

PRESIDENT'S LETTER

As I write this I have just received my copy of the fourth edition of Clive Stace's *New Flora of the British Isles*. I am glad that Stace had made the effort to revise this already most useful and comprehensive reference to our flora, a work which I have used frequently since the first edition came out in 1991. This new edition has added more than 200 new species and hybrids. At the same time some ninety aliens that have no longer been reported since 1999 have been omitted from the text although retained in the keys in case they reappear. Since this Flora has now become an essential reference source for the British flora it is good that it has been updated in this way incorporating recent changes in taxonomy and nomenclature. You are now unlikely to find a plant species in the British Isles that has not been included in this most comprehensive work. We should all be grateful to the Staces for the hard work that is involved in keeping up with all the inevitable taxonomic changes that are happening in this new age of molecular work. I find most useful the multi-access keys and separate keys for geographic areas that occur for a few genera such as *Sorbus*. A very reasonable approach is taken to

various apomictic groups such as *Hieracium* and *Rubus* rather than accepting the microtaxonomy of some specialists.

With all the information contained in this volume it needs to be a fairly large size, but it is still easy to carry around in the field in a backpack and the plastic cover helps to protect it from rain damage. I know that my copy will be out and about a lot. This will continue to be an essential reference for all professional and amateur botanists and conservationists interested in plants. If you have a former edition I think that it is well worth updating and getting the fourth edition of the *New Flora*.

Apart from this what an unusual season we have been having with flowering of various species quite out of the expected time both in my garden and in the wild. I did not expect to see Dog's Mercury (*Mercurialis perennis*) in full flower and even in seed on 26th December last year, but there it was in Devon. We now have to keep alert to find things flowering at odd times, partially due to changes in climate.

GHILLEAN PRANCE

**Copy date for Summer magazine
1st May, 2019**

EDITORIAL

Like me, I'm sure many of you are now the proud owners of two new invaluable texts as aids to identification, both lovingly referred to by their author's names, Poland and Stace. Having received my copy of *The Field Key to Winter Twigs* by John Poland I decided I needed a task to focus my use of the key. The amount of Mistletoe (*Viscum album*) growing on trees in Suffolk appears to have increased substantially over the last 20 years so I decided to use the key to help me identify the host trees. So far I have accumulated over 300 records with 28 different host species. The Mistletoe even managed to flower in time to appear on my Winter Hunt list. A very productive use of the short winter days.

Like our President I have also found time to thumb through the pages of Stace's 4th edition of the *New Flora of the British Isles*. Currently we rely on the 3rd edition to set the standard for naming plant species. The new edition incorporates many name changes and the committee has decided that we will gradually feed these into our reports. For records from 2018, notably those from your Record Books, we will continue to use the names from Stace's 3rd

edition. However, for field meeting reports and future Record Book entries we should like to change to the new names but include a reference to the previous name by stating 'formerly' after the name as I'm sure it is going to take time for us all to adjust.

Richard Robinson has written a thought-provoking article on the definition of 'wild' and I have added some images on the central page spread to illustrate the dilemma. This has been an on-going debate within the Society and one that has been discussed by your committee. We suspect that it is an issue that is never going to be resolved to everyone's satisfaction. However, we would welcome your input to the debate and if you would like to submit your thoughts please send them to the editor. All views will be considered by the committee and our Chair, Peter Llewellyn will be writing an article on this issue for the next magazine.

In the meantime, don't get too bogged down in terminology and just go out and enjoy the flowers.

ANNE KELL

NOTICES

Twitter account

In addition to our popular Facebook page mentioned in previous issues of the magazine the Wild Flower Society also has a Twitter account. The Twitter handle is @WildFlowerSoc and the address is <https://twitter.com/WildFlowerSoc>

Change of personal details

Ted Pratt's new e-mail address is edwardpratt39@gmail.com

Priscilla Nobbs' new e-mail address is priscilla.nobbs@gmail.com

Change to Field Meetings 2019

The date for the Southwold meeting has been changed from 21st September to 28th September.

Leader: Dr Stephen Clarkson

This will be a 'Come and find' meeting. Meet at 10.30 at the car park along York Road opposite Southwold Common TM502762 (nearest postcode IP18 6BT), where there is free parking. This meeting will be a circular walk around the town and include the adjoining coastal dunes, freshwater meadows and saltmarsh. We hope to re-find Giant Goosefoot (*Chenopodium giganteum*) and look for other alien species around the town before exploring the surrounding natural habitats for late season plants. To book, contact Sue Grayston: suegrayston@googlemail.com or phone 01473 831174

Photo Competition 2019

The closing date for photo competition is 20th August. Details can be found on page 18 of the Year Book. Don't forget that you can submit digital images this year and these should be sent to the magazine editor at wfs.magazine@gmail.com

1KM Square Study

This is a new addition for 2019 and it was felt that we needed to clarify the details. As with the 10km square study the plants recorded do not have to be in flower or listed in Stace, although for those plants not listed in Stace an alternative reference needs to be given.

'Stace' Exchange

Is your bookshelf full of redundant editions of Stace's Flora? On the other hand, would you like to try using the Flora before you commit yourself to the great expense of buying one? Although names have changed, most of the keys are still the same, so this would be a good opportunity to get used to using the Flora before buying the latest edition.

We are proposing to set up an 'exchange scheme' for any members who would like to get rid of their old copies of Stace and those who would like to receive one. The suggestion is that recipients would provide the cost of postage and packing (£4) and make a small donation to the WFS.

If you are interested in taking part in this scheme, I am willing to put donors and recipients in touch with each other. Donors please e-mail me your name, contact details and details of which edition you are offering. If you would like to receive a copy, please let me know.

Sheila Wynn, e-mail: wfs.gensec@gmail.com

WHAT IS A WILD FLOWER?

I was forced to think about this question when two interesting records of seedlings of introduced trees growing in flower beds were 'disallowed' in last year's submitted plant list.

The WFS Regulations say, 'Every plant in the Record Book must be wild'. The Introduction to the Record Book says, 'Count only plants which are genuinely wild'. What is 'wild' or 'genuinely wild' is not, however, defined.

Recourse to dictionaries gives a range of definitions of wild flowers but they fall broadly into two camps. There are those that emphasise the lack of cultivation e.g. 'a flower of an uncultivated variety or a flower growing freely without human intervention', 'the flower of a wild or uncultivated plant or the plant bearing it' (*Merriam Webster*), 'wild or uncultivated plant' (*Princeton's WordNet*), and those which include the lack of cultivation but also mention the situation e.g. 'flowers which grow naturally in the countryside, rather than being grown by people in gardens' (*Collins English*), 'the flower of a plant that normally grows without cultivation in fields, woods etc.' (*Free Dictionary*), 'wild (of an animal or plant) living or growing in the natural environment, not domesticated or cultivated' (*OED*).

Ted Pratt who seems to be the only person in WFS to have addressed this question, stated some years ago that, "Introduced species which have

propagated themselves within cultivated public or private gardens, council flower beds, churchyards or caravan parks, in lawns, on cultivated road banks or around golf course playing areas are not 'genuinely wild'." At the bottom of a wall of a house which abuts the pavement, a plant achieves wildness, as it does in a pavement crack. This definition has the advantage of clarity but also carries with it a number of problems.

Over 50% of the plants growing outside our gardens are neophytes i.e. introduced after 1492 when Columbus arrived at the Caribbean (of course many of our plants were introduced during successive waves of immigration for thousands of years before that). Introduction itself is a slippery concept but if such a plant, wild in its native country, seeds itself, whether it is wild or not depends upon where the gardener decides to put his fence. I would prefer to attempt a less arbitrary and less anthropocentric definition.

If the emphasis remains on situations and boundaries as in Ted's definition and we look over the garden fence or churchyard wall what do we see? A landscape, frequently manicured to within an inch of its life and set around with boundaries. Many of these came into force entirely illegally but were given force by the Land Enclosure Acts. Others predated them often by centuries but similarly defined ownership. Most boundaries of woods, usually consisting of a bank, are of Anglo Saxon or early mediaeval origin. Neither boundaries

nor management distinguish a garden from a field or wood for that matter. Where do the great estates or royal parks lie on this spectrum? There is no fundamental difference in terms of management or boundaries between the inside and the outside of gardens, a fact amply demonstrated by plants which happily colonise either.

If we adopt the notion of lack of cultivation, rather than situation, to define wildness, we arrive at firmer logical and botanical ground (no pun intended). A plant becomes wild when it starts doing its own thing **irrespective of its situation**. If a plant is transported to the wild intentionally its status remains to be determined by its subsequent success in reproducing itself.

Unintentional transport is very common. The seeds of Pineappleweed (*Matricaria discoidea*), for example, hitch a lift on the tyres of farm vehicles and germinate happily in farm tracks and gateways. The farmer has no intentional hand in that.

Reproduction is key. If a plant fails to reproduce, its status becomes dubious. It is very tempting for those of us who have scrambled up to the ledge in Glen Clova where sits the single plant of purple coltsfoot (*Homogyne alpina*) in the UK, to record it triumphantly in our list. It was first recorded by the redoubtable nurseryman George Don in 1813. However, it shows no inclination to move off its ledge, rarely flowers and does not set viable seed. Could this really still be Don's original plant and should we accuse it of being planted

(not wild)? The Inchmadamph 'zoo' with its menagerie of alpine found nowhere else in the UK is a more blatant case in point.

Reproduction can be by seed or vegetative. I would suggest suckers of an introduced plant are wild since they have achieved existence independent of the mother plant. Where a plant introduced and planted in a garden i.e. cultivated, starts to spread itself around without the hand of man, as has Himalayan Knotweed (*Persicaria wallichii*), promoted by Victorian nurserymen, it is well on the way to becoming naturalised and will not remain confined by the garden wall. It achieves wildness.

In summary, therefore, the essence of a wild plant is that it is unmanaged. A possible definition, for the purposes of the Society, which I am sure others could improve upon, is 'a vascular plant which is growing without the intended involvement of man'.

It is past time that the Society defines what it means by 'wild'. I would be grateful if the committee or a subcommittee set up by them for the purpose could address the issue, even consider the above, and if it deemed in due course appropriate, amend the Regulations.

Finally, I am grateful to Ted Pratt who prompted these happy musings.

RICHARD ROBINSON

RESEARCH INTO PALE FLAX

Last August, I found myself driving around southern Wales and western England for my first proper plant hunt as a PhD student. It was only possible thanks to the Wild Flower Society grant I received the same year. I was after Pale Flax (*Linum bienne*), a common herb with pretty blue flowers, although quite hard to

breeding and crop evolution perspective. *L. usitatissimum* was one of the first crops to be domesticated in the history of humanity. This happened around Turkey where *L. bienne* also grows. But *L. bienne* was already present all over Europe, which helped in the spreading of the crop northwards by subsequent hybridisation events between the two species.

L. bienne is a sturdy little plant adapted to many different climates and environments. But can it face rapid changes in climate? If so, how well and does this depend on its origin? Can it help the crop adapt to new environmental conditions again?

At the University of Portsmouth, we take care of a modest collection of *L. bienne* seeds mostly coming from the westernmost boundary of the species range, from Spain to the UK, but also including seeds from Sicily and Israel. To represent the UK species variability at its best, I needed to collect some more seeds from Wales and the west of England which I was able to do last summer. After scanning the BSBI database for possible *Linum* locations, I headed for Wales accompanied by my friend Timo. Without him the trip would have been much harsher. Besides driving for long hours, plant hunting can be very disappointing: sometimes your GPS is off, or the coordinates you retrieved are wrong, or someone decided to mow that bit of land you were expecting to be full of *Linum*. Sometimes your eyes just fail you, which is very likely with *L. bienne* if it is not in flower.

spot once you are looking for it. Then, why actually bother to hunt for such a common, but timid plant and its seeds? In brief, this little plant can be used as a model to study how species respond to climate change over a wide geographical range.

L. bienne is also the closest wild relative to *L. usitatissimum*, known as Flax or Linseed, which makes it an interesting species from a plant

Pale Flax



During our trip, this happened over and over. On the most disappointing day, we stopped at Sandy Haven, where we could take a quick swim in the beautiful bay to shake off the morning's failures. This gave us some courage to continue the trip, but the swim made us lucky too. At the end of the next day I decided to check a spot near Castlemorton (Malvern). After cliffs, dunes and lovely grassy spots in the woods, *L. bienne* was standing at the edge of a dusty road. Quite ironic, but *L. bienne* loves these disturbed places. After this it was time to head back home.

Although I did not collect many populations, this one sits in a very strategic place to complete the Portsmouth *L. bienne* collection. In fact, the starting set of populations from the UK did not include anything from that latitude, between the extreme north and extreme south of England. Also, the Castlemorton population was far from the coast compared to all the other ones we found in the south.

But what do we do with the seeds collected? Last year I started a common garden experiment in Portsmouth. A common garden experiment is one where plant populations coming from different locations are all grown in the same place. This is to be sure that the differences we observe between the populations are due to their genetic makeup, rather than the environment. With this experiment I measured first flowering date for all the populations in the greenhouse (my 'common garden'), the plants' height and fruiting-related traits.

Flowering and fruiting are very important traits in a plant's life-cycle as they mean reproduction. This is tightly controlled via a complex network of genes and the genes' expression is responsive to climatic fluctuations. From the common garden experiment, we were able to see that plants coming from southern Europe flower much earlier than plants from the north, especially when considering the extremes of the species distribution.

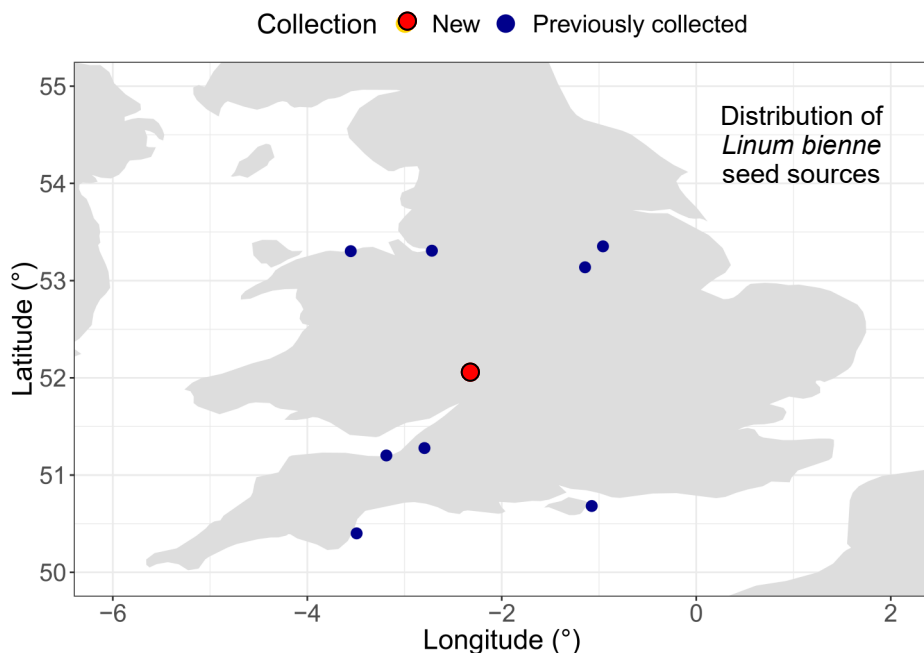


The common garden experiment also serves the purpose of replicating the plants so that we can do the same experiment on a larger scale to study their response to different environmental conditions. Let's say we have plants coming from the UK and plants coming from Spain. When we grow the same set of plants both in Spain and the UK, this is called a reciprocal transplant experiment. This experiment helps to simulate the response of plants under different climatic scenarios and can inform on their response to future changes in climate. For example, plants from the UK may experience a climate more like the Spanish one in the future because of climate warming. Such an

experiment is currently running in Spain and soon in the UK using seed produced in the common garden experiment last year.

The population collected this year, thanks to the Wild Flower Society grant, will be added to the reciprocal transplant experiment from next year when we will have greenhouse generated seeds. For now, we will grow it in the greenhouse with some newly acquired Israeli plants and measure their flowering time. We are all looking forward to seeing how they do!

BEATRICE LANDONI



RECORDING FOR ATLAS 2020: IRELAND

Thanks to another generous grant by the WFS, recording for Atlas 2020 took place across parts of Ireland that were considered to be under-recorded. In some cases, an area had not been recorded at all since 1999. Recording was undertaken in South Kerry (H1), North Kerry (H2), South Tipperary (H7), North Tipperary (H10) and South-east Galway (H15). Also, where the hectad straddled more than one county, or where I hadn't realised I had crossed over the county boundary, a little recording was done in Kilkenny (H11), Laois (H14) Limerick (H8) and Offaly (H18). In total, 53 ten-kilometre squares (hectads) across nine vice-counties were visited.

Fieldwork took place from June to early November. In areas which only had a small area of land, with the rest being in the sea, two hectads were visited during the day. Otherwise, a day was spent in a hectad where there was over half of the hectad with land.

The aim for many of the hectads visited was to record 200 plus species. Some had no post 2000 records. All hectads with one third of land or more reached this target easily. Where hectads had 220 species or fewer historically, all had more species recorded than previously known to occur in the hectad.

A list of species not recorded post

2000 was printed out for each hectad. Once I arrived in the hectad, the first place I found to park dictated the monad I would explore thoroughly. I would then cross off all the species I had found on the list. Then I would go habitat hunting to pick up as many of the other species on the list. The DDb (the BSBI's central database) was also searched to see which rare species had six-figure or better grid references. These were searched for. However, some hectads visited had no records better than hectad resolution.

As an example of recording a square, a ruined castle would be visited to pick up Pellitory-of-the-Wall (*Parietaria judaica*), or a wood to find Wood-sorrel (*Oxalis acetosella*). When necessary, even the summit of a mountain was climbed to see if that was where Stag's-horn Clubmoss (*Lycopodium clavatum*) had been previously recorded for a hectad. Aerial photos were used to locate raised bogs and turf moors; this was often the only way I could find this habitat in a hectad. In every raised bog or turf moor visited I always managed to find the Deergrass hybrid *Trichophorum x foersteri* (*T. cespitosum* x *T. germanicum*).

Several days were spent in September in South Kerry with a purpose of finding hybrid *Atriplex* and to undertake general recording within as many hectads as possible. I also searched for American Tear-thumb (*Persicaria sagittata*) in the Castle

Cove area, partly because it was a species I had never seen before and because all books said it had died out in 1993. I found it growing where it was last reported, thanks to a six-figure map reference in the DDb.

All records were checked before sending to the DDb and checked again when they were transferred to the DDb. All errors (inevitable in such

large datasets) found were corrected. All records were then verified in the DDb to save the Vice-county recorder having to do this task. Below is a short summary of the number of records collected by Vice-county and new species found. In total, 12,489 taxa were recorded during the survey, including 105 taxa new to a county.

PAUL GREEN

Summary

South Kerry (H1)

2,818 records collected

16 new species/hybrids for the Vice-county

205 new species/hybrids hectad records

North Kerry (H2)

3,807 records collected

35 new species/hybrids for the Vice-county

805 new species/hybrids hectad records

South Tipperary (H7)

683 records collected

15 new species/hybrids for the Vice-county

65 new species/hybrid hectad records

North Tipperary (H10)

4,790 records collected

33 new species/hybrids for the Vice-county

581 new species/hybrids hectad records

South-east Galway (H15)

391 records collected

6 new species/hybrids for Vice-county

60 new species/hybrid hectad records



American Tear-thumb

FIELD MEETINGS 2018

HAMPSHIRE 23rd - 24th JUNE

Saturday 23rd June Portsdown Hill

Thirteen members met near the very impressive Nelson Monument at the top of Portsdown Hill with magnificent views of The Solent and the Isle of Wight in the distance. Portsdown Hill is an outlier of the South Downs and is therefore made of chalk. We spent the day exploring the common, uncommon and unusual plants in this area.

Field Scabious (*Knautia arvensis*) was in flower and the pretty Yellow-wort (*Blackstonia perfoliata*), a member of the Gentian Family, was just starting to open. Fairy (or Purging) Flax (*Linum catharticum*) was hiding in the grass. Apparently it is the seeds that are effective, only five needed for a good purge! We found Yellow-rattle (*Rhinanthus minor*), with its capsules containing seeds which rattle. It is a useful constituent of the grassland because it is semi-parasitic on grasses making the sward more open and therefore more easily colonised by other plants. Steve Clarkson identified some plants as ssp. *stenophyllus* with its lowest flower at node seven.

Jill Oakley pointed out a vigorous bramble, "Himalayan Giant" (*Rubus armeniacus*), an introduction with fierce red-based prickles on its ridged stem. Other interesting plants included Common Spotted-orchids

(*Dactylorhiza fuchsii*) which were almost over, while the magenta Pyramidal Orchid (*Anacamptis pyramidalis*) was in perfect flower. One very large robust plant was the hybrid between Common Spotted-orchid (*D. fuchsii*) and the Southern Marsh-orchid (*D. praetermissa*). Apart from its large size the stems were slightly hollow, not solid, and the bright green leaves were keeled and very faintly spotted. This is a common hybrid in the south and is called *Dactylorhiza x grandis*. Everyone also admired the wonderful glands fringing the sepals of the Hairy St John's-wort (*Hypericum hirsutum*), another plant characteristic of chalk grassland.

After lunch in the very hot sunshine we explored a different area close to the M27. Here we saw the fantastic sight of a very large patch of Field Cow-wheat (*Melampyrum pratense*). This was a new species for most of us and admired by all. Close-by was a very rare variant of Ivy Broomrape (*Orobanche hederæ* var. *flava*) its flower spikes being totally yellow with no purple colour evident. Also, well naturalised in several places, was the Straw Foxglove (*Digitalis lutea*) with its pale flowers and glabrous stems and leaves.

On a near-by roadside verge protected by Hampshire County Council was Basil Thyme (*Clinopodium acinos*) with its blue flowers with a white patch on the

lower lip. It is the only calamint which is non-aromatic. Above this was a whole bank of Kidney Vetch (*Anthyllis vulneraria*) and lurking in some scrub nearby was a naturalised Smoke Tree (*Cotinus coggygria*), a plant normally only seen in Southern Europe. It was very unusual for it not to be the commoner purple-leaved garden variety.

We drove eastwards to Portsdown Hill Nature Reserve. In a field bordering the car park dense spikes of broomrapes caused much interest and some of the more intrepid botanists scaled the fence for a closer look. Examination of the flowers showed that the filaments were hairy below and the two lobes of the yellow stigmas were touching. This helped to identify them as Knapweed Broomrape (*Orobanche elatior*). Descending the hill we passed large patches of Wild Thyme (*Thymus polytrichus*) and along the reserve path there were plants of Common Gromwell (*Lithospermum officinale*) with small creamy coloured flowers and spear-shaped, stalkless leaves. On the dry hillside we were surprised to find some very tall specimens of Water Figwort (*Scrophularia auriculata*) taking advantage of concrete drains. At the western end of the reserve we crossed the road to find Fern-grass (*Catapodium rigidum*) growing with the Common Poppies (*Papaver rhoeas*) by the roundabout. We were delighted to find an ice cream van which gave everyone a welcome opportunity to enjoy ice creams and lollies and cool down after a hot day in the field.

Very many thanks to Jill Oakley for organising the meeting and providing clear and very useful maps and showing us some amazing plants.

GARETH BURNSNALL



Photo: Gareth Bursnall

Straw Foxglove

Sunday 24th June New Forest

According to one leading member of the WFS, who will remain nameless, my reputation hung by a thread. Another phrase that Janet John used was that I was skating on thin ice. It was all to do with Wild Gladiolus (*Gladiolus illyricus*) that I had singly, almost wilfully, failed to produce on my WFS walk in July 2017. So this time I determinedly conducted a careful search in spring to identify five young plants amongst the emerging bracken. But woe is me, when we did the proper recce just a few days before the walk, only one specimen could be found, parched by the arid early summer, half its normal size and with just three florets. My social doom seemed to be sealed. Coventry called.

The Wild Gladiolus was first recorded in the 1830s on the neighbouring Isle of Wight, though it has long since disappeared from there because of habitat loss. Its sole UK site is now the New Forest, where it is not exactly rare, but difficult to find under the bracken. After its first recording there in the 1850s, there was some dispute as to whether it was truly a wild flower as it is so spectacularly attractive, but it is found far from any garden, there is no history of its cultivation and it certainly grows wild on the Continent.

So 17 of us set off on this miserable quest from Shatterford car park, seeing a large number of Silver-studded Blue butterflies and Keeled Skimmers on route, together with Petty Whin (*Genista anglica*) and Lesser Bladderwort (*Utricularia*

minor). The Gladiolus was revealed from beneath the bracken I'd folded over it to protect it from ponies and people – Behold! – only to find that the florets had started to fade in the past few days. Everyone was very polite.

Returning to our cars, we then set off a couple of miles over the heath to Pig Bush and from there we walked down to a boggy mire to admire a dozen or so examples of the *pulchella* subspecies of the Early Marsh-orchid (*Dactylorhiza incarnata*). What made it even more interesting was that half the flowers were pure white – the *leucantha* variety. The last Bogbean (*Menyanthes trifoliata*) of the year, seen a few days before, had gone to seed, but Meadow Thistle (*Cirsium dissectum*) and Bog Myrtle (*Myrica gale*) were in full flower. Marsh Cinquefoil (*Comarum palustre*) would follow a fortnight later.

On offer on our way back to Shatterford was a colony of Lesser Butterfly-orchid (*Platanthera bifolia*). Some of the party were feeling hungry by this stage, so skipped this bit out to have an early lunch, but the others came with me to confirm that the pollinia were parallel, so they were indeed the Lesser rather than depauperate examples of Greater Butterfly-orchid.

This was the end of the day as I had originally planned it, but I had a trick up my sleeve. I had visited another site, at Holmsley, where Gladiolus grows in lower ground close to a stream. The plants there were full size, with up to six florets apiece. Some, including my erstwhile accuser, hot-footed it thither



immediately with Shireen and were suitably overwhelmed by the sheer beauty of the bright pink flowers.

The others, bar those who had to leave early, were meanwhile seduced by my offer of another long trek over the heath, this time to see the New Forest notables that had been available to those attending in 2017. So I led this select group to see, *inter alia*, Coral Necklace (*Illecebrum verticillatum*), Allseed (*Radiola linoides*) and the New Forest and Intermediate Bladderworts (*Utricularia bremii* and *U. intermedia*). The New Forest Bladderwort has arrived at Woodfiddley Bottom from Scandinavia by means unknown. It is in a foul-looking ditch that dogs nevertheless have liked to jump into. This hasn't done the Bladderwort much good, though it might possibly have been on the fur of such a dog, returning from his Nordic break, that it arrived in the first place. The two flowers were just by a hummock projecting into the ditch, so those

wanting a proper view had to balance as best they could and lean into the abyss, whilst the others, cameras at the ready, waited to take the winning entry in the Human Element category of the WFS photographic competition, as they fell in. In vain, even when Sue Grayston, the least stable person present (so to speak), looked to be the best candidate. Leaves and bladders of the plant were damaged irreparably so that Steve Clarkson could confirm with Stace that it was the bladderwort I had confidently claimed (phew!), though the slightly wavy but otherwise flat corolla was already clear evidence, vis-à-vis that of the Lesser Bladderwort with its recurved edges. Equal interest was taken in the Intermediate Bladderwort, which filled a boggy area nearby with its foliage, but our hopes of glory at being the first to see it in flower were all to nought.

This group, in their turn, were taken on to the premium Gladiolus site and I found three plants for them to fall about in wonder over. Shireen's group had found five, but in reality there were probably another dozen out there, under the bracken, quietly minding their own business. Everyone was very happy until someone said they were feeling 'glad' all over, at which there was a collective moan from the five of us. Richly deserved.

So there it is. When I attend my first WFS AGM, I can hold my head high. No dread of social ostracism at the sherry reception; no need to hide shame-faced amongst the canapes; and no fear of being branded a UFO (Useless, F-graded Organiser).

DAVID CAALS

PERTHSHIRE 15th - 17th JULY

Sunday 15th July Keltneyburn Reserve

Eighteen of us were greeted by our leader, Lyn Jones, and his wife, Amanda. Scotland, like the rest of the UK, had had twenty weeks of unadulterated sunshine and above average temperatures in the high 20⁰ C bracket, which made many of us feel that some hill climbing in the next few days, in this heat, would be foolish. But this evening the weather turned and we started out in some gentle Scottish rain. There had been no rain at all since late May and Lyn was already making excuses that there was very little to see and that many plants had dried up and disappeared!

We were divided up into two groups, the sheep and the lambs, not that we were separated out by age, just to make it easier to go in single file through the trees and over the nearby braes. Now we are getting into the lingo, that's the Scottish for banks, as in the famous words by Robert Burns "Ye banks and braes o' bonny Doon" (even though there's tautology in there !), but set famously to music by Percy Grainger.

Our first little gem was to see Small Cow-wheat (*Melampyrum sylvaticum*). It was difficult to photograph in the rain and appreciate the small differences between it and its cousin Common Cow-wheat (*M. pratense*). The flower of the latter has a straight lower lip compared to the deflexed lip of the former and the

corolla tube is longer than the calyx in the latter and equalling or shorter in the former. There'll be a test on this later!

Nearby were the palest of blue, almost white, flowers of a rather tall bellflower called Giant Bellflower (*Campanula latifolia*), with its fringed petals. In a shady bank we discerned some Oak Fern (*Gymnocarpium dryopteris*). Unusually to be found in birch woodland rather than beech were a couple of Bird's-nest Orchids (*Neottia nidus-avis*); unfortunately past their best. On a bank-side were patches of dark green, beautifully feathery leaves belonging to Spignel (*Meum athamanticum*). A tall raft of Water Horsetail (*Equisetum fluviatile*) with its completely hollow stems tried to hide a few Rush and Sedge species, amongst them being Sharp-flowered Rush (*Juncus acutiflorus*), demonstrating the wide apart septa in their leaves, and a hybrid between Bottle and Bladder Sedges (*Carex rostrata* and *C. vesicaria* = *C. x involuta*), supposedly one of the more common hybrids, according to Stace, but new for all of us.

This was but a short introduction to the spoils that awaited us over the next couple of days. Read on.....

STEPHEN CLARKSON

Monday 16th July

Ben-y-vrackie

The day started off a bit dreich for want of a better word, but even this had a certain novelty value after the tedious and unrelenting sunshine that we'd been experiencing all summer. First up, some wilting wintergreens (Common – *Pyrola minor*) and then, after a brief search among the heather, the leaves of the elusive Lesser Twayblade (*Neottia cordata*); we did later manage to find one in flower. Shortly afterwards we arrived at our first star plant – Brown Bog-rush (*Schoenus ferrugineus*). It wasn't always here, but was transplanted in the early 1950s when water-levels at its original site, the shores of Loch Tummel, were due to be raised as part of a hydro-electric scheme. Some plants were taken to higher ground at Loch Tummel itself but didn't survive. The Ben-y-Vrackie population is holding its own, but hasn't really spread much, according to our guide, Dr John Holland, Upland Ecologist at the SRUC (Scotland's Rural College) Hill and Mountain Research Centre, although several new populations have been discovered elsewhere in the intervening years. Sharing the Bog-rush flush were Scottish Asphodel (*Tofieldia pusilla*), Broad-leaved Cotton-grass (*Eriophorum latifolium*) and Few-flowered Spike-rush (*Eleocharis quinqueflora*), not to mention the ubiquitous Yellow Saxifrage (*Saxifraga aizoides*).

Next up, deceptively beguiling Bog Asphodel (*Narthecium ossifragum*). As John explained to us, this plant can be toxic to livestock despite it being a common component of some

upland grazing. It can be particularly harmful to lambs, causing photosensitivity, blindness, deafness and even death. As an aside, the scientific name *ossifragum* means 'bone breaker' and refers to the old belief that grazing on this plant caused the bones of sheep to become brittle. However, it later became apparent that this was due not to the Bog Asphodel per se, but to the calcium-deficient vegetation that made up the overall mix.

As we climbed up the middle section of the mountain, the flora started to become a bit more 'upland', with plants such as Wood Horsetail (*Equisetum sylvaticum*), Alpine Lady's-mantle (*Alchemilla alpina*), Chickweed-wintergreen (*Trientalis europaea*), Cowberry (*Vaccinium vitis-idaea*) and Green Spleenwort (*Asplenium viride*).

However, the best was yet to come, along the bottom of a line of low cliffs under the summit. The two stars of the show were undoubtedly Alpine Milk-vetch (*Astragalus alpinus*) and Purple Oxytropis (*Oxytropis halleri*), both present in some quantity, but this section also yielded Alpine Mouse-ear (*Cerastium alpinum*), Alpine Bistort (*Persicaria vivipara*), Starry Saxifrage (*Saxifraga stellaris*), Rock Sedge (*Carex rupestris*) and Holly Fern (*Polystichum lonchitis*).

With the major excitement over, we decided that we might as well bag a Corbett while we were at it and go to the top. Here we found Dwarf Cudweed (*Gnaphalium supinum*), Northern Bedstraw (*Galium boreale*) and plentiful Stiff Sedge (*Carex*

bigelowii), while our descent rewarded us with the usually upland subspecies of Harebell (*Campanula rotundifolia* ssp. *montana*), which was considerably larger in all its parts than ssp. *rotundifolia*.

Once we were all safely back down and, going way beyond the call of duty, Hamlyn took some of us to a nearby site to see possibly the rarest but somehow the most underwhelming plant of the day (from a visual perspective at least) – Whorled Solomon's-seal (*Polygonatum verticillatum*). We must have seen a good dozen in total but none seemed to have flowered and they were all a bit lacklustre and droopy (rather like us by that point). Of much greater aesthetic appeal was the next-door Red-berried Elder (*Sambucus racemosa*), resplendent in a mass of scarlet fruit and a fittingly joyous end to a jolly good day. Many thanks to John Holland and Hamlyn Jones.

STEVE LITTLE

Tuesday 17th July Ben Lawers

Ben Lawers is the highest mountain in the Breadalbane region of the Grampians reaching a height of 1214m (3984ft) - only eight mountains in Britain are higher. The mountain is mainly made up of calcareous mica-schist which breaks up easily – quite tricky for walking on but forms good, rich, water-retentive soil for the plants. The flora of Ben Lawers also owes its existence to appropriate rainfall, enough but not so much that it would leach away the goodness in the soil, suitable



temperatures, which are cold enough to provide a haven for alpine and arctic plants, and hollows and exposed rocks, which provide both wind protected and windswept areas. All this adds up to a unique and special area with amazing flowers.

Ben Lawers is owned by National Trust for Scotland and we were accompanied by our Leader, Lyn Jones, plus Helen Cole and Dan Watson from the Trust and Amanda Jones and Sue Jury, who provided back up support and lots of encouragement. We were fortunate in having a day that was not too hot and not too cold, just right at about 20^o C, with a little drop of refreshing rain on the way up. We started off from the car park a little after 9:30 a.m. and the walk to the top was interspersed with many breaks for botanising and, of course, lunch, so it was 5 p.m. when we reached the top. My first, and perhaps last, Munro. I felt a terrific sense of achievement. The flowers were a joy the whole way up. In the enclosure on the lower slopes there has been a long standing experiment in regeneration using seed from across the reserve. Deer and sheep are kept out and it was noticeable that the trees were more

Photo: Dennis Kell

Hanging Gardens on Ben Lawers

Photo: Anne Kell



vigorous at the bottom of the reserve but struggling at the top. Downy Willow (*Salix lapponum*) has been planted in this area in the hope it will go forth and multiply. Emerging from the exclosure we soon came across Spiked Wood-rush (*Luzula spicata*), which was an indicator that we were getting higher! A boggy pond provided our first * (RR in Stace!) plant of the day, Russet Sedge (*Carex saxatilis*), which was growing with Common Sedge (*C. nigra*), Star Sedge (*C. echinata*) and Bottle Sedge (*C. rostrata*).

Yellow Saxifrage (*Saxifraga aizoides*) accompanied us along much of our route from bottom to top.

A col on the way up was so full of interest that it was difficult for some people to progress up the mountain. We found Alpine Mouse-ear (*Cerastium alpinum*) with its long white woolly hairs, the mountain subspecies of Thyme-leaved Speedwell (*Veronica serpyllifolia* ssp. *humifusa*), Cyphel (*Minuartia sedoides*), with its tiny green flowers, together with Chestnut Rush (*Juncus*

castaneus), Two-flowered Rush (*J. biglumis*), and Three-flowered Rush (*J. triglumis*), amongst others.

Nearer to the top was a hanging cliff with calcareous flushes which provided a stunning variety of flowers including Alpine Gentian (*Gentiana nivalis*), Alpine Forget-me-not (*Myosotis alpestris*), Mountain Fleabane (*Erigeron borealis*) and Rock Whitlowgrass (*Draba norvegica*). Unusually for a British mountain plant, the Alpine Gentian is an annual and hence varies considerably in size depending on location and year. They only open in direct sunlight and luckily we saw one open with the intense blue of its petals.

However, the biggest treat of all was not far from the peak. In an area of overhanging rocks we found the diminutive Drooping Saxifrage (*Saxifraga cernua*) with red bulbils, Alpine Saxifrage (*S. nivalis*), Snow Pearlwort (*Sagina nivalis*), and Arctic Mouse-ear (*Cerastium nigrescens*). Drooping Saxifrage is sterile and so

reproduces by the small red bulbs on the stem. Hence, the Scottish plants are all clones which reduces their chance of adapting. Changing environmental conditions would not be favourable for this Saxifrage. We had a wonderful and very long day. I arrived back at the car park at about 7:30 p.m. happy but tired. The pasta and glass of red wine at the Italian Cafe in Aberfeldy went down extremely well!

Our thanks to Helen, Dan, Sue, Amanda and Lyn for a fantastic day. Goodness knows where Lyn gets his energy from, he traversed the mountain and went up and down seemingly without effort!

Many thanks to Lyn for using his contacts to provide us with experts on the areas on Ben Vrackie and on Ben Lawers and for arranging such a splendid Field Meeting for us in the Aberfeldy area.

JANET JOHN

IN SEARCH OF THE DROOPING SAXIFRAGE

Ben Lawers. Just its name sends shivers down my spine. For years its wondrous treasures tantalized me. As soon as I heard of it I put it on my 'must do' list. It promised so much that the first time I visited Scotland was specifically to climb its slopes. I was hoping to find Drooping Saxifrage (*Saxifraga cernua*), Alpine Gentian (*Gentiana nivalis*) and Alpine Forget-me-not (*Myosotis alpestris*), among many, many other botanical delights. Not having done any homework I naively assumed that I'd be able to find them easily as I set off with a friend. The obvious choice, or so I thought, was to take the path going up. And up it went, only not to the top of Ben Lawers, at least not straight away. It went via Ben Ghlas and as it was very cloudy we couldn't see where we were. Resting at what we thought was the top we overheard somebody say that Ben Lawers was another quarter of a mile further on across a very narrow ridge. We realised we hadn't arrived yet. However, I was a happy bunny as I'd already seen Alpine Forget-me-not (*Myosotis alpestris*), Cyphel

(*Minuartia sedoides*), Moonwort (*Botrychium lunaria*), Three-flowered Rush (*Juncus triglumis*), Moss Campion (*Silene acaulis*) and Alpine Mouse-ear (*Cerastium alpinum*) to name a few. After much huffing and puffing we eventually heaved our aching bodies up to the top of Ben Lawers and looked, unsuccessfully, for the Saxifrage. It was no-where to be found but Alpine Meadow-grass (*Poa alpina*) made up for it.

When, on a later Wild Flower Society trip to the Cairngorms, the weather was fine I decided to make a return visit to the mountain to try again. I'd asked practically everyone I know and people I don't, who had all been very helpful, and they showed me on the map where the fabled Hanging Garden was supposed to be. The Hanging Garden is the cliff face where you can find the Alpine Gentians, Alpine Forget-me-not and many others in wonderful array in one place. It looked like you could access it from the higher path so again I stupidly went up, via Ben Ghlas, and this time kept making



Crocuses and snowdrops in churchyard

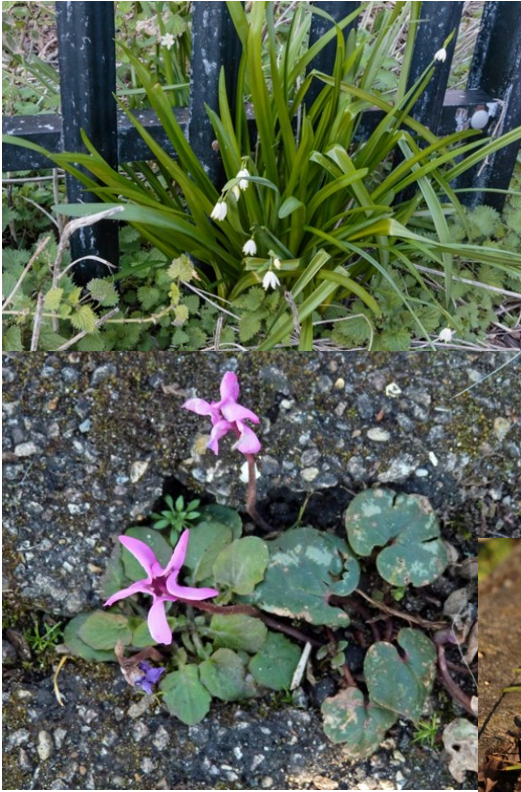
Yew tree growing out of grave in churchyard



IS IT WILD?



Snowdrops and Dog's Mercury in churchyard of redundant church



Clockwise from top - Summer snowflake on shingle spit; Rosy Garlic by road; Early Crocus in gutter; Lesser Celandine in garden border; Chickweed and Red Dead-nettle in allotment bed; Eastern Sowbread in tarmac



Photos: Dennis Kell, Anne Kell, Monica Davis

forays off the path to try to find the cliff face in question. I felt I couldn't go too far on my own as I didn't know the mountain well and didn't want to get lost with no one knowing where I was. It's just as well because I was far too low on the mountain. Alpines like to be high on the mountainside, that's why they're alpines!! When I got to the top of Ben Ghlas I rang Stephen Clarkson to tell him where I was and ask if he had the grid reference for the Saxifrage. He said he'd look for it. He said that it was difficult to find and he remembered it was down one of the ridges from the summit. I walked on and tried to ring again when I got to the top. Unfortunately, by the time I reached the top the signal had disappeared. I went down every ridge going away from the summit and looked in every cranny but still no Drooping Saxifrage. I saw quite a few goodies including some rare sedges and rushes on the way up but no Drooping Saxifrage again. This was beginning to get frustrating. I hadn't come across any Hanging Gardens either so I was beginning to think that the mountain had it in for me. I came down the other path which is a lot longer but it gave me an opportunity to search again for the Hanging Gardens. It wasn't to be. Unknowingly I had already walked past it twice now.

A couple of years passed and the pain of the climb had become a distant memory. My new partner Ken and I decided to holiday in Scotland and of course the subject of Ben Lawers inevitably came up. Should we give it another try? It wasn't a very nice day but off we went into the wind and rain. We battled our way nearly

to the summit but during a particularly gusty section I looked at poor Ken's face and decided it wasn't worth going any further. We saw a small path leading off to the right quite high up and thought why don't we look around here. At least we're out of the wind and there might be something interesting. Unknowingly we had stumbled on the Hanging Gardens. We spent a happy hour or so looking at what was growing there and even thought for a moment that we spied Gentians. Stupid me, Gentians only open in the sun. They were Pansies. This mountain was beginning to get on my nerves. I remember saying to Ken on the downward trudge that I wasn't going to climb it again unless I came with someone who knew where the Hanging Gardens and the Drooping Saxifrage are. I knew that was going to be incredibly difficult. People who have climbed it and know where it is generally don't need to go again.

The very next year I noticed that Janet John had arranged a visit to Ben Lawers with Hamlyn Jones. Oh no, I thought, not again and so soon. But it had to be done. We booked to go on the trip as soon as we could. And so it was that we found ourselves back at the bottom of Ben Lawers yet again. At least this time we had some hope of seeing the real rarities. It started well. Our party quickly broke into two groups, the hares and the tortoises. Needless to say, Ken and I were in the tortoise group. One of the wardens stayed with us to make sure we didn't miss anything. Bless her.

We went up on the low path round the back of Ben Ghlas and actually

passed the hares at lunch time. They had made a diversion to look for a Pearlwort. Anyway just after the junction between the path from the summit of Ben Ghlas and the path we were on we turned off to, guess what! The Hanging Gardens. As soon as we saw where we were we couldn't believe it. We'd been here before!! Of course the Gentians had been there all the time but had been all shut up against the weather. It very much depends on the weather and time of year as to what you see. Because it had been so hot during the summer the flowers had mostly flowered and gone over. These were the last dregs but still, we finally knew where it was. The two groups spent a wonderful time crawling slowly over the paths trying to see the plants but not cause any damage on the crumbly crag.

After a while I noticed that a lot of people were making their way around the corner of the cliff face. Last time we went we had done the same and it had seemed very steep so we didn't follow. I thought they would soon be back. However, they didn't come back and those of us who were left decided to either go up to the summit or go back down when we'd had our fill. Ken and I decided to go up and, although I was really struggling, I so wanted to have another go at looking for the Saxifrage. As we went puffing upwards we met the ranger coming down. I asked the inevitable question, where was the Saxifrage? He shouted as he went past at some speed, "Go to the summit and go right."

On the way, we started meeting some of our party who had disappeared round the corner of the



cliff face. It soon became apparent that they had gone up to the summit a different way and, worse, had seen the Drooping Saxifrage. Disaster. I had missed my chance to see the Saxifrage again. It was too much, I was exhausted and so upset. I had to walk away. I thought I was going to cry. I'd tried so many times to find it. Ken could see how upset I was and realising that the main party must be ahead of us sped up to ask them directions. There they were at the summit. On hearing that we really wanted to see it Hamlyn came to our rescue and kindly offered to take us back to see it. I can't thank him enough. He took us all the way back to where it grows. I just hadn't walked far enough along and down the ridge in the past. He let me have the joy of finding it myself hiding away in a little cranny on the rocky cragside. It still brings tears to my eyes when I think about it. I thought I'd never see it. It was brilliant. Then just to put the cherry on the icing we were shown Alpine Saxifrage (*Saxifraga nivalis*) and the Snow Pearlwort (*Sagina nivalis*) as well. What a trip. I just want to say a great big thank you to Lyn for doing that for us. We came down that mountain on wings.

SUE GRAYSTON

Photo: Dennis Kell

HOLY ISLAND 20th JULY

A short walk into the dune slack revealed a whole range of species to stop us in our tracks, lenses and cameras quickly springing into action. Sedges abounded, including Sand Sedge, False Fox-sedge and Distant Sedge (*Carex arenaria*, *C. otrubae* and *C. distans*), along with Few-flowered Spike-rush (*Eleocharis quinqueflora*). The Marsh Helleborine (*Epipactis palustris*) was scattered throughout this first area looking quite wonderful. Other orchids included the red form of Early Marsh-orchid (*Dactylorhiza incarnata* ssp. *pulchella*) and, interestingly, many of the Common Spotted-orchids (*D. fuchsii*) had paler flowers than usual. Marsh Pennywort (*Hydrocotyle vulgaris*) was abundant, with the pink flowers of Bog Pimpernel (*Anagallis tenella*) showing through the vegetation. Marsh Arrowgrass (*Triglochin palustris*) was in full flower, its rather lovely violet stigmas making it more obvious than usual. The white flowers of Brookweed (*Samolus valerandii*) stood out with the lime green stars of Common

Butterwort (*Pinguicula vulgaris*) completing this lovely tapestry. John Richards pointed out to us that the Brookweed occurs worldwide, one species in the north, *S. valerandii* and another in the south called *S. repens*.

A highlight of this area was the Lesser Water-plantain (*Baldellia ranunculoides*). The plant was flowering and the round heads of fruit stood out clearly, making the species readily identifiable. The Heath Dog-violet (*Viola canina*) was identified in the vegetative state by its leaves, which are longer than broad, and by the lack of a central rosette. John explained that the pale blue flowers seen in spring are replaced by later cleistogamous flowers which do not open and rely upon self-fertilisation. I should also mention the ubiquitous Pirri-pirri-bur (*Acaena novae-zelandiae*) which was all over the dunes and derives originally from New Zealand. There it is called bidi. For anyone who has not visited Holy Island, the hooked fruits of the Pirri-pirri-bur are a serious problem and boots and clothing must be thoroughly cleaned before visiting another site to reduce the spread of this foreign invader. (see photo)

Further around we encountered a large colony of Divided Sedge (*Carex divisa*), the only site in the county for this sedge. It was well over with only the odd fading inflorescence to help with identification.

Numbers of the Lindisfarne Helleborine (*Epipactis sancta*) were considerably reduced this year but we still managed to track down some

Photo: Anne Kell



of them. John explained that the preferred habitat for this rare orchid was towards the base of the sand hills rather than the dune slacks. It is distinguished from the similar Dune Helleborine (*E. dunensis*), which is not found on Holy Island, by the distribution of the leaves. In *E. sancta*, the leafy part of the stem is usually about a quarter compared to the inflorescence which takes up three quarters of the spike. Compare this to *E. dunensis* where ratio of leafy stem to inflorescence is roughly equal (a number of plants are needed to determine this characteristic). Another interesting orchid scattered around this habitat was *Dactylorhiza x venusta*, a hybrid between *D. purpurella* and *D. fuchsii*.

Bright blue spikes of Viper's-bugloss (*Echium vulgare*) stood out among the dune grasses as we moved towards a much wetter area around the Snook. The dry conditions allowed us much easier access than usual to this normally very boggy site. Stands of Grey Club-rush (*Schoenoplectus tabernaemontani*), Sea Club-rush (*Bolboschoenus maritimus*) and Black Bog-rush (*Schoenus nigricans*) combined to provide a stunning foreground to the view across the slack. Shoreweed (*Litorea uniflora*) was spread across the dried mud bed in full flower. The three long stamens of the male were clearly evident, with the less visible tiny female flowers at the base of the male; the broad, grassy plantain leaves reminded us it is a member of *Plantaginaceae*. Also present were the Common Spike-rush (*Eleocharis palustris*) and Mare's-tail (*Hippuris vulgaris*). Moving down to the drier track we saw the distinctive northern



Photo: Dennis Kell

subspecies of the Dune Gentian (*G. amarella* ssp. *septentrionalis*), with its characteristic paler flowers. On the heavily grazed, limestone cliffs further around the island, this plant is present in large numbers along with the Western Eyebright (*Euphrasia tetraquetra*).

Long-bracted Sedge (*Carex extensa*) and Seaside Centaury (*Centaureum littorale*) were growing together along the track with Sea-milkwort (*Glaux maritima*) and Sea Plantain (*Plantago maritima*). Greater Sea-spurrey (*Spergularia media*) caught our eye as we left the slack and returned to the cars. This interesting little plant was readily identified by its tiny winged seeds.

We had a wonderful day in the field with John Richards. He always enhances his detailed knowledge of plants with a plethora of fascinating facts and anecdotes. I think there was something to learn for all levels of botanist from new member to the more experienced and battle hardened among us.

LIZZIE MADDISON

SOMERSET 11th - 12th AUGUST

This weekend came exactly when the weather broke after the long hot summer. This was cruel luck for members who had come from far away to enjoy this lovely area round the Quantocks and, as Sunday in particular dawned with wind and fierce rain, plans had to be altered and somewhat restricted. Somehow, the days were not a disaster! Members of both groups joined up so that we were about 20 on both days and Graham Lavender, Liz McDonnell and I really appreciated the good humour and determination shown by everyone.

Saturday was planned to have a thorough look at the Wildlife and Wetlands Trust reserve at Steart, by the River Parrett. The reserve is primarily for birds and, to create habitat for wildfowl and waders, a breach has been created in the tidal river bank, forming a series of lagoons and intertidal fields which are periodically inundated. There are public paths and hides, but WWT are very friendly to botanists and organise surveys of the general biodiversity interest of their holdings. We therefore had access to areas not open to the public and were to make some of the first botanical recordings of the newly created habitats. Kitted up with yellow hi-viz tabards (WWT policy for off-road work), we divided into three groups and set off into three different 1km squares.

Two parties headed for the river, looking at the tidal banks and at the land just inland – this was formerly grassland, but now because of

periodical inundation with salt water they are being colonised by some saltmarsh species. This process is recent, so they are currently species-poor, and we did get pretty tired of Annual Sea-blite (*Suaeda maritima*) and Spear-leaved Orache (*Atriplex prostrata*) as the dominant vegetation! The only relief came from occasional clumps of Meadow Barley (*Hordeum secalinum*) which must have persisted from the former fields, looking strange flowering on bare dried mud. Most interesting plants were on the raised bank of the river path and small 'islands'. Here a popular find was numerous tiny Wild Celery (*Apium graveolens*) plants, dwarfed by the drought but highly aromatic. Sue Cooper called this the 'scratch and sniff' day - this was appropriate as we also (on both days) found Stone Parsley (*Sison amomum*) and Corn Parsley (*Petroselinum segetum*), both with extremely inconspicuous flowers but distinctive smells when a leaf is crushed. Sheila Wynn nicely described the scent of Stone Parsley as 'petrol and spice'! A distinguished plant, characteristic of this part of the Bristol Channel coast, was found by both groups near the river – Sea Clover (*Trifolium squamosum*) had been completely shrivelled in the drought, but the almost-spiny heads were still distinctive.

Our third group on this day went inland to former common land and damp grazing on Stockland Moor. Here again WWT are encouraging winter inundation and one field provided a tremendous thrill. The

habitat includes a pond, well trampled by grazing cattle, and wide areas of almost bare ground with no grass where water had lain till the drought set in. A huge population of the Red Data Book Species Pennyroyal (*Mentha pulegium*) was in lavish flower, with abundant shiny heads of the annual Hairy Buttercup (*Ranunculus sardous*) (also relatively uncommon). It's not clear what the origin of the Pennyroyal may be. It's become extremely rare since the days when it was a staple herb of country healers and flourished in damp places such as by village duck ponds and there is anecdotal evidence of it turning up in (weirdly) Canadian grass seed mixes designed for use on reservoir and river banks, but it could also be a previously unrecorded relic in this ancient common land.

The day was dull overhead and rather chilly, but although many of us shared Peter Hilton's opinion of the 'new' habitat near the lagoons "I looked hard on those intertidal fields but regrettably no! they were not very interesting". Our efforts have made an excellent record of a point in time, as vegetation gradually colonises and develops, while the Pennyroyal find was a really big 'squeak' for VC5!

Sunday at East Quantoxhead had a dreadful weather start, so plans were changed to shorter walks, with just two parties. Half headed for the cliff path (here running along the famous ammonite-laden stripy cliffs of Lias limestone and coloured clays). Again the drought had decimated much of the vegetation, but interest was still found. Sheila Wynn commented on the good opportunity to compare the

Oxtongues – Bristly Oxtongue (*Helminthotheca echioides*), a common weed round here, and the more elegant Hawkweed Oxtongue (*Picris hieracioides*) and she also helped name the rayed form of Chalk Knapweed (*Centaurea debeauxii* ssp. *thuilleri*). A small forest of Grass Vetchling (*Lathyrus nissolia*) was found, slightly easier to spot when in pod, and Sue Cooper was very pleased with Strawberry Clover (*Trifolium fragiferum*), still in flower, a 'special little plant' which was a first for her.

The second party had the privilege of walking the gardens of Court House, historic seat of the Luttrell family. Wild plants had to compete with the 17th century carved pew ends in the church and the gardens themselves. Amazingly early rain had stopped and the sight-seeing element meant progress was slow, but we did see both Stone Parsley and Corn Parsley again, which interested Barbara Lewis and Nicky Wesson who joined us today, and we saw the dainty Dwarf Mallow (*Malva neglecta*) in full flower in the yard of the tile-roofed cattle hovels near one of the famous East Quantoxhead Black Poplars.

After an extended morning there was a very cheerful meeting up for cakes at the Chantry tearooms in Kilve - the leaders extremely relieved that weather had not ruined the weekend and everyone delighted by good finds in spite of difficulties! In fact David Albon and Steve Little report being so inspired by the meeting that they started filling in record cards in the streets of Cheltenham, with fascinating results!

RO FITZGERALD

ONE DAY MEETINGS 2018

BANNERDOWN, BOX COMMON AND BROWN'S FOLLY, SOMERSET 26th JUNE

On a blistering hot day we met at Batheaston, near Bath, and then visited three more Bs – Bannerdown, Box Commons and Brown's Folly, all on Oolitic Limestone. All three sites are battling with the spread of scrub on to the grassland. At Bannerdown cattle grazing is an effective control. Box Common is also an amenity area but not practical to graze so hand cutting is used. Brown's Folly was, until recently, grazed by sheep but problems with dogs have stopped that and there is now considerable invasion of scrub, particularly Turkey Oak (*Quercus cerris*).

Bannerdown is on the southern edge of the Cotswolds. We were joined by Rob Kendall, Secretary of the Batheaston Freeholders Association (Guardians of the Batheaston Common Lands since 1719). He told us about the management of the site by the Commoners who have the right to graze animals. There was some discussion about the optimum time for cutting hay and bringing cattle in later. We walked through the hay meadows abounding with Marbled White and Meadow Brown butterflies. There was plenty of Yellow Rattle (*Rhinanthus minor*), Common Spotted-orchids (*Dactylorhiza fuchsii*), Pyramidal Orchids (*Anacamptis pyramidalis*) and Black Knapweed (*Centaurea nigra*). We enjoyed the spiraling involucre of Woolly Thistle (*Cirsium eriophorum*).

But it's the steep rocky butterfly bank that is special. Horseshoe Vetch (*Hippocrepis comosa*) had been in flower a fortnight earlier but now it was much harder to find the crimped pods. Still out were Common Rockrose (*Helianthemum nummularium*), Yellow-wort (*Blackstonia perfoliata*), Squinancywort (*Asperula cynanchica*), Hoary Plantain (*Plantago media*), Fairy Flax (*Linum catharticum*), Wild Thyme (*Thymus polytrichus*), Wild Marjoram (*Origanum vulgare*) and other limestone-loving plants

Back at Batheaston we had lunch in a very pleasant garden, sitting on a low wall, in SHADE. Across and up the Bybrook Valley, at Box Hill Commons there was more discussion about management and timing, what to cut and what to leave. The plants here were very similar. We were shown a superb old Crab Apple (*Malus sylvestris*) which was like a tent. Nearby stone mines are an S.S.S.I. for the bats and part of the Commons comes within the S.S.S.I. Impact Risk Zone.

Brown's Folly is an Avon Wildlife Trust reserve and an S.S.S.I. It has extensive remains of Bath stone quarries, which provide a variety of habitats, including woodland and grassland. The old mines are used by Greater Horseshoe Bats. Our visit was particularly to find a Helleborine

(*Epipactis* sp.) seen a fortnight earlier but not yet flowering. Now there was a floppy bent flower stalk but as it was not yet fully in flower we could still not confirm its identity. I thought it was floppy because of the drought and intense heat of the afternoon but apparently Helleborines do that. We found two more plants up a rocky exposure but still at the same stage.

Other plants seen were Ploughman's-spikenard (*Inula conyzae*), Water Figwort (*Scrophularia auriculata*), and Common Valerian (*Valeriana officinalis*).

Many thanks to Pauline Wilson for leading a very good day.

SARAH BEETHAM

NEW BUCKENHAM COMMON, NORFOLK 7th JULY

The summer of 2018 turned out to be one of the longest and hottest on record and the fields and roadside margins were merely sheets of the palest brown with just the odd glint of colour from a struggling wild flower. Seven of us met up on another hot and sunny day not expecting to see much plant-wise but expecting to have a good social lunch with friends when the heat drove us inside. Although we were on the Common for just a few hours we were pleasantly surprised by the plants that we did find. The first was at the edge of the car-park on the roadside kerb, a white-flowered Mullein that keyed out to be Nettle-leaved Mullein (*Verbascum chaixii* var. *album*), worthy of a picture or three. The whole area was drowned by a sea of dried out brown grasses including False Oat-grass (*Arrhenatherum elatius*) and Yorkshire Fog (*Holcus lanatus*) but, even so, they still looked pretty in the sunshine, gently swaying. Little dots of purple showed through as Hedgerow Cranesbill (*Geranium pyrenaicum*), which put on a show this year, and pale blue bells of Harebell (*Campanula rotundifolia*)

were close by. What did surprise us all was a sheet of low-growing Tubular Water-dropwort (*Oenanthe fistulosa*) in a low depression, numbering hundreds of plants

Photo: Anne Kell



Nettle-leaved Mullein

displaying beautiful seed-heads amongst the going-over flowers. A bank of rushes stood in our way and it turned out to be a hybrid swarm of Hard and Soft Rushes (*Juncus inflexus* x *J. effusus* = *J. x diffusus*).

A small stream runs through the Common and it was still wet below us as we crossed the wooden bridge to see a Water-plantain. Something about it didn't seem quite right so I risked life and limb to stretch out to grasp some of it, whilst I could feel the thoughts of those above me hoping that I would fall in. True! But I survived and looking at the books we determined it to be the hybrid

between Water-plantain (*Alisma plantago-aquatica*) and Narrow-leaved Water-plantain (*A. lanceolatum*) making it *A. x rhicnocarpum*; it had the cuneate leaves of the latter with the blunt inner petals of the former and, in the developing fruits, the style arose from the middle of them (below the middle in the former and above the middle in the latter). By now our brains were becoming addled with all of this new information and the increasing heat so we made a hasty retreat to the pub for a very enjoyable lunch.

STEPHEN CLARKSON

CHIPPENHAM FEN, CAMBRIDGESHIRE 13th JULY

Chippenham Fen consists of a natural depression separate from other fens in the Cambridge area. The peat is still there (up to 2m thick) and is separated from the underlying chalk by a layer of clay. Chalk streams well up into the depression, the water then being retained by the relatively impermeable clay. Attempts were made to drain it. In 1803 drains and sluices succeeded in lowering the water level some 1.5m. This was repeated again in 1943, oddly in view of the war effort. There was a largely ineffectual water mill in the late 18th century. All of this creates that uncommon habitat, a calcareous fen, and accounts for its rich biodiversity.

Thus it was on 13th July, Alan Leslie who knows the fen intimately, gathered 19 of us together and handed out a species list of 48 taxa, including 12 hybrids (of which four

were willows), explaining that his purpose on these meetings was to show people as much as possible. Even the most hardened Parnassians amongst us knew we were in for a treat. Over the next six hours Alan did precisely that for all 48 and more, after the customary warnings about horse flies and Asian water buffalo, which have been grazing the fen for the past 17 years to keep down the more rank vegetation.

Carex x fulva was demonstrated along with its parents, Long-stalked Yellow-sedge (*C. lepidocarpa*) and Tawny Sedge (*C. hostiana*). Other sedges included Distant Sedge (*C. distans*), Tufted Sedge (*C. elata*), Flea Sedge (*C. pulcaris*), Slender Sedge (*C. lasiocarpa*) and Thin-spiked Wood-sedge (*C. strigosa*). Alan had had the more unusual

willows confirmed by Irina Belyaeva, the Russian willow expert and current BSBI *Salix* referee. Thus we were treated to *Salix x puberula*, *S. x latifolia*, *S. x multinervis*, and *S. caprea x S. cinerea* ssp. *oleifolia*. Most of the parents, including the rather unexpected *S. myrsinifolia*, were also on site and, where they were not, Alan provided specimens for comparison.

Other highlights included a clump of Marsh Fern (*Thelypteris palustris*), growing deep in a damp alder wood, Perfoliate Honeysuckle (*Lonicera caprifolium*), Least Bur-reed (*Sparganium natans*), in flower as well as in its usual rather anonymous submerged state, and, of course, Cambridge Milk-parsley (*Selinum carvifolia*) for which the site is renowned. Alan made a convincing case for Raspberry (*Rubus idaeus*) x Dewberry (*R. caesius*), a plant with characters from both parents.

Saved almost until last was the account of Alan's determination of Lesser Water-parsnip (*Berula erecta*) x Fool's-water-cress (*Helosciadium* (previously *Apium*) *nodiflorum*) and named by him x *Beruladium procurrens*. First spotted by Max Walters in 1980, various explanations over the years were offered for this unusually straggly plant. Alan, unconvinced by these, collaborated with John Bailey at Leicester who happened to have a PhD student, Stuart Desjardins, at a loose end. Material was sent to them and the identity of this unusual intergeneric hybrid was determined using sequence data from chloroplast and nuclear markers to identify the maternal and paternal parents



Photo: Ken Southall

respectively. For a full account, including the tell tale morphological features, consult Desjardins D, Leslie AC, Stace CA, Schwarzacher T and Bailey JP (2015). "Intergeneric hybridisation between *Berula erecta* and *Helosciadium nodiflorum* (Apiaceae)". *Taxon* 64:784-794. A botanical detective mystery solved. A subsequent site in East Anglia has been discovered, with perhaps more to come with more widespread awareness.

In addition to these treats there was the full suite of bog plants you would expect. Whilst some, such as Marsh Helleborine (*Epipactis palustris*), had withered after only two weeks in flower, others such as Marsh Fragrant-orchid (*Gymnadenia densiflora*) and Bog Pimpernel (*Anagallis tenella*) were in prime condition.

Despite the heat, Alan kept our concentration with his informative expositions which comprised a botanical tour-de-force.

RICHARD ROBINSON

PARSONAGE MOOR & DRY SANDFORD PIT, OXFORDSHIRE 24th JULY

“Burdock to Burdock” or “Lunch - Roast Beef, Parsnip and Carrot, flavoured with Basil”

Another hot morning when thirteen of us met Roger Heath-Brown at The Merry Miller. Our first find, the Roast Beef plant. Roger showed us the fruit of Stinking Iris (*Iris foetidissima*) which smelled of roast beef. It was decided to visit Parsonage Moor in the morning. A show of red poppies (*Papaver rhoeas*) greeted us at the corner of the pub car park. On the path to the reserve there were two small Geranium plants followed by a large Burdock. The latter gave a chance to check the correct identification. Roger showed us the hollow stem of a basal leaf and pointed out the shape of the flower and the racemose arrangement of the heads – Lesser Burdock (*Arctium minus*).

Past a few well known plants and we stopped at a Giant Fescue (*Schedonorus giganteus*) with its purple tinged pointed auricles. Now we were at the gate into the reserve. Parsonage Moor Reserve is a calcareous fen, part of the Cothill Fen SSSI. Close by the gate was a thrush's anvil, a stone surrounded by broken snail shells. The sight of the board walk and then a few tentative steps showed Wellington boots were not necessary for the drying Fen. Whilst the weather was great for dry feet, many plants were past flowering

or dried up. Near the board walk were two grasses - Heath False-brome (*Brachypodium pinnatum*) and False Brome (*Brachypodium sylvaticum*) which gave us a chance to compare the two, *B. sylvaticum* having longer awns. Greater Bird's-foot-trefoil (*Lotus pedunculatus*), with a hollow stem, appeared farther on into the fen. Even though it was drier than usual we saw Agrimony (*Agrimonia eupatoria*), Fen Rush (*Juncus subnodulosus*), Long-stalked Yellow-sedge (*Carex lepidocarpa*), Hoary Willowherb (*Epilobium parviflorum*), Marsh Lousewort (*Pedicularis palustris*) and Parsley Water-dropwort (*Oenanthe lachenalii*). Near a stream were a few more plants of interest but not many in flower. We saw leaves of Butterwort (*Pinguicula vulgaris*), Bog Pimpernel (*Anagallis tenella*), then Grass-of-Parnassus (*Parnassia palustris*) in bud and a flowering Marsh Valerian (*Valeriana dioica*). Our spirits rose at Marsh Fragrant-orchid (*Gymnadenia densiflora*). Dried specimens of Black Bog-rush (*Schoenus nigricans*), Marsh Arrowgrass (*Triglochin palustris*), Narrow-leaved Marsh-orchid (*Dactylorhiza traunsteinerioides*) and Meadow Thistle (*Cirsium dissectum*) showed what had been. Butterflies and damselflies fluttered around. Lunch

was calling as we left the fen. After all that sun and heat time to cool down. Some of us took to the pub, while the hardier members found shade in a lane close to the reserve car park.

After lunch we went to Dry Sandford Pit. More water here but still possible to tiptoe on the tussocks. An unusual geological sight - the rocks here form a cliff with alternating layers, horizontal strata of sandstone and limestone, the latter full of fossils. Solitary bees and wasps burrow into the soft sandy layers and large holes in the limestone look perfect shelter for birds and other creatures. But, back to the plants. Wild Parsnip (*Pastinaca sativa*) was common. Fragrant (*Gymnadenia* sp.) and Common Spotted-orchids (*Dactylorhiza fuchsii*) came into view. Lots of dead remains, so there was delight at the sight of a flowering Marsh Helleborine (*Epipactis palustris*). Other finds included Figwort (*Scrophularia nodosa*), Wild Basil (*Clinopodium vulgare*), Hairy St John's-wort (*Hypericum hirsutum*), the odd Ploughman's-spikenard (*Inula conyzae*) and Common Fleabane (*Pulicaria dysenterica*). Before leaving the water we followed the Stace key, deliberating over a possible Variegated Horsetail (*Equisetum variegatum*). On dry land there were shining dead-heads of Chalk Knapweed (*Centaurea debeauxii*). Other notable finds were White Water-lily (*Nymphaea alba*), Black Mullein (*Verbascum nigrum*), and slim, green and only a metre tall, Woolly Thistle (*Cirsium eriophorum*), a soldier on parade. Also Wild Carrot (*Daucus carota*) with its central dark purple flower. Finally Burdock again. This time Greater Burdock (*Arctium*

lappa). A big plant, solid stems to the basal leaves and the flower heads forming flattened tops, that is, the capitulae of the main branches were in corymbose clusters - good to compare Greater Burdock (*A. lappa*) and Lesser Burdock (*A. minus*) in the flesh.

Thanks for a fascinating day.

SUE RILEY

Photo: Roger Heath-Brown



Woolly Thistle

AYSGARTH, WENSLEYDALE 12th JULY

Julie Clarke met us at Ballowfields Quarry, a National Nature Reserve which has a good selection of the typical species that grow on the metalliferous spoil from lead-mining. Of these we saw Thrift (*Armeria maritima*), Spring Sandwort (*Minuartia verna*), Fairy Flax (*Linum catharticum*) and Alpine Penny-cress (*Noccaea caerulea*), although we had to search very hard for the latter and had almost given up when Peter Jepson's sharp eyes spotted several small plants.

Near the banks of the stream where the vegetation was less dried up, we found Greater Burnet-saxifrage (*Pimpinella major*), Grass-of-Parnassus (*Parnassia palustris*) just

coming into flower, a single spike of Moonwort (*Botrychium lunaria*), again spotted by Peter as he bent down to look at the Grass-of-Parnassus buds, and some Lesser Clubmoss (*Selaginella selaginoides*).

Julie removed the fruits from the seed-head of Water Avens (*Geum rivale*) to reveal its very hairy receptacle. It shares this property with Wood Avens or Herb-Bennet (*G. urbanum*) in contrast to Large-leaved Avens (*G. macrophyllum*) which has a receptacle with sparse short hairs.

We compared the leaves and utricles of Carnation and Glaucous sedges (*Carex panicea* and *C. flacca*) which superficially look rather similar.



Round-leaved
St. John's-wort

Photo: Sheila Wynn

Carnation Sedge has leaves which are glaucous on both sides and taper to a trigonous (triangular) point whereas the leaves of Glaucous Sedge are only glaucous underneath and taper to a fine point. The fruiting spikes of Carnation Sedge have a few plump utricles, arranged untidily around the stem compared with those of Glaucous Sedge which has densely packed spikes of neat, ovoid utricles.

After lunch under the shade of a tree, we drove the few miles to Seata Quarry, a disused limestone quarry where several non-native species have become well-established. The most obvious was a pink-flowered Sedum which was forming carpets over the limestone slabs on the quarry floor. This has been identified as a pink form of White Stonecrop (*Sedum album*) although its exact identity has still to be confirmed.

Growing on the walls of the quarry were three plants native to the Pyrenees that have been known at this site for almost a hundred years. One was Round-leaved St John's-wort (*Hypericum nummularium*) flowering nicely in a couple of shady corners and another was Spiky Fescue (*Festuca gautieri*). Although this was very shrivelled, its sharp-pointed leaves were still very much in evidence! The third was Fairy Foxglove (*Erinus alpinus*) which had also finished flowering.

As the day was becoming rather hot, we made our way back to the cars, stopping to sample the Red-fruited Gooseberries (*Ribes uva-crispa* 'Hinnonmaki Rod') growing beside the road.

Thanks to Julie for organising such an enjoyable day.

SHEILA WYNN

COALHOUSE FORT, ESSEX 8th SEPTEMBER

The bad news was that Steve Clarkson, our intended leader, was too ill to attend. I shall not furnish you with any details lest you cry out "TMI!" But even worse news was that the café at Coalhouse Fort was closed all day! Thankfully, Sue Grayston stepped person-fully into the breach, at least in the first regard, and being the Tilbury Girl she is, did a wonderful job. She gave the best H&S briefing of all time (about five seconds brief) and the 13 of us were off.

With commendable honesty she told

us she had yet to find the Annual Beard-grass (*Polypogon monspeliensis*) and if anyone did find it, they should let her know. No one did, but this was decidedly not the pattern of the day. Our first site just beyond the fort was an area of drained marshland, bounded on one side by a small brackish river. We easily found Sea Club-rush (*Bolboschoenus maritimus*), Sea Couch (*Elytrigia atherica*), Salsify (*Tragopogon porrifolius*), Fennel Pondweed (*Potamogeton pectinatus*), Sea Barley (*Hordeum marinum*), determined from the rest



Photo: David Caals

of the genus by the length of its three glumes, and Sea Rush (*Juncus maritimus*), which I am told is in decline.

This was all en route to our first target species, Saltmarsh Goosefoot (*Chenopodium chenopodioides*). A good deal of TLC goes into its survival here, with the surrounding area given a good scrape each year to allow the seeds suitable ground for germination. It is closely related to Red Goosefoot (*C. rubrum*) but is clearly much shorter and more prostrate. Any Doubting Thomas could also examine the sepals round the fruit to see they are fused near the tip, rather than to just half-way.

There now follows a brief intermission. One of our company was an entomologist, armed with a sweep net. He was particularly

Saltmarsh Goosefoot

interested in sawflies, of which there are apparently 550 odd, identified by differing antennae segments and the veins in the wings, using online keys in the absence of anything published since the 1950s. But two creatures he did find to fascinate us were a beautiful Four-spot Orb Spider (*Araneus quadratus*) and the caterpillar of The Starwort moth (*Cucullia asteris*). This is green with yellow stripes, becoming pink as it matures. But to return to the world of flowers, and as its species name says, it feeds almost exclusively on Sea Aster (*Aster tripolium*). This we found in its rayed form, far more abundantly than in its unrayed form, and finally as the ssp. *confusa*, strangely absent from Stace, where it grows a couple of rays and then gives up.

We then headed a short distance to the coast for our second target species, Slender Hare's-ear (*Bupleurum tenuissimum*). We rejoiced to see there was one right at the start of the path and gathered round it but as we got our eyes in, we saw it was in flower all along the pathside, so elbows could be retracted. Thereafter we found Golden-samphire (*Inula crithmoides*), Sea Arrowgrass (*Triglochin maritimum*) and a Glasswort. Where is a Salicorniophile when you need one? But having pulled it out with ease (allegedly to prove it wasn't the tenacious Perennial Glasswort, (*Sarcocornia perennis*), it was with perseverance keyed out as Purple Glasswort (*Salicornia ramosissima*).

After the café-less lunch we went to the local churchyard. There were surprisingly no Autumn Lady's-

tresses (*Spiranthes spiralis*) - after all, the lady in question is Our Lady - but there were several Calamint plants. Were they the uncommon (in Essex) Common Calamint (*Clinopodium ascendens*) or the common (ditto) Lesser Calamint (*C. calamintha*)? After much deliberation and study of the lower teeth of the calyx, it was settled as the former.

The final site of the day was Tilbury Fort, which we reached by a dispiriting drive along the coast road, that turned out to be Fly Tippers' Route 66. Our hope was to find Bastard Cabbage (*Rapistrum rugosum*) and we did, albeit in seed. Also present were Greek Dock

(*Rumex cristatus*), Sea Clover (*Trifolium squamosum*) and, finally, Dittander (*Lepidium latifolium*) in what might be, rather than its *locus classicus*, its *locus horribilissimus*: the photo here gives you some idea of the concrete slabs and broken glass it had to struggle through.

We thanked Sue for doing a splendid job at very short notice. Her last words to me, her brow furrowed with the strain of an entire day at everyone's botanical beck and call, were (in reference to Steve), "I'll kill 'im".

DAVID CAALS



Photo: David Caals

NORWICH, NORFOLK

27th OCTOBER

AUTUMN ONE DAY HUNT

'Twas not a glorious day weather-wise but, as usual, we made the best of it. Some of our party got lost at the start and couldn't find us in front of the old Victorian red-brick Prison, which was to be our final resting place for the day with welcoming mugs of hot tea served in the Prison cafe. But that didn't stop us exploring the car park and hill-top, covered in flowering Gorse (*Ulex europaeus*), with views over the city below. Looking at the map you'd be surprised to see this vast area of woodland and open space in the middle of an urban landscape. The ten of us searched and searched and accrued a fair total considering the wayward weather that we had this year. There were a few surprises, such as Bramble (*Rubus* agg.) still in flower, and many grasses around such as Wall Barley (*Hordeum murinum*) and Cock's-foot (*Dactylis glomerata*) but to find Smooth Meadow-grass (*Poa pratensis*) was a bit of a shock. Ivy (*Hedera helix*) was still producing some flower with its sugar-rich secretions vital for some insects. Some pleasing splashes of colour from the yellow flowers of Tansy (*Tanacetum vulgare*) through the purples of Ivy-leaved Toadflax (*Cymbalaria muralis*) and Hedgerow Crane's-bill (*Geranium pyrenaicum*) to the white of the eponymous Dead-nettle (*Lamium album*). There wasn't much to find in the woodland but our eyes were met by a small patch of shocking pink. Surely this had to be a plastic flower thrown from a car but it

turned out to be real, and unfortunately not countable for the day's tally as it isn't a numbered species in Stace; it was a beautiful *Nerine bowdenii*.

Walking a footpath adjoining a nearby estate afforded us Black Nightshade (*Solanum nigrum*), Rosebay Willowherb (*Chamaenerion angustifolium*) (note the genus name change from *Chamerion*!), Fennel (*Foeniculum vulgare*), Purple Toadflax (*Linaria purpurea*) and Green Alkanet (*Pentaglottis sempervirens*). Our major new find for the day was a plant which a few of us have come across on several occasions for the first time this year. There's a subtle look to the shape of the flower-head and a fairly distinctive edging and colouration to its phyllaries all combining to be Hybrid Knapweed (*Centaurea* x *moncktonii*). A good day with some great company and some excellent plants. And now for that mug of tea.....

STEPHEN CLARKSON



Photo: Dennis Kell

BOOK REVIEWS

David Cabot & Roger Goodwillie, *The Burren*. 2018. Collins New Naturalist Library. Paperback £27.99. ISBN 978-0-00-818379-0

Probably most of us have a New Naturalist among our treasured books, and most of us are aware of the Burren as an ultimate botanical Mecca, so the combination of wonderful place with a wonderful book series naturally raised expectations. Although the area and its flora have an unusually high profile, with phrases like 'the finest karst limestone in Europe' and 'astonishing alpine plants at sea level' freely applied, somehow there has never been a definitive book. The *Flora of Connemara and the Burren* by the great Irish botanists David Webb and Maura Scannell came out in 1983, and has remained a valued *vade mecum*, but otherwise the

literature is mostly for the tourist trail, or secreted in scientific journals. This must have been an awesome undertaking for the authors. I know and respect both of them, but hadn't dared hope for something so resoundingly wonderful!

It is in the great New Naturalist tradition of describing an entire ecosystem, its topography, climate and history, from the far reaches of geological time to the pressures of the Anthropocene. Illustrations of animals for instance range from fossils in the limestone, to a woolly mammoth, to the llamas currently farmed near Fanore! Botany is of course prominently covered, as are

Limestone Pavement of The Burren



Photo: Anne Kell

most branches of natural history. There's a fascinating look at early botanists, and figures such as Patrick O'Kelly of *Dactylorhiza okellyi* fame, notorious for selling thousands of rare *Polypodium* forms to the greedy collectors of the Victorian Fern Craze. Past and present are examined and there's an intelligent look at the future of this precious place.

For me this is a 'book of a lifetime' and I know that I'll read parts again and again. It's beautifully produced of course, with evocative and informative illustrations. A hardback is available and this, more affordable, paperback. It should be on every wish list.

RO FITZGERALD

C.Metherell & F.J.Rumsey, *Eyebrights (Euphrasia) of the UK and Ireland*, 2018. Paperback £17.50. BSBI Handbook No. 18. ISBN 978-0-90-115853-6

Many of us dodge trying to record Eyebrights. They take effort to identify, and have a nerve-wracking habit of producing frequent hybrids. However they occur in good botanical habitats, so are important to any county flora list. We need to know them better (and find them less terrifying). Because of ongoing taxonomic research on hybrids, mapping Eyebrights is still a work in progress, but this book is bound to increase recording efforts for two reasons.

Firstly, it gives botanists at all levels of experience **somewhere to start**. Species descriptions are clear, enhanced by excellent line drawings and photographs, but crucially the introduction has a brilliant section on 'characters important for identification'. Size, stems, branches, leaves, indumentum (hairs and glands), the flowering node (very important!), calyx, corolla and capsules are explained and illustrated. I've always been an Eyebright coward, but believe me, I now can't wait to find one, peer at each aspect, and finally see what it

all means! There may not be an instant answer – hybrids specially will take time and experience – but now there is a clear method of approach, with a reassuring section on how to collect specimens to examine.

Secondly, this is a lucky time. One of the authors, Chris Metherell (members will recall his popular Burren meeting in 2017) is currently the BSBI Referee for *Euphrasia*, so anyone stuck on an identification can send specimens to him. He also spends generous time leading workshops around the UK. Help and information really can come straight from the horse's mouth!

I would have liked maps, to give an idea of what's likely in my home county or region, but known distributions are given in the species accounts. Possibly current information is considered to be too fluid to map until records are much expanded, and this is a very small gripe in terms of this inspiring and essential book!

RO FITZGERALD &
GRAHAM LAVENDER