

A circular wreath of various wildflowers and plants surrounding the text "The WILD FLOWER Society". The wreath includes a pink rose, a white morning glory, a purple thistle, a yellow crocus, a green bellflower, a white snowflake, a red holly, and a green bellflower. The text is centered within the wreath in a serif font.

SPRING 2024

WILD FLOWER MAGAZINE

Published four times a year by the Wild Flower Society

Presidents: 1886-1948	Mrs E.V. Dent, O.B.E.
1948-1956	Miss H.S.A. Dent
1956-1994	Mrs C.M.R. Schwerdt, M.B.E. (nee V.V.C. Dent)
1994-1997	Prof. D. Bellamy, O.B.E.
1997-2000	Mr D. McClintock
2000-2002	Mr R.S.R. Fitter
2002-2003	Mr R.M. Burton
2003-present	Prof. Sir Ghilleen Prance, F.R.S.

SPRING 2024

Registered Charity No: 271694

No:527

President's Letter		1
Editorial		2
Notices		3
Field Meeting 2023	Pembrokeshire	4
Autumn Hunt 2023	Preston, Lancashire	6
WFS Grant Recipient	Upland heathland management	8
		10
Autumn Hunt 2023	Danbury Essex	13
Autumn Hunt 2023	Secretary's Report	16
Field Meetings	Mitcham Common, South London	21
	Silverdale, Lancashire	24
	Insh Marshes, Highland, Scotland	25
	Strathdearn, Highland, Scotland	27
	River Tay, Perth, Scotland	28
	Glenshee, Scotland	31
	Knocking Hoe, Bedfordshire	35
	Hightown, Sefton Coast, Merseyside	36
	Coalhouse Fort, Tilbury, Essex	38
	A walk along the River Gipping, Suffolk	39
Book Reviews		41
Obituary	Bill Hawkins	43

PRESIDENT'S LETTER

It is always exciting to read about the discovery of new species of plants. This is now a very rare occurrence in the British Isles. It is usually another apomictic species of *Taraxacum* or *Hieracium* or a new alien species now able to flourish here because of the changing climate. The list of 74 new plant species from around the world that was recently announced by the Royal Botanic Gardens, Kew, for 2023 has some particularly interesting species in it. The list includes a *Dendrobium* orchid growing at the summit of the extinct volcano, Mount Nok, on the Indonesian island of Waigeo, and a *Pinanga* palm in Borneo that bears the bright red fruits and flowers largely buried underground. The new species in the mint family *Crepidorrhodon droseroides* has sticky hairs that trap insects. You will recognise the species name *droseroides*, which refers to the sundew-like habit of this new species, thought to be the first carnivorous plant in the mint family. If that is proved, it will be an example of the evolution of insectivory in a plant family hitherto unknown for that trait.

I was particularly interested in the two new species of underground trees, in which only the flowers and leaves emerge above the sandy soils of the Kalahari Desert. This adaptation is seen in sandy and savanna habitats where fires occur. The branches of these trees are underground and thereby well protected from fire. The two new species are members of the bean family, *Baphia arenicola* (meaning sand-loving), and *Cochlospermum*

adjanyae in the *Bixaceae* or annatto family, which has bright yellow flowers appearing through the sand. I am very familiar with other large trees of the genus *Cochlospermum* that grow in South America, where this type of underground forest also occurs in the fire-prone Cerrado region of Brazil. Here, some of the species of the plant families I study have adapted to fire by predominantly living underground. One example is the rhea fruit (fruta da ema) or *Parinari obtusifolia*, in the Coco-plum family, which I have studied for many years. This species has extensive underground trunks and branches. The leaves, fruits and flowers emerge after a fire and the fruits are a favourite food of the large ostrich-like rheas that also inhabit the Cerrado region and disperse the seeds.

The Kew list also contains 15 new species of fungi, three of which are from Antarctica, a continent almost devoid of flowering plants. This exciting list of new species of plants and fungi was accompanied by a stark warning from the Kew scientists that about three-quarters of undescribed species of plants are threatened with extinction and that these new finds need immediate protection. We send rockets to explore the moon, but we still have not yet finished discovering the wonders of our own planet and we certainly have not developed adequate protection for our plants and animals, whether at home in the UK or in the rainforests of Indonesia.

GHILLEAN PRANCE

PRESIDENT'S LETTER (Continued)

The photos are of two species of the genus *Parinari* (Cocoa plum family - Chrysobalanaceae) that have evolved from a genus of predominantly large forest trees to live underground in fire prone habitats of both South America and Africa.

'A' - *Parinari obtusifolia* of the Cerrado region of Brazil, showing the underground roots and above ground leaves and flowers.



Pictures:
Ghilleen Prance

'B' - a herbarium specimen of *Parinari capensis* from the Kalahari sands of Africa, which, like the two recently described new species, has evolved an underground habit in that region.



EDITORIAL

I have been pondering whether or not to change the general appearance of the text within the magazine. My own personal preference would be to see full justification - that is, both the left and right columns finishing vertically straight. My suggestion was put to the Committee members for their opinions and their replies were equally divided. Thank you to those who also gave me their reasons for a change or not. I have decided to trial the change in a later issue.

When I first took on the editorship I was very worried that there would not be enough copy coming in to fill the relevant magazine pages. How wrong I was! On the contrary, upon receipt of some of the longer reports, I have had extreme difficulty in being able to fit some of them into the space available. With this in mind, could I ask that, if at all possible, the reports could be kept to a reasonable length.

Please note, the pictures within the magazine with no accreditation have been taken by me.

KEN SOUTHALL

Our special memories of the late
WFS member Bill Hawkins



EDITORIAL (Continued)

On a wonderful week-long trip to the Isles of Scilly, Bill was always pleading with us to keep up with him as the leader. We had loads of fun teasing him and he took the teasing well. Here he is with wife Carol on a 2010 WFS trip to Guernsey, tucking into fish and chips. We remember his

outstanding botanical knowledge and his willingness to share this with us all. We will miss his wonderful anecdotes about botanising in Scotland. We certainly won't forget his daring exploits to reach seemingly unreachable plants!

SUE & KEN SOUTHALL

NOTICES

THE ANNUAL PHOTOGRAPHIC COMPETITION

The photographic competition has always been an integral part of the AGM Members' Weekend, this year on 6th – 9th September 2024 at Hunstanton, Norfolk. You do not have to attend the AGM to participate in the competition. Please note, the last day for receipt of entries is Friday 16th August 2024. Entries are to be sent digitally (jpegs at full resolution) to Ken Southall; email: ken.southall@btinternet.com Full details of the competition can be found in the 2024 Year Book on pages 31-32 and on the WFS website.

Note: The 'Shoot and Show' element of the competition has been cancelled. -

WEDNESDAY 29th MAY:- NEW BUCKENHAM, NORFOLK

Leader: Carol Hawkins

This was a favourite botanical location of Bill Hawkins, a long-standing member of the WFS, for whom this is a Memorial Meeting.

Meet at 10:30 at the small car park, by a children's play area, (TM090906; what3words: zaps.shift.ideas). New Buckenham Common is one of the finest areas of unimproved grassland in Norfolk. Its early summer display contains a rich variety of wild flowers, including (most years), a magnificent display of Green-winged Orchids *Anacamptis morio*. The village itself is very attractive, with many lanes to explore.

To book, contact Janet John (wfs.meetings@gmail.com) or phone 01753 884490.

CORRECTION TO THE 2024 YEAR BOOK:

On pages 34 & 35, please insert the following to replace the duplicated 10km Square Study North:

10km Square Study South. Jill Oakley, 20, Upper Heyshott, Petersfield, Hampshire, GU31 4QA. email: jill.oakley20@gmail.com

The 2024 password for the Members' page of the website is speedwell4

Copy date for the Summer magazine: 1st May 2024

FIELD MEETING 2023

PEMBROKESHIRE, 5th AND 6th AUGUST

Day 1:

Freshwater East is a bay in the Pembrokeshire Coast National Park, with a sandy beach, dunes and old red sandstone cliffs that are an SSSI for geology. We met our leaders, Vicky Tomlinson and Gordon Lewis, at the beach car park. Vicky told us about the history of the area, which became popular for recreation between the First and Second World Wars. Between the car park and the beach we saw Sea Radish *Raphanus raphanistrum* ssp. *maritimus*, Soapwort *Saponaria officinalis*, Lesser Meadow-rue *Thalictrum minus* and Burnet Rose *Rosa spinosissima*. There was also a large patch of Winter Heliotrope *Petasites pyrenaicus*, an invasive non-native which the National Park controls with herbicide. Only the male plant is found in the UK. Field Scabious *Knautia arvensis* and Wild Carrot *Daucus carota* were also present, as were the dried seed-heads of Ivy Broomrape *Orobanchae hederaceae*. Marram Grass *Ammophila arenaria* was planted in the 1980s to prevent erosion following sand extraction. Narrow-leaved Everlasting-pea *Lathyrus sylvestris* and Rock Samphire *Crithmum maritimum* were growing on the cliffs at the south end of the beach. On the cliffs at the north end, where a stream flowed down to the beach, were Brookweed *Samolus valerandi* and Water Figwort *Scrophularia auriculata*, both in flower, and leaves of Colt's-foot *Tussilago farfara*.

On the beach we saw Sea Holly

Eryngium maritimum, Sea Sandwort *Honckenya peploides*, Sea Spurge *Euphorbia paralias* and Sea Rocket *Cakile maritima*. Vicky showed us some pebbles from the beach containing crinoid fossils.

We had lunch on the dunes, where we found Sand Sedge *Carex arenaria* covered with the smut *Anthracoidea arenariae* (a fungal disease), Viper's-bugloss *Echium vulgare*, Carlina Thistle *Carlina vulgaris*, Squinancywort *Asperula cynanchica*, Lady's Bedstraw *Galium verum* and the invasive Sea Buckthorn *Hippophae rhamnoides* and Montbretia *Crocasmia x crocosmiiflora*. Purple Loosestrife *Lythrum salicaria*, Water Mint *Mentha aquatica* and Marsh Pennywort *Hydrocotyle vulgaris* were growing in a dune-slack inundated in winter.

Next, we went inland to the Secret Marsh Nature Reserve, where there were Alder Tongue Galls *Taphrina alni* on Alder *Alnus glutinosa*, then up to the headland, where we saw Sheep's-bit *Jasione montana* and Thrift *Armeria maritima*.

The meeting ended with a tea-break at Trewent Park, where we were entertained by the House Martins *Delichon urbica* which were nesting on the chalets. Thanks to Vicky Tomlinson and Gordon Lewis for leading the walk.

JANE LOWE

Day 2:

Castlemartin Range is a Ministry of Defence (MOD) site and access had

been negotiated through the Pembrokeshire Coast National Park. We assembled at the camp-gates to sign forms, as permission is required for access. The plan was to travel by minibus along a coastal track running from St. Govan's Head in the eastern section of the Range to reach Linney Head in the western section.

Castlemartin Range occupies an extensive area of heathland over carboniferous limestone and has a coastline displaying wonderful geological features. Gordon Lewis and Vicky Tomlinson, our leaders, gave us an excellent guided tour encompassing the geological features, the long history of the area and its more recent military use. St. Govan's Head, exposed to the strong southwesterlies, had a stunted vegetation dominated by the purple of Bell Heather *Erica cinerea* and the yellow of Western Gorse *Ulex gallii* in full flower. Diminutive Cat's-ears, Hawkbits and Centauries *Hypochaeris*, *Leontodon* and *Centaureum* spp. tested group members' identification skills. Views from the headland were extensive towards Tenby, Manorbier and Lundy.

St. Govan's Chapel was our next stop and was accessed by descending a steep flight of around 75 to 77 steps, with everyone counting a different number going down from coming up! On the cliffs at the bottom was Rock Sea-lavender *Limolium* sp. and Golden-samphire *Limbardia crithmoides*, both in full flower.

Continuing by minibus past Huntsman's Leap, we were able to inspect one of the several Iron Age

forts which festooned this coastline. We had excellent views of the collapsed arch of Moody's Nose. As we entered the Western Range, we also had excellent views of the famous Green Bridge of Wales, although in recent times the natural arch has collapsed. Lunch was taken at the Wash, a rocky inlet which is within the more restricted area of the Western Range. Gordon and Vicky had a selection of leaflets that illustrated the development of the geology of the region and were able to show us excellent examples of coral fossils.

Target of the Day was Goldilocks Aster *Galatella linosyris*. Fortunately, we had good grid references for the site for this rare plant and a number were found low growing on the coastal heath and in good flower. Driving on with several intervening stops we reached Linney Head, with views towards Grassholm, Skokholm and Skomer. Some participants had memories of eventful trips to these islands in the past.

The trip finished with a tour of a historic farm development which had become derelict when the land was requisitioned for use by the Castlemartin Range. This was a wonderful experience of a very special bit of the British coastline and not to be missed. We are very grateful to the Pembrokeshire Coast National Park and to Gordon Lewis and Vicky Tomlinson for a wonderful day.

PETER HILTON

AUTUMN HUNT, PRESTON, LANCASHIRE, 28th OCTOBER

*"Full many a flower is born to blush
unseen and waste its sweetness on
the desert air"* Thomas Gray

Our friendly group met up by the River Ribble in Preston. A treasure trove of over 80 flora in flower lured us through urban grassland, public parks, old tramway and scrub. Bystanders looked on as we knelt (ouch) to examine the riverine flora... such as...the intricacies of the leaves of Autumn Hawkbit *Scorzoneroideis autumnalis*, named after the Old French for snake.....the colours of Mexican Fleabane *Erigeron karvinskianus*...

*"I believe a leaf of grass is no less
than the journey work of the stars"*
Walt Whitman

...or the abundance of Water Bent *Polypogon viridis* (Greek *Polypogon* = much bearded)....Wild Carrot *Daucus carota*, first found 5,000 years ago in what is now Afghanistan and carried by Arab traders on their travels. Varied in colour from yellow, green, red and white to black, the modern variety was cultivated by Dutch growers in the 16th century and adopted as the royal vegetable of the House of Orange.

...Sun Spurge *Euphorbia helioscopia*. Spurge leaves exude a milky sap when broken which is an irritant.

...White Dead-nettle *Lamium album* smiled at us from the path-side. Not one of the nettle family, but a mint with square stems. It has no sting, so making it 'dead'.

...Shaggy-soldier *Galinsoga quadriradiata*, as opposed to Gallant-soldier *Galinsoga parviflora*, named after the Spanish botanist Don Mariano Martinez de Galinsoga (Wow, what a name!). An unusual *Asteraceae* as it has only 5 rays.

...Common Whitlowgrass *Erophila verna*. Not a grass but an early-flowering crucifer. It was October!

*"There grew Daisies, those pearled
Arcturi of the earth..."* Shelley

...Daisy *Bellis perennis*, from the Old English *daeges eage*, meaning 'day's eye' as it flowers at dawn.

...Ivy *Hedera helix*, a source of nectar for late-flying butterflies and bees, *Hedera* derived from the Greek for "to sit" referring to its roots.

*"The world is full of magic things
waiting for our senses to grow
sharper"* W.B. Yeats

We were joined by ladybirds:
The 7-spot Ladybird *Coccinella septempunctata* and the invasive Harlequin *Haemonia axyridis*.

We pondered Dilated Scalewort *Frullania dilatata*, a liverwort growing on riverside trees...

...and non-flowering plants, such as Grey Cushion Moss *Grimmia pulvinata*.

...Spangle galls on oak leaves caused by the wasp *Neuroterus quercusbaccarum*.

“Heaven is under our feet, as well as over our heads” H.D.Thoreau.

And much more, often watched over by epiphytic lichens such as *Xanthoria parietina*, a nitrophilous lichen that is yellow because of the pigment parietin, which acts as a sunscreen.

“Flowers are the courtship vessels of plants”

Led by Marion Chappell, a lovely day was had by all.

And back home to listen to Delibes’ “Flower Duet” to remind us that:

“In all things of nature, there is something of the marvellous” Aristotle.

OWEN FAWCETT

These photos were all taken by Owen and are in order of the text.



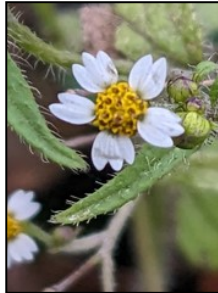
Autumn Hawkbit



Mexican Fleabane



White Dead-nettle



Shaggy-soldier



Ivy



7-spot Ladybird



Harlequin Ladybird



Dilated Scalewort



Grey Cushion Moss



Spangle galls



Epiphytic lichens



The Group

ARTICLES SUBMITTED BY RECIPIENTS OF WFS RESEARCH GRANTS

Dry upland heathland management methods and their effect on vegetation communities

For my MSc dissertation I chose to investigate how different traditional management techniques on dry upland heathland affect the plant communities of this declining habitat. My site was a Country Park in the

Photo: Ruth Calcraft



Clwydian Range hills in northeast Wales, as I wanted not only to bring together what I'd learnt on my course, but also to help inform on-the-ground conservation. The hilltops throughout the Country Park (highest 554m) are heather-clad, with species-poor dry upland heathland habitat dominated by Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus*.

Management of the site has been conservation- focused to improve the condition of the heathland by creating

a mosaic of *Calluna* age and structure, particularly to help increase numbers of resident Black Grouse *Tetrao tetrix*.

Without human management, *Calluna* will complete a well-documented life cycle of four phases: pioneer (3-6 years), building (6-20 years), mature (20-25 years) and, finally, degenerate (25+ years). In its degenerative phase, there is a potential loss of *Calluna*. Therefore, traditional management for Red Grouse *Lagopus lagopus scoticus* shooting or, more recently, for conservation, has looked to halt this succession by returning *Calluna* to earlier, more productive stages of its life cycle through a combination of cutting and/or burning, with or without grazing. Each method affects the vegetation community differently, with both positives and negatives to consider. Burning promotes good regrowth both vegetatively and from seed but can destroy the litter and moss layers in target and non-target areas if the fire is very hot and spreads too far. Cutting *Calluna* with machinery instead is less risky (but more expensive) and is good in building *Calluna* vegetative regrowth. However, older stands need seed germination and this can be inhibited by cut material left on site and the non-removal of the litter and moss layers. Finally, grazing slows *Calluna*'s transition to the next age phase for longer and promotes germination through trampling, but can be damaging if too heavy and ineffective if too light.

These practices which focus primarily on *Calluna* condition, however, affect the vegetation community as a whole, including bryophytes, and therefore the services that the heathland can provide towards achieving other aims such as maintaining biodiversity, carbon storage and combatting nitrogen deposition. These services could be very significant, with carbon storage potential on dry upland heathland thought to exceed that of both grass and wet heathlands. To maximise carbon sequestration, evidence suggests that management needs to allow *Calluna* to mature and a moss layer and litter layer to build up. Meanwhile, bryophytes have a greater ability to absorb nitrogen than dwarf shrubs and could help prevent nutrient-loving species, such as grasses, from outcompeting *Calluna*. I was therefore interested in not only what was growing where but assessing how current management techniques were affecting the ecosystem service potential of this habitat.

I was looking forward to the fieldwork element of my dissertation, although I did manage to select the couple of weeks in July that were full of

thunderstorms! Anyway, I survived being on the top of a hill and enjoyed using 1m x 1m quadrats to survey areas of the heathland within sections of the Country Park managed in different ways: grazed only, grazed and cut, grazed and burnt, cut and burnt and finally not grazed but cut. Shrub height, litter depth and pH were measured and identification and percentage cover of all vascular species, bryophytes and bare ground were recorded. I then statistically analysed the results to identify the similarities and differences between the management areas.

There were some clear results. One showed that the abundance of the key heathland vegetation species, Heather and Bilberry, was not significantly different in any of the management areas. There was also no significant difference in grass coverage either, which was very low in all areas, suggesting that grazing pressure wasn't too high. However, management method did significantly affect vegetation communities as a whole, with the strongest effect seen on the bryophyte communities.

One of the main reasons for these differences appears to be the association of different bryophyte species with litter depth and shrub height, with some adversely affected by increased depth and height and others positively so. Litter depth and shrub height are determined by the management; for example, a hot burn will remove moss mats and litter and leave bare soil, whereas a cutting regime will not damage moss mats as much and not remove the litter.

Photo: Ruth Calcraft



Shrub height will increase with age and therefore the length of time between management cycles will greatly influence how high vegetation gets and the bryophyte community that develops.

Understanding which conditions suit which bryophyte species could be important, as a heathland supporting a variety of species is likely to be more resilient and able to benefit from what the different assemblages can offer. One species, *Hypnum jutlandicum*, for example appears to produce dense mats only 15 years after an intense burn has removed the litter layer, thereby offering protection to the soil. Meanwhile, species assemblage in the older, non-burned and deep litter areas can provide habitat for rare hyper-oceanic lower plants and encourage old *Calluna* to layer, a process of new rooting systems forming on older horizontal stems. Layering of heather could be vital, as it may promote the sustainability of older heathland by allowing degenerate areas to persist

for longer.

This study then may help land managers consider more than just *Calluna* condition when deciding on management and, in particular, take into account the requirements of the bryophyte community in order to maximise the ecosystem services dry upland heathlands can offer and to benefit wider biodiversity. Extending rotation cycles and alternating existing burning regimes with cutting, for example, may allow more time for bryophyte mats to develop to help store carbon and nitrogen whilst still maintaining the health and the vigour of the heathland.

I am very grateful for the support of the Wild Flower Society in carrying out my dissertation. I was also able to attend a bryophyte identification course with the Society, which was a big help with my fieldwork. Many thanks.

RUTH CALCRAFT
ruthesthercalcraft@gmail.com

My summer on the machair

Scattered down the west coast of the Isle of Harris is the machair. A Gaelic

term borrowed by ecologists, the machair describes the calcium-rich coastal meadows unique to northwest Scotland and Ireland. Unassuming in the winter months, by summer the machair comes alive with bursts of colour from a rich succession of wild flowers and something else too. Movement, vibrations and a tickling buzz in your ear - hundreds of bumblebees emerge each summer to feast upon the cascade of flowers and nest in the grassy tussocks nearby. This summer, as part of a



Photo: Claire Whitehead

research project generously funded by the Wild Flower Society, I was lucky enough to travel to Harris for my first experience of the machair's floral succession.

At the end of June 2023, I, and seven other students, travelled up from Glasgow to the Outer Hebrides. The trip was undertaken as part of the Remote Scotland Expedition, which has seen students from the University of Glasgow carry out research in remote Scottish areas since 1936.

Fuelled by a passion for the conservation of UK wildlife and a keen interest in pollinator networks, I decided to lead a project to investigate the diversity, coverage and traits of wild flowers on the machair in addition to bumblebee diversity, abundance and floral choice. With flower-rich grasslands and bumblebees in decline throughout the UK due to agricultural intensification and urbanisation, I felt it was crucial to look at how different

land management schemes impact the floral communities of the machair and how this could affect bumblebee populations. This is especially true of the Moss Carder Bee and Great Yellow Bumblebee, which are priority species in the UK's Biodiversity Action Plan and have one of their last remaining strongholds on the machair. And so, armed with UK wild flower and bumblebee ID books, a notebook, quadrat and GPS, I was excited to get to work.

That first day as I stood on the machair at Seilebost beach with the Atlantic Ocean laid out in front of me, I admit that I felt confused. I was met with dry grassland devoid of much floral diversity and life. At first, my mind jumped to land management, deep ploughing and herbicides as the villains of the story! Then, as I stood on a Hebridean Island in just a pair of shorts and a T-shirt, I thought about the freakishly hot weather that Scotland had experienced in June. I theorised that the UK heatwave might have meddled with the machair! Following chats with some Harris locals, my theory was confirmed. Due to the dry spell, the famous machair floral succession had been delayed! Instead of hindering my project, this presented a perfect opportunity to see the machair change before my very eyes. It was fascinating to see the speed of change following just a few days of rain before the start of July. Suddenly the purples of Marsh-orchids *Dactylorhiza* spp, Selfheal

Great Yellow Bumblebee *Bombus distinguendus* on Spear Thistle *Cirsium vulgare*.
Photo: Claire Whitehead



Prunella vulgaris and Wild Thyme *Thymus drucei* popped up, interspersed with the pinks of Red Clover *Trifolium pratensis* and Red Bartsia *Odontites vernus*, alongside splashes of yellow from Common Bird's-foot-trefoil *Lotus corniculatus*, Kidney Vetch *Anthyllis vulneraria* and Lady's Bedstraw *Galium verum*. And so, the work to document and survey the floral communities began.

I chose five different sites of machair along the west coast of Harris, encompassing three different land use practices: mixed grazed (sheep and cattle), sheep grazed and ungrazed land. In each site, I established five 100m transects parallel to the sea. I then completed surveys along the transects to identify and record the flower species present in each site, their coverage and height. Bumblebee surveys were also conducted along the same transects. In addition, soil samples were collected to measure soil pH. Each transect survey was repeated three times over five weeks and with such a picturesque backdrop to my work, who was I to complain?

By the end of July, I had 4 bumblebee species, 19 wild flower species and around 1,800 data entries and it was time to head home. Analysis of my data revealed a complex relationship between land use, floral diversity and traits, and bumblebee populations on the machair. Firstly, I found greater floral

diversity to have a positive impact on the number of bumblebee species. I suspect that this is because a greater number of flower species has a greater diversity of floral traits (height, corolla depth, colour, scent), which cater to a wider range of bumblebee species, each exhibiting their own specific tongue length, body size and foraging range.

I also found land use to have a vital impact on both floral diversity and bumblebee populations, further underlining the importance of agriculture in mediating plant-pollinator interactions in grasslands. With bumblebee declines linked to agriculture, it might be expected that releasing the machair from human interference would allow recovery and a more diverse ecosystem. However, I found that ungrazed machair had the lowest floral and bumblebee diversity. In ungrazed land, Marram-grass *Ammophila arenaria* was easily able to dominate the machair and outcompete flowering plants popular with bumblebees such as Red Clover and Red Bartsia. This led me to one crucial finding: an intermediate level of disturbance is necessary to keep the machair healthy and diverse. Indeed, the machair is intrinsically linked with human influence, namely crofting, a traditional farming practice carried out on Harris and in northern Scotland more generally. Historically crofters have used the machair for livestock grazing and low-intensity

farming, which promotes the succession of diverse floral communities. The discontinuation of crofting endangers the machair, as do intensified farming practices. Therefore, a happy medium must be achieved. My study found that this is exemplified by mixed grazing for Harris machair.

Whilst on Harris, I also sought to use my project to benefit local communities via effective outreach work. This was a success, with my team and me engaging in a bug hunt and wildlife workshop with the children of Leverhulme Primary School. I hope that we were able to inspire the next generation of naturalists! Another aim was to reach audiences further afield, the success of which can be seen in our collaboration with the Outer Hebrides Wildlife Festival. We shared our wildlife experiences on Harris and the research projects we were undertaking in the Festival's online gallery. I have since kept in contact with the lead organiser of the Festival

to facilitate collaboration for future Remote Scotland Expeditions.

Upon reflection, over the five weeks the project had its challenges but overall was a success! I am particularly proud that I was able to log and confirm the presence of a colony of Great Yellow Bumblebees in a part of the island where they had not been recorded in recent years. As one of the UK's rarest bumblebees, their range expansion is a small but sweet victory for bumblebee conservation. In future, I hope to be able to contribute more to understanding pollinator systems in the UK, whether in research, conservation or both! Lastly, I would like to express my gratitude to the Wild Flower Society for its generous support in assisting me to explore the wild flower communities on the Isle of Harris and for the work that it does to promote the study of wild flowers across the UK.

CLAIRE WHITEHEAD
clairewhitehead2002@gmail.com

AUTUMN HUNT, DANBURY, ESSEX

29th OCTOBER

The week prior to the meeting heralded Storm Babet, with much of the east coast from Scotland down to East Anglia taking quite a hammering, with heavy rainfall and terrific flooding in places. Rivers in Suffolk and Essex broke their banks, fields became a quagmire and wellies were the order of the day. The only saving grace was that the

planned field-meeting was to be held on relatively high, sandy ground so might have been spared the worst of the conditions. The forecast leading up to the meeting was variable to say the least, but by the day before everything looked favourable so the field-trip went ahead. We left home in Suffolk to glorious sunshine; an hour later, as the group of seven hardy

souls gathered, the skies clouded over and the heavens opened. Undeterred, we soldiered on, determined to find as many species in flower as possible for our Autumn Hunt.

lovely show of colour to an otherwise grey day. After the group had dispersed, two of our number decided to venture further and managed to add another seven species to the list, giving a total of 47.

As is usual for a WFS meeting, we scoured the car park first and then the surrounding playing fields, followed by a trip to some allotments and the churchyard. By now we were getting a little damp so ventured inside the church for some welcome shelter (and a bite to eat).

Enthusiasm was beginning to wane as there was no sign of a let-up in the rain so we decided to call it a day having amassed a total of 40 species in flower. Most species were those that might be expected at the tail-end of the year but our most striking find was the Harebells *Campanula rotundifolia* in the churchyard giving a

ANNE KELL



A RANDOM SELECTION FROM THE 2023 PHOTOGRAPHIC COMPETITION

‘Something to laugh about’: Janet John



Corncockle: Sue Southall





Bloody Crane's-bill: Barbara Spense



Dragon's-teeth: Janet John



Ivy-leaved Toadflax: J. Diamond



The Botanist: By Anne Kell

AUTUMN HUNT 2023

Barbara Allen	Lancashire	70
Sheila Anderson	North Kent	95
Caroline Bateman	Surrey	126
Enid Barrie	Norfolk	106
Julie Clarke	Lancashire	110
Stephen Clarkson	Suffolk	73
Rosemary FitzGerald	West Somerset	148
Anthony and Rita Grainger	Yorkshire	100
Sue and Ken Southall	Suffolk	34
Ian Green	Moray and Somerset	153
Anne and Dennis Kell	South Suffolk and North Essex	122
Barbara Mathews	Suffolk	110
Nicki Mottram	Warwickshire	103
Priscilla Nobbs	Surrey	76
Janice Reynolds	East Sussex	88
Dorothy Ross	Northumberland and Lancashire	80
John Swindells	East London	84
Shirley and Anthony Timms, with Helen Nevens	North-east Norfolk	57
Christine White	Northamptonshire	61
Pauline Wilson	South Gloucestershire	97
Allison Singleton and Sheila Mallet (Mind over Madder Team)	Jersey	151
Peter Jepson	Lancashire	101

This season the weather in most parts of the country was mild but wet, however undeterred members ventured out looking for wild flowers. The total number of different plants found by those participants being 497 which was an increase of 63 species compared to 2022. Smooth

Sowthistle *Sonchus oleraceus*, Groundsel *Senecio vulgaris*, Daisy *Bellis perennis*, Yarrow *Achillea millefolium* were found by all participants. Only a few garden escapes were found. These included Snapdragon *Antirrhinum majus* and Aubretia *Aubretia deltoidea*.

Rita and Anthony Grainger were the only recorders of Golden Alison *Aurinia saxatilis* seen in Horsforth. Rita and Anthony visited North Cave Wetlands a Yorkshire Wildlife Trust reserve which is a restored gravel works, part of it still being worked. They were surprised to see a very large clump of Sunflower *Helianthus annuus* on the bank of a wide track used by heavy machinery. Their nicest sighting was of a field of 19 Field Pansies *Viola arvensis* in full flower and just one Yellow-wort *Blackstonia perfoliata*. They also had a single Upright Hedge-parsley *Torilis japonica* which they have never seen before on their Autumn Hunt.

Enid Barrie was the only person to record Dame's-violet *Hesperis matronalis* in flower along a riverbank. When Enid went back "water levels were high, but it was still clinging onto the bank edge!" Enid found her flowers in Wymondham and other Norfolk areas. She also found Wild Clary *Salvia verbenaca* well established

between some cobblestones near a road and railway bridge which had also spread extensively in the grassland of the Abbey grounds. Common Calamint *Clinopodium ascendens* has also spread along a main road pavement edge.

Barbara Allen from St Helens in Lancashire did not cover so much distance as in the previous year but did manage five trips out despite some very heavy rain. She noted that Black Nightshade *Solanum nigrum* seems to have spread around her village and Wild Angelica *Angelica sylvestris* was also a surprise find. Often there was only one flower left on plants which were found near Clock Face village, St Helens.

Sheila Anderson in North Kent has found some species in her area which are not usually in flower at this time of year due to the mild autumn. These include Hedge Bedstraw *Galium album*, Tansy *Tanacetum vulgare*, Chicory *Cichorium intybus*, Common Toadflax *Linaria vulgaris* and White Campion *Silene latifolia*.

Barbara Mathews from Felixstowe persevered through rain and wind getting rather wet without a raincoat in an unexpected shower. Barbara found the week more difficult after so much rain, it was the fourth day before she found a Shepherd's-purse *Capsella bursa-pastoris* that had not gone to seed. Her plants were found mostly from pavements, in gutters and car parks. Similar in number to last year but very different species. Her unusual finds included Squirting cucumber *Ecballium elaterium* known to her Suffolk Recorder, Wild Clary

Salvia verbenaca and Garden Lavender *Lavendula angustifolia* found flowering in a gutter.

Shirley Timmins met with her botany buddy **Helen Nevens** to participate in the Autumn Hunt. They originally met when they were both doing the FSC Botanical Recording Certificate and have stayed in touch ever since, meeting up at least once a year for a botany jolly! They found Dwarf



Mallow *Malva neglecta* and Common Reed *Phragmites australis* in North East Norfolk.

Dorothy Ross did some of her plant hunting whilst on holiday in Boulmer, Northumberland, and near her home in Darwen, Lancashire. She made the comment that many of her usual plants had gone over. Whilst near Embleton Beach, Northumberland, she found a solitary Harebell *Campanula rotundifolia* and a single Burnet Rose *Rosa spinosissima* on the coast at Boulmer. She was pleased with Lesser Swinecress *Lepidium didymium*, also found at

Boulmer, as it was the first time she had seen it this year. Reliable favourites like Red Bistort *Bistorta amplexicaulis* and Fox-and-cubs *Pilosella aurantiaca* were still adding some colour to her local patch in Darwen, where she also found Rose-of-Sharon *Hypericum calycinum* in the town centre.

Anne and Dennis Kell had several walks in South Suffolk and North Essex over the very wet week. They also participated in a meeting at Danbury. Quite a few garden escapes were found, noting that with local authority cutbacks and the road gutters not being cleaned regularly these are now proving to be the perfect habitat. Plants recorded in such areas included Treasureflower *Gazania rigens*, Argentine Vervain *Verbena bonariensis* and Pot Marigold *Calendula officinalis*. The Nettle-leaved Goosefoot *Chenopodium murale* was a new one for them, confirmed by Stephen Clarkson who had previously discovered it in the same place, growing around Ipswich docks.

Nicki Mottram found plants around Kenilworth in Warwickshire to complete her second WFS Autumn hunt. She found a similar number of species but noted that just over a quarter of them were different. The extensive areas of soil disturbances relating to HS2 had resulted in many 'weeds of disturbed ground and cultivation' flowering a bit later than expected. These included Shaggy-soldier *Galinsoga quadriradiata*, Barren Strawberry *Potentilla sterilis* and Corn Spurrey *Spergula arvensis*. Nicki noted that many opportunistic

annuals had been crowded out and the very wet weather experienced recently may have had an effect.

Julie Clarke from Lancashire was pleased to find over 100 flowering plants locally and she also joined a local Branch walk. Julie found Slender Borage *Borago pygmaea* three years ago on a grassy bank in Silverdale and was pleased to see it is still surviving. Small Toadflax *Chaenorhinum minus* had just two flowers showing at Slackhead.

Sue and Ken Southall were disappointed with their autumn hunt completed over two days in Suffolk. This was because of the terrible weather and they hope to do better next year! However, their list was the only one to include Dark Mullen *Verbascum nigrum*. Other finds included Fennel *Foeniculum vulgare* and Perennial Wall-rocket *Diplotaxis tenuifolia*.

Priscilla Nobbs has found it fascinating recording plants in flower each year on the same route and on the same day. This year was her highest total of 76 compared to 2019 when it was 70. Priscilla found Cockspur *Echinochloa crus-galli*, Green Bristle-grass *Setaria viridis* and Peach-leaved Bellflower *Campanula persicifolia* commenting that she may have had more but the council mowers were around and sadly before she reached a wonderful mix of flowers they had been cut. The next day Bungay was flooded as were lots of other places in Suffolk.

Caroline Bateman searched the arable fields in the National Trust

Harewoods Estate in Outwood, Surrey and urban areas in Redhill and Guildford. She also found flowers along the Grand Union Canal in Brentford and the Thames from Isleworth to Richmond. The high tide and heavy rain had led to flooding along the Thames, but Caroline was pleased to see Beggarticks *Bidens frondosa* on the canal bank in Brentford. Many arable weeds were in flower in Outwood including Stinking Chamomile *Anthemis cotula*, Treacle-mustard *Erysimum cheiranthoides* and Sharp-leaved Fluellen *Kickxia elatine*. The Celery-leaved Buttercup *Ranunculus sceleratus* was growing on a pond margin in a farmyard and the Maidenhair Spleenwort *Asplenium trichomanes* was growing on old brickwork at the stables. Jersey Cudweed *Laphangium luteoalbum* was between the cobblestones in Old Palace Yard in Richmond.

Ian Green

Ian flew down to Somerset for a weekend and visited a site for Cock's -eggs *Salpichroa oranifolia*. The last time he saw it was in 1991. He also had a wander around the car park and saw Basil Thyme *Clinopodium acinos*. The surprise species that he had not expected to see flowering in October was Ground-ivy *Glechoma hederacea*. He also had a good time getting out in Moray as well. He was most pleased to see Sulphur Cinquefoil *Potentilla recta* which he has not seen at the site since 1998.

Rosemary FitzGerald

Rosemary writes that plant growth in West Somerset was in quite lush condition after all the rain, but the

winds had had an effect and some reliable species such as Cow Parsley *Anthriscus sylvestris* never appeared. The most dramatic surprise was the Thorn-apple *Datura stramonium* which started coming up in her vegetable patch last year and is now quite a prominent annual weed, though she has no idea how it arrived. She was pleased to find Broad-leaved Spurge *Euphorbia platyphyllos*; there is one especially good arable field near her home and there were about 40 plants in peak condition which was lovely.

Stephen Clarkson has recorded plants local to him in Norfolk, Suffolk and Essex. He has one record of an alien Indian Yard-grass *Eleusine indica* to be found in Cambridge which was pointed out by Alan Leslie. He is involved with the Breckland Plant Group, and he did an end of season count of the two Knawel *Scleranthus* species to be found at Santon Downham in Norfolk, where they found new plants many of which were still in flower.

John Swindells

The records from John are from the London Borough of Tower Hamlets in East London. His most interesting finds were Chinese Chives *Allium tuberosum* which he has known for several years at the base of a wall in Bethnal Green, White Ramping-fumitory *Fumaria capreolata* which was a surprise as it is normally an early flowerer around his area and Johnson-grass *Sorghum halepense* which he has known for many years by the Hertford Union Canal. He was fortunate that the mowing of the towpath vegetation

had not quite reached that stretch of the canal. He also thinks it is the first time he has found Chinese Mugwort *Artemisia verlotiorum* in flower which he was pleased to find.

Pauline Wilson

Ivy Broomrape *Orobanche hederace* had a surprise second flowering in her local shopping centre where she also found Ploughman's-spikenard *Inula conyzae* for the first time. Pauline also found Rough Chervil *Chaerophyllum temulum* and, flowering on the roadside in Bath, was Hemp Agrimony *Eupatorium cannabinum*. All her records were found within two miles of home and a few in Bath ten miles away.

Janice Reynolds

Janice managed to get out for five days and noted that her arable field had been ploughed and re-seeded but she did see Field Woundwort *Stachys arvensis* and Field Madder *Sherardia arvensis*. Within a couple of miles near home in East Sussex she noted Chicory *Cichorium intybus*, Annual Wall-rocket *Diplotaxis muralis* and Tamarisk *Tamarix gallica* and visited Bishopstone, Blatchington, Newhaven and Seaford.

Christina White

The flowers were all seen in Northamptonshire including Rushden and Blisworth. Christina listed Bladder Campion *Silene vulgaris*, Common Valerian *Valeriana officinalis*, Primrose, *Primula vulgaris*, Wild Pansy *Viola tricolor* - all of these were not so common in the Autumn Hunt lists.

Alli Singleton & Sheila Mallet (Mind

over Madder team) Jersey.

Alli writes that Pale Toadflax *Linaria repens* and Common Toadflax *Linaria vulgaris* are rarities in Jersey which they found. The Yellow-flowered Strawberry *Potentilla indica* and Black Horehound *Ballota nigra* were found at new sites with an abundance of Hairy Tare *Ervillia hirsuta* being a real surprise. They also discovered new shoots of Jersey Fern *Anogramma leptophylla* which they would usually start looking for in January. This team also found Thorn-apple *Datura stramonium* and Cape Cudweed *Pseudognaphalium undulatum* much later than they

expected.

Peter Jepson

Peter has seen Gorse *Ulex europaeus*, Western Gorse *Ulex gallii* and Cowberry *Vaccinium vitis-idaea* on Darwen Moor. He also included five different species of *Asplenium* ferns and Cross-leaved Heath *Erica tetralix*. Red Bartsia *Odontites vernus* was found in an urban area in Blackburn.

JACKIE HARDY

ONE DAY MEETINGS 2023

MITCHAM COMMON, SOUTH LONDON, 4th JUNE 2023

On a lovely sunny June morning, a happy band of seven of us met at Mitcham Junction station for our field outing to Mitcham Common in South London, led by Jane Lowe. Seven turned out to be an almost perfect number of participants - everyone got a chance to chat and get to know each other, and we were able to all see things and keep together as a group. Jane had really done her homework and we managed to see some smashing plants.

Mitcham Common is one of the most varied and interesting open spaces in South London and merits a bit of an explanatory introduction. It is a 182-hectare site of Metropolitan Importance for Nature Conservation, straddling the boundaries of the

boroughs of Merton, Croydon and Sutton, and since 1891 has been managed and regulated by the Mitcham Common Conservators.

The Common covers an old, flat, river plain of sand and gravel, which means that the soil is inherently largely acidic and infertile. The original vegetation cover after the end of the last ice age is likely to have been open oak woodland. The woodland was cleared with the arrival of early Neolithic people, and for centuries the Common was kept open and infertile through agricultural practices such as grazing. As a consequence of this activity, the dominant vegetation would have been low growing shrubs and acid grassland/heathland. For generations

the area provided common land for the grazing of animals and the gathering of timber and fuel by local people. Skip to the present day, and unfortunately, now only a few areas of the common survive in anything like their 'natural' state. The combined effects of gravel digging, turf removal and golf course construction before the end of the 19th century, followed by extensive ploughing for food production during wartime and controlled tipping of domestic refuse in the 1950s and 60s (with subsequent attempts at landscaping), have all contributed a dramatic modification of the original soil profiles and vegetation. There can therefore be few other commons that have such a variety of scenery and vegetation – there are hills and valleys, ponds and wetlands, neutral and acidic grasslands, secondary woodland, and the golf course still covers a substantial area of the site.

But to our tale We set off from Mitcham Junction, but as we started to cross the bridge over the railway line, we looked back down onto the grassy verge of the station approach and saw a lovely Bee Orchid *Ophrys apifera* standing proud in the grass! So, of course we all trotted back down and oohed and aaahed over it for a while. With such an auspicious start to our plant hunting, we knew it was going to be a good day!

Once over the bridge, it was a short walk to the Common, and we entered via the Gunsite. This area is so called because it was once occupied by an anti-aircraft gun emplacement. The military hardware was removed after the end of the second world war, but

it was not until 1964 that the site was restored to something like its pre-war state. This area has escaped the tipping of household waste/ landscaping and has therefore survived as high-quality acid grassland and is ecologically one of the most important parts of the Common. Our target plant in this area was Saw-wort *Serratula tinctoria*. It was not in flower during



our visit, but we saw the characteristic lobed leaves with their jagged saw-toothed margins. I went back myself at the end of July to see it in flower. Other plants of interest on our walk through the site were Heath Groundsel, *Senecio sylvaticus*, and a pink campion that, by its jizz, looked a good candidate for *Silene latifolia* x *S. dioica* = *S. x hampeana*, the hybrid between White Campion and Red Campion, both of which were also present. When I went back at the end of July there was also Sneezewort *Achillea ptarmica* in flower.

Leaving the Gunsite we walked through to the One Island Pond area, via Beddington Lane tram stop. At the edge of the entrance path a sharp-eyed member of the group spotted some Sand Spurrey *Spergularia rubra*. We didn't visit the pond, but it was in this area that we first encountered the artificial hills of the common. The hills in this area were created from 1978 -1984 by first extracting gravel and then building the hills out of subsoil and builders' rubble. The materials used to build and surface the hills depended on what was available at the time, and some of the material would have contained chalk. As the hills were planned to be maintained as wildflower meadows, they were sown with a wildflower mix, although other species have now colonised. It was on the top of one of the hills that we were delighted to stop and have our lunch amongst large amounts of Yellow Vetchling *Lathyrus aphaca*,

nissolia. Some other members of the Fabaceae present were Hairy Tare *Ervilia hirsuta*, Smooth Tare *Ervum tetraspermum* and Lucerne *Medicago sativa* ssp. *sativa*.

Suitably refreshed and recharged we crossed the busy A236 and entered the Bidder's Pond area. Again, this area has artificial hills which have been seeded with a wildflower mix. We skirted the base of one of the hills but stopped to admire some very attractive pink Sainfoin *Onobrychis viciifolia* on one of the slopes. Our main target in this area was one of the Common's surviving parcels of wetland, and it was here that we tracked down our second orchid species of the day, the lovely Southern Marsh-orchid, *Dactylorhiza praetermissa*.

We then continued to the Seven Islands Pond and Mill Hill area. This area of the Common has also been altered by the tipping and levelling of rubbish and the construction of Mill Hill. This hill is composed of rubbish capped with clay and was built on an area which was previously a low-lying marshy part of the Common. Victorian gravel extraction has resulted in the creation of Seven Islands Pond. Despite all of this, some of the highest quality acid grassland on the Common is to be found here, and it is here that we saw one of the stars of the day, Petty Whin *Genista anglica*. The day was rounded off with a visit to Seven Islands Pond to see the Bogbean *Menyanthes trifoliata*, which is a London rarity. This was the last stop on our visit, although an intrepid band of three of us stayed on for a bit

Photo: Moira O'Donnell



and the beautiful Grass Vetchling *L.*

to try and track down Adder's-tongue *Ophioglossum vulgatum*. We were sadly unsuccessful, but we found some bonus Garden Asparagus *Asparagus officinalis*, and a small colony of Southern Marsh-orchids

and Common Spotted-orchids *D. fuchsii*.

Many thanks to Jane for leading a great trip to such an interesting site!

MOIRA O'DONNELL

SILVERDALE, LANCASHIRE, 8th JUNE

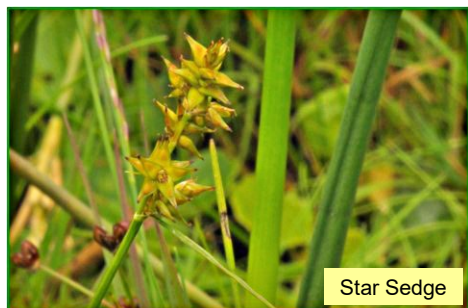
We started our meeting with a short walk into Eaves Wood to see Herb-Paris *Paris quadrifolia*. Although the flowers were over, it was easy to identify the plants from the four large unstalked leaves and the fruiting body just starting to appear in the centre. We then returned to the car park to start our walk down The Row where Rough Hawk's-beard *Crepis biennis* was in full flower along the lane. *Crepis* species are identified by a row of erect sepal-like bracts above, with a smaller ruff-like row at the base of the flower-head. Also present were White Stonecrop *Sedum album* and Lamb's-tail *Chiastophyllum oppositifolium*, the latter really making itself known in the area. Further along and outside house number 31, I was glad to see Upright Spurge *Euphorbia stricta* appearing again. I had this identified by Timothy Walker many years ago.

We then went through a green gate and up the path into woodland at the back of the houses to see Martagon Lily *Lilium martagon*, passing Spurge-laurel *Daphne laureola*. Continuing along the track, I pointed out where the Lady's-slipper Orchid *Cypripedium calceolus* once grew until it was dug up several years ago.

Unfortunately, the dry weather had taken its toll on the grassy bank just ahead of us, but we were still able to identify Smooth Lady's-mantle *Alchemilla glabra* and Pale Lady's-mantle *A. xanthochlora*; the former, as its name suggests, is hairless and the latter is hairless on the upper leaf surface.

Heading back to The Row, we made a short detour to see Cornish Bellflower *Campanula alliariifolia*, but unfortunately it had not started to flower. We retraced our steps to the pond to see Greater Spearwort *Ranunculus lingua* and Ragged-Robin *Silene flos-cuculi*. Here we found some rocks to sit on to have our lunch and I was able to catch up with some members that I had not seen for some years.

Replenished, we strolled towards Lambert's Meadow and found Fingered Sedge *Carex digitata* on the steps before going through the gate. This area is a wet meadow owned by the National Trust. Pale Sedge *C. pallescens* and Star Sedge *C. echinata* were spotted and as we walked to the little stream, we found Water Figwort *Scrophularia auriculata*, with its winged stem and



staminode rounded at its apex. This is a much stouter plant than its cousin Common Figwort *S. nodosa*. In the stream nearby were Watercress *Nasturtium officinale* and Marsh Valerian *Valeriana dioica*.

We then left the meadow, bringing us to Bottom's Well. Here we found the Wood and Water Avens cross *Geum*

urbanum x *G. rivale* = *G. x intermedium* growing with both parents. Also here, we saw Turkish Tutsan *Hypericum xylosteifolium*. Continuing up the track to Bottom's Lane and The Green, I took the group to see Celandine Saxifrage *Saxifraga cymbalaria*. We were lucky - it was still flowering despite the drought.

The heat was getting to us, so we decided to cut a corner back to The Row by crossing a field with Bulbous Buttercup *Ranunculus bulbosus*, identified by the reflexed sepals. A lovely day meeting with fellow members.

JULIE CLARKE

INSH MARSHES, HIGHLAND, SCOTLAND, 1ST JULY

After weeks of dry weather in Scotland, the deluge! Actually, it turned out to be more windy than wet for our day exploring the very varied terrain of this RSPB reserve, which was at all times accompanied by the roar of Aspen *Populus tremula*. Guided by locals Audrey and Bob Turner, we soon found a nice patch of Mountain Pansy *Viola lutea*, completely misnamed, as it was in this instance purple. These plants were, like many others, swimming in a sea of frog-spit, an unpleasant occupational hazard when one is out botanising at this time of year.

Continuing along the track we encountered much Petty Whin *Genista anglica* and some Zigzag

Clover *Trifolium medium* before emerging into a small meadow chock full of Heath Fragrant-orchids *Gymnadenia borealis*. Recent counts have recorded up to 7,000 individuals and it proved to be a common plant in other parts of the reserve too.

As we were admiring the wonderful lichen-draped trees and feasting on Bilberries *Vaccinium myrtillus*, that rarest of events took place. We happened upon a Hawkweed that we could identify just by looking at it – the very striking Green-flowered Hawkweed *Hieracium chloranthum*. The same cannot be said for the numerous eyebright *Euphrasia* species that we saw throughout the day.



Green-flowered Hawkweed

We eventually emerged into quite a large, damp meadow area, where orchids and sedges were the order of the day. The pick of the former were a couple of intergeneric hybrids: Heath Fragrant-orchid x Heath Spotted-orchid *Gymnadenia borealis* x *Dactylorhiza maculata* and Northern Marsh-orchid x Heath Fragrant-orchid *Dactylorhiza purpurella* x *maculata*. On the sedge front, a hybrid was also suspected when we found a patch of plants with squishy, seemingly empty utricles. However, the BSBI Sedges Handbook set us straight. Both Bottle Sedge *Carex rostrata* and Bladder-sedge *C. vesicaria* have inflated utricles which can feel as though there is nothing inside. On closer inspection, there were tiny fruits, and we identified the plant as Bottle Sedge. Pale Sedge *C. pallescens* was the pick of the others. En route

to our lunch spot, we happened upon a few Field Gentians *Gentianella campestris* just coming into flower.

After lunch we explored a different part of the meadow, where the highlights were undoubtedly a few Small-white Orchids *Pseudorchis albida* and a much larger number of Greater Butterfly-orchids *Platanthera chlorantha*. We also found a few Downy Currant bushes *Ribes spicatum*, but those had been planted in enclosures by the RSPB in an attempt to re-establish the species. A little later, it came as a bit of a surprise in such natural-seeming surroundings to find a patch of Garden Solomon's-seal *Polygonatum x hybridum* at the side of a minor road, no doubt dumped by some well-meaning parishioner wanting to give the plants a second chance.

The day was as much about butterflies as plants and we saw a good selection, including Ringlet, Small Pearl-bordered Fritillary, Small Heath, Meadow Brown and Dark-green Fritillary.

In case you're sitting indignantly wondering why on earth we didn't make a beeline for the String Sedge *C. chordorrhiza* that Insh Marshes are renowned for, the answer is: breeding waders. However, a small number of us did risk being sucked down into a sphagnum swamp to go and see it at a site on the other side of the marsh at the end of the day. Many thanks to Audrey and Bob for a most enjoyable day out.

STEVEN LITTLE

STRATHDEARN, HIGHLAND, 2nd JULY

Led by Audrey and Bob Turner

The first of today's treats was the approach to the meeting place. Ten miles along a remote single-track road, winding and undulating as it followed the River Findhorn snaking below. A magnificent vista of mountains beckoned ahead.

The day had begun in sunshine, but cloud soon closed in, and a sharp cold breeze begged woolly hats for some. Isolated and peaceful, Strathdearn attracts mainly birders: ten species of raptor can be viewed here. However, we were soon eyes to the ground, with plenty to occupy us for a couple of hours within two hundred metres of the parked cars.

The heathery lower slopes of the hillside down to the road revealed Sneezewort *Achillea ptarmica*, Stag's-horn Clubmoss *Lycopodium clavatum*, several sedges, including Glaucous Sedge *Carex flacca*, Green-ribbed Sedge *C. binervis*, Star Sedge *C. echinata*, Carnation Sedge *C. panicea*, Flea Sedge *C. pulicaris*, Tawny Sedge *C. hostiana* and Few-flowered Spike-rush *Eleocharis quinqueflora*. There was widespread bright yellow coverage of Bog Asphodel *Narthecium ossifragum* and purple patches of Wild Thyme *Thymus drucei*, their concentrations of silvery-furry buds looking comfortingly protective. Round-leaved Sundew *Drosera rotundifolia* showed tiny delicate white flowers held upright on their stems. Along a wet flush it was a delight to see my first Grass-of-Parnassus *Parnassia palustris* of the year in flower,



alongside Starry Saxifrage *Micranthes stellaris*, Marsh-marigold *Caltha palustris* var. *radicans* and Marsh Lousewort *Pedicularis palustris*. Alpine Bistort *Bistorta vivipara*, with its spike of flowers atop and bulbils below made an appearance and freshly flowering Melancholy Thistle *Cirsium heterophyllum* was spotted. Mountain Pansy *Viola lutea*, of varying sizes and shades of purple and yellow, lined the opposite side of the road, where we were also shown a white flowered Marsh Thistle *C. palustre*. Some became absorbed in Hawkweed *Hieracium* spp. identities, others in a slightly odd specimen, concluding it was, after all, White Clover *Trifolium repens*. A crowning glory was a perfect single pale-yellow Globeflower *Trollius europaeus* on the roadside, not usually seen this

low down by our leaders.

A shower put an end to our morning's



foray as we retreated to the cars to eat lunch. My far from comprehensive species count had reached sixty. For other highlights of the day, we drove to Upper Port Wood near Cromdale. I spotted a stand of Chicory *Cichorium intybus* from the parked car, but everyone was headed in the opposite direction. The main attraction there was an area of the delicate-looking Chickweed-wintergreen *Lysimachia europaea* interspersed with Creeping Lady's-tresses *Goodyera repens*. After taking in the abundance of these two plants and refreshed from the profusion of ripe Bilberries (locally known as Blaeberreries) *Vaccinium myrtillus*, we returned to the path headed by the tall and sturdy Chicory *C. intybus*, its sky-blue blooms shining upwards.

Further along into the Caledonian pinewood was the 'largest area ever' (according to expert opinion) of Twinflower *Linnaea borealis*. Whilst unfortunately partially ploughed through by youngsters' mountain bikes, this hardly detracted from the marvellous sight. Closer inspection revealed 'triplet' flower head branching and 'sextuplet' branching (two lots of threesomes) versions of it. Along the path were the enchanting Common Wintergreen *Pyrola minor*, with its shorter style, differentiated from the nearby Intermediate Wintergreen *Pyrola media*, with its style projecting beyond the corolla.

At times, caterpillars, butterflies and fungi caught our attention. Less wind and no more rain contributed to a very pleasant afternoon in a contrasting location. Many thanks to the leaders for sharing these special places and to all for the great and knowledgeable company.

JOY LYON

RIVER TAY, PERTH, SCOTLAND, 4th JULY

This was the first of a three-day WFS meeting in Scotland led by Hamlyn (Lyn) Jones, over the course of which we were shown an exceptional array of native and alien plants in diverse

habitats. A small group of us assembled near Branklyn Garden in Perth, where we were warmly greeted by Lyn and his wife Amanda. Lyn set the scene by describing our

day as an encounter with the colourful and unusual 'invasives' that have long colonised the banks of the river Tay. For those of us particularly interested in alien plants, Lyn's description was most apt, and we were treated to all manner of invasives, some of which have been known in the area for over 100 years. As we headed off toward the river Tay, the rain started and persisted for the duration of the morning. While some of us looked like drowned rats by the end of the morning, myself included, it did not dampen our spirits as we commenced the riverside walk.

While the day had been billed as a foray into Perth's unusual alien flora, there were some great native plants too, producing an interesting visual effect where they intermingled. One such combination was the mix of Giant Bellflower *Campanula latifolia* and Milky Bellflower *C. lactiflora*. Both were seen growing together and the

Photo: Sue Southall

Milky Bellflower



range of colour in Giant Bellflower was visually arresting, including white, lilac and pale violet flowers. Milky Bellflower had the appearance of being completely at home on the riverbank, producing tall inflorescences in great quantity. Coneflower *Rudbeckia laciniata* was spotted nearby, another plant that featured prominently along the banks of the Tay for the duration of our walk. A white Astilbe was seen growing on one of the stone pillars of the railway bridge over the river and was later identified as False Buck's-beard *Astilbe japonica*. As we slowly moved along the bank, Hemlock Water-dropwort *Oenanthe crocata* and Wild Angelica *Angelica sylvestris* were noted. Giant Hogweed *Heracleum mantegazzianum* was present too, a plant we would see en masse further up the river. A few flowering spikes of Fringecups *Tellima grandiflora* were seen as well as Pink Purslane *Claytonia sibirica*. As some members of the group picked their way carefully along the rocky path, Lyn showed us Coralberry *Symphoricarpos orbiculatus* in a damp wooded area, a plant that was new to some of us, including me. Two contrasting grasses were observed also growing in the same habitat, False-brome *Brachypodium sylvaticum* and Wood Meadow-grass *Poa nemoralis*.

As we pressed ahead, more alien plants were seen. A large patch of Comfrey *Symphytum* sp. with red-violet flowers was admired by the group, but its identity puzzled many of us including Lyn. It wasn't quite right to be named as Russian Comfrey *Symphytum x uplandicum*. Discussion ensued that suggested it

could be another garden escapee, but which one could not be identified with certainty. Less perplexing was the identification of Leopard's-bane *Doronicum pardalianches*, which was flowering well along the river path. The riverbank yielded more interesting garden escapees, such as Hybrid Monk's-hood *Aconitum x stoerkianum*. Nearby, a stand of Wood Club-rush *Scirpus sylvaticus* was flourishing in a marshy area. Despite the heavy rain at this stage, we were distracted by what one member of the group termed a 'forest of Giant Hogweed' that had developed by the river path. In spectacular flower and looking very statuesque, with many plants towering above us, it was easy to see the attraction of growing it as an ornamental, as was the case when it was introduced into the UK during the nineteenth century. Having escaped and naturalised in the wild with alarming rapidity, it is now classified as an invasive species, as this bewitching forest exemplified dramatically. In contrast to this giant invasive, we then admired Sand Leek *Allium scorodoprasum*, which was growing alongside another allium in bud that was thought to be Keeled Garlic *Allium carinatum*. Next, Lyn showed us a very small plant that is maintaining a toehold in a damp hollow near the riverbank: Krauss's Clubmoss *Selaginella kraussiana*.

Moving into an open area near where the M90 crosses the river Tay, we were delighted to be shown another assemblage of alien plants. New to many of us was the shrub Ninebark *Physocarpus opulifolius*, with its distinctive broadly ovate leaves and

fruits on long pedicels. Noteworthy also was the very handsome Cabbage Thistle *Cirsium oleraceum*, which, according to the latest edition of Stace, has been naturalised along



the Tay since at least 1912. A few plants were in bloom, so we were able to see the pale-yellow flower heads, some of which were tinged pink. Nearby, an extensive population of Sensitive Fern *Onoclea sensibilis* attracted interest, as did the floral tapestry of Coneflowers, Bellflowers and Monkeyflowers *Erythranthe* sp. growing on the riverbank and mudflats of the Tay.

At this stage, we sought shelter from the rain to have lunch. Although some of us were soaked to the skin, we were in jovial spirits as we ate. Amanda kindly offered to drive some

of us back to our meeting point near Branklyn Garden, while other members opted to walk back along the river path to reach the same rendezvous point. Mercifully, the rain petered out and we were bathed in sunshine by the time we all reconvened in the grounds of Branklyn Garden. Here we indulged in the genteel pastime of tea and cakes, sitting out on the lawn in the sunshine amidst the glorious plants cultivated in the borders. Branklyn Garden is a hidden botanic gem that is chock-full of rare and unusual plants and well worth a visit. Some of us spent time wandering around the garden, which despite its small size, is home to an incredible number of plant species. The lilies were looking particularly fine but so, for me, were the rock gardens, which had a number of rare Scottish natives in cultivation. Enchanting was the sight of Scottish Primrose *Primula scotica*

in perfect bloom, which made me think how special it would be to see this plant in its native Scottish habitat.

Overall, the day was thoroughly enjoyable. We were shown a wide range of alien plants and some very choice native plants too in a semi-urban environment. The number of alien invasive plants within a relatively short stretch of the river Tay was very impressive. On behalf of the group, I would like to thank Lyn for leading the meeting and sharing his botanic knowledge, and Amanda too, for ensuring that the group remained together and offering transportation to those of us who had had enough of the heavy rain during the morning.

NICK ASTON

GLENSHEE, GLAS MAOL AND CAENLOCHAN, SCOTLAND 6th JULY

In contrast to the other two days, the third day of the Scottish WFS meeting concentrated on showing members the alpine flora of Glenshee and surrounding areas. One group explored the lower slopes around the Glenshee Ski Centre. The other group, led by Hamlyn (Lyn) Jones, opted to embark upon the trek toward the upper slopes of Glas Maol and then Caenlochan Glen on the promise of seeing a host of the rare alpine for which this area is famous. Our assembly point was the car park at Glenshee Ski Centre, situated

above the Cairnwell Pass. From here we struck out, following the line of one of the ski-lifts up the mountainside. No sooner had we begun the ascent than Lyn showed us some Frog Orchids *Coeloglossum viride* amongst the heather. These were magnificent specimens that looked like giants compared to the diminutive ones I'm used to seeing on dry chalk downs in Hampshire. In the same area we saw Cloudberry *Rubus chamaemorus* growing in abundance. The plants were fruiting nicely, with several having turned orange, which

was a good indicator that they were ripe enough to eat. Several alpine plants were seen here that we subsequently encountered frequently throughout the day, such as Alpine Lady's-mantle *Alchemilla alpina*. There were sheets of Bilberry *Vaccinium myrtillus*, or Blaeberry as it is generally referred to in Scotland, also fruiting. Lyn pointed out a trio of clubmosses: Interrupted Clubmoss *Lycopodium annotinum*, Fir Clubmoss *Huperzia selago* and Alpine Clubmoss *Diphasiastrum alpinum*. These were growing within a relatively small area, enabling Lyn to show us the distinguishing features of each. Interrupted Clubmoss was looking splendid, with its procumbent stems running through the heather and its sporangium-bearing leaves well developed into apical cones.

Our attention then turned to several sedges. The tall inflorescences of Green-ribbed Sedge *Carex binervis* were easily spotted growing amongst the heather, while the distinctive yellow-green leaves of Sheathed Sedge *C. vaginata* could be seen in the more open areas of mountain heathland. Many plants were noted but Sheathed Sedge is a shy flowerer and it took a little while before a fruiting spike was detected, so that we could observe the long loose inflated sheath. As we made our way up the slope, we came across our first species of moonwort: Nordic Moonwort *Botrychium nordicum*. Distinguished from Moonwort *B. lunaria* primarily by its incised pinnae, Nordic Moonwort (not listed in Stace) has only recently been discovered in the Glenshee area, creating quite a stir within botanical circles (first in the

January 2019 issue of BSBI News). As its name indicates, Nordic Moonwort is native in countries such as Norway, so its discovery in the UK was initially surprising, but confirmed after molecular analysis. It is thought that this species of moonwort could be more widespread in Scotland. After we had admired it, we pressed onwards, with Lyn showing us some photogenic plants of Lesser Twayblade *Neottia cordata* growing amongst the heather.



Photo: Roy Hilton

A damper area by a small mountain stream yielded a different flora. Common Yellow-sedge *Carex demissa* was plentiful as was Flea

Sedge *C. pulicaris*, with Alpine Bistort *Bistorta vivipara* and a small population of Scottish Asphodel *Tofieldia pusilla* in flower. Nearby *Sibbaldia* *Sibbaldia procumbens* was also seen here, although most of it was in fruit. Hair Sedge *C. capillaris* took some finding, but once we had got our eye in we discovered more of its delicate inflorescences trembling on the breeze. On the drier parts, Mountain Everlasting *Antennaria dioica* was observed as well as Stiff Sedge *C. bigelowii*, which, as its name suggests, has very stiff glaucous leaves and stems. Trekking up the slope we noticed Dwarf Cornel *Cornus suecica* creeping through the heather, but alas no flowers. We briefly stopped by another boggy area, where we were shown Alpine Willowherb *Epilobium anagallidifolium*, which was exhibiting its typical decumbent growth pattern. Three-flowered Rush *Juncus triglumis* was identified in the same bog. Further up the mountain we encountered some Golden Eagles wheeling around in the sky before noticing an incoming rain shower. While it was still dry, Lyn took us to see a magnificent patch of Stag's-horn Clubmoss *L. clavatum* with Moonwort close by. Not long after this, the rain began to fall but, undaunted by the inclement weather, we forged ahead. At this stage, the flora began to change. As the terrain became more open and rocky, we started to notice plants such as Three-leaved Rush *Juncus trifidus*, Spiked Wood-rush *Luzula spicata* and Dwarf Willow *Salix herbacea*. Fortunately, the rain shower did not persist so, by the time we sat down on the grassy slopes of Glas Maol for lunch, we

could admire the panoramic view of Glenshee and the Cairnwell.

After lunch, we skirted around the summit of Glas Maol but stayed on some of the upper slopes that contained boggy mountain flushes. One such flush and stream produced some very choice alpine. Alpine Cat's-tail *Phleum alpinum* was one example, growing in the damp grassland in fair quantity. Its dark purple-coloured flower-heads were striking and attracted a lot of photography. By the stream, the montane subspecies of Thyme-leaved Speedwell *Veronica serpyllifolia* ssp. *humifusa* was seen, the flowers of which are much larger and brighter than the commoner subspecies *serpyllifolia* that we are more familiar with. More Alpine Willowherb was seen here. Lyn then took us to another boggy area to see Mountain Bog-sedge *C. rariflora*.



Photo: Roy Hilton

There was a healthy population of this very rare montane sedge at this site, the inflorescences of which were glistening in the sun after the earlier rain shower. In the same bog was a lot of White Sedge *C. canescens*. Not surprisingly, some members of the group spent some time admiring and photographing the sedges. At this

stage in the day, Lyn invited us to visit Caenlochan Glen, which would require descending a gully in order to see yet more alpine rarities. Some members of the group declined and peeled off, led back to the Glenshee Ski Centre by Alison Peaker and Carol Blow. Two of us, myself included, and Lyn opted to visit the Glen.

Remarkably the rain largely held off as we walked toward the top of the gully. Descending the gully required care, so we went at a slow pace. The drier upper part was ideal for Dwarf Cudweed *Omalotheca supina*, which was abundant in some areas. On our way to the bottom, more alpenes caught our attention. The damp rocky gully and stream provided the perfect habitat for many plants of Chickweed Willowherb *Epilobium alsinifolium*. We noticed more Alpine Cat's-tail and some flowering plants of Sibbaldia. We kept close to the rock-face and it was here that Lyn pointed out some large plants of Alpine Saxifrage *Micranthes nivalis*. This very rare mountain saxifrage was having a particularly fine year, flowering exceptionally well and in good numbers, with some unusually tall specimens growing in rock-crevices. In the same area, we saw Alpine Mouse-ear *Cerastium alpinum*, Viviparous Sheep's-fescue *Festuca vivipara*, Roseroot *Rhodiola rosea* and a number of ferns on higher rock ledges that were out of reach. By way of compensation, we saw numerous fronds of Oak Fern *Gymnocarpium dryopteris* growing at the base of the rock-face. Having made our way to the bottom of the gully, we walked along the bottom of Caenlochan Glen. This area was rich in alpenes,

but also home to some surprising non-alpine plants such as Hogweed *Heracleum sphondylium*, which was spotted on one of the mountain ledges, demonstrating its capacity to grow in a variety of habitats. Here we saw the star of the show: Alpine Blue-sowthistle *Cicerbita alpina*. The Blue-sowthistle was growing on a higher rock ledge, almost inaccessible, but still near enough for us to observe a fairly strong population of tall plants, one of which had produced the first blue flowers. This was an incredible sight. One reason why this plant has become so rare is that deer are very fond of eating it, so the remaining native populations are protected from this fate largely by their inaccessibility. We spent some time admiring it before heading back up the gully, which rewarded us yet again, this time with Alpine Speedwell *Veronica alpina*. It was at this point that the rain started to pour and the mist descended, but under Lyn's supervision we made the long walk back to Glenshee Ski Centre safely and in very good time. If that wasn't enough, once back in the car park we headed toward the slope behind the Glenshee Café to see the type site for Nordic Moonwort with some Lesser Twayblade nearby in the heather.

Overall, we spent a long but inspiring and botanically-rewarding day on the mountain under Lyn's expert guidance. On behalf of the group, I would like to offer an enormous thank you to Lyn for his time checking the sites beforehand, his unflagging energy and willingness to show us a dazzling array of alpenes in all manner of (in)clement weather conditions. Thanks also to Alison and

Carol for their support and guidance throughout the day. I have been attending WFS meetings since I was 14 years old and this meeting exemplifies beautifully what I have come to love about WFS field-trips: leaders who are very friendly and approachable, have a passion for plants and who wear their botanical knowledge lightly, imparting it

generously. Indeed, for those members who have yet to attend a field-meeting, please do so, as they are a wonderful experience where you can learn as much about plants as you wish to in very friendly company.

NICK ASTON

KNOCKING HOE, BEDFORDSHIRE 11th AUGUST

On a warm sunny morning we met up with our leader, John Wakely, and set off along the access lane to Paxton Farm with the intention of spending most of the morning looking at the profusion of arable weeds along the edges of the uncut fields of barley. Dwarf Spurge *Euphorbia exigua*, Field Pansy *Viola arvensis* and Field Bindweed *Convolvulus arvensis* were quickly found. John particularly wanted to draw our attention to the differences between Knotgrass *Polygonum aviculare* and Cornfield Knotgrass *Polygonum rurivagum*. The latter has much narrower pointed leaves and fruits that only just protrude from the dead flowers. We then turned uphill off the lane to reach the edge of a small wood, which was followed by another field of barley. Here, we added Perennial Sowthistle *Sonchus arvensis*, Field Madder *Sherardia arvensis*, Field Scabious *Knautia arvensis*, Ploughman's-spikenard *Inula conyzae*, Wild Candytuft *Iberis amara*, Sharp-leaved Fluellen *Kickxia elatine*, Venus's-looking-glass *Legousia hybrida* and Prickly Poppy *Roemeria argemone* to our plant-list. At one point we diverted

onto a bare patch of chalk where John set the group the task of finding Few-flowered Fumitory *Fumaria vaillantii* amongst the abundant Common Fumitory *F. officinalis*. He explained that the flowers were pale pink, smaller and arranged in a loose spike which is much longer than the inflorescence stalk. The task was successfully completed with several plants of the rarer fumitory being found. After the necessary photographs had been taken, we made our way to a field next to the Knocking Hoe National Nature Reserve (NNR) with the aim of reaching our lunch site, which had a commanding view over the surrounding countryside. On the way, we made a brief detour to a small pond, which was unexpectedly high up on the chalk ridge, and passed several umbellifers including Great Pignut *Bunium bulbocastanum* (in seed), Burnet-saxifrage *Pimpinella saxifraga* and Rough Chervil *Chaerophyllum temulum*. With the help of a hand-lens Large Thyme *Thymus pulegioides* was confirmed to be present around the lunch site. After lunch we walked to the north-

east of the field, where there were a few plants of Ground-pine *Ajuga chamaepitys*, Basil Thyme



Clinopodium acinos and Knotted Hedge-parsley *Torilis nodosa*, maintained with the help of intermittent ground scarification. The

adjacent cultivated field of Buckwheat *Fagopyrum esculentum* had the blue form of Scarlet Pimpernel *Lysimachia arvensis* forma *azurea* around the crop-margin. As we headed downhill towards the NNR, we came across a population of Moon Carrot *Seseli libanotis* and regularly disturbed Chalkhill Blue butterflies. A knoll within the reserve contains several thousand Moon Carrot plants and is also the site of a large colony of Autumn Lady's-tresses *Spiranthes spiralis*, but it was thought that we were probably too early. Fortunately, one of our group noticed that she was sitting adjacent to the one and only spike that we found. From that point, we made our way back to the cars and completed a very enjoyable day, thanks to John's expert leadership and the sharp eyes of some of the group.

ROY HILTON

HIGHTOWN, SEFTON COAST, MERSEYSIDE 19th AUGUST

Twenty-four people met at Hightown railway station for this joint trip of the WFS and Bradford Botany Group. It was a sunny, but rather windy day - it was impossible to keep the wind from blowing sand into our sandwiches at lunch time!

Our leader for the day, Steve Cross, of the Liverpool Botanical Society, gave a short introductory talk before we set off through the streets to the coastal path. This gave us a brief opportunity to do some urban botany

and we examined Common Orache *Atriplex patula* and Common Stork's-bill *Erodium cicutarium* to enable us to compare them with similar species to be seen later in the day. Just before we reached the saltmarsh, it was good to see a beautiful pinky-purple drift of Common Fumitory *Fumaria officinalis* growing together with a smaller patch of the paler-flowered Common Ramping-fumitory *F. muralis* ssp. *boraei*.

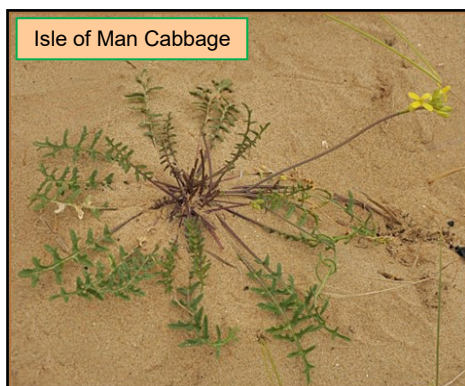
On the path down to the saltmarsh,

we passed an area where garden-escapes had become rampant including a double-flowered form of Soapwort *Saponaria officinalis* and the garden hybrid Twiggy Spurge *Euphorbia x pseudovirgata*. Later, Steve pointed out large stands of non-native invasive species, such as White Poplar *Populus alba* and Russian-vine *Fallopia baldschuanica*, which have also become a problem in recent times.

Today was an excellent opportunity to improve our orache identification skills. On entering the saltmarsh we soon saw Spear-leaved Orache *Atriplex prostrata*, closely followed by Grass-leaved Orache *A. littoralis*, although the latter had broader leaves than is usual for this species. Later, Babington's Orache *A. glabriuscula* and Spear-leaved Orache were seen side by side and, as Steve explained, once you get your eye in, you can usually tell them apart by their jizz, before confirming the identification by looking at the bracteoles in more detail. Before the day was over we also saw Frosted Orache *A. laciniata*, with its distinctive, frosted leaves, and Kattegat Orache *A. x gustafssoniana*.

Today was also good for looking at glassworts, with Steve showing us Common Glasswort *Salicornia europaea*, Purple Glasswort *S. ramosissima* and Long-spiked Glasswort *S. dolichostachya*, which were all growing next to each other.

In the dunes, there were many interesting species, but perhaps most notable was Isle of Man Cabbage *Coincya monensis* ssp. *monensis*, a



rare endemic subspecies. Steve regards this subspecies as having its global 'headquarters' on the coast between here and Crosby, with three quarters of its world population found here. Ray's Knotgrass *Polygonum oxyspermum*, with its relatively big, chunky fruits, was admired, as was a plant of Hound's-tongue *Cynoglossum officinale*, with someone commenting that its spiny nutlets look like tiny hedgehogs. Sticky Stork's-bill *Erodium lebellii* clearly had numerous glandular hairs on the flower stalks and sepals.

One section of the shore was an area of man-made 'shingle', formed from the rubble created by post-war clearances in Liverpool, which was dumped along a two-mile stretch of coast to create sea-defences. Plants dotted about here included Wild Mignonette *Reseda lutea*, Yellow Horned-poppay *Glaucium flavum* and Rock Samphire *Crithmum maritimum*. We saw a fascinating area of the beach with 5,000-year-old peat which had the preserved rhizomes of Royal Fern and, clearly visible, were the branches of birch, still with its distinctive bark attached.

Between the dunes and the shore, there was a stand of Sea Club-rush *Bolboschoenus maritimus* and a mix of fresh-water and saltmarsh species, including Long-bracted Sedge *Carex extensa*, Frog Rush *Juncus ranarius*, Wild Celery *Apium graveolens* and Trifid Bur-marigold *Bidens tripartita*.

seaside, full of interesting and unusual species, a lot of which were new to me. Steve was a very enthusiastic and informative leader and I thoroughly enjoyed the day.

TOM SIMCOCK

This was a wonderful day out at the

COALHOUSE FORT, TILBURY, ESSEX 17th SEPTEMBER

Seven of us met our leader, Stephen Clarkson (with his 'chariot'!), at the Coalhouse Fort car park. The Fort itself was built in the 1860s to guard against attack from the French. It is situated near East Tilbury in Essex and the area is now a park owned by Thurrock District Council. The area to the north is an SSSI, but we started going southwards towards the saltmarsh. On the way, we stopped to admire the Ivy Bees busy on a large Ivy *Hedera helix* bush and discuss the various grasses, all now dead. There was some nice Hawkweed Oxtongue *Picris hieracioides* at the side of the path and our leader showed us how to distinguish this from the commoner Bristly Oxtongue *Helminthotheca echioides*.

Reaching the saltmarsh, we observed both the rayed and rayless forms of Sea Aster *Tripolium pannonicum* and looked at other typical saltmarsh plants. We then went to see one of the stars of the meeting – Slender Hare's-ear *Bupleurum tenuissimum*. It's a small



Slender Hare's-ear

umbellifer with tiny yellow flowers, so definitely a hands and knees job to photograph it. We then moved on to view the other star – a small patch of Saltmarsh Goosefoot *Chenopodium chenopodioides* in an area being kept clear for it, as it is in danger of being outcompeted by the long grass.

By now it was lunchtime and the rain was starting so we retired to the café. Once the rain had stopped, we went over to the SSSI. We examined the fruits of a large dock and identified it as Greek Dock *Rumex cristatus*. We then walked over to the lagoon, observing Glassworts *Salicornia* spp.,

Saltmarsh Rush *Juncus gerardii* and Sea Arrowgrass *Triglochin maritima*. There was a lot of Strawberry Clover *Trifolium fragiferum* in the grass, but unfortunately the flowers had been mown off. We did, however, manage to find one in flower. We ended the meeting with a brief walk in the main part of the SSSI, where one of our group found a knotgrass that Stephen helped to identify as Ray's Knotgrass *Polygonum oxyspermum*.

Our thanks to Stephen for an interesting meeting and to Sue Southall for guiding us to where the key plants were growing.

JULIA TODD

A WALK ALONG THE RIVER GIPPING, BRAMFORD, SUFFOLK, 19th AUGUST

Our group of 7 enthusiasts met at Bramford Meadows on a warm and sunny morning but sadly our leader was unable to make it. Fortunately Sue and Ken Southall live very close by and are familiar with the area and they kindly stepped in to help. The area consists of a series of floodplain meadows alongside the River Gipping, separated by some drainage ditches and with small areas of scrub and trees. The River Gipping flows from Stowmarket to Ipswich where it becomes the source river for the Orwell. The Meadows, which are owned by Bramford Parish Council, are made up of a southern and a northern site, the latter having been designated a Local Nature reserve in 1995.

This is not a habitat with which I am at all familiar and I have next to no knowledge of aquatic plants so it was a real learning experience. Luckily for me the group was extremely knowledgeable and also very generous in sharing their knowledge, which was much appreciated.

In preparation for the day, Ken had been beavering away in his workshop, and before we set off, he showed us a very impressive looking grapnel he had put together especially for this trip - wish I had taken a photo!

The first meadows we came to were part of the southern site, which is designated a picnic area/public open space. We found a wide variety of meadow plants, including Musk-mallow *Malva moschata*, Musk Thistle *Carduus nutans*, Cornflower *Centaurea cyanus*, Yellow-rattle *Rhinanthus minor* and Common Poppy *Papaver rhoeas*. These were apparently sown in the early 90s as part of a wild flower seeding trial which proved unsuccessful due to flooding but some plants have managed to survive. It did provide an opportunity to observe some differences between Salad Burnet *Poterium sanguisorba* ssp. *sanguisorba* and Fodder Burnet *P. sanguisorba* ssp. *balearicum* - in particular that the leaflets have a longer petiole on Fodder Burnet.

A riverside footpath runs along the meadows and we soon came to the northern site and the banks of the Gipping, which meant it was time for Ken to put his grapnel to the test. It passed with flying colours and we soon had a good selection of plants to identify. Now, being a complete novice where aquatic plants are concerned, I thought that duckweed was duckweed - end of story! How wrong I was. A lot of discussion ensued and the decision was that we had found Common Duckweed *Lemna minor*, which has fronds with just one root and Greater Duckweed *Spirodela polyrhiza*, which can have 7-16 roots but 10 in the samples we looked at. I am now able to confirm that my pond at home is well supplied with Common Duckweed!

Moving on we found Prickly Lettuce *Lactuca serriola* and Sue pointed out that the seeds were brown whereas Great Lettuce *L. virosa* has black seeds. Comfrey plants proved challenging but we identified Russian Comfrey *Symphytum x uplandicum*, which had sessile, clasping stem leaves, and Common Comfrey *S. officinale*, which had broad wings running down past the next leaf base. But doubt crept in - maybe it was a hybrid after all?

Arrowhead *Sagittaria sagittifolia* formed extensive patches in the river with several plants in flower. Moving on we saw Water-plantain *Alisma plantago-aquatica* and Gypsywort *Lycopus europaeus* and in a particularly beautiful area there was a mass of Purple-loosestrife *Lythrum salicaria*, a large spread of Brooklime *Veronica beccabunga*, a few plants of Celery-leaved Buttercup *Ranunculus*

scleratus and best of all, the beautiful Flowering Rush *Butomus umbellatus*.



There was a large area of water-cress and Priscilla Nobbs initiated a debate over whether this might be Narrow-fruited Water-cress *Nasturtium microphyllum* but the final verdict was that it was Water-cress *N. officinale*.

Now that I have mentioned Priscilla this is a good point to hand over to her to deal expertly with some of those tricky aquatic plants.

Ken also pulled out Nuttall's Waterweed *Elodea nuttallii*, first recorded in the UK in 1966. The leaves are longer, narrower and more acute than Canadian Waterweed *Elodea canadensis*.

In the large group of stunning aquatic flowers was Amphibious Bistort *Persicaria amphibia* with its distinctive tiny pink flowers clustered together in a compact cylindrical head. The white-flowered umbels of Fool's-water-cress *Helosciadum nodiflorum* stood out, distinguished from Lesser Water-parsnip *Berula erecta* by no distinctive whitish ring on the lower petiole.

A highlight for me was the male flowers of Hop *Humulus lupulus*. I am ashamed to say that I had not realised the plant was dioecious! I had seen the cones of the female plant (often used for decoration at

harvest festivals) but never the loose-branched spreading clusters of the male flower.

We turned back at Sroughton Water Mill – the yellow flowers of Fringed Water-lily *Nymphoides peltata* were floating on the water – and enjoyed a leisurely stroll back to the car park. It was a delightful, healing walk in the sunshine – grateful thanks to Sue and Ken. Some of us went back to their house to enjoy a cup of tea and admire their garden which, although some of it was flooded, escaped the major October floods in Suffolk!

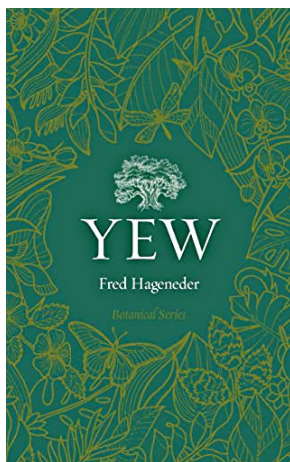
MOIRA SMITH AND PRISCILLA NOBBS

BOOK REVIEWS

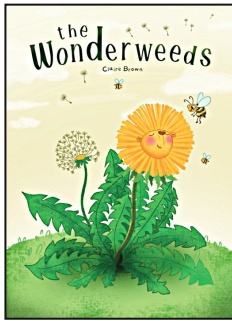
Yew
Fred Hageneder
Reaktion Books (2023)
ISBN 978-1-78914-721-6
Price seen on the web c.£15

This is not a detailed review of this particular book, but I feel that many members of the WFS may be interested in the botanical titles published by Reaktion Press. I was fascinated when I read *Rowan* by Oliver Southall and reviewed it in the Autumn 2023 magazine, so this is just a note to say how pleased I am to have been made aware of this series. It is worth consulting the Reaktion website for others. Just the contents list of *Yew* is full of promise – chapters include Botanical Yew (of course) but also 'Social Yew', 'Political Yew', 'Aesthetic Yew', 'Hospitable Yew' and 'Threatened Yew'. The illustrations suggest an equally wide range of inspiration and

interest whether of 'French topiary near Hagia Sophia in Istanbul', 'A female flower with micropylar drop', a fossil twig from Whitby, an Alaskan ceremonial pipe carved as a raven's head, or the many superb ancient trunks from many countries. The way these books bring an individual species or genus into extended fields



of thought and perception adds breadth to the context of our usual 'what's this' class of botanical reading, and the ones I've seen are affordable and well-produced.



The Wonderweeds

Claire Brown

ISBN 978-1-80517-234-5

Soft cover £9.99

www.thewonderweeds.com (2023)

'And now for something completely different...'. This is the first time that I've reviewed a children's book, and I didn't know what to expect when Sheila Wynn explained that the WFS had subsidised the author while she was writing, so we should report on the result. I needn't have worried – it's delightful!

We're all aware of the problem of plant blindness, which is now common among millions of adults and which is certainly worse among today's children (members may remember an excellent talk given at the Slapton Ley AGM in 2018). The days of school nature walks and a show-and-tell vase of wild flowers are extremely rare or gone altogether, and I believe that words such as 'acorn' and 'buttercup' are no longer in the Junior Oxford Dictionary. David Attenborough nobly exhorts us to care for nature but because of the obsession of programme producers with the idea that battling male animals make better TV, plants get almost no attention. Since the Chelsea Flower Show in 2023 showcased a number of designers

including wild species there is a bit more general awareness of native plants, but most gardeners still consider 'weeds' as enemies to be exterminated or at least strictly controlled. So a book speaking to the next generation about the *goodness* of such common plants has a really important message. Of course this message needs to charm and persuade, and Claire Brown's book will do both for readers of all ages. I've tried it out on friends of some 50 years age difference, and all were delighted. Plants such as docks, thistles and nettles have individual poems and illustrations. 'All around us, wherever we go, there are friends to be found if you look down low...' and the details are persuasive. A very grown-up and experienced gardener friend after reading the book said 'Well, I never thought I'd have bindweed for a friend', but his big smile showed that he had been won over and all his grandchildren will get the book for their next birthdays.

Botanists will approve - the details are correct and the book includes many elements which will fascinate readers and make them want to learn more. Notes on topics such as 'The Lives of Weeds', 'The Dandelion Food Web', 'Creatures which Feed on Weeds' or friendly uses such as nettles for soup are appealingly presented. Perhaps if I say that I'm over 80 and am delighted with this book, that is message enough, and I hope it will reach a wide readership! It is equally suitable for children of reading age or for adults to read aloud, and the illustrations will be fine in either case.

RO FITZGERALD

OBITUARY FOR BILL HAWKINS,

as delivered by Stephen Clarkson at Bill's Funeral.

I joined the Wild Flower Society in 1998 and for a few years everything that I looked at in the plant world was local to me where I lived in Suffolk. Then I decided to spread my wings and explore other opportunities. Walks are advertised in the Society's magazine and I applied to go on one which was being led by Bill and Carol Hawkins at Highgrove Wood in North London to see a special plant that grew there called Perfoliate Alexanders *Smyrniium perfoliatum*. That was in March 2003.

Thus was the start of a long and beautiful friendship. We've learned that Bill was in the Royal Air Force as a fitness instructor after his stint in National Service. He ended up in Grantown-on-Spey, Scottish Highlands, where he taught canoeing and survival skills such as digging out snow-holes. It was while he was in Scotland that he started hill walking and mountain climbing. He ultimately conquered all 282 Munros, with Carol accompanying him on most of these expeditions. He had an elementary knowledge of the wild flowers that grew there, but Carol, who had had a lifelong interest in botany, taught him a lot more.

They lived in Uxbridge for a while and it was in 1987 after the Great Storm that they became involved in the management and conservation of the Warburg Reserve near Henley-on-Thames, Oxfordshire. In full retirement they moved to Wymondham in Norfolk in 2003. A lovely property with a brilliant garden developed over the years, with

unusual and rare plants from all over the place.

Over the next couple of decades, privately and with the Wild Flower Society, we travelled and explored the countryside as well as towns and villages, from the Isles of Scilly to the far north and the Shetland Isles, from the magnificent Burren in the west of Ireland to our home base of East Anglia, but especially Norfolk. We also became involved with the friendly Norfolk Flora Group. Bill was a very intelligent man, easy to talk to and with a range of interests. He had a sharp mind and wit and extended his botanical knowledge in many fields, including dandelions and hawkweeds. Believe it or not, to the non-botanists here, there are hundreds of species to be found in both of these wild flower categories.

He had us out in the Brecks, Norfolk, identifying dandelions, but one of our most memorable days was on the island of Unst in Shetland. We were at the side of a loch and its waters were covered in a sheet of blue-green algae. However, the edges of the loch were fringed by a vertical wall of slate with a narrow ledge jutting out over the water. He saw a hawkweed growing out of this wall and in moments he was inching his way along this precipitous ledge. Carol couldn't look and ran away! But he crept his way along until he reached the plant. I stood many feet above and read out the key so that we could identify the species from various individual aspects, discovering it to be a special plant

found nowhere else in the world. He then confidently sidled back up to the top of the slate wall and we carried on for the rest of the day. We had many such instances over the years and even in his 60s and 70s he could still vault over gates, stiles and fences...which made it so much harder to see him over the past nine years with a diagnosis of Parkinsons that slowly ate away at him.

From a guy that in his younger days ate the equivalent of 6,000 calories a day to stay fit, it was painful to watch him slowly and inexorably lose so much weight; maintaining his posture became more and more difficult until he could no longer really do things for himself. The strain on Carol was immense and immeasurable. However, he still had a brain that was so alert and intelligent. He could still crack jokes and make us all laugh. The past few months saw him

gradually sliding down that slope until he finally went into Hethersett Hall, a superb nursing care home with excellent staff, close to their home. It also meant that Carol could have some respite time for herself.

Bill had lost so much weight, had bad bed sores and some disintegrating spinal bones that were causing him a lot of pain. He had started to sleep more and more frequently and for longer periods when he eventually passed away with Carol and a very good friend, Enid, by his side. He was 86 years old.

May he rest in peace.

STEPHEN CLARKSON

Carol's favourite picture shows her with Bill atop a mountain range in Scotland where they found the rare pincushion plant *Diapensia lapponica*.



Picture supplied by Carol.

