PRESIDENT'S LETTER

Last summer I had great pleasure from walking along the beaches of Dorset. One of the most intriguing features is the 29 kilometre long pebble strand of Chesil Beach with its pebbles gradually reducing in size from east to west. I was interested to find a rich maritime flora along the inner edge of the beach and spent several days enjoying this flora. It was at its best in July and this would be a good time for a visit if you are interested in the botany. There were huge areas of Sea Kale (*Crambe maritima*) often mixed with Yellow Horned-poppy (*Glaucium flavum*) with its long curved fruit capsules. The Sea Campion (*Silene uniflora*) forms large mats ornamented by its white flowers. Two of the most attractive plants of the strands are Common Mallow (*Malva sylvestris*) and Sea Bindweed (*Calystegia soldanella*) with its attractive striped pink flowers. On earlier visits the attractive displays of Thrift or Sea Pink (*Armeria maritima*) were at their very best last year. These are all common species, but all of them play an important ecological role in the stabilisation of our coast lines.

My only regret on these walks was the unacceptable amount of plastic littering the coast despite all the efforts of local citizens to keep it clean. I am heartened by the efforts of our local organisation 'Turn Lyme Green' to have our small town declared as a plastic-free area. I am sure on your wild flower trips you too come across plastic and I urge us all to be active in the growing community and political efforts to reduce the use of plastic worldwide.

GHILLEAN PRANCE

EDITORIAL

What a winter! As I write we are snowed in yet again with the mini 'Beast from the East'. Although I have had one of my lowest Winter Hunt counts this year and the two publicised Spring One Day Hunts had to be cancelled, it never ceases to amaze me how the plants still manage to pull through. After the snows melted in the first week of March I managed to find 34 different species poking through and in flower. However, some of my stalwarts for the Spring Hunt, such as Cherry Plum (*Prunus cerasifera*) and Cow Parsley (*Anthriscus sylvestris*) were still in tight bud.

So, hopefully, the reports of last year's field meetings will bring on thoughts of summer and brighter times to come. As a Society we

Copy date for Summer Magazine
1st May, 2018

certainly had a productive year, with a wide diversity of sites visited. This year's programme is equally as adventurous and I hope you have pencilled the dates into your diaries, although several of the main meetings are already fully subscribed. Please check with the organiser and register your interest as soon as possible.

Two particular species take pride of place in this magazine. Tim Harrison has written an article about the Violet Helleborine (*Epipactis purpurata*), one of our more unusual orchids, while Peter Brinkley has written an amusing piece about his quest to find Meadow Saffron (*Colchicum autumnale*) and some of the problems over the confusion arising from our use of common names.

Two of our members, Ted Pratt and Heather Silk, have written books about the flora of their local areas, both of which are reviewed in the magazine. Heather has also written an article relating to her book, heralding the botanical richness of the Wye National Nature Reserve. Certainly an area that warrants a visit.

Finally, it is with sadness that I have to report the death of Lorna Holland, who, with her husband, Derek, managed the Spring Week Hunt for the last 15 years. Geoffrey Kitchener has written a lovely obituary, celebrating her life and contribution to the Society. Our condolences go to Derek.

ANNE KELL

Subscriptions

Subscriptions were due at the beginning of the year. Unless you have renewed your subscription, this will the last magazine you receive.

NOTICES

Additional One Day Meeting

Thursday 12th July. Aysgarth, Wensleydale. Leader: Julie Clarke
Meet at 10:30 at the car park at Ballowfields Nature Reserve between Carperby and Askrigg (SD986898). The morning will be spent in this area and then we will drive to Seata Quarry for the afternoon. We hope to see Round-leaved St. John's-wort (*Hypericum nummularium*) and other limestone plants. To book, contact Julie Clarke: colin.julie9@gmail.com or phone 01539 563504

Dorset Flora Group
The Dorset Flora Group was formed in 2007 to encourage residents and visitors to discover the flower-rich areas of the county and to learn more about their wild flowers. For the last eight years it has organised a wild flower week, this year from 26th May – 3rd June, so residents and visitors can enjoy some of the beautiful wild flowers for which Dorset is famous. The programme mostly consists of a series of guided walks, each one led by a local naturalist, who will help beginners and others to appreciate

the plants and landscape of the county. Unless indicated, the walks will last about two hours. In some cases an afternoon walk is planned not far from a morning walk, to make it easy to join in both. For further details of the programme please go to their website (www.derc.org.uk/local/dfg.htm) or contact Ted Pratt (edwardpratt39@gmail.com).

Field Botanist's Record Book
The Record Books (sometimes referred to as 'Diaries') are available from the membership secretary, Sue Poyser, at a cost of £7.50 (including p&p). Currently they allow for two year's worth of recording and list 1000 of the most common and recognisable plant species in the UK. The species are listed alphabetically by Latin name, with an index to English names at the back. There is space on the facing page to write in additional species found that may not be included in the list.

For those who prefer to keep a digital record of their plant finds, there is a new version of the diary as a single Excel spreadsheet available to download from the bottom of the main page of the website. Peter Llewellyn has helpfully provided some instructions to accompany the download and an explanation of how one might use the spreadsheet to record their finds. If the type face appears a little small on the screen this can easily be enlarged once the spreadsheet has been downloaded.

Most Branch Secretaries will be happy to receive an electronic version of your Record Book, removing the need to print it out. However, please do check with them first that they are willing and able to receive your records in this format.

T-shirt
Nichola Hawkins has produced a simplified version of our logo and had it printed onto a T-shirt (see illustration). Once set up this will be

Dark Blue T-shirt

available from the manufacturer's website for a limited period of 16 weeks. The link to their website is bit.ly/2GNNwGZ. This is also given on our website.

I think you'll agree she has done an excellent job, so if you fancy a wild flower T-shirt you will have to act quickly. The cost will be £8.99 + p & p

Correction
In the yearbook Lizzie Maddison's e-mail has been printed incorrectly. It should read:
e.maddison@btinternet.com

A PLANT PORTRAIT: VIOLET HELLEBORINE (*EPIPACTIS PURPURATA*)

This article about Violet Helleborine (*Epipactis purpurata*) has been written largely on the basis of my own personal observations, but Dennis Kell (Branch Y) has been kind enough to share with me a copy of his Open University thesis on Violet Helleborine at Wolves Wood in southern Suffolk. His scientific observations reassuringly support my empirical ones.

In the UK, its *locus classicus* is the hills of south-east England (South Downs, North Downs, Weald and Chilterns) but the plant is also recorded from Suffolk, northern Northamptonshire, eastern Herefordshire, western Worcestershire and at scattered localities in Wiltshire and Somerset. By far the commonest habitat is on sloping ground, whether natural or man-made such as a lane bank or a ditch boundary. As with most orchids, there is almost certainly a mycorrhizal component to where it grows but published research is sadly lacking on the exact nature of this association.

Violet Helleborine is a late flowerer, typically blooming in late July through August and sometimes early September if the season is good (2016 was a good year in the Chilterns, for example). On close inspection, it is easy to distinguish flowering plants from both the Narrow-lipped and Broad-leaved Helleborines (*E. leptochila* and *E. helleborine* respectively). Flower spikes usually grow in multiples, sometimes up to 15 per plant and between 20 and 50 cm high (exceptionally, to 75 cm). The flowers are all on one side of the spike and those in the lower part of the flower spike often have a leaf-like bract at their base, giving the whole spike a crowded, leafy appearance. The sepals and upper petals are pale green and spreading, whilst the lip is pale creamy white with a pink boss. Pollination is mainly by wasps and hoverflies.

Photo: Dennis Kell

It is often hard to spot the greyish flower spikes because they blend into the background and the plant is probably at its most prominent after the flowers have gone over and the seed pods are swelling. The green pods are held downwards and

Photo: Tim Harrison

protrude slightly outwards from the main stem, tipped by the brown remnants of the sepals. Seed-set is usually good, but germination seems to be very poor.

Vegetatively, it is distinguished at once by the multiple stems which are tinged deep greenish-purple (especially towards the base) and give rise to the name of the plant. The leaves are narrower than those of the Narrow-lipped and Broad-Leaved Helleborines, but this isn't a reliable distinguishing feature since those of the Narrow-lipped Helleborine can be confusingly similar, especially as this plant is also found in the same habitat and can also be violet-tinged. The rootstock is large, fleshy and much-branched, but please **do not** dig one up to find out!

Violet Helleborine grows on a variety of soils. I have seen it growing under Beech, on both chalk and clay-with-flint, and on the sandy banks of a green lane under Oak, Hornbeam or Hazel, which nearby support saxicoles such as Hawkweeds. The plants which Dennis has studied are growing on the banks of drainage ditches in a damp Hornbeam wood on boulder clay in a soil with pH between 6 and 7. (See the one-day meetings report on Wolves Wood - page 35) Its chief requirements are heavy shade, little or no competition

from other plants and a deep, organic -rich loam, moist but well-drained.

Plants are long-lived. There is a large patch on the bank of a country lane near Berkhamsted in Hertfordshire which I have known for 17 years. Recently it has started to spread into the adjacent lane and come up through 2 cm of tarmac, albeit rather badly laid. It has been suggested by Dennis that some plants may be over 100 years old. The plant is clearly an indicator of ancient and undisturbed habitats. Occasionally, an achlorophyllous variety will be found. The plant is a spectacular pinkish-purple with creamy-white flowers. Chlorophyll may be absent due to a viral infection, which causes a genetic mutation and the only colouring left is the anthocyanin, which normally gives the plant its deep violet coloration. The flowers never open and appear to be sterile. The colour is so striking that when I first saw the plant in the photo I thought it was a discarded dog-poo bag! This photo was taken in mid-July 2016 in beech woods in east Oxfordshire, but the plant did not re-appear in 2017. Maybe the condition is terminal?

Keep your eyes skinned on a sunny day in late July or early August when walking ancient green lanes in suitable habitats in the south of England and you may be lucky enough to spot Violet Helleborine. Any records should be checked against the BSBI on line atlas and let your Vice-county recorder know if it's a new locality. I always have a little thrill of excitement when I find a plant in a new locality.

TIM HARRISON

Photo: Tim Harrison

OUR FAVOURITE PLACES

"Where can I go to see plants?" We are often asked this question by newcomers to wild flowers. They are usually disappointed by the reply: "stroll round the lay-by or car park when you get out of the car or look in the gutter and the pavement cracks while waiting for the bus". Of course, the questioners were actually hoping for details of a pleasant walk in the countryside, with some attractive flowers they could look up in their field guide. But plants are everywhere, they don't care whether there's pretty scenery or rubbish, dog poo or nasty smells.

This sets the scene for our favourite places to botanise - derelict industrial sites. What interests us most is the excitement of never knowing what might turn up. This is where we learnt about Melilots *(Melilotus)*, Rockets *(Sisymbrium)* and, more recently, the intricacies of the various Fleabanes *(Conyza)*. Some sites are crossed by motorways and if you can ignore the graffiti, the dumped mattresses and the greasy puddles beneath the flyovers, they can be a rich source of sightings (even a county first!) as plants arrive there from distant places.

There is ample scope for additions to the Record Book too as remnants of plantings from around the buildings seed themselves. Be prepared for some keying practice with Cotoneasters *(Cotoneaster)* and Evening Primroses *(Oenothera)*. Some of the workers loved to feed the birds, so bird seed aliens may be present. Green Bristle-grass *(Setaria viridis)* and Canary-grass *(Phalaris canareiensis)* can be persistent. Other unusual species such as Common Fiddleneck *(Amsinckia micrantha)* and Loose Silky-bent *(Apera spica-venti)* mysteriously appear.

Eventually, but sometimes only after many years, these places are redeveloped and lost to the botanist. But by then the Buddleia has overgrown all the smaller plants and the willow and birch are turning the whole site into scrub. Time to move on……..

MARY AND CLAIRE SMITH

A SITE OF BOTANICAL INTEREST: WYE NATIONAL NATURE RESERVE

Wye National Nature Reserve in Kent has always been one of my favourite places to visit. It evokes childhood memories of watching the shadows of the clouds racing across the Wye Downs and the ever-changing light. The broad view from the top is stunning, stretching from Romney Marsh to the Weald and the Channel coast. It is even possible to see France on a clear day.

More than 85 million years ago this area of Kent was submerged under the sea and the chalk of the North Downs was created from the compressed remains of the billions of sea creatures. There are steep coombs (dry valleys) of which the Devil's Kneading Trough is the most spectacular. These were caused by a series of freezes and thaws towards the end of the last ice age which carved out the chalk. A fascinating feature of these coombs is the ridges, known as terracettes, probably created by sheep which were an important grazing component of chalk downland. Sheep, with the aid of rabbits, helped to reduce scrub and other competitive species; a task which is now undertaken by a herd of British White cattle, a traditional breed.

Wye NNR is 134 hectares and stretches for three kilometres along the scarp face of the North Downs. The shallow dry nutrient-poor chalky soil and warm south facing slopes are

excellent for calcicoles (species found only on calcium-rich soils).

A great attraction for the botanist is the changing tapestry of species from late winter to early autumn. Early in the season is a good time to appreciate the semi-parasitic Mistletoe (*Viscum album*), with its viscous berries. To age it, trace from the tip of the stem to the base and count the number of divisions. This equals its age. Hairy Violet (*Viola hirta*), with its blunt sepals, occurs early in March and April, soon followed by Primrose (*Primula vulgaris*) and Cowslip (*Primula veris*). Another name for Cowslip is St. Peter's Keys. St. Peter held the keys to the gates of heaven and when he discovered that someone held a duplicate set, he dropped his own keys in horror and a Cowslip sprang up! False Oxlip (*Primula* x *polyantha),* which is the hybrid between Primrose and Cowslip, is found at the foot of the Downs where both species grow together. Nearby is the fern Adder's Tongue (*Ophioglossum vulgatum).*

Salad Burnet

Photos: Heather Silk

Up to 19 orchid species are recorded on the NNR and several may be seen from the Nature Trail. (For details, see the last paragraph). Lady Orchid (*Orchis purpurea*) is now restricted to Kent and known as the Fair Maids of Kent. This is one of the best counties for Man Orchid (*Orchis anthropophora)* with its narrow "arms" and "legs" and there is a scattering of Bee Orchids (*Ophrys apifera)* with its rich velvety brown patterned labellum. This is usually a self-pollinating species yet appears to practice pseudo-copulation with its resemblance to a bee. Deep pink Pyramidal Orchids (*Anacamptis pyramidalis*) and the paler delicate scented Fragrant Orchids (*Gymnadenia conopsea*) soon follow. The *conopsea* part of the scientific name is derived from the Greek, mosquito-like, presumably because the long spur is like a mosquito's mouthparts.

The species growing on these well-drained warm slopes need to retain moisture and hairs help to reduce water loss, for example the hairs on the stem of the pale yellow Hairy St John's-wort (*Hypericum hirsutum*). Others, such as Salad Burnet (*Sanguisorba minor*), with its sharp cucumber flavoured leaves and mix of upper female flowers and lower male or bisexual flowers, have deep roots to obtain moisture. Some hug the ground in a rosette. A typical example is the Dwarf or Picnic Thistle (*Cirsium acaule*), appropriately named if you have ever inadvertently sat on one for a picnic.

There are many members of the Fabaceae, which overcome the lack of nutrients in the soil by means of the bacteria in the root nodules, which absorb nitrogen from the air and fix it in the plant roots. These include Horseshoe Vetch (*Hippocrepis comosa)*, with horseshoe-shaped seed pods, Common Bird's-foot-trefoil (*Lotus corniculatus*) and the deep, purplish-blue, scrambling Tufted Vetch (*Vicia cracca*).

Look at the ground near Eyebright (*Euphrasia* agg.)*,* Yellow Rattle (*Rhinanthus minor*) (aka Hay Rattle and Rattle Box - try shaking the inflated calyx) and, the later flowering, Red Bartsia (*Odontites vernus)* to note how these hemi-parasites obtain most of their nutrients from roots of grasses, hence weakening their growth.

July and August have fantastic pink and purple colours with wonderfully scented Marjoram (*Origanum vulgare)*, Thyme (*Thymus* spp.*)* and Wild Basil (*Clinopodium vulgare)*. These plants release aromatic oils as a cooling mechanism. The almond/musk scented Nodding Thistle(*Carduus nutans*) has drooping heads and swept back bracts. There are delicate blues and lilacs of Field Scabious (*Knautia arvensis*), Small Scabious (*Scabiosa columbaria)* and, the later flowering, Devil's-bit Scabious (*Succisa pratensis).* One of the last flowering species is the purple Autumn Gentian *(Gentianella amarella),* occasionally with four petals instead of five.

Botanists sometimes view grasses as challenging but the Quaking Grass

Devil's-bit Scabious

(*Briza media*) lives up to its name and is easy to identify. Another name is Doddering Dillies.

At the top of Wye NNR is the main car park (grid reference TR 079453). From here follow the 1.7 km circular Nature Trial downhill, pausing at the Millstone panoramic viewpoint at the top of the Devil's Kneading Trough. Continue along Denton Field at the bottom, then gradually start climbing to take in the woodland with Yew (*Taxus baccata*) and Whitebeam (*Sorbus aria*) and look for the 400 + year old Hawthorn (*Crataegus monogyna*). Note its prostrate branches which appear to be rooting again. Be aware that the trail is steep in places although there are some steps. The reserve may also be accessed from Wye Rail Station or by bus from Wye Church and this is approximately a 4 km walk to the Nature Trail. Finally, enjoy your visit to this wonderful NNR.

HEATHER SILK

RECORDING FOR ATLAS 2020: IRELAND

Thanks to a generous grant from the Wild Flower Society (WFS), in conjunction with a grant from National Parks and Wildlife Services (NPWS), fieldwork was undertaken over 40 days in the spring and summer of 2017. I split the main recording effort between Counties Kerry, Mayo and Westmeath and did a small amount of recording in Limerick and Roscommon. I also visited West Galway to see if I could quickly find any hybrid *Atriplex* (Orache) new to the Vice-county. I did! *Atriplex* x *taschereaui* (*A. glabriuscula* x *A. longipes*) was the result of my 20-minute hunt. I spent an additional one and a half days in Co. Sligo helping the Vice-county Recorder (VCR), Don Cotton, with some of the more difficult groups of plants. Some of the highlights of my recording in Ireland are summarised below – including two new species for Ireland and one that has only ever been recorded in one other place in the world! My thanks to BSBI Referees, who helped with identification and confirmation along the way.

South Kerry (H1) and North Kerry (H2)
Kerry was visited in June, followed by another visit in August. A total of 5,859 records were collected, and Clare Heardman (VCR for West Cork) joined me for one day to help with ID tips.

Some of the more interesting finds:
Lanceolate Spleenwort (*Asplenium obovatum*), a new hectad record for this protected species in the Republic of Ireland, was abundant on tombs in a graveyard. *Trichophorum* x *foersteri* (*T. cespitosum* x *T. germanicum*); a new county record was found on one site on a raised bog. Early Orache (*Atriplex praecox*); a new native species for Ireland, found on the shore of Valentia Island.

East Mayo (H26) and West Mayo (H27)
Mayo was visited on two occasions in September. A total of 3,712 records were collected. Eamonn Delaney joined me for one and a half days to learn about recording and for plant ID and Don Cotton joined me for an afternoon of recording.

Some of the more interesting finds:
Long-stalked Orache (*Atriplex longipes*); a new county record, from two hectads in W. Mayo.
Early Orache (*Atriplex praecox*); a new county record, from one hectad in W. Mayo. This was the third county this species was recorded from in Ireland during 2017 and, as noted above, there are no other records. It is almost sure to be overlooked in other suitable areas. *Atriplex* x *gustafssoniana* (*A. longipes* x *A. prostrata*); a new county record, from five hectads in W. Mayo. Cowberry (*Vaccinium vitis-idaea*); third hectad record for W. Mayo, first record since 1904. Beech Fern *(Phegopteris connectilis*) - sixth hectad record for W. Mayo, only post 2000 record. Broad-leaved Rush (*Juncus planifolius*) – new for W. Mayo, recorded from 2 hectads.

Westmeath (H23)
I visited Westmeath a number of times over the summer, normally for two or three days at any one spell. 6,335 records were collected.

Some of the more interesting finds:
Trichophorum x *foersteri* (*T. cespitosum* x *T. germanicum*) – new county record, found in six hectads.
Epilobium x *argillaceum* (*E. parviflorum* x *E. brunnescens*) – a new hybrid for Ireland, and only the second global record!
Common Cudweed *(Filago vulgaris*) – second hectad record for the county and first since 1962 Atlas.
Potamogeton x *angustifolius* (*P. lucens* x *P. gramineus*) recorded from 2 hectads, first county records since 1895.

PAUL R GREEN

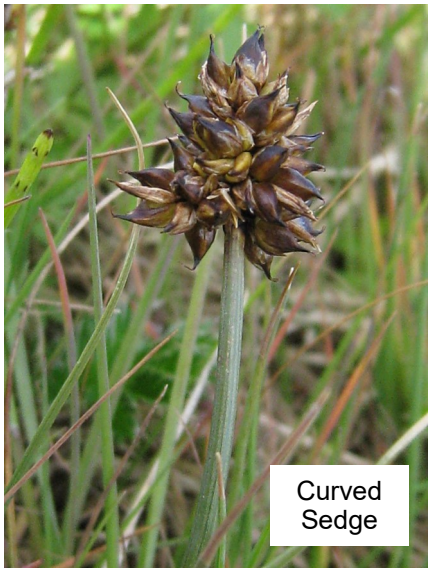
RECORDING FOR ATLAS 2020: OUTER ISLES OF ORKNEY

This is my third article for WFS magazine on annual recording excursions to the outer islands of Orkney to record for BSBI's Atlas 2000; I hope that I have not exhausted readers' interest. I hope also that it may stimulate interest in these islands and for recording plants in out-of-the-way places. This year's main excursion was to North Ronaldsay, the furthest flung of all the inhabited isles, two and a half hours by ferry from Kirkwall, though just an 18 minute hop by inter-island plane. I and a fellow enthusiast spent two days there at the end of July.

North Ronaldsay is about six kilometres long and up to two kilometres wide and is low-lying, the highest point being just 23 m. It has a population of 60. With the Atlantic Ocean to the west and the North Sea to the east it is a very exposed place, with no trees and the only shelter is from drystone walls. Of these there are plenty, including a tall one encircling the whole island; its purpose is to keep the native, seaweed-eating North Ronaldsay sheep to the rocky beaches and off the improved pasture. In places though, where the land is poor, the wall (called the 'sheep-dyke') deviates a fair distance inland, leaving areas of coastal heath and dune grassland to the attentions of the sheep and on this occasion to very interested botanists. The interior of the island is mainly fertile agricultural land but for several shallow lochs and their surrounding wetlands; these provide the main plant, and some bird, interest. The island is a popular destination for bird-watchers and has a fully-fledged bird observatory, where we stayed.

We started by the lighthouse at Dennis Ness, the north-eastern extremity of the island, in one of the areas where the sheep have year-round access. The dominant vegetation type here is coastal heath, but of what an unusual appearance – a carpet a centimetre or less in height due to the constant nibbling of the sheep, interwoven with herbs in

diminutive form, including Bird's-foot Trefoil (*Lotus corniculatus*), Sea Plantain (*Plantago maritima*), Wild Thyme (*Thymus polytrichus* ssp. *britannicus*), Lady's Bedstraw (*Galium verum*), Fairy-flax (*Linum catharticum*) and many others. Eyebrights (*Euphrasia* spp.) were quite frequent but more of a surprise were the bright blue flowers of Sheep's-bit (*Jasione montana*), a very scarce species in northern Scotland, except in Shetland where it is common. Shallow pools held Lesser Marshwort (*Apium inundatum*), Shoreweed (*Littorella uniflora*) and Brackish Water-crowfoot (*Ranunculus baudotii*), while damp hollows were quite rich, with Allseed (*Radiola linoides*), Bog Pimpernel (*Anagallis tenella*), Ragged-robin (*Silene flos-cuculi*) and Small-fruited Yellow-sedge (*Carex oederi*). Similar vegetation occurs along much of the western coast of the island; here, in a damp hollow, we came across Curved Sedge (*Carex maritima*) at a hitherto unknown site.



Photos: John Crossley

Curved Sedge

At Tor Ness, at the north-western tip of the island, exposure to sea spray is severe and coastal heath gives way to coastal grassland dominated almost entirely by Sea Plantain (*Plantago maritima*), Buck's-horn Plantain (*P. coronopus*), Red Fescue (*Festuca rubra*) and Thrift (*Armeria maritima*), with occasional Foula Eyebright (*Euphrasia foulaensis*) and Sea Milkwort (*Glaux maritima*). Here, as around most of the island, the strandlines and upper shore are almost devoid of vegetation, with just odd plants of Equal-leaved Knotgrass (*Polygonum arenastrum*), Chickweed (*Stellaria media*), Red Campion (*Silene dioica*) and Nettle (*Urtica dioica*) among the stones above the shore. However, in one short stretch inaccessible to sheep, we found a few plants of Oysterplant (*Mertensia maritima*).

In contrast, the eastern shores of the island are mainly sandy and behind Linklet Bay sand has drifted well inland, forming a machair-like plain. Grass-of-Parnassus (*Parnassia palustris*) was abundant here, apparently the large-flowered, short-stemmed variety *condensata*. Also found were Autumn Gentian (*Gentianella amarella* ssp. *septentrionalis*) and Knotted Pearlwort (*Sagina nodosa*). There was more Curved Sedge, this time in quite typical habitat at a site that has long been known. We were pleased too to find Common Adder's-tongue (*Ophioglossum vulgatum*), later confirmed by molecular analysis; only Small Adder's-tongue (*O. azoricum*) had previously been recorded here, almost certainly in error. The sandy

Magellan Ragwort

influence extends further inland and, beyond the reach of the sheep, forming rough grazing land, formerly intensively cultivated when the island population was several times what it is today. A few small plots are cultivated still, where some weeds of cultivation thrived in the light soil; they included Northern Dead-nettle (*Lamium confertum*), Northern Knotgrass (*Polygonum boreale*), Corn Spurrey (*Spergula arvensis*), Field Pansy (*Viola arvensis*), Wild Pansy (*Viola tricolor* ssp. *tricolor*) and a clutch of Speedwells (*Veronica* spp.).

Roadside verges mostly had a moderate diversity of herbs but nothing unusual, with the outstanding exception of the hybrid between Field Horsetail (*Equisetum arvense*) and Marsh Horsetail (*E. palustre*) (=*E.* x *rothmaleri*), a new Vice-county record. The few non-native species encountered were on verges, mainly garden perennials planted no doubt with the aim of beautifying the landscape. The most interesting of these was Magellan Ragwort (*Senecio smithii*); this plant can be found occasionally in northern Scotland, especially in Orkney and Shetland, but hardly at all elsewhere in Britain. There is a widely held belief that it was brought back from Patagonia by whalers, though it may have arrived by normal horticultural channels. Elsewhere, the main interest inland were in the lochs and their margins. These had a somewhat nutrient-enriched look, probably due to the large numbers of Greylag Geese that now winter on the island. Pink Water-speedwell (*Veronica catenata*) is a scarce species in Scotland; nevertheless it turned up twice in muddy ditch margins. Our list

of aquatics was confined to Spiked Water-milfoil (*Myriophyllum spicatum*), Fennel Pondweed (*Potamogeton pectinatus*) and Slender-leaved Pondweed (*P. filiformis*), the last of these quite frequent and flowering abundantly.

In all, 208 taxa were recorded, of which 41 were new to the island. This was another very worthwhile recording trip for Atlas 2020. I am grateful to the Wild Flower Society for providing financial assistance to help with the expense of travel and accommodation. Orkney is pretty well covered now, though one can always find more gaps, besides which some small, uninhabited islands beckon. As ever, visiting botanists are most welcome to contact me for advice on where to find particular species or which places are less well-recorded and to join outings of the local botanical groups. Details can be found on the BSBI website - https://bsbi.org

JOHN CROSSLEY

FIELD MEETINGS 2017

HAMPSHIRE 8th - 9th JULY

Saturday 8th July
Noar Hill Nature Reserve

Noar Hill was once the site of medieval chalk workings and is made up of many large pits from which the chalk was extracted for road-making, whitewash, lime mortar, lime kilns etc. It is now one of the most interesting chalk grassland and scrub sites in Britain. There is a very thin layer of soil so nothing dominates and the flora is diverse. The site is renowned for its roses and we saw Small-leaved Sweet-briar (*Rosa agrestis*) amongst others. We were delighted to see large numbers of Musk Orchid (*Herminium monorchis*) and several Frog Orchids (*Coeloglossum viride*) as well as a profusion of Pyramidal Orchids (*Anacamptis pyramidalis*). There was a wealth of flowers for us to enjoy and record but highlights would have to include Dragon's Teeth (*Tetragonolobus maritimus*) and Broad-leaved Spurge (*Euphorbia platyphyllos*) which was found on the edge of a field to the great joy of Tony Mundell the Vice-county recorder who led the meeting. It is always good to go to a Field Meeting because of the hints to identification that are shared. I picked up a number at this meeting including that Field Rose (*Rosa arvensis*) has stems that are purple on top because of the sun and green underneath; to distinguish between the subspecies of Yellow-rattle (*Rhinanthus minor*) count the number of pairs of leaves between the bottom flower and the first branch; many flowers on chalk will be "hairy" as it helps them keep in moisture e.g. Hairy St John's-wort (*Hypericum hirsutum*) and Hairy Violet (*Viola hirta*); Wall Lettuce (*Mycelis muralis*) often grows on the edges of pathways as it has wind-borne seeds which use the tunnel

effect of a path to spread. And lastly, mention must be made of Peter Hilton who spotted, whilst we were all having our lunch in the shade of the wood, a really nice example of Yellow Bird's-nest (*Monotropa hypopitys*), which was fortuitous as it was nowhere to be found at the site where Tony had last seen it!

Many thanks to Tony Mundell for leading the meeting and to Steve Povey, whose knowledge of the site added greatly to a most enjoyable meeting.

JANET JOHN


New Forest Bladderwort

Photo: Carl von Linen

Sunday 9th July New Forest

Forsooth, according to my parchment scrolls, the New Forest was established by Good King William for the Hunt, soon after he conquered this Sceptred Isle. In later years, diverse Wicked Barons purloined portions of land as they beheld any weakness in the Crown, but it was the most goodly land they took, eschewing the most wild and barren expanses. 'Struth, it was beyond their wit that they did circumscribe the best land for the Wild Flowers!'

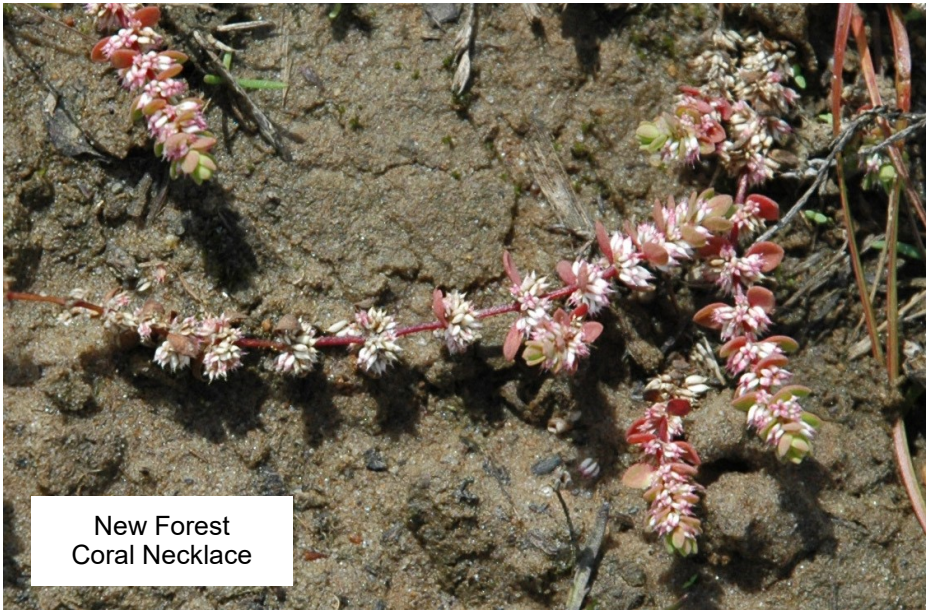
That Papist Rascal, James II, was the last to indulge his Royal Self in the Noble Pursuit, and thereafter it was dedicated to the nurturing of Oak and Beech for England's Mighty Navy; and yea, there was a Deer Removal Act in the 19th Century to protect the Trees from further cervid Injury. Upon my word, today's Forest is the largest piece of Lowland Heath in the whole of Western Europe, a most precious Commodity.

So it was, that in the Year of Our Lord 2017, in the clement Month of July, on a most sunny Morn, I and 20 likeminded Gentlefolk repaired to Shatterford to meet with Master David and his fair wife, the Mistress Shireen, for a Promenade through the most Choice and Rewarding Parts thereof. Fine Diversion was had by All, and much Joy to see the Flowers. I shall furnish you with the English Names, but methinks I shall add some special Latin Names that I have recently devised. I have been rebuked by my Learned Peers, because I have reached this Nomenclature by Close Scrutiny of Reproductive Organs: this is to their great Skandal, but Fie upon them all – 'tis a Pass-Time to which I am most partial, and I declare myself to be a Most Proficient Expert!

The two Flowers which provoked most Wonderment were firstly, the Coral-necklace (*Illecebrum verticillatum*), growing in Ruts that are logged with Water in the Winter Months, but Bone-dry in Summer.

Large Swathes were cunningly found by Master David for our Delectation. Then, for his Delectation, he took us to a Most Noxious Bog wherein grew the New Forest Bladderwort (*Utricularia bremii*), and he had much Sport expecting us to fall in as we drew nigh to behold it; he was grievously disappointed in this Regard. This Plante is a recent Arriviste in the Forest from the Continent, present solely in Woodfidley Passage; distinguished from Lesser Bladderwort (*U. minor*), that we saw aplenty, in Respect of its wide Corolla and a wide lower Lip whose Sides are not reflexed when fully developed. The Company also pressed Master David most urgently to be shown the Intermediate Bladderwort (*U. intermedia*) even though it ne'er has set forth a Bloom in any Part of the Realm: just seeing the Leaves and Bladders gave them Great Comfort.

Zounds, there was a Plenitude of Fair Flowers seen that Day, and I shall list the Most Remarkable in order to cause the Reader Great Envy and Beating of Breasts: Allseed (*Radiola linoides*), Round-leaved and Oblong-leaved Sundew (*Drosera rotundifolia* and *D. intermedia*), Marsh St John's-wort (*Hypericum elodes*), Bog Myrtle (*Myrica gale*), Bog Asphodel (*Narthecium ossifragum*), Dodder (*Cuscuta epithymum*), perniciously assailing a most unfortunate Ling, Bog Pimpernel (*Anagallis tenella*), Lesser Skullcap (*Scutellaria minor*), Marsh Pennywort (*Hydrocotyle vulgaris*) in full glorious Flower, as too was the Water Purslane (*Lythrum portula*), New Forest Water-crowfoot (*Ranunculus x novae-forestae)* and its only Parent extant in The Forest, the Round-leaved (*R. omiophyllus*), Sand Spurrey (*Spergularia rubra*), Birdsfoot (*Ornithopus perpusillus*), Pillwort (*Pilularia globulifera*), Marsh



New Forest Coral Necklace

Photo: Carl von Linen

Speedwell (*Veronica scutellata*), Chamomile (*Chamaemelum nobile*), rare outside the Forest, but bedecking large expanses of Lawns therein…. I begin to tire of this, and my Quill grows blunt. Suffice to say that I was much fatigued at the End of this most Pleasant Day; so I betook myself to the Tavern, and there I had much Merriment with a comely Damsel whom I will not name to spare her Blushes, and her Gallant Husband Gwyndaf. And thus fortified, I summoned my Barouche to convey me thence to another Part of the Forest to see the Blessed St Dabeoc's Heath (*Daboecia cantabrica*), the white Purity of which charmed me greatly.

Embellishing this short Treatise are some hand-tinted Etchings, from the Collection I use to tempt young Maidens to my Abode, shewing some Most Particular Occasions of the Happy Day.

Your Most Humble and Respectful Servant

CARL VON LINEN

THE BURREN
13th - 15th JULY

Thursday 13th July
The Coast, Poulsallagh

We arrived in squally weather to begin exploring the Burren, an area in County Clare in the West of Ireland dominated by the karst landscape. The Burren supports Mediterranean and arctic-alpine plants often in close proximity. The rich flora was evident from the outset and we spent most of the first day on the limestone pavement within 200 yards of the car park north of Ballyryan, clocking up almost 100 taxa before lunch. Carpets of Bloody Crane's-bill *(Geranium sanguineum)* and Lady's Bedstraw *(Galium verum)* were visually impressive, with Mountain Avens *(Dryas octapetala)*, Squinancywort *(Asperula cynanchica)* and Fragrant Orchid *(Gymnadenia densiflora)* appearing in profusion. Our leader, Chris Metherell, gave numerous mini-lectures on identification, focussing on local rarities and subspecies, including a form of Herb-Robert (*Geranium robertianum* ssp. *celticum*) which is only red at the stem-nodes and petiole bases, Irish Eyebright *(Euphrasia salisburgensis)*, Common Scurvygrass *(Cochlearia officinalis* ssp. *scotica),* the Burren speciality, O'Kelly's Spotted-orchid *(Dactylorhiza fuchsii* ssp. *okellyi),* which is white with unspotted leaves and the Irish subspecies of Hoary Rock-rose *(Helianthemum oelandicum* ssp. *piloselloides).* There was a memorable mention of the asymmetric utricles on Carnation Sedge (*Carex panicea*). Jan Armishaw found a challenging specimen eventually keyed out as Meadow Thistle *(Cirsium dissectum)*. Finding Field Woundwort *(Stachys*

arvensis) was a highlight given that there are only six records for the county. The cracks in the pavement (grykes) provide a habitat for ferns and Roger Golding was active in locating several interesting species. Late in the day we moved on to the dunes at Fanore, where we found some additional species, including Yellow-wort *(Blackstonia perfoliata*), Pyramidal Orchid *(Anacamptis pyramidalis)* and Curled Dock (*Rumex crispus* ssp. *littoreus*). Thus ended a very rewarding first day.

BOB CRABTREE AND
FREDA MILLER

Friday 14th July
Mullagh More

Hailing from North Yorkshire, I thought I knew a thing or two about limestone pavements but nothing can really prepare you for the sheer scale and majesty of the Burren. In some ways it's austere; whole hillsides composed of great expanses of grey, jagged limestone as far as the eye can see, but dotted with greenery (hazel scrub is becoming a real problem in certain areas) and the occasional turlough (a kind of seasonal disappearing lake virtually unique to limestone in Ireland); it also has a kind of stark beauty, especially when the sun shines. We spent our second day in the heart of the Burren near Mullagh More. A meadow, woodland-edge and roadside before we got to the limestone proper yielded a variety of orchids including Common Twayblade (*Neottia ovata*), Broad-leaved Helleborine (*Epipactis helleborine*), Bee Orchid (*Ophrys apifera*) and what looked as if it was going to be Dark-red Helleborine (*Epipactis atrorubens*), in addition to a wide variety of commoner species. Things got much more interesting once we hit the limestone pavement with abundant Shrubby Cinquefoil (*Potentilla fruticosa*), Lesser Meadow -rue (*Thalictrum minus*) and Northern Bedstraw (*Galium boreale*). There was also a worryingly frequent cotoneaster species which keyed out as Weeping Cotoneaster (*C. 'Hybridus Pendulus'*), though confirmation of this would be gratefully received. An added bonus was that we didn't lose anyone down a gryke – there were quite a few large enough to swallow a human whole. The drying margins of a turlough proved particularly fruitful, with Tawny Sedge (*Carex hostiana*), Long-stalked Yellow-sedge (*C. lepidocarpa*) and their hybrid, *Carex x fulva*, Lesser Water-plantain (*Baldellia ranunculoides*), Many-stalked Spike-rush (*Eleocharis multicaulis*), Shoreweed (*Litorella uniflora*), an unusual Purple Moor-grass subspecies *Molinia caerulea* ssp. *arundinacea* and a mystery sedge with stomata in unexpected places which was later identified as *Carex x turfosa,* the hybrid between Common Sedge (*C.nigra*) and Tufted -sedge (*C.elata*). To round off the day, we made our way to another turlough, happened upon by two members of the group a couple of days earlier. There, in the midst of almost unbelievable greenery, we feasted our eyes on swathes of Water Germander (*Teucrium scordium*) and Fen Violet (*Viola persicifolia*). Sadly they were shrinking violets, with not a single flower to be seen (we *were* a bit late in the season in fairness to them), but

no such modesty on the part of the Germander, which was flaunting hundreds of spikes in full bloom over an extensive area.

STEVE LITTLE

(Steve Little and David Albon were too modest to mention in the report that they were the eagled-eyed botanists who had discovered the star plants of the day - Water Germander and Fen Violet.)

Saturday 15th July
Eagle's Rock, Keelhilla NNR

With the terraces of Slieve Carran shrouded in mist, we began our last day on the limestone pavement, surrounded once again by the dramatic scenery of the Burren. Although by now many of the plants were the familiar ones of the last two days, there were still some new plants to be found. After looking in vain the previous day for Dark-red Helleborine (*Epipactis atrorubens*) in flower, we were hoping for better luck on this site. We weren't disappointed as, within several metres of the cars the first one was spotted, followed by several more splendid specimens in full flower. They were definitely a highlight of the day for me; we continued to come across them at regular intervals.

Chris Metherell identified some prostrate Juniper bushes as *Juniperus communis* ssp. *nana.* One distinguishing feature was the stomatal bands on the underside of the leaves which are pure white in subspecies *nana* rather than the greyish white of subspecies *communis*. Nearby was a nice group of seed-heads of Spring Gentian (*Gentiana verna*). Later, some Tormentil plants with larger flowers than normal caught our eye. Closer examination showed these to be *Potentilla erecta* ssp. *strictissima* which is a more robust plant than ssp. *erecta* and has stem-leaves serrate for most of their length.

As we were setting off after lunch, Hazel Metherell spotted the bronzy metallic sheen of a slow-worm (*Anguis fragilis*) sunning itself on a rock. We watched it for several minutes before it slid off into the vegetation. As several members of the group had planes to catch, we made our way back to the cars to say farewell. A small group of us carried on to explore the area on the other side of the road. We spent some time in a boggy area where, amongst the wetland plants, we found the upright form of Bulbous Rush (*Juncus bulbosus* ssp. *kochii*), Marsh Arrowgrass (*Triglochin palustris*), which has leaves which are deeply furrowed towards the base compared with the flat leaves of Sea Arrowgrass (*T. maritima*) and the smaller, less branched subspecies of Red Bartsia (*Odontites vernus* ssp. *vernus*).

Many thanks to Chris and Hazel Metherell for organising the meeting and providing us with the opportunity to visit this wonderful landscape and to enjoy some of the unique flora of The Burren.

SHEILA WYNN

SEARCHING FOR MEADOW SAFFRON (*Colchicum autumnale)*

About twenty three years ago Francis Simpson (the late BSBI recorder for Suffolk) and myself led a field trip in late Spring, with The Ipswich and District Natural History Society to the Suffolk Wildlife Trust Reserve, Martin's Meadows at Monewden, Suffolk, to view, amongst other plants, the Fritillaries. The leaves and capsules of Meadow Saffron (*Colchicum autumnale*) were abundant but, as the plants were not in flower, only a passing interest was taken of them. At the end of the meeting members departed but Francis never liked going home early so I said that I had visited a small wood nearby recently and that I thought it was worth another look. He readily agreed and a short drive took us to the wood.

My interest in the wood was that it was an example of a well-managed 'coppice with standards' wood with out being over-managed. Francis surprised me when he said he had never 'done the wood' before but as we made our way around he agreed with me that the coppicing had been carried out most sympathetically. Whilst walking past a large tussock of waxy green leaves he asked me what I thought they were. I could only think of Stinking Iris (*Iris foetidissima*). He said, "They are not, you know, they are Meadow Saffron." When I showed my surprise that they were in a wood, having earlier seen them in Martin's Meadows, he said that woods in the west of the country were their natural habitats. He was pleased with the find, although a little annoyed he had never checked the wood out himself before the publication of his Flora of Suffolk, in 1982.

About seven years ago I joined the Wild Flower Society as my botany had made little progress since the death of Mr Simpson. I was pleasantly surprised by the knowledge of the members and by the amount of field trips that Branch Y (East Anglia) had each year. So, with that in mind, I thought I would try to re-find the Colchicums of so many years earlier, especially as an early field trip was planned for Martin's Meadows and I thought I could show Branch Y members my local knowledge. I searched the wood in the spring without success and, in the area that Francis had identified the *Colchicums,* all I could find were tussocks of Stinking Iris leaves. I thought I would wait until the autumn when the showy flowers would be out and easier to find. In the autumn, Margaret (my wife) and I searched the area with no result. The following spring we searched again, no luck, and finally in that autumn we looked again, with the proviso to Margaret that if she found the flowers I would give her a fiver (her interest was waning by now). Still no sight of the *Colchicums*, although plenty of Stinking Irises. Had the knowledgeable Simmy been wrong?

A week later whilst I was working in our garden Margaret said to me, "That plant you want is in our wood." 'Our wood' is a grand term for the top half of our Ipswich garden that I

planted with native trees when we moved in about 26 years ago. “What are you talking about?” I said. “That plant is up the garden. In fact there are several of them,” was her reply. Sure enough there were several crocus type plants growing at the base of a hornbeam but as they were not open yet I could not be sure they were not Autumn Crocus (*Crocus nudiflorus*) as *Crocus* has three stamens and *Colchicum* has six. I spent an anxious five days hoping the flowers would open; they were in the shade and only got the sun for two hours late in the day. Finally, they opened and there were the six stamens. I had found my *Colchicums* and yes Margaret was £5 better off, although she claims she never took it. I had never planted anything like *Colchicum* in our garden and on reporting the find to Martin Sanford, the BSBI recorder for Suffolk, he was not too surprised as our garden had previously been an orchard and the plants can lie dormant for many years.

With our ‘eyes in’ now we returned to the wood a few days later and yes, we finally found Simmy's plants in flower. There were about 50 in one large area roughly where I thought Francis and I found them all those years earlier.

The plants in our garden did not set seeds in the following spring and whilst there were plenty of leaves on the *Colchicums* in the wild wood they were also seedless. *Colchicums* flower late in the year and are pollinated by bees, which need warmth to fly and the large colony of *Colchicums* in the wood also grow in the shade. I will return this spring to see if they have set seed. The colony covers about six square metres which is rather a large area to spread vegetatively so perhaps they only set seed in years when the sun penetrates the shady woods and bees can find them.

PETER BRINKLEY

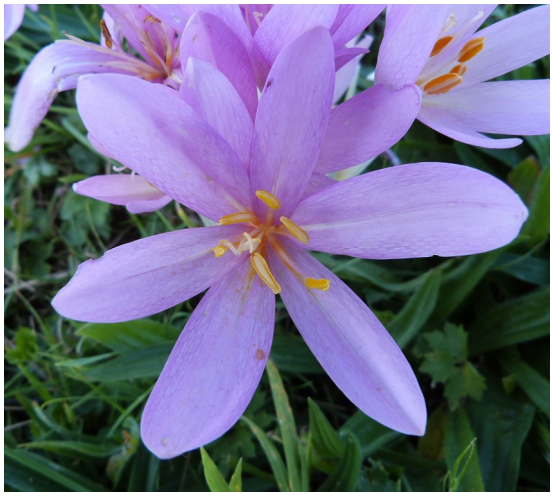
SOME NOTES ON MEADOW SAFFRON - OR WHAT’S IN A NAME

These notes are the result of my interest in the plant Meadow Saffron. As I read more about *Colchicum autumnale* for my article I became most interested in this clever, useful and dangerous plant.

I will refer to the plant from now on as *Colchicum autumnale*. I am using its scientific name because one of its common names, Autumn Crocus, is a most unfortunate choice as, although it flowers in the autumn (as do a few Crocuses) and looks like a Crocus, it is in a different family. Below is a summary of *Colchicum autumnnale* and two of the Crocuses that it could be confused with.

Colchicum autumnale, is in the Lily family, (Liliaceae), has six stamens, flowers in the autumn and has been given the following common names, amongst others. 'Meadow Saffron', it is not a Saffron and does not produce saffron; 'Autumn Crocus', it is not a Crocus; 'Naked Ladies', beware the plant is poisonous.

Photo: Anne Kell



Colchicum autumnale - showing 6 stamens, vegetative growth with fruits and cross section with long style

Photo: Peter Brinkley

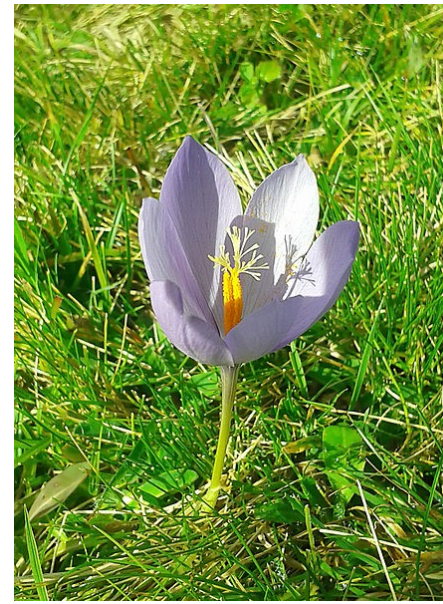


Photo: Serpico, Wikipedia

Above: *Crocus nudiflorus* with 3 stamens
Left: *Crocus sativus* with 3 'Saffron' stamens

Photo: Roger Culos, Creative Commons

Photo: Peter Brinkley

Photo: Anne Kell

Crocus sativus, is in the Iris family (Iridaceae); it is a crocus, has three stamens, flowers in the autumn and has been given the following common names, 'Saffron' and 'Saffron Crocus'. It is the source of the spice and the dye saffron. As it is sterile it rarely escapes from cultivation.

Crocus nudiflorus is in the Iris family, has three stamens and flowers in the autumn and has been given the following common names 'Autumn Crocus' and 'Naked-flowered Crocus'.

There are several other autumn-flowering Crocuses but they are mainly confined to gardens and rarely escape.

The above brief summary indicates the advantage of using scientific names, especially when discussing poisonous plants.

Colchicum, in common with *Crocus*, has its ovule below ground and the other floral parts above ground at the top of a fairly long perianth tube. This is one of the features that make the plant so attractive but it does raise the question as to how the pollen gets to the subterranean ovule from the stigma often over twenty centimetres away. As plants are non-motile the journey the male gametes (sperm cells) make from the stigma to the ovary is, to me, one of the wonders of nature. The pollen, on coming into contact with the stigma, develops a protrusion that grows down the style to reach the ovule taking the male gametes with it to fertilise the subterranean ovule. As the gametes travel at between one and three millimetres per hour it can take over three days from stigma to ovary in *Colchicum autumnale.* Most flowering plant pollen has to make this journey but it is rarely such an extended one. Presumably the advantages of a protected subterranean ovule compensates for the extra energy required for the longer journey. Maize (*Zea mays)* pollen makes an even longer journey as the long hairs protruding from the top of the cobs (the silks) are the remains of the pollen tubes along which the Maize gametes have also had to travel.

Colchicum autumnale is poisonous to stock and humans and as such has often been scrubbed out by farmers when it occurs in meadows. The plant contains the alkaloid drug colchicine, which has been used in the past for the treatment of gout and is now used in plant breeding as, if applied at the appropriate stage of meiosis cell division, it can affect the number of chromosomes. It can be carcinogenic.

From the preceding notes it will be seen why I think it is preferable to use the name *Colchicum autumnale* and not Meadow Saffron. It does not seem to be eaten by deer in the wild as in the wood described in my previous article. The *Colchicums* were not touched although the deer had eaten lots of Early-purple Orchid (*Orchis mascula*) flowers in this wood in the spring. The avoidance by deer may well be an evolutionary adaptation by the plant as the three day plus time needed for the gametes to travel from stigma to ovary would leave the flowers exposed to browsing for an unacceptablely long time after pollination.

PETER BRINKLEY

WEIGHING IT UP

Our newly published meetings list is incredibly inviting with venues from highland mountains to lowland fens. However, we are warned, ***"All those attending WFS Field Meetings do so at their own risk."*** Although our leaders are thoroughly prepared and warn us of any expected hazards, we must weigh up the conditions and make decisions about clothing, equipment, refreshments and our own capabilities before deciding on how to respond.

In the animal kingdom, decision-making is key to survival. When faced with competition, whether to fight, flee from or tolerate at a safe distance can be a life or death decision. Animal senses are very well-adapted to informing such decisions.

Plants also face competition. It is fundamental to their evolution. However, rather than being simply passive participants in the process, with poorly situated specimens quickly being out-competed, new research suggests that plants may also be active decision-makers themselves.

Researchers at the University of Tübingen in Germany have published results of experiments with Creeping Cinquefoil (*Potentilla reptans)* suggesting it makes decisions about how to respond to inadequate light conditions, depending on the type of competitor it is faced with.

Light is essential for photosynthesis and plants seek optimal conditions in which to grow. When faced with competition, they can respond by outgrowing their opponent, by moving laterally away from it or by developing better shade tolerance to improve performance in shaded conditions.

Researchers created three different scenarios to test *P. reptans*. Firstly, they simulated short dense competitors, then tall and dense ones and finally tall but sparse opponents. In each situation, plants appeared to assess the nature of the competition and responded appropriately. Plants facing short dense competition responded by growing taller and out-competing the opponent. Those facing tall dense competition did not try to outgrow the challenge, but developed better shade tolerance to cope in the adverse conditions. Those facing tall but sparse competition did not try to outgrow the competitor, or develop shade tolerance but grew longer stolons to move away from the competition. Further research is planned to investigate responses to competition for other environmental factors such as nutrients or water.

It is fascinating to think that plants can assess environmental conditions before developing appropriate responses (and tempting to lapse into anthropomorphising about plants). When we enjoy one of the many meetings offered this year, it might be interesting to spend a moment thinking about the way plants relate to each other in their communities. Of course, once we have assessed the conditions for ourselves.

DENNIS KELL

Journal Reference:
Michal Gruntman, Dorothee Groß, Maria Májeková, Katja Tielbörger. Decision-making in plants under competition. *Nature Communications*, 2017; 8 (1) DOI: 10.1038/s41467-017-02147-2

FIELD MEETINGS 2017
ISLE OF SKYE 24th- 27th JULY

Evening 24th July
Sligachan

It was a beautiful evening when 19 members gathered in a lay-by near the Sligachan Hotel to meet Ian Green who was to be our leader for the next three days. Once we were all ready, we descended into the adjacent bog to see what interesting plants we could find.

First up was a patch of Lesser Bladderwort (*Utricularia minor*) in a little boggy depression and nearby a solitary flower of Pale Butterwort (*Pinguicula lusitanica*). We then moved to the edge of a nearby small lochan. Here Ian drew our attention to the presence of Pipewort (*Eriocaulon aquaticum*), Water Lobelia (*Lobelia dortmanna*) and Bog Hair-grass (*Deschampsia setacea*) all within a few feet of each other and close to the bank. As we moved around the lochan accompanied by a swarm of midges we had to take great care on the uneven ground with grassy tussocks and boggy holes. At the far end of the lochan was a patch of native White Water-lily (*Nymphaea alba* ssp. *occidentalis*) with a few open flowers. After admiring these we climbed back to the road and caused considerable curiosity from passing motorists by crawling around on the verge to examine good colonies of Chaffweed (*Centunculus minimus*) and Frog Rush (*Juncus ranarius*). We all then dispersed back to our accommodation.

ROY HILTON

Tuesday 25th July
The Cuillin Hills

Our group of 19 assembled just before 10.00 at the Fairy Pools Forestry Commission car park on the west side of the spectacular Cuillin Hills. Several of us parked on the nearby roadside as the car park was already full on this beautifully clear and sunny morning. We were rounded up and briefed by our leader about the forthcoming walk and its potential hazards, as well as our main target species.

The start of the trek was on a wide well-walked path following the course of Coire na Creich with its low falls and crystal-clear pools. Compared with the usual botanical pace we made swift progress, stopping for a few rests and noting the appearance of commoner mountain plants such as Alpine Lady's-mantle (*Alchemilla alpina*). Pretty soon we passed the last of the pools, left the crowds behind and the track became less distinct, in places the stream bed itself seeming to be the route of least resistance. Here we saw Stone-bramble (*Rubus saxatilis*), Roseroot (*Sedum rosea*), Mountain Sorrel (*Oxyria digyna*) and some Hawkweeds (*Hieracium*) that we hope we might yet be able to name. We eventually reached some grassy slopes where we ate lunch. We sat close to Mountain Everlasting (*Antennaria dioica*) and Alpine Clubmoss (*Diphasiastrum alpinum*) in the short turf and Alpine Meadow-rue

Photo: Ken Southall

(*Thalictrum alpinum*) in a wet flush. Above us was a steep scree patch extending right up to the ridge near the top of Spurr na Bairnich. Ian pointed out roughly where he expected to find the main prize of the day at the base of the rock wall next to it – the distance itself wasn't that great but it was clear that the ground was very steep and the going would be tough. About half the group set off, picking their way up the edges of the block scree, with Ian eventually refinding the Alpine Rock-cress (*Arabis alpina*) rather higher up than he expected in a sheltered hollow at the base of the cliff. He had previously seen all the known populations of this three-star rarity (even finding a new location some 2km away from the core area) and it had then been in flower in mid-July, but our healthy-looking patch was already in fruit. The leaves were much like the familiar Garden Arabis (*A. caucasia*), to which it is closely related, but less grey. The rather slender pods were very attractively corrugated. By now the others of the group who decided to make the climb had set off and all eventually made it to see the plant, with a few reluctantly deciding against it. On nearby ledges, Northern Rock-cress (*Arabidopsis petraea*) was in flower, which is apparently sometimes taken for its rarer cousin by the unwary or overly optimistic. The potential dangers of the area were brought home when the mountain rescue helicopter noisily arrived low overhead and eventually stretchered off a climber who had apparently fallen about 50 metres from the top of the gully above us. Some of the party spoke to his climbing buddies who reported that he had broken bones, dislocations, cuts and bruises but was going to be OK and was on his way to Inverness Hospital. We made our way back down even more cautiously passing Starry Saxifrage (*Saxifraga stellaris*), Beech Fern (*Phegopteris connectilis*), Brittle Bladder-fern (*Cystopteris fragilis*) and Fir Clubmoss (*Huperzia selago*) on the way.

Some of the more energetic participants further explored nearby slopes finding Globeflower (*Trollius europaeus*), the mountain subspecies of Crowberry (*Empetrum nigrum* ssp. *hermaphroditum*) with its persistent stamens still attached to the ripe fruit, Three-leaved Rush (*Juncus trifidus*), Alpine Saw-wort (*Saussurea alpina*), Parsley Fern (*Cryptogramma crispa*) and, the main target, Mountain Male-fern (*Dryopteris oreades*). In the sunny and warm conditions, a few insects were noted including the moths Red Carpet and Mountain Pearl and a Common Hawker dragonfly. All 19 participants returned safely to the car park by late afternoon after a wonderful but tiring mountain walk.

JOHN MARTIN

Wednesday 26th July
The Storr

Sun cream and sunglasses were put away and replaced by waterproofs and umbrellas as we met at the Old Man of Storr car park. The rain had already set in but we felt emboldened by the forecast of better weather to come.

We made our way up the tourist track, passing through an area shown on my map as a conifer plantation but which had been clear-felled, stopping occasionally to look at plants such as Sea Campion (*Silene uniflora*) and Smooth Lady's-mantle (*Alchemilla glabra*). Reaching a large rock outcrop, we found Ostenfeld's Eyebright (*Euphrasia ostenfeldii*) and Field Gentian (*Gentianella campestris*) on the grassy slope, with plants including Northern Rock-cress (*Arabidopsis petraea*) and Glaucous Meadow-grass (*Poa glauca*) on the outcrop.

We then dropped down to a lochan with beautifully clear water to see Shoreweed (*Littorella uniflora*), Water Lobelia (*Lobelia dortmanna*), and, further round, an impressive display of Floating Bur-reed (*Sparganium angustifolium*).

The rain showed some signs of abating as we climbed again to a bare patch where we were hoping to see our main target, Iceland-purslane (*Koenigia islandica*), but no sooner had we located this stunningly minute plant than the heavens opened again, this time, as if to prove we were in suitably arctic conditions, the rain coming at us horizontally. Those of us with less respect for our photographic equipment attempted to get a prize picture of this great rarity, but to say the conditions were difficult would be an understatement.

Quite a few decided that this was the time to descend to the shelter of cars, but some soldiered on, and a few returned in the afternoon when the long-awaited improvement in the weather had arrived. In any case it had been an adventurous and rewarding day out.

ADRIAN MYLWARD

Thursday 27th July
Various sites

Our last day started by the Storr Lochs Dam which controls the water flow to the hydro-electric power station below in Bearreraig Bay. Our destination was the level grassy area around the bay.

This necessitated the descent of a slippery, precipitous path down a slope which proved to be an ideal habitat for horsetails. First, we found Shady Horsetail (*Equisetum pratense*), its rough stems and three-angled drooping branches distinguishing it from the Marsh Horsetail (*E. palustre)* with which it was growing. This has smooth stems and branches with five rounded angles. Lower down were Wood Horsetail (*E. sylvaticum*), Great Horsetail (*E. telmateia*) and Field Horsetail (*E. arvense*).

On reaching the bottom we saw the attractive flowers of Grass-of-Parnassus (*Parnassia palustris*) and Bottle Sedge (*Carex rostrata*).

We were then disconcerted to

discover that our route was blocked by a fast-flowing river, swollen by the previous day's heavy rain. Our only option was to climb back up the steep slope. As we reached the top the heavens opened again, so we beat a hasty retreat to our cars for lunch.

Once the rain had eased, we looked around the edge of the loch and found several pondweeds which Ian identified as Red Pondweed (*Potamogeton alpinus*), Perfoliate Pondweed (*P. perfoliatus*) and Broad-leaved Pondweed (*P. natans*). There were also some strands of Alternate Water-milfoil (*Myriophyllum alternifolium*).

Meanwhile, Ian had devised an alternative plan. Our first stop was a couple of miles away where, on the roadside near Rigg, we found a large colony of the hybrid Horsetail (*E. x font-queri*), the hybrid of Marsh and Great Horsetails. It was very distinctive being tall like Great Horsetail, but with thinner stems and gradually tapering tips.

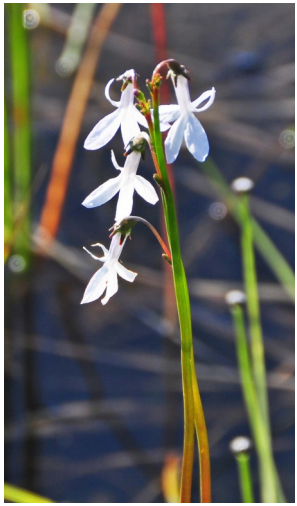
We continued north, enjoying the dramatic scenery of the Trotternish and Quirang Mountains, to the site of the Duntulm Castle ruins at the northern tip of Skye. Nearby there was another horsetail to look for: the hybrid of Field and Marsh Horsetails (*E.*x *rothmaleri*). This was much more difficult to identify than the previous one as the two parent species are quite similar. Eventually we thought we might have found it and Ian said he would send one off for confirmation.

Our final quest was Marshall's Eyebright (*Euphrasia marshallii*) which had been recorded on the grassy slopes of the cliff-tops surrounding the castle ruins. Jan Armishaw soon found a plant with very hairy leaves and small whitish flowers and a dedicated group keyed it out and confirmed that it was Marshall's Eyebright.

We decided that this was a good note on which to end the meeting but there was one more treat in store. Local botanist, Seth Gibson, took us to Uig, a little further round the coast, to see Oval-leaved Mitrewort (*Mitella ovalis*), a close relative of Fringe-cups (*Tellima grandiflora*), which had escaped from a local garden and been washed down a stream into the woodland where it was well established. Although it had finished flowering, its distinctive fruits were still in evidence.

This really was the end of our wonderful trip to Skye. After thanking Ian for organising and leading the meeting, we went our separate ways.

SHEILA WYNN



Water Lobelia

Photo: Ken Southall

ONE DAY MEETINGS 2017

COLDFALL WOOD, MIDDLESEX
8th JULY

London retains many fragments of ancient woodland and they are fiercely protected by their surrounding communities. Coldfall Wood, which lies on the western boundary of Haringey, supports a remarkable flora for its urban location. It is owned and managed by Haringey Council. The wood is dominated by a canopy of mature English Oak (*Quercus robu*r) over an under storey of Hornbeam (*Carpinus betulus*). The latter trees were regularly coppiced in historical times, but this traditional management ceased in the 1930s when the process was no longer economic. The hornbeam stools grew tall, shading out the once diverse native flora. By the 1980s many of the characteristic plants of such ancient coppices had apparently disappeared. It was at this time that I first became involved in managing the wood, as the borough's newly appointed conservation officer. One of my first tasks was to start coppicing the hornbeam again after a gap of nearly 50 years. I was careful to monitor the flora before and after each coppice was cut. Many ancient woodland plants, which I had not seen in the wood before, started to appear. They had lain dormant in the seed bank waiting for the light that the new coppicing was to provide. Particularly striking was the "arrival" of a number of sedges, now seldom seen in London. Pale Sedge (*Carex pallescens*), Common Yellow-sedge (*C. demissa*), and Pill Sedge (*C. pilulifera*) were particularly welcome finds. Other plants, now scarce in the Capital, included Slender St. John's-wort (*Hypericum pulchrum*), Vervain (*Verbena officinalis*), Yellow Pimpernel (*Lysimachia nemorum*) and Heath Speedwell (*Veronica officinalis*). By 2016, a total of 195 "new" species had been recorded from the coppices, which had not been seen there previously.

On July 8th, 2017 a large party gathered at East Finchley tube station to have a look around the wood. Originally set up by the London Natural History Society (LNHS), we were joined by a strong contingent from the Wild Flower Society and a scattering of ecologists from the Ecology and Conservation Studies Society. Together with an advance party already at the wood, we finally numbered 28 participants - much the largest group that I had taken around the wood! We started by admiring the widely suckering growth of a Wild Service Tree (*Sorbus torminalis*) close to the western entrance on Creighton Avenue. Many of the ancient woodland indicators mentioned above were no longer visible, but there were good displays of Tutsan (*Hypericum androsaemum*), which has been spreading along the stream since the coppicing. Some of these plants (with petals distinctly longer than the sepals and bearing longer styles) are likely to be Tall Tutsan (*H.* x *inodorum)*, the hybrid between Tutsan and Stinking Tutsan (*H.*

hircinum), or possibly back crosses. We followed the stream, noting several plants of Soft Shield-fern (*Polystichum setiferum*), which has also been increasing in the wood (and elsewhere in London). More unexpectedly, a six-foot sapling of Silver Maple (*Acer saccharinum*) was growing out of the streambed. This tree is widely planted along urban streets and occasionally regenerates from seed. Most such offspring are removed by the Local Authority before they reach any size, but this example was thriving. It exemplified another feature of the wood - the widespread presence of such aliens. The wood is surrounded by houses with large gardens and many such exotics are likely to have "escaped" from these. Other examples included Himalayan Honeysuckle (*Leycesteria formosa*), present in large numbers, the ubiquitous Butterfly-bush (*Buddleja davidii*) and occasional Cut -leaved Bramble (*Rubus laciniatus*). One attractive alien growing beside the stream proved more difficult to name. A small sapling with pinnate leaves, it was clearly a species of *Sorbaria* - but which one? With no floral characters available and vegetative ones rather inconclusive, we were unable to decide between Chinese Sorbaria (*S. kirilowii*) or Himalayan Sorbaria (*S. tomentosa*). Hopefully the plant will flower one day and disclose its true identity. There was no such trouble in identifying the next unexpected discovery - a young gymnosperm with characteristically broad, sharply pointed leaves. This was undoubtedly a young seedling Monkey-puzzle (*Araucaria araucana*). It was growing close to the edge of the wood, where it abuts onto the St Pancras and Islington Cemetery.

Widely grown in London gardens as an eye-catching ornamental, the tree is normally dioecious. In the adjacent cemetery there are several male and female trees and the edible seeds were probably dispersed by squirrels. The tree is very hardy but seedlings are very rarely found.

Our final stop was to a seasonal pool in the north-eastern corner of the wood. Here there was plentiful Marsh Marigold (*Caltha palustris*) and other widespread native aquatics. But Water Bent (*Polypogon viridis*) was also present in some quantity, an inconspicuous alien grass, now widespread in many parts of London. A substantial bridge had been

Himalayan Honeysuckle

Photo: David Bevan

constructed over the pool and a young willow tree was growing beside it. Previously identified as Holme Willow (*Salix* x *calodendron* Wimm.), a sterile triple hybrid between Goat Willow (*S. caprea*), Grey Willow (*S. cinerea*) and Osier (*S. viminalis*), this enigmatic tree had just been renamed at Kew by the Russian Salix expert, Irina Belyaeva-Chamberlain. She named it S*. gmelinii* Pall. and, at a recent LNHS workshop, confirmed that this was the true identity of the puzzling Coldfall Wood tree.

On leaving the wood at the end of the afternoon, we were delighted to observe a single Silver-washed Fritillary butterfly visiting one of the Buddleja bushes we had seen earlier in the day. This was a first record for the wood and it made a fitting finale!

DAVID BEVAN

AMBERLEY WILD BROOKS, SUSSEX 15th JULY

Twelve members set off eagerly from the car park at Amberley Station. The bank nearby had been allowed to grow up naturally this year so we were delighted to see Field Scabious (*Knautia arvensis*) and Nettle-leaved Bellflower (*Campanula trachelium*). The banks of the River Arun looked very colourful with Purple Loosestrife (*Lythrum salicaria*) and Common Valerian (*Valeriana officinalis)* fringing the banks.

In the first set of drainage ditches, originally built by the Dutch in the 18th century, we were pleased to find Shining Pondweed (*Potamogeton lucens*) and Square-stalked St. John's-wort (*Hypericum tetrapterum*) with its square stalk and prominently winged stems. The Marsh Bedstraw (*Galium palustre*) was here as were the invasive Least Duckweed (*Lemna minuta*) and the stately plants of Water Dock (*Rumex hydrolapathum*). Nearer towards the village the ditches were more open and accessible and we were happy to find Frogbit (*Hydrocharis morsus-ranae*), Lesser Water-parsnip (*Berula erecta*), with its leaves bearing a dark ring at the base, and Fool's Watercress (*Apium nodiflorum*), with its umbels growing from the leaf nodes. The bright blue flowers of Skullcap (*Scutellaria galericulata*) were admired while we ate our lunch and a fine patch of Strawberry Clover (*Trifolium fragiferum*) was seen soon after.

Towards the village the ditches are fed by underwater springs coming from the nearby chalk downs. This is the home of Mare's-tail (*Hippuris vulgaris*) looking rather stressed by the recent very hot weather. We also compared the hollow squashy stems of Water Horsetail (*Equisetum fluviatile*) with the ridged solid stems of Marsh Horsetail (*E. palustre*). Close to the village pond was Black Poplar (*Populus nigra*) plus fine stands of Gypsywort (*Lycopus eurupaeus*) and False Fox Sedge (*Carex otrubae*).

Entering the Wild Brooks, a large

area of flood plain meadows, we were greeted by Narrow-leaved Everlasting-pea (*Lathyrus sylvestris*). The best ditches are located here with Perfoliate Pondweed (*Potamogeton perfoliatus*), Arrowhead (*Sagittaria sagittifolia*) and Broad-leaved Pondweed (*Potamogeton natans*). The meadows contained the elegant Marsh Ragwort (*Senecio palustris*), a characteristic plant of this habitat.

The last ditches we investigated contained Tubular Water Dropwort (*Oenanthe fistulosa*), Fine-leaved Water-dropwort (*Oenanthe aquatica*), which loves to grow in the centre of ditches and Water Plantain (*Alisma plantago-aquatica*), all in perfect flower. Here also was the native Greater Duckweed (*Spirodela polyrhiza*) with its many roots and red underside to the frond and the attractive Hop Sedge (*Carex pseudocyperus*).

Returning to the village we were treated to tea and cakes by Richard's wife, a relaxing end to a rewarding trip. Many thanks to Richard Robinson for his help with transport, expert grapnel usage and his local knowledge of the area.

GARETH BURSNALL

SOUTH HARTING, WEST SUSSEX 10th AUGUST

It was a bright, clear morning when we gathered in the National Trust car park at the top of Harting Hill where Dawn Nelson had thoughtfully arranged parking permits for us. The views northwards were fantastic but the magnificent selection of chalkland flowers soon had our full attention. They included Harebell (*Campanula rotundifolia*), Common Centaury (*Centaurium erythraea* var. *erythraea*), Yellow-rattle (*Rhinanthus minor*) and Small Scabious (*Scabiosa columbaria*) with its blackish, bristle-like calyx teeth. Dawn showed us both Chalk Knapweed (*Centaurea debeauxii*) and Common Knapweed (*Centaurea nigra*) and explained how to look for the differences in the phyllaries. A walk down the steep scarp slope was rewarded by a close look at the deep blue flowers of Round-headed Rampion (*Phyteuma orbiculare*).

Round-headed Rampion

Photo: Dawn Nelson

We were briefly distracted by the hang gliders which were hovering just above our heads, but leaving them behind we followed the South Downs Way eastwards to see an established Common Juniper (*Juniperus communis* ssp*. communis*) and, nearby, a robust specimen of Ploughman's-spikenard (*Inula conyza)*. We were able to compare five thistle species - Dwarf Thistle (*Cirsium acaule*)*,* Marsh Thistle (*C. palustre*)*,* Spear Thistle (*C. vulgare*)*,* Creeping Thistle (*C. arvense*) and Musk Thistle (*Carduus nutans*) and were surprised to learn that the flowers of the last two species were fragrant.

Photo: Dawn Nelson

Autumn Gentian

Making our way towards the car park we found Fairy Flax *(Linum catharticum),* Hedge Bedstraw *(Galium album),* Lady's Bedstraw *(Galium verum)* and the purple flowers of Autumn Gentian *(Gentianella amarella* ssp*. amarella*)*.* After a splendid morning botanising we were more than ready to enjoy our picnic lunches.

After lunch we drove towards South Harting stopping at the bottom of a beech hanger. Our steep climb up through the dappled shade was rewarded by finding two areas of Yellow Bird's-nest (*Hypopitys monotropa* ssp. *hypophegea*) each with several stems in fruit. Even less obvious amongst the leaf litter were several dry, flowered stems of Bird's-nest Orchid (*Neottia nidus-avis*). Dawn then took us on to South Harting Churchyard. On the walls we saw Wall-rue (*Asplenium ruta-muraria*) and Maidenhair Spleenwort (*Asplenium trichomanes*) both with ripe sporangia. In the short turf Mouse-ear-hawkweed (*Pilosella officinarum*) flourished and around the edges, Hairy Sedge (*Carex hirta*). There were garden plants that had established themselves including Druce's Crane's-bill (*Geranium* x *oxonianum*) and False Virginia-creeper (*Parthenocissus inserta*).

In the churchyard extension, originally a walled garden, Dawn pointed out Narrow-leaved Meadow-grass (*Poa angustifolia*) growing in a favoured location on top of the three metre high wall. Later we were able to examine it closely where it was growing on a low wall by the church. We then noted more ferns, Southern Polypody (*Polypodium cambricum*) and Intermediate Polypody (*P. interjectum*), before we left Harting after an enjoyable and rewarding day.

SUE DENNESS AND JILL OAKLEY

WOLVES WOOD AND NEEDHAM MARKET, SUFFOLK
12th AUGUST

Nine of us gathered at Wolves Wood RSPB nature reserve, mainly to see Violet Helleborines *(Epipactis purpurata)* growing under the deep shade of an ancient hornbeam (once coppiced) part of the woods. This year's show was about seventy in number scattered beside two shallow wet 'trenches'. A small group produced very beautiful specimens in full flower and were greatly admired by us all. It was hoped to see butterflies (including White Admiral) in the woodland glade but unfortunately the weather was not sunny enough.

The afternoon was spent about thirteen miles away in a nature reserve at Needham Market where plants typical of chalkland habitat were sought. Plants of particular note and growing in profusion were Blue Fleabane *(Erigeron acer)* and Carline Thistle *(Carlina vulgaris).* None of our group had seen these growing to such a height before! Ploughman's Spikenard *(Inula conyzae)* was studied and we learnt that this plant was used in medieval times as an expensive perfume but ploughmen used the whole plant to advantage in their hovels to sweeten the air. Sure enough this 'perfume' was detected when the base of the plant was sniffed by us! Moving on through the labyrinth of pathways, we saw Elecampane *(Inula helenium),* with its very large, elliptical, very hairy underside and bluntly toothed leaves. Towards the end of the afternoon we studied Buckthorn *(Rhamnus cathartica)* which at first was confused with Alder Buckthorn *(Frangula alnus).* Although very similar we realised the leaves were finely toothed and we spotted some thorns amongst the branches. On an adjacent Protected Roadside Verge, Wild Liquorice *(Astragalus glycyphyllos)* was found - which we were particularly pleased to find because of its scarcity in our area.

Many other more common species were seen including Yellow-wort *(Blackstonia perfoliata),* Common Centaury *(Centaurium erythraea),* Mignonette *(Reseda lutea),* Agrimony *(Agrimonia eupatoria)* and Wild Basil *(Clinopodium vulgare)* and collectively they became a very good insight into chalk-loving plants for some of our newer members.

Our grateful thanks go to our leader, Stephen Clarkson, and to Sue Grayston, for suggesting this venue.

KEN SOUTHALL

Chiltern Gentian

Photo: David Caals

DANCERS END, AYLESBURY
15th AUGUST

Nine of us met on a warm sunny day at this Berks, Bucks and Oxon Wildlife Trust reserve in the Chilterns. We started with an introduction by the volunteer warden, who explained that this was one of the oldest reserves in the area and had been set up by the Rothschilds. We then set off to examine a small chalky dell, which had formerly been used as a reservoir. Here we found such typical chalk-loving species as Yellow-wort (*Blackstonia perfoliata*), Common Milkwort (*Polygala vulgaris*), Fairy Flax (*Linum catharticum*) and Eyebright (*Euphrasia* sp). Our discussions as to exactly which *Euphrasia* species this was were inconclusive – we will have to wait for the forthcoming BSBI handbook! However we did have a very informative demonstration of the key features of Chalk Knapweed (*Centaurea debeauxii*), particularly the shape of the undivided part of the phyllaries. The Milkwort also received close inspection, noting the anastomosing veins of the inner sepals and the absence of any leaf rosette, these characters separating it from Chalk Milkwort. Undoubtedly though the star performer of the morning was the Chiltern Gentian (*Gentianella germanica*), of which we saw several handsome specimens. After duly admiring these we returned to our cars and drove to the Cholesbury and Hawridge Common for lunch. Although the Common is only a mile or so from the Dancer's End reserve it is quite acidic, being on Clay-with-Flints. We began the afternoon by examining two ponds. The first had Curly Waterweed (*Lagarosiphon major*) and the dreaded New Zealand Pigmyweed (*Crassula helmsii*), while the second produced Thread-leaved Water-crowfoot (*Ranunculus trichophyllus*). Our main goal however was to see Common Blue-sowthistle (*Cicerbita macrophylla*) down a nearby lane, recently discovered at its first site in Bucks – a great way to round off the day. Many thanks to Janet & Gwyn John for organising everything!

ROGER HEATH-BROWN

SMITHILLS, BOLTON
17th AUGUST

A group of us, mostly from Branch N3, joined up with Lancashire Botany Group for a very pleasant day in the field, walking around Smithill Hall and Smithills Country Park not far from Bolton, Lancashire. It is now owned by the Woodland Trust, is their largest site and includes grassland and woodland. The meeting also doubled as a recording session. The weather was fortunately sunny and warm. We were helped by a species list, which Julie Clarke our leader had provided, of approximately 150 species and we eventually found most of them. As usual, much time was spent in and very near to the car park, where a dock in seed was thought to be a hybrid and Julie took a specimen back for further

investigation. A grassy area near the formal gardens of Smithill Hall interested us for some time, finding Marsh Cudweed (*Gnaphalium uliginosum),* Parsley Piert (*Aphanes arvensis),* which helpfully had fruit and Selfheal (*Prunella vulgaris),* plus a grass that turned out to be Squirreltail Fescue *(Vulpia bromoides).* An area away from the formal gardens proved worthy of examination as there were several plants naturalized, including Indian Rhubarb (*Darmera peltata).*

A stream contained Water Pepper (*Persicaria hydropiper),* while a grassy area had several *Potentilla* plants, in full flower. Close examination revealed them to be Hoary Cinquefoil (*Potentilla argentea).* Nearby a hybrid Woundwort plant was in flower (*Stachys sylvatica* x *S. palustris* = *S.* x *ambigua)*. Several yellow Asteraceae were seen leading to much discussion and we finished by walking along a quiet track with Sneezewort *(Achillea ptarmica),* Marjoram *(Origanum vulgare)* and Common Knapweed *(Centaurea nigra).*

As always, many thanks to Julie for her time and expertise.

PAULINE GRIMSHAW

THE BSBI/WFS PRESIDENTS' AWARD

The Presidents' Award is an annual award made jointly by the Presidents of the Botanical Society of Britain and Ireland and the Wild Flower Society. Its origins lie in the mid-1990s, when an anonymous donor generously gave £4,000 to fund an award of £200, to be made "annually, if merited". The award was "to acknowledge the most useful contribution to the understanding of the flowering plants and ferns of the British Isles through a book, major paper, discovery or outstanding exhibit during that calendar year".

The first award, for 1994, went to Eric Clement and Sally Foster for their book *Alien plants of the British Isles.* In 2017 the then Presidents, John Faulkner and Sir Ghillean Prance agreed that the scope of the award should be extended to include the software of a database and the 2016 Award was presented to Tom Humphrey for his work on the BSBI Distribution Database (DDb).

Since 1996 the Award has been presented (or announced if the recipient was unable to attend) at a major general meeting of each society alternately. As well as the financial reward each recipient is given a certificate signed by both Presidents. From the beginning, the certificates have been prepared by Gwynn Ellis and the fund has been managed by BSBI's Treasurer.

The following table lists the recipient (s) for each year since 1994 and displays the subject or title of their work, the occasion and date of the presentation and the names of the Presidents of the two societies in the year for which each award was made.

JOHN SWINDELLS &
DAVID PEARMAN

Year	Recipient(s)	Subject/title	Occasion of Award.	BSBI President*	WFS President*
1994	Clement, Eric J. & Foster, M.C. (Sally)	*Alien plants of the British Isles*	Announced at BSBI AGM 13 May 1995 (Dublin) but recipients could not attend.	Franklyn M. Perring	Violet V.C. Schwerdt
1995	Preston, Chris D.	*Pondweeds of Great Britain and Ireland*	BSBI AGM 11 May 1996 (Kew)	David A. Pearman	David J. Bellamy
1996	Mabey, Richard	*Flora Britannica*	Announced at BSBI AGM 17 May 1997 (Dorchester) and (?) at WFS AGM 8 November (Birmingham).	David A. Pearman	David J. Bellamy
1997	Green, Paul R., Green, Ian P. & Crouch, Geraldine A.	*The atlas flora of Somerset*	WFS AGM 7 Nov. 1998 (Commonwealth Institute, London)	David A. Pearman	David J. Bellamy
1998	Kitchener, Geoffrey & McKean, Douglas	Work on *Epilobium* hybrids published in *Watsonia* **22**: 49-60 (1998) 'Hybrids of *Epilobium brunnescens* (Cockayne) Raven & Engelhom (Onagraceae) and their occurrence in the British Isles'	BSBI AGM 8 May 1999 (Royal Pharmaceutical Society, London)	Mary Briggs	David McClintock
1999	Marren, Peter	*Britain's rare flowers*	WFS AGM 4 Nov. 2000 (Commonwealth Institute, London)	Mary Briggs	David McClintock
2000	Rodwell, John S.	The National Vegetation Classification published in *British plant communities* vols. 1-5	BSBI Annual Exhibition Meeting 24 Nov. 2001 (NHM, London)	Geoffrey Halliday	David McClintock
2001	Rhind, Peter & Evans, David	*The plant life of Snowdonia*	WFS AGM 9 Nov, 2002 (Oxford)	Geoffrey Halliday	Richard S.R. Fitter
2002	Preston, Chris D., Pearman, David A. & Dines, Trevor D.	*New atlas of the British and Irish flora*	BSBI AGM and Conference 8-12 May 2003 (Camborne, Cornwall)	Richard D. Pryce	Richard S.R. Fitter
2003	Blamey, Marjorie, Fitter, Richard & Fitter, Alistair.	*Wild flowers of Britain and Ireland*	WFS AGM 6 Nov. 2004 (York)	Richard D. Pryce	Rodney M. Burton
2004	Averis, Alison, Averis, Ben, Birks, John,	*An illustrated guide to British upland vegetation*	BSBI AGM 14 May 2005 (Ferryside, Carmarthenshire)	Richard D. Pryce	Ghillean T. Prance

	Horsfield, John, Thompson, Des & Yeo, Marcus				
2005	Crawley, Michael J.	*Flora of Berkshire*	WFS AGM 11 Nov. 2006 (Southwark, London)	Richard J. Gornell	Ghillean T. Prance
2006		NO AWARD MADE		Richard J. Gornell	Ghillean T. Prance
2007	Evans, Trevor G.	*Flora of Monmouthshire*	Announced at WFS AGM 8 Nov. 2008 (Southwark, London)	Richard J. Gornell	Ghillean T. Prance
2008	Mears, Ray & Hillman, G.	*Wild food*	Announced at BSBI Spring Conference 10 May 2009 (Berwick-upon-Tweed)	Michael E. Braithwaite	Ghillean T. Prance
2009	Poland, John & Clement, Eric J.	*The vegetative key to the British flora*	WFS AGM 4 Sept. 2010 (Swanage, Dorset)	Michael E. Braithwaite	Ghillean T. Prance
2010	Chater, Arthur O.	*Flora of Cardiganshire*	Announced at BSBI AGM 18 June 2011 (Galway)	Michael E. Braithwaite	Ghillean T. Prance
2011	Boon, Christopher R.	*Flora of Bedfordshire*	WFS AGM 8 Sept 2012 (Ainsdale, Lancs.)	Ian R. Bonner	Ghillean T. Prance
2012	Greenwood, Eric	*Flora of north Lancashire*	BSBI AGM 12 June 2013 (Beaumaris, Anglesey)	Ian R. Bonner	Ghillean T. Prance
	and Forbes, Ralph S. & Northridge, Robert H.	*The flora of County Fermanagh*	BSBI Irish AGM 14/15 September 2013 (Killarney)	A. Ian Denholm	Ghillean T. Prance
2013	Edgington, John	*Who found our ferns? A history of the discovery of Britain's ferns, clubmosses, quillworts and horsetails*	WFS AGM 6 September 2014 (Bethnal Green, London)	A. Ian Denholm	Ghillean T. Prance
2014	Sell, Peter & Murrell, Gina	*Flora of Great Britain and Ireland* (Vol. 2 of 5 published in 2014)	Announced at BSBI AGM 28 November 2015 (NHM, London)	A. Ian Denholm	Ghillean T. Prance
2015	Stace, Clive A. & Crawley, Michael J.	*Alien plants* (New Naturalist 129)	Announced at WFS AGM 3 September 2016 (Juniper Hall, Surrey). At the last minute neither recipient could attend.	John S. Faulkner	Ghillean T. Prance
2016	Humphrey, Tom	BSBI's Distribution Database (the DDb)	BSBI Welsh AGM 6 June 2017 (Holywell, Flintshire)	John S. Faulkner	Ghillean T. Prance

BOOK REVIEWS

The Discovery of the Native Flora of Britain and Ireland: David Pearman. BSBI (2017). 488pp, b&w illustrated. ISBN 978-0-901158-52-29

We all spend time with national and county floras of Britain and Ireland, and take their existence for granted, but do we ever wonder where it all started, and who first listed the 'British flora'? The chances are that is *terra incognita* for most of us. It's fairly easy to look up the meaning of scientific names in works such as D.Gledhill's *The Names of Plants,* and there are rich sources concerning English names in Geoffrey Grigson's *The Englishman's Flora* and the more recent *Flora Britannica* compiled by Richard Mabey, but none of these reveal when *all* our plants were first recorded, or who recorded them. County floras often give this information for local specialities, but there has never been one specific reference book covering our entire flora.

Botanists working on local floras, on rare plant registers, and on conservation legislation have long needed such a book. Status, whether a plant is *native* (here since the ice retreated), an *archaeophyte* (introduced by humans accidentally or on purpose, before AD1500), or a *neophyte* (introduced since the discovery of the Americas), matters as conservation decisions in times of inadequate funding use nativeness in difficult evaluations – older being better . It will be wonderful having a reliable go-to book available.

'First Records' is a fascinating subject with many surprises. Iconic wild flowers such as Fritillary (*Fritillaria meleagris),* perceived as being sublimely British, are actually quite late arrivals. Fritillaries were not confirmed till 1737, an odd oversight for such a beautiful flower which grows in vast populations. Now we have a scholarly and beautifully organised book which gives insight into such mysteries. When I heard of its publication I knew that it would be good to dip into for occasional queries, and its clear layout makes this a pleasure indeed, but I had not expected the depth of rich interest which it would offer.

Incredibly, over 80% of the basic species of Britain and Ireland were discovered by about 1700. Early botanists (names such as Ray, Turner, Lyte and Gerard) laid down what David Pearman calls 'such a firm foundation in blending science and fieldwork' that much of the flora was recorded in the 16th and 17th centuries. Of necessity these are written records – very few herbarium specimens exist – but they date from 'almost the dawn of printing', starting with a book by William Turner from 1538. There are of course earlier mentions of plants, some in documents by monkish apothecaries, but these present the problem of how to tell whether the plant described was in a garden or collected from the wild. It was not till nearly the middle of the 16th century that the works of earlier herbalists, who were

'concerned with 'useful' plants', were joined by those of successors who 'aimed to describe all plants, whether useful or not'.

Difficulties of interpretation, sources and the criteria used in researching the book are clearly explained in introductory sections, and there are five appendices including 'Herbals and Floras', 'Histories of Botany and Biographies', and a wonderful 'The Botanists – the discoverers of our Flora' listing all who have had the incomparable honour of finding something 'New to Britain or Ireland', and which plants they found.

This is so much more than a useful reference book – I can see countless happy hours ahead mining it for treasure. It's beautifully produced, the handsome hardback cover with a lovely Sowerby picture of *Astragalus alpinus*, and with small reproductions of sample pages from key early books scattered through the species accounts. If like me you are a sucker for 'not many people know that' nuggets of information, this is one of the ultimate source books, and will help to make us better botanists as well!

RO FITZGERALD

The Wild Flowers of the Isle of Purbeck **Second Edition:** Edward A. Pratt. Brambleby Books (2017). 370pp, colour and line illustrated. ISBN-13:978 1908241 450

There are many reasons to recommend this book, but I'm choosing to begin with the author, because the Rev. Edward Pratt ('Ted' to his many friends in the Wild Flower Society), is one of the society's treasures! Not only is he a very fine botanist, but his long membership, and the help and support he has given to countless members in his role as branch secretary, has been of sterling worth. Some members may already know the first edition of his book (published in 2008), because it is essential for botanising in this wonderful part of Dorset, and this new edition will enhance a visit still further.

Purbeck is a wonderful area with widely differing habitats. There are chalk cliffs, limestone ridges, ancient grasslands, and some of the best remaining raised bogs in lowland England. There are glorious rarities such as the Marsh Gentian (*Gentiana pneumonanthe)*, and the extensive heaths and bogs have a wonderful range of heathers, including Dorset Heath (*Erica ciliaris*). The long-term stable habitat conditions have allowed hybrids to develop, which may be an intimidating concept, but working them out is exactly the kind of problem this book can help with. The Dorset Hybrid Heath (*Erica* x *watsonii* = *E.ciliaris* x *E. tetralix*) will soon become as possible to spot as its much commoner Cross-leaved Heath parent! Difficult plants throughout have meticulous notes, and sometimes a helpful line-drawn detail.

Purbeck can be a great experience for botanists, and the essence of this local flora is the real help it offers visitors. It's not just a list of the plants

in the area, but gives careful and detailed information on how to identify them and where to find them, together with fascinating background material. Land history and geology have brief clear explanations, often further extended in the species notes. For experienced botanists it's an excellent *vade mecum,* having a sensible handbook format, and giving access to sound information on plant distributions and diagnostic details. For beginners too there's plenty of supportive advice - how to use the book, necessary equipment, useful books to get, there's even a section called 'Half-day Closing' on plants which can disappoint photographers by not opening in the afternoon! The Warnings section brings in Good Behaviour in the countryside (controlling dogs, not trampling fragile habitats) as well as avoiding Lyme Disease or falling off a cliff. New in this edition are three sections (each with a map) on Flower-Rich Locations, Suggested Walks, and most delightfully a Calendar of Special Sights giving treats for each month of the year. Planning a Purbeck holiday will never have been easier!

The Wild Flowers of the Isle of Purbeck is written with great knowledge, and with even greater love of this special area. This new edition, with additional species and even more information and thoughtful advice will make it very easy to follow one of the suggestions in the introduction, which is simply headed 'Enjoy Yourself'!

RO FITZGERALD

Wild Flowers of Kent Downland. A Photographic Guide. Heather Silk. Private publication (2017) 64pp Colour Paperback ISBN-13: 5028745145720

Following her previous publication on the *Wild Flowers of Dungeness,* Heather has now produced a wonderfully illustrated book on the *Wild Flowers of Kent Downland*. This covers 70 species of plant that can be found along the chalk backbone of the North Downs from Sevenoaks to Dover. Each plant description is accompanied by a number of stunning photographs. The plant is shown in its habitat and in many cases there is a close-up of the flower or seed-head, giving finer detail and exemplifying the key features needed for identification, such as the detail of the hairy leaves and blunt sepals in Hairy Violet (*Viola hirta)* or the black glands on the sepals of Hairy St. John's-wort (*Hypericum hirsutum*). The quality of the photos is excellent as can be seen by the illustration of the Common Eyebright (*Euphrasia nemorosa*) on the back cover of this magazine and those accompanying Heather's article on pages 8 and 9, which are taken from the book. A brief written description accompanies each of the 70 species, giving additional details such as height, flower description, nature of stems and leaves, finer habitat detail and flowering time. I particularly like the extra little snippets that are added to the description relating to the possible origin of the English or Latin name or the use of the plant by

specific insects. The plants are sorted by flower colour rather than by plant family and for those unfamiliar with botanical terminology there is a short glossary to the important terms. This is a private publication and Heather plans to donate any profits to local conservation organisations.

Books can be obtained from :

www. sumerfieldbooks.com

Cost £6.99 + p & p

ANNE KELL

OBITUARY
LORNA HOLLAND

Lorna Holland died on 9 January 2018 of cancer, aged 84, having said her family farewells three days before.

She, with Derek, put in much work for the WFS, collating with enthusiasm the Spring Week Hunt (formerly the First Hunt) results from 2001 to 2016, and achieving some national attention in 2006, when it was realised, through a joint venture between the WFS, the Woodland Trust and the Centre for Ecology and Hydrology, that the records of first flowerings maintained by Lorna and Derek, forming part of a sequence back to the 1920s, were of value to the study of phenology in relation to climate change. She participated also in the other seasonal WFS Hunt activities, as well as submitting a Valhalla diary up to the end of 2012. She was a good photographer, a winner in the WFS photographic competitions, especially through her pictures of Greek plants and their settings; and her photographs also appear in the Kent rare plant register, to which she contributed records. She was a founder member of the Kent Botanical Recording Group.

As a child, she experienced the Blitz in London, her family having moved there from Pontypridd. She studied at the Royal College of Music, becoming a professional flautist, and later taught music, both for this instrument and the piano. She married young, but the marriage did not last. Subsequently she met Derek on a holiday with her children in what was then (1970) Yugoslavia. They married in 1972 and lived at Teston, where she and Derek became, and remained, fully involved with the local community. There were many active strands to her life, not just botany. She continued music teaching at Teston and was heavily involved with Weight Watchers – not that she needed to watch her own at all, but she helped hundreds of people towards achieving their health and fitness goals. With Derek, she was devoted to getting the most out of their holidays. These included regular trips to the Gower and, above all, the Greek Islands, especially Simi in the Dodecanese. There she made a study of the island flora, finding in the course of over 30 years' visiting many species new to the island. She learned to speak and write Greek effectively and felt strongly the

attraction of Greek life: the song O Kaimos epitomised this for her, and was one of her choices of music for her memorial service. Lorna and Derek also visited New Zealand on a number of occasions, where her daughter had moved, and took great interest in the plants there. Retirement did not slow her down and in addition to maintaining her botanical interests she was a National Trust volunteer, a Speedwatch community volunteer and very much involved in her garden and keeping up with her family, extending to great grandchildren.

She was good company at botanical meetings, generous with information regards records, caring and hospitable. She will be much missed, and we send our condolences to Derek, her children and their families.

GEOFFREY KITCHENER

WFS AND DATA PROTECTION

The General Data Protection Regulation comes into force on 25 May 2018 and will apply to WFS as an organisation which collects, stores and uses personal data, in particular the names and addresses of members. The Executive Committee has been looking at the implications of this. In particular, we have had to identify our lawful bases for processing data. We consider that these are legitimate interests and legal obligations. Legitimate interests can be those of the WFS or your interests as members. It is appropriate where people's data is used in ways they would reasonably expect and have minimum privacy impact. This would, for example, cover using members' addresses to send them our Magazine. The main example of a legal obligation is the responsibility we have to retain records in support of our claims for Gift Aid payments from HMRC.

A full explanation of how we look after personal data and your rights in relation to this will be included in our Privacy Notice to be published on our website by 25 May. A paper copy can be obtained from me and any other queries should be referred to me.

ROBIN BLADES

PHOTOGRAPHIC COMPETITION 2018

Details and rules of the Photographic Competition were published in the Yearbook. The deadline for submission of images for this year's competition is 21st August. Please send your photos to Ken Southall, Aspen Cottage, Nettlestead, Ipswich, Suffolk IP8 7BB

Start taking your photos now!