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Botanical Society of Britain & Ireland

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BSBI NEWS
NEWSLETTER OF THE BOTANICAL SOCIETY OF BRITAIN & IRELAND

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Cover photo: *Chenopodiastrum murale* (Nettle-leaved Goosefoot), Laboratory Battery, Steep Holm (*Helena Crouch*). *See England country roundup, p. 46.*

Contributions for future issues should be sent to the Editor, John Norton (john.norton@bsbi.org)

FROM THE PRESIDENT

As I write, we've just held the British and Irish Botanical Conference in Newcastle-upon-Tyne. As my partner, Nick, still has his parents' cottage in Elsdon, Northumberland, we undertook the 14 hours' drive (and ferry) from Galway, allowing several days to recover and enjoy the snow scenes. Unfortunately snow, ice and train strikes hampered many folk in their efforts to attend. But it was still the biggest-ever, since members of the Natural History Society of Northumbria (which co-hosted the meeting) also attended, giving a nice mix of interests. The location facilitated many living in northern England and Scotland for a change, even so soon after the Scottish Botanists' Conference, also a big draw.

The mix of young enthusiastic attendees and speakers with many very eminent botanists, including at least three past presidents, was terrific. This is one of the strengths of societies such as BSBI and NHSN; people of all ages attend meetings and share enthusiasm and knowledge. Indoor meetings such as this are great, but I learned a lot of my botany on Dublin Naturalists' Field Club field outings and later with the BSBI. It's so important to visit other regions, see species you might not find in your own patch – and absorb shared knowledge. This year one of the Conference themes was urban botany, a favourite since my *Flora of Inner Dublin* days. By nature, such flora is ephemeral with losses and new arrivals, so always an unexpected assemblage. I was glad to hear that weed-killing policies are changing – mainly in Britain I fear – as it's soul-destroying to see how even old walls around towns and cities have been 'cleaned up' to 'look better', at least still in Ireland. Ancient 'weeds' can often tell us about the history of a place, such as Weld (*Reseda luteola*) and Alexanders (*Smyrnium olusatrum*), both 'herbs' used in Mediaeval Dublin. Genetic science is so sophisticated now that we can use plant species to tell us about historic, even prehistoric movements of people. My Presidential address described the antics of some of the Hiberno-Lusitanian Ericaceae; species that are found in Ireland and not in Britain and have their main distribution outside Ireland on the Iberian peninsula. Genetic and palaeoecological research now show that many of these species came to Ireland in prehistoric or historic time by human agency. Several of our overview papers are in *New Journal of Botany* and *British & Irish Botany*, thanks to the generous interest of Ian Denholm, long-time Editor. He will be much missed but we welcome his replacement, Stuart Desjardins.

At the conference I picked up Margaret Bradshaw's *Teesdale's Special Flora*. A very impressive richly illustrated book, it describes all the key species' ecology and details, site history, geology, case histories and much more. A must-have, which I'll bring on my next visit to the area. Well done Margaret!! *Buala bos*!!

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EDITORIAL

Welcome to our first issue of *BSBI News* for 2024. For the first time in my editorship I was a little short of members' articles for this issue, so if you are thinking of writing a note or article on a botanical subject please do let me have it in good time for the April issue. Articles for inclusion may cover any aspect of British and Irish botany, but especially those related to identification and recording of wild and naturalised plants in the field (including organised surveys) and the conservation and management of plants in their habitats. I'm always happy to give my thoughts or feedback on ideas and first drafts – if requested! Of particular note in this issue is an extra long obituaries section, celebrating the lives of six of our most esteemed members, who between them notched up a total of 356 years' membership of the Society, and I am ever grateful to Chris Preston for the great amount of work he puts in to compile and edit this section.

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The Basal Project – photo contributions needed!

RICHARD MABBUTT

The Basal Project is a free web resource to help with the identification of the basal and juvenile leaves of wild plants of Britain and Ireland. It is aimed at beginner botanists, to give them the opportunity to use picture matching for non-flowering material. Developing more botanists is extremely important for the future. Many of us started out by picture matching; the Basal Project will help beginners to focus on not only the flowers in their books, but on the vegetative features too, thus encouraging them to become better all-round botanists.

The Basal Project

I have worked on this project for five years, and have found and photographed 650 species so far in their juvenile and basal state. There is a link on the website to a downloadable Excel spreadsheet which lists all species found so far, and all those still sought after. There are approximately 1750 species still to find, and that's where I am asking for your help – otherwise this project may take another 15–20 years to complete! The Excel sheet has a search facility, so trawling through 1750 plant names is not required when you are off out for the day, and have a rough idea of what you may see and, hopefully, photograph.

Basal leaf of *Agrimonia procera* (Fragrant Agrimony). *Richard Mabbutt*

Not all species groups are readily identifiable vegetatively, so I have omitted hybrids, microspecies, varieties, grasses, sedges, rushes, ferns, some rare trees and submerged aquatics. I am keen to ensure that every image includes something to provide a sense of scale, such as a hand, car keys or a ruler.

There is a search bar on the home page where you can enter partial or full scientific or common names, genus, species or family. Enter 'thistle', and all the thistles come up, enter 'Hypericum 'and

First-year leaf rosette of *Carduus crispus* (Welted Thistle). *Richard Mabbutt*

you get the Hypericums. There is also a families tab where you can go to every single plant in that family, which is important as we know, in gaining an ID for beginners. Click on any photograph, and it will enlarge for detail. There is also a tab for useful links for beginners, so if people have suggestions for additional ID websites, these would be most welcome.

Not all that remains to be found is rare. After five years, some common plants have not been photographed, e.g. *Acer campestre* (Field Maple), *Atriplex littoralis* (Grass-leaved Orache), *Hypericum androsaemum* (Tutsan), *Geranium macrorrhizum* (Rock Crane's-bill), which has eluded me four times, and quite a lot of common trees, as I only chose to include trees this year. I would also be grateful for photos that are better than those currently on the website. There's always room for improvement!

Please contact me at the email address below if you would like to get in touch or contribute photos. Contact details are also on the website. Credit will, of course, be given for all images used.

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MistleGO! – a new Mistletoe study across Britain and Ireland

OLIVER SPACEY & JONATHAN BRIGGS

Mistletoe, as discussed in several recent articles in *BSBI News* (e.g. Harrison, 2019; Taylor, 2019; Briggs, 2019; Spooner, 2023) and in two recent overview papers (Briggs, 2021; Thomas et al., 2023), is showing changes in both distribution and abundance, caused by one or more of several factors. These could include climate change, changes in bird vector populations or, in some habitats, simple management neglect. There is a need for a new assessment across Britain.

Previous national studies were led by BSBI in the 1970s (Perring, 1973) and, in the 1990s by BSBI and Plantlife in a joint citizen-science study (Briggs, 1999). Both studies highlighted the unusual concentration of Mistletoe in the south-west midlands but also recorded scattered populations across most of central and southern Britain. There were fears that Mistletoe might be threatened by the loss of traditional apple orchards, thought to be a primary habitat. In the event the 1990s study found Mistletoe was established rather more widely than previously thought. However, by only measuring distribution and not abundance, it was difficult to assess orchard loss impacts.

In recent years there has been evidence, some anecdotal, some in local measured studies (some reviewed in Briggs, 2021) of both increasing abundance and wider distribution. This includes the many very neglected old orchards in parts of the Mistletoe stronghold areas. Ironically, rather than the orchard loss leading to Mistletoe decline it now seems that unmanaged excess Mistletoe may be accelerating orchard decline. But the changes are not limited to that south-west Midlands – they seem to be a national phenomenon, at least in central and southern areas, perhaps less so in the extreme

Excessive growth of Mistletoe (*Viscum album*) in an apple tree. *Jonathan Briggs*

west and north. Similar trends in Mistletoe spread and abundance have also been noted in mainland Europe (Briggs, 2021; Thomas et al, 2023).

There is a need for a new study, ideally measuring quantity as well as simple distribution in order to assess current trends and likely management needs. Until recently there has been little need to manage most Mistletoe populations, but if there is 'explosive' (a word used in several studies) growth in numbers there may need to be more management in future.

To this end, a new citizen science app-based study, MistleGO!, has been launched this winter by the University of Oxford and the Tree Council. BSBI members across the UK and Ireland are encouraged to submit records of Mistletoe, including a rough estimate of the number of clumps that can be seen. MistleGO! will not only update our picture of where Mistletoe is found nationally, but provide crucial information about the density of Mistletoe at particular sites.

Being app-based the new study should eliminate some of the issues that dogged the 1990s project, particularly poor location data and host tree identification. The app will record location automatically, and records will include photographs which can be used for host tree ID verification. The app also asks the recorder to submit data on the surrounding habitat (e.g., parks, orchard, road verges), which will help us understand the types of habitat that may favour Mistletoe spread. The data collected will be used to model current Mistletoe distribution, and predict where it may spread into the future under various climate change and tree-planting scenarios. Such predictions will help inform how we manage Mistletoe, allowing us to conserve a native and iconic species while preventing it from becoming a pest.

To take part in the survey (which is run through ArcGIS Survey123), follow the QR code below or use this link: *arcg.is/1vnbru0*. You may use the survey in a web browser with an internet connection or download the Survey123 app and then install the survey for use offline. For more information, contact Oliver Spacey at the email given below.

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Species population decline at tetrad and hectad scales

MICHAEL BRAITHWAITE

This article is intended as a simplified introduction to the question of what exactly is being measured by the individual species declines demonstrated by *BSBI Plant Atlas 2020*.

For Berwickshire (v.c. 81), where I was BSBI Vice-county Recorder for 35 years, I published a *Berwickshire BSBI Botanical Site Register* giving for each site considered by me to be of botanical interest, an OS map at 1:25,000 scale with site boundaries marked, a site description and species localities. Rare and scarce species were listed by 6-figure grid reference with supporting detail, often including 10m localities. Selected axiophytes were listed by 6-figure grid reference, while other axiophytes were just listed without detail. This reflected my consistent recording strategy over many years, always at monad scale or finer within sites.

In the process of writing this *Register*, I reflected on what population loss means for scarce species. I found that such species almost always occur singly or as a group of colonies within a modest area, typically less than 1 km^2, though often overlapping a monad boundary. I concluded that loss at monad scale gives the best available measure of scarce species decline in the context of species distribution mapping, as it is applicable equally to the great majority of species. At finer spatial scales individual colonies often die out but may, or may not, be compensated for by a similar number of new colonies elsewhere in the same site, so the situation becomes complex.

Betonica officinalis (Betony) and *Teucrium scorodonia* (Wood Sage), two of the declining species considered in this study. *John Norton*

BSBI studies of change in the distributions of individual species

BSBI has studied the decline of individual species over time for Britain as a whole in two ways. At tetrad scale the BSBI Monitoring Scheme 1987–88

surveyed a sample of around 1% of British tetrads. This survey was repeated as BSBI Local Change in 2003–04. The results of the comparison between the two surveys were published as *Change in the British Flora 1987–2004*, of which I was the lead author (Braithwaite et al., 2006). For those species that had changed most, my team were able to measure the percentage decline or spread at tetrad scale between the two surveys, though only within disappointingly wide confidence limits. The measures were, however, adequate for the project to achieve its objectives. At hectad scale a much more comprehensive analysis of species change has now been published in *BSBI Plant Atlas 2020*. The analysis has been enabled by the *Frescalo* approach of Mark Hill, as developed by Oliver Pescott and his team.

Both the analysis at tetrad scale and that at hectad scale derive 'Relative Change' rather than 'Absolute Change'. That is to say that the measures are relative to the average change of a baseline group of the best-recorded native species, which may not be negligible. The baseline groups differ between the two analyses, but the concept is similar, so the comparisons made in this article are believed to be valid.

I have now compared the results of the tetrad and hectad repeat surveys for each of a small sample of six typical declining species, *Agrimonia eupatoria* (Agrimony), *Cerastium arvense* (Field Mouse-ear), *Betonica officinalis* (Betony), *Orchis mascula* (Early-purple Orchid) *Sanicula europaea* (Sanicle) and *Teucrium scorodonia* (Wood Sage). I find that the two measures of percentage change are notably similar (Figure 1), taking into account the broad confidence limits of the underlying data. This is not a self-evident result! Therefore, I have considered, first, what tetrad and hectad losses might be expected for a given hypothetical decline at monad scale and have then constructed illustrative examples using the same hypothesis. The results are informative, but do not point directly to a reason for the similarity between the two measures of percentage change. I leave that for others to investigate.

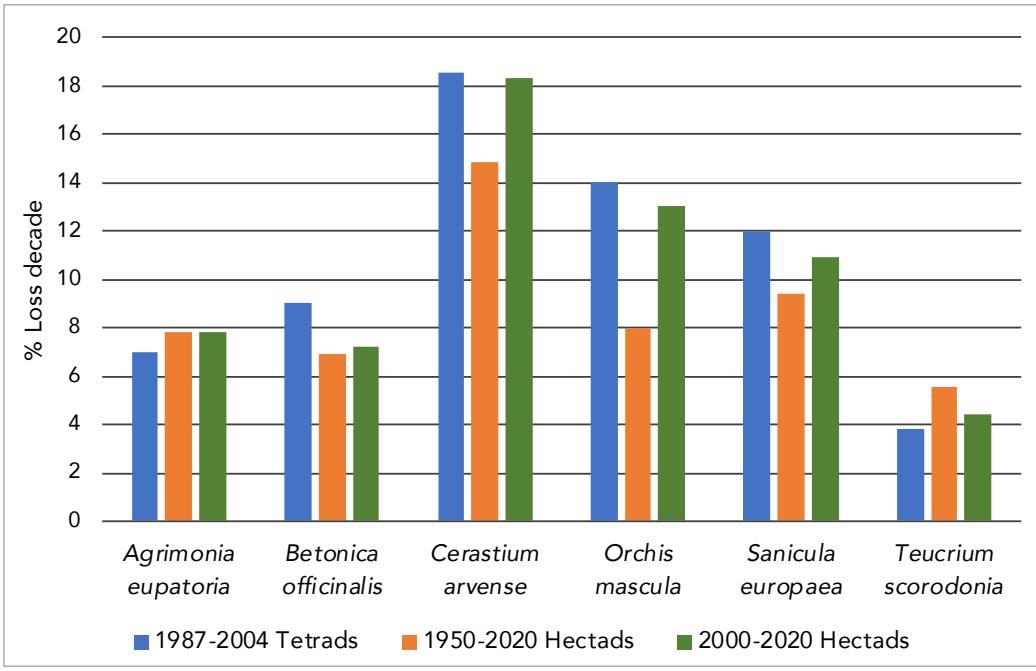

Figure 1. The tetrad data is taken from *Change in the British Flora 1987–2004,* with an exponential model being used to derive loss per decade. The hectad data is taken by eye from the long-term time trends in the online version of *Plant Atlas 2020,* with an exponential model being used to derive loss per decade.

Modelling population decline as shown by species distribution maps

For simplicity's sake, consider the situation where, over a certain period of time, 25% of all the monad populations of a particular species die out, whether they are in areas where the species is moderately frequent, or at the fringes of its distribution where it is infrequent.

Losses at tetrad scale will be:

- Tetrads initially with a population in one of the four monads – 25%
- Tetrads initially with a population in two of the four monads – 25% × 25% = 6.25%
- Tetrads initially with a population in three of the four monads – 25% × 25% × 25% = 1.56%
- Tetrads initially with a population in all of the four monads – 25% × 25% × 25% × 25% = 0.39%

It is apparent that the majority of the tetrad losses will be at the fringes of the distribution of the species, where it is scarce.

Losses at hectad scale will follow almost exactly the same pattern, as losses in hectads initially with a population in more than four of the one hundred monads will be negligible. A much larger sample will be needed to demonstrate change at hectad scale than at tetrad scale, but the change statistics will be comparable. As a result of the need for a large sample at hectad scale the change statistics in *Plant Atlas 2020* have disappointingly wide confidence limits, not dissimilar to those in *Change in the British Flora 1987–2004* at tetrad scale. The measures are, however, adequate for the *Atlas 2020* project to achieve its objectives.

For many species in decline, the decline is closely exponential over quite long periods of time. It is interesting to speculate why this is so. It seems most likely to relate to the fragmentation of natural habitats in the agricultural revolution that took place between, roughly, 1750 and 1850, followed by a gradual whittling-away of the remaining fragments by many drivers of change including eutrophication, field drainage and hedge removal. In the future, the rate of decline may, or may not, accelerate.

Illustrative examples

Continuing to examine the situation where, over a certain period of time, 25% of all the monad populations of a particular species die out, examples are taken of a real distribution at both tetrad and hectad scales and applying the postulated 25% loss at monad scale. These examples illustrate how widely the postulated changes at monad scale may differ from the portrayed losses at tetrad and hectad scales.

Example with 14 populations in 10 of the 25 tetrads (Figure 2).

If 25% of the recorded populations die out, 2 (19%) of the occupied tetrads will be shown as losses.

As the populations are widely scattered, usually with no more than a single population per tetrad, the tetrad losses give some indication of the magnitude of the underlying population losses.

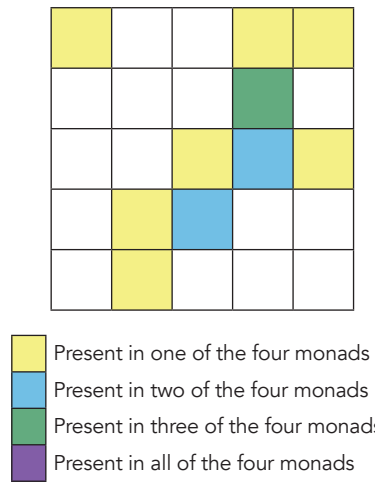

Figure 2. Example tetrad distribution for a single hectad (based on *Geranium sylvaticum* [Wood Crane's-bill] in NT75).

Example with at least 161 occupied monads in 71 of the 100 hectads (there were in fact 282 distinct occupied localities) (Figure 3).

If 25% of the recorded populations die out, 6 (8%) of the occupied hectads will be shown as losses, so the underlying population losses are not at all evident because of the relatively clustered distribution.

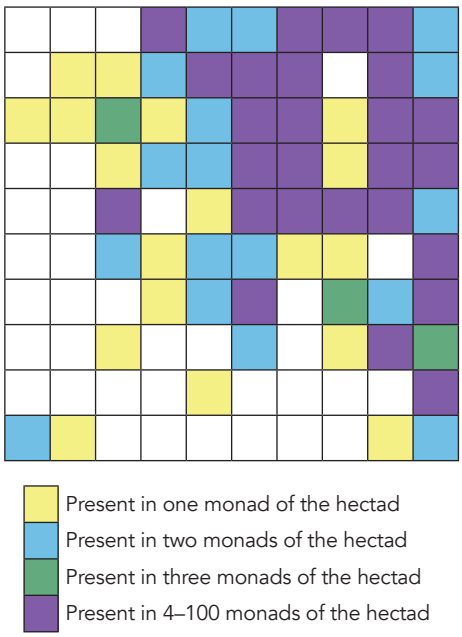

Figure 3. Example hectad distribution for a single 100 km square (based on *Cerastium arvense* [Field Mouse-ear] in SK00–SK99).

Summary

Comparing the estimates of change in individual species from BSBI's tetrad and hectad repeat surveys, I find that the two measures of percentage change are notably comparable. I suggest that this is a suitable subject for further mathematical analysis by others. I examine these measures of change in more detail in relation to hypothetical losses at monad scale.

Only species in decline are discussed, but the concepts are equally applicable to species that are spreading, albeit with the proviso that there is no expectation that long-term trends will be similar to short-term trends.

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Michael Braithwaite died in December 2023 just a few weeks after submitting the final version of this article. We would like to offer our condolences to his family. *John Norton*, Editor

An unusual habitat for Rustyback in Teesdale

JOHN DURKIN

Inspired by Margaret Bradshaw's book *Teesdale's Special Flora*, I spent some time in 2023 plant hunting in Upper Teesdale. One of my oddest finds was *Asplenium ceterach* (Rustyback), which had not been recorded in Upper Teesdale since 1963. Rustyback is normally a fern of lowland limestone, but this population is on a volcanic dolerite, called the 'Whin Sill' in north-east England, and at an altitude of 360 metres. Further, the plants are the variety *crenatum*, which is mainly found in Ireland, west Wales, Devon and Cornwall. Var. *crenatum* plants are generally larger and of a more angular appearance, with the pinnae crenately lobed. The Whin Sill is the rock that forms the nearby High Force waterfall, the crags at Falcon Clints and Cronkley Scar, the Roman Wall, Lindisfarne and the Farne Islands. It supports many species of rare and interesting plants.

There are about 180 Rustyback plants on these Whin Sill crags, on vertical rock faces and in scree. Associated species in the community include *Asplenium trichomanes* subsp. *trichomanes* (Delicate

Maidenhair Spleenwort), which is the dominant species and has its English HQ here, plus *Dryopteris oreades* (Mountain Male-fern), *Polypodium vulgare* (Polypody), *Sedum album* (White Stonecrop) and small numbers of *Asplenium ruta-muraria* (Wall Rue). The other calcicolous ferns common in Upper Teesdale, such as *Asplenium viride* (Green Spleenwort), *Cystopteris fragilis* (Brittle Bladder-fern), *Asplenium scolopendrium* (Hart's-tongue) and *Polystichum aculeatum* (Hard Shield-fern), are absent.

In north-east England Rustyback is otherwise present as much smaller colonies of the normal form, on mortared walls, in both rural and urban areas. Upland volcanic rock is an exceptional habitat for this fern. This is a botanically interesting area and I hope to investigate further in 2024.

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Left: *Asplenium ceterach* var. *crenatum* (Rustyback) growing in a rock crevice and close-up showing the crenately lobed pinnae. Above: habitat on the Whin Sill dolerite in Upper Teesdale. *John Durkin*

Unusually well-grown *Carex remota* (Remote Sedge) in Epping Forest

ALJOS FARJON

My first encounter with *Carex remota* (Remote Sedge) forming dense vegetation in Epping Forest was on 3 August 2023. It covered a large patch of about 30 × 20 m in a gap between tall beeches and oaks at TQ 4075 9770. This is where the first photograph (opposite) was taken. Subsequently on the same walk I saw similar patches in several places along the 'Up and Down Ride' (at K19 on the Epping Forest Map, City of London) where the ride repeatedly dips down into small valleys usually crossing a stream. On later walks, on 15 and 26 August 2023, I saw it again in numerous places, mostly along the rides but also well away from these, nearly everywhere covering the forest floor over a more or less extensive area. Almost all places showed signs of waterlogging or seepage.

My experience in deciduous woodland with *C. remota* in England and in my country of origin, the Netherlands, was of a sedge forming small tussocks in moist places, often on the sides of ditches or small streams, but never completely covering large areas. The plants in Epping Forest were also much larger than usual. This prompted me to think it might be a case of a new invader, as it strongly reminded me of similar patches of a species I had seen only shortly before in Białowieża Forest in Poland, which I was told was spreading there from further south: *Carex brizoides*. I had not seen inflorescences of this sedge. When I collected specimens at the request of Mike Porter, BSBI *Carex* referee, the sedge I had seen in Epping Forest was identified as *C. remota*.

Short botanical description: rhizomes short. Shoots tufted, forming flat tussocks, first erect, then decumbent. Leaves to 30 cm long, 2.5–3.5 mm wide. Stems becoming very long to c.100 cm, 1.2–1.5 mm wide, nearly terete. Spikes remote in upper part of stem, 5–10 mm long, 2–3 mm wide. Utricles smooth, 3 × 1 mm, beak minutely bifid at apex.

Top: *Carex remota* (Remote Sedge) forming a dense ground-covering vegetation in a forest opening above stagnant groundwater in Epping Forest at TQ 4075 9770, 3 August 2023. Bottom: Another dense stand of *Carex remota* in humus-rich waterlogged soil containing iron oxides, 15 August 2023. *Aljos Farjon*

Its most distinct character in Epping Forest is the decumbent habit, with exceedingly long stems, as shown in the photographs, together with its vegetation spreading across extensive areas of

ground, excluding most other plants. Mike Porter confirmed by email that this growth form seems exceptional for this species and wrote: 'I've never seen this sedge forming such dense mats, as shown in your photographs.'

The causes of this growth form are as yet obscure. Given the extent of the spreading vegetation it has probably taken several years to cover such large areas as shown in the photographs.

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Revisiting *Salix* × *doniana* (Don's Willow) on the Sefton coast sand dunes, Merseyside (v.c. 59, South Lancashire)

PHILIP H. SMITH

Smith (2014) described the history, status and habitat of *Salix* × *doniana* (Don's Willow) (*S. purpurea* Purple Willow × *S. repens* Creeping Willow) in the UK. He reported that in 2013 there were 32 bushes of this distinctive hybrid (Figures 1, 2, 3) in the Sefton sand dunes (v.c. 59 South Lancashire). Elsewhere, only four or five bushes were known, singles at two sites in Scotland and two or three at one locality in Norfolk. Another possible sighting in Somerset was not confirmed. It is hardly surprising that Meikle (1984) described it as 'a very uncommon hybrid. The 2013 study mapped the Sefton Coast sand dune bushes, measured their dimensions and determined their sex. During the last decade, several new bushes of this hybrid were found and a few were apparently lost. It was therefore thought opportune to revisit the Sefton duneland population of *S.* × *doniana* to update previous information on this rare taxon. *Photographs by the author.*

Methods

Previously recorded *S.* × *doniana* bushes were revisited and 'new' bushes identified from their characteristic appearance and morphology, including leaf shape and colour in late summer, the presence of sub-opposite leaf pairs, and stem colour – often flame-red or orange (Meikle, 1984; Stace et al., 2015). The catkins of most bushes were also checked in April to confirm identity and determine their sex (Figures 2, 3). Some of the new bushes were first noted during the winter when their red stems were visible from a distance using binoculars (Figure 4), while the shape of fallen leaves gave clues to their identity. These individuals were revisited in spring and summer 2023 to confirm the taxon. The following details for each specimen were entered into a database: National Grid Reference (determined using a Garmin Etrex GPS device), date, sex, bush area (estimated using πr^2 from the mean of two diameters taken at right angles) and maximum bush height.

Results

Table 1 summarises the status of *Salix* × *doniana* bushes in 2023 in nine duneland zones. They extended from Hightown in the south to Birkdale in the north, a linear distance of about 5.5 km. Of the 32 bushes extant in 2013, 27 (84%) survived until 2023. However, one split into two separate individuals, while two adjacent pairs and one triplet grew together to form single bushes. As many as 13 'new' individuals were discovered, seven in or on the edges of dune slacks at Ainsdale Sandhills Local Nature Reserve (LNR), four in slacks at the

Devil's Hole blowout, Ravenmeols LNR, and one each in slacks at Ravenmeols and Birkdale LNRs. Another was found in 2016 in secondary woodland at Falklands Way dunes, Ainsdale, but had died by 2023. Five more bushes were lost or died during the decade between surveys, three in woodland at Lifeboat Road, Formby, and two in slacks at Ainsdale Sand Dunes National Nature Reserve (NNR). The total number of extant bushes increased from 32 in 2013 to 38 ten years later. In 2023, 14 individuals were male and 20 female, four mostly young bushes being undetermined. As in 2013 (Smith, 2014) most of the *S.* × *doniana* bushes were associated with dry slacks or the edges of wet slacks in vegetation that resembles the UK National Vegetation Classification's SD16: *Salix repens-Holcus lanatus* dune slack (Rodwell, 2000). Exceptions included a few bushes associated with secondary woodland that was planted or has grown up in former slacks since the late 1960s or early 1970s (pers. obs.). It was expected that the bushes would have grown during the last decade. Table 2 shows mean annual percentage changes in bush area and height in nine sand dune zones since they were last measured. The latter period varied depending on the year of discovery. On average, bushes grew 13.9% per annum in area and 6.4% in height but there was a great deal of variation, mostly due to large increases or decreases of single bushes, together with the effects of small sample size. The range of bush areas and heights in 2023 are given in Table 2. Overall, the largest bush was at Birkdale LNR, having an estimated area of 207.4 m^2, while the tallest, at 3.8 m, was at Falklands Way dunes, Ainsdale. Mean bush area in 2023 was 40.1 m^2, while mean height was 1.84 m, compared with the mean values of 29.1 m^2 and 1.66 m, respectively, for the 32 bushes in 2013 (Smith, 2014).

Figure 1 (top). Typical leaves and stems of *Salix* × *doniana* (Don's Willow), Devil's Hole, September 2016. **Figure 2** (centre). Male catkins of *Salix* × *doniana*, Hightown dunes, April 2023. The anther colour is an inherited character from *S. purpurea* (Purple Willow). **Figure 3** (bottom). Typical female catkins of *S.* × *doniana*, Hightown dunes, April 2023.

Table 1. Numbers of *S.* × *doniana* bushes found in 2013 and 2023 in the Sefton Coast sand dunes (from south to north).

Zone	Tetrad	2013	2023	Notes
Hightown dunes	SD20W	11	9	No new bushes; three conjoined
Cabin Hill NNR	SD20X	1	1	No new bushes
Devil's Hole, Ravenmeols	SD20S	1	5	4 new bushes
Ravenmeols LNR	SD20S	0	1	1 new bush
Lifeboat Road, Formby	SD20T	6	4	3 bushes lost; 1 divided into 2
Ainsdale Sand Dunes NNR	SD21V	7	4	2 bushes lost; 2 conjoined
Falklands Way dunes, Ainsdale	SD31A	1	2	1 old bush divided into 2. A new bush found in 2016 was lost by 2023
Ainsdale Sandhills LNR	SD21W	1	8	7 new bushes
Birkdale Sandhills LNR	SD31B	4	4	1 new bush; two conjoined
Total		**32**	**38**	

Table 2. Area and height range of *S.* × *doniana* bushes in 2023 and mean annual percentage changes in bush area and height.

Zone	No. of years	Area range 2023 (m^2)	% area change per annum	Height range 2023 (m)	% height change per annum
Hightown dunes	10	2.4–60.1	15.7	0.9–2.7	1.2
Cabin Hill NNR	10	27.8–27.8	29.2	2.35	5.7–5.7
Devil's Hole	1–10	0.22–2.1	12.7	0.5–1.1	34.9
Ravenmeols LNR	0	35.3	–	2.2	–
Lifeboat Road	10	0.7–30.7	37.6	2.1–3.6	3.7
Ainsdale Sand Dunes NNR	10	12.6–107.5	1.7	0.6–2.2	1.2
Falklands Way	15	1.43–29.2	–0.4	1.55–3.8	–1.3
Ainsdale Sandhills LNR	2–10	26.9–59.5	12.7	1.1–3.2	5.0
Birkdale Sandhills LNR	1–14	54.1–207.4	13.1	0.87–3.0	3.7
Mean			**13.9**		**6.4**

Discussion

The BSBI Maps website indicates that there were no new British records of *S.* × *doniana* during the last decade. The Sefton Coast sand dunes therefore remain the main British locality for this rare hybrid. Within the nine study areas, the largest number of new bushes (seven) was found at Ainsdale LNR. This was probably due to improved access, following several years of winter grazing by traditional breeds of cattle, which lowered the height and density of vegetation on the dunes. Localised scrub control was also a factor. For example the new bush on Ravenmeols LNR was discovered following *Hippophae rhamnoides* (Sea Buckthorn) removal from several dune slacks. Previously, this bush was out of sight, being surrounded by *H. rhamnoides*. Most bushes were found in or on the edges of dune slacks, while a few were associated with partially planted secondary woodland. Perhaps due to shading, the latter seems to be a less suitable habitat for this taxon; thus, the three 'lost' bushes at Lifeboat Road and one at Falklands Way were in wooded slacks.

The lifespan of *S.* × *doniana* is unknown but potentially extends for several decades. Thus some extant bushes in Ainsdale NNR were shown on a map of rare plants drawn up in 1976 by the site manager, Keith Payne. These must now be at least 50 years old. According to Smith (2014) the large bush on Falklands Way that was divided in 2010 by a fallen bush of *H. rhamnoides* may date back to the 1960s, before trees were planted, making it now around 60 years old. The Falklands Way individuals, together with others at Lifeboat Road and Hightown, support several dead branches, perhaps indicating

Figure 4. Flame-red stems of *S.* × *doniana* in winter, Birkdale LNR, December 2021.

Figure 5. Large bush of *S.* × *doniana*, Birkdale LNR, August 2023. Since 2013, it has grown by 125% in area and 20% in height.

impending mortality. Falklands Way was the only zone where both bush area and height declined during the decade (Table 2). Nevertheless, many large and, presumably, old bushes elsewhere grew vigorously in both area and height (Figure 5). Meikle (1984) gave the maximum height for *S.* × *doniana* as 1.5 m, while those measured in this study averaged 1.7 m, with a maximum of 3.8 m. The mean bush area also increased during the decade. The six bushes 'lost' between 2013 and 2023 were replaced by 13 new discoveries, several of them young bushes, suggesting that spontaneous hybridisation between *S. repens* and *S. purpurea* may still be occurring on the Sefton dunes. Alternatively, pollen from male *S.* × *doniana* bushes may be capable of fertilising female catkins to produce viable offspring. These possibilities would provide interesting topics for further study.

Acknowledgements

I am grateful to Mike Wilcox for encouraging my interest in hybrid willows and for helpful comments on the draft manuscript.

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BEGINNER'S CORNER

Stitchworts (Part 1)

MIKE CREWE

In this edition of Beginner's Corner, I'm returning to the chickweed and campion family – the Caryophyllaceae – for a first look at members of the genus *Stellaria*, of which we have seven species in Britain and Ireland. One of the reasons why keys are so popular as a way of identifying plants is that they allow us to break down the choices into smaller, manageable groups as we work towards an identification, and this method works well in the campion family generally. We've looked previously at the closely related mouse-ears in the genus *Cerastium* (*BSBI News* 152: 37–40). That genus can generally be separated from *Stellaria* by a close look at the flowers: *Cerastium* has four or five styles, while *Stellaria* has only three (though annoyingly, there's one exception). Further, *Cerastium* species typically have a relatively shallow cleft in the tip of each of the petals, along with hairy leaves, while the petals of *Stellaria* are cleft to beyond half way to the base and the leaves are more or less hairless. Indeed, the petals of several of our stitchworts are so deeply cleft that one has to be careful not to believe that they have 10 petals – an easy trap for those still learning their plants! A few other members of the campion family could perhaps be confused with *Stellaria*, such as the various sandworts, but those species typically have entire, un-notched petals.

Flowers of Greater Stitchwort (*Stellaria holostea*), showing the five deeply cleft white petals, characteristic of the stitchworts. *Mike Crewe*

Having separated out our *Stellaria* species from their relatives, the commoner species can fairly easily be split into two manageable groups by means of their leaves, all of which are carried in opposite pairs along the stems, as is typical for the family. Here, I'll be looking at the subset of species with rather narrow leaves and which are generally known as stitchworts. In a later issue, I'll have a look at the broader-leaved species, known as chickweeds.

The five stitchworts

So, by looking at just a few easy features, we're starting with a group of just five species to get to know, most of which are pretty widespread across Britain Ireland in either grassy or woodland habitats, with just a couple of more specialist species.

All of our stitchworts are perennial species, they all have deeply cleft petals and all have ten anthers and three styles, so we need to look elsewhere for the differences. Habitat (wet or dry, shady or sunny) and growth style are certainly worth noting, as are details of the leaves and stems. Greater and Lesser Stitchworts are typically the most frequently encountered so can act as your yardsticks by which to compare other, less common, species.

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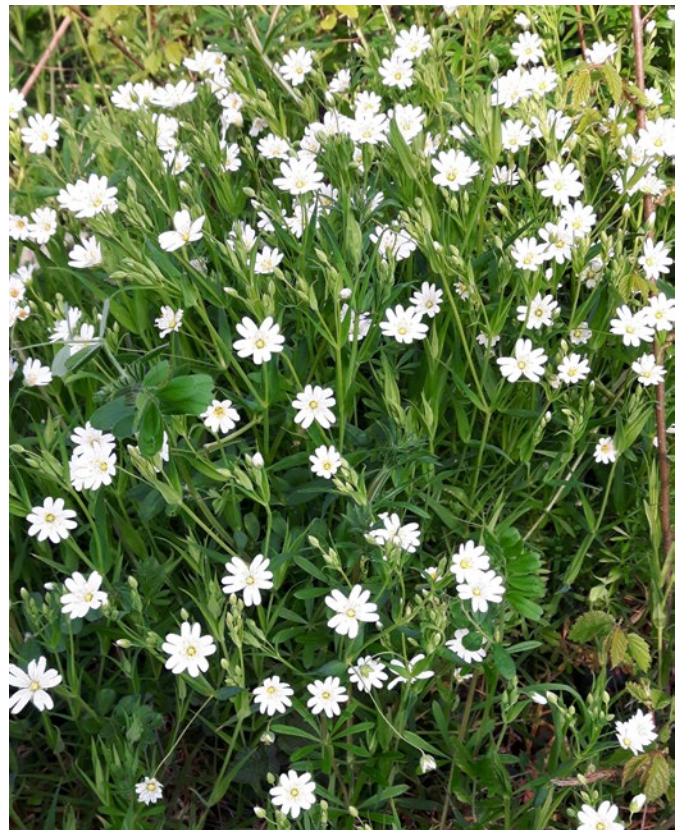
My apologies to Mike Crewe, as I inadvertently missed his name off as author of Beginner's Corner in the last issue ('Paving the way: some increasing alien grasses of urban habitats'). A mix-up in photo labelling also meant that the left-hand photo of New Zealand Wind-grass (*Anemanthele lessoniana*) at the top of p. 27 was in fact Argentine Needle-grass (*Nassella tenuissima*). If any member would like an updated pdf version of the article, please contact me. *John Norton*, Editor.



Greater Stitchwort (*Stellaria holostea*). Unless you live in the Outer Hebrides or high on a mountainside, this species should be familiar to all. It appears as a welcome sign of spring, often forming snowy drifts along open woodland rides, roadsides and hedgebanks. Greater Stitchwort has relatively large, showy flowers, 2–3 cm across, with broad petals, not unlike those of Field Mouse-ear (*Cerastium arvense*) and they are carried well above the lanceolate leaves on slightly rough, upright, four-angled stems. *Photos: Mike Crewe (top left, right); John Norton (bottom left).*

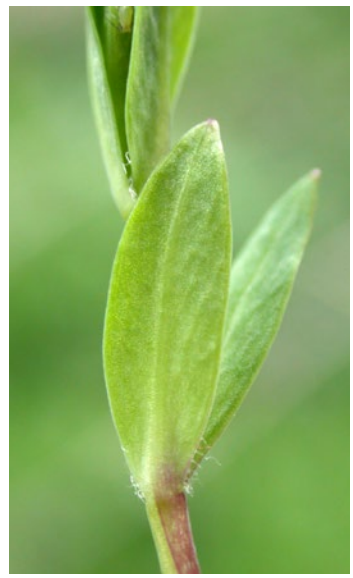


Lesser Stitchwort (*Stellaria graminea*). Widespread throughout Britain and Ireland and a common constituent of a range of grassland habitats, especially if seasonally wet. Also in grassy woodland rides and on roadsides. A much more delicate plant than Greater Stitchwort, with smooth (not rough), four-angled stems that are fine and difficult to spot as they scramble through surrounding vegetation. The flowers are 0.5–1.2 cm across, well-spaced, being carried on widely branching stems and the petals are slender and deeply cleft, being split almost to the base. The leaves are slender and sharply pointed on the upper part of the stems, like those of Greater Stitchwort, but lower leaves are broader and less distinctive. *Photos: Mike Crewe*




Wood Stitchwort (*Stellaria nemorum*). This species will be far less well-known to most of us; it frequents shady, usually damp, places, typically along waterways in woodland. Though there is a population in the Forest of Dean/Wye Valley region, one would otherwise need to be north of Manchester–Leeds to find this species, north into the lowlands of Scotland. Wood Stitchwort flowers are intermediate in size between those of Greater and Lesser Stitchworts and share the deeply cleft petals typical of this group, but it has broad-based leaves that are more like those of some of the chickweeds, with the lower leaves having obvious petioles. Most distinctively, its stems and leaves have downy hairs on them, those on the stem being evenly distributed and not arranged in a one-sided line, as they are in some of the chickweeds. *Photos: Mike Crewe*






Bog Stitchwort (*Stellaria alsine*). A widespread and common species in wetland habitats throughout Britain and Ireland, though typically avoiding calcareous soils, so more localised in chalky areas and strangely absent from much of Fenland. Unlike all of our other stitchworts this is typically a low, prostrate species, though it may become more upright among taller grasses. The flowers are small, only 5–6 mm across, with the petals usually a little shorter than the pointed sepals. The petals are cleft almost to the base, with each half wide-spreading to form a Y-shape. Indeed, the two halves are so widely spaced that each half appears more likely to belong to its neighbouring petal. The leaves are rather shorter and broader than those of other stitchworts and often have a slight blue-grey bloom. *Photos: Debbie Allan (top left); Mike Crewe.*



Marsh Stitchwort (*Stellaria palustris*). Although found across much of our region, this is the scarcest and most localised of our stitchworts, with the main populations being found in the wetlands of East Anglia and Somerset in England and along the Shannon and River Erne wetlands in Ireland and Northern Ireland. Marsh Stitchwort is often a frail-looking plant with slender stems that bear few leaves and which discreetly trail through other vegetation in tall herb fen habitats. The stems are four-angled and, along with the narrowly lanceolate to linear leaves, typically have a blue-grey bloom. A pair of very narrow bracts can be found where the flower stalk (the pedicel) joins the main stem; these bracts have hairy margins and are distinctly pale at the edges with a green central stripe. *Photos: Mike Crewe (left); John Norton (centre, right).*

ADVENTIVES & ALIENS

Adventives & Aliens News 31

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In keeping with the shorter preambles of late, I won't use any more space than that required to express my pleasure at the better coverage Scotland, Wales and Ireland receive in this compilation and to thank everyone who has helped by supplying records for those vice-counties, and indeed for all the records received, whether featured below or not (more will of course appear in News 32). I am ever grateful.

V.c. 4 (N. Devon)

Vinca difformis (Intermediate Periwinkle). Yarnacott (SS62123045), 24/5/2023, R.I. Kirby (conf. M. Berry): carpeting floor of wood, clearly spread from roadside introduction. The first v.c. 4 record. A glabrous trailing evergreen subshrub (Apocynaceae) that has leaves of a shape and size more like *V. major* (Greater Periwinkle) than *V. minor* (Lesser Periwinkle) but paler green and milky blue almost white flowers with the limb c.40 mm across. It is a native of southern Europe and less commonly in cultivation than the other two familiar species. Stace (2019): 582.

Avena nuda L. (Naked Oat). Tiverton (SS96821359), 11/10/2023, R.I. Kirby (conf. O. Pescott): growing as pavement weeds at a wall base with *Guizotia abyssinica* (Niger) and *Brassica napus* (Rape), Bluebell Avenue. The only other modern record presently in DDb is for v.c. 36, when found by Aaron Woods in a flower bed in 2017, some metres from where birds were fed in winter (also conf. O. Pescott). As well as bird seed, it was once widely cultivated in Cornwall and the Isles of Scilly (and to some extent in central Europe as a cereal), Ryves et al. (1996). It is like *A. sativa* and was formerly treated as a subspecies of it. One distinguishing feature is the relatively loose attachment of the palea to the caryopsis, Bob Kirby pers. comm.

Avena nuda, Tiverton, North Devon (v.c. 4). *Bob Kirby*

V.c. 7 (N. Wilts)

Equisetum hyemale subsp. *affine* (Engelm.) Calder & Roy L. Taylor (Rough Horsetail). Melksham (ST91136406), 27/10/2023, D. Green (det. F.J. Rumsey/comm. D. Green): pushing through hard

standing at rear of property amongst garages, over 50 stems. New to the county. There are only three other records in the DDb, all for v.c. 38. A native (Equisetaceae) of N. America and parts of east Asia, it is grown as an ornamental plant of garden ponds. It differs from native subsp. *hyemale* in having aerial stems to c.250 cm tall (vs c. 100 cm) and 15 mm across (vs 8 mm across), and more persistent sheath teeth.

Hibiscus trionum (Bladder Ketmia). Near Bradford-on-Avon (ST8295063150), 10/2023, D. Green (comm. P. Stroh): at Cumberwell landfill. The first v.c. 7 record. A stiffly hairy annual (Malvaceae) that has solitary white or very pale yellow flowers, often purple veined on the reverse, c. 5 cm across and with purple-black centres. It has an epicalyx of 12 linear segments and a distinctive inflated fruiting calyx. The leaves are entire or deeply divided into three to five lobes, which are often in turn coarsely toothed or lobed. A native of south-east Europe, south-west Asia and Africa. In Britain it has been introduced in wool, bird seed and oil-seed. It is also occasionally grown in gardens. There are no records for Ireland. Adventives & Aliens News 13, v.c. 14. Clement et al. (2005), p. 97. Stace (2019): 405.

Hibiscus trionum, near Bradford-on-Avon, North Wiltshire (v.c. 7). *David Green*

Solanum rostratum (Buffalo-bur). Near Bradford-on-Avon (ST82906291), 14/9/2022, D. Green: one

Solanum rostratum, near Bradford-on-Avon, North Wiltshire (v.c. 7). *David Green*

plant at Cumberwell landfill site. The fifth v.c. 7 record and the second for this site, the first being in 2017. A spiny, yellow-flowered annual (Solanaceae) from N. America; a wool, grain, bird- and oil-seed casual in Britain and Ireland. Clement et al. (2005), p. 221. Stace (2019): 612.

Rostraria cristata (Mediterranean Hair-grass). Bromham (ST96406528), 24/7/2023, D. Green (det. H.J. Crouch): c. six clumps in central village car park. The first v.c. 7 record. An annual grass with spike-like panicles, a native of the Mediterranean region; the lemmas are 5-veined and have short, subterminal awns. A wool, esparto and bird seed casual in Britain and Ireland. Post-2010, c.10 new sites have come to light in scattered, southern English v.cc. Adventives & Aliens News 1, v.c. 11; Adventives & Aliens News 19, v.c. 14. Stace (2019): 1067.

V.c. 9 (Dorset)

Tigridia pavonia (L. f.) Redouté (Tiger Iris). Ridge (SY9357286269), 4/8/2023, D. Leadbetter: two plants on verge opposite houses; also several *Gladiolus* × *hortulanus* (Florists' Gladiolus). A perennial herb (Iridaceae) with a bulbous rootstock, native to central America and found as an introduction in several S. American countries; it is a garden plant in Britain and Ireland. The tepals of the typical plant are red distally and have yellow red-spotted bases (this and other colour forms are found in cultivation), each flower being c. 8 cm across. The leaves are sword-like and pleated. As a genus *Tigridia* differs from *Sisyrinchium* and *Libertia* in having filaments fused their entire length to form a staminal tube (vs fused only at base); and from *Homeria* in having inner tepals smaller than the outer (vs all tepals of equal size). Another common name for the plant is Maravilla, 'wonder' in Spanish. There are no records in the DDb.

Tigridia pavonia, Ridge, Dorset (v.c. 9).
David Leadbetter

V.c. 12 (N. Hants)

Lonicera × *purpusii* (Winter Honeysuckle). Barton Stacey (MOD) (SU4441), 25/10/2022, J. Moon (comm. A. Mundell): near houses and probably a garden throwout, Area 7. The fourth v.c. 12 record, the first being for 2011. A deciduous to semi-evergreen garden shrub (Caprifoliaceae), the artificial hybrid of *L. fragrantissima* and *L. standishii*, both from east Asia. Stace (2019): 828.

Eryngium planum (Blue Eryngo). Alton (SU72873864), 14/7/2023, P. Flood (comm. A. Mundell): some plants on the southern verge of westbound Alton Bypass. The first v.c. 12 record. A perennial central and south-east European herb (Apiaceae) grown in gardens. It has unlobed basal leaves, deeply cut stem leaves and blue ovoid capitula. Clement et al. (2005), p. 200. Stace (2019): 850.

V.c. 14 (E. Sussex)

Callistemon rigidus R. Br. (Stiff Bottlebrush). Eastbourne (TQ6262500107), 18/6/2023, M. Berry (conf. E.J. Clement): one seedling at foot of lamp post, self-sown from plants in nearby hedging, Royal Parade. The first Sussex record. An evergreen shrub (Myrtaceae) to 4.5m, native to Australia and quite commonly planted, along with a few other *Callistemon* species, in milder parts of Britain and Ireland. The alternate leaves are stiff, very narrowly elliptic and have sharply acute tips. The flowers form terminal spikes overtopped by leafy extensions of the branches. They have inconspicuous petals and very showy stamens, with red filaments and dark red anthers; the stigmas are yellow. They are followed by closely packed woody seed capsules. This

name would now include plants formerly known as *C. linearis*. *C. viminalis* has a similar leaf shape and is known to self-sow but is a shrub with a weeping habit.

Ocimum basilicum L. (Sweet Basil). Milton Street Area (TQ5333505011), 26/7/2023, M. Berry & J. Linsell (conf. E.J. Clement): five plants on waste ground between new cycle path and A27, east of Sherman Bridge. The first Sussex record. A branched annual or sort-lived perennial herb (Lamiaceae) with highly aromatic, glandular-punctate leaves and white or purple flowers (c.13 mm long) in axillary whorls; a native of the tropics (e.g. India and western Australia) and perhaps mainly grown as a pot herb in Britain and Ireland. It is distinctive in having the upper tooth of the calyx broadly winged and so resembling a circular 'cap'. The stamens are exserted and lie almost flat along the lower lip of the corolla. *O. americanum* and *O.* × *citriodorum* might also be in cultivation. The former differs in having smaller flowers and smaller leaves which have grey-green lower surfaces (vs green both sides). *Ocimum micranthum* Willd. (known now as *Ocimum campechianum* Mill.) is an annual with larger leaves and white corollas which barely exceed the calyx. *O. basilicum* was collected from a tip in Greenhithe (v.c. 16) by Eric Clement and J.R. Palmer on 26/10/1969 (Herb. EJC). The only record in the DDb is for a greenhouse in Silwood Park (v.c. 22) from 2019.

Pratia pedunculata (Blue Lawn-lobelia). Friston (TV5598), 12/6/2023, J. Linsell (det. M. Berry): established in lawn of property, The Ridgeway; not introduced by the present owner. All other v.c. 14 records have so far referred to cemeteries and churchyards. A mat-forming perennial herb (Campanulaceae) with pale blue flowers and hairy leaves, native to Australia, and a rockery plant/lawn weed in Britain and Ireland. Although the fruit is a berry rather than a capsule, it should probably be sunk into *Lobelia*. Stace (2019): 713.

Gaudinia fragilis (French Oat-grass). Milton Gate (TQ5394005009), 15/8/2023, M. Berry (conf. E.J. Clement): abundant for c.100–150m along verge of new cycle path, backing onto field, south side of A27, just extending into TQ5404. A southern European annual grass with a spiciform inflorescence, the axis of which breaks into one-spikeleted segments at maturity. There have been a few casual records in Sussex, e.g. the first county record on a road verge near Duddleswell (TQ42U) in 1960. It has also had a more permanent presence in unimproved and semi-improved grassland, including in TQ50T at nearby Polegate, Sussex Botanical Recording Society (2018). Because of its extent and frequency, Eric Clement suspects that the Wilmington/Milton Gate population is native, a survival from a pre-arable meadow habitat perhaps. This could be the case, if under certain suitable conditions the seed is long-lived, it is otherwise much more likely to have been a recent introduction. Its possible native status elsewhere in southern England has been much debated. Ryves et al. (1996), fig. 16. Stace (2019): 1066.

V.c. 15 (E. Kent)

Falcaria vulgaris (Longleaf). Broadstairs (TR3768), 5/6/2021, R. Cox: on gravelled grave of Private J.L. Castle, St. Peter-in-Thanet churchyard; found during a 'Churches Count on Nature' biodiversity survey. After a follow-up visit, which revealed a 4m × 4m spread into adjacent rough grassland (e.g. TR37916856), Sue Buckingham suggested a possible introduction on mowing machinery from an established population at Kingsgate golf course (TR37V). There have been a number of v.c. 15 records over the years with several extant or likely to be. It seems to have been more or less absent from v.c. 16, the only record an apparent introduction. A branched, glaucous, glabrous perennial (Apiaceae) identifiable by the long, narrow, slightly curved, serrate lobes of its ternate leaves, the lobes themselves often further divided, and with thickened, cartilaginous margins. A Eurasian native, it is an established grain and agricultural seed alien mainly in southern England and the Channel Islands, Clement & Foster (1994). The first Irish record was for v.c. H38 in 1912, Reynolds (2002). Stace (2019): 866.

Eragrostis minor (Small Love-grass). Herne Bay (TR1767), 25/9/2022, C. Osborne: two large plants

by the old London-bound platform access and c. five small plants on the London-bound platform edge, both Herne Bay station. The first v.c. 15 record and for Kent as a whole. *E. cilianensis* (Stink-grass), another southern European annual species of Love-grass, is very similar, also having crateriform glands on or along the same parts and spikelets very close in size, shape and arrangement. A useful tabulation of the differences between the two can be found in Kent Botany 2022, p. 12. Stace (2019): 1117.

Pennisetum macrourum Trin. (Fountain Grass). Chatham (TQ76456999, etc.), 26/10/2022, S. Buckingham & D. Mills (det. G. Kitchener): five clumps in places above the waterline and below the walkways at the Quays, Chatham marina. Google Earth imagery indicates a fairly rapid development of at least one of the clumps. The first record for v.c. 15 and Kent as a whole. A densely tufted perennial grass with elongating rhizomes and culms up to c.1m (up to 5m according to some sources!). It is a native of Africa (west-central tropical and east tropical regions) and Saudi Arabia. *Pennisetum* has been sunk into *Cenchrus* and the accepted combination for this species is *Cenchrus caudatus* (Schrad.) Kuntze. Kent Botany 2022, pp. 15–16. Adventives & Aliens News 14, v.c. 1a.

V.c. 16 (W. Kent)

Digitaria ciliaris (Tropical Finger-grass). Eynsford (TQ5465), 22/8/2022, R.M. Burton: a plant on edge of road surface near residence. The first Kent record since the 1970s when it was known as a casual on tips. Records have otherwise been associated with wool, bird seed, oil-seed and cotton, Ryves et al. (1996). As the English name indicates, it likes a hotter climate than *D. sanguinalis* (Hairy Finger-grass), so is much less likely to naturalise or occur as a casual now the tip habitat has been more or less eliminated. It is, however, very like the latter, so could be overlooked. It is generally larger and more robust than *D. sanguinalis*, lacks its purple colouring and has smooth-nerved lower lemmas (vs scabrid in *D. sanguinalis*). Stace (2019): 1105.

V.c. 25 (E. Suffolk)

Tordylium apulum L. (Beaded Hartwort). Nettlestead (TM08575046), 14/5/2023, S. Grayston (conf. M. Sanford/S. Knees): one plant in the gravel path of a front garden. Sue Grayston discovered it on

Flowers and fruits of *Tordylium apulum*, Nettlebed, East Suffolk (v.c. 25). *Sue Grayston*

returning from a holiday and suspects that it arrived in bird seed. This is the first British and Irish record that does not refer to a deliberate introduction. A softly hairy annual (Apiaceae) with pinnately divided leaves, native to the Mediterranean region. The fruits are disc-like with white thickened borders as in *T. maximum* (Hartwort), but in *T. apulum* the border is interrupted or crinkled (vs entire). The outer petals are radiating, i.e. very much larger than the rest and also very deeply notched, characteristics shared by other umbellifers, including another exotic and sometime garden plant *Orlaya grandiflora* (Large-flowered Orlaya). The fruits of the latter are quite different, however, being ribbed and ornamented with spines. The English name used above was coined by Eric Clement, no alternative being found elsewhere.

Centaurea solstitialis, Kelling, East Norfolk (v.c. 27). *Mick Lacey*

V.c. 27 (E. Norfolk)

Centaurea solstitialis (Yellow Star-thistle). Kelling (TG0961142968), 8/2023, M. Lacey (comm. M. Lacey): six or seven plants in clover fields and also near a road works, some gone over others well in flower. It is possible that old buried seed is responsible as there are a number of old records for this part of Norfolk (M. Lacey, pers. comm.). A cottony-hairy yellow-flowered composite, native to southern Europe, with a winged stem and spiny involucres, each phyllary with one long apical spine and shorter lateral spines arrayed like fingers of a hand. The specific epithet refers to the Solstice (about 21 June) by which time the plant should be in flower. It has been an impurity of Lucerne and Sainfoin crops. Adventives & Aliens News 23, v.c. 10.

V.C. 35 (Mons)

Cardamine occulta Hornem. (Cryptic Bitter-cress). Usk (ST3799), 9/2023, T.C.G. Rich (comm. S. Tyler): all over flower beds in garden centre. New to v.c. 35. Adventives & Aliens News 30, v.c. 5. *See photos p. 52.*

Koenigia mollis (Soft Knotweed). The Narth (SO5230805777), 29/9/2023, G. Agg (comm. S. Tyler): two clumps at edge of Manor Wood. New to v.c. 35. An upright, central and south-east Asian perennial (Polygonaceae) to 1.5m, known as a garden escape in Britain; not recorded in Ireland. Resembles *K. weyrichii* (Chinese Knotweed) but leaf lower sides less hairy (vs tomentose), achenes unwinged (vs winged) and the fruiting perianth blackish and succulent (vs shrivelling). Stace (2019): 466.

Scrophularia vernalis (Yellow Figwort). Abersychan (SO2703), 5/2022, R. Hewitt: growing with *S. nodosa* (Common Figwort) (no details of habitat). New to v.c. 35. A densely glandular hairy biennial or perennial (Scrophulariaceae) with rather inconspicuous dull yellow corollas divided into equal lobes and lacking staminodes; a Eurasian native

scattered in Britain and Ireland as a garden escape, sometimes naturalised in suitable habitat. Adventives & Aliens News 25, v.c. 12. Stace (2019): 643.

V.c. 52 (Anglesey)

Lilium pyrenaicum (Pyrenean Lily). Point Lynas (SH480934), 24/8/2023, N. Brown: a strong colony in rank grassland/scrub beyond the immediate confines of the Pilot House. The fourth site for v.c. 52. It is more frequent in northern and western Britain and is also well scattered in Ireland. There are or have been a number of classic sites, e.g. on Sheepwash Hill between South Molton and Bampton in v.c. 4 (SS72Y). A striking bulbous perennial herb (Liliaceae) from the Pyrenees. It has reflexed yellow tepals (red-spotted at the bases), red anthers and narrow, two-ranked stem leaves. Stace (2019): 902.

V.c. 59 (S. Lancs)

Cicerbita macrophylla subsp. *macrophylla* (Common Blue-sowthistle). Clitheroe (SD74324318), 2023, S. Wynn (comm. S. Wynn): greater than 2m plants in Cross Hill Quarry. A tall, glandular hairy, blue-flowered herb (Asteraceae), native to the Caucasus, with basal leaves that have very long terminal lobes. Although the subspecies was recognised in 2023, *C. macrophylla* in a general sense has been known in Cross Hill Quarry since c.1983. Adventives & Aliens News 23, v.c. 64. *BSBI News* 152: 53–54.

V.c. 61 (S.E. Yorks)

Cuscuta campestris (Yellow Dodder). Riplingham (SE96923194), 27/9/2023, D. Broughton (comm. D. Broughton): dense colony along 2m of rural road verge adjacent to halophyte zone for road gritting, with *Polygonum aviculare* (Knotgrass), Rowley Road. See v.c. H12.

V.c. 63 (S.W. Yorks)

Verbena hastata L. 'Alba' (American Vervain). Bottom Boat (SE35932467), 22/8/2023, D. Broughton: two plants at base of wall by pavement. The first v.c. record based on DDb. A N. American perennial herb (Verbenaceae) that is mainly if not entirely a garden escape in Britain. There are no records in the DDb for Ireland. The more or less terminal candelabrum-like inflorescence is made up of numerous stiffly erect spikes, the typical corolla colour is blue-violet to a delicate pink and the fruits are overlapping. Adventives & Aliens News 13, v.c. 6; Adventives & Aliens News 19, v.c. 14.

Verbena hastata 'Alba', Bottom Boat, South-West Yorkshire (v.c. 63). *David Broughton*

V.c. 64 (M.W. Yorks)

Araucaria araucana (Monkey-puzzle). Shipley Glen (SE12963986), 18/4/2023, D. Broughton: seemingly self-sown in a rock face of a crag at north end of Glen. A dioecious evergreen conifer (Araucariaceae), native to S. America, the familiar Monkey-puzzle tree seen in parks and gardens throughout Britain and Ireland. Genuine self-sown specimens seem rare and/or hard to confirm. Stace (2019): 53.

V.c. 73 (Kirkcudbrights)

Senecio inaequidens (Narrow-leaved Ragwort). Brockloch Rig Wind Farm (NX53689692),

Araucaria araucana, Shipley Glen, Mid-West Yorkshire (v.c. 64). *David Broughton*

20/8/2023, J. Davidson & Kirkcudbrightshire Botany Group (comm. S. White): one plant in car park. The first v.c. 73 record. A perennial neophyte from S. Africa with linear denticulate leaves. A persistent wool alien, it is also spreading from more recent introductions from mainland Europe. Clement et al. (2005), p. 337. Stace (2019): 801.

V.c. 77 (Lanarks)

Cardamine corymbosa (New Zealand Bitter-cress). Glasgow, 2022/2023, M. Macneill (comm. M. Harding): recorded widely by Malcolm Macneill in different parts of Glasgow, within fifteen monads in NS56, one monad in NS57 and three monads in NS66, a total of some 74 different sites, with most records being made in April and some in May. There are no v.c. 77 records in the DDb for earlier than 2022 and none for outside Glasgow. His recording has uncovered a similar picture for *Polypogon viridis* (Water Bent) in the city. Adventives & Aliens News 30, v.c. 56.

V.c. 80 (Roxburghs)

Hacquetia epipactis (Scop.) DC. (Hacquetia). Heiton (NT705295), 20/3/2022, J. Waddell & M. Parratt: spreading over a fairly large area on edge of car park/building works, Roxburghe Hotel. New to v.c. 80. A glabrous, tufted to spreading perennial (Apiaceae), native to the eastern Alps of Austria, Italy and the former Yugoslavia, the northern Carpathians, the former Czechoslovakia and Poland; it is grown as a ground cover in rock gardens. The lobed bright green leaves grow on long petioles from a spreading rhizome and the leafless stems can reach 25 cm but often only half that. The small (c.2 cm across) solitary umbel is one dense mass of tiny yellow flowers surrounded by five or six large, pale green, leaf-like (or more fancifully petal-like) bracts. The sepals are yellow like the petals and more conspicuous than the latter. There are two other records in the DDb for v.cc. 44 (2017) and 64 (2021). A long persistent garden relic near Landford (v.c. 8), Clement & Foster (1994); now presumably gone. *Hacquetia* is (or was) a monotypic genus. *Sanicula epipactis* (Scop.) E.H.L. Krause is the new accepted name for this species.

V.c. 81 (Berwicks)

Schizanthus pinnatus Ruiz & Pav. (Poor-man's-orchid). Simprims Main (NT86244593), 22/7/2022, R. Cowe (det. M.J. Crawley): on newly constructed track at edge of field; white-flowered. New to v.c. 81. An annual garden plant (Solanaceae) native to Chile. It has pinnatisect leaves and deeply irregularly lobed corollas. There are two stamens (plus three staminodes) per flower (vs the more usual four or five stamens in other genera of this family). It is very variable with respect to height and flower colour and size. A 'typical' flower is violet and there is a yellow or white blotch on the central lobe of the upper lip which is spotted and streaked purple. A rather tender species, it has perhaps done well to produce flowers here.

V.c. 83 (Midlothian)

Datura stramonium (Thorn-apple). Newbridge (NT11947249 & NT11867248), 28/8/2023, S. Jury & D. McKean (comm. S. Jury): two flowering and fruiting plants on a brownfield site soon to be built on. These are only the fourth and fifth v.c. 83 records, and the second and third records since 1988. Stace (2019): 606–607.

Datura stramonium, Newbridge, Midlothian (v.c. 83). *Sue Jury*

V.c. 87 (W. Perth)

Silene armeria (Sweet-William Catchfly). Aberfoyle (NN499018), 14/8/2023, J.R. Jones (comm. M. Harding): two plants of unknown origin appeared in a well-established garden. *Zinnia elegans* made a similarly unplanned appearance in the same garden. The first v.c. 87 records. Adventives & Aliens News 29, v.c. 4.

V.c. 95 (Moray)

Asperugo procumbens (Madwort). Forres (NJ03105889), 23/6/2023, I.P. Green: two plants in garden; otherwise the most recent v.c. 95 record is for 1909. A prostrate, subhispid, self-pollinating annual (Boraginaceae) which is a native of much of Europe, western Asia and north Africa. The blue flowers are 3 mm across, in clusters of up to three on short downturned pedicels; the deeply five-lobed accrescent calyces eventually engulf the fruit. It has mainly been a rare casual of sandy arable and waste ground, hardly ever becoming naturalised. One of the last British records was for v.c. 5 in 1996, when it turned up under a bird table and was seen by, among others, Ian Green. There was a v.c. 68 record in 2019. Stace (2019): 584.

V.c. 104 (N. Ebudes)

Astilbe rivularis Buch. – Ham. ex D. Don (River Astilbe). Dunvegan Area (NG24844943), 4/5/2022, J. Walmisley (det. S.J. Bungard/conf. M.J. Crawley): wet ground between road and ditch in deciduous woodland, Dunvegan Castle estate. New to Britain and Ireland. A perennial garden herb (Saxifragaceae), native to Asia, with 2- to 3-pinnately compound leaves and brown hairy stem. The inflorescence is a panicle up to c.40 cm long. The name has been misapplied to *A. chinensis* (Tall False-buck's-beard) from which *A. rivularis* differs in its sparsely flowered inflorescence (vs densely flowered) and the usually absent or sometimes few, vestigial petals (vs 5 non-vestigial petals). In the present case, the flowers that were examined had no petals and five stamens.

Cardamine raphanifolia (Greater Cuckooflower). Portnalong (NG34853542), 28/4/2023, S. Bungard, N. Roberts & W. Macruary (det. S.J. Bungard): large patch in woodland at top of shore, 2.5 × 1.5m. New to v.c. 104. Adventives & Aliens News 26, v.c. 12.

Cardamine raphanifolia, Portnalong, North Ebudes (v.c. 104). *Stephen Bungard*

Cardamine raphanifolia, Portnalong, North Ebudes (v.c. 104). *Stephen Bungard*

Iris setosa Pall. ex Link (Bristle-pointed Iris). Glasnakille (NG54211396), 7/6/2023, S.J. Bungard (conf. M.J. Crawley): single rhizome with four flowering stems and three non-flowering, in small marsh with *I. pseudacorus* (Yellow Iris). New to Britain and Ireland. A clump-forming perennial garden plant (Iridaceae) with a wide ranging if interrupted distribution. It resembles a dwarf, shorter-lived *I. sibirica* (Siberian Iris), with a highly branched rhizome clothed in grey-brown fibrous leaf remains; the sword-like leaves, 30–60 cm × 1–2.5 cm, are prominently ribbed and have purple-tinged bases. The stems are 1- to 2-branched and there are (2)3–6(7) flowers per stem. Flowers are 7–8 cm across and vary in colour with almost all variations/combinations of blue, violet, purple and lavender seeming to be possible. The outer tepals, 4–6 cm × 3–5 cm, are perhaps typically deep purple-veined with yellow-white centres. The inner tepals are much reduced, 1–2 cm × 0.3–0.4 cm, largely obscured by bases of the outer tepals, with acuminate tips terminating in a 3–8 mm bristle. It was first described from Siberia and *Iris arctica* Eastw. is one of its synonyms. The N. American populations of this plant might once have been continuous with the east Asian ones.

Iris setosa, Glasnakille, North Ebudes (v.c. 104). *Stephen Bungard*

V.c. H12 (Co Wexford)

Cuscuta campestris (Yellow Dodder). Mulrankin (S991112), 20/8/2023, G. Draper (det. P.R. Green): one coming up in a garden plant pot. New to Ireland. A twining yellow-stemmed parasitic annual (Convolvulaceae) native to N. America. As an adventive it has been particularly associated with cultivated Carrot plants and in recent times even more strongly with Niger-seed. Adventives & Aliens News 3, v.c. 85. Stace (2019): 603.

Solanum villosum subsp. *villosum* (Red Nightshade). Wexford (T0457822171), 2022, D.A. Berridge (det. P.R. Green): many plants at base of wall and a few on wall, Westgate Tower. They were initially thought to be *S. dulcamara* (Bittersweet) with abnormally coloured berries, redetermined by Paul Green from photos taken in August 2023. The abundant presence of patent gland-tipped hairs indicated subsp. *villosum*. The first Irish record of *S. villosum* of any subspecies. Very like *S. nigrum* in flower and chiefly distinguished by the yellow to red colour of the ripe berries (vs black) and the usually deeper lobing of the leaves. *S. villosum* subsp. *miniatum* differs from the nominate subspecies in being less hairy and none of the hairs gland-tipped, and the angled stems with dentate ridges (vs terete and entire). A native of Eurasia and north Africa and

Solanum villosum subsp. *villosum*, Wexford, County Wexford (v.c. H12). *Paul Green*

naturalised in N. America, it is known as a wool, bird seed and oil-seed casual in Britain, Clement & Foster (1994). The berries are edible and sometimes marketed as a 'vegetable' under such inviting names as Wonderberry and Golden Pearls, so there is also the possibility of a garden/allotment origin for some records. Described as an annual, Paul Green noted that some of the plants in the Wexford population had woody bases to the stems. Preserved material of this and the previous species have been lodged in the herbarium at Glasnevin (DBN) (Paul Green pers. comm.). Stace (2019): 609.

V.c. H21 (Co Dublin)

Sinacalia tangutica (Chinese Ragwort). Islandbridge (O1236034298), 24/5/2023, A. Fitzgerald (det. P.R. Green): in herb layer of wet woodland on an island in the River Liffey, west Dublin City. The first county record and third for Ireland. A robust, rhizomatous herb (Asteraceae) to 2m, native to central China and a garden escape in Britain and Ireland (having been introduced in 1901) and becoming established where habitat is suitable. The terminal inflorescence is a pyramidal-ovoid panicle up to c.40 cm long. It is many flowered but each radiate capitulum is rather insignificant, with a yellow disc c.2 mm across, narrow cylindrical involucre and three or four yellow ligules, c.7 mm long. The alternate leaves are roughly

Sinacalia tangutica, Islandbridge, County Dublin (v.c. H21). *Alexis Fitzgerald*

triangular in outline, deeply pinnately lobed and c.15 cm long. It has a pappus of white silky hairs. Clement et al. (2005), p. 342. Stace (2019): 808.

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British herbaria, with special reference to alien plants

DAVID PEARMAN

Part of a sheet of *Potentilla rivalis*, from the herbarium of Eric Clement. A rarely grown American annual, first seen in near Bridgnorth, Shropshire in 1976 but collected again in 1978 and then confirmed by Eric Clement. It persisted there until 1993. This is a really good and informative pressed specimen.

For the last six years my colleague, Chris Preston and I, have been researching afresh when each of the alien species in the four editions of Stace's Floras were introduced to Britain and Ireland and when they were first reliably recorded here in the wild. Previous attempts for the latter have been very largely based on literature records, which perforce are all that are available for earlier (pre-1800 records), as well as a mixture of field records and known herbarium references. We felt that searching for supporting herbarium records, and, in the rare cases where we felt able to, re-examining the determinations, would be a much more satisfactory project and lead to a more rigorous outcome.

In the last two years we have visited or corresponded with all the larger herbaria and many others too. We have visited eight ourselves, some of them multiple times, and corresponded with museum curators or arranged for vice-county recorders and others to visit another 32. We have been met with courtesy in almost every case, and from the point of view of our original aim, it has been a very successful exercise.

There are a number of points that might be of interest to BSBI members and other researchers:

- Very few herbaria, even including some of the major, are now staffed by botanical experts. As keepers have retired, they have not been replaced, other than at the Natural History Museum (BM) and one or two others. However in almost all of those that we have approached we have managed to contact someone who has been prepared to search for the required

specimen, even if they do not know what they are looking for.

- The lack of trained staff in herbaria makes it harder to determine specimens, so we have to rely on experts (where we can find them) to examine our photographs, or by loans. But arranging loans of specimens is becoming much more difficult in the absence of permanent staff and with a general, perhaps innate, unwillingness to entrust specimens to third parties or even to a holding museum near to us. Some museums have said that they cannot afford the postage.
- Almost all the smaller herbaria have their holdings arranged by collector, rather than in one general run, and those individual collections might be arranged by the taxonomic orders used in Stace (rarely), by Kent, by Dandy and even by Druce or Bentham and Hooker! Even Kew (K) keeps separate the herbaria of Borrer and Watson (key 19th century figures); the BM too does not incorporate those of Sowerby, nor, of course, the Sloane collection. This makes searching time-consuming for us, and much more difficult for a non-botanist, made worse by the fact that the species in each collection are filed in under the name used in their day. As an example Bristol Museum (BRISTM) has something like 18 separate collections, using at least four different taxonomic orders.

But almost the biggest problem for us has been the comparative lack of specimens of aliens collected in the last 50 years, which arises from at least four reasons:

- An unwillingness to collect through laziness or on conservation grounds, fed by late 20th century strictures by BSBI and others, of touching and photographing rather than collecting. This will only get worse. There is no earthly reason why an unusual unknown alien plant should not be collected.
- An unfamiliarity with how to collect and mount an acceptable specimen, and to put on it the key details needed. This is not rocket science – the BSBI website has some very helpful hints from Arthur Chater (*bsbi.org/herbaria*, and look at menu on RHS) – and is usually essential for critical species. Most referees will also advise. I certainly am not blameless – some of my queries have met with scorn – but I hope I learn and there is a peculiar pleasure in submitting a well-mounted specimen.
- The lack of anywhere to deposit specimens currently held in private herbaria. We know of few if any herbaria that are accepting private herbaria, or even the odd specimen, and even where they do, the lack of internal resources to accession these can lead to delays for years or decades. We are trying to reopen negotiations with BM to at least accept important new records of aliens.

Some of our members still have collections, which in days gone by would be passed to public herbaria, but now might well be binned. It would be a far better solution if any owner of a private herbarium was to find a home for their specimens/collection and see it incorporated in their lifetime, helping if need be financially or by volunteering, rather than waiting for executors to deal with it.

- The idea that a photograph is a good substitute. This might be true in a minority of cases, but even then, where is the repository for photographs?

It is very difficult not to be thoroughly depressed by the situation. There were roughly 600 herbaria locations listed in *British & Irish Herbaria* (1987). This was largely updated by Richard Gornall, based at Leicester, ten years or more ago, but was never completed or published. However a list, dated 2018, but I suspect based on earlier details, giving updated information for 160 of those, is available on the BSBI website, though I have found that much of this is now obsolete. A few years ago, the then President, Chris Metherell, tried to enthuse members (see *bsbi.org/herbaria*). I suspect that there was some interest, but then Covid intervened, followed by further swingeing cuts in Local Authority funding.

There is hope, at least for some herbaria, from initiatives for digitising the collections. This is certainly happening at Kew and Edinburgh among a few others, and the excellent but now

Rumex scutatus, Cornelly, Swansea, 1830. From the herbarium of J.W. Rimmington, from an unknown collector, held in the University of Manchester (MANCH). This is the common garden species of Sorrel, grown here for centuries and mentioned in Gerard's Herbal (1597) and in the catalogue of the plants growing in his own garden in the Holborn area of London, in 1596. It was apparently known for many years from walls outside Swansea, but this is the earliest specimen traced.

moribund project of Herbaria@Home, started by Leander Wolstenholme, and carried on by Tom Humphrey (*herbariaunited.org/specimensearch*). This had digitised around 150,000 specimens, and not only needs resuscitation but also a critical eye on the naming of specimens. Much of its value was the accession and scanning of specimens from the more minor herbaria, and if and when time and funds do allow, those collections should be the priority, as most of the larger collections should be able to raise some funding. I say *should*, but the Herbarium at Reading (RNG) provides a salutary lesson. This was one of the few herbaria that actively welcomed collections in the late 20th century, resulting in many recent specimens including many alien plants. Pressures of space, an unsuitable building and lack of funding have resulted in the decision to move around 75% of the collection to an off-site facility, where it would only be accessible on demand. This will effectively emasculate it. Similar plans are mooted for the collections at Kew (K) and I'm sure others will follow. There has been some small movement for the larger herbaria to absorb other collections under threat, but this very much the exception, and in any event, many local Museums treat their herbaria as of local cultural importance, and are loth to part with them, even if they do not look after them!

To end on a positive note, and to give an idea of what can be achieved, our project covers about 1800 species. When we

started there were around 400 'first' records that were linked to an herbarium specimen. After a lot of effort, we have now refound almost all of those (though it is worrying that around 25 claimed to be at various herbaria can no longer be found), or found earlier records for many. But in addition we have traced specimens to support first records for just over a further 600 species, making around 1000 in all. We also have photographs for almost all of those specimens.

Please, again, try to contact your local public herbarium, and better still, volunteer to go in and help them. Even that might be difficult – I have failed to gain access to my local herbarium in Truro (TRU), though luckily a past Vice-county Recorder made a list, and determined or re-determined all the specimens, but perseverance is the key. There might be many specimens that need mounting (peculiarly satisfying for some!). If we could enable the scanning of specimens, possibly through a resuscitation of Herbaria@Home, that would be so much better, because that could then be shared by the outside world.

I'm very grateful to Chris Preston for his company on our visits to herbaria and for comments on the draft text.

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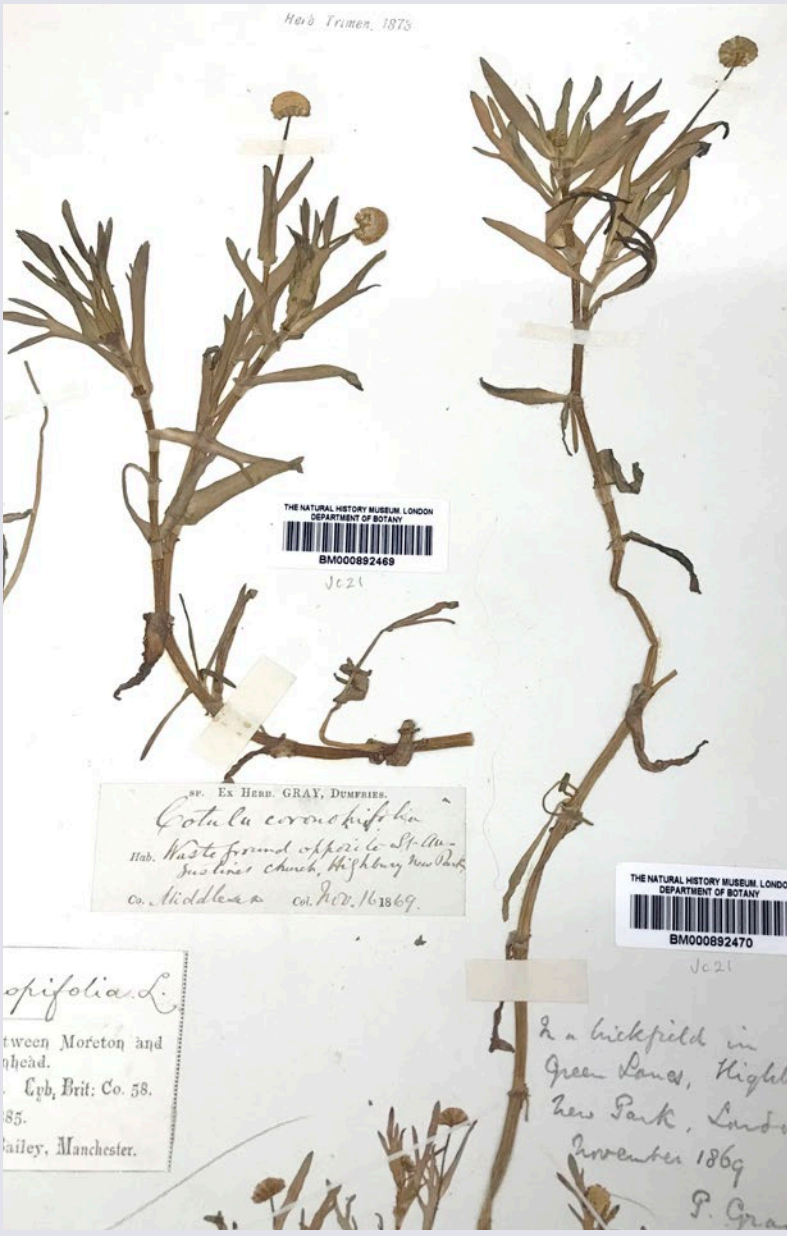

Cotula coronopifolia (Buttonweed), Highbury New Park, Middlesex, 1869. From the herbarium of H. Trimen, author of the *Flora of Middlesex*, though originating from that of Mr P. Gray, and possibly collected by him, although his other specimens in herbaria are all from Dumfries. This specimen is in the Natural History Museum in London (BM). An annual, though often perennating at least in south-west Britain, originating from South Africa. Most of the 19th century herbarium specimens that we have seen came from Cheshire, where it was first found about 1880 and where it still persists.

Crepis foetida (Stinking Hawk's-beard) in Cambridge

JONATHAN SHANKLIN

Crepis foetida (Stinking Hawk's-beard) was first recorded in Cambridgeshire (v.c. 29) by Ray in the 17th century. In the translation of John Ray's *Cambridge Catalogue* (1660) by Philip Oswald and Chris Preston (Oswald & Preston, 2011) he calls it 'Small rough Succory-leaved Hawkweed' and describes it as having "several branched hairy stems half a foot or taller" and "The flowers are yellow, small, quickly passing away; after they close up, they swell as heads into a minutely channelled protuberance, revealing a pappose down from the top". Ray later reported that he had found it in pastures between Cambridge and Grantchester, not far from the river. There were a few subsequent records and it was last recorded in the county in the mid-19th century.

Hobson's Park in Cambridge is a new country park, created from farmland, covering over 40 hectares. It includes wild flower meadows, playing fields, lakes, allotments and other features. The wild flower meadows have been sown with typical mixes, though these have occasional impurities. Ditches surround the largest lake and the allotments and these have been planted with aquatic species. Many unexpected species (e.g. *Baldellia ranunculoides* [Lesser Water-plantain]) have been found amongst them and it is not clear whether these were deliberate or accidental introductions. The park was regularly visited during 2023 by the Cambridge Natural History Society (CNHS) as part of a programme to record the flora and fauna of the wider area and was the site for a BSBI meeting in May.

To supplement the CNHS visits in 2023 I made several trips to the park, often making unexpected finds. One such visit was on 2 July, when I visited a sustainable drainage system (SuDS) feature at the southern end of the site (TL455543). This has a pond filled with *Phragmites australis* (Common Reed), the bank of which has been sown with a wild flower mix, and a more open area, with the whole site surrounded by a young hedge. In the open area I found an abundant *Crepis* in flower and on checking the achenes found that they were beaked. This was most surprising as *C. vesicaria* (Beaked Hawk's-beard) had long since finished flowering and by now even seed heads were rare. I took a sample home and initially concluded that it might be *C. vesicaria* subsp. *stellata* as most of the flowering heads were erect and I could not smell any scent. Sell & Murrell note this as having been found in Cambridgeshire and also that the plant would key to *C. foetida* in most floras. I asked Alan Leslie to check the plant and he paid a visit with Peter Leonard on 23 July, finding a few plants on the track outside the SuDS feature, without actually entering it. Studying various reference books and paying a visit to the Cambridge University Herbarium (CGE), Alan concluded that it was *Crepis foetida* subsp. *rhoeadifolia*, an alien subspecies from central and south-east Europe.

Alan provided the following reasoning: whilst both *C. foetida* subsp. *rhoeadifolia* and *C. vesicaria* subsp. *stellata* have the peripheral achenes lacking a beak, the central achenes of *C. vesicaria* subsp. *stellata* have achenes with a beak less than 2 mm, whilst those of *C. foetida* subsp. *rhoeadifolia* have much longer beaks. In addition, the pappus of *C. foetida* is much further exserted from the involucre than in *C. vesicaria*, which in any case is long over in July. It seems that subsp. *rhoeadifolia* differs from subsp. *foetida* in the involucre being usually eglandular (not glandular pilose), with broader, relatively longer outer bracts and pappus 5–8 mm long compared to 4(–5) mm in subsp. *foetida*. *Flora Gallica* (Tison & de Foucault, 2014) suggests that drooping buds are always present in subsp. *foetida* but that in subsp. *rhoeadifolia* they may be drooping or upright, with both morphs often present in the same population, as they are in the Cambridge plants. The difficulty of sensing the smell seems to have been recorded before and on the first visit I could smell nothing but on the second visit, to the main colony, it was quite strong.

There were no records of subsp. *rhoeadifolia* in the DDb (and it isn't in MapMate); however Sell & Murrell (2006) note that it had been recorded from Bristol. I therefore asked Helena Crouch if she could shed any further light on this occurrence. She quickly found details in Captain Roe's card index which referenced Bristol Botany. There she found, in the volume for 1961, a report by Noel Sandwith, which said: "*C. foetida* L. subsp. *rhoeadifolia* (Bieb.) Schinz et Keller. The plant recorded as *C. foetida* from a 'tip on the Somerset side of the City' [the former Ashton Gate Tip], in 'Bristol Botany in 1939' is to be referred to this subspecies, fide J.B. Marshall. It is a native of Central and Eastern Europe and the Orient." This entry also noted a further record for the species in 1940 from a specimen collected by Mrs Sandwith, possibly at the same site, which is in ST57. It hasn't been reported anywhere since!

The SuDS feature clearly had a wild flower mix sown in it, and one that was different to that which has been sown elsewhere in the park, and it seems likely that this is the origin of the plant. What was particularly interesting is that Ray's original description almost exactly fits the plants seen in Hobson's Park, whereas the images of the native *C. foetida* subsp. *foetida* in the online Plant Atlas 2020 gallery do not look like it. Perhaps subsp. *rhoeadifolia* has a longer history in the country than previously thought and it would be worth checking some of the herbarium specimens; for example there are reported to be Cambridgeshire specimens in YRK and K (Leslie, 2019). Several continental Floras suggest that it is spreading there and it is clearly escaping from its sown area here. It may be worth members looking for it elsewhere.

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Some of the plants of *Crepis foetida* (Stinking Hawk's-beard) in the SuDS feature. Note the branched and hoary appearance of the plant, which has mostly erect flowerheads (not drooping as in the key). On this visit (27 July 2023) the lower leaves did have a distinctly unpleasant smell. *Jonathan Shanklin*

Centaurea rhenana (Panicled Knapweed), Aberford, Mid-west Yorkshire – revisited

MICHAEL WILCOX

Centaurea rhenana (Panicled Knapweed) was reported by Taylor (2000) with a strange mix of *Centaurea* taxa on stretches of the A1(M) and roadside verges off Main Street at Aberford, Leeds, and was reported again in *BSBI News* 89 (Clement, 2002). The site did produce a number of other interesting aliens not reported at the time in the *BSBI News* articles above. However, a number of the *Centaurea* taxa were difficult to identify and Clement (2002) suggested that it would need an expert on the genus to look at these.

Over 20 years on from the first finding of *Centaurea rhenana* at Aberford, it is still present in small numbers, surviving in a small field just off Main Street, SE4338, v.c. 64 (seen in good numbers in 2000 and 2001 by the author) and refound in small numbers in 2019–2022 but isolated to the one field (motorway verges are difficult to survey and were left alone, though parts of the A64 where it joins Main Street and the A1(M) roundabout area were briefly searched in 2019–2021). The plants at Aberford are perennial and survive from year to year as basal rosettes. This has been shown here by rosettes being present after the plants have died back and by cultivating a rosette for three years (Figure 1a), which flowered (see Figure 1b). It is likely to be surviving here as the small meadow area is cut at least once a year as it is part of a small treatment works area and this reduces competition from other taxa. However, it is not widespread and not spreading from seed.

Centaurea stoebe s.l. (Spotted Knapweed) is known as two cytotypes in its native Central Europe and has been introduced to Britain (England) and elsewhere, e.g. North America (Španiel et al., 2008). In its introduced range, the tetraploid form is said to be invasive, and is said to belong to *C. stoebe* s.l. and plants called *C. rhenana* are diploid. However, our

Figure 1a. *Centaurea stoebe* s.l. (4×), rosette, cultivated from the meadow, Aberford, Leeds (SE4338), September 2020. *Michael Wilcox*

Figure 1b. *Centaurea stoebe* s.l. flowerhead. Aberford, Leeds, July 2021. *Michael Wilcox*

Figure 1c. *Centaurea stoebe* s.l. showing bracts which have the apical part running down the sides, not forming two distinct parts.

plants cannot be called *C. rhenana*, (see below) as they are tetraploid, but the taxonomy is still not straightforward (Mráz et al., 2011; Mráz et al. 2012a, 2012b).

The road verges have become rather rank and overgrown with tougher perennials over 20 years or so. Generally, fewer *Centaurea* taxa occur at this site now. Those that do include *Centaurea nigra* (s.l.) with an array of hybrids between this species involving *C. jacea*. The latter species occurs in scattered places in much smaller numbers. Several ± F_1 hybrids can be seen with other generations of hybrids perhaps more frequent in places making identification more difficult. Other *Centaurea* taxa were mentioned in Clement (2002) but seem to have gone, except one that is maybe *C. phyrgia*/*C. uniflora*. The only other fairly frequent species here is *C. scabiosa* (subsp. *scabiosa*) (Greater Knapweed), though two or three plants of what appears to be *C. scabiosa* subsp. *alpestris* were found in 2021.

Most of the verges are now dominated by tall rank grasses such as *Dactylis glomerata* (Cock's-foot), *Arrhenatherum elatius* (False Oat-grass) and *Bromopsis erecta* (Upright Brome). In the past I have recorded grasses such as *Anisantha madritensis* (Compact Brome), *A. tectorum* (Drooping Brome) and *A. diandra* (Great Brome) at this site (see Abbott, 2005) but all have gone; however, a large patch of *Bromopsis inermis* subsp. *inermis* (Hungarian Brome), appears to have been overlooked for many years which was found near the A1/A64 junction; it has been seen several times driving past over the last few years but I only stopped to check the identity in 2021. *Festuca trachyphylla* (ex. *F. brevipila*) Hard Fescue, occurs along the road verge in places all the way to the roundabout and occurs in the meadow area with *C. stoebe* s.l.

The name *C. rhenana* is somewhat complicated as it is part of a complex in *C. stoebe* s.l. (Mráz et al., 2011). Plants named '*C. rhenana*' have been shown to be part of the diploid taxa (Mráz et al., 2012a) in this group and thus this name cannot be used for our plants. The Aberford plants are perennial with slightly wider basal leaf lobes and a more narrowly ovate capitulum in our plant (Figure 1c) and is therefore a tetraploid taxon. It cannot be confused with taxa such as *C. nigra* as the phyllaries (bract appendages) are more similar to taxa such as *C. scabiosa* where the apical appendage runs down the proximal end (Figure 1b, 1c) rather than forming two ± separate parts. The diploid taxon is annual/biennial and has more finely dissected basal leaves and a more rounded capitulum (pers. comm. P. Mráz). Leaf material in silica gel and an herbarium specimen of the leaf rosette from the Aberford plants has been sent to Christoph Rosche, and they confirmed its tetraploid nature.

Mráz et al. (2011) propose to treat the two cytotypes as different species. The name *C. stoebe* subsp. *stoebe* seems to be the appropriate name for the diploid cytotype (see Greuter, 2003; Španiel, et al. 2008; and pers. comm. P. Mráz) but may be changed when the taxonomy is sorted. However, the appropriate nomenclature for the tetraploid cytotype is not clear. It was argued by Greuter (2003) that subspecies names should be applied. The name '*C. stoebe* subsp. *australis* (Pančić ex A. Kern.) Greuter' was suggested for the tetraploid cytotype as this name has priority over *C. stoebe* subsp. *micranthos*.

However, one of two Hungarian populations of *Centaurea* (subsp.) *australis*, mentioned in Kerner's protologue and for which relevant syntype material exists, was diploid and another was tetraploid (see Mráz et al., 2011, from Španiel et al., 2008). Thus, either the name *C. australis* (or *C. stoebe* subsp. *australis*) depends on the choice of the syntype material. If the name is based on the diploid syntype, then it should not be used for the tetraploid plants and alternatively, if the name *C. australis* is typified using the syntype from the second locality and this turns out to be a tetraploid cytotype, this name can be used for the tetraploid taxon (either as species or subspecies).

While *C. stoebe* subsp. *australis* could be used for our plants (or at the species level), because plants named subsp. *australis* were diploids from one site and tetraploids from another, and one locality of the type for subsp. *australis* is now developed, the tetraploid site cannot be checked (pers. comm. P. Mráz). *C. rhenana* is part of the diploid taxa in *C. stoebe* s.l. (which in turn could be a subspecies of it (subsp. *stoebe*), but it is also unclear as to the name for the diploid at present). For practical purposes only, our plants are *C. stoebe* s.l. (4×); however, older names exist (e.g. *C. triniifolia* Heuffel, and others, pers. comm. P. Mráz). Thus, until the type specimens and the ploidy of such material is fully checked, the taxonomy remains somewhat unclear. Once the taxonomy has been sorted, it may be preferable to name them at the species level as artificial crosses have produced hexaploids, (with an unreduced gamete; pers. comm. Patrik Mráz). For the time being we should refer to our plants as *Centaurea stoebe* s.l. (4×).

Acknowledgements

Thanks to Drs Patrik Mráz and Christoph Rosche for their references and comments on these taxa and to Eric Clement.

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Juncus marginatus Rostk. (Grass-leaved Rush) new to Britain and Ireland

MARK WOODS

The creation of new heathland habitat at Rufford Colliery in Nottinghamshire (v.c. 56) is an ongoing process that has been largely successful but has been hindered by the activity of off-road vehicles and localised flooding. Heather brash, which was applied to a sand substrate overlying colliery shales was lost from some areas as a consequence of vehicular movements. In addition, some areas were also subject to seasonal flooding over compacted, impermeable substrates. The loss of heather brash allowed for natural colonisation and the resultant community is a unique mix of species. On sandy substrates that are seasonally wet the vegetation is sparse but species-rich, with supporting species such as *Lythrum portula* (Water-purslane), *Isolepis setacea* (Bristle Club-rush), *Juncus bulbosus* (Bulbous Rush), *Glyceria declinata* (Small Sweet-grass), *Eleocharis palustris* (Common Spike-rush) and *Lotus pedunculatus* (Greater Bird's-foot-trefoil).

During a walkover on 14 August 2021, Dave Wood (Joint Vice-county Recorder for Nottinghamshire) noticed an unusual-looking rush species occupying an area approximately 75m long and 25m wide, which was occasional to locally frequent centred at OS grid reference SK598605. After an initial inspection it was obvious that it was not a native British *Juncus* species, so material was collected for further examination. Research by Dave using on-line keys at *efloras.org* suggested that the taxon was *Juncus marginatus*, which is found in the eastern states of North America.

In the absence of a *Juncus* referee Michael Wilcox was contacted for help with determination. Michael agreed with Dave's identification but he raised concerns about the dimensions of the seeds, anthers and filaments, which were not typical for *Juncus marginatus* (based on the key in Kirschner et al., 2002), but stated that this species could be made

Inflorescence of *Juncus marginatus* (Grass-leaved Rush), Rufford Colliery, Nottinghamshire (v.c. 56), 15 July 2023. *Mark Woods*

up of several taxa in North America so suggested sending material to experts in the United States. David Boufford of Harvard University Herbarium (HUH), with help from Peter Raven (Professor Emeritus at Missouri Botanic Garden, MOBOT) verified that the taxon was *Juncus marginatus* and in his response included a section from the eFlora of North America (*efloras.org/florataxon.aspx?flora_id=1&taxon_id=222000153*), which states "The number of glomerules per inflorescence, stamen length versus perianth length, and tepal shape have separately and in combination been used to distinguish a number of taxa at various nomenclatural ranks. These characters, however, vary considerably across the distribution of the species (broad sense) and do so

independently of one another to the point that if separate taxa are recognised, they pass insensibly among each other." Thus, *Juncus marginatus* is a variable species across its range and those at Rufford exhibited part of that variation.

No records for Britain or Ireland were found on the BSBI database or in Alien Plants of the British Isles (Clement & Foster, 1994). Other sources such as Herbarium United were also checked without finding any records so it is likely that the population at Rufford is the first occurrence in the British Isles. The nearest habitation is more than two kilometres away so it is not entirely obvious as to the source of the material. It may have been transported to site on the tyres of off-road vehicles or in the imported substrate used for heathland creation, but the source can only be guessed at. It is worth searching in seasonally wet, sandy substrates and look out for a rush that is c.30 cm tall with grass-like leaves and a chestnut brown inflorescence.

Acknowledgements

I would like to acknowledge the support of Michael Wilcox, Dave Wood, Dave Boufford (HUH) and Prof. Peter Raven (MOBOT).

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NOTICES

BRITISH & IRISH BOTANICAL CONFERENCE 2023

On 2 December 2023, hundreds of botanists enjoyed the chance to meet up at the University of Newcastle for the British & Irish Botanical Conference (the event formerly known as the BSBI Annual Exhibition Meeting). This was a joint event organized by the BSBI in association with the Natural History Society of Northumbria (NHSN). Although 300 people had booked to attend the event, train strikes and illness conspired to reduce the total number who attended by around a third.

The programme featured nine 15-minute talks, a keynote by BSBI President Micheline Sheehy Skeffington on Ireland's Lusitanian flora, four flash talks, a dandelion workshop/demo by Prof John Richards, Summerfield Books' pop-up shop and behind-the-scenes tours of the NHSN archive. The talks were recorded and videos can be viewed via the BSBI YouTube channel, where you will also find a short TikTok video which gives a taste of the day's proceedings.

The Conference also featured the presentation of this year's Presidents' Award, made by BSBI President Micheline Sheehy Skeffington and Janet John, representing the Wild Flower Society. The award went to the five authors of *Plant Atlas 2020*, and four of them were there in person to accept their certificates, to loud applause from a grateful audience which included many people who had contributed to, and/or benefited from, this third plant distribution atlas as an essential resource for botanists, conservationists and policy-makers across Britain and Ireland.

There were 38 exhibits in total. Some provided the latest news about BSBI projects and activities, such as Identiplant, Field Identification Skills Certificates, the New Year Plant Hunt, 2024's programme of field and indoor meetings, and BSBI's grants programme. Recipients of BSBI grants exhibited posters outlining their research into subjects including comparing biodiversity on green roofing and adjacent habitats in London, and mapping potential mountain woodland vegetation in the Western Highlands. BSBI members exhibited posters on subjects ranging from Polypody in Hayley Wood to *Antennaria dioica* in Teesdale, from a new mistletoe recording app (see p. 5) to Maybud Campbell's expeditions to the Outer Hebrides (1936–1948).

The Conference webpage provides links to the videos, electronic versions of many of the exhibits,

and some photographs from the day: *bsbi.org/british-irish-botanical-conference-2023*.

Many thanks to NHSN for hosting the Conference: a special shout-out to James Common, Senior Naturalist at NHSN and BSBI joint County Recorder for North Northumberland, and to Clare Freeman, NHSN Director; they and their team – Aimee. Alex, Kris, Gordon and Julie – really went the extra mile to ensure the event's success. Thanks also to the Conference Organising Team, especially volunteers Billy, Kylie, Nicola and Ryan from BSBI Events & Communications Committee; to BSBI member Lindsay-Anne Heald, who recorded the TikTok video; and to my colleagues Julia Hanmer and Sarah Woods.

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NEW YEAR PLANT HUNT

By the time you read this, BSBI's thirteenth New Year Plant Hunt will be over, the results will be in and an analysis will have been carried out. You'll be able to find out more in the April issue of *BSBI News* but if you can't wait, please visit the New Year Plant Hunt webpage and follow the links for the Results map and the analysis. Many thanks to everyone who took part! Find out more on the webpage: *bsbi.org/new-year-plant-hunt*.

Louise Marsh

SUPPORT FOR RECORDERS APPEAL

Thanks to the support shown for our appeal, we have reached our initial goal of £10,000 within three months. Because of this generosity, we have now raised our target to £15,000, which would allow us to achieve even more for the recording community. For more information, visit *bsbi.org/appeal/support-for-recorders*.

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FIELD MEETINGS 2024

With this issue of *BSBI News* comes the annual Yearbook. In it you will find reports of many of the field meetings that were held in 2023 and synopses of the Winter Talks. If the reports boost your enthusiasm for attending a meeting, then there are even more to choose from in 2024 than there were in 2023. There should be something of interest for all members, so do attend one if you can – they can be enjoyable social occasions as well as a chance to take part in formal recording. In the members' area on the website you will be able to find a pdf version of the Yearbook, which has hyperlinks to take you straight to web pages, for example all the B&IB abstracts have a link to take you to the original article. In addition all the meetings will be on the events webpage, which is searchable so that you can select the type or location of meetings that particularly interest you: *bsbi.org/field-meetings-and-indoor-events*.

I would like to thank all those who have organised or led meetings during 2023 for their contributions. Our meetings, both at national and local level, are much appreciated by members and supporters and are an integral part of the BSBI. I would also like to thank the country field meeting secretaries for all their help, as they make a big difference in arranging the meetings in their countries.

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CADBURY MEDAL AWARDED

Congratulations to Rosemary Parslow, Vice-county Recorder for the Isles of Scilly and author of the recent *New Flora*, who was awarded the Cadbury Medal by The Wildlife Trusts last autumn. It is an annual award that is given to a member of a Wildlife Trust who has shown dedication to the advancement of nature conservation within the UK. She joins distinguished past winners including our members Ray Woods, David Streeter and Ian Trueman.

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INDEXES AVAILABLE

An index to *BSBI News* 141–150 will be placed on the BSBI website in early spring and print copies may also be made available for a small charge.

An index to field meeting reports, obituaries and B&IB abstracts in BSBI Yearbooks 2011–2020 is also in preparation and will appear on the website in due course.

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NEW EDITOR-IN-CHIEF FOR *BRITISH & IRISH BOTANY*

The third issue of the 2023 volume of *British & Irish Botany*, our Open Access, online scientific journal, was published in December. The journal was launched five years ago under the leadership of Prof Ian Denholm, then Editor-in-Chief of our previous scientific journal, *New Journal of Botany*. Ian is now handing over the reins to Dr Stuart Desjardins, a plant scientist working out of the University of Leicester. Stuart's research interests include plant molecular phylogenetics and taxonomy, as well as evolutionary processes, such as speciation, hybridisation, meiosis and adaptation to polyploidy.

Stuart said: "Under Ian's leadership *British and Irish Botany* has become established as a valuable scientific publication and, over the last five years, has resulted in the publication of some 136 papers from some of Britain and Ireland's finest botanists – not least two of my own. I wanted to take this opportunity to thank Ian for dedicating so much of his time and expertise to the role, and also for his patience over the last six months as he has shown me the ropes and ensured a seamless transition for the journal. I was approached to join the editorial team last year, and have shadowed Ian through the publication of issue 5.3 with a view to taking over as Editor-in-Chief in 2024. The BSBI is a wonderful institution and I am honoured to become the custodian of its scientific journal. I now look forward to a new era for *British and Irish Botany*, and will strive to maintain the excellent standards set by Ian".

You can view or download all the papers in issue 5.3 and previous issues free of charge from the journal website: *britishandirishbotany.org/index.php/bib.* If you are interested in submitting a manuscript, you can view the guidelines for submissions here: *britishandirishbotany.org/index.php/bib/about/submissions.* You can also contact us to discuss a proposal; either by email (address below) or phone us on 07725 862957.

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Hieracium elizabethae-reginae (Asteraceae), a new English species of hawkweed named after Her Majesty Queen Elizabeth II – T.C.G. Rich, J.K. Warren

Teasing Tansley? A 'tremendus' caricature from the launch party for the *Flora of the British Isles* – David M Wilkinson, Laura Jean Cameron

First record of *Gypsophila elegans* (Caryophyllaceae) in Tunisia and typification of the name *G. pilosa* published by Hudson on a plant cultivated in the Chelsea Garden (London, UK) – Ridha El Mokni, Duilio Iamonico

Edward Morgan (c.1615–1689) and his botanical pupil Edward Lhwyd (c.1660–1709) – Frank Horsman

Is *Artemisia campestris* subsp. *maritima* (syn. *Artemisia crithmifolia*, Asteraceae) native in Britain? – Andy Jones, Fred Rumsey

The shifting ecology and distribution of one of Britain's rarest plants: *Orobanche picridis* (Orobanchaceae) – F.J. Rumsey, C.J. Thorogood

PANEL OF VCRS

There are a few changes in England to report. In Worcestershire (v.c. 37), Cesca Beamish and Tom Ward join John Day as joint VCRs for the county. In Huntingdonshire (v.c. 31), Pat Doody is now in post following the retirement of David Broughton (who remains as VCR for Mid-West Yorkshire). In the Isle of Wight (v.c. 10), Nick Aston joins Colin Pope as joint VCR, and in the Isle of Man (v.c. 71), Philippa Tomlinson has retired after 10 years in post, and is succeeded by Andree Dubbeldam. The contact details for all new appointments can be found on their respective county pages on the BSBI website. We thank all new appointments for volunteering for the role of VCR, and thank Philippa and David for the wonderful work they have accomplished in their respective counties. I'm sad to report the death of Brian Bonnard, who had been VCR in Alderney (v.c. 113) since 1996. Brian was a fount of knowledge, knew the island intimately, and published several authoritative books, including *Channel Island Plant Lore* (1993), *A Natural History of Guernsey, Alderney, Sark & Herm* (1995), *A Very Wild Island* (2005), The *Wildflowers of Alderney* (2008) and *The Wild and Naturalised Flowers of the Channel Islands* (2012). He was also a noted local historian, publishing several books on this subject, including *The Island of Dread in the Channel* (1991), *Alderney at War* (2009) and *Ships and Soldiers; a Military and Maritime History of the Island of Alderney* (2013). An impressive legacy.

There are no changes to report in Scotland or Wales. In Ireland, Oliver Lynch Milner is now VCR for Co Limerick (v.c. H8), succeeding Tanya Slattery, whose resignation was mentioned in September News. In Co Cavan (v.c. H30), Aoife Delaney has been appointed as VCR. Aoife was formerly joint-

VCR for Co Leitrim (v.c. H29); Eamon Gaughan is now the sole VCR for the county.

In addition to the changes listed above, Science & Data Committee will be discussing the appointment of several candidate VCRs at their meeting in January (too late for this note). Details will follow in April *News*.

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BOTANICAL NOTES

VULPIA MEMBRANACEA IDENTIFICATION

Following my article on *Vulpia membranacea* in the last issue (*BSBI News* 154, p. 42), Mike Wilcox wrote to me to say he had looked at a specimen from the West Suffolk site which Clive Stace had sent him. He noticed that there were some differences in the appearance of the basal callus of the lemma between this and *F. fasciculata* which appear to be diagnostic (*see photos*). In *V. membranacea* the abaxial side of the basal callus of the lemma is narrow (thus appearing long, but to c. 1 mm) and only slightly angled away from the line of the inner side of the lemma. It is covered in short hairs. The notch at the back is not obvious, consisting of a shallow depression or collar, which is only about one fifth the length of the base. In *V. fasciculata* the callus (abaxially) at the base of the lemma is almost glabrous, broadly triangular (obtuse) and is more angled away from the line of the inner side of the lemma. The shallow collar is about half to two-thirds as long as the base of the callus in profile. Thanks to Mike for this very useful information.

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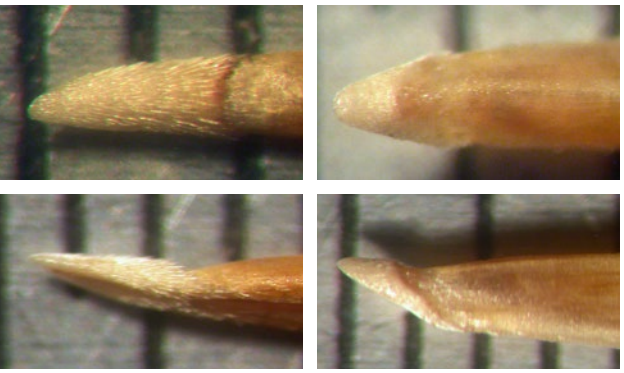

Photographs showing differences in the basal callus of the lemmas of *Vulpia membranacea* (left; specimen from West Suffolk) and *V. fasciculata* (right; specimen courtesy of Phil Smith). *Michael Wilcox*

MATERIAL REQUEST: ROADSIDE HALOPHYTES

We are embarking on an exciting (we hope) study of the invasion of roadsides by two native halophyte species: *Cochlearia danica* and *Spergularia marina*. We are interested in knowing whether the inland march of these species began with a single genotype (which implies pre-adaptation, or the flicking of a genetic switch) or multiple invasions from all around the coast (which throws up other questions, e.g. about timing). Later, we hope to look further into the species genomes and see if we can detect changes associated with the move inland. These findings could help us to understand how plants will respond to rapid changes of habitat and climate in the future, as new potential ranges become available.

To help us build up comprehensive sampling, we are asking BSBI members to assist us by gathering one or both species from their local patch. Both natural (seaside) and inland (roadside) material will be very welcome. If you are interested in collecting for us, please email **christopher.dudley@ed.ac.uk**, and we will send a simple collecting kit with instructions and an SAE.

Christopher Dudley, Alex Twyford and Richard Milne
University of Edinburgh

WILD ORCHIDS OF MÁLAGA

BSBI member Ian Phillips has published 'Wild Orchids of Málaga', based on more than 30 years of study and illustrated with his own photographs, including close-ups of the flowers of many species. Further information is available and paperback and ebook versions may be purchased from the publisher's website: *austinmacauley.com/book/wild-orchids-of-malaga*.

John Norton

COUNTRY ROUNDUPS

Compiled by Pete Stroh
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ENGLAND

In recent years a lot of time and effort has been expended in an attempt to reverse the fortunes of some of our rarest species. *Campanula patula* (Spreading Bellflower) is Critically Endangered in England, on the precipice of extinction. Much is known about its ecology, thanks in large part to Natasha de Vere and staff at the National Botanic Garden of Wales. Armed with this published evidence, Stuart Hedley, Kate Woolen and Anne Crane, alongside others and with Natural England's support, have been attempting to give it a helping hand in Herefordshire (v.c. 36) by developing a local plan to stem its seemingly inexorable loss. Conservation introductions often fail, for a wide variety of reasons, but it would seem that the rigorous approach that the team in Herefordshire has adopted is starting to bear fruit (literally), with 12 plants recorded in a wood on the outskirts of Ledbury which can all fairly confidently be ascribed to the first in situ progeny from local-genome plug plants. Monitoring of the population is ongoing, and it is hoped that lessons learnt from this introduction might lead to its gradual restoration at more locations.

When not trying to save threatened plants, Stuart has been busy uncovering new v.c. 36 sites for some very nice sedges. In 2021, about 20 plants of *Carex muricata* subsp. *muricata* (Large-fruited Prickly-sedge) were found growing on a sunny verge over Woolhope Limestone near Fownhope, and in 2022, *C. vulpina* (True Fox-sedge) was detected amongst *C. otrubae* (False Fox-sedge) and a dense stand of *C. acuta* (Slender Tufted-sedge). Specimens for both were confirmed by Mike Porter, and are notable extensions to their known ranges. In 2023, the star sedge find comprised over twenty tussocks of *C. elata* (Tufted-sedge), a very scarce species in the county, growing in a glacial-origin pond in the Wye floodplain near to Madley. All three of these recent records could be mistaken for more common and widespread species if not scrutinised with a sharp eye. And speaking of keen eyes, Jonathan Forsyth found eight plants of *Lycopodium clavatum* (Stag's-horn Clubmoss) at a new site (and hectad) in Herefordshire in November. This is the first sighting in the county for 19 years, following unsuccessful searches at several historic locations which now appear unsuitable.

Campanula patula (Spreading Bellflower). *Bob Gibbons*

In Cambridgeshire, Roger Maskew has confirmed Alan Leslie's identification of *Rosa sherardii* (Sherard's Downy-rose) from Hayley Wood, adding a fourth site for the county. Alan notes that it was a lesson in the value of seeing individual plants across more than one season, as he saw it in flower early on (small, deep pink petals), then in green fruit and later with mature fruit. The sepals did not seem typical for the species when in flower, but later in the season they were all persistent and erect, with the disc orifice wide and open. As an aside, I am greatly looking forward to the revised Roses Handbook, co-authored by Roger Maskew and Gareth Knass, which should

be available in time to help you identify your roses in 2024.

As reported in the September roundup, a wet and relatively mild winter and hot, dry spring combined to make 2023 a beneficial year for many species of drier habitats. David Pearman, and others, reported a very 'good year' for *Gentianella campestris* (Field Gentian) on the Lizard Peninsula (West Cornwall). This biennial (occasionally annual) species has become very rare indeed in the south-west; counts at the few known Lizard localities usually number in the 'low to mid tens', but in 2023 there were over 550 individuals present. Other rare species with bumper crops at this nationally important reserve included *Juncus capitatus* (Dwarf Rush) and *Trifolium bocconei* (Twin-headed Clover). It will be interesting to monitor how populations fare this year. The management currently appears beneficial for these species, so much will depend on what the weather holds.

Andy McVeigh and Andy Byfield had a number of productive outings last year. Highlights included 'festoons' of *Fallopia dumetorum* (Copse Bindweed), present for over 300m along the verge of the A420 that

Fallopia dumetorum (Copse Bindweed). *Andy Byfield*

bisects the Oxfordshire/Berkshire border, and in the Cothill – Frilford area, a nice population of *Herniaria glabra* (Smooth Rupturewort), which appears to be a new county record for Berkshire. But perhaps their most exciting find came from Cothill Fen, a well-surveyed SSSI in Berkshire, where they collected a Bladderwort that was later determined by John Day, the national Referee for the genus, as *Utricularia minor* (Lesser Bladderwort). This would appear to have emerged from long-buried propagules following management works at the site, and is the first county record for more than a century, with the last known sighting included in G.C. Druce's *Flora of Berkshire* (1897), where he stated its location as 'Cothill Marsh, in the pools'. Following this theme, David Morris has let me know that pond restoration work by the Newt Conservation Partnership at an old common in Oxfordshire (v.c. 23) has resurrected *Helosciadium inundatum*, sadly a rare plant in the vice-county, but at least now not as rare as it was 12 months ago.

In East Sussex (v.c. 14), Alex Worsley and his team at Sussex Wildlife Trust undertook a comprehensive survey of *Baldellia ranunculoides* (Lesser Water-plantain) at Castle Water, Rye. Over 2,000 plants were recorded, making it an important refuge for a species which is assessed as Vulnerable in England. I'd be interested to know if there are other sites in England with a similarly impressive population. Staying in v.c. 14, *Potentilla verna* (Spring Cinquefoil) has been found growing in a dry valley on a south-east facing slope of the South Downs, near Alfriston. The area covered was approximately 30m × 30m, and was picked up by Naomi Forbes who has been carrying out a transect nearby for Butterfly Conservation for several

Potentilla verna (Spring Cinquefoil). *Naomi Forbes*

years. This is only the second record for the vice-county, and would appear to be the sole native population. And over the border into West Sussex (v.c. 13), there is a new site for *Epipactis palustris* (Marsh Helleborine) on East Head, where Francis Rose long ago predicted it would eventually be discovered. Thanks to Nevil Hutchinson for relaying this information to me.

We often write about decline, but not all species are in trouble, and in the north-west, the startlingly rapid spread of *Senecio inaequidens* (Narrow-leaved Ragwort) has occasioned great interest among local botanists. This plant was first recorded in Westmorland (v.c. 69) in 2015 and in Cumberland (v.c. 70) in 2016. Numbers have steadily increased but in 2023 the plant really seems to have taken off, particularly in urban areas, with records coming in from many parts of Carlisle, especially one small semi-industrial district where it could almost be described as dominant. On the other side of the coin, *Isolepis cernua* (Slender Club-rush) is a remarkably rare plant in Cumbria, the few known records being concentrated in a single monad on the coast north of Silecroft. During the course of a field meeting based at Silecroft and in subsequent visits, Gary Lawrence, accompanied by Peter

Bullard, was able to refind the few known sites and to add to them, later taking some superb photos of the nuts and those of *I. setacea* (Bristle Club-rush) which also grows in the area. The nuts are, of course, minute, but the characters are still clearly visible in the field with the aid of a hand lens. Bear in mind that earlier in the season, it is very difficult to separate the two taxa, with the length of the involucral bract relative to the length of the inflorescence an unreliable character. Mike Porter, who provided the information above, also mentioned that the

Nuts of *Isolepis cernua* (Slender Club-rush) (top left) and *I. setacea* (Bristle Club-rush) (bottom right). *Gary Lawrence*

strange weather patterns of 2023 produced some odd results. For example, on 12 October he found two spikes of *Orobanche minor* (Common Broomrape) just coming into flower on rough grassland in Workington Harbour; dead spikes of *Phelipanche purpurea* (Purple Broomrape) were also present nearby.

The Durham Botany Group (DBG), and Keith Robson, were very busy in 2023, amassing over 17,000 records and organising no less than 55 field meetings, including winter tree and vegetative sessions at the start of the year and fungi and bryophyte excursions in the winter months. In the course of these outings, 21 new vice-county vascular plant records were made, all but two of them neophytes. Whilst most of these aliens are benign, there has been a troublesome increase in the distribution of one, *Acaena novae-zelandiae* (Pirri-pirri-bur), for which there were only a handful of casual records in the past, nearly all in the east of v.c. 66, until it appeared on moorland in the west of the county in 2020. This potentially highly invasive species is now known from five sites in the west, and looks likely to continue its spread. In happier news, a small group of DBG members visited a number of remote sites that have not been botanised for many years. Targets for the meetings included checking historic sites for *Neottia cordata* (Lesser Twayblade). This resulted in finding the orchid at two locations, where they were last recorded in 1932 and 1997 respectively, as well as in a completely new area. I imagine that the group must have kicked aside a lot of heather. There was also a new location discovered for *Epipactis palustris* at a well-botanised Durham Wildlife Trust nature reserve, and the appearance of three flower spikes of *Neotinea ustulata* (Burnt Orchid) at its most northerly British outpost, where it continues to hang on.

There was a bit of a sedge theme to 2023 in South Northumberland (v.c. 67). The substantial expanse of moorland, bog and mire at Moss Peteral, east of the River Irthing in the far south-west of the county, has rarely been visited by botanists. Recording in such places often gives hope that one might stumble across something nice, and so it was when Tom Charman spent time there, and recorded *Carex limosa* (Bog-sedge), *C. lasiocarpa* (Slender Sedge) and *Rhynchospora alba* (White Beak-sedge), and on a later visit Bill Burlton and John Richards added *C. pauciflora* (Few-flowered Sedge) to the list. All are uncommon in South Northumberland, and as John notes, the area has quickly become one of the county's best 'bog sedge' sites. *Blysmus compressus* (Flat-sedge) is also a rare sedge in v.c. 67, with only two extensive sites, so it was good to hear from John of a new population on the banks of the South Tyne, found by the Natural History Society of Northumberland's regular Wednesday botany group.

In Derbyshire (v.c. 57), Alan Wilmot has reported a few new locations for species which he terms 'near native' – that is to say, plants that are native not far away from the county and which may have arrived without the obvious direct action of people. For example, *Cicuta virosa* (Cowbane) was found by Daniel Lusher-Sellors in two balancing ponds created around 10 years ago within a new housing development at Mackworth. It was present in flower in large numbers in both ponds. Alan subsequently found a single plant of the same species on the banks of the River Derwent in the centre of Derby. Native plants popping up in new hectads often presented the editors of the Atlas with considerable dilemmas about how to best assign status. But regardless of whether we use a blue or a red dot, they remain of ecological interest.

Plants have been moved around the country with the inadvertent assistance of humans for centuries, whether it be via transhumance, the construction of

Cicuta virosa (Cowbane). *Daniel Lusher-Sellors*

canals and roads, or the transferral of materials used for building. *Spergularia rubra* (Sand Spurrey) is still fairly widespread in suitable areas with acidic soils, but in North Somerset (v.c. 6), there was only one post-1999 sighting (Deerwood Common) until Helena Crouch inputted records sent in by John Poingdestre last autumn, one of which was for this species at a new and unusual location – on stone chippings in a Highways yard, off the A303. Helena has also mentioned finding, with Dave Green, *Trifolium arvense* (Hare's-foot Clover) on the edge of a new lawn in a housing estate, a first record for the hectad for over 50 years. Did it arrive with seed brought in with sand or soil from elsewhere? *Gymnocarpium robertianum* (Limestone Fern) is a native species with a particular penchant in v.c. 6 for Cheddar Gorge, and in general terms has a liking for cracks, fissures and scree. We can now add 'street drains' to this list, after fronds were found in this situation in Bath, fairly close to a garden where it is known to be grown. The provenance of this street weed is not, like the others mentioned above, difficult to determine, but it clearly likes the spot it has found, and others have tried to plant out this fern in seemingly ideal habitat, only for the introduction to fail. Perhaps a cautionary tale of the plant knowing best? It was nice to hear from Helena about one more find in a surprising place. While out botanising with Fred Rumsey at Steep Holm near Weston-Super-Mare, they came across a single clump of *Chenopodiastrum murale* (Nettle-leaved Goosefoot), an Endangered archaeophyte in Britain. It was found not in a cultivated field or waste ground, as you might expect, but in an upturned cannon at one of the famous gun batteries built on the island in the mid-19th century. This is the first record for Steep Holm and for North Somerset since 2006 and the first for all of Somerset since 2007. *See photo on front cover.*

Whilst we all enjoy botanising and finding records of new species, converting such effort into products that summarise for others (e.g., planning authorities, local government) species that are important, rare or threatened is a vital part of this process. Several vice-counties are updating, or have recently written, new Rare Plant Registers. In Middlesex, Mark Spencer, together with Paul Losse, Julija Fediajevaite and Andy Foy, have been busy developing an RPR, an axiophyte list, and a listing of species considered to the threatened in the London area. The draft results of the latter undertaking do not make for happy reading, and demonstrate the perilous situation for many native and archaeophyte species that are considered to be of 'Least Concern' in England as a whole.

Finally, I must mention the remarkable efforts of Geoffrey Hall, VCR for Leicestershire. Geoffrey took on the daunting task of writing-up Guy Messenger's unpublished manuscript *Supplement to the Flora of Rutland*, left incomplete following his death in 1993. To quote Geoffrey, "the *Supplement* is a fascinating snapshot written at a time of great ecological change by a skilled and dedicated naturalist who knew and loved Rutland's plants and wanted to share his knowledge with all." Leicestershire is fortunate to have another skilled and dedicated naturalist to complete Messenger's work, and the publication is a valuable resource both for botanists and for those involved with the management, conservation and protection of Leicestershire's flora.

Pete Stroh
BSBI Scientific Officer & England Officer

WALES

Delyth Williams, VCR for Denbighshire (v.c. 50), commented that it never ceases to amaze what can be picked up at the latter end of the year, before the frosts set in, when we turn to urban recording. Allotments are always a good bet and in no more than a 100 m square in a corner of Wrexham on 29 October they recorded almost 200 taxa, of which three – *Borago officinalis* (Borage), *Smyrnium olusatrum* (Alexanders), *Polypogon monspeliensis* (Annual Beard-grass) – are new to the hectad. This is only the third county record for *P. monspeliensis* but on 5 November it was soon

followed by a fourth, at Morfa Rhuddlan in a pavement crack in the middle of a housing estate. Nearby there was also a small specimen of *Galinsoga quadriradiata* (Shaggy Soldier), new to the hectad and only the fourth record for the vice-county. *Erigeron floribundus* (Bilbao's Fleabane) was found in luxuriant abundance in a farmyard near Wrexham in September, new to the hectad and only the second record for the vice-county.
A first vice-county record of *Buphthalmum speciosum* (Yellow Oxeye) was reported by Brian and Sue Burnett from Coed y Fron-wyllt on 25 July only to be followed by a second record on 31 July from Pentre-celyn. This large, striking plant was first found at the edge of a woodland ride, the second on a lane-side verge near the village. Neither location suggests deliberate planting.

In Flintshire (v.c. 52), Jonathan Shanklin found *Potentilla verna* (Spring Cinquefoil) on a spring visit to Graig Fawr where it hadn't been seen since 1999. There were some plants close to the previous grid reference, though this was more in Tan-yr-allt than Graig Fawr. Moving on to nearby Gop Hill he found a new site for the plant, with a couple of patches on the hillside. An exciting find

Potentilla verna (Spring Cinquefoil). *Jonathan Shanklin*

in June was *Juncus compressus* (Round-fruited Rush) in the flushing lagoon at Greenfield. An interesting find on a September visit was a line of four flowering plants of the hybrid thistle *Cirsium* × *celakovskianum* (*C. arvense* × *palustre*) near a capped mine shaft on Halkyn Common SSSI. These had some of the appearance of *C. palustre*, but the creeping habit and sterility made them clearly different.

Jo Clark sent a report from Meirionnydd Naturalists group for v.c. 48. She wrote that the group visited Craig yr Aderyn / Bird Rock near Tywyn in March, where ubiquitous sheep grazing generally precludes finding much of interest. However, in the cleft of rock, out of reach, were a few plants of *Dryopteris aemula* (Hay-scented Buckler-fern). In May, the group visited woodland near Aberdyfi to count the *Cephalanthera longifolia* (Narrow-leaved Helleborine) population. They were pleased to find 38 plants, of which half were flowering. It's hoped that the National Botanic Garden of Wales will be able to arrange for this colony to contribute to their important seed bank. In June the group were invited to see Andrew and Janet Graham's land at Minera Quarry (Denbighshire). It was very impressive to see limestone grassland covering most of the immediately visible landscape. Martin Stead spotted *Myosotis laxa* (Tufted Forget-me-not) in a ditch (rarely seen in Meirionnydd) and also in a marshy area of *Juncus acutiflorus* (Sharp-flowered Rush) with associates including *Valeriana dioica* (Marsh Valerian), *Carex hostiana* (Tawny Sedge), *Carex pulicaris* (Flea Sedge) and *Veronica scutellata* (Marsh Speedwell). We were also shown a good-sized patch of 20 or so *Botrychium lunaria* (Moonwort).

Also in June, the group re-located *Genista anglica* (Petty Whin) – 25 plants – at Duallt Station, near Maentwrog during an enjoyable walk beside the Welsh Highland Railway. They also found *Carex canescens* (White Sedge), a new tetrad record.

Seed collecting for three species – *Oenanthe fistulosa* (Tubular Water-dropwort), *Stellaria palustris* (Marsh Stitchwort) and *Cephalanthera longifolia* (Narrow-leaved Helleborine) – in Montgomeryshire (v.c. 47) has now been successfully completed. Some of the fruits will stay with the NBGW and some have gone to Kew. A fourth targeted species, *Luronium natans* (Floating Water-plantain), was located in the Montgomery Canal, but many of the stands are vegetative only and no fertile fruit appeared to be produced from the few flowering stands. It was also found in upland pools, but with high water levels all summer, the group were only able to find one flowering stand at the time of the visit, so there were no seeds collected from Llyn Gwyddior or Bugeilyn either.

Over the year Kate Thorne has reported seven new county records for Montgomeryshire (v.c. 47), including *Atriplex littoralis* (Grass-leaved Orache) and *Euphorbia stricta* (Upright Spurge). The former species was found along an inland roadside and the latter, which is now considered a neophyte in Britain, was growing out of tarmac at the base of a wall. The five other neophyte species recorded included *Senecio vernalis* (Eastern Groundsel), *Oenothera cambrica* (Small-flowered Evening-primrose) *Lepidium viginicum* (Least Pepperwort), *Rosmarinus officinalis* (Rosemary) and *Acaena ovalifolia* (Two-spined Acaena). It is possible that some, perhaps all previous records for *Acaena*

novae-zelandiae (Pirri-Pirri Bur) are actually this species. Of the new hectad records for this year, species of particular interest included *Viola lutea* (Mountain Pansy) in the Berwyns, *Ceratophyllum demersum* (Rigid Hornwort) and *Potamogeton berchtoldii* (Small Pondweed) at Lymore Pool. *Hydrocharis morsus-ranae* (Frogbit), although apparently native and pronounced extinct in the Montgomeryshire Flora of 1996, continues to spread south-westwards in a rather invasive fashion, alongside *Stratiotes aloides* (Water-soldier). Reasons for this spread may be that this is a non-native variety, or that the canal is becoming more nutrient-rich; the latter scenario appears unlikely given the healthy population of *Luronium*. Whatever the cause, it appears that both these species pose a risk to *Luronium* and other plants of interest in the canal.

The church and chapel graveyards of Cardiganshire (v.c. 46) are havens for plants, both native and non-native, and in them botanists can expect the unexpected. Exploring the burial yard of the Pant-y-Defaid chapel in Pren-Gwyn in September, Steve Chambers found a convincingly self-sown plant of *Phedimus hybridus* (syn. *Sedum hybridum*) (Siberian Stonecrop), previously unreported for the county, growing on one of the bare, earthy burial mounds currently in a state of seral recovery following what looked like herbicide spraying, associated with generic ruderals re-colonising the soil. The species was growing in some quantity nearby in a rockery garden fronting a property opposite the chapel, from whence it must have come. Checking it up on the superfast online Atlas 2020, Steve noticed that the mapped records of *P. hybridus* are all defaulted to *Sedum kimnachii* (Mexican Sedum), but he believes that this is a quite different-looking plant, and there is perhaps a problem in need of resolution here regarding what we have in Britain.

Contributions from John Crellin, VCR for Breconshire (v.c. 42) include information on three species. He notes that the county already had the most southerly occurrence of *Circaea alpina* (Alpine Enchanter's-nightshade) in Britain and Ireland but the one small (and somewhat struggling) population at Craig y Cilau is now joined by a substantial and healthy population found by Sam Thomas while visiting the (also very rare) population of *Sorbus stenophylla* on Tarren yr esgob near Capel y Ffin in the Llanthony valley in late August. *Silene gallica* (Small-flowered Catchfly) had not been recorded in Breconshire since 1950 but plants were seen in early October by Ray Woods at the edges of a Swede field at Ty Maer Farm near Ray's house. This occurrence suggests that there may be a long-lived seed bank.

The Cambrian Mountain Society teamed up their walking expertise with botanists in mid-September on a walk to the most remote lake in Breconshire, Llyn Carw, which is about a 6 km trek across difficult moorland from Dolymynach. Quillwort was found there in 1979 by Ray Woods and determined to be the rarer *Isoetes echinspora* (Spring Quillwort) by S.G. Harrison at the National Museum of Wales. It was then common on the northern and western margins. Gill Foulkes, one of the botanists on the walk, did find a Quillwort on the other side of the lake, but this turned out to be *Isoetes lacustris* (Quillwort). None was found where the original sample was taken. Maybe the lake does still have both these quillwort species; the north and west seem to have the more suitable habitat for Spring Quillwort.

Circaea alpina (Alpine Enchanter's-nightshade), Tarren yr Esgob (v.c. 42). *Sam Thomas*

Finally, in Monmouthshire (v.c. 35), Tim Rich found *Cardamine occulta* (Cryptic Bitter-cress) on gravel beds at Usk Garden Centre in September, following his find of this species in plant pots at St Mellons Garden Centre near Cardiff in 2019, a new species to the vice-county list. New hectad records included *Digitaria ischaemum* (Smooth Finger-grass) spotted at a pavement edge by Elsa Wood (EW) as Steph Tyler (SJT) drove through Usk town, *Panicum miliaceum* (Common Millet) noted by EW and SJT in Rogiet allotments, and *Diplotaxis muralis* (Annual Wall-rocket), locally frequent at the edge of the A48 roadside near Five Lanes. *Erodium maritimum* (Sea Stork's-bill) has spread along this road between Chepstow and Newport where it can be locally abundant. A day in November checking many laybys along main roads for halophytes on the A48 towards Newport and A49 dual carriageway between Newport and Raglan was quite productive, despite lorries roaring past. *Sagina maritima* (Sea Pearlwort) was found in two locations and *Spergularia media* (Greater Sea-spurrey) at one, both being new hectad records, whilst *Catapodium marinum* (Sea Fern-grass) was found too, as well as more widespread halophytes such as *Plantago coronopus* (Buck's-horn Plantain) and *Cochlearia danica* (Danish Scurvy-grass). A turnip field at an organic farm at Mitchel Troy had thousands of plants of *Galinsoga quadriradiata* (Shaggy Soldier) plants as well as many *Nicandra physaloides* (Apple-of-Peru) plants in early October.

Steph Tyler
Joint VCR Monmouthshire

SCOTLAND

Two hundred botanists gathered at the RBGE in November for this year's Scottish Botanists' Conference, with a fascinating range of talks, workshops and exhibits. We were delighted to be joined by Prof. Mathew Williams, Chief Scientific Advisor for Environment, Natural Resources and Agriculture to the Scottish Government, who opened the conference with a talk on *Plant Atlas 2020*, describing it as an extraordinary achievement for biodiversity mapping and change detection – quite a tribute to the efforts of the Scottish botanical community!

A highlight of the conference was Aline Finger presenting fascinating results from a conservation translocation trial with *Cicerbita alpina* (Alpine Blue-sow-thistle), a species restricted to just four sites in Britain and Ireland, as part of the Scottish Plant Recovery programme at RBGE. Gus Routledge gave a wonderful overview of his year as a self-employed botanist, packed with superb images of terrific finds, including a remarkable 'aquatic' *Spiranthes romanzoffiana* (Irish Lady's-tresses) plant, submerged by floodwater! We learnt about the highs and lows of managing Plantlife Scotland's Munsary Nature Reserve from Alistair Whyte, and were fabulously entertained and educated by Richard Milne

Cardamine occulta (Cryptic Bitter-cress), St Mellons garden centre (v.c. 35). *Tim Rich*

explaining how molecular data impacts classification and can conflict with established plant taxonomies. James Rainey and Jane Sayers from Trees for Life closed the conference with an intriguing introduction to the Wild Pine Project, which aims to identify, map and survey ancient Caledonian Pinewood sites missing from the official inventory.

The conference is a great opportunity for vice-county recorders to share some of the highlights of their year with other botanists, displaying specimens and photos of exciting finds. The discovery of *Epipactis dunensis* (Dune Helleborine) in Dumfriesshire (v.c. 72) at an old limestone quarry at Kelhead by Paul Stanley, was a new vice-county record and the first outside central Scotland. Two other new v.c. 72 records were also displayed: *Polygonum boreale* (Northern Knotgrass) found on a Dumfriesshire Botany Group outing to Powhillon Farm, its large, petiolate leaves standing out from the commoner Knotgrass species nearby; and *Fumaria purpurea* (Purple Ramping-fumitory), identified as part of an interesting flora of 60+ taxa on an arable farm that had been left uncultivated since the spring.

Moving west to Kirkcudbrightshire (v.c. 73), a field meeting at Kirkbean Glen with Roger Golding and Alison Evans from the British Pteridological Society refound the rare *Dryopteris pseudodisjuncta*, a member of the *D. affinis* agg. (Scaly Male-fern) complex originally recorded here in 2010 and known from just seven sites across Britain. Two previously unrecorded taxa, *D. lacunosa* and *D. pseudocomplexa*, were also discovered. This challenging group of Scaly Male-ferns may be best left to experts, but the results of this survey suggest that the site may be of SSSI quality for its ferns alone, with 12 taxa present. Also in v.c. 73, a partial survey of the RSPB Wood of Cree Reserve counted over 2,250 flowering tufts of *Carex elongata* (Elongated Sedge), plus uncounted non-flowering tufts, along part of the river, with more riverside habitat to explore in 2024. Another uncommon sedge, *C. elata* (Tufted-sedge) was refound at Carlingwark Lane, Castle Douglas, and one plant was identified as *C.* × *turfosa*, its hybrid with *C. nigra* (Common Sedge) first recorded there in 2013.

Mertensia maritima (Oysterplant) is known from three areas of the Ayrshire (v.c. 75) coast. In September, Carol Crawford, Angus Hannah and Dave Lang found it along the Fisherton foreshore, where it was happily showing signs of spread/colonisation northwards, representing the most northerly vice-county record since the 19th century. Bennane Head Grasslands SSSI in Ayrshire is well known as the Scottish stronghold for *Anacamptis morio* (Green-winged Orchid). However,

Anacamptis morio (Green-winged Orchid). *Dave Lang*

the discovery of a previously unrecorded group of plants on the unfenced A77 verge by Dave Lang may explain why the SSSI boundary extends beyond the Troax Farm fence line at this point. Interestingly, unlike the stunted specimens that grow in their hundreds (perhaps even thousands) across the farm, these

Mertensia maritima (Oysterplant), Fisherton (v.c. 75). *Dave Lang*

new plants were much larger and more 'typical'. Dave speculates that the ones in the grazed areas have to get up and flower very quickly before being munched by cattle, whereas the specimens on the verge had the luxury of being able to grow to full height before flowering. A new Ayrshire site for the related *A. pyramidalis* (Pyramidal Orchid) was also discovered in 2023, just the third site in the vice-county and all found since 2015.

Botanising in Lanarkshire (v.c. 77) this year by urban specialist Malcolm Macneill has revealed various interesting archaeophytes and aliens. Of particular note were two sites for *Apera spica-venti* (Loose Silky-bent), new to the vice-county, both in Glasgow and both hospital related! The first comprised a large 'wildflower' bed sown several years ago in the grounds of the Queen Elizabeth University Hospital, the second below a new housing development in the grounds of the former Ruchill Hospital. Another unusual find in the grounds of another hospital was *Isatis tinctoria* (Woad), last seen in Glasgow in 2000, and *Ballota nigra* (Black Horehound) was spotted in a newly paved street – the first vice-county record for well over fifty years. Malcolm also found *Oxybasis glauca* (Oak-leaved Goosefoot) growing in some waste ground beside a Glasgow housing development, last seen in the vice-county many years previously. This record was made in November 2023, a reminder that urban botanising can be productive well beyond the traditional field season.

Apera spica-venti (Loose Silky-bent). *Peter Wiggins*

Oak-leaved Goosefoot was also an unexpected first for West Perthshire (v.c. 87), where I bumped into it whilst on my way to post a letter in the village of Thornhill in July. Several small plants were growing at the base of a street bollard, but sadly these were gone a few weeks later – a casualty of vigorous street cleaning. Staying with the Amaranthaceae, I refound *Atriplex longipes* (Long-stalked Orache) during a SHARPP search at its most northerly British site, the Haughs of Airth in Stirlingshire (v.c. 86), growing on the exact spot Clive Stace recorded it in 1984! Two orache hybrids, *A.* × *gustafssoniana* (Kattegat Orache) and *A. glabriuscula* × *prostrata*, were also identified at this site and at Blackness in West Lothian (v.c. 84), with the help of referee John Akeroyd. Both taxa were previously unrecorded from the Firth of Forth, suggesting a closer study of the orache communities of the upper saltmarsh and strandlines around the Forth would be of interest.

Readers of the September 2023 issue of *BSBI News* may have spotted the botanical note by Michael Wilcox, confirming the presence of *Elymus athericus* (Sea Couch) in Scotland based on a specimen from Seafield Beach in Midlothian (v.c. 83), found by prolific new Vice-county Recorder Sue Jury – a brilliant record! A display of other notable 2023 finds for Midlothian at the Scottish Botanists' Conference included the first vice-county record of *Ophrys apifera* (Bee Orchid), found by Markus Ruhsam in June on waste ground near West Granton, with a count of twenty flowering spikes made. Bee Orchid was first recorded in Scotland in 2003, and has now been found in eleven Scottish vice-counties – its northwards migration thought to be encouraged by climate change, with milder winters likely to be improving the survival of its winter-green rosettes, thereby allowing it to increase in numbers and colonise new sites via wind-dispersed seed.

Whilst searching for *Gentianella campestris* (Field Gentian) at St Cyrus National Nature Reserve, Kincardineshire (v.c. 91), David Elston made a chance discovery of a small *Ophioglossum* fern-ally. The only previous records for *Ophioglossum* in v.c. 91 were for *O. vulgatum* (Adder's-tongue) prior to 1860, but the size and paired fronds pointed to something even more exciting, and it was subsequently confirmed as *O. azoricum* (Small Adder's-tongue) by Fred Rumsey. This record fills a sizable gap in the distribution of this species on the east coast, between sites to the north of Aberdeen and Lindisfarne to the south. Over on the west side of Scotland, Ian Strachan and Jim McIntosh made an exciting discovery on a September visit to Coire Eoghainn, high above Glen Nevis – a small population of

the Nationally Rare *Omalotheca norvegica* (Highland Cudweed), on south-east facing cliffs beyond the eastern rim of the coire. This is the first record for the Ben Nevis range, and the second site in Westerness (v.c. 97), the other being over twenty miles away on Creag Meagaidh.

The highlight of the year from North Ebudes (v.c. 104) was the discovery of *Sedum villosum* (Hairy Stonecrop) on Eigg by Marco Dobson, with a colony of 125 plants flowering near Loch nam Ban Mora. This Nationally Scarce native is new to the vice-county, and the most northerly confirmed site on the west coast. *Pimpinella saxifraga* (Burnet-saxifrage) was also new

Sedum villosum (Hairy Stonecrop). *Marco Dobson*

for North Ebudes this year, with a colony found by Joanna Walmisley on top of an old landfill site outside Portree. Back on the mainland, during the July BSBI recording weekend in the Northern Fannichs, I encountered *Chenopodium ficifolium* (Fig-leaved Goosefoot) growing in gravel at the Altguish Inn near Garve, a new vice-county record for East Ross (v.c. 106). A second addition to the East Ross flora, *Isoetes echinospora* (Spring Quillwort), was found at Loch na Still in August 2020 by Jim McIntosh and Dan Watson.

In West Sutherland (v.c. 108), Ian Evans and Gwen Richards found *Mycelis muralis* (Wall Lettuce) at Lochinver in July, new to north-west Scotland. In August, a new hectad record for *Lycopodiella inundata* (Marsh Clubmoss) was made by Ro Scott and Gordon Rothero at Loch Achcheargary, above Strath Naver, and Ro also made new hectad records

Mycelis muralis (Wall Lettuce). *Gwen Richards*

for *Orthilia secunda* (Serrated Wintergreen) and *Pyrola media* (Intermediate Wintergreen) on crag woodland south of Loch an Dherue, which is south of Tongue. Finally, on Shetland (v.c. 112) new Vice-county Recorder Jon Dunn found a second site for *Neottia ovata* (Common Twayblade), a scattered colony some forty miles north of the first location, which was only identified in 2021. Along with the Wall Lettuce record, this is a nice reminder to many of us that familiar species can be of significant interest elsewhere in Scotland.

Finally, I would like to thank Ian Strachan for producing this Scotland roundup over the last five years – his contributions were always beautifully written and full of interesting detail. Ian has now stepped back from the role, so if anyone would like to volunteer to help showcase Scotland's botanical discoveries, please let me know.

Orthilia secunda (Serrated Wintergreen). *Gwen Richards*

Neottia ovata (Common Twayblade). *Jon Dunn*

Matt Harding
BSBI Scotland Officer

IRELAND

From the depths of midwinter, it's nice to recall the summer months – even if they were not as summery as they might have been, there were some impressive finds across the whole country that didn't make their way into the September issue. Aquatic plants were a big focus in Ireland in 2023, thanks in large part to the NPWS-funded Aquatic Plant Project, but there have also been some exciting new orchid finds as well as a host of aliens, hybrids and interesting refinds!

Starting in Northern Ireland: in Co Down (v.c. H38) *Spiranthes spiralis* (Autumn Lady's-tresses) was the big find of 2023, even managing to make BBC News as a first-ever record for Northern Ireland! This was spotted at Killard (at the mouth of Strangford Lough) by Judith Dalzell, and identified by her son Jake, while out hunting for *Coeloglossum viride* (Frog orchid) on 13 August. In the Mourne Mountains, Graham Day and Rhonda Ridley think that they refound *Thalictrum minus* (Lesser Meadow-Rue) by the Black Stairs on Thomas's Mountain, on 29 September. They had been looking for *T. alpinum*, which had been recently recorded in the area on iRecord, but instead found what they suspect is putative *T. minus* at the iRecord location. Unfortunately, it was not in flower, but the vegetative growth matched *T. minus* and not *T. alpinum*. Although *T. minus* is common on parts of the coast, there are very few records from the Mournes and it was last seen at this station in 1983. It's not an easy site to search, so Graham was not surprised that it has not been seen more frequently here.

In Co Armagh (v.c. H37), John Faulkner had a busy summer completing post-2000 tetrad recording in preparation for the drafting of a Flora for the county. This means that a minimum of 100 taxa have been recorded from every tetrad that is wholly or mostly within the vice-county. In areas of intensive grassland, it can be challenging to reach this total without multiple visits, so he has been kept busy! There are just a few areas that need more attention, one such being the aquatic flora of Lough Neagh, in the wake of 2023's catastrophic algal blooms.

In September, John also led a BSBI meeting on urban flora in Newry, attended by six members. There was so much of interest to see that they only got to two sites in the city, one close to the railway station and the other in the Albert Basin beside the canal in the City Centre. Perhaps the three most interesting finds were a second VC record of *Polypogon viridis* (Water Bent); confirmation of the continued presence of *Potamogeton trichoides* (Hairlike Pondweed) in the canal in the city centre; and some dead specimens of an *Orobanche* which might be *O. hederae* (Ivy broomrape) – if so, this would be a first VC record. In scouting out suitable sites to visit a week beforehand, John also found a clump of *Jacobaea erucifolius* (Hoary Ragwort) growing almost beneath a flyover of the main Belfast-Dublin Road on the north side of the city. Although regarded as native further south in Ireland, it clearly was a new arrival here and a first record for Armagh.

There were some exciting finds this autumn in Co Sligo (v.c. H28). In early September, a group led by Eamon Gaughan explored Streedagh strand and dunes, refinding two uncommon species not seen there recently: *Spiranthes spiralis* (Autumn Lady's-tresses) and *Polygonum oxyspermum* (Ray's Knotgrass), the latter in good quantity. The best find of the day was *Atriplex praecox* (Early Orache) – only the second sighting for Sligo. In October, Robert Northridge, Andy King, Mairead Kavanagh and I joined Eamon for an Aquatic Plant recording session at the north shore of Lough Easky, finding *Elatine hexandra* (Six-stamened Waterwort), *Eleocharis acicularis* (Needle Spike-rush) and *Isoetes lacustris* (Quillwort), along with the less rare *Lobelia dortmanna* (Water Lobelia). Lough Easky is Sligo's only known site for the *Elatine*, which was last recorded at the southern end of the lough in 2002. Thanks are due to Robert for pointing out this unobtrusive species!

Spiranthes spiralis (Autumn Lady's-tresses). *Graham Day*

Other interesting Sligo finds by Eamon Gaughan were a fruiting spike of *Carex canescens* (White Sedge) in late October in a new hectad, first sightings in Sligo for two non-native species near Strandhill (*Iris foetidissima*,

Stinking Iris and *Pyracantha coccinea*, Firethorn) and two new sightings of the locally rare *Veronica agrestis* (Green Field-Speedwell). Finally, Patricia McHugh found another first for Sligo: *Buddleja globosa* (Orange-ball Tree) in a hedgerow near Coolaney, and not near a house or garden.

Leitrim also had some good late season finds/refinds. In August, Eamon Gaughan found *Erigeron acris* (Blue Fleabane) on a forest track near Kiltyclogher – the first ever sighting of this species in Leitrim, and one of only two records ever for the northwest of Ireland. On a very

Veronica agrestis (Green Field-Speedwell). *Eamon Gaughan*

wet September afternoon, Eamon and I visited the eastern shore of Lough Gill to see several trees of the rare *Sorbus rupicola* (Rock Whitebeam). As a bonus, we saw the fine colony of *Hypopitys monotropa* (Yellow Bird's-nest) which was still in flower nearby. We then went to refind *Sorbus hibernica* (Irish Whitebeam) near Drumkeeran, first recorded there by Robert & Hannah Northridge in 2017, and to date, the only Leitrim site for this Whitebeam. In better

Sorbus rupicola (Rock Whitebeam). *Eamon Gaughan*

September weather, Eamon and I made the steep climb up to the Glenade cliffs to see if we could refind two very rare species; *Epilobium alsinifolium* (Chickweed Willowherb) and *Equisetum pratense* (Shady Horsetail). Although we failed to find the Horsetail this time, samples of non-flowering *Epilobium* were collected and sent to the referee, Geoffrey Kitchener, who was able to confirm the continued presence of *Epilobium alsinifolium* from this, its only Irish site.

Eoin McGreal reports a number of notable finds in West Mayo (v.c. H27). While doing survey work within the Wild Nephin National Park, Brendan O'Hanrahan found a third county record for *Eriophorum gracile* (Slender Cottongrass), in a wet bog near Ballycroy, and also recorded a number of new sites for *Rhynchospora fusca* (Brown Beak-sedge). On 26 August, Simon Doran noted an unusual orchid at Drummin Woods near Foxford that was later identified as *Epipactis phyllanthes* (Green-flowered Helleborine) – a new species record for Mayo. Over in East Mayo (v.c. H26), Chris and Lynda Huxley discovered a small colony of *Pinguicula grandiflora* (Large-flowered Butterwort) beside Lough Carra, a new county record and likely now its most northerly Irish site; while in a woodland nearby, on 11 August, Sinéad Garry found a colony of *Equisetum* × *trachyodon* (Mackay's Horsetail). The only previous record for this hybrid within this hectad was by Praeger in 1906, in what could possibly have been the same site?

There were also several interesting finds from Co Clare (v.c. H9). From the east of the County, *Thalictrum minus* (Lesser Meadow-rue) was found beside Bleach River near Lough Atorick, and *Empetrum nigrum* (Crowberry) at Glendree – both appear to be first records for this part of the county. Also, at Glendree, Donncha Ó Catháin refound *Huperzia selago* (Fir Clubmoss), which hasn't been recorded there since the 1960s. Phoebe O'Brien recorded the

Huperzia selago (Fir Clubmoss). *Donncha Ó Catháin*

locally rare *Scutellaria minor* (Lesser Skullcap) at a new site near Feakle, a very nice record as there are only a handful of records from Co. Clare. Noteworthy records from other parts of the county included *Groenlandia densa* (Opposite-leaved pondweed), seen in flower near Shannon Airport on 5 September (thanks to a tip-off from Julie Larkin!), and *Dactylorhiza traunsteineroides* (Pugsley's Marsh-orchid), found near Lough Bunny by Adrian Riley. On a more depressing note, *Selaginella kraussiana* (Krauss's Clubmoss) is strongly spreading from where Fran Giaquinto and Phoebe O'Brien found it a few years ago; while *Prunus laurocerasus* (Cherry Laurel) was found in viable fruit for the first time in East Clare, which prompted a lot of feedback from around the country of first-time fruits on this species – a worrying trend.

Olly Lynch, our new Co Limerick (v.c. H8) VCR, has been investigating a possible occurrence of the hybrid fescue X*Schedolium loliaceum* (*Lolium perenne* × *Schedonorus pratensis*) near Loghill, on the coast road

Groenlandia densa (Opposite-leaved Pondweed).
Phoebe O'Brien

Dactylorhiza traunsteineroides (Pugsley's Marsh-orchid).
Adrian Riley

from Limerick to Kerry – after having found what he thought was this hybrid while working on the Stable Grass project in Co. Roscommon earlier this year. He plans to confirm the identification when he can get fresh flowering material next summer, but vegetatively it looks right, and this hybrid is known from the area north of Limerick, so he has his fingers crossed! Olly also found a new site for *Persicaria campanulata* (Lesser Knotweed) just south-west of Newcastle West, and was pleased to record *Dipsacus fullonum* (Wild Teasel) just east of Clarina Village. He is looking forward to his first proper survey season as VCR in 2024, so watch this space to see what he unearths!

Fiona Devery reports an exciting new record for Co Offaly (v.c. H18): *Epipactis atrorubens* (Dark-red Helleborine), found by Dan Singer (and verified by John Richards) near Clonbullogue in the eastern part of the county, associated with a railway running through an area of cutaway bog. This is an especially interesting find given that all the other Ireland records of this limestone-loving species are from the west of the country, most notably the Burren.

Finally, in Co Wexford, Paul Green spotted *Ruppia maritima* var. *brevirostris* (Beaked Tasselweed – a.k.a. Widgeon Grass) – the first time this variant has been found in Wexford. It was growing on either side of the River Slaney on exposed tidal mud – at Ballyhoge on the west side, and at Polldarrig on the east side. This is the only site in Wexford where *Ruppia* grows along a tidal river: all the other sites in the county are in brackish drains, pools, lakes and ditches. The *Ruppia* was growing with *Callitriche truncata* (Short-leaved Water-starwort) and *Zannichellia palustris* subsp. *pedicellata* (Horned Pondweed). Initially, Paul thought it may be a *Potamogeton*, but as the tide went out, its flowers started popping out of the exposed mud and seemed to be showing their pollen. When Paul found the fruits under the mud, he knew it was a *Ruppia* with fruits with very short stalks.

This is just a handful of 2023's botanical specialities – there are doubtless many more that could have been mentioned, and tantalisingly, some potentially exciting records have yet to verified, so perhaps more on those next summer! Big thanks are due to all the Ireland VCRs, who work tirelessly to keep Ireland's botany so firmly on the map, and to everyone who organised and attended the wonderful field meetings that were held across the country. Looking forward to the next field season to see what new treasures may be revealed!

Bridget Keehan
BSBI Ireland Officer

OBITUARIES

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DAVID ELLISTON ALLEN (1932–2023)

David Allen died in July last year, aged 91. He is well known for being one of Europe's foremost authorities on brambles (*Rubus*) and had a lifelong interest in botany, but he was also an accomplished historian and 'social anthropologist', with a passion for researching the social history and culture of British naturalists of the eighteenth and nineteenth centuries. He wrote or contributed to several books on these subjects and in all published more than 400 notes, articles and papers.

David was born in Southport, Lancashire on 17 January 1932, to Joan and Col. Gerald Allen, a solicitor, and had an older sister, Elizabeth. In July 1940 he attended Bilton Grange Preparatory School in Rugby, Warwickshire. At this early age he was already developing a keen interest in botany and won a wild flower competition in 1941, still only aged 9, for which he received a copy of *Wild Flowers of the Wayside and Woodland*. In 1945 he gained a scholarship to Rugby School where he specialised in Classics and won several school prizes and a general knowledge competition; he also became Secretary of the school's Natural History Society. He compiled a list of the flora of the Rugby area in the society's report for 1948, commenting that 'Canadian fleabane (*Erigeron canadensis*) has arrived, as predicted in last year's report.' At Rugby he met another aspiring botanist, Humphry J.M. Bowen, who was three years his senior (at this time the tradition of younger boys doing jobs for older boys was still kept up, and David delightedly told me on more than one occasion that he was Humphry Bowen's fag). By his final year at the school he was directing his house orchestra and playing solo clarinet.

David's botanical mentor during his early life (and probably throughout his schooldays) was

David Allen, c. 2000.

Alexander (Alec) D. Walker, who was a family friend and business associate of his father. Walker was an accountant, working out of offices on the Isle of Man and Liverpool, and owned a farm estate on the Isle of Man where his family spent each summer. Walker, who was a keen botanist and also a Rugby old boy, would invite David over for botanising visits, taking him around the island by car. David made numerous visits there to study the flora and eventually published his *Flora of the Isle of Man* in 1984.

After leaving Rugby School David went on to Clare College, Cambridge in 1950, initially to read Law, but after only half a term realised that it was not for him so he switched to a joint degree of Archaeology and Anthropology, graduating in 1953. In a typewritten document with the tongue-in-cheek title of 'My brilliant career', he recounts that he thought about changing again to a botanical subject, but this would have meant staying on an additional year and 'one way or another it did not work out'. He had his eye on a career at Kew but

mistakenly assumed that a Botany degree was a necessity for this and he explained that he 'resisted attempts to lure me there and fatally assumed I must wander down other avenues'.

David's first job after leaving univesity was a trainee with the Natural History department of Birmingham City Museum and Art Gallery, where he recalls unexpectedly undertaking a six month period of immersion in the history of art. He then spent eight years in market research, initially gaining a job by walking in off the street into the offices of an advertising agency. He remarked that his anthropology degree came in useful during this part of his career, particularly when conducting a major survey of the market for contemporary furniture; one of his contributions was a report titled 'The Future of the Wardrobe'. In later years he worked as a buyer of sample surveys from subcontractors, and explains that he developed 'a fascination with the often sharp regional differences in patterns of consumer behaviour – a transference into that other sphere of my long-standing fascination with the distribution patterns exhibited by plants'.

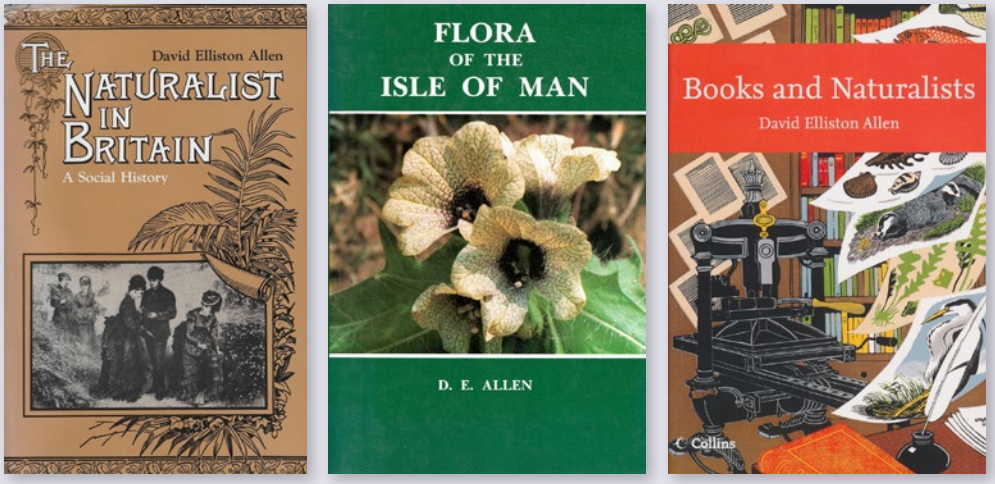
Whilst employed in market research the idea for a book developed and in 1965 he took the bold step of quitting work to write full time for the next two years. His first book, *British Tastes,* was published in 1967 to a 'blaze of almost stupefying publicity, which I had never anticipated'. This included a whole page in the Sunday Times, numerous reviews and seven television appearances. He explains that this was 'rather an embarrassment' since by this time he had returned to full time employment with the Social Science Research Council (later the Economic and Social Research Council, ESRC), where he was 'mingling with the top echelons of Academia'.

At the ESRC he inherited the administrative responsibility for a somewhat problematic national computerised data archive (though ironically he virtually never used a computer in his life) and also founded what is now the National Statistics Users Council, on which he initially served as Secretary. The data archive was taken on by the University of Essex where it flourished and now holds the UK's largest collection of social, economic and population data. Whilst at ESRC he also met his future wife Clare; they were married in 1972 and bought a house in Winchester, Hampshire, where they lived until 2020.

In 1986, after 19 years with ESRC, David jumped at the opportunity to retire early, so he would have more time to pursue his other interests; however, realising he still needed to supplement his pension he joined the Wellcome Institute for the History of Medicine and did some freelance lecturing in the History of Biology (jointly at the Institute and University College London). This soon led to him taking on the role of Co-ordinator of the History of Medicine grants programme for the Wellcome Trust (who funded the Institute). During this time he recalls that he also started to become interested in another new botany-related field, that of traditional herbal medicine. After nearly 11 years with the Wellcome Institute he retired in 1997 at the age of 65.

David joined the Botanical Society of the British Isles as a teenager in 1949 and was the second longest serving member (74 years) when he died in 2023. He was elected to Council in 1953, aged only 21, and later served as Honorary General Secretary from 1967 to 1969 and President from 1985 to 1987. He also served as Chairman of the Records Committee in the 1980s. He was made an Honorary Member in 1994 and a Vice-county Recorder Emeritus in 2013. One of his earliest botanical papers 'The history of the vasculum' was published in the *Proceedings* of the Society in 1959 and whilst serving as President he published the official account of the Society in *The Botanists: a History of the Botanical Society of the British Isles Through 150 Years* (1986). Unsurprisingly, he took on several referee and specialist contact roles related to his subjects of interest, including 'Biographical details of British botanists', 'Herbaria', 'Medicinal uses of British plants' and 'infraspecific taxa of British phanerogams'. One of his early interests was the taxonomy of the *Cardamine pratensis* complex. He was never a referee for *Rubus*, presumably because by the time he considered himself expert in the group, it was already well covered by other batologists.

Shortly after joining the BSBI David attended the week-long field meeting to the Isle of Man in June



Three of David Allen's well-known books: *The Naturalist in Britain* (1976); *Flora of the Isle of Man* (1984) and *Books and Naturalists* (2010).

1950 and took on the task of keeping the records. In the *Flora of the Isle of Man* he recounts a few details of the meeting, including meeting several of the 'elite of British botany' at the time, including two well known figures from Kew. He doesn't say whether he was the one that had suggested holding a meeting there, but this seems quite likely considering his keen interest in the flora of the island.

During the two years away from employment he had also started work on two more books focusing on social history. The first was *The Victorian Fern Craze; a History of Pteridomania* (1969), which in a later article he explains was originally intended to be a paper for the *British Fern Gazette*, but due to a 'plethora of material' was published as a short book. The other was *The Naturalist in Britain, a Social History* (1976), of which David was particularly proud and which is probably his most widely known work. It was printed in several editions and languages, including Japanese and Chinese, which David was particularly amazed by. In 'My brilliant career' he explained that 'although History as an academic subject had passed me by at university, I had discovered a taste for it at school and during my second year at Cambridge the chance loan of the script of an old lecture by one of the Botany staff had fired me with the idea of writing a book on the social development of natural history, partly as a way of reconciling my passion for field botany with the social anthropology with which I was currently attempting to grapple'.

David's interests in botany and social history were also combined during the writing of two other important books: *British & Irish Herbaria* (1984) with D.H. Kent and most recently, *Books and Naturalists* (2010) in the Collins New Naturalists series. He also co-authored *Medicinal Plants in Folk Tradition: an Ethnobotany of Britain & Ireland* (2004).

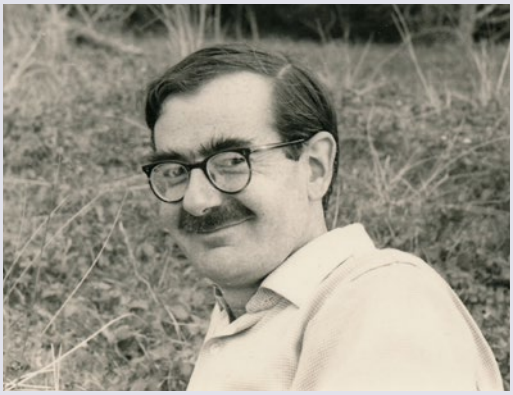
The Naturalist in Britain paved the way to him gaining election to the Council of the British Society for the History of Science (1978–81), to take on the Presidency of the Society for the History of Natural History (1977–80) and becoming a Fellow of the Linnean Society of London. He was a long-time supporter of the British Records Association (who promote the preservation and study of British archival heritage), where he served on Council and as the Chair of the General Purposes Committee. He was also active in several other societies, including the Market Research Society, the Royal Statistical Society and the Economic History Society. He was also much in demand as a speaker at seminars and conferences, including several held overseas. He was awarded a PhD (through submission of publications) in the History and Philosophy of Science by the University of Cambridge in 1988 and an honorary doctorate by the University of Essex in 1995 for his

work on the data archive. His research into British naturalists was written up as numerous papers, many of which were published in the *Journal of the Society for the Bibliography of Natural History* (later *Archives of Natural History*), and in 2004 he published a collection of his most important works as *Naturalists and Society: The Culture of Natural History in Britain, 1700–1900*.

David's interest in brambles probably began during his early investigation of the Isle of Man flora. His first of many papers on brambles published in *Watsonia* was 'Irish and Welsh species of *Rubus fruticosus* L. agg. in the Isle of Man' (1974), although the first time he mentions collecting brambles was during a week's trip to southern Ireland in 1961 where he collected 34 specimens and 'put names to one or two with reasonable confidence'. However, it was not until 1973, a year after moving to Hampshire, that he started recording and researching the group in earnest. In addition to his field notebooks he maintained a set of species index cards with notes on herbarium specimens and described all his unidentified collections in a series of notebooks, assigning them 'H-numbers', which reached 1,448 before his death. Many of these specimens were duplicates or were eventually matched up to named species but over time he became familiar with several widely distributed unnamed entities which he gave nicknames, some of which were later published as new species in *Watsonia*. In total he published names and descriptions for 12 new *Rubus* species in the British flora and three more jointly with other authors. The first, H288, was appropriately named *Rubus hantonensis*, which David published in 1985 and which made it into the Addenda and Corrigenda section of Edees & Newton's *Brambles of the British Isles* (1988). His *Watsonia* papers include remarkably detailed background accounts into the (often very confusing) taxonomy and naming of *Rubus* species and are testament to the enormous amount of time and effort he put in to track down specimens mentioned in the literature and look through boxes of 'indet' material in the hope of finding a match to something he had collected.

David did not drive a car, so in pursuit of his interest in *Rubus* in Hampshire, he travelled to almost every woodland, common and heathland area of the county by train, bus and on foot. One of his favourite localities was Southampton Common, a 150-hectare area of woodland and parkland of medieval origin lying to the north of the city. He led a BSBI meeting there in the hot, dry summer of 1976 and in his report in *Watsonia* (Vol. 12, 1978) he light-heartedly compared the effects of the heat during the preceding week which 'had resulted in all but a few of the brambles being deprived of their petals' with the 'ferocious heat' on the day, which 'induced mass wilting on the part of the 11 members who attended'. His Southampton Common list numbers around 60 named species (of c.360 in Britain and Ireland), plus several hybrids and unnamed H-numbers, so the area is undoubtedly one of the best recorded and richest *Rubus* sites in Britain. His account of the Hampshire *Rubus* flora appeared in *The Flora of Hampshire* (1996), when it numbered around 137 named species (43% of the British flora at that time) and 50 or so of the more widespread H-numbers.

For a man in his seventies (when I first started brambling with him) David was extremely fit and active. Eric Clement and I visited him in Winchester in July 2008 for a whistle-stop tour of the city, which is built over several hills. We ended the day by climbing one of the highest and steepest ones and it was several days before our legs recovered. On bramble trips David traditionally brought along a sandwich for lunch, washed down with a small bottle



David Allen, September 1976.

of lager; however, he was not averse to visiting a tea shop for a pot of Earl Grey and a slice of cake.

In later years he joined forces with various car-owning botanists to make visits to the adjacent counties of the Isle of Wight, Dorset, West Sussex and Surrey, often with the purpose of compiling annotated lists for publication in county floras. Trips farther afield included week long bramble forays in Mid Wales with Arthur Chater (from 1994 to 2003) and visits to the Channel Islands and the Isles of Scilly to further his interest in the *Rubus* floras of islands. In addition, he made regular visits to the Normandy area of France, hunting for 'cross-channel' species. Since bramble recording is only really possible during the summer flowering period of June and July, recording trips to many of these locations were often conveniently taken as 'holidays' with Clare. Brambles encountered during these trips were written up *Watsonia* articles, including five relating to northern France.

Whilst President of the BSBI in 1986 David was invited over to Ireland to attend the centenary celebrations of the Dublin Naturalists' Field Club, and although too early in the season to record brambles, this led to a further invitation to study *Rubus* for a Flora of County Dublin and the start of a long friendship with Declan Doogue. David ended up making regular, almost annual summer visits to Ireland, organised with help from Declan and other enthusiastic recorders. Eventually he covered most of the Republic and parts of Northern Ireland and examined thousands of specimens sent to him in large batches at the end of each season. His last major work on *Rubus,* to be fittingly entitled *Allen's Brambles of Ireland*, is to be published by the National Botanic Gardens, Glasnevin in collaboration with the Field Club in the near future.

David went out bramble hunting at least every other day during June and July but spent the days between and most other months of the year visiting museums, libraries, herbaria and other institutions to carry out his research. Representative specimens of many of his H-numbers and the newly named species were deposited in the Natural History Museum herbarium and the Hampshire county herbarium in Winchester. He did not keep his own *Rubus* herbarium, only a small reference collection of rarer species. Before depositing specimens he would send batches for checking and confirmation to Alan Newton, the leading authority on *Rubus* in Britain and Ireland until his death in 2016, who David highly regarded.

David Allen was undoubtedly one of the most important botanists and social historians of the 20th century. His public school and university education, followed by a career predominantly in in data analysis and statistics, clearly helped instil a meticulous, methodological approach in the collection and collation of data, which turned out to be particularly important and well-suited for the study of brambles as well as his social history research. His long-term studies of *Rubus* in Britain, Ireland and northern France have considerably advanced the understanding of that group of ecologically important, though under-appreciated, plants.

In his later years David's memory faded as a result of Alzheimer's disease and he suffered ill-health from a shoulder injury and a fall which broke his wrist, but he soldiered on and continued his weekly herbarium visits to London and bramble trips, including his last visit to Ireland in 2017. He and Clare moved to a retirement village in Romsey in 2020, where they celebrated their 50th wedding anniversary in 2022. David died on 14 July 2023 and his funeral was held at a natural burial site in East Meon, Hampshire on 17 August. His family requested that donations in his memory be made to the Alzheimer's Society.

Acknowledgements

I am very grateful to David's wife, Clare and his niece, Amanda for providing information on his life and career and to Barbara Greenwood for details of her father's early botanising visits with David on the Isle of Man. I would also like to thank Jenny Hunt, Rugby School Archives Manager and her colleagues for compiling information on his schooldays. An earlier version of this obituary was published in the newsletter of the Hampshire Flora Group.

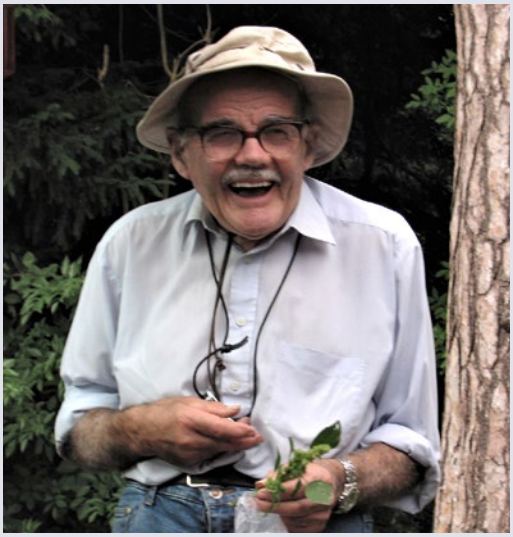
John Norton

ALWYN LEONARD ('ALEC') BULL (1927–2023)

Alwyn Leonard Bull was born on 26 August 1927 and died peacefully at home with his family at his side on 8 August 2023. We all knew him as Alec and that was the name he preferred and the one he published under. He was brought up on the family farm at Hitcham in Suffolk, the son of Leonard J. and Judith Bull (née Somers). He went to school in Bury St Edmunds but left in 1941 at the age of 14 to help out on the farm. His main task was looking after the small herd of dairy cattle and his subsequent working life would be spent in farming, looking after various herds of cattle in Norfolk and Suffolk until he retired in 1992.

In 1944 Alec became interested in natural history, mostly birds at first but by the middle of that year he was also making records of plants, butterflies and anything else that attracted his attention. He joined an ornithology club that he heard about on the radio and later the same year he was elected to the Suffolk Naturalists' Society. He remained a member throughout his life and at the time of his death he was their longest serving member. In 1948 he married Rita Roper, who shared his interest in ornithology and general natural history, a marriage that was to last until Rita died in 2017. They set up home at nearby Icklingham, in a cottage that came with the farm where he started a new job. Thereafter they would move to various farms in Suffolk and Norfolk as he became an experienced herdsman. In 1960 he took a job in Cranworth, which came with accommodation large enough for what was now a family of six.

It was whilst living at Cranworth that he responded to an appeal from the British Trust for Ornithology (BTO) for volunteers to undertake recording for the Common Birds Census. He took this on for 246 acres of the farm where he worked, which involved 8 to 10 visits between 21 March and 21 June, recording on large scale maps every bird seen and heard, and what they were doing. Despite moving away, he carried on with the survey for 29 years, recording the devastating decline in farmland birds brought about by the industrialisation of farming which occurred during that time. For much of this time he was a regional representative for the BTO.



Alec Bull, Earl Soham, Suffolk, 2005. *Janet Negal*

It was also at Cranworth that Alec became involved in systematic plant recording for C.P. Petch and E.L. Swann's *Flora of Norfolk*, published in 1968, and for *An Ecological Flora of Breckland*, edited by P.J.O. Trist (1979). The latter allowed him to obtain his first pass into the Stanford Military Training Area (STANTA) and this became a very special place to both him and later to Rita when she was able to join him. He continued his recording of the plants, birds and fungi there for over 50 years and in 2011 published *A Flora of STANTA*, covering his records of vascular plants and bryophytes from 1990 to 2010 and fungi from 1980 to 2010.

When the 1968 *Flora of Norfolk* was published, Alec noticed that almost all the bramble records were still based on the work of the Rev. E.F. Linton, who was in Norfolk for ten years between 1878 and 1888. He saw this as a challenge and having obtained a copy of the *Handbook of the Rubi of Great Britain & Ireland* by W.C.R Watson, and with the encouragement of Eric Swann and later that

of Eric S. Edees and Alan Newton, he set about learning brambles, with increasing success. He published 14 notes and papers on *Rubus* in *Watsonia* between 1980 and 2009, including the names of nine new species and a major paper mapping the species in Norfolk and Suffolk (1985). He was appointed as *Rubus* Referee for Eastern England in 1996, a role he held until 2017. He also wrote a book entitled *Looking at Brambles* (2011) which catalogued the distributions of the 104 species of *Rubus* that he recorded in Norfolk with detailed descriptions of many. By the time that his active collecting career came to an end, his bramble herbarium contained over 3,000 mounted specimens of more than 260 species, which are now housed in the herbarium of the University of Cambridge (CGE).

Alec joined the BSBI in 1970. In 1984 he took on the vacant post of Vice-county Recorder for East Norfolk (v.c. 27). It was a busy time to be a Recorder. Gathering data for the BSBI Monitoring Scheme ran from 1987 to 1988, collecting records for one in ten 10 km squares across Great Britain and recording three designated tetrads in each one. Five of these 10 km squares fell into East Norfolk. Alec then began to work systematically towards a tetrad flora for the county of Norfolk in conjunction with the recorders for West Norfolk (v.c. 28), Gillian and Ken Beckett. The aim was to cover all the tetrads in Norfolk (which they almost achieved), including over 1400 in East Norfolk. Data for the tetrad flora continued to be gathered until 1998, co-ordinated by Alec and Gillian who built competent recording teams by holding regular recording meetings in their respective vice-counties and giving encouragement and training on the job. This was the foundation of what came to be known as the Norfolk Flora Group. *A Flora of Norfolk* was published in 1999.

The data for the BSBI Monitoring Scheme had been entered at the Biological Record Centre (BRC) but all the data for the flora was entered onto computer by Alec and Gillian themselves and was then forwarded to BRC for inclusion in the BSBI's *New Atlas of the British and Irish Flora*, which was published in 2002. After *A Flora of Norfolk* was completed, Alec retired from the post of Recorder in order to focus on STANTA, brambles and his other interests but he carried on tetrad recording for a few years with the Norfolk Flora Group, organising regular visits to northern parts of Suffolk to contribute to a flora of that county. He would turn up at occasional meetings after that, especially if they were in an area under-recorded for brambles, and he led bramble workshops for the group.

Alec was a long-standing member of the Norfolk and Norwich Naturalists' Society (NNNS) and served as secretary for several years. He was elected as President of the society twice, the second time jointly with Gillian Beckett after the publication of *A Flora of Norfolk*. The role he most enjoyed, however, was that of Chairman of the Research Committee. It was under his leadership that they organised detailed surveys of Catfield Hall Fen, the results of which were published as an occasional publication of the Society in 2008. Later on this provided evidence for the species richness of the area, which was being damaged by water abstraction, licences having been issued to nearby farmers for irrigating their crops. The owners of the fen disputed these licenses which eventually lead to a Public Inquiry, which ruled that the evidence was overwhelming and the licences were revoked. Alec was delighted.

Alec was also active in the Little Ouse Headwaters Project and the Norfolk Moth Survey. He ran a moth trap at his home at East Tuddenham for many years, regularly recording 300 to 400 species in a year, and this became his main focus in his declining years. He also wrote a second book on farming life, *The Lowing Herd* (1999), following his earlier *Muck on my Boots* (1976). This charted his life as a herdsman and the changes he saw in dairy farming and agriculture in general, many detrimental to the natural world he loved.

In 1999 Alec's work as a naturalist was recognised by the award of the Sydney Long Memorial Medal, which is awarded jointly by the NNNS and Norfolk Wildlife Trust for services to conservation. Alec was probably one of the most knowledgeable all-round naturalists of his time in Norfolk and Suffolk, and his career in farming and his life-long recording of wildlife gave him a deep understanding of the

countryside. To spend a day out recording plants with him was always a great privilege, educational and most of all, great fun.

Alec is survived by three daughters as well as grandchildren and great-grandchildren. He and Rita gave their family a keen love of nature and several of them have acquired an interest in natural history.

Bob Ellis

ERIC FAIRGRIEVE GREENWOOD MSC, FLS, FRSB, FMA (1938–2022)

Eric Greenwood was born on 15 February 1938 in Preston, the younger son of Herbert and Alison Greenwood. His father came from a long line of proud Yorkshire folk and his mother was of Scottish descent. His older brother Duncan Greenwood FRS (1932–2010) became an eminent soil scientist. Eric was the first in either the Greenwood or the Fairgrieve family to be born in Lancashire. His deep research interest in family history started as a young child, talking to his grandfather Fairgrieve. His grandmother Fairgrieve, a Headmistress, failed miserably to teach him to read, as did his primary school. He was nearly ten when he finally 'broke the code' and after that he never looked back, although his spelling was idiosyncratic and his handwriting remained an issue as family members, museum staff and botanical colleagues can all testify.

In his schooldays Eric attended the Friends School in Lancaster, a long daily return journey which was never a chore because, like so many boys of that era, he was able to indulge his passion for steam trains. Having been brought up at Fulwood, Eric was a lifelong supporter of Preston North End and was a follower during the glory days of his hero Tom Finney. Throughout his life he checked the football scores each week and was happy if Preston stayed comfortably in the middle of the Championship.

Eric's interest in botany started at an early age and he learned to garden as a wartime child when his family turned their garden into a smallholding; he had plenty of tales from those challenging but satisfying times. We know from the BSBI Database that he recorded Mistletoe on Rowan at Victoria Avenue, Fulwood, Preston c.1950 at the age of 12. He later became an active member of the Preston Scientific Society.

Despite Eric's early educational struggles he studied Botany at King's College, Durham and the University of Newcastle where his research covered the colonisation of colliery spoil heaps. On his journeys to and from Preston Eric would devise complicated train routes on obscure lines. Barnard Castle, Hawes and Aysgarth were some of the stations he passed through on lines that are now long gone but have developed into wonderful wildlife sites.

After attaining his master's degree Eric returned to Preston. Once the *Atlas of the British Flora* had been published in 1962, it was clear that a keen Vice-county Recorder was needed for West Lancashire (v.c. 60). Eric had joined the BSBI in 1963 and his skills as a keen botanist had been noted by the local botanical community, so he was appointed in January 1964, following two recorders with very short terms of office. He was thus able to attend the BSBI's 'Local Officers' Conference in Cambridge in September 1964. With help from members of the Natural History Section of the Preston Scientific Society, he set out to rectify the dearth of records from the vice-county. Local recording had hitherto tended to be limited to 10-km precision and Eric decided to begin recording at the tetrad level, a major step forward in those days. The recording team appear to have immediately got to work with the aim of producing a flora.

Eric briefly pursued a teaching career until he was appointed Keeper of Botany at the City of Liverpool Museum in 1966, where he remained in various guises until retiring in 1998 as Keeper of the World Museum Liverpool. Being based at the museum, Eric played leading roles in the Liverpool Botanical Society. He was a council member for

Eric Greenwood leading a meeting of the Lancashire Naturalists' Trust on the Lancaster Canal, 1967. *Lancashire Evening Post*

56 years, including a long term as President, and he led numerous excursions, particularly in v.c. 60. He was editor of a major work *Ecology and Landscape Development: A History of the Mersey Basin* (1999).

In 1970 Barbara Walker answered the advert for a trainee Keeper in Natural History. She and Eric were married in 1973 at which time Eric moved from Preston to Wirral. With Barbara originating from the Isle of Man, they would regularly venture to the island recording the flora and researching the museum collections. In recent years they adopted many tetrads in recording for the proposed new flora of the Isle of Man. Eric and Barbara's daughters Emma and Fenella were born in the 1980s and Eric was a loving and proud father to both girls.

In the early days at Liverpool Museum Eric began to take on editorial roles for the BSBI. He was the sole editor of *Proceedings* from 1966 until 1969 then an editor of *Watsonia* (1970–1975), being an ex-officio member of Council during this period. On stepping down as an editor he was elected an honorary member of BSBI. He was also a member of the Publications Committee between 1966 and 1980, and later served as an elected member of Council (1984–1988). He had particularly fond memories of delicious dinners at Jack Gardiner's house after Publications Committee meetings; after the meal Jack would order a taxi to take Eric to Euston for the sleeper train back to Liverpool. After breakfast at the station and a spruce up, Eric was at his desk at the Museum before 8 am.

In the late 1960s Eric had established the North-west Biological Field Data Bank at Liverpool Museum, a pioneer local biological records centre. Later he was on the Museums Association's Working Party on Records Centres in Museums. He chaired the national committee of the Biology Curators' Group from 1979 to 1985, where he championed museum natural history curators and their collections and was part of the movement within the BCG that recognised biological recording as a key part of museum work. Eric also contributed to the Linnean Society's working party which produced the report *Biological Survey: Need & Network* (1988). This helped initiate progress towards the establishment of the National Biodiversity Network a decade later.

Eric was closely involved with the Lancashire Naturalists' Trust (later Lancashire Wildlife Trust) from its early days and took an active grass-roots role in recruiting members in the 1960s. He served on the Council until 2010 and on the Conservation Committee until 2017. He was always very concerned about the changes in our local flora, many of them negative, and had a keen interest in the management of LWT reserves. His extensive scientific and ecological knowledge and advice was invaluable to the work of the Conservation Committee. His work with the LWT extended to that of being on the Lancashire Environmental Records Network Technical Working Group, the Lancashire Endangered Plants Group and the Lancashire Botany Group. Eric was particularly keen on venturing out with local botanists to monitor locally endangered populations of plants such *Orchis morio*, *Parnassia palustris*, *Primula farinosa* and *Spiranthes spiralis*. Eric was also a Fellow of the Royal Society of Biology and a committee member and Chair of the North Western branch for many years. He helped organise many of their events, including community and outreach events surveying the flora. In recognition of this work, he was awarded the RSB President's Medal in 2020. In recent times we would both attend Bioblitz events based at Stanah Country Park near Fleetwood, exploring the Wyre Coastal habitats and nearby former industrial sites.

Eric Greenwood inspecting *Dipsacus laciniatus* (Cut-leaved Teasel) at Bidston Marsh, 2022. *Barbara Greenwood*

By 2002, after 38 years of intensive local recording, Eric was ready to begin the task of compiling the *Flora of North Lancashire*. He chose North Lancashire as a cohesive area which included that part of the Forest of Bowland in v.c. 64, but administratively in Lancashire, thus covering modern-day Lancashire north of the River Ribble. We celebrated the publication of the *Flora* at the Brockholes LWT Reserve in 2012 and Eric was awarded the Presidents' Award from the BSBI and the Wildflower Society for the *Flora*.

Around this time Eric and I would often venture out together recording in North Lancashire and in 2013 we agreed that I should take over as the Vice-county Recorder. Two years later Eric published another book, *Hunting Plants: The story of those who discovered the flowering plants and ferns of North Lancashire* (2015). He celebrated his 80th birthday with his family by venturing to the summit of Clougha (413 m), this being a tribute to the late Albert Wilson who (with J.A. Wheldon) had produced the first flora of West Lancashire in 1907 and who had climbed Ingleborough on his 80th birthday.

In early 2022 Eric was diagnosed with terminal bowel cancer, but he was able to complete one profitable field season which included refinding *Puccinellia rupestris* on the top of the sea wall at Rock Ferry after an absence from the Mersey Estuary of over 100 years. He also completed four final papers for the BSBI before his death on 18 October 2022.

The covering letter for one paper, on changes to the coastal flora of Wirral, was dictated to the editor of *British & Irish Botany* from a hospital trolley.

Eric is sadly missed by family and friends, especially when specimens are being researched and interesting plants are found, but as the author of the *Flora of North Lancashire* he, like James Alfred Wheldon and Albert Wilson, will not be forgotten.

Dave Earl
with contributions from Barbara Greenwood and Steve Garland

ROSALINE (ROSE) JESSIE MURPHY (1924–2023)

Rose Murphy was born at Hendon Hospital, London on 7 October 1924 (a somewhat frail baby) to a Scottish mother, Elizabeth (née Clarke), and an Irish father, George Murphy. Her sister Muriel was born in 1925, and her brother Desmond in 1927. Her father was a commercial traveller, and worked at many different things over the years. Early on they lived in London, including at Roehampton, but her father's job took the family to Derby when Rose was aged three, and six years later they moved to Weston-super-Mare. As 'town' children Rosaline and Muriel loved spending time in meadows and Desmond caught minnows in a pond. Rose's early interest in, and love of, botany started at this early age: the fields full of cowslips and cuckoo-flowers and the ditches or 'rhynes' full of flowering water-crowfoots were her first memories of flowers. Rose's father noted her interest in plants when she was 13 or 14 and bought her a grey scrapbook.

Rose failed her 11+ exam but her father paid for her to go to grammar school. Later in her teens she took trips to look for rare plants in the local area, such as *Helianthemum apenninum* on Brean Down. Rose achieved distinctions in her Botany and Zoology 'A' levels but failed Chemistry. She was accepted at the University of Bristol providing she took extra Chemistry classes. Her father lent her the money for university and was repaid later. Aged 20 Rose developed pleurisy, but not TB, and was quite ill, being nursed at home for three months rather than in a sanatorium. Subsequently Rose changed her university course to Bacteriology and Zoology for the one year and Botany for three years, leaving with only a modest degree.

Rose Murphy, 1991. *Pam Tompsett*

Still recovering from pleurisy, Rose's father suggested looking for a job in the milder climate of Cornwall. She joined the Cow and Gate dairy at Lostwithiel, where she worked in the main laboratory for two years. When she was 25, she became friendly with Prof. F.A. Turk and his wife Stella, whom she met quite often travelling on the local trains. Rose accepted the offer of a room at their home, Shangri-la at Reskadinnick near Camborne, where she lived for the rest of her life. She took a job at the Milk Marketing Board at Treswithian, Camborne, but a year later moved (aged 26) to a better paid job at

the Royal Cornwall Infirmary (City Hospital) and a year or so after that she was transferred to Tehidy Hospital, an isolation hospital for patients with tuberculosis, where a good laboratory technician was needed. Aged 30 and weighing 8 stones, Rose got up early, cycled to Tehidy from Reskadinnick and enjoyed a large free breakfast which was on offer! She later transferred to the Camborne-Redruth Hospital laboratory.

Meanwhile, W. J. (John) Burley, originally a gas engineer living near Reskadinnick and a close friend of the Turks, had changed careers after WWII by gaining a scholarship to Oxford University, subsequently taking up teaching at Newquay Grammar School for Boys in 1955. He later wrote the Wycliffe series of crime novels. In 1960 he suggested that Rose might take up a vacant biology teaching post at Newquay Grammar School for Girls, although it meant arising at 5 am to get to Camborne for the 6.15 train to Chacewater and then changing trains for Newquay. Lodging in Newquay during the week improved the situation.

After about three years the Camborne Grammar School for Girls had a vacancy for a Head of Science to teach Biology, Physics and Chemistry. The Nuffield syllabus posed severe problems for both staff and pupils; Rose was sent on a training course to Sheffield College and on her return to Camborne all her 'A' Level pupils passed their exams with flying colours. In 1975/6 the school changed to a separate Sixth Form and Lower School Co-ed Comprehensive at Treswithian. Rose moved with the latter, becoming Head of Biology which she much preferred. She retired after eight years teaching there just before her 60th birthday.

Botany was an interest that continued alongside the day job, but after retirement from teaching in 1984 Rose was free to pursue the interest fully. Her garden at her home at Shangri-la was her sanctuary when working – especially after the trials of teaching during the day – but once retired Rose was free to explore further afield.

Early on, Rose was particularly interested in bryophytes, joining the British Bryological Society in 1957. In 1961 she found a liverwort on Tresco which did not fit the description of any known species. It was named *Telaranea murphyae* in her honour by Jean Paton. In recent years DNA studies have shown that it is a male clone of the New Zealand *Telaranea* (now *Tricholepidozia*) *tetradactyla*, so Rose's claim to fame in the bryophyte world was short-lived. However, her name lives on in the name of the rare hybrid dock *Rumex* × *rosemurphyae* (*R. conglomeratus* × *rupestris*), named by David Holyoak from dune slacks on Penhale Sands. Alec Gray, the daffodil grower who created the famous dwarf *Narcissus* 'Tête-à-tête', named a daffodil cultivar 'Rosaline Murphy' (a hybrid between *N. asturiensis* and *N. rupicola* subsp. *watieri*) in honour of Rose in 1958.

Rose was in many groups and societies and though quite a private person, very much enjoyed the company of like-minded people, talking about plants. She regularly attended field meetings organised by the Wild Flower Society, which she joined in 1982. In additon to many trips with local WFS members, Rose travelled to all parts of Great Britain to see as many species as she could, meticulously noting them in her Wild Flower diary. Her visits ensured that Rose joined 'Parnassus', the Society's highest branch of members who have seen more than 2000 species. Rose also attended many field meetings around the country organised by the BSBI, which she joined in 1951. Many who met Rose on field trips remember her fondly. She often attracted a keen audience when demonstrating the features of a plant, her teaching skills honed from her days at the Grammar School.

Rose became BSBI Vice-county Recorder for East Cornwall in 1985. As she could not drive, she had thought that the West Cornwall vice-county would be the more suitable area, but Len Margetts, the retiring Recorder, persuaded her that East Cornwall, which was less well recorded, would be a worthier challenge. With help from others Rose managed to get of all parts of the vice-county, often taking the train to Liskeard or Bodmin Road and meeting Mary Atkinson for a full day's recording. She accompanied Ruth Lees, Mardi Tempest and Hazel Meredith to areas further west and Ian Bennallick often drove her to sites. Rose also enjoyed visits to the Isles of Scilly

with Rosemary Parslow very much and returned several times. For places outside Cornwall Paul Gainey, Nicholas de Sausmarez and Colin French provided transport.

Ian Bennallick joined Rose as joint East Cornwall Recorder in 2002 until Rose stepped down in 2004 when she was made an honorary member of the BSBI. Rose's dedication to the role and attention to detail made her one of the best BSBI recorders at the time. Taking notes and organising records was Rose's forte and the many files of her hand-written lists, maps and other information have passed to Ian as Vice-county Recorder. These remain a valuable resource when checking sites of plants and are irreplaceable. Rose could not pass a stationery shop without getting something. Everything was in colour-coordinated folders or files and neatly put away.

Rose was also part of the Cornish Biological Records Unit from the mid-1980s until 1997, and during that time liaised with organisations such as the National Trust, Cornwall Wildlife Trust and the English Nature botany unit, as it was then. With Pam Tompsett she undertook surveys of waste sites for the Environment Agency, arable fields for the National Trust and the historic castle sites for English Heritage. Tintagel Castle was a particular favourite place.

In 1987 Rose instigated the publication 'Botanical Cornwall', producing 13 issues until 2005. This included a range of articles from Rose, and other local and national experts, as well as reporting on new finds for Cornwall. In it she increased the drive towards the recording of flowering plants and ferns at the tetrad scale. The result of all the fieldwork was published in 1999 as the *Flora of Cornwall* which Rose co-authored with Colin French and Mary Atkinson. In 2002 Rose founded, with others, the Botanical Cornwall Group, which now holds regular field meetings during each year.

Rose's eye for detail and efficiency also saw her take on editing journals for local natural history and recording groups, including The Lizard Field Club reports, Camborne and Redruth Natural History Society and the Cornwall and Isles of Scilly Federation of Biological Recorders. Rose was also involved in the Kernow Microscopical Society and later joined the Linnaean Society.

With a wealth of experience and an investigative mind, Rose tackled the distribution (in Cornwall) and identification of more 'difficult' genera including *Carex*, *Festuca, Fumaria*, *Rubus*, *Taraxacum* and *Ulmus*. Rose tutored several workshops on these, and for grasses, ferns, and willowherbs and it is not surprising that they were always successful. Rose spent many hours preparing the material and handouts and as with her earlier teaching career she went above and beyond. Her investigative mind led Rose to write two BSBI handbooks, *Fumitories* in 2009 and *Evening-primroses (*Oenothera*)* in 2016. If it was not for her failing sight Rose would have started work, aged 94, on another BSBI handbook, on mints (*Mentha*).

One of Rose's main interests was ferns, and she was fascinated by the *Dryopteris affinis* aggregate and the polypodies (*Polypodium*). A member of the British Pteridological Society since 1989, Rose quickly became a familiar person at BPS field trips and meetings. Many of her fern specimens are lodged at the BM herbarium. Her interest led to the publication in 2012 of *Ferns, Clubmosses, Quillworts and Horsetails of Cornwall and the Isles of Scilly* which was instigated by Rose, and co-authored with Chris Page, Rosemary Parslow and Ian Bennallick.

Rose's voluntary services to botany was recognised in 2009 when she was awarded the Marsh Botany award (and £1000) from the Marsh Christian Trust. Ian Bennallick and Dorothy Brookman accompanied Rose to collect the award at Kew and when she was presented with the award Rose's smile said it all.

Despite failing eyesight and increasing immobility Rose was still very keen on chatting about plants and current affairs to her regular visitors to her home in her last year. After a couple of falls, Rose died peacefully at Royal Cornwall Hospital Treliske, on 8 February 2023, aged 98. Though she will be missed by all, she will be with us every time we read one of her books, see her writing – so clear and legible – on her notes and remember the trips out to look for plants and the cream tea at the end!

Ian Bennallick and Pam Tompsett

CHRISTOPHER NIGEL PAGE (1942–2022)

Christopher Page, who died on 9 December 2022, will be fondly remembered by many members of the BSBI for his lifetime work on ferns, and especially Equisetums, but perhaps less known for his significant contribution to the study of the world's conifers. I first met Chris in 1974 when I was a horticultural student at the Royal Botanic Garden Edinburgh and we were reacquainted 14 years later in 1991, when I was back at RBG Edinburgh as a full-time member of staff, working with Chris on his new initiative, the Conifer Conservation Programme.

Chris was born in Gloucester on 11 November 1942 into a family of aviation engineers. They had founded Handley Page, which started trading in 1909 as one of Britain's first aircraft manufacturing companies. In a further link to the aviation industry, Chris's father assisted in designing the first jet engine during the Second World War. This background in aviation certainly rubbed off on Chris, who learnt how to fly small aircraft and maintained a fascination for aviation throughout his life, even keeping a detailed log of his 133 long haul flights. I vividly remember sitting on a flight with Chris en-route to Santiago and witnessing his routine of assiduously noting the composition of the crew, and every last detail of the aircraft, in a small notebook. Such was his appreciation of the contribution to his research of the 67 airline companies he had flown with that he has acknowledged them all in his forthcoming book *Evolution of the Arborescent Gymnosperms*.

Chris always said that his interest in aircraft influenced his interest and indeed his observations of the natural world. The many recurrent engineered shapes he observed in aircraft he also saw in the natural world, especially in the fossils he collected as a boy, whether ammonites, horsetails or ferns. These impressions captured his youthful imagination and hence shaped his interest in fossils. On seeing his considerable fossil collection, the scientist Dr Jacob Bronowski, who was a friend of his father, encouraged Chris to pursue a career in science and thus he decided to study for a degree in geology at Durham

Chris Page, 2009.

University. He graduated in 1964 and completed a PhD in cytogenetics at Newcastle University in 1967. His great mentor was Dr Trevor Walker, first as his undergraduate tutor and then his PhD supervisor. Trevor's passion for propagating and cultivating ferns greatly influenced Chris in his experimental approach to the study of fern and conifer biology.

Chris took up a post-doctoral fellowship from 1968 to 1970 at the University of Queensland, Brisbane, working on Queensland pteridophytes, before returning to the UK to work at Oxford University for a year. In 1971 he was appointed head of fern and conifer research at the Royal Botanic Garden Edinburgh and this gave him the ideal opportunity to develop his great interest in ancient plant groups. To broaden his observation of conifers and ferns in the wild Chris visited Fiji, Japan, Hong Kong, New Zealand, Taiwan, western North America, western Samoa and the great jewel in the crown for endemic conifers, New Caledonia. During these trips Chris especially concentrated on making collections of seeds, spores and vegetative material and in doing so he established at RBG Edinburgh one of the finest collections of living ferns and conifers of the day. However, this did

not sway him from studying ferns closer to home, resulting in regular contributors to the *Pteridologist* and his first major work, *The Ferns of Great Britain and Ireland* (1982; second edition 1997), published by Cambridge University Press. His work on *Equisetum* led to the description of one species and seven hybrids, including *E.* × *rothmaleri* (1973), *E.* × *dycei* (1981), *E.* × *bowmanii* (1989), *E.* × *willmotii* (1995) and *E.* × *mchaffieae* (2007) in Britain and Ireland. In 1988 he joined the illustrious group of authors of books in the Collins New Naturalist series. *Ferns* was number 74 in the series and the first purely botanical book to be published in the series for 27 years. This much sought after work is today one of the most valuable New Naturalists, with a first edition, in good condition, fetching prices in excess of £300!

One of Chris' greatest initiatives was the Conifer Conservation Programme (later the International Conifer Conservation Programme). Chris' approach was quite different to many other scientists at Edinburgh in that he had a deep interest in the cultivation of trees, and this formed an integral part of his research. An important component of the Programme was to establish a network of safe sites throughout Britain and Ireland for the cultivation of threatened conifer species, using material collected from native habitats. This network, which today comprises nearly 200 sites, has been my focus over the past 30 years and of course I have Chris to thank for this unique opportunity. His trademark characteristic of immense enthusiasm, along with the ability to explain complicated scientific processes in a lucid manner, meant that he was a very popular lecturer and supervisor of students.

During my time at Edinburgh, I travelled with Chris to many of these ex-situ conservation sites for threatened conifers, but in 1993 we also travelled together to Chile to explore the southern rainforests for conifers. Of course, it is often on these excursions that one really gets to know one's colleagues, and this visit to Chile was no exception. Chris' idiosyncratic ways included an unfortunate predisposition to accidents or to be in the wrong place at the wrong time! One of many such incidents has stayed in my mind. It happened on our second day in Santiago, when we were walking past a fruit stall on a bustling high street. Chris' preferred dress code of a khaki safari jacket and matching trousers, together with his tall European stature, made him stand out in a crowd and he was therefore the obvious target for a street robbery. Chris put up a good fight with a group of three typically small-statured Chilean men – and the marauding mass of flailing arms and legs ended up collapsing into what was previously a neatly laid-out, colourful display of fruit. Little did the assailants know that I had earlier made an executive decision that I had best carry all our money, and they ran off empty handed. Typically, Chris was very gracious and apologetic to the stall vendor, as if it was all his fault that the incident had happened at all – he even attempted to rearrange the badly damaged fruit on the stall.

However, more positive things also happened in Chile. It was a lifetime ambition for Chris to see the monkey puzzle tree in its natural habitat on the slopes of snow-clad volcanoes – as one can imagine, he was in awe of this remarkable tree. But he had another conifer on his all-time list of trees to see, *Fitzroya cupressoides*. This conifer was familiar to Chris as a rarely cultivated tree in the UK, growing up to about 18 metres tall. But in Chile he was seeing trees 60 metres tall, and some were 2000 years old or more. For Chris, an added level of excitement was seeing these stately trees in coastal rainforests that overlooked the very waters that Captain FitzRoy navigated 180 years before, on board HMS *Beagle* with one of Chris' heroes, Charles Darwin.

In 1996 Chris retired from RBG Edinburgh and spent the rest of his life living in Cornwall with his wife Clare and their daughter Tamsin. By no means did this result in Chris retiring from his devotion to ferns and conifers, indeed it gave him a greater opportunity to pursue his interests. He had a long association with the University of Exeter and in 2004 he joined their Camborne School of Mines, Penryn Campus near Falmouth and remained senior honorary research fellow at the university until June 2022. He taught environmental students about ferns, would take them on fieldwork and continued to teach part-time on the environmental science

and technology degree until 2008. He was a co-author of *Ferns, Clubmosses, Quillworts and Horsetails of Cornwall and the Isles of Scilly* (2012) with Rose Murphy, Rosemary Parslow and Ian Bennallick. Chris was also a longstanding member of the Royal Geological Society of Cornwall and edited their *Transactions* from 1996 to 2015. He was awarded the Bolitho gold medal of the Society in 2016 to mark his contribution as editor, and served as President from 2016 to 2019. Throughout his retirement he gradually brought together his lifetime's research on conifers into a two-volume work entitled *Evolution of the Arborescent Gymnosperms* and just before his death in 2022 he submitted the final manuscript to Cambridge University Press. It is due for publication in 2024.

Chris will be remembered for his unique, multifaceted approach to understanding the processes that drive evolution – nothing would be off the table! He will also be remembered for his unprecedented enthusiasm and a generous approach to sharing his knowledge – all greatly inspiring to a younger generation of students. My lasting memory will be of this, but especially of his very kind and gentle nature.

Martin Gardner

DAVID WELCH (1939–2023)

David Welch was born in Preston, Lancashire on 31 December 1939, the elder of the two children of Gilbert, an accountant in local government, and Maggie, who was from a family of market gardeners in nearby Walton-le-dale. David's interest in botany began whilst a pupil at Hutton Grammar School, his first records in the BSBI's Distribution Database dating from 1955 when he was just 15 years old. David's formal education continued at Downing College, Cambridge, where he read Natural Sciences (1958–61) whilst engaging in various aspects of college life including singing in the College Choir and captaining the College Chess Team. The final year of his undergraduate studies focused on botany, sparking his interest and expertise in the genus *Myosotis*, for which he would become BSBI referee.

To fill the gap between school and university David took the initiative of writing to the then Nature Conservancy research station at Merlewood, Grange-over-Sands (which had opened in 1954), offering to assist with their fieldwork for the summer. As a result he was given an 18-week assignment at Moor House in upper Teesdale. There he started the work on moorland ecology which continued with vacation work and then with his appointment as resident botanist once he had completed his first degree, this post being made available following the tragic death of Ken Park who drowned in the River Tees.

David Welch at a *Saxifraga hirculus* (Marsh Saxifrage) site near the Buck of Cabrach, North Aberdeenshire, 5 August 2016. *Muriel Welch*

David's first duties at Moor House included some humble but necessary tasks associated with running a high-altitude field station, such as feeding the transport horse and ensuring continuity of the meteorological readings. The latter was a particular challenge during the long winter of 1962–63, when provisions had to be brought in on foot through deep snow. Scientifically, David advanced understanding of the ecology of sheep-grazed upland grasslands, with a particular focus on *Juncus squarrosus* (Heath Rush), setting the tone for his later career with its recurring themes of plant ecology and plant-herbivore interactions. While at Moor House David obtained an MSc for his thesis *Studies in the autecology of* Juncus squarrosus *L.*, supervised by Professor David Valentine of Durham University. It was through his association with Durham University that David met his future wife, Muriel, then a young geography student at St Hild's College. David and Muriel were married on 7 July 1967 and together raised two sons, Stephen and Adrian.

After five years at Moor House, David was recruited to a new research station, the Nature Conservancy's Unit of Grouse and Moorland Ecology at Banchory. He started work there in January 1967 in the Range Ecology Group, his first project being to describe and map vegetation in Glen Feshie, and to estimate herbivore use there. David spent the remainder of his career at the successors of this research station. During his career, disruptions included a move from Blackhall to Hill of Brathens; the organisational transitions from the Nature Conservancy to the Natural Environment Research Council's Institute of Terrestrial Ecology (ITE, 1973) and subsequently to the Centre for Ecology and Hydrology (CEH, 2000); and the fire of 1991 started by so-called animal rights activists which almost destroyed the card files containing all his plant records.

During his 33 years of employment at Banchory, David undertook research on a wide range of important issues, much of it collaborative, often collecting and analysing data from long-term studies he initiated. His nominal retirement in 2000 largely consisted of exchanging his salary for an occupational pension, as in his new role as Emeritus Fellow of CEH he continued both to collect data and to write papers summarising his findings. His montane research included the effects of a ski fence corridor on Glas Maol, where changes in sheep movements and snow cover led to encroachment of grasses into the fragile sedge/moss heath of the plateau. David's longest running study, spanning 45 years, measured grazing impacts on the floristics of multiple upland moorland sites in North East Scotland. The impact of herbivores also featured in a project at Mar Lodge estate, in which he initially studied the impacts of Red Deer on heather moorland. However, following a change in ownership from private estate to National Trust for Scotland, he took the opportunity of switching emphasis to monitoring the early stages of pinewood regeneration. As a final example of his ITE/CEH work, he was part of a joint initiative, including zoologists and foresters, researching the ecology, impacts and management of deer in commercial forests. David's element outlasted all others, his measurements of browsing and bark stripping impacts by Red Deer on Sitka Spruce at Glenbranter in Argyll continuing for 35 years.

Interwoven with his work as a professional botanist were David's many voluntary activities for BSBI and the application of his knowledge to the cause of nature conservation. He was Vice-county Recorder for North Aberdeenshire from 1977, involving his young family in the search for species and specimens and allocating a part of his garden to a living collection of unusual willows. Of all the species present in the county, the population of *Saxifraga hirculus* (Marsh Saxifrage) near The Buck of Cabrach is of greatest national significance, and David monitored this and attempted to establish additional populations nearby. The expanded understanding of the flora of the county achieved as a result of David's efforts and expertise was encapsulated in his *Flora of North Aberdeenshire* (1993), which included many of his remarkable discoveries such as an isolated site for *Betula nana* (Dwarf Birch).

The *Flora* contains a thorough account of the critical genera *Taraxacum, Hieracium* and *Rubus.* Although he rather let the former lapse, he maintained an active interest in the latter two groups and came to specialise in brambles, taking over the mantle of

lead Scottish referee from George Ballantyne. Like many batologists, David kept a list of bushes he knew did not fit into the published taxonomy, and after linking several such plants together he described one as new to science. Given its distribution, his name of choice would have been '*Rubus angus-mearns*', but the hyphenation was frowned upon and so *Rubus longiflorus* it became.

When the recordership for Kincardineshire became vacant, David took this responsibility on in 1994 to ensure full coverage of the vice-counties of North East Scotland. Some time after I joined him as co-Recorder in 2018, we began working together to produce a county Rare Plant Register for which David applied his scholarly mindset to seek out widely scattered herbarium specimens which had yet to be incorporated within the BSBI database. He also answered the call when BSBI was asked to assist Scottish Natural Heritage undertake Site Condition Monitoring of Sites of Special Scientific Interest, producing reports that Jim McIntosh, then BSBI Scottish Officer, described as being detailed, incisive and thoughtful.

David was a great advocate for botany in North East Scotland. He succeeded Charles Gimingham as botanical member of the panel of experts advising Aberdeenshire Council on the selection of Local Nature Conservation Sites and on the defence of these sites when threatened by planning applications. And for nearly 30 years he led annual botanical excursions for the Scottish Wildlife Trust, many of these being joint with BSBI, building a sense of community amongst regular attenders. As a result of his professional and voluntary activities, David received the North East Scotland Biodiversity Partnership's 2020 Award for Lifetime Achievement in Ecology, Conservation and Biodiversity, an accolade of which he was justifiably proud.

In addition to his professional and voluntary work on plants and ecology, David was very active in research on a wide range of other topics, much of it centred around the history of church music in North East Scotland. He produced a steady stream of articles on topics such as gallery singing, psalmodies and historic organs published by the West Gallery Music Association and the British Institute of Organ Studies. He was himself very involved in church music over many decades, singing tenor and assisting Muriel in her roles as organist and choir master, thereby repaying her assistance in his botanical fieldwork.

In his latter years David's mobility became progressively more restricted due to myositis, making him increasingly reliant on assistance to reach the field sites he remained determined to visit. He died in hospital on 16 May 2023 after a fall and subsequent complications.

I am very grateful to Stephen Welch and Dave Scott for their help in writing this obituary.

David Elston

OBITUARY NOTES

Since we compiled the last Obituary Notes, news has reached us of the death of the following members or former members. We send our sympathy to their families and friends.

Mr B.J. Bonnard of Alderney, a member for 37 years and Recorder for Alderney since 1996. **Mr M.E. Braithwaite** of Hawick, Roxburghshire, a member for 50 years, latterly an Honorary Member and sometime Vice-county Recorder for Berwickshire, Treasurer and President. **Mr A.L. Bull** of Dereham, Norfolk a member for 53 years (see Obituary above). **Mrs E. Clark** of Penrith, Cumbria, a member for 16 years. **Mr J.N. Davies** of Treharris, Glamorgan, a member for 21 years. **Dr P.J. Heath** of Bamford, Derbyshire, a member for 33 years. **Mr D.J. Nicolle** of Bexley, Kent, a member for 47 years. **Ms S.E. Print** of Frome, Somerset, a member for just 4 months.

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assisted by the Membership Secretary, Gwynn Ellis
Date of compilation 7 December 2023.

REVIEWS

Compiled by Clive Stace, Book Reviews Editor
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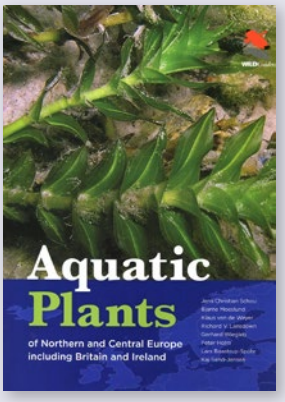


Aquatic Plants of Northern and Central Europe including Britain and Ireland
J.C. Schou, B. Moeslund, K. van de Weyer, R.V. Lansdown, G. Wiegleb, P. Holm, L. Baastrup-Spohr & K. Sand-Jessen
Princeton University Press, Princeton, 2023. Pp. 746, with numerous photographs, maps and line drawings; hbk £95.
ISBN 9780691251011

This is an uncommon publishing phenomenon, a book that fills a genuine gap in the market. A substantial A4 volume, printed on glossy paper and weighing 3kg, it provides an attractive and copiously illustrated treatment of submerged, floating and emergent aquatics and a selection of those found in marginal or marshy areas, largely those living in sites 'where surface water persists for a period of months' (p.61). The authors say that they include 318 species (p.20) or 410 species and hybrids (dustjacket); I counted 385 numbered taxa (332 species, 16 additional subspecies, 37 hybrids), with many more mentioned in passing. The scope is broader than that of Preston & Croft's *Aquatic plants* (1997), including an additional 50 British native or neonative plants of marshy areas and excluding only three (*Carex nigra*, *C. recta* and *Rumex aquaticus*). Two numbered *Erythranthe* taxa make no claim to be aquatics and three *Sparganium* species are only potential future introductions. The area covered might best be described as north-western and north-central Europe, extending from Finland and the Baltic states westwards through Scandinavia, Poland, Czechia, Germany and the Low Countries to Britain, Ireland and even to Greenland (presumably as a Danish territory) but France is completely excluded as are the undeniably central European states of Slovakia, Austria and Switzerland.

After brief introductory material, the book starts with a general key which leads to the species or to keys for the larger genera. An annoying feature of the design of the systematic text is that the plant orders are highlighted but the families appear in very small type, so one has to hunt for Cyperaceae, Juncaceae, Poaceae and Typhaceae under Poales. Many of the numbered taxa have double-paged spreads with three or more high quality photographs plus line drawings and small distribution maps. The widely spaced text is dominated by the morphological description, with additional notes on flowering time, biology, habitats, distribution, and 'characteristics and similar species'. However, some numbered taxa have much briefer accounts. Throughout the work, naturalised species are as thoroughly treated as natives.

The accounts of the large aquatic genera will clearly be very useful to British and Irish botanists. All species and the commoner hybrids of *Potamogeton* and *Stuckenia* are given full treatment (though I question the assumption that stipule/sheath structure can safely be distinguished in the field). There is a long introduction to batrachian *Ranunculus* and full accounts of the species, defined on familiar lines, but not the hybrids. The account of Lemnaceae (15 taxa) is likely to be outstandingly useful, as are those of *Baldellia* (with superb photos of *B. repens*), *Sparganium erectum* agg. (with *S. erectum*, *S. microcarpum* and *S. neglectum* treated as species and their hybrids illustrated) and *Utricularia*. Both armchair and travelling botanists will be attracted to accounts of species we lack in such genera as *Elatine*, *Sagittaria* and *Typha*.

It is readers who are interested in more than just identification who are most likely to be disappointed. Chromosome numbers are rarely cited, even for taxa where these are key to understanding their taxonomy (e.g. *Nasturtium, Eleocharis palustris*) or reproductive biology (*Butomus*), though *Ranunculus* is a welcome exception. The accounts of species' biology are rather superficial and there is (for example) no mention of the

remarkable dispersal adaptations in genera such as *Nymphoides* and *Typha*. References are not cited in the species accounts, but simply listed under families at the back of the book. The selection is woeful, with 26 families lacking any references and even major families (Poaceae) and genera (*Carex*) covered by just one or two. Many key monographs and ecological accounts are missing, including numerous works by C.D.K. Cook, which I regard as essential reading. Some genera, such as *Bolboschoenus* with eight references, are again exceptions to this generalisation, and Schou's own publications are well cited.

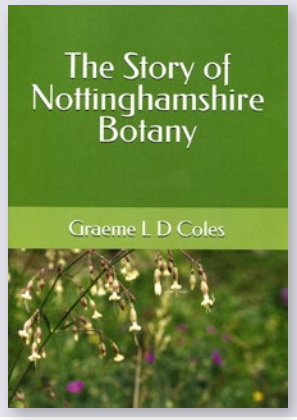
Though the book is well-produced, a sharp-eyed editor might have spotted the misplacement of the Pontederiaceae page amongst the Araceae, discrepancies between keys and descriptions (*Nuphar*), and text and maps (*Cabomba*), and unexplained map symbols (*Schoenoplectus*). The 'historic' *Illecebrum* records mapped in Britain should, I suspect, be labelled 'non-native'.

Despite some limitations, this is a most welcome book, widely available for less than the recommended price and certainly worth a place on the shelves of all but the most hygrophobic botanist.

Chris D. Preston

The Story of Nottinghamshire Botany
Graeme L.D. Coles
Self-published, 2023. Obtainable from *amazon.co.uk* or from the author at 18 Hartland Road, Worksop, Notts S80 1XN. Pp. v + 273, with 17 B&W figures; pbk £10. ISBN 9798375606842

Many British county Floras include a chapter on the historical recorders and records



of the vice-county. The research required to obtain this information is, from personal experience, not only very time-consuming but also very interesting and provides a necessary basis for understanding current species' distributions. This historical information for v.c. 56 Nottinghamshire, from 1578 to the latest Flora of 1963, is provided here in much more detail. It is intended as a companion to an impending new Flora of the county.

Following the informative introduction, the sources containing records from Nottinghamshire are dealt with in chronological order. These are mostly published works but also include herbaria and manuscript sources. In general, the latest taxon names are used along with the original nomenclature. A bibliography and index complete the first portion of the book. The two appendices which follow contain data from two early full accounts of the county's flora.

Data on the Nottinghamshire species have been extracted from those documents that cover a wider geographical area. For the documents pertaining to Nottinghamshire itself the more interesting species are mentioned, and first records are noted, this being one of the aims of the book. Throughout, there is interesting information on the authors and recorders, with good discussion on many of the individual species, particularly where their presence in the county is considered either doubtful or in error. Appendix 1 is a list of accepted species from an account by Charles Deering from 1738, whilst Appendix 2, taking up nearly 50% of the book and with its own index, is a complete transcription of an account by Thomas Jowett from 1826, which was originally published in a local newspaper in 28 weekly parts. The text gives descriptions of the localities and habitats with the species present being numbered in chronological order of flowering. Throughout the document there are many poems and quotations with floral themes taken from a wide range of literature.

Being based upon extracts from other works inevitably creates problems in designing the overall layout. The author has overcome these very well and presents the data in a concise and readable manner. However, to locate all data on a single taxon it is necessary to consult the main index as well as the Appendix 1 list and the Appendix 2 index. It would have been preferable to incorporate the latter in the main index and also indicate there the presence of the taxa in Appendix 1. The main index then could be placed at the end of the book. Unusually, the pagination is such that the even numbers occur on the right-hand page.

This book gives those interested in Nottinghamshire's flora access to the information from diverse historical sources, although they must be conversant with the latest nomenclature as no modern English names are used. It would be good if all vice-

counties were to have such an authoritative book as this on their botanical history.

Chris Boon

Flore du Massif Armoricain et ses Marges
Vincent Guillemot
Éditions Biotope, Mèze, 2023.
Pp. 896, with over 2,500 coloured photos; pbk €45.
ISBN 9782366623017

A portable handbook for France's large vascular plant flora is a challenge, and those produced in the last century have combined ingenuity with terseness, with varying degrees of success. Consequently, regional Floras have often included identification guides. An example is *Flore et Végétation du Massif Armoricain* by des Abbayes et al. (1971). A revised version with information collected up to des Abbayes' death in 1974 appeared in 2012: an unglamorous technical Flora with keys and descriptions to species level, habitat notes, and locations listed by commune. Despite dated taxonomy it remains a valuable document. The work under review follows a recent trend of more visually appealing handbooks for a less expert public.

The geologically defined Massif Armoricain includes Brittany and parts of neighbouring départements; this book embraces those départements in their entirety, increasing its size while blurring phytogeographical boundaries. Sections on physical environment and vegetation communities are followed by a short glossary. Top-level keys use growth habit and generalities of form, with thumbnail drawings. This is not without its problems (try *Cerastium diffusum*). Below this, each subsection provides a brief heading in place of a formal key entry and a few small photographs for a genus without supporting text.

Species accounts follow the sequence of the key sections, resulting in some family and genus splits. There are scattered lower-level keys, but the choice of subjects seems arbitrary: *Spergula* and *Spergularia* are keyed out, tricky Amaranthaceae genera are not. Unkeyed genera demand close reading; accompanying photographs offer variable help with determinations. Scientific names appear without authorities, a pity especially given the novelty (and occasional questionability) of some names. Accounts covering morphology, ecology and distribution seem generally accurate, apart from some attributions of native status, but the presentation less satisfactory; features marked as characteristic in one species are often not shown so when equally characteristic and shared by another closely related species.

This book attempts much, but I wonder about its intended readership. Experienced botanists who might appreciate the *Taraxacum* key may not enjoy the non-taxonomic ordering and would doubtless happily lose many illustrations. I suspect that the general plant lover will not find it as easy to use for identification as first impressions suggest. The publisher (Biotope) has had to compromise its usually high design standards to deal with the bulk, yet it can still barely be considered a portable handbook, while small fonts and accompanying distribution maps come close to illegibility. The content is valuable, but it deserved better.

Martin Rand

In the Herbarium. The Hidden World of Collecting and Preserving Plants
Maura C. Flannery
Yale University Press, London, 2023.
Pp. ix + 325, with 42 B&W illustrations; hbk £24.99.
ISBN 9780300247916

Herbaria are collections of preserved plant specimens – permanent records of botanical diversity. Plants can be preserved in fluid (e.g. formaldehyde or alcohol) or boxed if bulky (e.g. pine cones), but the most common method of preservation is to press plants, which rapidly dries and flattens specimens and prevents them from rotting or shrivelling. This technique was developed in 16th century Italy by

the father of modern herbaria, Luca Ghini, and has remained largely unchanged to the present day. If these dried specimens are stored under optimal conditions, then they appear to last indefinitely. Today, there are around 390 million specimens in over 3000 herbaria worldwide. This vast global collection underpins modern plant taxonomy and systematics, as well as being of immense cultural, historical and aesthetic value.

In the Herbarium provides an overview of the central role of herbaria in the study of plants, past and present. It begins with the inception of herbaria in the 16th century, when Italian physicians, including Luca Ghini, began compiling reference collections of medicinal plants. From these early days of botanical collecting, the book charts the history of herbaria through Linnean classification, to the great age of exploration and botanical collecting, to Darwin and the formulation of the theory of evolution by natural selection, to the neglect of natural history collections in the late 20th century, and finally to the renaissance of modern-day herbaria, with the advent of large-scale digitisation projects and the application of modern genomic approaches to sequence ancient DNA from herbarium specimens. This timeline is split over sixteen chapters, arranged chronologically, and each chapter stops at key moments in botanical history, for example: ch. 2 'Early Botany', ch. 6 'Linnaeus & Classification', ch. 11 'Evolution & Botany', and ch. 15 'Online Herbaria', etc.

The author is professor emerita of biology at St. John's University, New York, but is not a botanist by training and prior to embarking on this project confesses to knowing little about plants. Her interest in herbaria was something of a recent phenomenon, and she describes being 'moonstruck' on a visit to Roger Williams Park herbarium (RWPM), Rhode Island, US in 2010. Since then, she has researched and written extensively on the subject of herbaria in a series of articles and blogposts, which culminates in the publication of *In the Herbarium*. The result is a well-informed and thoroughly researched account, which is written in the popular science style and accessible to a non-specialist audience. Furthermore, Prof. Flannery's relatively recent conversion to the world of herbaria means she comes to the subject with fresh eyes and an enthusiasm, which gives the book an energetic and exciting tone. The reader is left marvelling at the invaluable and irreplaceable nature of our botanical collections, which over time seasoned botanists have come to take for granted.

A minor drawback is that at times the text is interrupted with excessive name-dropping as botanists and explorers of the past come on and off stage in quick succession. This is difficult to keep up with at times, especially in the early chapters, and would have benefited from more selective editing. Furthermore, while there are 42 B&W illustrations, the book would have been augmented by the inclusion of plates to present examples of specimens in colour. However, this decision will have been made with economy in mind, and does not detract from the story Flannery is telling.

Overall, *In the Herbarium* is a must-read for anyone wanting to know more about the rich history of herbaria and the colourful collectors who have contributed specimens over the last 500 years.

Stuart D. Desjardins

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