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NEWS

September 2023 154



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## FROM THE PRESIDENT

‘I don’t fly’. I’d love to be able to say that but as yet it’s still an aspiration, since try as I might, even the Daneway Banks meeting in Gloucestershire was just too difficult to reach overland (and sea) from the Irish west coast. In fact, even flying there turned out to be very trying, but that’s another story.

The joint meeting with the Royal Entomological Society at Daneway Banks was well worth it, though, and a tremendous success. The talks were superb, the site even better – where we saw Large Blue butterflies in flight and mating – and everyone helped with identifications, though the RES members had the edge on species knowledge! They were a delight to be with. Species new to me included Cut-leaved Germander *Teucrium botrys* and Cut-leaved Selfheal *Prunella laciniata* (and hybrid with *P. vulgaris*). But the main message was that, as botanists, we need to be aware of the habitat requirements of invertebrates, so such meetings are invaluable. It would be great to plan another one and firm up the links with RES. A joint weekend workshop would be my ideal to give more time to interact, since my only disappointment at Daneway Banks was that everyone disappeared at the end of the field excursion (bar a few stalwarts), cutting short a very sociable event. Could we find a species-rich site with affordable group accommodation nearby to run such a meeting in the future?

But back to air travel. If you are travelling, then it’s the worst way to do it, as far as the planet is concerned.

But passenger air flights are still increasing back to pre-pandemic levels. Have we learned nothing from lockdown? Our travel habits are something we can all attempt to change, though as botanists it’s hard to get to out-of-the-way places. The Irish naturalist, Robert Lloyd Praeger went everywhere by train and walked cross-country where this was not available. Investment in, as well as use of public transport is essential and by using it, however inconvenient, we help that to happen.

As I live on an island off an island, low-energy travel is even more difficult. However, my plan for the 2024 Annual Summer Meeting is to cycle 90 minutes to the local station, take the train to Cork, cycle two hours to the ferry and sail to Roscoff. The French SNCF gives great support to cyclists on regional trains. Once there, it’s just a matter of taking trains to St Malo for the ferry to Guernsey. Match that anyone?!

So I’m very grateful for Zoom, as I won’t fly to Britain for 5-hour BSBI business meetings. However, I hope to attend field meetings lasting more than a day, preferably at least by car or – better – public transport. And I hope that by saying ‘I don’t fly’ to anyone who will listen, it might make more people reflect on what more they can do to help deal with the climate crisis.

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## EDITORIAL

Welcome to what is effectively the autumn 2023 issue of *BSBI News*. I hope everyone has enjoyed botanising over the summer and seen some nice plants. In my local area the grassland was parched off by mid June, but the rain in July, though not good for holidaymakers, produced a burgeoning second wave of lush vegetation. As I write this, the urban bird-seed alien grasses in particular are doing spectacularly well and so it is appropriate that Mike Crewe has covered several of these in Beginner’s Corner (p. 26). Indeed there is a bit of a grasses

theme in this issue, for which I am partly responsible! Suki Pryce’s first article will hopefully inspire those who do not already do so to take up winter botany.

This has been my 12th issue and I am starting to think about handing over the reins in a year or two. If anyone has good computer skills and thinks they might like to take on the job, please get in touch.

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**John Norton**  
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## Winter recording and 'necrobotany' by the Norfolk Flora Group

SUKI PRYCE

Jo Parmenter of the Norfolk Flora Group (NFG) arranges our official recording programme, which runs from April to October. A few years ago, some members wished to carry on recording during the winter, and Jo therefore began organising unofficial Saturday meetings (limited during 2020–21) from November to March – targeting mainly under-recorded monads in West Norfolk. These proved surprisingly popular, with up to fifteen people attending per outing, though the average is usually around five or six. One member of the group, Jake Brendish (a talented young ecologist), commented: *'I'm shocked how few people actually botanise through winter, given how fantastic it is for both advancing ID skills and preventing brain atrophy. ... I credit the NFG winter programme with helping me get to grips with some intermediate ID aspects much faster than I'd expected.'*

### Benefits of winter botanising

Winter recording meetings have proved remarkably fruitful, with taxa totals recorded on a day's outing

Fruits of *Torilis nodosa* (Knotted Hedge-parsley).  
Marilyn Abdulla

averaging around 180, and with some over 200. Even the bleakest, most frozen and frost-ridden days produced totals around 150 (e.g. see Abdulla, 2023). This in itself shows that winter botanising is worthwhile, and isn't a poor relation of summer recording. It has also meant that lower priority areas have been tackled that wouldn't otherwise find their way into summer programmes, which makes it even more worthwhile.

Winter recording also means that we get to see plants which are less or not visible later in the year, and are therefore often under-recorded. Taxa in this group include early spring flowerers such as *Adoxa moschatellina* (Moschatel), *Cochlearia danica* (Danish Scurvygrass), *Crocus* spp. (crocuses), *Eranthis hyemalis* (Winter Aconite), *Erophila verna* (Common Whitlowgrass), *E. glabrescens* (Glabrous Whitlowgrass), *Ficaria verna* (Lesser Celandine),

*Galanthus* spp. (snowdrops), *Montia fontana* (Blinks), *Myosotis ramosissima* (Early Forget-me-not), *Poa infirma* (Early Meadow-grass), *Saxifraga tridactylites* (Rue-leaved Saxifrage) and *Stellaria pallida* (Lesser Chickweed).

From a 'human' or personal point of view, recording in winter keeps our botany brains – which tend to atrophy if unused – ticking over. It helps keep physical fitness levels up, and offers invaluable fresh air, exercise, natural light (think vitamin D), stimulating activity and good company during the darker days of the year. And being willing to turn up in all weathers in order to record certainly fosters NFG morale and sense of camaraderie.

## 1. Wintergreen plants

The relatively easy side of winter botanising is identifying *wintergreen plants*, as many are fairly straightforward to determine then – at least to genus level. This group includes wintergreen perennials, first-year biennial rosettes, autumn/spring germinating annuals and the aforementioned spring-leaving/flowering perennials. Here, Poland & Clement's *Vegetative Key to the British Flora* is invaluable, though a few wintergreen taxa can look anomalous in winter.

### Wintergreen aliens

We're also sometimes challenged by unusual non-natives immune to our combined ID skills. We have some good horticulturists in our group, but even so, many 'mystery monocots' and other garden escapes have proved surprisingly hard to determine. It's not an overwintering *Agapanthus* (African Lily) or *Crinum* (Cape-lily) ... what *can* it be? Is it an Iris ... or *Kniphofia northiae* (Greater Red-hot-poker)? Is it a half-grown *Centaurea cyanus* (Cornflower), or an *Argyranthemum* (Marguerite) left over from summer bedding? And so on. Winter botanists definitely need to know their garden plants, as a significant part of what we see comprises garden escapes and other non-native ornamentals – particularly in built-up areas. (We have favoured these for our winter outings, as there's more to see there than in the countryside.)

## 2. Non-wintergreen plants

### (a) 'Necrobotany'

Many taxa aren't wintergreen, so in order to identify such plants, other abilities are needed. One of the most important is the ability to ID plants from their *dried-up remains*, and we have coined the term 'necrobotany' for this skill. Dead remnants of *inflorescences* are particularly useful; but all parts can be helpful, as well as overall form, climbing habit, etc. Examples are given in Box 1.

Necrobotany is a skill we continue to hone, the more so as it has benefits throughout the year (e.g. Jo's ability to recognize *Cerastium semidecandrum* (Little Mouse-ear) in summer from a few wizened shreds). Plants we have identified during the growing season in this way include *Aira caryophyllea* (Silver Hair-grass – more visible when dead than when alive!), *A. praecox* (Early Hair-grass), *Ranunculus bulbosus* (Bulbous Buttercup), *Spergula arvensis* (Corn Spurrey), *Trifolium campestre* (Hop Trefoil) and *Veronica arvensis* (Wall Speedwell).

And for those of us who rely greatly on jizz to ID plants year-round, necrobotanising tends to



Dead plant of *Veronica arvensis* (Wall Speedwell).  
Suki Pryce

**Box 1.** Examples of plants that can be identified in winter**Dead inflorescences:**

These often enable IDs in their own right, or alert one to the presence of still green or newly-grown green basal leaves which can confirm an ID. It may be the overall shape of the inflorescence which is diagnostic, or details of seed heads, etc. (e.g. *Linaria* spp.). Among the many taxa which lend themselves to this form of ID are:

*Achillea millefolium* (Yarrow)  
*Alliaria petiolata* (Garlic Mustard)  
*Anisantha* spp. (bromes)  
*Anthriscus caucalis* (Bur Chervil)  
*Brachypodium sylvaticum* (False Brome)  
*Bromus hordeaceus* (Wall Barley)  
*Catapodium* spp. (fern-grasses)  
*Centaurea debeauxii* (Chalk Knapweed)  
*Centaurea scabiosa* (Greater Knapweed)  
*Chaerophyllum temulum* (Rough Chervil)  
*Chamaenerion angustifolium* (Rosebay Willowherb)  
*Cichorium intybus* (Chicory)  
*Cirsium arvense* (Creeping Thistle)  
*Diplotaxis* spp. (Wall-rockets)  
*Echium vulgare* (Viper's-bugloss)  
*Erigeron acris* (Blue Fleabane)  
*Erigeron sumatrensis* (Guernsey Fleabane)  
*Filago germanica* (Common Cudweed)  
*Galinsoga* spp. (gallant-soldiers)  
*Heracleum sphondylium* (Hogweed)  
*Heracleum mantegazzianum* (Giant Hogweed)  
*Hypericum* spp. (St John's-worts)  
*Knautia arvensis* (Field Scabious)  
*Koeleria macrantha* (Crested Hair-grass)  
*Lathyrus nissolia* (Grass Vetchling)  
*Linaria purpurea* (Purple Toadflax)  
*Linaria vulgaris* (Common Toadflax)  
*Lunaria annua* (Honesty)  
*Lycopsis arvensis* (Bugloss)  
*Mycelis muralis* (Wall Lettuce)

*Odontites vernus* (Red Bartsia)  
*Origanum vulgare* (Wild Marjoram)  
*Phalaris arundinacea* (Reed Canary-grass)  
*Phragmites australis* (Common Reed)  
*Plantago* spp. (plantains)  
*Pteridium aquilinum* (Bracken)  
*Scabiosa columbaria* (Small Scabious)  
*Sison amonum* (Stone Parsley)  
*Solidago* agg. (goldenrods)  
*Symphyotrichum* agg. (Michaelmas-daisies)  
*Teucrium scorodonia* (Wood Sage)  
*Thlaspi arvense* (Field Penny-cress)  
*Torilis japonica* (Upright Hedge-parsley)  
*Torilis nodosa* (Knotted Hedge-parsley)  
*Turritis glabra* (Tower Mustard)  
*Verbascum thapsus* (Great Mullein)  
*Verbena officinalis* (Vervain)  
*Vicia sativa* subsp. *segetalis* (Common Vetch)

**Dead vegetative parts:**

*Arenaria serpyllifolia* (Thyme-leaved Sandwort)  
*Artemisia vulgaris* (Mugwort)  
*Cirsium arvensis* (Creeping Thistle)  
*Ervilia hirsuta* (Hairy Tare)  
*Ervum tetraspermum* (Smooth Tare)  
*Lathyrus pratensis* (Meadow Vetchling)

**Overall form:**

*Erysimum cheiranthoides* (Wallflower)  
*Lepidium ruderales* (Narrow-leaved Pepperwort)  
*Verbena bonariensis* (Argentinian Vervain)

**Climbing shoots:**

Their climbing habit, shoot appearance/texture, etc. can be diagnostic.  
*Bryonia dioica* (White Bryony)  
*Humulus lupulus* (Hop)  
*Tamus communis* (Black Bryony)

make us look more closely at the specific features making up the jizz – so improving our knowledge of field characteristics, and often opening our eyes to features of which we were previously unaware.

**(b) Woody deciduous plants**

The ability to ID deciduous trees, shrubs and woody climbers in winter is important, and features which can help with this can include nearby fallen leaves, form, bark, twigs, and fruits. Nevertheless, it's both surprising and embarrassing how often we find leafless woody plants that we can't pin down at all,

even as to family. Most of us now seek to improve our performance in this area. John Poland's excellent *Field Guide to Winter Twigs* (2018) is most helpful, as is *Collins Tree Guide* (Johnson & More, 2004) and its 'winter shoots' guide (pp. 9–11). Even more so is the comprehensive *Identification of Trees and Shrubs in Winter Using Buds and Twigs* (Schulz, 2018), with its superb illustrations.

**(c) Newly emergent leaves**

The new foliage of a few non-wintergreen taxa can be harder to identify than one would think,



1. *Centaurea scabiosa* (Greater Knapweed), Suki Pryce. 2. Dry seedheads of *Linaria vulgaris* (Common Toadflax) (top) and *L. purpurea* (Purple Toadflax) (bottom), M. Abdulla. 3. Early Hair-grass (*Aira praecox*) and young leaves of *Rumex acetosella* (Sheep's Sorrel), Suki Pryce. 4. Seed pods of *Medicago sativa* subsp. *sativa* (Lucerne), Suki Pryce. 5. *Anthriscus caucalis* (Bur-chervil), Suki Pryce. 6. *Ranunculus bulbosus* (Bulbous Buttercup), Suki Pryce.



as they often look atypical. Examples include *Agrimonia* spp. (agrimonies) which can look like *Achillea millefolium* (Yarrow), *Geum urbanum* (Wood Avens), *Pimpinella saxifraga* (Burnet-saxifrage) and *Ononis repens* (Restharrow). *Allium ursinum* (Ramsons) can resemble *Arum maculatum* (Lords-and-Ladies) – but don't chew on a leaf to find out, smell it first! Lords-and-Ladies is corrosive with oxalate crystals, burns your lips and mouth and *isn't* garlicky.

### Following up unknowns: our 'ongoing ID' spreadsheet

Largely as a result of winter botanising, some of us decided during the 2022/23 winter to develop a methodical approach to pinning down plants we couldn't identify in the field. In the past, we may have made a vague note-to-self to revisit such plants at a suitable time; and Bob Leaney writes queried taxa in his wall calendar at the beginning of their next flowering period, with their grid reference and habitat. But we've now become more tech-savvy, thanks to Mike Crewe, who created a Cloud-shared spreadsheet on which anyone signed up can list (in iRecord-type format) the nature, location, and suggested best-revisit times of taxa we'd like to look at again. The idea is that if anyone in the shared spreadsheet group is in a featured area at an appropriate time, they can pop and have a look at the plant in question, and – we hope – nail the ID of otherwise tantalisingly unidentifiable specimens.

This spreadsheet was initially intended for checking out a selection of Jo's queried iRecord verifications. I even went on to produce a wartime ops-room logistics style map by pasting colour-coded (for late spring/early summer; mid-summer; late summer/early autumn) stickers onto road map pages for at-a-glance decision-making re revisiting sites. However, my follow-up experiences over the 2023 growing season have been very disappointing – regarding both Jo's iRecord IDs (*nil points*), and our NFG winter IDs. In regard to the latter, this has led me to feel that we'd be better off doing our very best to ID things at the time, *in situ*: taking photos, taking good specimens to study at home (Eric Clement strongly supports this) and then perhaps not pursuing

these elusive IDs any further. Life's too short, and fuel's too expensive.

### Is a winter botany or 'necrobotany' ID guide needed?

As this article was in preparation, our Editor John Norton mentioned to me that Eric Clement (of the *Vegetative Key to the British Flora* fame) had been winter botanising/square bashing regularly for a few years, in a similar vein to the NFG. As a result he had 'often suggested that some sort of ID guide to dead plants would be useful'. Having subsequently (April 2023) seen a draft of this article, Eric confirmed that he thinks the concept is a valid one. John Poland (June '23) is also supportive, saying 'I think it's a great idea.' I have been very heartened by these positive responses from such botanical heavyweights, and encouraged to take this article further and prepare some sort of winter botanising guide – to Norfolk herbaceous plants initially. Poland recommends looking at *A Guide to Wildflowers in Winter: Herbaceous Plants of Northeastern North America* (Levine, 1995) as a possible template for what could be produced: this includes some UK species, and provides beautiful colour illustrations rather than photos. However, that is an ideal; and our version is likely to be a much more low key/informal affair: it would probably be online, e.g. on the NFG website, illustrated only by photos and an ongoing work-in-progress. To further this cause, I would therefore be delighted to hear from anyone who has relevant information to add to what's sketched in here: species for inclusion, photos, comments, etc.

### Acknowledgements

Thanks to everyone who has come out on winter NFG meetings, particularly to Jo Parmenter for organising them and to Mike Crewe who set up our shared 'ongoing ID' spreadsheet. Many thanks also to Eric Clement for checking a draft of this article and being an 'early adopter' of the winter ID guide idea, and for supporting the idea of building on this article to produce one; and to John Poland for supporting the concept as well, and adding further helpful ideas.

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## Suki Pryce

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# *Cystopteris alpina* in Britain

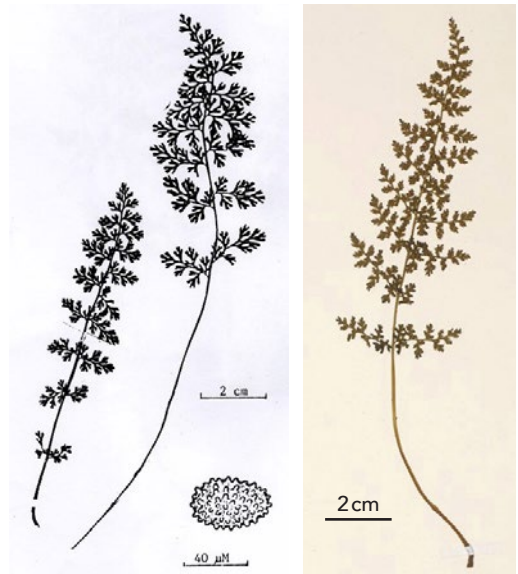
DAVID TENNANT

*Cystopteris alpina* (Alpine Bladder-fern) was discovered in Britain on an old wall in Essex at the end of the 18<sup>th</sup> century and persisted there until the site was destroyed in the mid-19<sup>th</sup> century. It was initially named *Cyathea incisa* by Sir J.E. Smith

in 1794 and later *Cystopteris alpina* Desv. by W.J. Hooker in 1842. It is clearly the fern that many early authors have referred to as '*C. regia*'. A *Cystopteris* specimen collected in North Wales, possibly as early as 1800, and named by Hooker as *Cyathea*



**Figure 1.** *Cystopteris fragilis* subsp. *huteri* (Brittle Bladder-fern). Cultivated examples from Snowdonia (v.c. 49), D.J. Tennant, illustrating the degree of variation [scale bar 4cm]. Reproduced by kind permission of the Editor of *The Fern Gazette*.



**Figure 2** (left). *Cystopteris alpina* sensu stricto (Alpine Bladder-fern). Collected Upper Teesdale, N.W. Yorkshire (v.c. 65), J. Backhouse, 1876; fronds and spore [scale bars 2cm; 40µm]. *Photo of specimen in E, with permission.* **Figure 3** (right). *Cystopteris alpina* variant. Collected Upper Teesdale, Durham (v.c. 66), F.A. Lees, 1874. Scan courtesy of BM.

*regia*, is also considered to represent a form of *C. alpina*. Other records for *C. alpina* from Snowdonia in North Wales refer to *Cystopteris fragilis* subsp. *huteri* (Brittle Bladder-fern) that was first recognised there in 2008 (Tennant, 2017) (Figure 1).

The morphology of the Essex fern appears to match a *Cystopteris* that occurs at intermediate altitudes in Europe, and is referred to one form of *C. alpina*. The more finely dissected *C. alpina* sensu stricto occurs in Europe only at higher altitudes, usually over 2000 m. A *Cystopteris* that matches European *C. alpina* sensu stricto was discovered in Upper Teesdale, North-west Yorkshire (v.c. 65), in 1872 (Figure 2), and a *Cystopteris* that matches the *C. alpina* variant from Essex was collected nearby in Durham (v.c. 66), in 1874 (Figure 3), but neither has been re-found in these localities since the end of the 19<sup>th</sup> century.

A *Cystopteris* that appears to be the same variant of *C. alpina* as the Essex fern has, however, since been discovered in several places in northern Scotland

(Tennant, 2022), in West Ross (v.c. 105) (Figure 4), West Sutherland (v.c. 108) (Figure 5), Skye (v.c. 104) and the Orkneys (v.c. 111), where it is extremely local and scarce.

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**Figure 4.** *Cystopteris alpina* variant. W. Ross (v.c. 105). David Tennant



A



B

**Figure 5.** *Cystopteris alpina* variant. (A) collected W. Sutherland (v.c. 108), D.J. Tennant, 1991 & 2019, showing range of variation; (B) collected in Essex (v.c. 18), T.F. Forster, pre-1800. Scans courtesy of BM. Figures 2–5 reproduced by kind permission of the Editor of *The Pteridologist*.



## *Dryopteris pseudocomplexa* – an enigma

ANTHONY PIGOTT

*Dryopteris pseudocomplexa* is a tetraploid member of the *Dryopteris affinis* (Scaly Male-fern) complex, recorded in north-west and central Europe. Earlier taxonomic treatments assumed a triploid ploidy level but the recent discovery of it apparently being the first known non-hybrid tetraploid member of the complex has added ambiguity to its origins and taxonomic treatment.

### History

The taxon was described in Pigott (1997) following a visit to Arran in 1992 where Tony Church had discovered it earlier. I described it under the informal name *D. affinis* cx. morphotype ‘Arranensis’. It seemed similar to the description of ‘var. *pseudocomplexa*’ that I had read about in Christopher Fraser-Jenkins’ unpublished draft monograph (Fraser-Jenkins, 1992) although I had not, at that time, seen an authenticated example.

In the 1980s, Fraser-Jenkins had collected material from Skye and Europe that he believed was a distinct taxon to those that he already recognised. He listed

*Dryopteris pseudocomplexa* from Arran (v.c. 100).  
All photographs by the author.

it as ‘var. *pseudocomplexa*’, without valid publication, in Fraser-Jenkins (1996). He assumed it was triploid, based on it forming populations, its morphological similarity to *D. cambrensis* and its spore size. It was first validly published, as ‘subsp. *pseudocomplexa*’, in his comprehensive paper on the *D. affinis* complex in Fraser-Jenkins (2007). The description there is mostly consistent with the earlier description of morphotype ‘Arranensis’. This treatment was followed in Stace (2010).

All listed members of the *D. affinis* complex in Sell & Murrell (2018) are treated as species, including *D. pseudocomplexa*. The description given, however, is significantly at variance with both the earlier ones.

Since his 2007 paper, Christopher Fraser-Jenkins has reverted to his earlier treatment of the *D. affinis* complex as a single species; e.g. Fraser-Jenkins (2022). In this, he has the taxon in question as ‘*D. affinis* subsp. *pseudocomplexa*’. This general approach

has also been followed in Stace (2019), although he has ‘subsp. *pseudocomplexa*’ included within ‘subsp. *cambrensis*’.

I have chosen here to use *D. pseudocomplexa*, which is consistent with both the approach used in Fraser-Jenkins (2007) and that of Sell & Murrell (2018).



*Dryopteris pseudocomplexa* frond (composite image).

In 2017, as part of a scan of ‘interesting’ plants in my living collection, Libor Ekrť measured the DNA ploidy of a few plants with morphology consistent with *D. pseudocomplexa*, including ones from Arran and Ireland. To my surprise these all were found to be tetraploid. This was not published at the time, but the information was passed on to a few people working on the *D. affinis* complex.

Recently, Wilfried Bennert et al. (2022) have described a tetraploid taxon in the *D. affinis* complex in Germany that they identify as conspecific with *D. pseudocomplexa*. They had apparently discovered its tetraploid status independently in 2018. They state that, other than in levels of spore abortion, it is indistinguishable from the tetraploid hybrid *D. × complexa* (*D. affinis* sensu stricto × *D. filix-mas*). This latter conclusion seems difficult to justify when one considers the British examples of *D. pseudocomplexa* and *D. × complexa* which, of course, includes hybrids with all the varied forms of diploid *D. affinis*.

A further paper by Stefan Jessen et al. (2022) describes another population forming tetraploids in the *D. affinis* complex from the Carpathians. They state that, though similar, it is probably not the same taxon as the one mentioned by Bennert et al.

## Description

Just like all the taxa of the *D. affinis* complex, they need to be identified by consideration of a wide range of characters and by comparison with the other members of the group. Particularly significant features include the somewhat dull upper surface of the lamina, shallow, slightly acute teeth (which can appear missing due to the margin being rolled back), relatively long pinnules and usually well-developed lowest pinnules on the pinnae. As the name implies, it can be confused with *D. × complexa* but also with *D. cambrensis* and some forms of *D. borrieri* sensu lato. The illustrations in this note are all from one specimen: ACP 92/45 from Arran (v.c. 100).

## Discussion

As with most things in the *D. affinis* complex, one must guard against making unsupported assumptions and be prepared for surprises; there is still much to learn.



*Dryopteris pseudocomplexa*: frond upperside (top) and underside of pinna showing sporangia (bottom).

In particular, the discovery that *D. pseudocomplexa* is tetraploid means that we should not assume that everything that looks like *D. pseudocomplexa* is in fact that taxon and also that not everything that is tetraploid is the hybrid *D. × complexa*.

It is suggested in Bennert et al. (2022) that the genomic make-up of *D. pseudocomplexa* is the same as that of *D. × complexa*, i.e., two contributions from *D. oreades*, one from *D. caucasica* and one from the unknown ‘affinis ancestor’ giving the ‘formula’ OOAC; see, e.g. Pigott (1986). Alternatively, if one assumes an origin from a cross between a form of *D. cambrensis* and *D. oreades*, then the corresponding formula is OOOA, see Fraser-Jenkins (2022). The latter option seems more likely on morphological grounds.

## Acknowledgements

I am particularly grateful to the late Clive Jermy for his encouragement and advice on ‘Arranensis’, to Christopher Fraser-Jenkins for always being ready to share his views and information and to Libor Ekrt for working with me and carrying out FCM measurements on my living collection. The recent sad loss of Chris Page has reminded me of how, in the 1980s, he raised the awareness of the variation in the *Dryopteris affinis* complex in Britain and Ireland, which, in no small way, inspired me to study it.

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## Assessing changes in the diversity of Irish semi-natural grasslands – my MSc project

OLIVER LYNCH MILNER

Ireland has a large land cover of grassland habitats, which is primarily dominated by intensive agricultural grasslands. A small proportion of the grassland is extensively managed semi-natural grassland, which may have originated as a result of 5,000 years of human activity (Hall & Pilcher, 1995). As a result, these grasslands have a greater diversity of species. They provide a range of ecosystem services such as plant diversity, pollinator abundance, water regulation and carbon sequestration. Globally, research has shown, in some cases, that an increased plant diversity can generally increase carbon storage in response to climate stress (Isbell et al., 2015; Craven et al., 2016; Chen et al., 2018). To date, little is known about the capacity of Irish semi-natural grasslands to store carbon, and how plant diversity affects this.

The Department of Agriculture, Food and the Marine funded ‘StableGrass Project’, based in University College Cork, and University of Galway,

Above: Upland acid grassland at c. 700 m, Galty Mountains, Co Limerick. *Oliver Lynch Milner*. Below: the author in action. *Phoebe O’Brien*



aims to investigate this using various approaches, including functional trait assessment, as well as using novel methods in remote sensing. My project forms a Masters by Research degree, which is being undertaken at the University of Galway. My study began in October 2022, with the objective to resurvey 12 grassland sites from the 2007–2012 Irish Semi-natural Grassland Survey (ISGS) (O'Neill et al., 2013) to analyse changes in diversity since that survey. These sites were resurveyed during the months of June and July 2023. For the 12 resurveyed sites, three of the most frequently encountered habitat types in the ISGS were re-surveyed, namely Dry Calcareous and Neutral Grassland (GS1), Dry-humid Acid Grassland (GS3) and Wet Grassland (GS4) – classifications according to ‘A Guide to Habitats in Ireland’ (Fossitt, 2000).

My MSc will run until October 2024. The remaining time will be used to analyse the relevé data collected for all of the sites, and to relate the data to the other StableGrass components, to assess the impact of plant diversity on the carbon sequestration potential of Irish grasslands.

### Grassland study sites and associated floral diversity

My survey sites range from highland calcareous EU Annex 1 grassland near Manorhamilton, Co Leitrim, to lowland calcareous grasslands of

Leitrim and the Burren, Co Clare; lowland *Molinia* meadows in Galway and Limerick; and upland acid grasslands in West Cork, South Kerry and Limerick. This subset, which has a large range in terms of location, habitat, internal habitat mosaics, etc. will allow for the determination of the current diversity that occurs in Irish semi-natural grassland types, under different managements. The twelve sites also vary considerably in the topography, geology, hydrology and pedology (soils). This will capture the range and variation in the semi-natural grassland vegetation types that occur across Ireland, based on the various abiotic factors.

With this variation, a vast diversity of habitat types was observed, each with their associated diversities and flora. The calcareous grasslands were on average the most diverse, with a high number of species recorded per relevé, however, some of the *Molinia* meadow (wet grassland) sites were on par with this species diversity. However, as I learned from my observations of the sites, the number of species within a site, does not fully define the uniqueness or importance of a site. Within each site, a continuum of vegetation communities occur, each with a varying number of species, depending on the abiotic or biotic factors. This makes it more difficult to assess and compare the conservation value of different grassland types across a national scale. Hence, the goal of future analysis of the relevé data for these communities is to determine, in light of the expected diversity for that community, the current diversity and conservation value for each vegetation type encountered. Changes between the baseline ISGS data and the data collected during this survey will be analysed to assist in these determinations.

Also, the sites surveyed varied based on the conservation potential, with some of the sites containing examples of the protected EU Annex 1 grasslands, which was not the area of focus. However, in addition to these the more typical grasslands (or ‘standard’ grasslands; i.e non-Annex), were also surveyed. While these non-Annex grasslands may appear less diverse to the Annex counterparts, it was in my opinion very beneficial to survey a set of non-Annex grasslands. These would not have had



Upland calcareous grassland near Manorhamilton, Co Leitrim. *Oliver Lynch Milner*



the same exposure to monitoring programmes such as Article 17 reporting or the 2015–2017 Grassland Monitoring Survey, which resurveyed many of the Annex ISGS sites.

It is the hope that this project will better describe the current and changing diversity of non-Annex grasslands, as well as give them recognition, as they still have their own role in the promotion of biodiversity and heritage. For example, an upland grassland in Lauragh, Co. Kerry, which was not previously recorded as EU Annex 1 grassland, was steeped in culture, and diversity of species with restricted distributions. This site had areas of Chamomile (*Chamaemelum nobile*) lawns, which, historically has resulted in locals naming fields in this area as Fíogadán (Irish for Chamomile) (P. O'Brien & C. Heardman, pers. comm., August 2023). In terms of species richness, it would not be the most diverse, but still so important for maintaining diversity of this vegetation type, and the cultural and landscape heritage.

Calcareous grasslands in Ireland are possibly the most restricted in distribution, as many of these have been agriculturally improved, which made them difficult to select for the study. Frequent species in these habitats include *Festuca* (fescues), *Agrostis* (bents) and other common grasses; with forbs such as *Achillea millefolium* (Yarrow), *Lotus corniculatus* (Common Bird's-foot-trefoil), *Hypochaeris radicata* (Cat's-ear) and *Galium verum* (Lady's Bedstraw) (to name a few – there were often 30–40 species in one relevé). *Briza media* (Quaking-grass), *Avenula pubescens* (Downy Oat-grass) and *Sesleria caerulea* (Blue Moor-grass) defined the more strongly calcareous grasslands. These sites were located in some lovely locations, and the most typical calcareous grasslands were those of shallow soils with exposed limestone in the vicinity.

The acid grassland sites, as with their nature, were largely on mountain/hill slopes of Lauragh, Co. Kerry, Ballyourney, Co. Cork, and Galtees, Co. Limerick, with the exception of an unusual lowland GS3 site on the shores of Lough Mask, Co. Mayo, which had habitat mosaics of calcareous and wet grasslands, fen, tall herb and scrub communities. The more typical acid grassland sites are generally

more species poor, than the calcareous and wet grasslands, with species such as *Agrostis*, *Festuca*, *Molinia caerulea* (Purple Moor-grass), and in some sites *Nardus stricta* (Mat-grass) being the distinctive grass species for this habitat, as well as *Carex binervis* (Green-ribbed Sedge) and other *Carex* species. Herbs which were dominant in my GS3 sites included *Galium saxatile* (Heath Bedstraw), *Potentilla erecta* (Tormentil), *Succisa pratensis* (Devil's-bit Scabious) and *Viola* spp (violets). Interestingly, some of these species were also recorded at GS1 sites, which indicated the degree of variation that influenced the vegetation communities at my sites.

Finally, the wet grassland sites included *Molinia* meadows of Portumna, Co. Galway; Foynes and Lough Gur of Co. Limerick; and a 'standard' wet grassland (GS4) in Co. Clare. This habitat is still arguably the most frequently occurring semi-natural grassland in Ireland, as it typically occurs in lands that are marginal for agriculture and have not been improved. The species richness on average across my wet grassland sites has been quite high, but this has been influenced by the Annex 1 grasslands surveyed. The common species that denote this habitat, and recorded during the surveys included *Juncus* spp. (rushes), *Carex flacca* (Glaucous Sedge), *Carex panicea* (Carnation Sedge), *Holcus lanatus* (Yorkshire-fog), *Molinia caerulea*, *Agrostis* spp., *Cirsium palustre* (Marsh Thistle), *Potentilla anserina* (Silverweed), *Filipendula ulmaria* (Meadowsweet), *Mentha aquatica* (Water Mint), *Galium palustre* (Common Marsh-bedstraw) and *Cardamine pratensis* (Cuckooflower) to give a few examples. Some of the more exciting species in these sites included *Parnassia palustris* (Grass-of-Parnassus) and *Dactylorhiza kerryensis* (Irish Marsh-orchid).

### Notable flora records

Besides the data being collected for a research project, they will also contribute valuable records. One example is the discovery of *Achillea ptarmica* (Sneezewort) in a site just South of Foynes, Co. Limerick. This species was last recorded in 2019 and as such, was included on the County Limerick Rare Plant Register (Reynolds, 2021). I also observed species which were new to me, including

*Chamaemelum nobile*, mentioned above, and *Hypericum elodes* (Marsh St. John's Wort). *Parnassia palustris* (Grass-of-Parnassus) and *Epipactis palustris* (Marsh Helleborine) were two species which I have wanted to see during the past year, and to my delight, these were observed at sites in Portumna, Co. Galway, and Lough Mask, Co. Mayo.

While these are only a few examples of the flora encountered during my surveys, they were amongst my most notable records and gave me great excitement.

### Future work

It is intended that the data gathered during these grassland surveys will be used to assess how the species diversity has changed with time and define the vegetation communities present in the study areas, using the Irish Vegetation Classification system. When grouped with the overall StableGrass project,

it will contribute to the larger understanding of how plant diversity may impact carbon sequestration in these grasslands. Science aside, I have had a very enjoyable journey, recording many lovely plants, and continuously developing my plant identification skills.

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*Parnassia palustris* (Grass-of-Parnassus) and *Epipactis palustris* (Marsh Helleborine). Oliver Lynch Milner

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# Plants in urban and rural habitats in Easter Ross

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In a previous article we described the work of the Botanical Society of Scotland's (BSS) Urban Flora project<sup>1</sup>, including a comparison of urban and rural flora (Ballinger & Grace, 2020). I also reported on some man-made habitats in Easter Ross (Ballinger, 2014). Many studies have suggested that the urban flora may be more diverse than the rural, including Grace's study of BSBI records (J. Grace, pers. comm.). A series of small comparisons in Easter Ross did not show a clear diversity difference, although the characteristics of the urban and rural floras differed, with a higher proportion of neophytes in towns (Ballinger, 2020).

Since then, I have carried a series of small comparative studies of rural and urban habitats in Easter Ross (v.c. 106) and some of these are summarised here.

Vegetation at Tain railway station, Easter Ross.  
*Photographs by the author.*

## 1. Coastal paths

Ten 100 m stretches of urban coastal path were compared with ten 100 m rural coastal path sections. The urban sites were at the first grid reference boundary from the town edge and the rural ones were the first accessible site more than 100 m from the town edge. Each transect was visited twice, recording all vascular plants within two metres. In the urban sites 401 records were made compared to 329 in the rural sites. There were 131 urban species and 109 rural species. Seventeen neophytes (aliens) were seen in the urban sections and 7 in the rural. Taken together with a small North Fife sample the difference was statistically significant. Typical shore species were present in both settings, but more typical urban species were also seen in the

<sup>1</sup> [www.botanical-society-scotland.org.uk/Urban\\_Flora\\_of\\_Scotland](http://www.botanical-society-scotland.org.uk/Urban_Flora_of_Scotland)

towns (Ballinger, 2023). Notable species seen in the survey included *Zostera marina* (Eelgrass) and *Z. noltii* (Dwarf Eelgrass) recorded by the Tain path and *Astragalus danicus* (Purple Milk-vetch) on a rural path by Rosemarkie.

### 2. Railway stations

These are some of the more accessible parts of the railway system. I have previously reported on the diminished floral diversity of railway stations in recent years, probably related to management changes. Studying the flora of the accessible areas of 12 railway stations in Easter Ross, it was possible to compare the floral diversity of larger towns' stations with those of small habitations (Ballinger, 2021*b*). There were no significant differences, with 81 species in larger towns' stations and 85 in smaller places. This is perhaps not surprising, given the intensive management of these sites. Interesting finds on stations included the only Vice-county record for *Orobanche minor* (Common Broomrape) on a disused siding at Fearn station and the only recent Easter Ross record for *Sherardia arvensis* (Field Madder) by the platform at Alness station.



*Orobanche minor* (Common Broomrape) on a siding at Fearn railway station.

### 3. Town and country walls in Easter Ross

A standard route was followed in each of 12 towns in Easter Ross and 182 records were made of 78 different species. The commonest were *Taraxacum* agg. (Dandelion), *Cymbalaria muralis* (Ivy-leaved Toadflax), *Festuca rubra* (Red Fescue) and *Dryopteris filix-mas* (Male Fern), as well as 17 neophyte species.

These walls were virtually all mortared. The small *Asplenium* species, including *A. ruta-muraria* (Wall-rue) and *A. trichomanes* (Maidenhair Spleenwort) were on some urban walls, this being a frequent feature of some east coast locations liable to haar (sea mists).

**Table 1.** Commonest wall species

Urban walls	Rural walls
<i>Taraxacum</i> agg. (Dandelion)	<i>Taraxacum</i> agg. (Dandelion)
<i>Cymbalaria muralis</i> (Ivy-leaved Toadflax)	<i>Festuca rubra</i> (Red Fescue)
<i>Festuca rubra</i> (Red Fescue)	<i>Chamaenerion angustifolium</i> (Rosebay Willowherb)
<i>Chamaenerion angustifolium</i> (Rosebay Willowherb)	<i>Polypodium vulgare</i> (Polypody)
<i>Dryopteris filix-mas</i> (Male Fern)	<i>Cerastium fontanum</i> (Common Mouse-ear)
<i>Sonchus oleraceus</i> (Smooth Sowthistle)	<i>Dryopteris filix-mas</i> (Male Fern)
<i>Jacobaea vulgaris</i> (Ragwort)	<i>Poa pratensis</i> (Smooth Meadow-grass)
<i>Asplenium ruta-muraria</i> (Wall-rue)	<i>Agrostis capillaris</i> (Common Bent)
<i>Asplenium trichomanes</i> (Maidenhair Spleenwort)	<i>Dactylis glomerata</i> (Cock's-foot)
<i>Buddleja davidii</i> (Butterfly-bush)	<i>Digitalis purpurea</i> (Foxglove)
<i>Lapsana communis</i> (Nipplewort)	<i>Fraxinus excelsior</i> (Ash)
<i>Linaria purpurea</i> (Purple Toadflax)	<i>Urtica dioica</i> (Common Nettle)

Twenty sample lengths of rural walls in Easter Ross were also surveyed and 184 records of 88 different species were made (Ballinger, 2021a). The commonest included *Festuca rubra*, *Taraxacum* agg. and *Polypodium vulgare* (Polypody), the latter growing densely on some walls (Ballinger, 2020; Table 1). Only four neophyte species were seen and the walls were all dry-stone. Only 44 of the species recorded were found in both the urban and rural samples. There were considerable differences in species found, but given the great difference in nature of the walls, it was not possible to make a judgement of relative botanical diversity.

#### 4. Woodlands

This project is still incomplete, but ten 100 m transects of town woodlands in Easter Ross have been studied and compared with similar transects of ten nearby rural woodlands, in all cases taking the first complete 100m stretch after the entrance.

In all, 254 urban records and 197 rural records have been made and 98 urban wood species including 22 neophytes were recorded, as opposed to 75 rural wood species, including eight neophytes. *Rubus fruticosus* (Bramble) was the commonest species in both samples. The woods differed to some extent, although most were mixed broadleaved and coniferous with a greater coniferous presence in the rural woodlands. So far there is a trend towards greater species diversity in the urban woodlands.

#### 5. Cemeteries and graveyards

Twenty cemeteries in Easter Ross were visited on two occasions, recording all vascular plants and following a route round the main path (Ballinger, 2022a). Eight were in towns and 12 in rural areas; 153 species were recorded, 103 in the urban sites and 135 in the more numerous rural cemeteries. Eighty-five of the species were recorded in both urban and rural samples. There was an average of 39.0 species per site in rural cemeteries and 38.4 in urban cemeteries. Twelve neophytes were in rural places and eight in urban.

*Saxifraga granulata* (Meadow Saxifrage) was present in some quantity in two graveyards. *Luzula*



*Saxifraga granulata* (Meadow Saxifrage) site at Tain graveyard.

*campestris* (Field Woodrush) was frequent, being in 16 cemeteries, often in some quantity, and *Montia fontana* (Blinks) was in 11 places, often being frequent on the paths. All sites were intensively managed, so the lack of an urban rural difference may not be surprising.

A similar study in Dundee city recorded an average of 63 species per site, although some of the cemeteries were large.

#### 6. Car parks

Car parks are widespread in town and country, given our dependence on motorised travel. In 2021 two visits were made to 10 car parks in Tain and Invergordon in Easter Ross and 10 car parks in the surrounding rural areas were visited, recording all vascular plants within a metre of the tarmac in a similar way (Ballinger, 2022b). Ninety-nine species were recorded in urban car parks and 117 in rural.

Urban car parks yielded an average of 14.5 species in winter and 19.9 in summer. Rural car parks had 15.2 species in winter and 21.3 in summer. Rural car parks often contained species from the surrounding wild habitat, so it may not be surprising

that their totals were slightly higher. Both were extensively managed but this was probably more intensive in towns.

In recent years *Crassula tillaea* (Mossy Stonecrop) has been recorded in several gravelly places in Easter Ross and there is a particularly dense and persistent patch on Invergordon station car park.

## 7. Industrial estates

Easter Ross is probably unusual in having some industrial estates that are physically separated from the built-up area. Five urban sites and five rural were visited following the main route round as far as possible. Totals of 364 records were made in urban estates and 370 in rural; 124 species were recorded in urban settings and 149 in rural. Rural industrial estates often had species from surrounding wild areas such as *Circaea lutetiana* (Enchanter's-nightshade) as well as more typical town species. The sites studied varied in size so any comparison should only be



*Crassula tillaea* (Mossy Stonecrop) at Invergordon railway station car park.

made with caution. The overall proportion of neophytes was perhaps surprisingly low at 6.2%.

## Discussion

These were small studies in a particular highland county and may not necessarily be replicated elsewhere. The habitats studied were diverse, so it is not possible to reach any firm conclusion about overall urban and rural diversity. Most sites were managed, some intensively, as is inevitable in these sorts of settings. Urban woodlands and urban coastal paths had some species typical of woodlands and shores but also some species more associated with urban habitats. There appeared to be a greater similarity between the species lists of the more managed urban and rural sites in comparison to the less managed ones.

Very few sites were managed with conservation as a priority, although sometimes neglect appeared to result in more species. It would be good to encourage an increase in management with conservation in mind as far it is appropriate for these settings. Human activity continues to produce new habitats with new floral characteristics.

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# Mapping species using the Ordnance Survey grid – a reflection of how we have arrived at *Plant Atlas 2020*

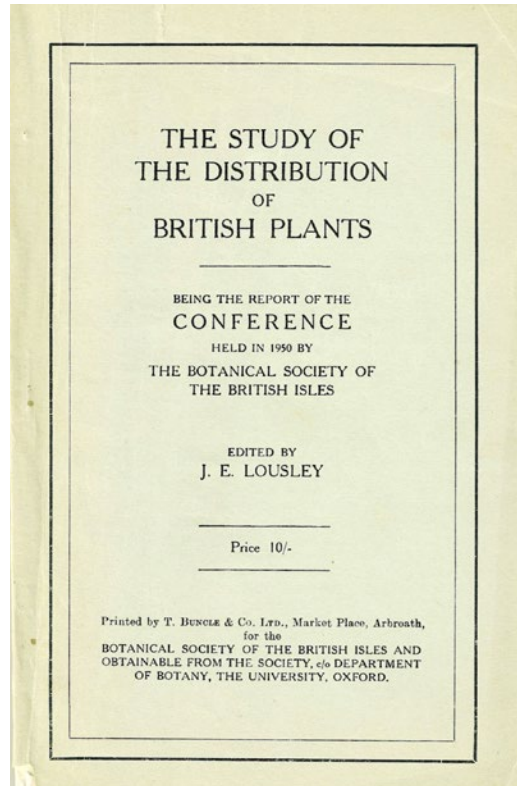
JOHN NEWBOULD

It is a little over 70 years ago that the then Botanical Society of the British Isles, now the Botanical Society of Britain and Ireland (BSBI) organised a conference (Figure 1) which planned how best to map the distribution of wild plants (Walters, 1951). This important conference spent two days considering how to record plants and what should be recorded.

Prior to 1950, most records of plants and animals were recorded using lists, possibly attached to a date and a place name or worse only a county or district name. One difficulty may be explained by a record stating 'Bradford'. Could this be Bradford, Yorkshire, Bradford on Avon (Wiltshire), Bradford on Tone (Somerset) or Bradford Abbas, Dorset, etc?

S. Max Walters, in his conference paper, described in a general way 'the study of the distribution of higher plants, with particular reference to the British Flora.' He paid tribute to the work of H.C. Watson in providing, some 100 years previously, a mapping system for Britain based on the 1852 political county boundaries with a small number of exceptions. This would stand the test of time as to provide constant boundaries thereby allowing comparative studies of the British flora and fauna. In terms of plant distribution, such maps exaggerate the true distribution of plants (Figure 2).

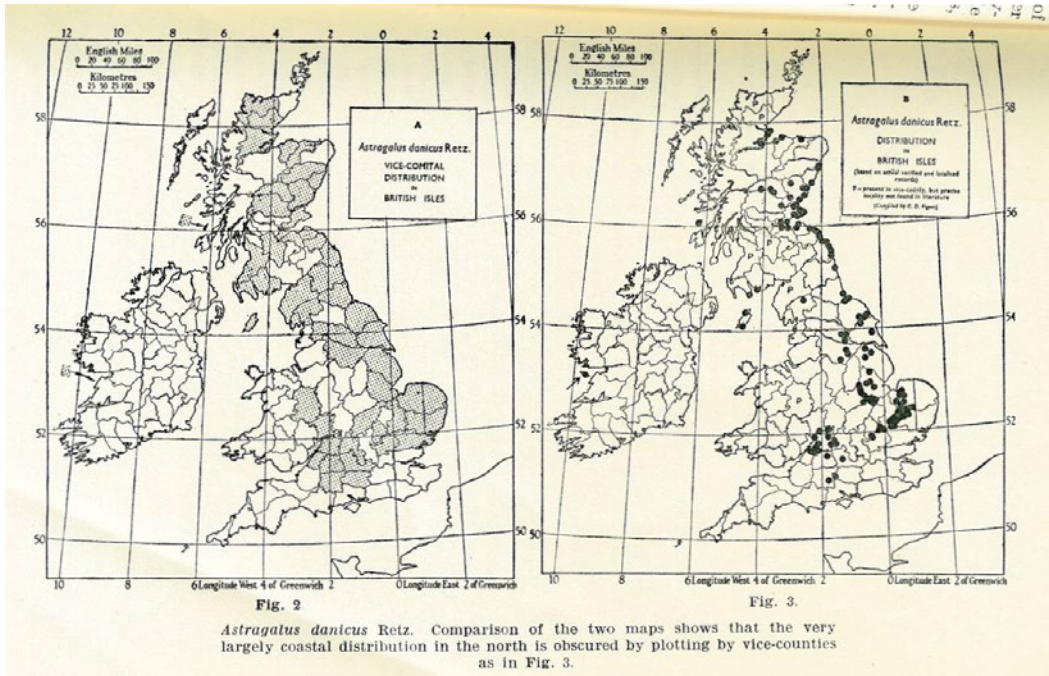
Walters also stated that amongst plant geographers at the time, it was considered that climate (in the widest sense) is the primary factor controlling the distribution of plants (and therefore *inter alia* many other species, e.g. many invertebrates). He also highlighted soil factors, but in a subsidiary manner. This is not current thinking. Recent publications take into account the chemical and physical characteristics of soil important for optimum growth of both lower and higher plant species (Grime et. al., 2007; Hill et. al., 2004, 2007; Rodwell, 1991–2000). There is



**Figure 1.** The cover of the BSBI 1950 conference report on British plant distribution, edited by J.E. Lousley and published in 1951.

now much worldwide current research in the role of soil fungi and plant development. Natural England highlights the fragility of soil in many farmland ecosystems. Walters correctly pointed out that the great climatic and physiographic changes of the past have 'left their mark' on the present day distribution of organisms. He also pointed out that the range of a species is subject to continuous variation.

It was, however, left to another famous Yorkshire botanist, Professor A.R. Clapham, of the University



**Figure 2.** Two maps produced by Max Walters for the BSBI 1950 conference. Caption reads ‘*Astragalus danicus* Retz. Comparison of the two maps shows that the very largely coastal distribution in the north is obscured by plotting vice-counties as in Fig. 3.’

of Sheffield during the last talk at the conference to propose that with the adoption by Ordnance Survey of the metric 100km square mapping system, that an atlas be produced on the basis of reporting distribution by 10km square (Clapham, 1951). He described ‘their [10km squares] great advantage as being considerably smaller than vice-counties and can give much more precise information about distribution within the general range’. After some debate, the BSBI agreed to the proposal to produce the *Atlas*; obtained the necessary finance and appointed S.M. Walters as project director with Dr Franklyn Perring in day-to-day control. Within some eight years the mainly amateur botany community had obtained sufficient data to produce a world first atlas (Perring & Walters, 1962). There were, however, some gaps, for example SK49 (Rotherham, South Yorkshire) having just 206 species. Following the opening of a Biological Records Centre at Rotherham Museum in 1974, under W.A. (Bill) Ely and the help of Rotherham

Naturalists’ Society and other local societies, the situation was rectified, with over 1000 species being listed on the NBN Atlas today.

The 10km square is the basis of most national society and recording schemes atlas projects today in the UK, allowing good statistical analysis of trends. At one point scientists considered that once an atlas had been produced it was pointless repeating the exercise. However, following repeat surveys of birds, plants and butterflies in the late 1990s, some showed considerable changes in distribution (Preston et al. 2012). Many species showed decline, but others, such as Little Egret, did show an increase. In the future, such changes could be important indicators of climate change as well as other environmental factors. Unexpectedly, the atlas methodology influenced conservation (Preston, 2013). Today, local maps are produced on a 1km and even a site-based analysis of data. Methods of analysis were developed using sampled repeat surveys in 1987 and 2004 (Braithwaite et al., 2006). One of the difficulties



with this methodology was that different recorders in 1987 may have had different skills to the recorders in 2004. One sample I was responsible for on Portland, Dorset in the 2004 survey was eliminated from the analysis as I had found three times as many species as the earlier survey!

As I write this in 2023, it is difficult to comprehend the difficulties in producing the 1960s *Atlas*. Data was fed into a large mainframe computer using paper punched tape. The method of producing dot maps from computer data in the 1964 atlas, from computer data was very new. I have found, when explaining to a younger audience, they have difficulty grasping how new and difficult such a technique was in 1962. Today, most school children can produce graphics using a computer. Producing computer driven numerical graphs really did not come into its own until the late 1980s, whilst the modern young scientist cannot contemplate life without a spreadsheet.

The 1964 *Atlas* showed just the maps, with indications of when the species had been recorded by date class. Just two classes: pre-1930 and post-1930 in black and white. The *New Atlas of the British and Irish Flora* (Preston et al., 2002) showed native plants in blue and alien plants in red, with three date classes: pre-1970, 1970 to 1986, and 1987 to 1999. It also provided statistics on the occurrence in Great Britain and Ireland separately. There was also a brief description of habitat and whether a native or neophyte. If the latter, its country of origin. Another significant difference was the provision of plastic overlays with the 1962 *Atlas* showing climate, vice-counties, under-recorded squares, etc.

In conclusion, for *Plant Atlas 2020*, not only have BSBI and partners produced a hard copy atlas, with more detailed interpretation (e.g. allowing a quick comparison of changes when demonstrating to a small audience, where online facilities are not available), but an online version that allows data to be viewed at the tetrad level it was collected at. The written commentary in both the hard copy and the online version is invaluable in assisting a person to understand not just what but why. I am sure in time, given that much data today is collected

at a finer resolution, a significant contribution to wildlife conservation, surveying and planning will be available. This could allow targeted sampling, by say entomologists, considering that many insect species are dependent on the availability of a host plant.

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# *Alopecurus magellanicus* (Alpine Foxtail) and the Widdybank Fell record, Upper Teesdale

ROD CORNER

The publication of *Plant Atlas 2020* has been a magnificent achievement and I have enjoyed looking through the maps and descriptive texts of species which particularly interest me. *Alopecurus magellanicus* (Alpine Foxtail) is one such species, and I see that it is given as descending to 457 m (1500 feet) on Widdybank Fell in the Upper Teesdale National Nature Reserve, following on from Atlas 2000. I contributed the caption for this grass in Stewart et al. (1994) and although I expressed my doubts on the origin of the low altitude record on Widdybank Fell, the editors did not take this comment into account. On seeing this figure repeated once more in *Plant Atlas 2020*, I feel I must set out my arguments as to why I feel the origin of this record is unsafe.

In 1959 the grass was discovered high on Cross Fell in v.c. 70 by Derek Ratcliffe and shortly afterwards by his colleague Alan Eddy on Little Dun Fell in v.c. 69 (Ratcliffe & Eddy, 1959). In their account, they stated the following:

*‘Morton (1954) reported it as having been discovered in a collection of grasses made by him in Teesdale in 1945, but though the identification of his plant was not in doubt there was some uncertainty about its provenance, and in spite of repeated searching, it could not be found again.’* (p. 389.)

In his *Flora of Durham* (v.c. 66), Gordon Graham stated the following:

*‘Found in 1945 on sheep-cropped mounds of short turf near the Tees on the Durham side of the river, JKM (K) det. C.E. Hubbard; “the precise grid-reference is from J.K. Morton’s memory. He tried but failed to refind it.” S.M. Walters pers. comm. The site is in any case now submerged under the Cow Green Dam.’* (Graham, 1988, p. 224.)

There was a gap of 10 years between the grass collection and its determination by Hubbard. Morton was a young man of 24 when he visited Upper Teesdale and presumably unaware of the significance of the importance of his discovery of

this grass. He later produced a *Flora of Jura and Islay* (Morton, 1959) and became a Professor of Botany in Canada. Even though the possible site of collection is now under the waters of the Cow Green reservoir, it is surprising that the grass has not been seen at other relatively low levels here. There have been intensive ecological and floristic studies carried out in this part of the reservoir, including Widdybank Fell prior to the flooding; and since then, Margaret Bradshaw has carried out detailed work for many decades, followed by John O’Reilly and other experienced field botanists attracted by the rich habitats. *Alopecurus magellanicus* has not been recorded by any of them at this low altitude; nor indeed was it recorded in the past by the host of Victorian botanists who scoured the habitats for rare plants, giving the area a special place in the botany of the British Isles.

The grass came into its own in the year 2002, when there had been no sheep on the fells for a year due to foot and mouth disease. As might have been expected, it certainly did reappear but not at low levels. Jeremy Roberts gives a vivid description of the resurgence of the flora of Cross Fell from the lack of grazing. He stated: ‘Almost as surprising [related to the discovery of *Carex vaginata* (Sheathed Sedge), new to England,] was the finding of the Alpine Foxtail in new stations, and the astonishing frequency of flowering heads in many sites’ (Roberts, 2002, p. 34). He gives a map (p. 37) showing its distribution on Cross Fell, the Dun Fells and Dufton Fell, where it was not seen anywhere below 650 m. In 2003, further localities were found to the south on Little Fell within the Warcop military range, where it reached its lowest altitude of 659 m (Roberts, 2003).

It was not until botanists such as Ratcliffe and Eddy (Ratcliffe & Eddy, 1959) left the low-level sites by the Tees and ventured onto the high-level habitats

on the Cross Fell range that *Alopecurus magellanicus* was found. I think it is relevant that Margaret Bradshaw, in her exciting book on Teesdale's Special Flora (2023), makes no mention of the Morton record in her description of this grass, which only occurs above about 650 m altitude. She feels that Morton did mix his collections up (M. Bradshaw, pers. comm.). Morton's description of the habitat as 'sheep-cropped mounds of short turf' doesn't quite ring true, as it is a plant of flushes. I have seen it many times in these upper level flushes but never below 700 m in altitude.

In conclusion, there is no doubt that Morton made the first collection of *A. magellanicus* from England. However, it seems likely that it was not collected from the low altitude site on Widdybank Fell, as commonly stated, but from one of the high altitude flushes of the Crossfell range to the west, as Morton had mixed his collected material. It is of note that Clive Stace (2019, p. 1083) gives its lower altitude as 600 m (1968 feet); and Geoffrey Halliday (1997, p. 548) puts it well when he described the Morton record as 'problematical'.

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*Alopecurus magellanicus* (Alpine Foxtail) at 800 m on north side of Cross Fell, 21/05/2004; the pink moss is *Bryum weigelii* (Duval's Thread-moss). Rod Corner



## BEGINNER'S CORNER

### Paving the way: some increasing alien grasses of urban habitats

Take a browse through the grasses section in *Plant Atlas 2020* and it might seem to go on forever! There's a great diversity of grasses and, seemingly to complicate matters within this already tricky group even further, there are ever more species appearing from foreign shores, generally aided by human hand. It can be difficult for books to keep up with all of these new species and it often requires more specialist publications such as *Grasses of the British Isles* in the BSBI handbook series, rather than more general field guides to sort them out. Many of us live in or close to a reasonably sized town or city and it is quickly apparent that grasses fare well in such places, eking out a living on the driest of walls, in gutters and cracks in paving. While a number of our commoner, native, grasses do well in such places, it is here that we often notice something a little different.

Gone are the days of the wool shoddy fields, or bulk deliveries of products to open docksides, from where exciting non-natives might persist for a while and make interesting days out for local botanists. These days, non-native grasses tend to spread most readily to our shores via one of three sources: agricultural side-lines such as gamebird

The distinctive flowerheads of Annual Beard-grass (*Polypogon monspeliensis*) on disturbed ground at the edge of a housing estate, Mundsley, Norfolk. All photographs by the author.

rearing, the horticultural industry, and garden bird feeding; with the last two the most likely sources for plants in urban situations. The somewhat milder climates experienced in built-up areas due to the warming effects of all that hard surface can be ideal for encouraging species from further south and many alien grasses are indeed from the Mediterranean region or – more recently – even further afield in the southern hemisphere.

Some of these alien grasses are highly distinctive in their own right and offer an opportunity to 'get into grasses' without needing to learn all of that frightening grass jargon all in one go. Here's a selection of some of the more frequently encountered species that have already spread themselves across much of southern Britain and are steadily making their way north – if they're not in your area yet, it might be because they just need to be found, so it's time to start pounding your local pavements and seeing what's out there!



**New Zealand Wind-grass (*Anemanthele lessoniana*).** Also known as Pheasant's-tail, this is a perennial grass that can form loose, graceful tufts of arching branches with long leaves that turn rich shades of orange, yellow and red, making it highly popular as an ornamental for the garden and often identifiable even when not in flower. The individual flowers are tiny (2.5–3mm long), but each with a very long awn and carried in long, multi-branched, arching heads. More recently, this species has been widely used in municipal plantings in urban areas, from where it has been recorded spreading by self-seeding into nearby road margins and path sides. The BSBI Maps website shows a rather fragmented distribution in urban areas, north to northern Scotland and west to southern Ireland, but also major clusters from the West Country, London/Surrey, Leicester/Peterborough and East Norfolk. These may be areas of major spread, or could simply indicate regions where recorders are familiar with the plant. It should certainly be expected elsewhere in urban and suburban areas.



**Greater Quaking-grass (*Briza maxima*).**

Originating from southern Europe, this species is no doubt well-known to gardeners and, especially, flower arrangers. Although we have a native Quaking-grass (*Briza media*), this introduced species has much larger flower spikes which can contain up to 16 florets and measure up to 2cm in length. However, always beware of young flowerheads early in the season and to be sure that the flowerheads are fully developed, as they can be much smaller and more pointed when young and thus more closely resembling our native species. Plants probably originate most often as 'escapes' from gardens, as they self-seed very readily, but some may also originate from bird-seed. Our native Quaking-grass is a plant of chalk grassland, but Greater Quaking-grass can be found in a wide range of urban habitats, doing particularly well at the base of walls and in dry flowerbeds. Widely recorded throughout much of Britain and Ireland, both in urban areas and coastal regions, particularly in the south, suggesting the need for a slightly milder climate for this primarily Mediterranean species.



**Hairy Finger-grass (*Digitaria sanguinalis*).** There are no native 'finger-grasses' in the British Isles but this style of open, fingered flowerhead is common in warm-temperate to tropical countries. If you find a grass with fingered flower spikes, it is worth consulting the literature or your county recorder for confirmation, but Hairy Finger-grass is at present by far the most commonly recorded species, being reported throughout much of lowland Britain as far north as Central Scotland and around Belfast. The flowerhead has 4–10, long, slender and flexible spikes, with the elliptical, sharply-pointed florets arranged in pairs. Plants will spread by rooting at the nodes and are most often found in mown grass areas or growing as a pavement weed.

**Argentine Needle-grass (*Nassella tenuissima*).** A slender and graceful species, with very fine leaves (0.2–1.5 mm wide), usually sold in the horticultural trade as *Stipa tenuissima*. Although very fine, the leaves may grow up to 60 cm in length and form very tight, dense clumps. The long, branched flower spikes carry many, very tiny florets (2.5–3 mm long) with very long awns (4.5–10 cm long) and soon turn a very pale straw colour, giving the plant a 'blond highlights' look.



This has become a popular garden ornamental and seedlings are now being recorded from urban areas in gravel paths, cracks in pavements and similar places. So far, records have mostly come from the broader London–Oxford area and around Cambridge and Norwich, but there are reports from well into northern Scotland, South Wales and the eastern half of Ireland; its current mapped distribution may well be, at least in part, down to recorder familiarity.



**Common Canary-grass (*Phalaris canariensis*).** This is a highly distinctive species, with its broadly striped, green-and-white florets gathered together in a neatly rounded head. There are other, less common, canary-grass species, but none have such broad florets. Common Canary-grass is frequently recorded from where bird-seed has been left to germinate, but is also sometimes grown for flower arrangement and may be occasionally found by the field full, being grown as a crop for bird feed. Widely recorded throughout Britain and Ireland, even as far north as Shetland.



**Annual Beard-grass (*Polypogon monspeliensis*).** A very attractive grass with its dense-packed, softly downy flowerheads. Beware of confusion with the somewhat similar Hare's-tail grass (*Lagurus ovatus*), which has more downy leaves and shorter, more ovate flowerheads, resembling a rabbit tail. This is typically a relatively small, annual species, growing to around 30 cm in height (sometimes more) and often forming multi-stemmed tufts. Annual Beard-grass has a very wide, natural distribution as a plant of salt-influenced sands and drier areas on the edges of saltmarsh across southern Europe, North and East Africa and all the way to the far east of China. This native distribution is considered to include the south-eastern coasts of England, but this species also crops up as a garden ornamental and a constituent of bird-seed and it is from these sources that it has spread to become widespread as a plant of urban habitats. Records are mostly from south of a line from Liverpool to the Humber, but the species is occasionally reported elsewhere and is worth looking for.



**Water Bent (*Polypogon viridis*).** This species acquired its English name when it was formerly considered to be in the genus *Agrostis* and that shows in its rather open flowerhead with tiered layers of progressively shorter side branches. Overall, it can look rather like the meadow-grasses (*Poa* spp.) but has a distinctive, upright, stiffness about it. The florets are not awned but are finely pointed at the tips and have broad, silvered margins. Water Bent has rapidly colonised urban areas from a former base in the South West and is already widespread as far north as a line from Liverpool to Newcastle and in scattered urban areas further north into lowland Scotland. In Ireland it is already frequent in suitable habitat, from Waterford to Belfast.



**Rough Bristle-grass (*Setaria verticillata*)**

There are a number of bristle-grasses that might be found as urban aliens, but most also occur in more rural environments, which we hope to cover another time. However, one that especially stands out as different is Rough Bristle-grass. Most bristle-grasses have a narrow, upright flower spike, with each individual, globular floret accompanied by an array of bristly hairs. In most species, these hairs are furnished along their length with short, stiff bristles which point towards the tip. In the present species, these point towards the base and this simple difference can easily be felt with the finger tips (and seen with a hand lens). Having the bristles set this way causes the flower spikes to become entangled in each other and is one of the most distinctive features of this bristle-grass. The spikes and florets can also easily attach to clothing and animal fur. In the past this species has been an occasional introduction from a variety of sources, but a recent increase in urban areas across lowland Britain, roughly from Cheshire and Norfolk southwards, is probably mostly from bird-seed mixes.



# ADVENTIVES & ALIENS

## Adventives & Aliens News 30

Compiled by Matthew Berry

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Alan Leslie has furnished this month's column with records of three more coir aliens from v.c. 29, a fascinating and for the British Isles, seemingly entirely novel source of alien plant species. This follows on well from the species described in his article in *BSBI News* 150, pp. 69–71.

There have also been two recent reports of *Veronica cymbalaria* (Pale Speedwell), see v.c.c. 11 and 15. This is a species for which there have been hardly any new records since the first British record in 1985. Will that remain the case?

I conclude a very brief preamble on a more concerning note. For some of us *Leycesteria formosa*

(Himalayan Honeysuckle) is an occasional sight in towns, where it has got out of gardens, and occasionally as an odd specimen in plantations close to gardens. In the West Highlands, however, James Fenton has observed it spreading very quickly in clear felled areas in v.c.c. 97 and 98, a long way from gardens. It seems to be behaving there much as it does in New Zealand, where it is considered an invasive species. He does not think it should be for sale in the UK and judging on this evidence it is difficult not to agree. At present it is not included in the list of Schedule 9 plants.



*Leycesteria formosa* (Himalayan Honeysuckle) near Loch Linnhe picnic area, Westernness (v.c. 97). James Fenton

**V.c. 2 (E. Cornwall)**

*Valeriana pyrenaica* (Pyrenean Valerian). Treligga (SX0501584475), 14/5/2023, D. Steere (comm. D. Steere): one plant on a rural village road verge with ruderal native plants, the nearest gardens c. 30m away, and an obvious garden escape in David Steere’s view. The first v.c. record since 1951 when it was recorded in SW94 by P.T. Barbary. A tufted perennial (Valerianaceae) up to 1.2m tall with a basal rosette and opposite stem leaves, hollow petioles and pink flowers in dense compound cymes. A native of the Pyrenees, it is a garden escape in Britain and Ireland being more common in the north, particularly Scotland. English records have been mostly concentrated in v.cc. 4 and 5, where it has been known since 1933 and 1883 respectively. Stace (2019): 834.



*Valeriana pyrenaica*, Treligga, East Cornwall (v.c.2). David Steere

**V.c. 4 (N. Devon)**

*Capsicum annuum* (Sweet Pepper). Westward Ho! (SS432253), 25/9/2022, R.I. Kirby (conf. T.D. Dines): fruiting in a road side gutter. The first v.c. record. The closest previous south-western records seem to have been for Sherbourne in v.c.9. A glabrous to subglabrous white-flowered annual (Solanaceae) from tropical America, occurring primarily as a food refuse alien in Britain and Ireland, more rarely from bird-seed. It usually has one flower per leaf axil. Stace (2019): 608.



*Capsicum annuum*, Westward Ho!, North Devon (v.c. 4). Bob Kirby

*Lemna turionifera* (Red Duckweed). Bideford (SS448273), 1/8/2022, R.I. Kirby (conf. R.V. Lansdown): among a mixed population of *Lemna* in a drainage ditch, Kenwith Valley Nature Reserve. The first v.c. record. Revisited and confirmed in 2022 after it was noticed in a photograph taken in 2013. A N. American/Asian free-floating aquatic perennial (Araceae) which can be hard to distinguish from *L. minor* (Common Duckweed). The red pigmentation of the fronds is a useful spotting character but not wholly diagnostic and not invariably present. See Richard Lansdown’s recent comments relating to *L. valdiviana*, *BSBI News* 153, p. 88. *Adventives & Aliens News* 23, v.c.35. Stace (2019): 876.



*Lemna turionifera*, Bideford, North Devon (v.c. 4).  
Bob Kirby

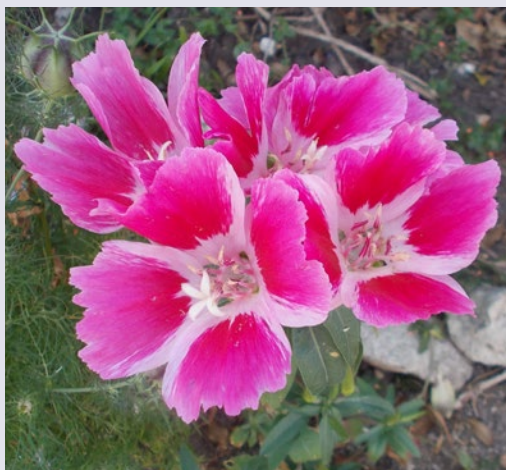
*Echinochloa esculenta* (Japanese Millet). Muddlebridge (SS528325), 17/9/2022, R.I. & S.H. Kirby (conf. O. Pescott): single plant growing on a kerb. The first v.c. record. An annual grass that originated in cultivation, found in bird-seed and as a game food relic in Britain and Ireland. It has a clumped inflorescence like *E. frumentacea* (White Millet) but with purple-tinged spikelets rather than yellowish-green. Stace (2019): 1106.

### V.c. 5 (S. Somerset)

*Cardamine occulta* Hornem. (Cryptic Bitter-cress). Minehead (SS97504571), 22/4/2022, G. Lavender (comm. S. Leach): in pots in Minehead Garden Centre; Yeovil (ST541178), 23/4/2022, I.P. Green (comm. S. Leach): weed in the Brimsmore Garden Centre. The first and second v.c. 5 records respectively. An octoploid east Asian annual (Brassicaceae) which is being increasingly recorded while remaining predominantly a casual species of plant containers and garden centres. For characters which reliably differentiate it from *C. flexuosa* and *C. hirsuta*, consult the table on p. 74 of *BSBI News* 135.

*Scutellaria altissima* (Somerset Skullcap). Currypool Mills (ST23173830), 21/6/2022, R. FitzGerald, J. Webb & S. Austin: a garden escape self-sown in cracks in concrete by bridge. First v.c. 5 record. Stace (2019): 661. See v.c. 28.

*Laphangium luteoalbum* (Jersey Cudweed). Minehead (SS97104628), 25/4/2022, I.P. Green (comm. S. Leach): growing in a pavement crack. The first v.c. 5 record. A white-woolly hairy annual composite with straw-coloured phyllaries which continues to spread as an urban weed of pavements and driveways, etc. The first modern Irish record was for 2001 in v.c. H6. Stace (2019): 773. See v.c. 55.



*Clarkia amoena*, Swanage, Dorset (v.c. 9). David Leadbetter

### V.c. 9 (Dorset)

*Clarkia amoena* (Godetia). Swanage (SZ0301080301), 25/6/2023, D. Leadbetter: one plant in lane south of Bay Crescent. The second v.c. record and first since 1998. A hardy four-petalled annual (Onagraceae) native to western N. America, distinguished from *C. unguiculata* (Clarkia) by the hairy leaves and longer, less clawed petals. It is a garden plant turning up on disturbed waste ground or as a throw-out with dumped soil etc. and strictly casual. Stace (2019): 389.

*Verbascum phoeniceum* (Purple Mullein). Wareham (SY92098834), 25/5/2023, D. Leadbetter: one plant in grassland c. 100m north-east of parking area on north side of Wareham Station. The third v.c. 9 record and the first this century. A tall herb (Scrophulariaceae) native to south-eastern Europe and south-west Asia. A garden plant and also in bird-seed. Rather like *V. blattaria* (Moth Mullein) but

perennial with the corollas purple and the anthers all reniform. *Adventives & Aliens News* 7, v.c. 39. Stace (2019): 640.



*Verbascum phoeniceum*, Wareham, Dorset (v.c. 9).  
David Leadbetter

*Ligularia stenocephala* (Maxim.) Matsum. & Koidz. (Narrow-headed Leopardplant). North of Dorchester (SY69089104), 11/7/2023, D. Leadbetter: one large patch on bank of River Frome below garden. The first v.c. 9 record and there are very few if any records for it elsewhere in Britain and Ireland. A clump-forming perennial herb (Asteraceae) to 1.2 m, native to east Asia, which like *L. przewalskii* (Przewalski's Leopardplant) has a long narrow inflorescence; but the leaves are ovate-acute and serrate to dentate-laciniate (vs deeply palmately lobed). Perhaps most likely to be found spreading/surviving where once in cultivation.

#### V.c. 10 (Isle of Wight)

*Campanula alliariifolia* (Cornish Bellflower). Ventnor (SZ559775), 6/1/2022, P.D. Stanley (comm. P.D. Stanley): two plants on wall top, foot of Spring Hill. The first v.c. 10 record. A stately white-flowered perennial (Campanulaceae) which like *C. medium*

(Canterbury-bells) has calyces with five reflexed sepal-like appendages in addition to the five calyx lobes. A garden plant native to Turkey and the Caucasus. A small colony on a shaded bank in Wellcombe Crescent in Eastbourne (v.c. 14), recorded in 2012 (M. Berry), was extinguished by a carpet of invading ivy. Stace (2019): 708.

*Erigeron annuus* (Tall Fleabane). Kingston (SZ47958140), 15/6/2019, P.D. Stanley: one plant on verge of Kingston Road, north of Beckfield Cross. The first v.c. 10 record. There was also at least one new record for v.c. 14 in 2023, in Eastbourne (TV69E, M. Berry), bringing the E. Sussex total to three. In time the situation in Britain and Ireland could move closer to that on the continent, where this N. American composite is widely naturalised. Stace (2019): 783.

#### V.c. 11 (S. Hants)

*Cardamine quinquefolia* (Whorled Coralroot). Harefield (SU467139), 18/3/2023, P.D. Stanley (comm. P.D. Stanley): a large patch on western verge of A27, West End. The first v.c. record. A purple-flowered rhizomatous perennial (Brassicaceae) native to eastern Europe and occurring as a garden escape in Britain and Ireland. Of similar species, *C. bulbifera* (Coralroot) has bulbils in the upper leaf axils; *C. heptaphylla* (Pinnate Coralroot) has stem leaves at separate nodes (vs in a whorl); and *C. pentaphyllos* (L.) Crantz (Five-leaflet Bittercress) has stem leaves of 3–5 leaflets but palmate (vs pinnate). Stace (2019): 425.

*Veronica cymbalaria* (Pale Speedwell). Southampton (SU454153), 18/3/2023, P.D. Stanley (comm. P.D. Stanley): c. 30 plants on a kerb edge, access road leading to a car wash, just to the left of the main entrance to Haskins Garden Centre, Gaters Mill. An annual herb (Veroniceae) which in habit and general appearance resembles white-flowered *V. hederifolia* (Ivy-leaved Speedwell). It is well illustrated by the line drawings on p. 1 of *BSBI News* 40. On p. 14 of the same issue there is a note of the first British record from v.c. 1 in 1985. One of a suite of southern European species which it might be predicted we shall be seeing more frequently in the very near future. See v.c. 15. Stace (2019): 621.

*Avena barbata* (Slender Oat). Portsmouth (SU641031), 22/5/2023, P.D. Stanley (comm. P.D. Stanley): by Park and Ride, Tipner; also SU645044 (Junction 12, M27/M275), SU643020 (Junction 2, M275) and SU695089 (Junction 3, A3/Waterlooville); hundreds on central reservation. The first v.c. 11 records. An annual Mediterranean grass, traditionally a wool and grain alien in Britain, which is spreading in such habitat. With two long bristle-tipped teeth per lemma like *A. strigosa* (Bristle Oat) but the spikelets breaking up above the glumes and between the florets (vs not breaking up at maturity). *Adventives & Aliens News* 24, v.c. 15. Stace (2019): 1065. See v.c. 24.

### V.c. 12 (N. Hants)

*Euphorbia waldsteinii* (Waldstein's Spurge). Barton Stacey (MOD) (SU4441), 25/10/2022, J. Moon (comm. A. Mundell): garden escape on western edge, Area 7. A glabrous, rhizomatous perennial (Euphorbiaceae), native to Eurasia, and belonging to the difficult *E. esula* group. Very like *E. esula* (Leafy Spurge) but more robust and leaves linear to oblong-lanceolate (vs oblanceolate)/widest below middle (vs widest above middle). Stace (2019): 362.

*Lonicera maackii* (Rupr.) Maxim. (Amur Honeysuckle). Magdalen Hill Down (West) (SU49852924), 27/8/2022, Hampshire Flora Group (det. A.R.G. Mundell): four tall shrubs. Specimens were also found in the allotments field at SU49772926 and SU49802824 on 30/8/2022 by A.P. Stewart and D. Pearson (also det. A.R.G. Mundell). The first records for v.c. 12 and Hampshire as a whole. A deciduous multi-stemmed shrub (Caprifoliaceae) from east Asia. The ovate-elliptic leaves (5–9 cm long including petiole c. 0.8 cm long) appear before the flowers. The paired pale yellow flowers are grouped in small clusters and are followed by red berries, c. 6 mm long. The pith in mature stems is brown but the stems eventually become hollow. Tony Mundell worked through the rather gruelling *Lonicera* key in the European Garden Flora to arrive at this determination. It could be bird-spread from gardens and parks etc. and is considered an invasive species in eastern N. America.



*Lonicera maackii*, Magdalen Hill Down, North Hampshire (v.c. 12). Tony Mundell

### V.c. 14 (E. Sussex)

*Euphorbia portlandica* (Portland Spurge). Eastbourne Roselands (TV6142899993), 30/4/2023, M. Berry (conf. E.J. Clement): growing out of a wall and at wall base behind a lamp post where Waterworks Road turns into Moy Avenue, very close to a tetrad boundary and perhaps crossing it. It has apparently spread from the site of a disused depot into rupestral/ruderal habitat provided by 'suburbia' in the adjacent residential area. First seen c. 2019 but inaccessible then. I have found details of two other 'casual' records of this otherwise native species of coastal sands and limestone cliffs, in v.c. 5 (ST23Z, 1990) and 15 (TR05J, 2010). There may well be others. It has been recorded in a number of new sites in v.c. 10 recently, where it is a native plant (P.D. Stanley, pers. comm.). The seeds are pitted. Stace (2019): 362.

*Lythrum virgatum* L. (Slender Purple-loosestrife). Berwick area (TQ5231505214), 21/7/2023, M. Berry & J. Linsell (conf. E.J. Clement): one plant of several stems on waste ground by new footway/cycle path by Lewes Road (A27), near turning for

Berwick village. A native of central and eastern Europe (Lythraceae), it much resembles *L. salicaria* (Purple Loosestrife) but is completely glabrous and has narrower, more willow-like leaves. It could be the first confirmed British record for a very long time. There is an Irish record for v.c. H16 from 2010. It seems to be in fashion as a garden plant ('Dropmore Purple' is one of the cultivars), so more records are very likely.

*Romulea bulbocodium* (L.) Sebast. & Mauri (Crocus-leaved Romulea). Beachlands (TQ6757505067), 4/2023, E. Jones (det. M. Berry/conf. E.J. Clement): many plants scattered for c. 8m in turf at top of beach. Evan Jones first became aware of the colony in 2022 or possibly earlier. It was perhaps planted in the first place but seems to be spreading very locally. The first Sussex record and perhaps a first for Britain and Ireland too. Perennials (Iridaceae) growing from a corm; *Crocus*-like, but differing in the presence of a short stem (vs an underground pedicel) and the herbaceous bract sheathing the perianth tube (vs white or brown bract). The leaves are also

more or less round in section (vs flat) and lack the central white line of *Crocus* species. *R. bulbocodium* is a native of southern Europe and northern Africa and a garden plant in Britain and Ireland. It has sparse hairs in the throat of the perianth and on the filaments, one of the characters distinguishing it from the native *R. columnae* (Sand Crocus).

#### V.c. 15 (E. Kent)

*Veronica cymbalaria* (Pale Speedwell). Faversham (TR0242060852), 5/2/2021, F.R. Gomes & E. Gomes: established and widespread in several patches, including one of 2m × 5m, Faversham Cemetery. It was initially observed on two graves next to the main drive. The first record for v.c. 15 and Kent as a whole. Kent Botany 2021, p. 15.

#### V.c. 16 (W. Kent)

*Dipsacus laciniatus* (Cut-leaved Teasel). Snodland (TQ69226026), 14/8/2021, G. Kitchener: colony c. 100m long on waste ground of former Oast Park Golf Course (closed 2017), in rough vegetation on



*Romulea bulbocodium*, Beachlands, East Sussex (v.c. 14). Evan Jones

and around an embankment; some *D. fullonum* (Wild Teasel) present, but no hybrids seen. The first record for v.c. 16 and Kent. A tall biennial herb (Dipsacaceae), a native of Eurasia, differing from *D. fullonum* in the deeply lobed leaves (vs more or less entire) and broader linear-lanceolate basal bracts (vs linear). It is perhaps in wildflower/grass seed mixtures and bird-seed, as well as an occasional garden plant. It has a long association with v.c. 23, where it was first recorded at Marston in 1920. *Adventives & Aliens News* 19, v.c. 64. Stace (2019): 835–836.

### V.c. 22 (Berks)

*Bituminaria bituminosa* (L.) C.H. Stirt. (Pitch Trefoil). Near Sunninghill (SU9470568614), 30/4/2023, M.J. Crawley (comm. P. Stroh): surviving despite frosts in an area of gravel where seedlings have been known since 2014, Kennedy Building, Silwood Park. Seven seedlings were seen in 2022 for example. More familiar perhaps as *Psoralea bituminosa* L., a rather spindly perennial species (Fabaceae) of Mediterranean Europe to c. 1 m with globular terminal heads of blue-violet flowers and long-petiolate, gland-dotted, trifoliate leaves, the leaflets of the upper leaves more lanceolate than the lower. It produces long-beaked, hairy, ovoid, one-seeded fruits. The English name comes from the fact that the leaflets emit a strong smell of tar when crushed. It has been a wool alien in Britain.

*Deutzia crenata* Siebold & Zucc. (a Deutzia). Near Sunninghill (SU9465368632), 11/6/2023, M.J. Crawley (comm. P. Stroh): self-sown at the base of the wall of the Stable Yard, with *Leycesteria formosa* (Himalayan Honeysuckle) and *Hypericum* × *inodorum* (Tall Tutsan), Silwood Park. New to Britain. A deciduous shrub (Hydrangeaceae) to c. 3 m tall, native to Japan, with ovate-lanceolate leaves and cymose panicles of many flowers that have white narrowly elliptic petals, 0.8–1.5 cm × c. 6 mm. The leaves are sparsely stellate-hairy, the hairs of the upper surfaces being 4–5-rayed and of the lower 10–15-rayed (vs 7–10-rayed in *D. scabra*). Highly variable and very like the equally variable *D. scabra* (Deutzia). Current taxonomic opinion seems to

regard them as good species but they can be hard to separate and have been treated as conspecific by some authorities.

### V.c. 24 (Bucks)

*Avena barbata* (Slender Oat). Staines (TQ021725), 5/2023, P.D. Stanley (comm. P.D. Stanley): at the Berks/Bucks border (Junction 13, M25), Hythe End. The first v.c. 24 record.

### V.c. 27 (E. Norfolk)

*Muehlenbeckia complexa* (Wireplant). Salle (TG10472437), 29/4/2023, S. Pryce (det. M. Crewe/T. Doncaster): one large plant apparently self-seeded into roadside face of a garden wall, Wood Dalling Road, with several smaller plants in rough beds below. No parent plants were seen anywhere nearby. The first Norfolk record. A wiry woody-stemmed subglabrous climber (Polygonaceae) with small (0.4–1 cm across) alternate more or less orbicular leaves and a distinctive white succulent fruiting perianth containing three-angled achenes. A native of New Zealand and long in cultivation. It is particularly known as an escape in extreme south-west England, so its occurrence in the extreme east of the country might be of particular significance. Stace (2019): 471.



*Muehlenbeckia complexa*, Salle, East Norfolk (v.c. 27). Suki Pryce

*Oloptum miliaceum* (Smilo-grass). Cromer (TG24), 1/1/2022, J. Parmenter, S. Pryce & M. Crewe (det. M. Crewe/conf. O. Pescott): found in a pavement crack during a New Year Plant Hunt, the source being a nearby communal garden where many young and mature plants were observed in and around the planted ornamental shrubs. The first record for v.c. 27 and Norfolk as a whole. See Adventives and Aliens News 19, v.c. 14. In 2023 it was found in a second v.c. 14 site – two tufts in paving by marina, Eastbourne Sovereign Harbour (TQ60E, M. Berry). A tufted perennial grass native to the Mediterranean region which as well as being a bona fide garden plant could also arrive in gardens as a nursery weed. Stace (2019): 1042.

### V.c. 28 (W. Norfolk)

*Trifolium resupinatum* (Reversed Clover). Little Snoring (TF96203221), 6/11/2021, Norfolk Flora Group: scores of plants in the base and around margins of a shallow balancing pond next to a recently completed housing estate. The first Norfolk record. A procumbent to suberect glabrous annual (Fabaceae), native to the Mediterranean, that has the corollas oriented so that the keels are uppermost. The recorders have suggested an origin in a wild



*Trifolium resupinatum*, Little Snoring, West Norfolk (v.c. 28). Jo Parmenter

flower seed mix for the Little Snoring plants. It has been in wool and might be in grass seed (spread thence by mowing or on footwear, etc.). It has also recently been turning up in the touring sections of caravan sites, sometimes with *T. tomentosum* (Woolly Clover) (with smaller leaflets and more densely woolly fruiting calyces), see *BSBI News* 139, pp. 53–55. Stace (2019): 185.

*Isatis tinctoria* (Woad). Swaffham (TF82440978), 23/4/2022, NFG: c. 20 plants on edges of thinly grassed track and parking area, Tumbler Hill Allotments; it probably originated from another site within the allotments and is thought likely to persist. A tall glaucous yellow-flowered biennial or perennial herb (Brassicaceae) with distinctive drooping fruits like mini ash keys; formerly an ancient dye plant now a scarce casual where old seed is disturbed or the result of more recent introductions in wildflower mixes etc. It has been known on a vertical chalk cliff near Guildford (v.c. 17) for c. 240 years and also on a river cliff in the Severn Valley near Tewkesbury (v.c. 33) for a good span of years; the last formal records 2013 and 1991, respectively. *Adventives & Aliens News* 27, v.c. 27. Stace (2019): 445.

*Amaranthus blitoides* (Prostrate Pigweed). Roudham (TL950870), 8/10/2022, 8/10/2022, NFG (det. Bob Leaney): on a sandy trackway. The source is believed to be a game-crop. The fifth record for both Norfolk and v.c. 28 but only the second since 2000. A prostrate N. American annual (Amaranthaceae) with axillary inflorescences and transversely dehiscent fruits. Vector-wise it has been associated with wool, oil-seed, bird-seed, carrot seed and cotton, Clement & Foster (1994), and it seems to be increasing. *Adventives & Aliens News* 6, v.c. 26. Stace (2019): 530.

*Scutellaria altissima* (Somerset Skullcap). Thetford (TL876842), 12/7/2021, I. Woodward (det. M. Spencer/comm. I. Woodward): small clump in wooded area behind houses; associates included *Lamium galeobdolon* subsp. *argentatum* (Garden Yellow Archangel). It seems to be the first v.c. 28 record. A Eurasian perennial herb (Lamiaceae), persistent in v.c. 6 since 1929, occasional as a casual garden escape/discard elsewhere.



*Knautia macedonica* (Macedonian Scabious). Mundford (TL804938), 2/7/2022, NFG: one plant on small triangular green (no obvious source). The first v.c. 28 and Norfolk record. A red-flowered perennial Balkan herb (Dipsacaceae) grown in gardens and sometimes seeding from them. *Adventives & Aliens News* 15, v.c. 59. Stace (2019): 836.

### V.c. 29 (Cambs)

*Ampelopsis japonica* (Thunb.) Mak. Cottenham (TL43756625), 8/2022, J.L. Sharman (det. A.C. Leslie): one plant, Monksilver Nursery. Alan Leslie describes it as a perennial tuberous vine (Vitaceae) with much divided palmate leaves, branched tendrils and branched, tendril-like stems producing loose terminal clusters of tiny white flowers. The terminal leaflet is typically winged between the lobes but this seems to be less obvious in immature growth. It grew to a height of c. 20 cm before being frosted. A native of China and southern Russia and only an introduction in Japan.

*Eragrostis viscosa* (Retz.) Trin. (Sticky Love-grass). Cottenham (TL43756625), 8/2022, A.C. Leslie (conf. E.J. Clement): two plants (one much larger than the other and with a slightly more open inflorescence), Monksilver Nursery. Among the features that helped to guide Alan Leslie towards his determination were the flowers with three stamens and very small blackish red anthers and the sticky sessile glands sunk in the surfaces of the upper part of the culms, including the loose cylindrical inflorescences. An annual or sometimes perennial species of 'love grass' that is a native of tropical Africa (including S. Africa), the southern Arabian Peninsula and tropical Asia.

*Dactyloctenium aegyptium* (L.) Willd. (Common Crowfoot). Cottenham (TL43756625), 8/2022, A.C. Leslie (conf. E.J. Clement): one plant that flowered through to first frosts, Monksilver Nursery. Despite being clearly tender it produced a lot of tiny white lenticular seeds. A mat-forming (sometimes stoloniferous) annual grass with papillose-hispid leaves. The inflorescence is an umbel of 3–9 ascending or radiating linear to narrowly oblong racemes, 1.2–7.5 cm long. It is a native of Africa,

the Middle-East and east Asia; and an introduction in the southern US, much of S. America, southern Europe and Australia. Alan Leslie described its appearance as being like little starfish mounted on cocktail sticks!

### V.c. 55 (Leics)

*Houthuyntia cordata* (Fish-plant). Leicester (SK608038), 7/8/2021, R. Parry (comm. R. Parry): growing in pavement joints having escaped from a front garden, Staveley Road. The first v.c. 55 record. A rhizomatous east Asian herb (Saururaceae) grown in gardens at least in part for the cordate-ovate, gland-dotted leaves, often coloured cream and red, and which have a tangerine to fish-like odour. A marsh plant, it would only likely become established in permanently moist situations. Stace (2019): 87.

*Laphangium luteoalbum* (Jersey Cudweed). Enderby (SP533992), 14/9/2021, L. Heald (conf. G. Hall): several plants scattered across pavement and into front gardens, Alexander Avenue. The former were killed by council workmen, the garden population surviving. The second v.c. 55 record. A third record was made by G. Hall in Kimelford Close, Leicester (SK609077) on 25/7/2022; and a fourth by R. Parry of plants scattered in the block paving of a front garden, also in Leicester (SK575068), on 18/8/2022.

### V.c. 56 (Notts)

*Cardamine corymbosa* (New Zealand Bitter-cress). Southwell (SK70295429), 14/3/2020, R.A. Johnson: several plants growing at the base of a wall with *C. hirsuta* (Hairy Bitter-cress), Byron Gardens. The first v.c. 56 record. An annual (Brassicaceae) native to New Zealand and dispersed by the trade in garden plants. Recorded as a weed of garden centres, in plant containers and sometimes in paving/wall bases where it has more properly escaped. Like *C. hirsuta* but fewer flowered (sometimes only one) and more tenaciously rooted. *Adventives & Aliens News* 3, v.c. H36. Stace (2019): 426.

*Nepeta racemosa* (Eastern Cat-mint). Barton-in Fabis (SK522326), 28/4/2021, D.C. Wood: several plants in sparse ruderal vegetation on roadside verge where

there had been recent road works. The first v.c. 56 record. An aromatic perennial herb (Lamiaceae) native to the Caucasus and Iran that is commonly grown in gardens. *N. × faassenii* (Garden Cat-mint) is probably sterile, so genuine seedlings are more likely to be this species. *Adventives & Aliens News* 3, v.c. 14. Stace (2019): 664.

*Helianthus × multiflorus* (Thin-leaved Sunflower). Clipstone area (SK585625), 17/3/2021, D.C. Wood: single clonal patch on a heavily used verge in tall ruderal vegetation, Newlands Track, Vicar Water Country Park. The first v.c. 56 record. Like *H. × laetiflorus* (Perennial Sunflower) and *H. tuberosus* (Jerusalem Artichoke), a patch-forming composite grown in gardens and allotments, which may or may not be completely sterile, and which can persist where dumped etc., but seeming to be less commonly encountered. Distinguished from those two other rhizomatous taxa, among other ways, by the more or less glabrous lower half of the stem (vs roughly hairy more or less to base). Stace (2019): 815.

*Hedera helix* subsp. *poetarum* (Yellow-berried Ivy). Wollaton (SK535400), 17/3/2021, P. Acton & R.A. Johnson: on Wollaton Road where associated with the boundary wall of the original Wollaton Estate. The first v.c. 56 record. A neophyte (Araliaceae) from the central and eastern Mediterranean region, found surviving/spreading where planted, perhaps also occasionally bird-dispersed. *Adventives & Aliens News* 25, v.c. 12. Stace (2019): 840.

### V.c. 83 (Midlothian)

*Pilosella caespitosa* (Yellow Fox-and-cubs). Millerhill (NT3247870320), 11/6/2023, S. Jury & V. Krivtsov (det. M.J. Crawley): by side of path in a small clearing, waste ground. Sue Jury comments that this is a brownfield site well known for interesting species. The first v.c. 83 record since 1986. A stoloniferous composite with crowded inflorescences of yellow capitula on scapes to c. 80 cm, and rosettes of largish subglaucescent leaves. A Eurasian native and scattered garden escape in Britain and Ireland. The first Irish record was for v.c. H4/5 in 1944. Stace (2019): 758.

*Lagurus ovatus* (Hare's-tail). Edinburgh (NT26967215), 7/5/2023, S. Jury: on Dalkeith



*Pilosella caespitosa*, Millerhill, Midlothian (v.c. 83).  
Sue Jury

Road, not apparently in any nearby gardens. Fourth sighting in Scotland this century, all since 2019. First v.c. record since 1993. A Mediterranean annual grass grown as an ornamental garden plant, also in wool and grain. Expanding as a casual (garden escape), as well as being long naturalised on sand dunes in several places in Britain and Ireland. Once also seen regularly on tips. Ryves et al. (1996), fig. 24. Stace (2019): 1067.

### V.c. 95 (Moray)

*Anthyllis vulneraria* subsp. *carpatica* var. *pseudovulneraria* (Kidney Vetch). Grantown-on-Spey (NJ02702804), 16/7/2023, A. Amphlett (det. J.R. Akeroyd): in disturbed ground by new houses. The second post-1999 record for Scotland. A central European perennial (Fabaceae), introduced as a fodder crop and much sown in restored and amenity grasslands. It differs from native subsp. *vulneraria* in being erect



*Lagurus ovatus*, Edinburgh, Midlothian (v.c. 83).  
Sue Jury



*Anthyllis vulneraria* subsp. *carpatica* var.  
*pseudovulneraria*, Grantown-on-Spey, Moray  
(v.c. 95). Andy Amphlett

(vs decumbent to ascending) and having inequifoliate leaves mainly at base of stem (vs equifoliate leaves evenly distributed along stem). Stace (2019): 163.

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## *Vulpia membranacea* (L.) Dumort. in West Suffolk (v.c. 26)

JOHN NORTON

At the end of May 2023 I visited East Anglia with an old schoolfriend of mine for a 4-day birdwatching and plant hunting trip. We spent our second full day on the north Norfolk coast and with some time to spare before returning to our accommodation in Newmarket, we called in at Maidscross Hill nature reserve at Lakenheath, Suffolk (v.c. 26). The site is designated an SSSI for its Breckland flora and is also part of a statutory Local Nature Reserve. We walked a route south and then east from the car park, seeing a few nice plants along the way, including *Descurainia sophia* (Flixweed), *Scleranthus annuus* (Annual Knawel), *Medicago minima* (Bur Medick), *Silene otites* (Spanish Catchfly) (a Breckland speciality) and the Nationally Scarce moss *Racomitrium canescens*. On the way back we came to the edge of a large, crater-like sand pit in the east of the site, which my botanist's eye told me looked interesting for plants. At my feet I noticed a reddish-coloured grass, which evidently was abundant on parts of the side and bottom of

*Vulpia membranacea*, Maidscross Hill, Lakenheath, W. Suffolk (v.c. 26), 29 June 2023. John Norton

the pit. A brief look under a hand lens confirmed it was a *Vulpia*, with long awns and a very short lower glume. I collected a few stems for better look later and although it was tempting to stay and explore the pit further we continued back to the car. My friend took some scenic photographs and captured me in the act of taking the specimen (Plate 1), but neither of us took any close-ups of the grass.

On returning to our accommodation I looked at the specimen more closely and keyed it using Stace's *Concise Flora* (Stace, 2022). I realised it was a good match for *Vulpia fasciculata* (Dune Fescue), which I was familiar with; however, the inflorescence did not look as 'fat' as in my local plants. I put this down to recent drought conditions – prior to our trip the weather in the UK had been hot and sunny without significant rain for several weeks. The identification made good sense since it was growing on bare sand,

but on checking the BSBI Maps and Plant Atlas 2020 websites I realised that *V. fasciculata* is very rare inland in Britain, with apparently only a single recorded site in Surrey (at Frensham Pond), and not present at all in the Brecks. Furthermore, it was much more sparsely distributed along the east coast of Britain than the west.

Back at home I checked the identification using the grasses handbook (Cope & Gray, 2009) and took some photographs of the specimen (Plate 2). I also collected some fresh material of *V. fasciculata* from a colony only three miles from my house at Lee-on-the-Solent, Hampshire (v.c. 11) with which to compare. The identification still seemed straightforward, not least because *V. fasciculata* is the only British *Vulpia* which has an awned upper glume. The *Vulpia* key in the handbook mentions the presence of a ‘minute apical hairy appendage’ on the tip of the ovary and caryopsis, which I thought I could see.

I emailed my photos to the West Suffolk Vice-county Recorder, Martin Sanford, just to check if he knew about the colony (I was certain someone must have already recorded it). Martin asked me to

send the specimen to Clive Stace, who examined it on 6 June and sent me a detailed email explaining that he was almost certain it was *Vulpia membranacea* (L.) Dumort., that it was new to Britain, and with a good claim to being native! Clive pointed out that what I thought was the hairy appendage on the ovary would have been the stigmas, since the ovary of *V. membranacea* is glabrous; this being a key distinction from *V. fasciculata*. I examined my specimens again and realised that Clive was correct of course and I had made a schoolboy error. I was able to see hairs on the specimen of *V. fasciculata* from Lee-on-the-Solent, but there were none on the *V. membranacea* from Maudsross Hill (Plate 3).

Clive Stace suggested making a further visit to the site to collect ripe seed, so that we could be fully confident of the identification. I was due to attend a BSBI *Rubus* meeting in Hertfordshire at the end of June, so I was able to extend my stay there and meet up with him at Maudsross Hill on 29 June, accompanied by Alan Leslie. The weather since my initial visit had again turned warm and dry so it was no surprise that the plants had dried up and were



**Plate 1.** Collecting the specimen of *Vulpia membranacea* at Maudsross Hill nature reserve, 30 May 2023, with the sand pit and Lakenheath air base in the background. Peter Milinets-Raby



**Plate 2.** Unmounted specimen of *Vulpia membranacea*, from Maidcross Hill nature reserve, 30 May 2023, showing slender habit with panicles exerted well above the uppermost leaf sheath [scale bar 10 cm]. John Norton

starting to disintegrate, but we were able to collect further useful herbarium material and appreciate the distinctive look of the plant at this time of year – most of the stems had bent over or were laying almost flat on the ground (Plate 4).

### The Maidcross Hill colony

During the June visit I did not have time to map the colony, so this was done subsequently from

photographs. It formed dense patches within an area of roughly 2,800m<sup>2</sup> on the west side of the pit, falling mainly within the OS 100 m grid square TL729824. The total area covered was probably 25–40% of this, i.e. at least 700m<sup>2</sup>. I have not attempted to accurately estimate the total population as this would firstly require counting the number of stems originating from each plant, which is impossible to discern from the photographs and probably variable. However, the total number of stems would easily have been in the thousands or tens of thousands.

The substrate within the pit is a coarse, greyish sand mixed with gravel and small flint stones, which also form a scattered or moderately dense layer on the surface. The *Vulpia* plants were predominantly growing on this bare or sparsely vegetated substrate next to paths, on naturally eroded pockets on the side of the pit and on larger areas of bare sand (disturbed by rabbits and people) in the bottom. Associated species included other annual *Vulpia* species: *V. bromoides* (Squirrel-tail Fescue), *V. ciliata* (Bearded Fescue) and *V. myuros*, together with various other fine-leaved grasses, Sand Sedge *Carex arenaria*, Lady’s Bedstraw *Galium verum* (abundant), Rest-harrow *Ononis repens*, the moss *Syntrichia ruraliformis* and *Cladonia* spp. lichens.

### A brief overview of taxonomy, distribution and habitat preferences

Clive Stace had studied *Vulpia membranacea* in the 1970s with his student Ray Cotton, showing that it was diploid, and genetically distinct from the tetraploid which was assigned the name *V. fasciculata* (Cotton & Stace, 1976). Prior to this research there had been much confusion between the two taxa and both had



**Plate 3.** Ovaries of *Vulpia membranacea* (left) and *V. fasciculata* (right) showing hairs on appendage of *V. fasciculata* (arrowed) and remains of stigmas. John Norton



**Plate 4.** *Vulpia membranacea*, Maidscross Hill nature reserve 29 June 2023, showing mostly procumbent dried up plants covering side of the sand pit. John Norton

been known under a number of different names (synonymy given in Stace & Cotton, 1976). The holotype in LINN (sent to Linnaeus from Spain by Loeffling just before publication of *Species Plantarum* in 1753) had been microscopically examined and shown to have glabrous ovaries (C.A. Stace pers. comm.), so this eventually became the ‘true’ *V. membranacea*.

Stace & Cotton (1976) mapped the European distribution of the two taxa. *V. fasciculata* had a wide coastal Mediterranean and Atlantic distribution, including the coasts of Britain and eastern Ireland. *V. membranacea* was more restricted to the western Mediterranean but its native range extended to the north-eastern coast of France in the Calais area and there were a few old records in Belgium. It was known that *V. membranacea* had a tendency to occur inland, whereas *V. fasciculata* was predominantly coastal.

Since that time it is apparent that *V. membranacea* has extended its range significantly. Scholz & Raus (2001) published some records of *V. membranacea* for the Canary Islands, Germany and some outlying parts of the eastern Mediterranean. Thomas (1999

and pers. comm.) noted that he had seen convincing herbarium specimens from Turkey.

Clive Stace contacted Filip Verloove in Belgium and Leni Duistermaat in the Netherlands to see if he could find out more about the the historical and present-day status of *V. membranacea* in the two countries. Filip Verloove explained that: ‘in 1979 *Vulpia membranacea* was recorded again in Belgium, after an absence of many decades and in a quite different area (coastal areas vs inland). The inland localities – on sand near Obourg in Hainaut, mostly from the 19th century – have always been considered to be native. The truth is that this is one out of many cases where nativeness is simply uncertain. The coastal populations might refer as well to an introduction but perhaps more likely (?) to a natural range extension’ (F. Verloove, pers. comm. to C.A. Stace). Leni Duistermaat replied that there were a few records of *V. membranacea* in the Netherlands in the 1920s, all considered to be adventive, but it turned up on coastal dunes at Renesse, where thought by the recorder to be native, though not accepted as such by others, and appeared in the

Wadden Sea area in 1980 where similarly discounted as native. However, based on an inland record in the 1990s it was decided that the species ‘has to be considered indigenous’ in the Netherlands. Since 2000 it has been recorded from several dune and inland localities and seems to have extended its continental European distribution northward, but is still considered a very rare species in the Netherlands (L. Duistermaat, pers. comm. to C.A. Stace). Mapped records are shown on the Flora of the Netherlands online atlas (see link under ‘Further information’).

In terms of habitat preferences the two clearly have much in common, although their ecology and dispersal mechanisms must be different enough to allow one to favour coastal habitats and the other

inland habitats. This would be an interesting subject for further investigation and literature review.

**Identification**

The main differences between *Vulpia membranacea* and *V. fasciculata* are summarised in Table 1, based on Stace’s account in *Flora Europaea* (Stace, 1980) and my own measurements. The only fully reliable diagnostic characters (apart from the difference in chromosome number) are the ovary hairiness, as described above, and anther length (effectively <1 mm in *V. membranacea* and >1 mm in *V. fasciculata*) (Plate 5). Anthers can be measured from dried specimens, but it should be taken into account that they will shrink a little. The measurements of ripe caryopsis length are based on my specimens and

**Table 1.** Some useful distinguishing characters of *Vulpia membranacea* and *V. fasciculata*.

Character	<i>V. membranacea</i>	<i>V. fasciculata</i>
Anther length	< 1 mm (0.6–0.9 mm)	> 1 mm (0.8–2.0 mm)
Caryopsis length (of basal floret)	< 5 mm (3.5–4 mm)	> 5 mm (5.5–6 mm)
Palea length	4.5–7 mm	6.5–11 mm
Lemma length (excluding awn)	7–15 mm	8–18 mm
Apex of the appendage at tip of ovary and caryopsis	Glabrous	Minutely hairy (hairs c. 0.20–0.25 mm)
Length of exerted section of culm (between uppermost leaf blade and base of panicle)	Usually >5 cm	Usually <5 cm (often <2 cm)



**Plate 5.** Anthers of *Vulpia membranacea* (left) and *V. fasciculata* (right) to same scale. John Norton



**Plate 6.** Mature caryopses of *Vulpia membranacea* (left) and *V. fasciculata* (right) showing hairs present on the apical appendage of *V. fasciculata*. John Norton



would need further checking, but there appears to be a difference. There is some overlap in measurements of the lemma and palea, and probably no clear difference in the length of the upper glume (so this measurement has been omitted from the table). Note that the lower glume is very short in both species (c. 0.5–2[3] mm), or may appear to be absent in at least *V. fasciculata* (hence its former name of *V. uniglumis*). In these two species there is no clear junction at the base of the awn, making accurate and comparable measurements of the length of the upper glume and lemma quite difficult.

In order to check for the presence or absence of hairs at the tip of the caryopsis a dissecting microscope is almost essential. The lemma and palea adhere to the ripe caryopsis, so need to be carefully peeled away first. The anthers may be loosely attached so can also be removed and measured under the microscope, then the mass of stigmas gently teased away to reveal the tip of the caryopsis and its appendage. The appendage is actually a thin, brownish-coloured flap of tissue curved around the tip of the caryopsis, almost transparent at the margins, about 0.5 mm long. The hairs present in *V. fasciculata* arise around the apex of this, giving the appearance of a miniature brush (Plates 3 & 6). Therefore when examining specimens of putative *V. membranacea* for absence of hairs, it is important not to break off the appendage when the stigmas are removed.

The panicles and spikelets of *V. membranacea* are generally smaller than those of *V. fasciculata*, but there are some overlaps in dimensions. The height of the two species is also variable. Both can exceed 30 cm, although *V. fasciculata* is usually a shorter and more robust-looking grass; however, an important difference is that the panicle of *V. membranacea* is more exerted from the uppermost leaf sheath and this is what gives this species a more slender and weaker appearance as a result (Plate 2), making it prone to ‘flopping over’ when mature. This tendency is mentioned in its description on the Wild plants in the Netherlands and Belgium website (see link under ‘Further information’) and was very evident at Madsdross Hill at the end of June 2023, as described

above (Plate 4). By contrast, my coastal colony of *V. fasciculata* visited a few days later during a force 7 gale had stiff culms that remained upright (Plate 7).

The reddish colour of the flowering plants of *V. membranacea* noticed at Madsdross Hill may be a useful character if looking for this species in early summer. Some photos seen online also show this, and the Flora of the Netherlands online atlas notes that ‘the whole plant is usually discoloured to a purplish pink, in contrast to [*V. fasciculata*] where only the awns change colour after flowering, but then to orange-ochre’. Plants of *V. fasciculata* that I photographed at Lee-on-the-Solent in June 2016 had both pinkish and orangey hues on the spikelets but were not as distinctly reddish as the *V. membranacea* plants at Madsdross Hill.

### British status and thoughts on possible origin of the Madsdross Hill colony

Subject to any other recent records that come to light it appears that this is the first record of *Vulpia membranacea* established in Britain and Ireland. In the past it has been reported as a casual from ports and other coastal areas, but of course it is difficult to be sure if historical records refer to *V. membranacea* or *V. fasciculata*. Ryves et al. (1996) list it as a ‘wool casual’, with herbarium material in Edinburgh and Reading. These specimens and other records listed



**Plate 7.** Senescent plants of *Vulpia fasciculata*, Lee-on-the-Solent, Hampshire (v.c. 11), 3 July 2023.  
John Norton

on Eric Clement's set of Mary McCallum-Webster's index cards may relate to either species, though the Reading specimen was collected from 'sand dunes below Pennard Castle', on the Gower, Glamorgan (v.c. 41) (by H.J.M. Bowen in June 1983), so clearly refers to *V. fasciculata*, which is locally common in that area.

Peter Thomas (pers. comm.) informed me that he looked at a *Vulpia* specimen at Edinburgh in January 1971, collected by James Fraser on 1 August 1916 from Levenhall, Musselburgh (v.c. 83). Peter noted at the time that the anthers were 'short, less than 1 mm' and suspected it was the true *membranacea*. Peter contacted the RBGE herbarium staff, who kindly scanned the specimen, which can now be viewed online by searching their website ([data.rbge.org.uk/search/herbarium](http://data.rbge.org.uk/search/herbarium)). This shows the distinctive long, bare, exerted portions of the culms. Another photo sent to us confirms that the anthers are less than 1 mm long. This record is mentioned in Martin (1934), where interestingly the species is also listed for Leith (the dockland area of Edinburgh). These two casual occurrences for the Edinburgh area must therefore have originated from imported grain or other goods via the docks. Further investigation is needed, but the Levenhall specimen appears to be the earliest confirmed of the true *V. membranacea* that has so far been tracked down. Whether it is the only one is uncertain, but this species was clearly very rare as an alien a century ago.

Casual historical records aside it is tempting to argue that *Vulpia membranacea* could be a long lost British native plant, especially since the species is considered native in northern France, Belgium and the Netherlands. Although Breckland is one of the better botanised parts of the country, a grass like this could easily be overlooked, especially if present in a small or isolated population. It would be missed by most visiting botanists who tend to only go to the hotspots to look for the specialities. Furthermore, Breckland is quite an extensive area, and significant tracts of land are under private or Ministry of Defence ownership where public access is either not possible or very difficult. Of course there is also a possibility that it already occurs in

in a coastal locality somewhere in the UK, but has been overlooked or misidentified as *V. fasciculata*.

However, unless proved otherwise, I think it fair to assume that *V. membranacea* is a recent arrival from the continent, particularly in view of its recent expansion in the Netherlands. The distribution of the plant on the site strongly indicated that it was recently established, and had taken advantage of the availability of bare, sandy substrate within the sand pit, but not yet spread more widely, despite the site being popular with dog walkers and other visitors. Following my visit to the site with Clive Stace in June 2023 it transpired that Martin Sanford had taken Clive and David Streeter there five years previously in June 2018 when no-one noticed any unusual reddish-coloured *Vulpia*. This helps to strengthen the theory of recent arrival at the site, but the questions of 'where did it come from?' and 'how did it get here?' still remain.

The owners, Elveden Estate, confirmed that there had been no earthworks or introduction of machinery to the site for many years, and it is thought the pit could have been formed when Lakenheath air base was constructed in the 1940s. The close proximity of the air base is clearly a potential source of seed, but although the habitat within the base is mostly regularly mown short grass and so largely unsuitable as a seed source, some disturbed sandy areas are likely to exist around rabbit burrows and in less frequently managed perimeter areas. There is a 9-hole golf course on the site (with sandy bunkers), whilst Google Earth imagery dated April 2021 also shows a large area of bare ground associated with a construction area. The jets which use the base could potentially cause seeds of *Vulpia* to become airborne and settle within the site (the sand pit is only 425 m from the end of one of the runways). It is not known if the personnel and equipment which use the base have regular contact with other European countries, from where seeds could have been transported, but it is worth noting that an American squadron based in France in the 1950s relocated to the base in 1960 (Wikipedia).

Naturally there is a strong possibility that seeds could have been carried to the site on the shoes or

clothing of people or pet's fur, and so these could have originated from a number of European countries, including the Netherlands or Belgium, though perhaps more likely from a coastal holiday destination in France or Spain. Maidscross Hill is only 74 miles (119km) by road to Harwich where there are ferry crossings and container routes to Hock van Holland and Rotterdam.

Alternatively, transportation by means of the seeds becoming attached to birds' feathers or carried in the gizzard or gut of a grain-eating species is also very plausible. Species such as Woodpigeon arrive in East Anglia in large numbers from the continent on migration each autumn and could easily feed on the fallen seeds of *Vulpia* species along the Dutch coast, for example, prior to crossing the North Sea.

### Final thoughts

Please look out for this plant and contact me (and your VCR) if you do happen to find it. Look for the reddish colouration in late May and early June and the distinctive bent over stems in late June or July. Also check existing herbarium specimens named as *V. fasciculata* and photographs taken during previous botanising trips to sandy areas – the plant may be visible in the background!

If *Vulpia membranacea* does become established in Britain in the future, it might be necessary to coin a vernacular name for it. The Dutch name translates as 'Sand Longbeard Grass', with *V. fasciculata* being 'Dense Longbeard Grass'. 'Sand Fescue' might be one possibility, although this is used for a North American grass (*Festuca ammobia*). 'Slender Dune-fescue' might be the best option.

### Further information

Useful photographs and distribution maps of both species may be found on the Wild Plants in the Netherlands and Belgium website by Klaas Dijkstra ([wilde-planten.nl](http://wilde-planten.nl)) and on the Flora of the Netherlands (FLORON) online atlas ([www.verspreidingsatlas.nl/vaatplanten](http://www.verspreidingsatlas.nl/vaatplanten)). Details of Maidscross Hill nature reserve are given on [www.breakingnewground.org.uk/earthheritagetrail/maidscross-hill](http://www.breakingnewground.org.uk/earthheritagetrail/maidscross-hill). If you do visit the site, please be careful not to transport any seeds of

*V. membranacea* on clothing or pets. It clearly has the potential to spread very quickly and it will now be important to monitor the plant here for a few years to determine if it could have a negative impact on other Breckland flora.

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# A cautionary tale of a *Cochlearia*–*Mentha* mix-up

HELENA J. CROUCH

The streets of Bath have yielded exciting botanical discoveries over the years. In July 2022, Rob Randall found some tiny plants in pavement cracks on the north side of The Circus. They were identified from photos as *Cochlearia acaulis* or *Ionopsidium acaule* (Violet Cress) and the record was sent to me. I visited the site in September, by which time the pavements had been swept and only minuscule scraps remained, but enough to photograph a little patch with one diminutive 4-petalled pink flower which I excitedly shared with friends. What I should have done, in retrospect, was to smell the foliage, but The Circus is a popular and busy tourist attraction and sometimes picking scraps of vegetation from the pavement and sniffing them doesn't seem quite the done thing in Bath. *Mea culpa!*

After I reported this thrilling discovery as new to Somerset, and the first record for Britain since 2006, during my short talk on 'Aliens of Somerset' for the BSBI England AGM meeting, I was contacted by Ian Benallick (VCR for East Cornwall) who kindly and gently informed me that the photograph I showed was in fact *Mentha requienii* (Corsican Mint), a species which he and others have recorded on pavements several times in Cornwall (see French, 2020). Ian is also familiar with *Cochlearia acaulis* (or *Ionopsidium acaule*), which he has seen in Portugal, where it is an endemic species. Tutin et al. (1964) state that it is widely cultivated in gardens.

I returned in March 2023 with John Poland, who kindly confirmed that the plants smelled of mint. Despite the extremely cold weather in late 2022, hundreds of plants were seen in cracks between paving, none in flower. Both species have tiny ovate to subrotund entire leaves, about 5 mm long, with slender petioles and small flowers with four petals/corolla lobes. Sell & Murrell (2009; 2014) give the corolla length as 2 mm with lobes 0.6 mm × 0.6 mm and rose in colour for *Mentha requienii*, but petals 5–8 mm and lilac or purple in *Ionopsidium acaule*.

In defence, the flowers of plants in Bath were pale mauve (as described in Rose, 2006), not rose, and corolla lobes were longer than 0.6 mm; but in retrospect they were clearly not large enough to be *Cochlearia acaulis*.

*Mentha requienii* is native to Corsica, Sardinia and the island of Montecristo and is used as flavouring for Crème de Menthe. It was introduced in 1829 as a garden plant and was first found as a garden escape in 1872 in West Cork (Stroh et al., 2023). Although there are several records in South Somerset (v.c. 5), it has only been recorded once before in North Somerset (v.c. 6), in paving at the American Museum in Bath, in 2000. This is the first record for v.c. 6 outside a garden, so is still an exciting addition to the streets of Bath.



A scrap of the plant flowering in a paving crack in The Circus, Bath, September 2022. Helena Crouch



The carpet of tiny plants of *Mentha requienii* (Corsican Mint) flowering in a paving crack in The Circus, Bath (v.c. 6), August 2022. Rob Randall



*Cochlearia acaulis* (*Ionopsidium acaule*) in Portugal.  
Fred Rumsey

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# NOTICES

## NOTICE OF ANNUAL GENERAL MEETING

The BSBI AGM 2023 will take place at 7.15 pm on **Thursday 16 November 2023** as an electronic meeting. An invitation to attend is included with this issue of *BSBI News* (to those who receive a postal copy). Or you may write to me at the address below. The AGM will be preceded by introductory talks starting at 6.30 pm.

There are several vacancies on the Board of Trustees. At the AGM Chris Miles will resign as Chair of the Board of Trustees and I will resign as Hon. Gen. Secretary and trustee, and as Company Secretary. If you are interested in being nominated for any of these roles please contact me as soon as possible.

### Steve Gater

Company Secretary  
28 Chipchase Grove, Durham, DH1 3FA  
[steve.gater@bsbi.org](mailto:steve.gater@bsbi.org)

## BSBI CONFERENCES 2023

Details of this year's indoor meetings and conferences are given below. The draft programmes and details of how to book for these events – whether you wish to offer an exhibit or you just want to come along and enjoy the day's proceedings – can be found on the BSBI website (links given below). We are not providing printed flyers this year. Very few people have used these in recent years so we do not feel that the expense is justified. We are, however, very keen that members without internet access should be able to attend – if this is the case please telephone or write to the respective contacts given below to book a space. We plan to record the talks and share them via our YouTube channel for anyone who can't make it along on the day.

Please contact me for general enquiries, or if you experience any problems with the website links.

### Louise Marsh

BSBI Communications Officer  
[louise.marsh@bsbi.org](mailto:louise.marsh@bsbi.org)

### British and Irish Botanical Conference

The British & Irish Botanical Conference (the event formerly known as the BSBI Annual Exhibition Meeting) will be held on **Saturday 2 December at**

**Newcastle University**. There will be talk sessions on urban botany and on plant identification, and a keynote talk by BSBI President Micheline Sheehy Skeffington on the research she has been doing into plants occurring in Ireland which belong to the Lusitanian flora.

**Website bookings:** [bsbi.org/british-irish-botanical-conference](https://bsbi.org/british-irish-botanical-conference)

**Other bookings:** Sarah Woods, 23 Bank Parade, Otley, LS21 3DY; telephone +44 (0) 7570 254619

### Scottish Botanists' Conference

The Scottish Botanists' Conference will be held on **Saturday 4 November at the Royal Botanic Garden Edinburgh**. A diverse programme will include talks on *Plant Atlas 2020* and its impact, plant introductions for conservation and the recently updated Caledonian Pinewood Inventory, along with hands-on identification and training workshops.

**Website bookings:** [bsbi.org/scottish-annual-meeting](https://bsbi.org/scottish-annual-meeting)

**Other bookings:** Matt Harding, BSBI Scotland Officer, RBGE, 20a Inverleith Row, Edinburgh, EH3 5LR  
telephone +44 (0) 7814 727231

[matt.harding@bsbi.org](mailto:matt.harding@bsbi.org)

### Irish Autumn Meeting and AGM

The Irish Autumn Meeting and AGM will be held on **Saturday 21 October at the National Botanic Gardens in Glasnevin, Dublin**. This is a great chance to meet up with BSBI members across Ireland, and as usual, there will be a fascinating line-up of speakers and workshops.

**Website bookings:** [bsbi.org/irish-autumn-meeting-agm](https://bsbi.org/irish-autumn-meeting-agm)

**Other bookings:** Bridget Keehan, BSBI Ireland Officer, National Botanic Gardens, Glasnevin, Dublin, D09 VY63, telephone: +353 86 3456228

[bridget.keehan@bsbi.org](mailto:bridget.keehan@bsbi.org)

## BSBI PHOTOGRAPHIC COMPETITION

A reminder that the deadline to enter the 2023 BSBI Photographic Competition is Friday 20 October and the categories this year are 'Plants and People' and 'Plants in the Landscape'.

Entries will be displayed on screens during this autumn's Scottish Botanists' Conference and the British & Irish Botanical Conference and will then be featured on the BSBI website, and in BSBI periodicals such as the mid-monthly eNewsletter. Copyright of images remains with the photographer, who will be

credited wherever possible, but it's a condition of the competition that we may exhibit the entries and use them to promote the Society and further its aims. For more details of the competition rules, to submit an entry and to view entries from previous years, please visit [bsbi.org/bsbi-photographic-competition](https://bsbi.org/bsbi-photographic-competition).

**Louise Marsh**

## NEW YEAR PLANT HUNT

BSBI's thirteenth New Year Plant Hunt will run from Saturday 30 December 2023 to Tuesday 2 January 2024. Last year's Hunt saw 1,691 people braving unpleasant weather to take part; they generated 10,199 records, noting 477 taxa in bloom – far fewer than in previous years. Was this just down to the weather or is there something else going on?

We need more data to help us understand how our plants are responding to a changing climate, so please save the dates and keep an eye on our webpage for further info nearer the time, for details of group Hunts in your area and to register your interest and receive a helpful spotter sheet: [bsbi.org/new-year-plant-hunt](https://bsbi.org/new-year-plant-hunt).

**Louise Marsh**

## NEW BSBI PROJECT TO GROW BOTANICAL SKILLS AND EVIDENCE FOR NATURE RECOVERY IN NORTHERN IRELAND

We are delighted that BSBI has been awarded funding to grow botanical skills and evidence for nature recovery in Northern Ireland, thanks to funding from the Department of Agriculture, Environment & Rural Affairs (DAERA)'s Environment Fund. The project will work to support botanical training, recording and monitoring activities over five years, 2023–2028. We will recruit a Botanical Skills Officer, who will organise training and events to encourage plant identification and recording, as well as working to increase participation in the National Plant Monitoring Scheme (NPMS). We will work closely with DAERA, CEDaR and our NPMS partners (BSBI, Plantlife, JNCC and UKCEH) as well as landowners and other organisations to ensure there are the necessary botanical skills and evidence to underpin nature recovery in Northern Ireland.

**Julia Hanmer**

Chief Executive

[julia.hanmer@bsbi.org](mailto:julia.hanmer@bsbi.org)

## BSBI SCIENCE STRATEGY

The BSBI will be publishing a new Science Strategy later this year and to help develop this we have been consulting over the summer with all our members, VCRs, referees and key partners to gain feedback on what scientific work we should focus on in the years ahead. Thank you for all your responses. We are bringing the strategy to the September Trustees meeting and will publish it in the autumn on our website.

**Kevin Walker**

Head of Science

[kevin.walker@bsbi.org](mailto:kevin.walker@bsbi.org)

## BSBI FORUM

We held the second BSBI Forum meeting on 4 April 2023, an opportunity to discuss how we work together across BSBI and progress against our overall Strategy 2021–2024. Many thanks to everyone who took part. A report on the Forum is available on the members area of the website. It includes updates on progress against ideas raised at the first BSBI Forum meeting in 2022 and summaries of key themes from two 2023 discussion sessions: how do we best support VCRs and how do we plan and support a cohesive events programme? Each of these have suggested next steps, for consideration by committees or staff. The report also shares feedback from participants about the Forum. The Forum report and the ideas included will feed into our planning cycle for the rest of 2023 and our Strategy refresh consultations over the winter of 2023–24.

**Julia Hanmer**

## NEW IRELAND OFFICER

BSBI's new Ireland Officer is now in post: a warm welcome to Bridget Keehan who takes over from Paul Green. Paul retired in June, although he is continuing to support the Aquatic Plant Project this year (so we will be including a goodbye and thanks to Paul in January News). Paul also continues as County Recorder for Co Wexford.

Bridget is based in Leitrim and has been working as a Senior Ecologist – Botany Lead for an environmental consultancy. Her contact email is [bridget.keehan@bsbi.org](mailto:bridget.keehan@bsbi.org) and she would welcome hearing from you about botany in Ireland.

**James Harding-Morris**

Countries Support Manager

[james.harding-morris@bsbi.org](mailto:james.harding-morris@bsbi.org)

## DATA SUPPORT OFFICER

James Drever joined BSBI as our Data Support Officer on 14 August. James will work alongside Tom Humphrey, Database Officer (DO) and other BSBI staff to increase our capacity to support recorders and improve data management and dataflows. Alongside this new post a more detailed data development plan has been developed, which sets out the priorities in terms of data management and how these will be achieved over the 2-year period of the post. I will be managing Tom and James and reporting on progress against this plan.

James has a wealth of experience in IT, web development and data management, having spent 15 years as the Head of Digital at Field Studies Council. Since 2017 James has also run his own IT company (Careful Digital) and he set up and maintains the Shropshire Botanical Society website. He is looking forward to meeting members and providing guidance and training for our recording network, as well as supporting us in developing our data infrastructure.

**Kevin Walker**

## BSBI ARCHIVIST NEEDED

Members will have seen the tremendous work that Clive Stace has done to bring together the BSBI archive (see last issue and his note at the end of this section). Clive is now stepping down from his very active role in updating items lodged in the archive and we thank him immensely for his huge contribution to this vital work.

BSBI now needs to find someone willing and able to volunteer as **BSBI archivist**. It is an important responsibility and one that there is no specific role description for, so is open to be developed. Essentially it will entail occasional visits to the BSBI office in Harrogate, cataloguing, accession of newly donated materials and oversight of access to the archive. If you are interested in discussing and exploring this role please contact me (details below). Access to the archive is currently arranged by Sarah Woods: [sarah.woods@bsbi.org](mailto:sarah.woods@bsbi.org).

**Steve Gater**

[steve.gater@bsbi.org](mailto:steve.gater@bsbi.org)

## SUPPORT FOR RECORDERS APPEAL

The work of recorders and recording communities is central to all the work that the BSBI does. We want to ensure that our digital systems support

recorders' needs, that we provide adequate, relevant training and opportunities to train others, and that we are advancing projects that achieve significant impact through using our data for botanical conservation.

We want to raise £10,000 to allow us to increase the capacity of BSBI staff to focus on this work, capitalising on the effort of volunteers and experts within BSBI. With few overheads, we hope to see real impact on the amount of support available for recorders in a short period of time.

We're extremely grateful to the estate and family of long-time BSBI VCR and recorder Clive Lovatt for their foundational support for this appeal. Visit the Support for Recorders Appeal page ([bsbi.org/appeal/support-for-recorders](https://bsbi.org/appeal/support-for-recorders)) to find out more and donate.

**Sarah Woods**

BSBI Fundraising Manager

[sarah.woods@bsbi.org](mailto:sarah.woods@bsbi.org)

## BSBI AWARDS

Remember there is the opportunity for you as a member to nominate anyone who has impressed you with their dedication to the work of BSBI. This might be through botanical recording activity, training, organisation of meetings, publications or promoting botany through talks. If you look at the Awards page on the website ([bsbi.org/nominations-awards](https://bsbi.org/nominations-awards)) you will see that we created two awards, one for impacts at the local level and one for impacts at the Britain and Ireland level. You can see last years results here: [bsbi.org/bsbi-awards-for-outstanding-contributions](https://bsbi.org/bsbi-awards-for-outstanding-contributions). Please think about nominating anyone who has gone that bit further to make your and fellow members botanical life that bit richer. The nomination forms can be downloaded from the website or requested in writing from myself by the deadline of 31 December 2023.

**Chris Miles**

Chair of the Trustees

[chris.miles01@btinternet.com](mailto:chris.miles01@btinternet.com)

## HANDBOOKS AS EBOOKS

We are excited to announce that the BSBI's catalogue of handbooks are now also available for purchase as PDF ebooks. All handbooks, apart from *Roses*, which is due to be replaced with a new edition soon, can be downloaded for use on desktop, on mobile or on tablet. We hope this will allow for easier use of multiple titles in the field, and



will help with access to those titles that are no longer in print. Visit [bsbi.org/publications/ebooks](https://bsbi.org/publications/ebooks) for more information.

**Sarah Woods**

BSBI Fundraising Manager  
[sarah.woods@bsbi.org](mailto:sarah.woods@bsbi.org)

## PLANT ATLAS 2020

Since its launch on 8 March, *Plant Atlas 2020* is proving to be an invaluable resource for botanists, ecologists and conservationists. The website was visited more than 250,000 times by more than 100,000 users during its first five months; social media posts about wild plants regularly link to their entries on the [plantatlas2020.org](https://plantatlas2020.org) website; the Atlas was mentioned in articles in the *Irish Examiner* in April and *The Guardian* in June; and there was a glowing review of the Atlas by Peter Marren in the June issue of *British Wildlife* magazine – visit the Plant Atlas media coverage page to find out more: [bsbi.org/plant-atlas-2020-coverage](https://bsbi.org/plant-atlas-2020-coverage) [and see the review in this issue, p.75; Editor].

If you'd like to order a print copy of the Atlas and claim your 30% members' discount, you'll need to place that order before the end of the year. Visit the password-protected members' area of the BSBI website for the discount code and guidance on ordering: [bsbi.org/members](https://bsbi.org/members).

**Louise Marsh**



At the Plant Atlas Cambridge launch, co-author Pete Stroh and Daniel Zeichner MP cut the Plant Atlas cake. *Julia Hanmer*

## EASIER ACCESS TO BSBI REFEREES

Access to BSBI's network of 100+ expert referees, who can help with identification of tricky plants, is one of the many benefits of membership.

Contact details for each referee, the taxa they are responsible for and notes on the material you'll need to send them appear in the BSBI Yearbook, but there is now another way to access that information quickly if you don't have your print copy of the Yearbook to hand. We've created a new Referees page on the password-protected members-only area of the website: [bsbi.org/members/bsbi-referees](https://bsbi.org/members/bsbi-referees) (email us at [enquiries@bsbi.org](mailto:enquiries@bsbi.org) if you don't know your password).

The Referees page gathers together all the information currently listed in the various sections of the Yearbook into one handy table and there's a helpful search button to take you straight to the plant group you want. We hope you find this new resource useful.

**Louise Marsh**

## PANEL OF VCRS

In Huntingdonshire (v.c. 31), David Broughton has retired from his position as VCR, but note that he continues in post for Mid-west Yorkshire (v.c. 64). Thanks to David for all his sterling work in v.c. 31, most notably the production of an excellent Rare Plant Register, which is available on the relevant county page of the BSBI's website. Taking on two counties, especially ones that are so distant from each other, must have been a monumental task! In Staffordshire (v.c. 39), Helen Ball ([helen.ball4@btinternet.com](mailto:helen.ball4@btinternet.com)) has been appointed as joint VCR with John Hawksford, with John remaining the primary Staffordshire VCR contact. Helen is a member of the Science and Data Committee, and will be concentrating on the fieldwork aspects of the role, particularly with developing and training members. Many thanks to Helen for volunteering. There are no other changes to report for England since April's *BSBI News*, although there are a few in the pipeline, and we have potential volunteers for at least three 'vacant' counties, pending ratification by the Science & Data Committee in October, so watch this space.

There are no changes to VCR positions in Wales. In Scotland, Neale Taylor has been appointed as joint VCR with Jim McIntosh for Mid Perthshire (v.c. 88). Neale's name might ring a bell with some of you, as he was VCR for West Perthshire in the past. He is, unsurprisingly, an excellent and experienced field recorder, and is interested in encouraging local

botanical recording, so please do get in touch with him if you live in the area and would like to know more.

In Ireland, our new Irish Officer Bridget Keehan has let me know that Tanya Slattery has resigned from the post of VCR for Limerick (v.c. H8). Bridget writes that '...on behalf of BSBI I would like to sincerely thank Tanya for all her hard work during her time as VCR – it was very much appreciated. This is a good opportunity to also extend grateful thanks to all our VCRs and point out what a splendid and vital job they do.' I couldn't agree more! Finally, one change of address. Mark McCorry has moved house, and can now be contacted at Oldtown, Abbeyleix, Co Laois, R32 X2F9.

**Pete Stroh**

[peter.stroh@bsbi.org](mailto:peter.stroh@bsbi.org)

## BSBI MEMBER AWARDED BEM

We would like to congratulate long-standing BSBI member John Newbould who was awarded a British Empire Medal in King Charles' Birthday Honours List 2023 for voluntary services to Ecological Surveying and Data Collection. He has been involved with plant recording and BSBI atlas work for many years. See his article on p.21 of this issue.

**John Norton**

[john.norton@bsbi.org](mailto:john.norton@bsbi.org)

## BRITISH & IRISH BOTANY 5:2

The second issue of the 2023 volume of *British & Irish Botany*, BSBI's Open Access, online scientific journal, was published in June. You can view or download the papers free of charge, as well as previous issues and guidelines for submissions, from the B&IB website: [britishandirishbotany.org/index.php/bib](http://britishandirishbotany.org/index.php/bib). You can also phone us on 07725 862957 to discuss a proposal.

**Ian Denholm & Louise Marsh**

[bib@bsbi.org](mailto:bib@bsbi.org)

## BSBI ARCHIVE – AN UPDATE

Since the list of items in the BSBI Archive was published in the last *BSBI News* (153) there have been a few developments. I found that the seemingly unobtainable first item on the list, *Proceedings of the Botanical Society of London 1836–38*, had been reprinted, and I have obtained a fine leather-bound copy from the printer in India. I discovered that there were FIVE versions of the

### **British & Irish Botany Vol. 5 No. 2 (2023)**

Distribution and ecology of *Equisetum variegatum* (Variegated Horsetail) (Equisetaceae) on the Sefton Coast sand-dunes, north Merseyside, UK – Philip H. Smith

Conservation of Britain's biodiversity: rediscovery of the extinct Lake District endemic *Hieracium fissuricola*, Fisherplace Gill Hawkweed (Asteraceae) – T.C.G. Rich

Constrained by poverty: Richard Relhan's botanical fieldwork in Cambridgeshire, 1781–1820 – Christopher D. Preston

High mountain trees: altitudinal records recently broken for eleven different tree species in Britain – Sarah H. Watts

Predicting the current and future distribution of pine woodland specialist plants in the Cairngorms National Park – Joshua Evans, Andrew Carr

*Hieracium tridentatum* (Asteraceae) in Britain – J. Bevan

The wild Scots Pines (*Pinus sylvestris*) of Kielderhead – Adrian D. Manning, Bill Burlton, Stephen Cavers, Tom Dearnley, Graham Gill, Graham Hollyoak, Angus G. Lunn

Were the five rare heathers of the west of Ireland introduced through human activity? An ecological, genetic, biogeographical and historical assessment – Micheline Sheehy Skeffington, Nick Scott

original *Atlas of the British Flora*, published in 1962, 1963, 1976, 1982 and 1990, of which we had only the first (1962). I have obtained the other four of these via [AbeBooks.co.uk](http://AbeBooks.co.uk).

All the above were obtained very cheaply. In addition a very few other minor additions have been made. Hence the Archive now contains, as listed in categories A–D, every publication known to me produced by the BSBI from its beginning (1836). The fifth category, E, is of related books, not published by BSBI. There are four gaps remaining here but the category is nebulous and never-ending, and I do not personally intend to pursue the missing items. However, it would be very satisfactory if those gaps could be filled by members, so I list them here:

**BSBI Mapping Scheme: Distribution Maps of 50 Common Plants.** Produced by BRC, Abbots Ripton, ed. D.W. Scott (1975). Paperback and apparently of very limited circulation.

**New Flora of the British Isles**, ed. 3 (2016 reprint). There are 11 versions of *New Flora*, of which I have been able to supply 10, but I do not have a copy of this version, easily recognised because it was mistakenly printed on thicker paper.

*Teesdale's Special Flora. Places, Plants and People*, by M.E. Bradshaw (2023). Recently published but clearly of relevance to BSBI interests.

Biological Flora of the British Isles (*Journal of Ecology*), numbers 270–279 (2012–2015). These ten parts are missing from our run.

I calculate that the Archive contains about 127 titles involving about 753 separate items. I would be pleased to supply a copy of the final definitive list on request.

#### Clive Stace

Appletree House, Larter's lane, Middlewood Green, Stowmarket, IP14 5HB  
[cstace@btinternet.com](mailto:cstace@btinternet.com)

## DAVID ALLEN

I am sad to report the death of David Allen in July this year; he was aged 91. He was President of the Society between 1985 and 1987, held several referee roles and was one of our longest serving members. Although possibly most well known for his work on *Rubus*, his other passion was researching the social history of plant collectors and other natural historians. He was also President of the Society for the History of Natural History (1978–81) and wrote or contributed to more than 400 books, articles

and notes, including *The botanists: a history of the Botanical Society of the British Isles through 150 years*, published in 1986. An obituary will appear in a future issue of *BSBI News*.

#### John Norton

Editor

[john.norton@bsbi.org](mailto:john.norton@bsbi.org)

## HERBARIUM OF D.J. NICOLLE

The attractive and extensive herbarium of David Nicolle (Bexley, Kent), sadly recently deceased, needs a good home. It consists of 10,000 quarto sheets of vascular temperate plants collected 1950–2023 and neatly stored by family in 300 ring binders. It is rich in plants of garden origin as well as wild collected plants from e.g. New Zealand, Canary Islands, Israel and much of the Mediterranean area; also from seed collected from the Himalaya. Most determinations have been verified by EJC over many years, often by comparison with material in BM. Please phone Valerie (02083 021869) for more details. It is perfect for learning plant families, e.g. Poaceae (991 sheets). Please save it from disposal at a tip! Also available are 40 boxes of relevant slides.

#### Eric J. Clement

# BOTANICAL NOTES

## BRACHYPODIUM PHOENICOIDES IN BRITAIN, A POSTSCRIPT

As was reported by Smith (2020), *Brachypodium phoenicoides* (L.) Roem. & Schult., was retrospectively identified from Devon, v.c. 3. Due to mis-identification it may have dated back much earlier, but without older voucher specimens from the area it remains as reported by R. Smith. Some *Brachypodium* specimens were recently sent to me from Scotland for determination and two of these were *B. phoenicoides*.

Marion Moir (MM) sent some *Brachypodium* specimens from v.c. 82 (E. Lothian). One from West Barns (NT 6470 7910) was *B. pinnatum* (L.) P. Beauv. (Heath False-brome); it was identified as this from some vegetative material and again later when in flower, confirming on 20 July 2023. However, MM included some others from Yellowcraig on 13 July 2023 as follows: *B. pinnatum*? (NT 5179 8578) and *B. rupestre*? (NT 5221 8558), and further specimens were gathered and received (with some other

grasses) on 20 July 2023, with an additional specimen from NT 5202 8573.

The specimens received on 13 July and 20 July 2023 were identified as *Brachypodium phoenicoides* (new to Scotland). The plants at Yellowcraig have been misidentified for a while according to the BSBI database records. The records could be looked at, and the site, to see how long they have been there and how they got there.

To look for this species, features that aid identification in the field are:

- relatively glaucous, narrow stem leaves which have a short, dense grey indumentum on the upper surface;
- typically no awns on more or less glabrous spikelets.

The two natives *B. pinnatum* and *B. rupestre* also need updating and surveying and vouchers collecting (duplicates preferred) and are best at flowering time. Please send specimens to the address below.

Thanks to Marion Moir for sending the specimens.

**Reference**

Smith, R. 2020. *Brachypodium phoenicoides* new to South Devon (v.c. 3) and Britain. *BSBI News* 143: 41–43.

**Michael Wilcox**

43 Roundwood Glen, Greengates, Bradford,  
BD10 0HW  
michaelpw22@hotmail.com

**ELYMUS ATHERICUS (SEA COUCH) IN SCOTLAND**

In a large, mainly herbarium-based study of coastal *Elymus* taxa in Scotland (Wilcox, 2022), no specimens of *Elymus athericus* (Link) Kerguelen (Sea Couch) could be verified. There were a few specimens which could not be fully identified due to the condition of the specimens. Many specimens were hybrids involving *E. athericus* in Scotland, thus it was always likely that the species occurs or had occurred at some point (perhaps being hybridised out in many areas).

However, on 21 July 2023, I received a specimen which turned out to be *E. athericus*, from v.c. 83 (Midlothian) as follows: *Elymus* sp., collected: Sue Jury, v.c. 83, Seafield Beach, NT2909 7568, 14 July 2023. This is pollen fertile with hairs on the free margin of the sheath (rather sparse and worn off) and typical squared-off ribs and is thus *E. athericus*. Other specimens (and potential extant sites of this taxon) may exist or have existed but could not be verified in the study. This specimen shows that *E. athericus* does occur in Scotland. While some records of *E. athericus* are still shown on the New Atlas, mainly in SW Scotland, none were found in the Wilcox (2022) study. There are four modern records in v.c. 75: Seamill (NS202463), Prestwick coast (NS3426), Ayrshire (NX 08144 82924) (all 2019) and Ardrossan shoreline (NS229429) in 2022. I have not seen any specimens relating to these. The VCR informs me that they were marked as ‘in need of checking’, and confidence in the records is now low (D. Lang pers. comm.). Vouchers (specimens) need collecting from these areas as they could still be a useful record whether they are *E. athericus* or not. Please send good (duplicate) specimens to the address below.

While it is possible others are *E. athericus*, without voucher specimens, the v.c. 83 plant is the only verified specimen of *E. athericus* at present for Scotland, albeit having been overlooked for so long. Please survey your local patch, and collect voucher specimens.

Thanks to Sue Jury for sending the specimens.

**Reference**

Wilcox, M. 2022. *Elymus athericus* (Sea Couch) (Poaceae) and coastal hybrid couch grasses in Scotland. *British & Irish Botany* 4(1): 27–33.

**Michael Wilcox**

43 Roundwood Glen, Greengates, Bradford,  
BD10 0HW  
michaelpw22@hotmail.com

**GLYCERIA STRIATA, NOT G. GRANDIS – A CORRECTION**

In *BSBI News* 146 (Hounscome, 2021) I reported that I had found an alien grass which I determined as *Glyceria grandis* S. Watson. Mike Wilcox requested a sample so I sent him one and he grew it on. He had some doubts about my determination, thinking that it was actually *G. striata* (Lam.) Hitchc., so referred it to Dr. Oli Pescott, the BSBI alien grass referee, who confirmed it. Subsequently Alan Leslie visited the site where I had seen it and where it was still growing. He agreed with that identification. This may be the first British record for the species.

The essential difference is that *G. grandis* has three anthers, whereas *G. striata* has only two, a pretty obvious distinction but one that I had not seen mentioned in any of the species descriptions I came across. Maybe I didn’t look hard enough? I did initially consider the latter species but rejected it in favour of the former for what now seem to me to be pretty unsafe reasons.

I would like to thank Mike Wilcox and Alan Leslie for correcting my determination and for improving my botanical knowledge.

**Reference**

Hounscome, G. 2021. *Glyceria grandis* S. Watson (American Manna-grass) in Surrey. *BSBI News* 146: 48–49.

**George Hounscome**

14 St John’s Rise, Woking, GU21 7PW  
george.hounscome@btinternet.com

**A UNIQUE JUNCUS HYBRID?**

The photograph opposite is of the hybrid *Juncus inflexus* × *J. conglomeratus* (Hard Rush × Compact Rush) in the garden of CAS, but artificially synthesised and raised by MPW in 2013/14, *J. inflexus* being the female parent. We do not know of any other material of this hybrid. The history of its supposed occurrence was set out in Stace (2020). In the past it has been reported from Britain

and the Continent under two names, *J. × leersii* T. Marsson (1867) and *J. × ruhmeri* Asch. & Graebn. (1904), but the type specimen of the first in Vienna (W) has been re-identified as *J. conglomeratus* and that of the second in Berlin (B) was destroyed in the Second World War. All other material we have seen so labelled is in our opinion not referable to this hybrid but to other *Junci*, particularly *J. inflexus* × *J. effusus* (= *J. × diffusus* Hoppe) (Hard Rush × Soft Rush). Hence MPW's synthesised hybrids (four were obtained) are possibly the only ones in existence in the wild or in herbaria.

All three of the above species can be found growing close together, although they have different preferred habitats. *Juncus inflexus* × *J. conglomeratus* should be sought in the field where both parents exist. It closely resembles *J. × diffusus*, but the inflorescence is more compact, with shorter more erect branches, the main bract subtending the inflorescence is slightly wider (but much less so than in *J. conglomeratus*), and there are fewer ridges on the stems (c. 12–20 as opposed to c. 20–45, counted 1–2 cm below the inflorescence). One isolating barrier between the species is likely to be the

flowering time: *J. conglomeratus* flowers earlier than *J. effusus*; *J. inflexus* later than *J. effusus*, and hybrids are not likely to be common.

### Reference

Stace, C.A. 2020. Hybrids in *Juncus* section *Juncotypus*, with a description of *J. × lancastriensis* (Juncaceae). *British & Irish Botany* 2(4): 266–284.

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## ANOTHER YELLOW-FLOWERED FIGWORT

On 10 August 1983 I was moving from my house in Chesham the next day and walked down into the village for something to do. Walking along the River Chess there were several large clumps of *Scrophularia auriculata* (Water Figwort), one of which had yellow flowers. With not much chance of returning to the locality in the immediate future I took a sample of the plant, some seeds and some photographs. I thought it fairly unusual and wrote to the recorder for the area to pass on the information. I planted the seeds on my bedsit windowsill, plenty grew, some with reddish colour in the stems, some just pale green. I threw away the former and kept the latter. Eighteen months later they moved with me to a place with a garden, and as I hoped, they grew into plants with yellow flowers. In the meantime I had heard nothing from the recorder and thought perhaps it wasn't such a surprising find and I would see a yellow-flowered figwort again some time. Forward forty years of botanising, mostly with the London Natural History Society, and I've never seen another yellow-flowered figwort.

Like Richard Jefferson in the last issue (*BSBI News* 153, p. 69), I also read of Pullen's lime green flowered Balm-leaved Figwort (*Scrophularia scorodonia* var. *viridiflora*) with interest. However, having now read of a lime green *S. nodosa* (Common Figwort) as well, I thought readers of *BSBI News* might be interested to hear about my plants, which makes it a trilogy of yellow-flowered *Scrophularias*. I revisited Chesham in the summer of 2019 but saw no *S. auriculata* plants, either red or yellow, but there didn't seem to be as much water in the River Chess.

**Jill Collar**

10 Sudbury Croft, Wembley, HA0 2QW



The hybrid *Juncus inflexus* × *J. conglomeratus* in cultivation.

# COUNTRY ROUNDUPS

Compiled by Pete Stroh  
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## ENGLAND

El Niño and human-induced climate change combined to make this spring a very dry and hot one in many parts of England, especially in the west. It's certainly the first time that I have walked through a swathe of *Carex lasiocarpa* (Slender Sedge) without so much as a drop of water on my boots, or knelt to take a photo of a sundew without getting damp knees. For many perennials of fens and other wetlands, and especially lowland wetlands, the future is not looking particularly rosy if we continue on our current path. But in an attempt to see a sliver of a silver lining, it is possible that species with short

life cycles, especially those with a preference for drier habitats, might benefit from, or at least be able to quickly adapt to, changing environmental conditions in the years to come. In late May, I led a walk to Cavenham Heath NNR in West Suffolk (v.c. 26). It was a site I had never visited, and so I arrived early to recon the area in an attempt to find things of interest to show the group later in the day. I need not have worried. It appears to have been a wonderful spring for annuals. The sandy tracks supported a fantastic show of Breckland specialities, in abundance, such as *Scleranthus annuus* (Annual Knawel), *Hypochaeris glabra* (Smooth Cat's-ear), *Teesdalia nudicaulis* (Shepherd's Cress), *Ornithopus*



*Scleranthus annuus* (Annual Knawel) Cavenham Heath, May 2023. Pete Stroh

*perpusillus* (Bird's-foot), *Logfia minima* (Small Cudweed) and *Crassula tillaea* (Mossy Stonecrop), to name but a few. And in an area surrounded by heather, a small population of a favourite perennial, *Astragalus danicus* (Purple Milk-vetch), which I later learnt had not been recorded from the NNR. It is likely that I would never have stumbled across it if I had been armed with grid references of known locations of the special plants of the area, and so the best places to take people. Sometimes, it is a positive boon to be armed only with ignorance! And chance encounters are, after all, what makes botanising so interesting, and addictive.

It is a close call, but perhaps the most notable find since April's News is the discovery of a new population of the Nationally Rare and Red List Endangered *Polygala amarella* (Dwarf Milkwort) at a farm in hills northeast of



*Astragalus danicus* (Purple Milk-vetch) Cavenham Heath, May 2023. Pete Stroh

Orton, Westmorland (v.c. 69). Whilst recording monads in an area that had not so much as a single record in the DDb, Jeremy Roberts, Mike Porter and Linda Robinson, together with other members of the Cumbria Botany Group (CBG), chanced upon calcareous-rich flushes with spectacular displays of *Primula farinosa* (Bird's-eye Primrose) growing with its common associate on the Orton limestones, *Schoenus nigricans* (Black Bog-rush). Nearby, on a rich grassy slope above a small area of calcareous fen, four plants of the Milkwort were found in good company, growing with *Carex capillaris* (Hair Sedge), *Epipactis palustris* (Marsh Helleborine) and an impressive colony of *Eriophorum latifolium* (Broad-leaved Cottongrass), amongst other species of note. This is clearly an important site, and one wonders if there might be other similarly rich areas hidden away in as yet unexplored flushes running off the limestone. It's certainly a nice thought.

Road verges can be happy hunting grounds, especially if

the surrounding land is not open access. In South-west Yorkshire (v.c. 63), Peter Burton has recorded a few new hectad records along the banks of the A635 Holmfirth Road, including *Anacamptis pyramidalis* (Pyramidal Orchid) and *Plantago maritima* (Sea Plantain), both at an altitude of 485m AOD, the former at (I think) its highest known elevation. Peter also found *Osmunda regalis* (Royal Fern) along the same road, to add to other recent *Osmunda* records on the tops of the moors, and also a population of c. 50 *Huperzia selago* (Fir Clubmoss) plants. Quite the verge.

The spread of halophytes along roadsides is well documented, and one species that continues to hitchhike away from its coastal habitat, albeit not nearly so fast as others, is *Hordeum marinum* (Sea Barley). John Norton (the eagle-eyed editor of this publication) spotted a huge colony of this grass (later confirmed by John Wakely) whilst driving along the A421 in Bedfordshire (v.c. 30), and with some help from Google Earth Street View later estimated that the population may extend

for a distance of c. 5km along a grass verge. This is only the second county record this century, and the fourth in total. It is also creeping along the A428 in Cambridgeshire, with Jonathan Shanklin recently recording a small population along the Madingley Slip Road RSV County Wildlife Site.

Staying with grasses that have a coastal bias in their distribution, in May this year Brian Gough discovered a large population of *Poa bulbosa* (Bulbous Meadow-grass), confirmed by Arthur Copping, in Dovedale (v.c. 57), growing in thin soil over limestone rock near the main carpark. The location hints that it might have dispersed and later established in this area via anthropogenic means, but it is not the showiest of species, and there is a chance that it might be an overlooked inland native population. It is clearly happy where it grows, whatever its status.

Targeting aquatic habitats in urban areas can sometimes be a depressing business, but it's certainly worth persevering for the moments when your grapple emerges from the depths with hidden gems. On a joint London Natural History Society/BSBI meeting earlier this year, Mark Spencer and others, including Chris Preston, BSBI's pondweeds referee, refund after an absence of 15 years *Potamogeton lucens* (Shining Pondweed) at the Hertford Union Canal in Tower Hamlets, its last known site in Greater London. Aside from this location, it has not been seen anywhere in London since the 1980s. The group also found *P. trichoides* (Hairlike Pondweed), which is a rare but possibly increasing species in the area. Mark has clearly been interested in the wetter areas of our capital, as he and Trevor Dines also



*Polygala amarella* (Dwarf Milkwort), Orton, Westmorland (v.c. 69).  
Jeremy Roberts

recently found *P. friesii* (Flat-stalked Pondweed) in a canal in the Kings Cross area, in a stretch of water that Mark says he has peered into gloomily on many an occasion in the past hoping to see something aside from *Elodea nuttallii* (Nuttall's Waterweed) and *Lagarosiphon major* (Curly Waterweed). Flat-stalked Pondweed has not been recorded in Middlesex since the late 1940s and aside from healthy populations in the east Kent Stour this species appears to be almost extinct in south-east England. The canal also hosted *P. crispus* (Curled Pondweed), which is now quite scarce in London, *P. pusillus* (Lesser Pondweed), *P. trichoides* and *Stuckenia pectinata* (Fennel Pondweed). In Cambridgeshire (v.c. 29), Jonathan Shanklin also made a nice aquatic find with the discovery of *Eleogiton fluitans* (Floating Club-rush), found near to Wimblington and last recorded from the hectad in 1932. This is a relatively rare species in England outside of its strongholds in the south-west and parts of southern England, although new records continue to be made in eastern areas, and especially Fenland, thanks to intensive work for the forthcoming Fenland Flora (Mountford & Graham, in prep.).

Nearby(ish), in Buckinghamshire, Andy McVeigh has let me know about the first appearance in the county for nearly 50 years of the diminutive yet striking *Centaureum pulchellum* (Lesser Centaury). Discovered by the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) Ecology Team in early July in the north of the county, the site was later visited by Andy and Julia Carey, who estimated a population of 100,000s of plants – an impressive display! Andy also found *Scleranthus annuus* subsp.

*polycarpus* this summer on the Greensand Ridge (Woburn Sand Formation) near Great Brickhill, where an estimated c.200 plants plus a small number of subsp. *annuus* plants were present (both determined by Fred Rumsey). The locality sits close to the Bedfordshire/Buckinghamshire border, just squeaking into v.c. 24. The record of subsp. *polycarpus*, almost certainly an under-recorded taxon, appears to be a first for the county.

I visited Worcestershire this spring to meet up with the local botany group, ably run by Tom Ward. We recorded the flora of the Knapp & Papermill Nature Reserve located in the west of the county, and found some lovely plants, including oodles of *Carex strigosa* (Thin-spiked Wood-sedge) and nice populations of *Trifolium medium* (Zigzag Clover)



*Orobanche rapum-genistae* (Greater Broomrape), Worcestershire (v.c.37), May 2023. Pete Stroh

and *Luzula forsteri* (Southern Wood-rush), the latter close to its northernmost limits. But the star of the day was undoubtedly the Nationally Scarce *Orobanche rapum-genistae* (Greater Broomrape). A few statuesque plants of this perennial parasite were found in peak condition under a leggy *Cytisus scoparius* (Broom), about 100m away from the main path. It was last reported at the site over thirty years ago, and might possibly have emerged recently from the seed bank following disturbance, as the plants were situated close to an active badger sett.

In North-east Yorkshire (v.c.62), Dave Barlow has reported two notable finds. In 2022, he discovered *Epipactis phyllanthes* (Green-flowered Helleborine), new for the county, in a most unusual place; by the river Tees in Stockton-on-Tees. Dave went back this year, and counted 24 spikes. And in July of this year, he found a very healthy colony of c.200 spikes of *Hypopitys monotropa* (Yellow Bird's-nest). This is a rare plant in the county, and in the north of England generally. Bedfordshire (v.c.30) also has an *Epipactis* first, *E. leptochila* (Narrow-lipped Helleborine), very similar to *E. phyllanthes* but with subtle differences to the lip shape, colour, posture of the flowers, and vegetative characters. This Nationally Scarce species appears to be declining, and so it's heartening to hear about an extension to the known range. The plants, growing under *Fagus sylvatica* (Beech) but on chalky boulder clay rather than more typical calcareous substrates, were found by Richard and Geraldine Hogg in a central Bedfordshire woodland and later confirmed by Richard Bateman.

A native species that has been expanding its range in





*Epipactis leptochila* (Narrow-lipped Helleborine), Bedfordshire (v.c. 30), July 2023. Geraldine Hogg

recent years might bear closer examination. Ken Adams has recently reported more new sites for *Galium parisiense* (Wall Bedstraw), one on Canvey Island, the other in Rayleigh (both v.c. 18), with the main colonies growing at the base of walls but with some plants also found in nearby gardens. However, rather than having finely papillose fruits (var. *leiocarpum*), the plants appear to be the spiny-fruited

alien variety (var. *parisiense*), which Stace (2019) notes as very rare, although I cannot find any definitive records from Britain or Ireland in our database. Ken notes with some understatement that the significant increase in records for the species this century might not be unrelated to this discovery. Consequently, if you do happen to find a new population, or revisit a known site, please do ensure

to check the fruits and record to variety.

In East Norfolk (v.c. 27), Bob Ellis has written to tell me of two significant discoveries. *Rumex cristatus* (Greek Dock) continues its gradual expansion out from south-east England strongholds, with a large patch found by Alex Prendergast in south-east Norfolk; this is a first county record. And the lovely *Carex diandra* (Lesser Tussock-sedge) has been reported from a couple of valley fen sites; at Holt Lowes, where it doesn't seem to have been recorded before, and at Southrepps Common. William Nicholson's *Flora of Norfolk*, published in 1913, mentions a record from Southrepps parish by E.F. Linton (who was in Norfolk from 1878–1888), but there seem to be no records since.

Phillipa Tomlinson has let me know of a 'new' species confirmed for the Isle of Man (v.c. 71). Phillipa writes that a hawkweed that has been growing on the toxic lead mine 'deads' in Foxdale for many years has now been identified, by the Hawkweed referee Brian Burrow, with the tongue-twisting name of *Hieracium daedalolopiooides* (Petite-leaved hawkweed). This is a probable endemic species of our area which occurs mainly in Wales and as far as south-west Scotland.

In Cambridgeshire, *Bunium bulbocastanum* (Great Pignut) has been refound in Melbourn, where it was last noted in 1890, and there is now a second county site for *Orchis anthropophora* (Man Orchid), with a single plant recorded at Fulbourn Fen by Lucy Watts. I visited the site this summer (to search for something else – I didn't know about the discovery of the orchid at the time), but managed to see the spike, as it was rather signposted by a small (I assume temporary)

fence within an otherwise open, cattle-grazed area.

*Valeriana dioica* (Marsh Valerian) is a vanishingly rare plant in the south-west of England, with only one site known from Cornwall, at Lower Moors on the Isles of Scilly (v.c. 1), and it has only been recorded there once, in 2017, following disturbance of the soil during boardwalk works (which, as an aside, also led to many other rare species for the island establishing from the seed bank). There are a few unconfirmed records for mainland Cornwall in the past, and although Margetts, in his *Review of the Cornish Flora* (1981), didn't outright reject it occurring in Cornwall, the absence of specimens led to him being cautious. The discovery of this species by Paul Gainey at Trelusback (v.c. 1), south of Redruth and on the Carnmenellis granite, is therefore significant.



*Valeriana dioica* (Marsh Valerian), Redruth, Cornwall (v.c. 1), May 2023. Ian Bernallick

The plants were growing in damp woodland, consisting of mature planted trees on a former rush-pasture/*Molinia* mire area, just west of a large pool which is much visited by wildfowl. Parslow (2017) speculated that the Scilly plants could have been introduced by migratory birds, and Ian Bernallick, who kindly sent me details of the find, suspects that the same mode of dispersal may have led to its establishment at Trelusback. That may well be the case. However, the associate species that Ian has listed seem quite in keeping with sites for *V. dioica* that I know of in other parts of England – in fact, the Cornish site is considerably more species-rich than many – and I do wonder if it is an overlooked population that has been present for some considerable time. I recently found a 'new' population abutting the River Nene, very close to my home (v.c. 32), in an area of species-poor wet woodland that was probably much richer in the past, before a fenceline stopped sheep and cattle from entering. The population is almost entirely vegetative, with only one or two flowers seen in any one year, and it is easily missed. And of course, as proficient as botanists have been in the past, there are always new areas to explore and new plants to discover, as the find of *Polygala amarella* and many others mentioned above amply demonstrates.

My thanks to all who have sent in their finds, and apologies for not being able to include them all. Please do continue to send me details of notable records, at any time – I'm always pleased to hear about them.

**Pete Stroh**

BSBI Scientific Officer & England Officer

**WALES**

Starting in North Wales, the discovery of *Lycopodium lycopus* (Hare's-foot Clubmoss) in Eryri (Snowdonia) by Plantlife's Vascular Plant Officer Robbie Blackhall, adds a new species to Wales's flora. This clubmoss had not previously been found further south than Scotland in our area so it is a very exciting find. Robbie first found it in 2021 but it was not confirmed until more recently by Fred Rumsey, as it is very similar to *L. clavatum* (Stag's Horn Clubmoss).

On Anglesey (v.c. 52) Ian Bonner and Nigel Brown have, as ever, been busy. *Trifolium subterraneum* (Subterranean Clover) was found at Llyn Maelog, probably the most extensive colony on Anglesey in short grassland over thin soils in two lakeside fields. This is a species that has increased since the 1982 Flora by R.H. Roberts. At Wylfa Head, a newly discovered population of *Ophioglossum vulgatum* (Adder's-tongue) numbered an estimated 10,000 fronds in damp hollows on the headland. *Botrychium lunaria* (Moonwort) at Bwrdd Arthur was a welcome rediscovery of a single frond, not reported from this well-visited locality since 1961. *Logfia minima* (Small Cudweed) seen at Llangaffo on rocky debris, was a welcome new location for this otherwise declining species, the only other recent locations all in the Newborough area.

Some orchids have flowered very well this season on Anglesey, especially *Platanthera chlorantha* (Greater Butterfly-orchid) at the Coronation Meadow, Plas Newydd, and the dune and dune-slack species *Anacamptis pyramidalis* (Pyramidal Orchid), as well as *Dactylorhiza incarnata* (Early Marsh-orchid) and *Epipactis palustris* (Marsh Helleborine) at

Newborough and Aberffraw. On the other hand, *Coeloglossum viride* (Frog Orchid) could not be found at its usual best site – despite careful searching and also, *Neottia nidus-avis* (Bird's-nest Orchid) was not seen at its only site near Menai Bridge.

First county records reported by Wendy McArthy for Caernarvonshire (v.c. 49) included *Euphorbia oblongata* (Balkan Spurge) at Glanwydden, spreading along a lane bank, *Triteleia laxa* (Triplet Lily), a single plant on the Great Orme, found by Richard Jones, and *Buphthalmum salicifolium* (Willow-leaved Yellow-oxeye), with several plants in cracks around a car park at Llandudno Junction, self-sown from a raised bed on a wall top, found by Trevor Dines. The latter two appear to be new Welsh records. Ian and Linda Fraser found a single *Epipactis helleborine* (Broad-leaved Helleborine) at Beddgelert, new for the hectad. Twenty-five spikes of *Orobancha rapum-genistae* (Greater Broomrape) were spotted in a new site in SH77. The western variety of *Fumaria bastardii* (Tall Ramping-fumitory) var. *hibernica* grew in profusion on dumped soil in Llandudno, no doubt imported, although there are old records for it here. *Prunus cerasifera* (Cherry Plum) can be difficult to pick out when not in flower, so new sites are usually found in spring, and several bushes were spotted this year in a hedgerow near Llanddeiniolen. Also, in spring, careful examination of whitlowgrasses produced a first record of *Erophila glabrescens* (Glabrous Whitlowgrass) for SH88 on the Little Orme, and an update of a 1901 record at Caernarfon, both duly confirmed by Tim Rich.

In Denbighshire (v.c. 50), Delyth Williams wrote that it has been a good year for buttercups. More

recent records of the locally near-scarce *Ranunculus aquatilis* (Common Water-crowfoot) from a pond in Mynydd Cricor, *R. peltatus* (Pond Water-crowfoot) from Mostyn Uchaf and *R. penicillatus* (Stream Water-crowfoot) from Llanrwst, were reported by Wendy McCarthy. Also, of the locally scarce *R. lingua* (Greater Spearwort) from Sydal West. But the highlights were re-finds of the locally rare *Ranunculus parviflorus* (Small-flowered Buttercup) and *Ranunculus sardous* (Hairy Buttercup). Delyth and company were thrilled to find more, bigger and better patches of the former on limestone beneath a small outcrop at Rhyd-y-meudwy. This may now be the vice-county's only extant site; previous records from 2004 on Mynydd Marian SSSI have not been refound. *R. sardous* was found in 2009 from Tir Prince, but a search in 2013 proved fruitless until this year when Tony Cumberlidge found it in a few sites on rough ground in the industrial site, near to the original record.

Steve Chambers in Cardiganshire (v.c. 46) reported that in early May via the local botanical grapevine and social media came news of the discovery of a completely new location for *Lathraea squamaria* (Toothwort) in the county at Cwm Rheidol. It was spotted by Caroline deCarle, who found three small spikes, one partly munched by molluscs, under a small patch of suckering *Prunus spinosa* (Blackthorn) on a trackside by the Rheidol Visitor Centre. Based on the metric of 'most proximate woody neighbour', Blackthorn appeared to be the host, and a novel associate at that for the county, as the nearest *Corylus avellana* (Hazel) bush was several metres away.

Toothwort is very rare in West Wales and it has only been seen in the county before in three woodlands, two near to the Dyfi estuary, in Cwm Einion/Artist's Valley (last seen in 1930) and in Coed Cwm Cletwr, and one in a few spots in the lower Aeron valley. The Rheidol valley location is c. 9 miles/14.5 km south of the Dyfi sites and c. 16 miles/26 km from the Aeron valley.

Alongside organising the Wales AGM (which sadly had to be cancelled because of problems at the venue) in Montgomeryshire (v.c. 47), Kate Thorne noted that she and others had been working towards seed collecting for five species. One of these was *Hottonia palustris* (Water-violet) until they found that it had been lost from all three of its known sites in the county. Another of the species – *Luronium natans* (Floating Water-plantain) – fitted in well with the AGM theme of 'wetlands' and they had been able to check flowering during their recesses of upland pools and canals for the field outings. The first few flowers noted in a canal were on 17 July and, in an upland pool, on 21 July. However, it is possible that *Luronium* does not reproduce by fruiting, at least in the canal, where many other stands, occasionally sizeable, are currently vegetative. But this remains to be seen – the canal records, and those from formal canal monitoring, are often made out of the flowering season. Botanists tend to go to the uplands in summertime and this could be why there are more flowering/fruiting dates for the upland pools. Seed collecting for two more species, *Oenanthe fistulosa* (Tubular Water-dropwort) and *Stellaria palustris* (Marsh Stitchwort), may now be put on hold for another year whilst designation of the site they occur

within is finalised. Meanwhile the fifth species – *Cephalanthera longifolia* (Narrow-leaved Helleborine) – is well on its way with its fattening capsules. Flowering was on 26 May and there were five capsules on one of the stems on 24 July.



*Cephalanthera longifolia* (Narrow-leaved Helleborine), May 2023. Dale Warren

Regarding new species for 2023, there have been new post-2000 tetrad records in v.c. 47 for several species from the three Flora Group meetings to date. In addition, there were some interesting records from outings with the Montgomeryshire Field Society with two species – *Isoetes lacustris* (Quillwort) and *Elatine hexandra* (Six-stamened Waterwort) – found for the first time at Llyn Hir LWS. Both are new hectad records. *Ophioglossum*

*vulgatum* (Adder's-tongue) was recorded in a new tetrad by Ruth Dawes and in a second new tetrad by Ruth and the Montgomeryshire Field Society. Steve Chambers had a first county record for *Atriplex littoralis* (Grass-leaved Orache) at Welshpool on the edge of a layby. Arthur Chater very kindly confirmed the *Elatine* from photographs.

John Crellin found *Andromeda polifolia* (Bog-rosemary) on Llangynidr Mountain (first found by NRW last year) in Breconshire (v.c. 42) whilst in Glamorganshire (v.c. 41) Tim Rich found *Cardamine occulta* ('Nursery Bitter-cress') in June as a plant pot weed, in Whitchurch, Cardiff. This is new to Wales, but no doubt will soon spread. Julian Woodman found a new colony of another small alien plant, *Galium murale* (Small Cleavers), in Danescourt in June. This is the second Cardiff location and the fourth for Wales if all the Fishguard populations are considered one. The habitat was the thin soil gaps of newish block paving, exactly like its other site in Cardiff.

The Glamorgan Botany Group had four trips this year up to July. A new location was found for *Paris quadrifolia* (Herb-Paris) at Cefn Mably woods in April, and a couple of plants of *Asparagus prostratus* (Wild Asparagus) were recorded at Overton, Gower in May on our 10th anniversary. On a sweltering day in June, we visited reclaimed colliery land and skirted around the scene of a recent grass fire in some forestry and cliffs. Of note was the large colony of *Carex distans* (Distant Sedge) in the reclaimed colliery grassland. In July the group started a census of *Cirsium tuberosum* (Tuberous Thistle) and its hybrids following previous surveys by Vicky Morgan, Geoff Norman and, more recently, a comprehensive study by Kevin

Walker in 2002. We also counted *Campanula glomerata* (Clustered Bellflower) when we saw some. Good numbers of *C. tuberosum* were seen in Cwm Marcross and Cwm Nash, some *C. glomerata* at Cwm Marcross but lots at Cwm Nash. The hybrid *Cirsium × semidecurrans* (*C. tuberosum* × *palustre*) was seen at Cwm Marcross, as was a possible *Cirsium × medium* (*C. tuberosum* × *acaule*). Some of us will continue the survey on towards Dunraven in early August.

In Monmouthshire (v.c. 35), the most interesting recent plant find was by Lowri Watkins who, when surveying at Springdale Farm, a Gwent Wildlife Trust reserve, found a spike of *Orobancha rapum-genistae* (Greater Broomrape) by a bush of *Cytisus scoparius* (Broom). There is only one other record this century for the county, from 2015. *Carex hostiana* (Tawny Sedge) found by Elsa Wood (EW) and Steph Tyler (SJT) in a boggy area on a hill farm on the Blorenge was a new hectad record, and another was *Euphrasia micrantha* (Slender



*Campanula glomerata* (Clustered Bellflower), Overton, Gower (v.c. 41). Julian Woodman



*Cirsium* × *semidecurrans* (Tuberous Thistle *C. tuberosum* × Marsh Thistle *C. palustre*), Cwm Marcross, Glamorgan (v.c.41). Julian Woodman

*helleborine* (Broad-leaved Helleborine) found by Anne Griffiths and Ceri Goring near Chain Bridge and by EW and SJT at Llangwm-isaf. A small colony of *Carex hostiana* was also found in some fine species-rich meadows near Wolvesnewton. Another species-rich hay meadow between Llansoy and Penyclawdd supported a good population of *Dactylorhiza praetermissa* (Southern Marsh-orchid) and hybrids *D.* × *grandis*, but among them a *D. praetermissa* var. *junialis* ('Leopard Marsh-orchid').

**Steph Tyler**

Joint VCR for Monmouthshire (v.c. 35)

**SCOTLAND**

There was exciting news from the Mamores (south of Ben Nevis) in late June when Gus Routledge discovered a new population of *Carex norvegica* (Close-headed Alpine-sedge) high in Coire Dearg, between Mullach nan Coirean and Stob Ban. This Nationally Rare species



*Orobanche rapum-genistae* (Greater Broomrape), Springdale Farm, Gwent (v.c. 35), June 2023. Lowri Watkins

the species was rediscovered in 2022. Two plants of *Senecio sylvaticus* (Heath Groundsel) were found by SJT, EW and Adrian Wood along a woodland ride on Mynydd Machen in mid-July, representing a new post-2000 hectad record for this apparently scarce plant in the vice-county.

Caroline O'Rourke identified *Dryopteris cambrensis* (Narrow Male-fern) on a bank by a lane near Llanfoist in June. There have been many new tetrad records by EW and SJT including high on the Bloreng, on a track near the Punchbowl, *Ornithopus perpusillus* (Bird's-foot), only the eleventh tetrad record for Monmouthshire; *Alchemilla filicaulis* subsp. *vestita* (Hairy Lady's-mantle) near Ynsddu in the west of the vice-county in early May, along with *Carex caryophyllea* (Spring Sedge) and *Polygala serpyllifolia* (Heath Milkwort); and *Epipactis*

Eyebright) on a forest track on Mynydd Machen. Seven flowering spikes of *Epipactis leptochila* (Narrow-lipped Helleborine) were noted this year by Anne Griffiths and Ceri Goring at the site where



*Carex norvegica* (Close-headed Alpine-sedge) Coire Dearg, Westernness (v.c. 97). Gus Routledge

was previously known from only a few mountains in the central and eastern Highlands. This is the first record for Westernness (v.c. 97) and is 40km north-west of the nearest site, on Beinn Heasgarnich. It is also further west than the site on Ben Lui, making it the most westerly location in Britain (early records from the Hebrides have been discounted). Other notable finds in Coire Dearg included *Salix myrsinites* (Whortle-leaved Willow) and *Equisetum pratense* (Shady Horsetail), the latter not seen in the Mamores for more than 50 years.

Earlier in June, at the invitation of the Knoydart Foundation Ranger Service, we held a 'Rough Crew' meeting in Knoydart, based at Inverie. Over four days of sweltering heat our small group made nearly 4,000 records in 50 monads, from the coast up to



Luke Gaskell explaining fern ID to Knoydart ranger Juliet de Banzie, Inverie. Ian Strachan

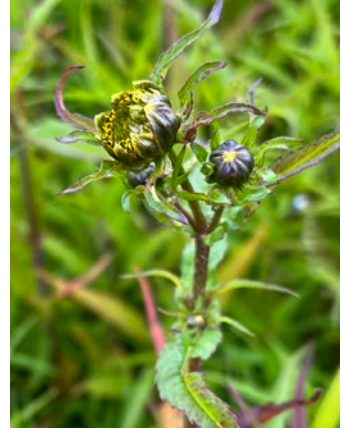
the summit of Ladhar Bheinn at 1020m altitude. This has greatly boosted the coverage of this remote part of Westernness, much of which has been rather poorly recorded in recent years. Orchids such as *Platanthera bifolia* (Lesser Butterfly-orchid), *Pseudorchis albida* (Small White-orchid) and *Dactylorhiza incarnata* (Early Marsh-orchid) were plentiful, along with other calcicoles such as *Eriophorum latifolium* (Broad-leaved Cottongrass) and *Saussurea alpina* (Alpine Sawwort). Notable finds included the first Knoydart record of *Osmunda regalis* (Royal Fern), at Sandaig, and *Subularia aquatica* (Awlwort)



*Dactylorhiza incarnata* (Early Marsh-orchid), Knoydart (v.c. 97). Ian Strachan

in several lochans near Mam Li, the first hectad records since 1959. A full report will appear in due course.

There have been a number of other good finds in wetland habitats this year. In Stirlingshire (v.c. 86) Matt Harding made a successful visit to the Forth & Clyde Canal at the Falkirk Wheel, with the Darwin Tree of Life Project and Scottish Canals, to collect pondweeds (see photo p. 80). They found *Potamogeton friesii* (Flat-stalked Pondweed) – the first record for Stirlingshire



*Bidens cernua* (Nodding Bur-marigold) St Helens Loch, Bonnybridge (v.c. 86). Matt Harding

since 1988 – as well as *P. trichoides* (Hair-like Pondweed), *P. alpinus* (Red Pondweed) and *P. pusillus* (Lesser Pondweed). At St Helen's Loch, Bonnybridge, the locally scarce *Callitriche hermaphroditica* (Autumnal Water-starwort) was refound after 26 years during a SHARPP search. A bonus find was *Bidens cernua* (Nodding Bur-marigold), only the second site for Stirlingshire and the first record since 1994.

In Dunbarton (v.c. 99) Stan Campbell found *Carex pseudocyperus* (Cyperus Sedge) near the River Leven at Balloch. Several vigorous tufts were growing by a muddy ditch in open scrub. It has very few Scottish records, and this is the first for the western half of Scotland. Unfortunately, a nearby threat is the invasive non-native *Lysichiton americanus* (American Skunk-cabbage) which, as *Plant Atlas 2020* shows, is spreading nationally at an alarming rate.

In Easternness (v.c. 96), Gus Routledge found the Nationally Scarce *Aristavena (Deschampsia) setacea* (Bog Hair-grass) at Loch Ceo Glais, south of Dores, the

first record for the area since Mary McCallum Webster recorded it in 1976. Andy and Liz Amphlett visited the site the next day and noted a large population of *Carex viridula* (Small-fruited Yellow-sedge) around the shores of the loch; but they also spotted several clumps of what turned out to be *C. × helenae*, its hybrid with *C. demissa* (Common Yellow-sedge), as determined by referee Nigel Blackstock. There are very few records for this hybrid in Britain, though whether it really is rare or is very under-recorded is unclear.

Another Nationally Scarce species, *Juncus balticus* (Baltic Rush), while primarily a coastal species, is also found inland in north-east Scotland. It grows naturally beside the Rivers Avon, Dulnain and Findhorn as well as increasingly along roadsides (Amphlett, 2019). Earlier this year Andy and Liz discovered a new site at Coignafearn beside the Allt a' Mhuilinn, at the base of a flushed slope. The site, at 400m altitude, is c.6km upstream from the highest known location on the River Findhorn and is therefore a considerable extension of range inland.

Hybrids tend to be much less frequent than their parents, but one notable exception is *Circaea × intermedia* (Upland Enchanter's-nightshade) which is very widespread in moist woodland across northern and western Britain. It is the hybrid between *C. lutetiana* (Enchanter's-nightshade), which is rather common in lowland base-rich woodland, and the much rarer *Circaea alpina* (Alpine Enchanter's-nightshade), which has its Scottish stronghold on Arran. In May, Angus Hannah, Recorder for the Clyde Isles (v.c. 100), was very pleased to discover *C. alpina* for the first time on the Isle of Bute. It was growing

abundantly at two remote locations on the north coast – one in a wooded gully and the other amongst rocks along a stretch of craggy coast. He speculates that *C. alpina* has survived in these isolated sites on Bute because the conditions there were never suited to *C. lutetiana*, so hybridisation did not occur; and the sites were too remote for the hybrid to reach, given its limitation to dispersal by vegetative means.

Across on Arran, Sarah Cowan (now joint Recorder for v.c. 100) discovered *Ophioglossum vulgatum* (Adder's-tongue) on the coast near Kildonan. It was last seen there in 1992 but she found it to be considerably more abundant and widespread than had been previously known. Some 30km east across the Firth of Clyde, a visit to Prestwick dunes in Ayrshire (v.c. 75) by the local botany group in April was productive, with notable finds including *Viola canina* (Heath Dog-violet), not seen there since the 1970s; *Teesdalia nudicaulis* (Shepherd's Cress), last recorded there in 1990; and *Coincya monensis* subsp. *monensis* (Isle-of-Man Cabbage), which was still widespread in the dunes. This last taxon is a Nationally Scarce GB endemic, for which the coasts of Ayrshire and Arran are now the Scottish stronghold.

In July a workshop on brambles (*Rubus*) run by Angus Hannah



*Rubus lanaticaulis* stem, Dailly, Ayrshire (v.c.75). Matt Harding

in Ayrshire was very successful, and turned up an interesting, hairy-stemmed bramble at Dailly, eventually pinned down to *Rubus lanaticaulis* – a species with just two previous Scottish records (the last from 1988). Also of note was *Rubus conjungens*, a first record for Ayrshire, growing in the Maybole area.

Returning to hybrids, in Peeblesshire (v.c. 78) recorder Luke Gaskell discovered the second county record for *Viola × contempta*, the hybrid between *V. tricolor* (Wild Pansy) and *V. arvensis* (Field Pansy), growing on the edge of an organic spring barley field near Walkerburn. *Viola arvensis* remains quite common in arable fields locally but *V. tricolor* is rare and usually only found around habitation. Luke was also pleased to refine *Centaurea cyanus* (Cornflower) on the same farm; as with the *Viola* it was in spring barley in a field that had been in grass for a while. He recorded it in the same spot in 2011, when he thought that it would have arrived as an impurity in the organic seed, but it is possible that it has been there for a long time.

Finally to Corrou, where head stalker Allan MacLeod spotted the hybrid between *Betula nana* (Dwarf Birch) and *B. pubescens* (Downy Birch) near Loch Treig. Surprisingly perhaps this is the first record for Westernness, but no doubt more specimens await discovery as *B. nana* is frequent in the easternmost part of the vice-county.

## References

Amphlett, A. 2019. Inland populations of *Juncus balticus* (Juncaceae) in Scotland. *British & Irish Botany* 1(3): 202–218.

## Ian Strachan

Joint VCR for Westernness (v.c. 97)

## IRELAND

This has been an interesting summer weatherwise – a slow start, followed by a warm dry spell which seemed to make everything appear at once, followed by a wet chilly July – not at all conducive to botanising. Still, thanks to our dedicated VCRs there have been some wonderful findings across the country.

*Epipactis dunensis* (Dune Helleborine) has been causing rather a stir across Ireland this year, with speculation that a helleborine specimen that appeared unexpectedly on the lawn of Trinity College (v.c. H21) during 'No-mow May' may have indeed been this species and not the aggravatingly similar *E. helleborine*, as originally reported. The very rare *E. dunensis* is known to occur at a handful of locations in Co. Dublin and in July, Mike Wyse Jackson of NPWS kindly accompanied Paul Green to see it in the Dodder valley, where it continues to thrive. Maybe one to keep a close eye out for next summer...

On the subject of helleborines, Andrew Malcolm revisited successful colonies of both *Epipactis phyllanthes* (Green-flowered Helleborine) and *Neottia cordata* (Lesser Twayblade) in Co Waterford this year, although the former's numbers were down from last year, probably due to the dry conditions in the early summer. The Lesser Twayblade site is a Sitka Spruce plantation that was being thinned this year, and luckily Andrew was able to contact Coillte, enabling the main area that they were growing into to be cordoned off, so that they survived another year! Robert Northridge tells me that spruce plantations with lots of moss, especially those at higher altitudes, can provide good



*Neottia cordata* (Lesser Twayblade) (left) and *N. nidus-avis* (Bird's-nest Orchid) (right), Co Waterford (v.c. H6). Andrew Malcolm

habitat for this species in Ireland. Enviously, Andrew also recorded three spikes of *Neottia nidus-avis* (Bird's-nest Orchid) just 1 km from his house in Co Waterford (v.c. H6) – one of which was the best specimen he had ever come across. They have been known to occur in the general area, but he comments that they seem very random in their occurrence from year to year.

David McNeill reports that a new site for *Neotinea maculata* (Dense-flowered Orchid) – only the second site in Co Antrim (v.c. H39) – was discovered at Galboly, where five fruiting spikes were counted, about 1 km west of the only previous record. Interestingly, the new site is on basalt cliffs. One fruiting spike was also seen this year at the original site, which is on chalk. These records are the most northern and western in Ireland and Britain for this species (with the exception of one site on the Isle of Man, where

sadly it has not been seen since 1985 – I was lucky to witness its swan song that year). In addition, a new hybrid orchid for Co Antrim was found by David McNeill and Ric Else on Rathlin Island. This was confirmed by Richard Bateman to be  $\times$  *Dactyloдения st-quintinii* (*Gymnadenia borealis*  $\times$  *Dactylorhiza fuchsii*) which, helpfully, was growing with both parents. Also in Co Antrim,



$\times$  *Dactyloдения st-quintinii*, Co Antrim (v.c. H39), July 2023. Ric Else



*Cerastium arvense* (Field Mouse-ear) was rediscovered at its only extant site in the county on Royal Portrush golf links, after a gap of nearly 50 years.

At the other end of the country, three new native species/hybrids/varieties have been recorded in Wexford (v.c. H12) this year, a pleasant surprise as most years bring forth only one! Paula O'Meara discovered over 100 stems of *Equisetum* × *trachyodon* (Mackay's Horsetail – that is, *E. hyemale* × *E. variegatum*) in and around a wet drainage ditch at Ballykeerogemore (ID confirmed by Pat Acock). Paul Green was delighted to find *Vaccinium vitis-idaea* (Cowberry) scattered across a rocky knoll on Black Rock Mountain, Co Wexford, over an area 3 × 10m. Although this was within a new monad for him, he found it surprising that this had not been spotted before, as the knoll looked a tempting location for botanists exploring the mountain. Earlier in the year, the third new Wexford find for 2023, *Senecio vulgaris* var. *hibernicus* (the rayed form of Groundsel) turned up uninvited in his garden!



*Senecio vulgaris* var. *hibernicus* (Groundsel), Co Wexford, April 2023. Paul Green

Ciarán Flynn and Enda Flynn also recorded *Equisetum* × *trachyodon* in Co Louth, growing on a riverbank at Glenmore. The only Louth (v.c. H31) records are from this river. Ciarán also saw *Fagopyrum esculentum* (Buckwheat) in early July, growing at the edge of an arable field in Ballagan, Co. Louth, which appears to be a new county record.

Close to where Praeger had recorded the same species in 1913, Paul Green and Lisa Dolan were delighted to discover five plants of *Campanula trachelium* (Nettle-leaved Bellflower) on the riverbank at Fee Beg, North Tipperary (v.c. H10). They had previously recorded the same species last year in a different location, by a nearby river, adding weight to Praeger's original records. While visiting neighbouring Co Limerick (v.c. H8), Paul was impressed to see *Scirpus sylvatica* (Wood Club-rush) near Adare, a species previously unseen by him in Ireland but known from this site and listed in

Sylvia Reynolds' County Limerick Rare Plants Register published in 2021 (available on the BSBI's website: [bsbi.org/rare-plant-registers](https://bsbi.org/rare-plant-registers)).

Also in the west of the country, Eoin McGreal (VCR for West Mayo) led an immensely enjoyable and successful field outing on 15 July (in spite of gusty wind and driving rain!) to a lowland



*Vaccinium vitis-idaea* (Cowberry) Black Rock Mountain, Co Wexford, June 2023. Paul Green



*Campanula trachelium* (Nettle-leaved Bellflower) Fee Beg, North Tipperary (v.c. H10). Paul Green

blanket bog area near Ballycroy, Co Mayo (v.c. H27), where some exciting species were found, including *Utricularia intermedia* (Intermediate Bladderwort), *Carex limosa* (Bog Sedge) and the elusive *Hammarbya paludosa* (Bog Orchid).

Julie Larkin fortuitously came across *Thelypteris palustris* (Marsh Fern) in a Co Clare (v.c. H9) fen – this fern is rare in Ireland and is listed as Near Threatened in the Irish Red List. George Smith also reports finding this species in a lovely area of tall swamp at Ballykeeran Bay, Lough Ree (Co Westmeath, v.c. H23), along with *Lathyrus palustris* (Marsh Pea), *Stellaria palustris* (Marsh Stitchwort) and *Thalictrum flavum* (Common Meadow-rue), all of which are uncommon in Westmeath.

A fantastic Aquatic Plant Project workshop in Counties Clare and Galway, led by Cilian Roden on 29 July turned up a new location for *Potamogeton obtusifolius* (Blunt-leaved Pondweed), at Ballynakill Lough, Co Galway (v.c. H17), and a new Co Clare record for *Galium album* (Hedge Bedstraw), growing on the roadside close to Lough Bunny – the first Clare record since recording for the Atlas

commenced. As well as seeing the magnificent and unique marl lake, Lough Bunny, and learning about its aquatic species – which include a variety of charophytes and *Utricularia vulgaris* (Greater Bladderwort), it was a special bonus to catch the lovely Burren plants, like *Rubia peregrina* (Wild Madder), *Filipendula vulgaris* (Dropwort) and *Geranium sanguineum* (Bloody Crane's-bill).

Up in Co Sligo (v.c. H28), Eamon Gaughan has been out to many wonderful sites this summer, bravely making two trips up Ben Bulbin and seeing such exciting rarities as *Saxifraga aizoides* (Yellow Saxifrage), *Arenaria ciliata* (Fringed Sandwort), *Silene acaulis* (Moss Campion), *Euphrasia salisburgensis* (Irish Eyebright), *Galium sternerii* (Limestone Bedstraw) and *Sedum rosea* (Roseroot). A field outing to Strandhill in early July found many lovely dune species, like *Phleum arenarium* (Sand Cat's-tail) and abundant *Epipactis palustris* (Marsh Helleborine), as well as revisiting a healthy colony of *Pyrola rotundifolia* (Round-leaved Wintergreen) growing amongst *Antennaria dioica* (Mountain Everlasting) and *Salix repens* (Creeping Willow). Also recorded

was *Polycarpon tetraphyllum* (Four-leaved Allseed), a small patch of which persists in the caravan park, in one of only four Irish locations. We must assume it got there by caravan!

Eamon also led a group up Knocknarea, Co Sligo (v.c. H28), in May, to search for *Neotinea maculata* (Dense-flowered Orchid), first seen here in 2020. They were delighted to find a colony of 25 flowering spikes in a different monad, on the south side of the mountain. In June and July Eamon also came across two nice fens in Sligo that had few or no records – new sites for the uncommon *Eriophorum latifolium* (Broad-leaved Cottongrass) with associated species such as *Selaginella selaginoides* (Lesser Clubmoss), *Juncus subnodulosus* (Blunt-fruited Rush), *Carex dioica* (Dioecious Sedge), orchids and more. In July, Patricia McHugh found *Mycelis muralis* (Wall Lettuce) near Coolaney, a species which although frequent in parts of Ireland, is rarely seen in Sligo, with only one post-1999 record. Eamon also refound the uncommon *Carex pallescens* (Pale Sedge) by Slish Wood – a species that has had no Sligo records this century, but has turned up unexpectedly in a few sites in Co Leitrim (v.c. H29) in recent years.

Meanwhile in Co Leitrim, Robert Northridge and I recorded the tiny aquatic species *Elatine hexandra* (Six-stamened Waterwort) from Upper Lough MacNean, a new record for the county. Robert had previously recorded this species from the same lake in Counties Fermanagh and Cavan, so the new Leitrim record wasn't too surprising, but a nice one to find, nonetheless.

**Bridget Keehan**  
BSBI Ireland Officer



*Saxifraga aizoides* (Yellow Saxifrage) (left) and *Arenaria ciliata* (Fringed Sandwort) (right), Co Sligo (v.c. H28), July 2023. Eamon Gaughan

# OBITUARIES

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## BENGT EDVARD JONSELL (1936–2023)

Bengt Jonzell was born in Göteborg, Sweden, on 11 June 1936. His father was a medical radiologist, his mother a housewife, and he had two brothers and a sister. The family moved to Nyköping where Bengt went to school, and where he became interested in birds and plants. He then studied at Uppsala University, and did his doctoral thesis on the European species of *Rorippa*. This resulted in his masterly paper 'Studies in the north-west European species of *Rorippa* s.str.' published in *Symbolae Botanicae Upsaliensis* 19: 1–222 (1968), which had perhaps his greatest influence on British taxonomy. Among much else, it established the existence of the two species *R. palustris* and *R. islandica* in Britain, as well as in other parts of Europe. Continuing with *Rorippa*, he gave a paper on hybridisation in the genus to a BSBI conference at Cambridge in 1974, later published in the conference proceedings. Becoming Docent in 1968 at Uppsala, Bengt became Lecturer in 1977 and then Chair of Ecological Botany at Uppsala until 1999. He was also attached to Stockholm University from 1977 to 1983, and from 1983 to 2001 he was Bergius Professor and directed the Bergius Botanic Garden in Stockholm.

In 1987 Bengt took the great step of founding *Flora Nordica*, with Thomas Karlsson as co-editor. This was to cover Sweden, Norway, Denmark, Finland, Iceland, the Faeroes and the Norwegian Arctic islands, with a total of some 4,600 species. Fourteen volumes, in English, were planned. Vol. 1 appeared in 2000, Vol. 2 in 2001, a general introductory volume in 2004 and Vol. 6 in 2010. But the funding, which had been provided by the Swedish Museum of Natural History and the Bergius Foundation, ran out and, in the deplorable absence of any further funding, the project had to



Bengt Jonzell, 1986. Clive Stace

be abandoned and one of the most authoritative and useful of European floras was never completed. Bengt had planned to write a number of genera in the Brassicaceae for Vol. 3, and did manage to publish a few of the accounts separately. In 2001, along with his distinguished botanist wife Lena, he published a revision of the Krok/Almquist *Svensk Flora*.

In 1972 Bengt became Regional Adviser for Sweden for *Flora Europaea*, replacing Nils Hylander,

and this resulted in him making closer contacts with members of the Editorial Committee (all English). Soon after, he replaced Eric Hultén as Regional Collaborator for Sweden on the Committee for Mapping the Flora of Europe. Long active in the Svenska Linnésällskapet, of which he was President in 1986–1998, he was elected an Honorary Foreign Member of the Linnean Society of London in 1995. He became President of the International Organisation of Plant Biosystematists, attending several of their international meetings and being one of the chief organisers of the 1995 conference in Tromsø. All these positions and responsibilities led to many visits to Britain and to friendships with many British botanists. He was one of the most friendly, co-operative and convivial of botanists. Amongst his many activities with British botanists I, for example, took him on a botanical tour of sites in the north of England and North Wales in 1974 in return for a tour of the Scandinavian Arctic, as well as areas round Uppsala, in 1973 when we saw most of the Scandinavian species of *Carex*, vital for my account of the genus in *Flora Europaea*. In 1998 he paid a particularly productive visit to the English sites for *Viola rupestris* with Jeremy Roberts, resulting in their paper, with Inger Nordal, ‘*Viola rupestris* and its hybrids in Britain’, *Watsonia* 21: 269–278 (2000). When he took part in the BSBI

field meeting at Glynhir in Carmarthenshire in 2008 it was a pleasure to take him to some of the sites for *Rorippa islandica*, and he was impressed by the vast numbers of the plants of this species at one of them. He had joined the BSBI in 1983, and in 1998 he was made an Honorary Member; Franklyn Perring wrote a delightful profile of him in *BSBI News* 79: 7–8 (1998). One of the results of his involvement with British botany is his paper ‘250 years of Nordic-British meeting points in botany’, read at the Linnean Society and published in *BSBI News* 85: 67–77 (2000). He and Lena attended the BSBI conference at Leicester on ‘Current taxonomic research work on the European flora’ in 2003.

Bengt, who died on 4 February 2023, had always lived in Uppsala, but he was one of those taxonomists who strongly believed that their kind should make an effort to see many of the world’s floras and had himself travelled extensively. He and Lena had four sons, Mats, Svante, Björn and Ulf. All those of us in the BSBI who knew him will have fond memories and give Lena (who kindly provided some details of Bengt’s early life) and the family our warmest appreciation and sympathy.

My thanks to Clive Stace for the photo and for helpful additions to this obituary.

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Arthur Chater

## 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.

**Dr D.E. Allen** of Romsey, a member for 74 years, President 1985–87, honorary member since 1994 and distinguished both as a botanist and as a historian of natural history.

**Mrs M.E. Fry** of Leigh-on-Sea, a member for 49 years.

**Mr N.J. Mussett** of Lymington, a member for 23 years.

**Mr D. Welch** of Banchory, a member for 43 years and former Vice-county Recorder.

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Assisted by the Membership Secretary, Gwynn Ellis.  
 Date of compilation 8 August 2023.

## REVIEWS

## Compiled by Clive Stace, Book Reviews Editor

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### Plant Atlas 2020. Mapping Changes in the Distribution of the British and Irish Flora

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T.A. Humphrey, O.L. Pescott &  
R.J. Burkmar

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& Botanical Society of Britain  
and Ireland, Durham, 2023. Pp. ii  
+ 1524, in two volumes, with  
numerous maps and charts; hbk  
£132. ISBN 9780691247595

That familiar floras change is a commonplace. Knowing by how much and why can satisfy curiosity and prompt concern. To have such an authoritative summary of the changing flora

of Britain and Ireland as this is a scientific achievement of high order and cause for gratitude and delight.

It is twenty years since the *New Atlas of the British and Irish Flora* (Preston et al., 2002), but *Plant Atlas 2020* benefits from hectad recording that dwarfs previous surveys, with almost 30 million records available from 2002 to 2019; from enhanced data capture with a switch to electronic submission; with more effective central data checking, validation and editing; and the production of maps directly from underlying records. This formidable task, dependent on dedicated Vice-county Recorders and their army of skilled volunteers, taxon referees, data analysts, ecologists and editors at the Centre for Ecology & Hydrology, presents us with a more accurate and comprehensive picture of the *status quo* of the flora of Britain and Ireland than ever before and an opportunity to assess and understand changes in the longer and shorter term.

The Introduction sets this project within the history of grid-based mapping across Britain and Ireland; it describes the geographic and taxonomic scope and resolution of the work, the methodology of data collection and mapping, and the coverage achieved. There is a statistical analysis of changes in the flora among species and groups with particular ecological amplitudes, biogeographic affinities and broad habitats. The species

maps and accounts are arranged very pleasingly two per page, and the volumes close with a bibliography and index. The work is simultaneously available online with additional alien species included and enhanced styles of on-screen presentation of the data.

Geographically, the scope of *Atlas 2020* extends to the Channel Islands and the Isle of Man. Much of the recording ultimately resolved at hectad level was more precise, particularly for rare, threatened, new or rediscovered taxa, much helped by modern recording technology which delivered around half-a-million records a year at 100m resolution or finer. Recording was limited to occurrences 'in the wild' but included sown or planted individuals or 'volunteer' relics of cultivation.

*Plant Atlas 2020* covers all terrestrial and aquatic flowering plants (including the sea-grass beds of the intertidal zone), pteridophytes and, for the first time, charophyte algae. All vascular plants treated in full in *New Flora of the British Isles*, ed. 3 (Stace, 2010) and some of the extra taxa in ed. 4 (Stace, 2019) are included, as well as the recently discovered *Stenogrammitis*; and hybrids follow *Hybrid Flora of the British Isles* (Stace et al., 2015) with maps for all occurring in 50 or more hectads. Microspecies have been excluded and *Taraxacum* and *Hieracium* are treated at genus level, brambles as *Rubus fruticosus* agg. These criteria yield

2863 taxa mapped in the books, 3495 online, the difference being made up in all but one case (a hybrid) of neophytes. Definitions of 'native' and 'introduced' follow Macpherson et al. (*BSBI News* 72: 13–16, 1996) and natural arrivals or taxa evolved here *de novo* number 1554. Introduced species include 161 archaeophytes and 856 neophytes (631 more online). Questionably native taxa number 45, and 16 taxa have been given a changed status, the reclassification of *Fritillaria meleagris* as introduced sure to vex its flood-meadow enthusiasts.

Colour differences of the dot maps indicate either native or introduced, the strength of colour showing their recording as pre-1970, 1970–86, 1987–99, all these 'but not since'; all new records are treated in the single class 2000–19. For each date-class the number of hectads recorded is shown. Online, the earliest data class is split into 1930–69 and pre-1930. The present native ranges of 39 taxa which have been completely obscured by introductions have been mapped black. The maps have an indication of relief in six altitudinal bands shown using conventional colours, though the distinctions are not sharp due to faint registration and a necessarily small scale. Further information on altitudinal relationships is provided for each taxon in a neat graphic which uses blob size to show the proportional occupancy of available hectads in bands of 50 km latitude × 100 m altitude south to north through the British Isles. Another graphic illustrates the frequency of daily recording averaged and smoothed across 2000–19 against the phenology of the taxon in leaf and in flower or sporing.

I sympathise with readers who will wrestle with the methodology

of statistical analysis of change described in the introduction, but it underlies the conclusions about shifts in species occurrences and species groups discussed there and summarised for each taxon in graphics of change. The approach took account of variable recorder effort over time and space by basing taxon frequency against benchmark species within each taxon's range. Repeated random sampling of the data and analysis allowed trends to be based on model-based certainties. Calculations were made separately for Britain and Ireland across the longer term (1930–2019, excepting 1970–86 when attention to commonplace and rare taxa skewed the modelling) and shorter term (1987–2019). The account of the results lists top increasers and decreaseers and the speed of changes in each country, and summarises the significance and meaning of the results.

The analyses of change among species groups with particular ecological attributes rely on modified Ellenberg values based on expert judgement and, for changes among habitats, it is a pity not to have used the available species frequency data to define more precise categories.

As the editors freely admit, many of the broad changes characterised by these analyses are unsurprising to those familiar with the British and Irish landscapes through the past half century and it is to the shifts described in the individual taxon accounts and maps that readers will turn for a richer picture. Graphics for each taxon summarise the short and long-term changes across the recorded hectads in each country with five-point scales from strong decrease to strong increase variously shaded to indicate the modelled change

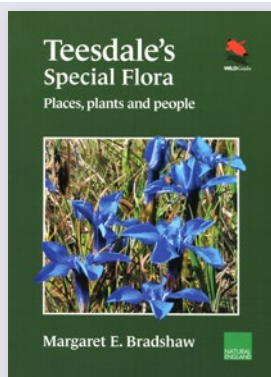
and the degree of certainty of the trend. Text provides commentary on trends and likely reasons for change enriched by literature and expert authors' knowledge. These interpretations are sometimes at variance with the modelled trends and are refreshingly candid about puzzling changes or recording inadequacies. The online *Atlas* provides further information underlying the metrics of change and helpful visualisations of shifts among the hectads.

The descriptive texts for each species follow the *New Atlas* style but have been updated and edited with details of the life-form, habitat, altitudinal range and biogeography. At their best, these are highly informative in a succinct and appealing style.

The bibliography is extensive and authoritative and the index uses typographic differences to distinguish scientific and vernacular names, whether a taxon is online only or in which volume a taxon occurs, though this is explained confusingly. It would have been helpful to have the index included in both volumes.

Overall, the generosity of funders and Princeton University Press have provided us here with two sumptuous volumes – literally weighty, at around 8 kg, needing a substantial table-top for comfortable use. For books of this size and quality, the price is nowadays not unexpected but free internet access will ensure wide distribution of this extremely rich and valuable source of data and learning.

**John Rodwell**



**Teesdale's Special Flora.  
Places, Plants and People**

**Margaret E. Bradshaw**

Princeton University Press, Oxford, 2023. Pp. 288, with numerous colour photographs; pbk £14.99. ISBN 9780691251332

Upper Teesdale has long been renowned for its unique botanical treasures, and several earlier publications have described its special flora. Recent research, however, has provided new information, and the long-awaited *Teesdale's Special Flora* is by far the most comprehensive account available, and thoroughly up to date. It is the first to list nearly all the special plants found there: each has its own profile and description accompanied by habitats, with excellent colour photographs. The influence of local climate and geology on the flora is explained succinctly; a summary is given of four centuries of botanical exploration and plant discoveries, along with today's inhabitants and current farming practices.

Bradshaw outlines her own story and first introduction to Upper Teesdale, initially studying lady's-mantles (*Alchemilla* species) at the centre of their British distribution. She soon became the acknowledged expert. In 1951, the author discovered *A. subcrenata*, then new to

Britain. When a reservoir threat loomed in 1964, she turned her attentions to the urgent need to conserve Teesdale's other plants. Bradshaw goes on to detail the 'assemblage' of unique plants in Teesdale, an assemblage defined as the rare or local plants within a small geographical area (not necessarily in the same community or habitat). Twenty-one unique plants are listed, with geographical classification and the prime reasons for their occurrence; geology, soil and weather records follow, in considerable detail.

Upper Teesdale differs from other North Pennine dales, being more remote and uniquely sculpted in hard volcanic rock ('Whin Sill') which creates dramatic waterfalls and high cliffs. Limestone bedrock, baked by molten lava into crystal-quartz ('Sugar Limestone'), is favoured by many of Teesdale's plants but is sensitive to drying summer winds. Local geology has formed varied habitats and a harsh climate has restricted tree growth: both major factors in creating the unique flora. Plant communities, national, geographical and IUCN threat classifications are given, together with several useful maps.

A lengthy chapter follows, giving species accounts for close to one hundred of Teesdale's notable plants which include habitats, distribution and conservation status – very few omissions exist. It should be noted, however, that the rare *Gymnadenia densiflora* (Marsh Fragrant-orchid), listed was first discovered in 1969, and confirmed by Victor Summerhayes. The relict form of *Salix caprea* (Goat Willow), subspecies *sphacelata*, was first confirmed in 2002 and its scarce hybrid with *S. repens* (Creeping Willow) shortly afterwards; the very rare *Salix*

× *lochsiensis* was found near Wynch Bridge in 2008. A Durham specimen of *Cystopteris alpina* (Alpine Bladder-fern), Britain's rarest fern, has been recognised and published recently (*Pteridologist* 7: 229; 2022), but neither its locality nor that of the original Yorkshire one has been rediscovered (although the fern is now known in Scotland).

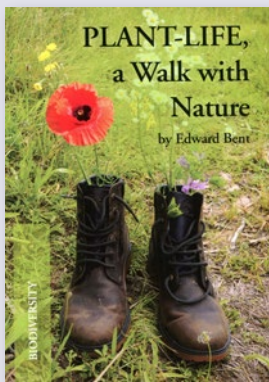
Recent surveys show which species have declined rapidly, principally on account of climate change. *Melampyrum sylvaticum* (Small Cow-wheat), and its frequent associate *M. pratense* var. *hians* (Common Cow-wheat), have both disappeared from one area in the past 20–50 years. Teesdale, however, is still yielding new records; a new locality for *Betula nana* (Dwarf Birch) and *Euphrasia ostenfeldii* (Ostenfeld's Eyebright), were discovered very recently. Reservoir construction and plant rescues are described: fortunately, only few rare plants were lost. A compensation grant led to the formation of the 'Teesdale Special Flora Research and Conservation Trust' that provided valuable new information.

The adverse effect of drying summer winds and periodic droughts on Sugar Limestone habitats is mentioned, yet the author omits the effects of acid rain because of lack of evidence. With Teesdale's above-average rainfall and being in direct line with prevailing winds, it might be expected that 200 years of industrial atmospheric pollution caused some damage, as is known to have occurred in the Pennines further south.

Instructive case studies of rarer species are provided, also the causes for decline, continuing threats, planned conservation programmes, land management and social changes. The book is

moderately priced and compact enough to take into the field, but it is a pity so useful a reference title has no hardback version for durability. Upper Teesdale is clearly a last refuge for relict species once widespread in late glacial times. Bradshaw's landmark study will prove essential for students and others concerned with climate change, or simply with Arctic-Montane flowers, not least in such a remote and beautiful setting of waterfalls and high cliffs.

David J. Tennant



**Plant Life, a Walk with Nature**

Edward Bent

Self-published, 2023 ('2022'). Obtainable from The Great British Bookshop, Unit 9, Culley Court, Peterborough, PE2 6XD, [www.thegreatbritishbookshop.co.uk](http://www.thegreatbritishbookshop.co.uk). Pp. 240, with numerous coloured photographs; pbk £21.00. ISBN 9791221009576

The author of this unusual book presents it as a journey through the wonders of the plant world with the hope of enabling us to appreciate it more. He hopes that 'this book gets to the heart of plants'. He wants us to appreciate their complexities, to celebrate their beauty, and to look more closely into their form and function, at the dynamic lives

of roots and leaves, and at the evolutionary complexities that lie behind plant biodiversity.

In truth, this is not an easy book to summarise. To try and make his lesson palatable, he structures it in the form of a walk, symbolised by the pair of boots on the cover, one of them containing a red poppy. For the first kilometre or two, we celebrate nature's 'designs and adaptations', and the uncanny way technology often mimics them, consciously or not. Getting into our stride, we move on to the basic science of plants, including their 'intelligence', their alliances with fungi and bacteria, and the way they detect and use light. That leads into a 'holistic' section looking at the sense of order and symmetry in nature, and how they influence art ('flower power'). At the fourth milestone, we pause at the farm gate for a deeper look into plant inter-relationships, defences and manipulations. We also deepen our appreciation of how diversity is created and maintained. Finally, having gained a better appreciation of plants, we examine our role as caretakers, and how we need personal values, and indeed imaginative art, quite as much as science, to fulfil it. Our walk has been a 'magic journey' where 'botany, art and philosophy interact', and where 'humankind returns [to?] an integral part of nature'. All this and more is crammed into 240 well-illustrated pages. The scope is broadly pan-European (the author lives in Italy), though the principles are, of course, universal.

It's very ambitious. Does it work? The text comes alive when the author discusses specific examples, many of which were new to this reviewer. For instance, how a hybrid *Ophrys* orchid produced a new and unknown pheromone that attracted a bee not hitherto known to be

interested in pseudocopulation. Or how brassicas turn the tables on cabbage white butterflies by releasing a volatile chemical that attracts their insect parasites. Or how dandelions might be the answer to the world's rubber shortage (18% of a dandelion's dry weight is usable as latex). The author's overall desire is to present plants as wonderful beings that also influence us for the good (as well as being essential for our wellbeing and survival).

The intention is laudable. The science is, as far as I can judge, accurate and up-to-date, if occasionally ill-digested. The style is somewhat laboured, perhaps because, in his zeal, the author attempts too much. But if you read it patiently, there are many worthwhile facts and insights to absorb.

Peter Marren



**Common or Garden. Encounters with Britain's 50 most Successful Wild Plants**  
Ken Thompson

Profile Books, London, 2023. Pp. 240, with numerous coloured drawings; hbk £14.99. ISBN 9781800811447

Botany has quite recently moved from being a quirky interest for a few of us, to being



so popular that the current trend evokes the Victorian frenzy for ferns, orchids, and seaweeds. We've been here before, and last time round there were winners and losers. This book focuses on the success stories; plants that are skilled opportunists and thriving alongside us.

A scientist-reader will want to know the method used to select the top 50, which Thompson admits is 'dodgy'. He justifies his criteria well, drawing on BSBI records and on the Countryside Survey, while weighing up the limitations of these data. An experienced botanist will likely broadly agree with the chosen plants, and especially on the number of grasses (15). There is an overall champion of commonness, and we learn its identity early on; a pity, as leaving the answer to the end of the book would have emphasised the central role of grasses in our lives.

The author writes as a former plant scientist, deftly slipping in nuggets of scientific knowledge in a way that is light touch without compromising on accuracy. He

recognises how many readers are unfamiliar with taxonomic ranks, not helped by gardening journalists insisting on calling a wild species a 'variety' or a 'type' as if the word 'species' is somehow out of bounds. An illustrated glossary would have been useful, as he does occasionally assume a reader knows what, for example, an 'awn' is.

The core of the book is the plant stories, organised thematically by ecological strategies, and based on cited scientific research. The text is astute, intriguing, full of surprises, and, unusually for a 'popular' book, features frequent mentions of Stace, BSBI, and biological recording. It is ideal material for anyone leading wild flower walks, especially with participants new to field botany. The book also tackles complex concepts to explain brambles and dandelions in entertaining ways.

The stylised illustrations are lovely (especially of Germander Speedwell *Veronica chamaedrys*). The only howler is that 'Bracken' (*Pteridium aquilinum*) is shown

as bipinnate, looking like a Male-fern (*Dryopteris filix-mas*). Some tweaks might improve the images, e.g. Sweet Vernal-grass (*Anthoxanthum odoratum*) could have had its characteristically dinky leaf blade; and Field Woodrush (*Luzula campestris*) its long marginal hairs. However, the sparse illustrations will disappoint florists and garden designers – it would be fantastic if a botanist could produce a book to rival visually stunning hardback books about plants which the wider botanical community rely on for plant stories, whose authors' 'research', unfortunately, is usually to cut-and-paste from Wikipedia.

Overall, the book is invaluable for anyone leading natural history walks who wants to encourage interest by telling accurately researched, curious plant stories about common species that a botany beginner will find growing everywhere they look. And the winner of the title of Britain's most common plant ...? Yorkshire-fog (*Holcus lanatus*)!

Clare O'Reilly-Coleman

## LETTERS

### MISTLETOE (*VISCUM ALBUM*) – TWO RECENT PAPERS ON TRENDS AND ISSUES IN BRITAIN AND IRELAND

In *BSBI News* 153 an article by Brian Spooner (Spooner 2023) responded to previous *BSBI News* articles on Mistletoe (Briggs, 2019; Harrison, 2019; Taylor, 2019) and discussed aspects of 'hot-spots' and spread and possible changes and factors. Mistletoe trends are indeed fascinating – a preoccupation of mine for many years – and do deserve much discussion like this.

In this regard I would draw attention, as Brian Spooner did not mention it, the much longer review of Mistletoe issues in my paper in BSBI's journal in 2021 (Briggs, 2021) which followed on from the 2019 discussion in *News*. This discusses many of the current issues in much more detail and outlines possible research needs in Britain and Ireland. I wrote that paper in an effort to present and define the current situation – so I do hope it is being read!

In addition to that paper, I would also draw attention to the even more recent account of *Viscum album* in the Biological Flora of the British

Isles series, published in *Journal of Ecology* this year (Thomas et al., 2023). The two papers are, I would suggest, essential reading for those with an interest in Mistletoe and emerging trends.

Both papers are open access – there are links in the references below.

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Processing *Potamogetons* on the Forth and Clyde Canal, Stirlingshire (v.c. 86), June 2023. Left to right: Lee Oliver (Scottish Canals), Cornelia Simon-Nutbrown (Biodiversity Genomics Europe Project, RBGE), Andy Griffith (Darwin Tree of Life Project, RBGE). *Matt Harding*. See Country Reports, p. 80.



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Lynne Farrell, Member and former President of BSBI

Creeping Lady's-tresses (*Goodyera repens*),  
Aberdeenshire by Tristan Norton

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# A NEW APPEAL: SUPPORT FOR RECORDERS

The work of recorders and recording communities is central to all the work that the BSBI does.

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It is simple and easy to support, visit:  
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*'We are extremely grateful to the estate and family of the late Clive Lovatt, County Recorder for West Gloucestershire, for their foundational support for this appeal.'*

Registered with/Cofrestrwyd gyda'r

Bradford botanists with hybrid centaury,  
Sefton Coast, Merseyside by Phil Smith



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