ruta-muraria*, Maidenhair Spleenwort *A.*

Photo: Alli Singleton

trichomanes, Hart's-tongue *A. scolopendrium* and Intermediate Polypody *Polypodium interjectum*. They note that 'Field Madder *Sherardia arvensis,* at the end of the session, was an absolute delight and brought a smile to our weary faces'.

Field Madder

Pauline writes that she is about 20 down on usual finds in South Gloucestershire and wondered if the hot dry summer meant that plants had flowered early. Different plants this season included Rough Hawk's-beard *Crepis biennis*, Cowslip *Primula veris*, American Winter-cress *Barbarea verna*, Angelica *Angelica sylvestris*, Broad-leaved Dock *Rumex obtusifolius* and Fat-hen *Chenopodium album,* which just had a few anthers showing. Pauline observed that quite a number of plants only had one flower or one flowering head. Gallant-soldier *Galinsoga parviflora* and Corn Spurrey *Spergula arvensis* were favourite finds in the local plant nursery sand beds and have obviously come in with bare-rooted shrubs. They also have in the garden Procumbent Yellow-sorrel *Oxalis corniculata* which came in a few years ago and has spread over the vegetable plot. Pauline notes it was mentioned along with other recently imported plants in a recent BSBI publication.

Thank you to all the members who compiled lists for plants in flower during the last week of October 2022.

JACKIE HARDY

AUTUMN ONE DAY HUNT

DEREHAM, NORFOLK 30th OCTOBER 2022

Half a dozen of us set out from the Cherry Tree car park in the centre of Dereham which is an attractive small town with some literary associations, such as being the birthplace of the science fiction writer Bryan Aldiss and also that of the famous poet William Cowper. As usual it took us an age to work our way around the perimeter looking in as many nooks and crannies as possible for plants in flower at this late time of the year. Our Spring venture afforded us a mere forty odd species so we were keeping our fingers crossed to record a lot more. The weather wasn't being very kind to us however, as the grey clouds scudded across the sky and

Photo: Ken Southall

down came the rain. The temperature fell too, so on went our waterproofs and up went our brollies. Fortunately the ether above did clear later on and some blue skies and warm sunshine fell upon us.

We soon found reliable species such as Shepherd's-purse *Capsella bursa-pastoris* and Groundsel *Senecio vulgaris* and we had an unusual side by side comparison of Guernsey Fleabane *Erigeron sumatrensis* with its sister, the now less common, Canadian Fleabane *E. canadensis* showing the difference in colour of the foliage and the hairiness, or not, of the phyllaries on the flower heads. Another relative, with more daisy-like flowers, was the Mexican Fleabane *E. karvinskianus*. An aberrant flowering Raspberry *Rubus idaeus* was spotted, along with an established population of a type of Sage called *Salvia x jamensis* 'Hot Lips', showing many striking red and white bi-coloured blooms.
Not many grasses were found apart from the ever present Annual Meadow-grass *Poa annua* and Cock's-foot *Dactylis glomerata* but a lone Wheat *Triticum aestivum* stood out with some dangling anthers. In some flower pots in the town were many stems of Hairy Finger-grass *Digitaria sanguinalis.*

The churchyard was where we found our only Daisies *Bellis perennis,* along with an out of place Fuchsia *F. magellanica,* as well as a Zonal Geranium *Pelargonium zonale* surviving on a compost heap.
Nearby is a pleasant stroll through some meadows with a stream passing through it, called the Ted Ellis Walk, where we added Water Chickweed *Stellaria aquatica* and just one flower hanging on in Water Figwort *Scrophularia auriculata*; I told you that we were determined to beat our Spring tally!

Walking back through the town and checking the flower pots and beds gave us Scarlet Pimpernel *Lysimachia arvensis*, the re-named Kamchatka Stonecrop *Phedimus kamtschaticus* and Striped Goosefoot *Chenopodium strictum,* which seems to be popping its head up everywhere in East Anglia. Other pavement cracks yielded Dwarf Mallow *Malva neglecta* and both Knotgrass *Polygonum aviculare* and Equal-leaved Knotgrass *P. depressum*.

Our final stop was in a cafe to refresh ourselves with a warming coffee and a piece of cake. Well done everyone and our final tally was great news as we had reached a total of 91 species.

STEPHEN CLARKSON

ONE DAY MEETINGS 2022

IPSLEY ALDERS MARSH
5th JULY

Once in open countryside, the marsh is now in the middle of Redditch and consists of sedge peat, which is a rare habitat in the Midlands. Spring water rises below much of the site and so many parts are waterlogged all year round. It is managed as a grazed marsh with small numbers of cattle kept on the site for much of the year to maintain structural variety within the grassland marsh.

Wellies on, or off, depending on your inclination, we set off for the marsh. Things looked a little dry and parched from a distance, but keen eyes soon began spotting plants that gave rise to discussion. For example, Greater Bird's-foot-trefoil *Lotus pedunculatus* with its hollow (usually!) stem, reflexed sepals and a tendency to have more flowers in its head than Common Bird's-foot-trefoil *L. corniculatus.* We knew that there was Common Marsh-bedstraw *Galium palustre* as well as Fen Bedstraw *G. uliginosum* on the site so we made sure we would be able to identify these correctly. Marsh Bedstraw has a stem with no prickles and downward pointing prickles on leaves, while Fen Bedstraw has down-turned prickles on the stem and leaf plus a minute bristle at the tip of the leaf.

We were adept at identifying Marsh Horsetail *Equisetum palustre* and Field Horsetail *E. arvense* when given a quick identifier by Monika Walton – something to do with lady's knickers. Suffice it to say at this point that Field Horsetail is chaste and doesn't show its knickers. Noticing Hedge Bindweed *Calystegia sepium,* Large Bindweed *C. silvatica* and Field Bindweed *Convolvulus arvensis* led to discussion of the sinus. The sinus is the indentation between the two lobes of the leaf. Field Bindweed has none. The sinus is shaped like an 'M' for Large Bindweed and an upturned 'V' with a rounded top for Hedge Bindweed. I hope that helps.

There was plenty of opportunity for refining sedge identification skills as we saw False Fox-sedge *Carex otrubae*, Greater and Lesser Pond-

Marsh Woundwort

Photo: Richard Coomber

sedges *C. riparia* and *acutiformis*, Remote Sedge *C. remota*, Hairy Sedge *C. hirta*, and Spiked Sedge *C. spicata.* It was interesting to compare directly the ligules of Greater and Lesser Pond-sedge. The ligule for Greater is much more rounded.

Ferns were also high on the agenda and we saw Soft Shield-fern *Polystichum setiferum*, Male-fern *Dryopteris filix-mas*, Scaly Male-fern *D. affinis*, Lady-fern *Athyrium filix-femina* and Broad Buckler-fern *Dryopteris dilatata* – so a good place to visit if you want to test your fern identification.

There are always the "nice to see" plants, which are personal to yourself and for me on this meeting these were the Marsh Woundwort *Stachys palustris,* which was really at its best, and Ragged-Robin *Silene flos-cuculi* which never ceases to delight.

A retreat to the café at the Garden Centre nearby for tea and cake rounded the day off nicely. Thanks Jackie Hardy for an interesting and helpful day.

JANET JOHN

A BRECKLAND HUNT 10th JULY

A Breckland hunt had not been carried out for about 12 years so this was a good opportunity for people like me, who had not visited the area before, to see as many sites as possible and to find many rare plants. The Breckland or The Brecks, in East Anglia, is an area covering approximately 400 square miles in south Norfolk and north Suffolk and is famous for its unique flora which is due to a chalk plateau overlain by windblown glacial sand which can vary in depth from a few centimetres to several metres. This means that acid-loving and alkaline-loving plants can often be found in close proximity. A feature of the Brecks is rows of planted Scots Pine *Pinus sylvestris,* known as Deal Rows, which divide up various land holdings.

We convened at the Norfolk Wildlife Trust reserve at Weeting Heath. The site is primarily visited for viewing Stone Curlews but is also being managed for other wildlife. The area of particular botanical interest is made up of two fields across the road from the visitor centre. These are not open to the public but we were given a guided tour by the site ranger, James Symonds, who also accompanied us to other sites. Many thanks to him. Of the two fields, the left-hand one is rough pasture, while the right-hand one is being managed for agricultural weeds. A crop of old-fashioned Rye is sown each spring. The density of the crop is low allowing light in to the smaller plants. The seed harvested from each year's crop is resown the following spring. The crop has no commercial value.

We began just over the stile in the pasture where we found Large Thyme *Thymus pulegioides*, Dark Mullein *Verbascum nigrum*, Loose Silky-bent *Apera spica-venti* and

Photo: Ken Southall

Sand sedge *Carex arenaria,* the latter growing in straight lines above underground rhizomes. We then made our way to the margin of the Rye field. Here we found the agricultural weeds, Narrow-fruited Cornsalad *Valerianella dentata*, identified from the seeds, two species of Sandwort, Fine-leaved *Sabulina tenuifolia* and Thyme-leaved *Arenaria serpyllifolia,* together with Corn Spurrey *Spergula arvensis*, Hard Fescue *Festuca brevipila* and Annual Knawel *Scleranthus annuus.*

Back into the pasture field we made an anticlockwise circuit. Starting near the road there is an old excavated chalk pit filled with Victorian rubbish with lots of broken glass. In this pit we found Bur Medick *Medicago minima*, Squinancywort *Asperula cynanchica*, Basil Thyme *Clinopodium acinos*, Bird's-foot *Ornithopus perpusillus* and an Eyebright locally identified as '*Euphrasia nemorosa* ssp*. confusa*'.

Higher up the hill we found Small Cudweed *Logfia minima* and Spiked Speedwell *Veronica spicata*. The latter is found in only a few sites in the UK and Weeting Heath has the largest population. At the very top of the field growing in the shade under bushes was White Horehound *Marrubium vulgare* which was hosting a moth specific to the plant, the rare Horehound Plume moth *Wheeleria spilodactylus*.

Working our way back down the field we encountered many beautiful patches of Maiden Pink *Dianthus deltoides* in full glory together with Heath Groundsel *Senecio sylvaticus* and Sheep's Sorrel *Rumex acetosella* var. *tenuifolius* with its very narrow, linear leaves.

At the bottom of the hill growing on the verge opposite the visitor centre car park there was a patch of Sickle Medick *Medicago sativa* ssp*. falcata* with its distinctive yellow flowers and eponymous fruits.

Around the visitor centre we found Green-flowered Helleborine *Epipactis phyllanthes* plus a few plants which had probably seeded from the 'Green Roof' of the centre building, including Kamchatka Stonecrop *Phedimus kamtschaticus* and Tunicflower *Petrorhagia saxifraga.*

After lunch and a much-appreciated ice cream we embarked on a road trip to take in a further six sites. With a convoy of nine cars we caused some confusion to oncoming motorists down the narrow Breckland lanes. The first site, near Weeting Village, produced Dense Silky-bent *Apera interrupta* and a hybrid pansy *Viola x contempta,* the parents being Field Pansy *V. arvensis* and Wild Pansy *V. tricolor*. There was also Cotton Thistle *Onopordum acanthium* which is possibly native in the Brecks, but an archaeophyte or recent garden escape elsewhere, and Guernsey Fleabane *Erigeron sumatrensis* which is fast taking over from Canadian Fleabane *E. canadensis* as the dominant introduced Fleabane.

We then stopped at Cranwich Camp which was an Italian prisoner of war camp in WW2. Growing in the ditch behind a concrete block just inside the site was Proliferous Pink *Petrorhagia prolifera* with several plants having small pink flowers. The occasional Pyramidal Orchid *Anacamptis pyramidalis* still survived the heat as did Spanish Catchfly *Silene otites*.

At Santon Downton a gravelly track led out onto heathland. Along the track grew Hoary Cinquefoil *Potentilla argentea*. The main attraction of this site was Perennial Knawel *Scleranthus perennis* ssp. *prostratus.* Previously, this was a known site for the plant but it had died out. It was reintroduced by Plantlife about three years ago and has now spread successfully. At the end of the track, close to a five-bar gate, was a very fine example of Tower Mustard *Turritis glabra,* approximately six feet tall.

The next site was unusual to say the least being on a housing estate by McColl's on St John's Close in the middle of Mildenhall. There is a large wilderness field where the local children can play. Along the tarmac path the council had planted bushes, an unusual choice, Willow-leaved Sea-buckthorn *Hippophae salicifolia*, which had naturalised further down the path. In the field itself was Cypress Spurge *Euphorbia cyparissias* and the star species, Field Wormwood *Artemisia campestris* ssp. *campestris* discovered here quite recently by a local botanist: there were several substantial plants growing quite happily.

At Icklingham, our leader Stephen Clarkson, finally allowed us to discuss Great Brome *Anisantha diandra*, which had been seen at several earlier sites but which was growing in profusion here. The field we visited had recently been harvested for onions which were drying in rows. The soil was very poor -looking, being sand with little organic matter. Despite the recent harvesting we managed to find several specimens of Small Nightshade *Solanum triflorum*. As the name implies this plant carries an inflorescence of three flowers which then develop into round fruits that give the plant the appearance of a

Photo: Gareth Bursnall

Spiked Speedwell

pawn-broker's sign, hence the local name, Pawn-broker-plant. At the very top of the field, across the road along the fence line, we found several taller examples of the Spanish Catchfly *Silene otites* than those seen at Cranwich Camp.

The final stop at Ramparts Field seemed disappointing at first because it was obvious that cars and motorbikes had been doing wheelies over the grass turf and there was very little to see, but I hope that the disturbance that the soil gets this year will be good news for the following year. However, to round off our very long day we managed to add a few more plants which included a tiny patch of the very rare Blue Fescue *Festuca longifolia,* small areas of recovering Breckland Thyme *Thymus serpyllum*, which has hairs going all the way around the stem compared to the two other much commoner species, and our final plant of the day, Russian Cinquefoil *Potentilla intermedia,* which has a more upright growth pattern.

It had been a very long day, a very hot one as well, with very little shelter from that sun but we had a most enjoyable time. That was the end of our Breckie hurl. Now to find that pub for a refreshing pint!

FAY BANKS AND
STEPHEN CLARKSON

WEST PENNINE MOORS
14th JULY

On a bright and breezy day, (mercifully before the predicted heat wave) eleven WFS members met at the entrance to Sunnyhurst Wood, Darwen, for a day exploring the plants of the local mixed woodland, upland meadows and marshland. Our leader, Peter Jepson, has a life-long encyclopaedic knowledge of the local flora.

We were first greeted by the unwelcome sight of Himalayan Balsam *Impatiens glandulifera* which now dominates Sunnyhurst Wood in summer, despite the efforts of the local 'Balsam-bashers'. Sadly, it is threatening the Bluebells *Hyacinthoides non-scripta* which make the wood so attractive in May. We set off down into the wood and

were shown Box-leaved Honeysuckle *Lonicera pileata* (not in flower) and Lesser Knotweed *Koenigia campanulata,* before admiring several plants of Broad-leaved Helleborine *Epipactis helleborine,* whose flowers apparently get eaten by deer, although a few blooms were still to be seen. An attractive display of Enchanter's-nightshade *Circaea lutetiana* grew further down the path and later Peter showed us the very similar Upland Enchanter's-nightshade *Circaea x intermedia,* which he admitted had confused him in his earlier years, at the time being by far the commoner of the two in the wood.

Peter has a particular interest in Lady's-mantles *Alchemilla* spp., of which several grow locally, and he explained the differences between two of the commoner species: Pale Lady's-mantle *A. xanthochlora,* and Smooth Lady's-mantle *A. glabra*. These plants are not easy to identify and it is necessary to study the leaf details and stem hairs to separate the species.

Unsurprisingly, in this rather damp part of the world, there were quite a few ferns to be seen in the wood. In abundance were Lady-fern *Athyrium filix-femina*, Bracken *Pteridium aquilinum* and Broad Buckler-fern *Dryopteris dilatata* but scarcer species flourished too, like Golden-scaled Male-fern *D. affinis* and Lemon-scented Fern *Oreopteris limbosperma.* Sedges too were well-represented, one of the most abundant being Remote Sedge *Carex remota*. Wood Sedge *C. sylvatica* is also common. Peter pointed out a rather weedy version of Pill Sedge *C. pilulifera* which still had fruiting parts and could have been overlooked as an anonymous tuft of grass. Green-ribbed Sedge *C. binervis* and Smooth-stalked Sedge *C. laevigata* were also seen. Common woodland species like Hedge Woundwort *Stachys sylvatica* and Foxglove *Digitalis purpurea* added to the wood's variety.

Emerging from the wood and appreciating fine views of moorland and Darwen's famous Jubilee Tower (recently restored) we entered a species-rich meadow, with both Red and White Clovers, *Trifolium pratense* and *T. repens*, Meadowsweet *Filipendula ulmaria*, various vetches *Vicia* spp. and a good variety of grasses such as Yorkshire Fog *Holcus lanatus,* Creeping Bent *Agrostis stolonifera* and Timothy *Phleum pratense*. There was also a lot of Yellow-rattle *Rhinanthus minor* and we were shown a small patch of inadvertently introduced Greater Yellow-rattle *R. angustifolius* so could clearly see how the latter was so much more robust than its commoner cousin. A welcome rest and lunch were enjoyed in the meadow, with some of the party being taken to see Melancholy Thistle *Cirsium heterophyllum*, a most attractive and distinctive member of the Thistle family which grows on the edge of Sunnyhurst Wood. After lunch we continued up the track to another species-rich hay meadow. Despite the meadow having been cut we were able to see the rare Large-toothed Lady's-mantle *Alchemilla subcrenata* in the field margin. Further along the track, towards Darwen Moor, we encountered yet another Lady's-mantle *A. mollis* - the

Photo: Dorothy Ross

garden favourite (though I find it too invasive in my garden) as well as a few surprises like Marjoram *Origanum vulgare*, Nettle-leaved Bellflower *Campanula trachelium* and Tansy *Tanacetum vulgare.* The latter Peter thought had been recently planted by someone, but it was good to see them.

Climbing onto the lower slopes of Darwen Moor, we reached a de-commissioned reservoir drained about ten years ago but retaining a small area of water. The open water, along with the surrounding marshland, makes this an area rich in birdlife as well as supporting a rich variety of flora. We watched, delighted, as a flock of lapwing rose from the ground below us. Among the marshier ground was Bottle Sedge

Sunnyhurst Woods, Darwen

Carex rostrata, Common Cottongrass *Eriophorum angustifolium*, Slender and Jointed Rushes *Juncus tenuis* and *J. articulatus,* Lesser Spearwort *Ranunculus flammula* and Round-leaved Crowfoot *R. omiophyllus*. Also seen was the more unusual White Sedge *C. canescens* and we were shown the rare Narrow Small-reed *Calamagrostis stricta.* On the sloping sides of the reservoir edge (rather difficult terrain for my unsteady feet!) we saw Fairy Flax *Linum catharticum,* Fox-and-cubs *Pilosella aurantiaca* and, unexpectedly, Small Cudweed *Logfia minima*; not a particularly attractive plant but a first for many of us!

On firmer ground now, we descended by a path along the bottom of the moor where we found typical grasses such as Purple Moor-grass *Molinia caerulea* and Mat-grass *Nardus stricta* which are plentiful in this area, plus a nice patch of Greater Burnet-saxifrage *Pimpinella major* which is locally less common. Nearly at the end of our expedition we saw two hybrids; Shore Horsetail *Equisetum x litorale* and a tall hybrid Marsh Orchid *Dactylorhiza x grandis*. To end the day we were taken to the water treatment compound where Peter showed us the plants he was propagating for his project working as an ecologist for the West Pennine Moors. Nearby we found Sneezewort *Achillea ptarmica* and Perforate St. John's-wort *Hypericum perforatum*.

The weather, though breezy at times, was fine for the whole day, which helped to make this meeting particularly enjoyable. Although I have lived in this area for many years, I was astonished to find so

many new plants within half a mile of my home to add to my life list. Many thanks to Peter for his expertise and to Sheila Wynn for organising such a botanically rich meeting. Thanks also to United Utilities and the local farmer for access permissions

DOROTHY ROSS.

GRIMWITH RESERVOIR, N. YORKSHIRE 16th JULY

A small group of WFS members joined Bradford Botany Group on a beautiful summer's day, perfect weather for botanising as the peak of the heat wave hadn't yet arrived. After investigating the grassy margins surrounding the car park which yielded a diversity of plants including Common Spotted-orchid *Dactylorhiza fuchsii*, Common Twayblade *Neottia ovata*, Flea Sedge *Carex pulicaris* and Common Yellow-sedge *C. demissa*, we made our way leisurely along the path towards the reservoir.

Here, Shore Horsetail *Equisetum x litorale* was growing abundantly. Our leader Bruce Brown explained how to identify this hybrid between Water Horsetail *E. fluviatile* and Field Horsetail *E. arvense*, by looking at the diameter of the hollow in the stem. A little further along, I was pleased to find Marsh Willowherb *Epilobium palustre*, a plant I'm not familiar with. The plant has a club-shaped stigma and the flowers typically droop downwards.

Jesse Tregale soon pointed out a plant of Northern Dock *Rumex longifolius*. Jesse explained the differences between Northern Dock, Broad-leaved Dock *R. obtusifolius* and the hybrid between these two species, *R. x hybridus* which were all growing in close proximity. Nearby were some more plants we don't see too often, White Sedge *Carex canescens*, Pale Sedge *C. pallescens* and Bristle Club-rush *Isolepis setacea*. We ate our picnic overlooking the reservoir with the restored 400 year-old cruck barn of Grimwith High Laithe just behind us.

One of my highlights of the day came soon after lunch, as nestling in the grass by the track was Adder's-tongue *Ophioglossum vulgatum*. This is an unusual-looking fern which, although frequent throughout most of the British Isles, is hard to spot among the grass and is probably often overlooked. Bruce said the grass here is kept relatively short by grazing geese and is therefore to the liking of the Adder's-tongue, although by now the grass was getting a little too long in places. We found quite a number of Adder's-tongue although only a few with the fertile frond developing.

Further along we came across a group of Northern Marsh-orchid *Dactylorhiza purpurella* but the flowers were well past their best. Later finds included a good stand of Brown Sedge *Carex disticha* beside

the track and some Meadow Barley *Hordeum secalinum*. A wet ditch gave us Tufted Forget-me-not *Myosotis laxa* and Fen Bedstraw *Galium uliginosum,* the mucronate tips of its leaves distinguishing it from the Common Marsh-bedstraw *G. palustre* seen earlier.

We then headed over to the main attraction of the visit – the draw-down zone of the reservoir, the mud still very wet in places, so we had to watch our step. Here were yet more species that we don't encounter very often such as Water-purslane *Lythrum portula*, the pretty Marsh Speedwell *Veronica scutellata* and tiny rosettes of leaves of Mudwort *Limosella aquatica*. Marsh Pennywort *Hydrocotyle vulgaris* and Water-pepper *Persicaria hydropiper* were frequent here as well as the ubiquitous and invasive New Zealand Pigmyweed *Crassula helmsii*. Another plant of note was a subspecies of Greater Plantain *Plantago major* ssp. *intermedia*, the leaves having only 3 obvious veins.

We then retraced our steps to the car park after thanking Bruce Brown for showing us the interesting and diverse plants of this site.

SUSAN SIMCOCK

DEVIL'S DITCH AND NEWMARKET HEATH 20th JULY

Saved by a day! On the Tuesday temperatures had been hitting 40 degrees; however, on the Wednesday they had dropped to the mid 20's. Phew – a close call. There was some concern among the assembled multitude – nine to be exact - that the flowers would have been and gone but our leader, Alan Leslie, assured us that, though in some cases crispy and a bit brown, all the plants highlighted would be putting in an appearance.

The Ditch itself is impressive. Most likely Anglo-Saxon in origin, it is ten metres high in places and runs for about seven miles. Built for defence and as a boundary marker and designed to control movement along the ancient trackways, the site has extensive chalk grassland with diverse species and areas of woodland and chalk scrub. We did also stray onto Newmarket Heath Racecourse which is allowed after 1pm.…but where were the horses?....and races? Perhaps just as well as my previous visits to a racecourse haven't led to big wins and a change in lifestyle.

We saw many of the expected chalkland plants on the Ditch but particular highlights of the day included Sainfoin *Onobrychis viciifolia,* Bastard-toadflax *Thesium humifusum* and Lesser Meadow-rue *Thalictrum minus* and, at the side of the Racecourse, Crown Vetch *Securigera varia* which was absolutely glorious and tempting to have as a garden plant. We were warned it is rampant when in a happy place!


Dog-rose


Downy-rose

If you have steered away from Brambles *Rubus* and Roses *Rosa* because of the sheer number and fine differences between the sub-species, then a Field Meeting with Alan Leslie is definitely the thing to do. Differences were clearly highlighted, patiently described and carefully demonstrated so that confidence grew in identifying Dog-rose *Rosa canina*, Sweet-briar *R. rubiginosa* and Harsh Downy-rose *R. tomentosa*. I really did see the glands on the top and bottom of the leaves of *R. rubiginosa* var*. echinocarpa*. Likewise for Brambles, the variety of shape, form and colour of the stems, leaves, prickles and flowers began to be recognised.

Bulbous Meadow-grass *Poa bulbosa* was one of our target plants and it was found on the July Course on the Heath. Somewhat underwhelming in that it had long since finished and all to be seen were the tiny dry bulbs at the bottom of the stems. We gave it due respect and wondered at the ability of Alan to find one tiny patch of dry, burnt grass in the midst of the vast acreage of Newmarket Heath.

The last plant we saw was Spiked Speedwell *Veronica spicata.* Alan had emailed me the previous day to say 'I went out on the Heath

Photos: Peter Llewellyn


Sweet-briar showing glands


Sweet-briar

yesterday and was rather shocked to see that poor *Veronica spicata* was actually looking rather desiccated but was trying to flower.' Well it succeeded. Rather curled, dry leaves but with flowers! One of our group, Andrew Palmer, was moved, whilst gazing at it, to say, "An example of the resilience of life." With that profound observation I conclude my report!

JANET JOHN

GROTON WOOD, SUFFOLK
24th JULY

It was a very warm summer's day with pristine blue skies and not a cloud in sight, the corn fields already harvested and rounded bales of hay lying on the pale straw-coloured ground giving a vivid interpretation of the Ukrainian flag. There were five of us on this venture walking through the dappled light of this ancient woodland which is now a Suffolk Wildlife Trust reserve. It was comfortable in the shade of the trees but very warm in the open glades which showed very few butterflies, although we did have great views of a White Admiral. After the major storms that we experienced earlier in the year several trees must have come down as there was a huge pile of long logs and the track leading into the wood was well-worn and furrowed.

There were not many plants in actual flower but when we came across one, we looked at it carefully and keyed it out. Our first such was Lesser Burdock *Arctium minus* identified, firstly by the hollow stalks of its basal leaves, and then noting that the most distal flower heads had a small stalk which separates it from Wood Burdock *A. nemorosum*. It was nice to come across a couple of yellow-flowered plants related to one another that can be told apart by the shape of their leaves. In Creeping-Jenny *Lysimachia nummularia* they are rounded at their tips but in Yellow Pimpernel *L. nemorum* they are pointed; a way of remembering this is that **P**impernel has **p**ointed leaves. Tufted Hair-grass *Deschampsia caespitosa* can be found in many habitats but there is a woodland form ssp. *parviflora* which can be told apart from its relative ssp. *caespitosa* by its smaller spikelet length of 2-3mm compared to 3.5-5mm and of the difference in length of the hair tuft at the base of the lower lemma, this being much shorter in the woodland plant.

This woodland is known for its small population of the rare Violet Helleborine *Epipactis purpurata* with its purple-coloured stems holding flowers which are mainly green with some white and a pink-tinged labellum. There were quite a few diminutive single plants this year along a few metres bordering a path and we managed to find another single plant in a different location. As I said earlier it was a very warm day and we decided to make tracks to a local hostelry and partake of some local brews. A very satisfactory end to a lovely day.

STEPHEN CLARKSON

OTMOOR, OXFORDSHIRE
25th JULY

After we had gathered in the RSPB car park, Roger Heath-Brown explained the history of the area we were about to visit, not the bird reserve, but a Site of Special Scientific Interest owned by the Ministry of Defence. Our field trip had been planned for a Monday to avoid tanks, artillery, etc!

Our path to the SSSI initially involved a Roman Road, now a track. Though currently dry, deep ruts suggested it was probably wet in winter and we soon started spotting damp-loving plants such as Amphibious Bistort *Persicaria amphibia* (the land form), Wild Angelica *Angelica sylvestris* and Marsh Woundwort *Stachys palustris.* The strong smell of Water Mint *Mentha aquatica,* was apparent to all, though the 'sickly sweet' fragrance of Meadowsweet *Filipendula ulmaria* took more sniffing out. We pondered the origin of 'Codlins and Cream', one of the traditional names for Great Willowherb *Epilobium hirsutum.* Water Chickweed *Stellaria aquatica* was much admired. In front of the hedges on either side of the track we noticed Tufted Vetch *Vicia cracca,* Dewberry *Rubus caesius* and Upright Hedge-parsley *Torilis japonica,* Roger explained the different flowering times of the commoner Apiaceae species. Some large specimens of Timothy *Phleum pratense* provided a fine display of anthers.

Checking that there was no red flag on the flagpole, we ventured out onto a large field where we were able to compare Hard Rush *Juncus inflexus,* Soft-rush *J. effusus* and Compact Rush *J. conglomeratus,* growing in close proximity and enjoyed seeing a multitude of Strawberry Clover *Trifolium fragiferum,* growing along and beside the bridleway. Additional species typical of damp conditions were spotted, including Common Fleabane *Pulicaria dysenterica* and Celery-leaved Buttercup *Ranunculus sceleratus,* whilst alongside a small pond Roger identified Tufted Forget-me-not *Myosotis laxa* from its small flowers, the shape of the calyx teeth and its styles being shorter than the calyx tube.

After a gate, we left the bridleway and the ground gradually became wetter which, combined with poaching from cattle and taller vegetation, made walking somewhat tricky. Floating Sweet-grass *Glyceria fluitans* was found in a ditch and a Water-plantain turned out to be Narrow-leaved Water-plantain *Alisma lanceolatum*, identified by the wedge-shaped base to its leaves and the nutlets arranged like the segments of an orange. Corn Mint *Mentha arvensis,* with its leaves above the flowers at the top of the stem was compared with the Water Mint which we had seen earlier that has the inflorescence at the top.

Skullcap *Scutellaria galericulata* was abundant amongst the taller vegetation. Common Marsh-bedstraw *Galium palustre,* without a point at the end of the leaves, had a few remaining flowers. We also found Creeping-Jenny *Lysimachia nummularia,* Lesser Spearwort

Ranunculus flammula, Common Spike-rush *Eleocharis palustris* and abundant Water-violet *Hottonia palustris,* with just a few, small flowers remaining, though the feathery leaves are also very attractive. Flowering-rush *Butomus umbellatus* provided a pink haze. We were soon able to pick out the numerous Marsh Stitchwort *Stellaria palustris* by their silvery leaves. Roger pointed out Tubular Water-dropwort *Oenanthe fistulosa* with its hollow stems and petioles and distinctive spiny round clusters of fruit and, a little later, the accurately named Fine-leaved Water-dropwort *Oenanthe aquatica*. Branched Bur-reed *Sparganium erectum,* in fruit, was soon followed by flowering Unbranched Bur-reed *Sparganium emersum,* enabling easy comparison. Water-plantain *Alisma plantago-aquatica,* with truncate leaves, was intermingled with the rarer Lesser Water-plantain *Baldellia ranunculoides,* with its shorter stature, slightly pink flowers and Buttercup-like seedheads. We were alarmed to find several patches of the invasive New Zealand Pigmyweed *Crassula helmsii.* Further natives included Marsh Pennywort *Hydrocotyle vulgaris* and Grey Club-rush *Schoenoplectus tabernaemontani*, lenses deployed to find its pink papillae on the glumes.

Despite the 'palustris' habitat, Roger managed to lead us to dry ground for lunch. Our return route yielded a few additional marshland species, including Common Meadow-rue *Thalictrum flavum,* Toad Rush *Juncus bufonius* and Marsh Ragwort *Jacobaea aquatica.* Many thanks to Roger for leading us around such an interesting and unusual (for Oxfordshire) habitat, along with really clear explanations of identification features for the plants we saw.

BARBARA SPENCE

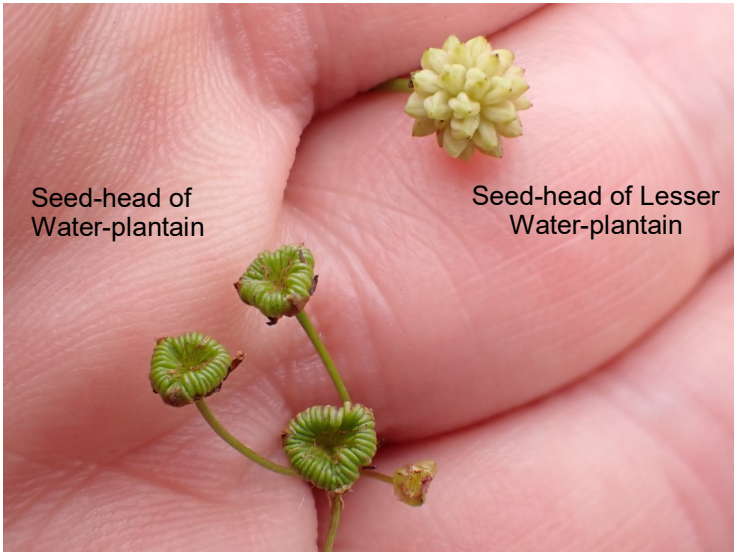


Photo: Peter Hilton

RUTLAND WATER
26th AUGUST

On an overcast but warm morning, 13 of us including the leaders, Geoffrey Hall and Tim Sexton, Species and Recording Officer at Leicestershire and Rutland Wildlife Trust, met at the Birdwatching Centre. Rutland Water, created in the 1970s, is the largest reservoir in England by surface area and has had a nature reserve area from the start. In the early 2000s Anglian Water sought to abstract more water. As the site had already been designated as a RAMSAR site it was necessary to create mitigation areas which included five new lagoons and a wet meadow.

In the medieval garden near the Birdwatching Centre we saw Small Teasel *Dipsacus pilosus*, Nettle-leaved Bellflower *Campanula trachelium*, Soapwort *Saponaria officinalis* and Tansy *Tanacetum vulgare*, all planted.

In the wet meadow we saw Trifid Bur-marigold *Bidens tripartita* and Nodding Bur-marigold *B. cernua* which we distinguished using charts Geoffrey had brought on how to distinguish the UK *Bidens* species by achenes. Sea Club-rush *Bolboschoenus maritimus* was also present. We observed the orange glands on Pale Persicaria *Persicaria lapathifolia* and the bent nodes of Marsh Foxtail *Alopecurus geniculatus*. We found Field Horsetail *Equisetum arvense* with branched branches which that species only develops in autumn. Golden Dock *Rumex maritimus* was in flower and there were leaves of Water-violet *Hottonia palustris*. Tim also told us about invertebrates we saw including Short-winged Conehead, the micro-moth *Prochoreutis myllerana* which we found on its larval food plant Skullcap *Scutellaria galericulata* and Water Scorpion.

We had lunch in Snipe Hide, enjoying the view over the reservoir and watching an Osprey. Near the hide we noticed vibrations in the vegetation, caused by a Comma chrysalis shaking to protect itself from *Ichneumon* attack.

In the mud of the drawdown zone we found Spiked Water-milfoil *Myriophyllum spicatum* and Fennel Pondweed *Stuckenia pectinata*, stranded by the water level reduction, and flowering Mudwort *Limosella aquatica*. In a drier area were Marsh Cudweed *Gnaphalium uliginosum*, Toad Rush *Juncus bufonius*, plantains probably *Plantago major* ssp. *intermedia*, Creeping Yellow-cress *Rorippa sylvestris*, Water Chickweed *Stellaria aquatica*, Pink Water-speedwell *Veronica catenata* and Many-seeded Goosefoot *Lipandra polysperma*. Invertebrates included Rush Veneer Moth, Great Pond Snail and Wandering Pond Snail. Dung showed the presence of Otter and Fox.

In the grassland by Lagoon 7 were Common Fleabane *Pulicaria dysenterica*, Early Goldenrod *Solidago gigantea*, with glabrous leaf undersides that distinguish that species from Canadian Goldenrod

Early Goldenrod

Solidago canadensis. Spiked Sedge *Carex spicata* was fruiting; we observed its spongy utricle bases. On the lagoon island we found Sticky Groundsel *Senecio viscosus*, Canadian Fleabane *Erigeron canadensis* and an Elephant Hawk Moth caterpillar. Using a grapnel made from a balloon whisk, a crab line and a hagstone we dredged Nuttall's Water-weed *Elodea nuttallii* from the lagoon.

It was a most enjoyable and informative field meeting, thanks to Geoffrey for the ID help and resources, Tim for sharing his invertebrate knowledge, and to all who came.

JANE LOWE

Photo: Peter Llewellyn

LOFTS FARM, ESSEX
11th SEPTEMBER

Nine of us met at Lofts Farm in South Essex on a pleasantly warm day. Here the owners are rewilding the farm and several surveys have been performed in previous years. However, this year some land ownership had changed and we inadvertently parked in the wrong area. This was quickly resolved and the relationship with the new owners of the area was smoothed over. The area is mostly grassland surrounding some lakes and a few arable fields around these. The varied habitats allowed for over 100 species to be recorded in quite a small area. We were fortunate the area was small as we had plenty of ID headaches to work through so progress was quite slow. The ID challenges were several goosefoots, knotgrasses, an unusual club-rush and some really challenging amaranths. A few of the interesting neophytes are now unfortunately no longer present, but we added a few that were not seen previously. It was an interesting site and a very enjoyable day. Highlights were Cornfield Knotgrass *Polygonum rurivagum*, Maple-leaved Goosefoot *Chenopodiastrum hybridum*, an unusual club-rush which needs further investigation and the amaranth ID puzzles which produced one to species level - Powell's Amaranth *Amaranthus powellii*.

MARK HOWS

HARLESTONE FIRS, NORTHAMPTONSHIRE 18th SEPTEMBER

According to the internet Harlestone Firs is a short distance from Northampton and is a wonderful place to take your waggy-tailed friends and also offers some of the best mountain biking that Northants can offer. Strangely, not attributes that attracted the WFS to hold a meeting there. Even more surprising, given that it was a pleasant, early-autumn day, was the lack of dog walkers or mountain bikers to bother us; just the odd walker or two.

We walked to a small area of grassland in the Firs conifer plantation which was left as a fire break. It is one of the few last remaining areas of acid heathland in the county which gave us some interesting finds. Brian Laney was a whizz at finding the plants. Small Cudweed *Logfia minima* was small – and well past its best. But we saw it, photographed and appreciated it. Likewise the Bird's-foot *Ornithopus perpusillus,* a plant I always enjoy seeing – but preferably with its exquisite flowers. However the Dwarf Gorse *Ulex minor* obliged and was full of flowers. Yes, it is a dwarf shrub with paler yellow flowers in which the sepals and petals are almost the same length. The wonderful thing was looking with a lens at the base of the flower and seeing the tiny brown bracteole which was smaller even than that on Western Gorse *Ulex gallii.*

A walk to an area that used to have Heath Cudweed *Omalotheca sylvatica* proved disappointing as the grass was too long and if it was there we failed to find it. A pity as it is a 'nice to see' plant.

There were also a number of surprises – Buck's-horn Plantain *Plantago coronopus*, Thyme-leaved Speedwell *Veronica serpyllifolia*, Scarlet Pimpernel *Lysimachia arvensis,* Climbing Corydalis *Ceratocapnos claviculata* and Water-purslane *Lythrum portula*, all reflecting the mix of different soil types.

At the end of the meeting we jumped into our cars and sped a mile down the road to a housing estate. At the outset it seemed rather a forlorn place to be looking for interesting plants but Brian Laney, our leader, was focused and confident – and yes – to our delight he found Jersey Cudweed *Laphangium luteoalbum* round the edge of a bleak car park area and Fern-grass *Catapodium rigidum* at the base of a wall. Two nice finds to finish the day.

JANET JOHN

Photo: Peter Llewellyn

Dwarf Gorse

A CITIZEN SCIENCE PROJECT

U3A GROUP SURVEYS

Photo: Pauline Wilson

My local U3A, Yate and Sodbury, has a wild flower group. We meet monthly and have had two opportunities during 2022 to take part in some botanical research.

Firstly, in May, we helped with some research suggested by Plantlife, the charity which works both nationally and internationally to save threatened wild plants and fungi. Plantlife are looking at the health of Cowslip *Primula veris* communities. Because Cowslips, and some other plants, have the male and female parts in opposite places in different plants, it is an interesting plant to choose. We used to describe the different plants as pin-eyed and thrum-eyed but now they are

Photo: Plantlife

described as L-morph and S-morph respectively. This strategy presumably leads to better cross fertilization by insects and therefore continued resilience of the plants.

Plantlife wanted people to count 100 Cowslip plants in one habitat and record the positioning of the male and female parts. The aim of the research is to establish whether there is a developing imbalance in how Cowslips mature. This could be connected with changing agricultural practices, loss of habitat, climatic or other factors. A healthy population will show a roughly 50:50 ratio in the two types of plant. We were able to do three counts in local fields and our surveys showed that there were almost equal numbers of each so we assume they are fairly healthy populations. The research is being carried out across Europe and originated in Estonia.

Then, in early June, we set out metre squares every 10 metres diagonally across a 1 acre wild flower area sown last year. To assess what had come up, we noted which flowers were growing in each square and how many of each there were. We want to see how the area evolves so we aim to repeat the same exercise each year.

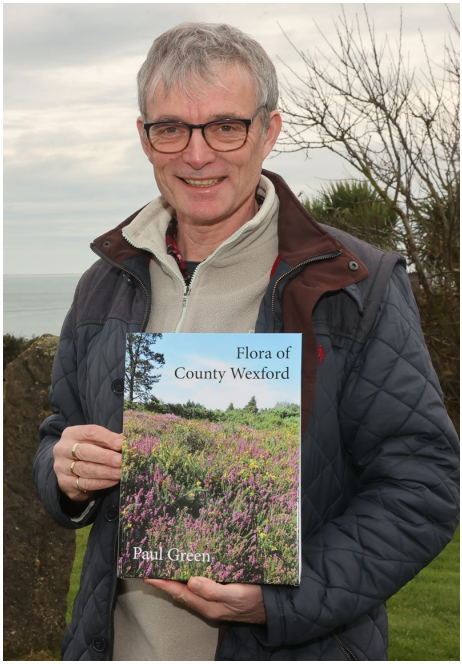
Learning about plant identification and flower structure enabled us to carry out this useful work. Several of us are members of The Wild Flower Society.

PAULINE WILSON

BOOK REVIEW

Green, Paul, with support from BSBI, WNFC and National Parks and Wildlife Service (Ireland) – *Flora of County Wexford.* Published by the author (2022). ISBN 978-1-3999-3877-8. £/€30 (+9.00 postage). Purchase direct from paul.green@bsbi.org

Modern county floras are often huge books and this can be quite intimidating. Having parted with a hefty sum of money one is faced with a (literal) weight of information which it's hardly possible to lift off the shelf. The *Flora of County Wexford* at first glance is such a book, handsomely presented with an area of flowering Western Gorse and Bell Heather on the cover. This is not because this habitat is dominant here but because 'purple and gold' are the county's sporting colours! The volume also has a halo of significance as this special area, the most continental county in Ireland, has never before had a Flora. Inside are found all the essentials of such a work – accounts (often with photographs) of the 1,700 species now recorded there; twenty pages relating the development of this massive recording project; relevant maps and notes on special taxa and distributions; topographical information; detailed notes on the many habitats present; a fascinating section on 'Wexford recorders and other visiting botanists' from the beginning of the 19C to the present, with a notably good collection of portrait photos; generous acknowledgements of the many who have helped Paul; and a pleasing



extra section similar to that in Paul's *Flora of County Waterford* (2008) 'Some places of interest to look for plants' which reads in the author's own voice.

I'm also impressed as a professional reader by the presentation of the data. Each species has a note on its habitat and distribution with an extremely clear dot map (in simple black and white) showing distribution at monad, tetrad and hectad level. The 'first record' date is given and the find meticulously attributed. This author, as well as being a notably energetic recorder himself, is always generous in acknowledging other botanists. In fact, in spite of being another huge tome the whole book has an approachable feel, as if populated by all one's botanical friends, gurus and influencers in a lively way, regardless of when they lived (or live). This accessibility is important. Because of Paul's great skill in understanding habitat and his ability to process and apply the knowledge collected by past botanists, both the species accounts and the supporting essays are full of enlightening details which can be applied wherever readers botanise. In this sense this Flora can be of great value in both Britain and Ireland.

The only element which made me slightly regretful is purely a printing fault. As noted the accounts are unusually generously illustrated, mostly with the author's useful photographs. However some accounts have less depth on the page than the accompanying photo which has made exact alignment difficult and text and illustration have sometimes drifted apart which can cause a moment's irritation. However, this book is overall a very fine achievement and of a nature to be valued in the future. The *Atlas Flora of Somerset* (1997) produced by Paul, his twin brother Ian and their friend Geraldine Crouch is still to hand for every Somerset botanist – although the presentation is primitive compared to the more gorgeous techniques available now it has proved endlessly ***useful*** and ***dependable*** and I expect the same for *Wexford.* When I showed my copy of the new book to an English member he paged through for some time then turned to me with a big grin and said "This is what we ***want***!" I can only agree.

RO FITZGERALD