





1. *Verbascum densiflorum* in Fife
(See p.9).



2. George Ballantyne (right), Fife recorder for 51 years, with Sandy Edwards (See p.42).



3. *Micranthes (Saxifraga) nivalis* on Ben Lawers (p.5).

4. *Dactylorhiza purpurella* var *cambrensis* see p.35 (photo Irene Brandt).

5. *Melampyrum sylvaticum* in vc97 (p.10).

6. *Ajuga pyramidalis* pink form, near Ullapool. See p.36 (photo Gwen Richards).



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Scottish Botanists' Conference (jointly with BSS and RBGE)

Saturday and Sunday 31 October/1 November 2020

This took place, virtually, from Royal Botanic Garden Edinburgh, and all the talks, workshops and exhibits are available to hear/view via the links on the BSBI website. The minutes of the Scottish AGM, which took place virtually during the conference, are printed below, on pp. 40 ff.

As the exhibit abstracts were briefer than usual, and not of sufficient interest to merit printing by themselves, several exhibitors have provided the short articles which follow, based on the content of their exhibits.

My best botanical day in 2020

Sarah H. Watts

Ben Lawers is Britain's primary site for rare arctic-alpine flora, and I have been fortunate to work here since 2010, initially as a volunteer, and then as an NTS ecologist. Spring and summer 2020 were unusual because I only climbed the mountain once this year. However it ended up being an absolutely stunning botanical day out. The experience brought me so much joy that I knew I had to share it. There are also vital contributions from aspiring young botanists Georgia (aged 6) and Felix (aged 4)! If you enjoyed reading, then please give me a follow on twitter @Watts_SH

I was employed by the National Trust for Scotland from 2013-2020 as an ecologist at Ben Lawers NNR, Britain's best site for rare plants and arctic-alpine flora. In a typical summer I would climb Ben Lawers (1214m) and its surrounding peaks on a very regular basis to undertake monitoring of nationally important habitats and plant populations. However, as we are all aware, 2020 proved unusual and I found myself on furlough leave and unable to work at this remarkable upland location. I only went up Ben Lawers and neighbouring Beinn Ghlas once this year (9th August), but it would turn out to be the most wonderful single-day botanical experience I have had yet.

The initial purpose of the outing was a family hill walk up the two Munro summits. Georgia (aged 6) and Felix (aged 4) took the adventure in their stride, and since the weather was unusually good for August, I suggested that we make a detour on our descent from the summit of Ben Lawers. We would walk past the known botanical hot spots "just to have a look". However, it soon became clear that it would be more than just a short diversion. I have seen each of the following species at some point before, but never like this all on the same day. It was the sheer scale and abundance of flowering that made the occasion so special.

The first stop was a key population of **snow pearlwort** (*Sagina nivalis*). Ben Lawers NNR holds the entire UK population except for c.18 plants, and this

arctic-alpine is threatened by climate change impacts. At 2 cm big it is definitely the most under-appreciated and diminutive of the site's rarities! The flowers only open on warm, sunny days and these individuals were still in shade during our visit.

The next find was made by Georgia, who spotted a fabulous (and unusually accessible) example of **alpine saxifrage** (*Micranthes nivalis*). Here we also encountered **drooping saxifrage** (*Saxifraga cernua*) complete with bright red bulbils from which vegetative reproduction occurs. It only features in two other hectads in Britain, with all sites located at extreme altitude. Unfortunately this means bad news as temperatures rise and snow cover varies due to climate change.

Following on was another rare upland member of the Caryophyllaceae, **mountain sandwort** (*Sabulina rubella*). This cushion-forming perennial herb is associated with strongly base-rich rocks including mica schists and limestone. The Ben Lawers population is the most southerly in the world and may also be struggling due to climate change. Shortly after, we noticed the striking sky-blue flowers of **alpine forget-me-not** (*Myosotis alpestris*) on high herbaceous ledges; again another species with a very limited distribution in Britain that has Ben Lawers as its primary location.

Arctic mouse-ear (*Cerastium arcticum*) made an appearance in some crevices further down our descent. It has particularly large white flowers for this genus and is scarcer than the closely related alpine mouse-ear (*Cerastium alpinum*). It is usually found in north-facing corries and has a complex taxonomic history in this country.

Finally we reached a series of gently sloping wet rock slabs where I hoped to see the jewel of Ben Lawers, the **alpine gentian** (*Gentiana nivalis*). It is an annual which grows in short herb-rich calcareous vegetation and this NNR is one of its two sites in Scotland. Like the snow pearlwort the flowers only open in warm sunshine, but fortunately luck was on our side today. Though tiny, these glorious deep azure blue stars are an impressive picture. Georgia convinced me to continue the search on some higher slabs, and I'm so glad she did because there we found some relatively large multi-flowered individuals. This is certainly the best example of gentian flowering I have seen yet (See front cover). And just when we thought it couldn't get any better, some delightful **alpine fleabane** (*Erigeron borealis*) came into view too!

These irrigated slabs are also home to an unusual population of **hairy stonecrop** (*Sedum villosum*). It is typically associated with bryophyte-rich flushes in hilly areas and sub-montane locations (250 – 500 m), but the Ben Lawers plants grow at a far higher altitude than anywhere else in the coun-

try (up to 1138 m). There is a hypothesis that they are a different montane ecotype than those from other northern British sites, and may therefore be particularly vulnerable to variations in annual temperature and snow lie.

Other mountain plants we encountered but are not photographed here include **rock speedwell** (*Veronica fruticans*), **mountain scurvygrass** (*Cochlearia micaea*), **alpine pearlwort** (*Sagina saginoides*), **Scottish pearlwort** (*Sagina x normaniana*), **cyphel** (*Chelaria sedoides*), **alpine willowherb** (*Epilobium anagallidifolium*), **purple saxifrage** (*Saxifraga oppositifolia*), **yellow mountain saxifrage** (*Saxifraga aizoides*), **dwarf willow** (*Salix herbacea*), **moss campion** (*Silene acaulis*), **hoary whitlowgrass** (*Draba incana*) and **rock whitlowgrass** (*Draba norvegica*).

However time was marching on and I was aware that my children still had a long walk ahead of them. We bade farewell to the flowers and started on the return journey over Beinn Ghlas. But I definitely had a spring in my step, having immersed myself once again in the glorious arctic-alpine flora of this unique botanical site. The experience was much appreciated having spent far more of the spring and summer months at home indoors than I would have liked.

I am incredibly thankful for having worked in these hills and living so close by. This is the sort of day that many of us aspire to having at some point during our entire botanical career and lifetimes. Perhaps the most remarkable thing is that my young children (aged 4 & 6) were able to share it with me. I am grateful for their patience while I stopped to admire and photograph the flowers, their willingness to contribute to the search and ability to listen carefully to instructions of where they should and shouldn't step!

Reference: Mardon, D.K. & Watts, S.H. (2019). Population dynamics and life history of the rare arctic-alpine plant *Sagina nivalis* (Caryophyllaceae) on the Ben Lawers range, Scotland, UK. *British and Irish Botany*, 1(1), 50-69 <https://britishandirishbotany.org/index.php/bib/article/view/6>

50 Walls in Dundee: a lockdown project *Brian Ballinger*

Stone walls are to be found in many of our towns and cities and provide a unique and demanding habitat for plants. Some manage to survive well and a few thrive in this setting. Studies in England describe a wide range of species that may grow on walls. For example, Payne (1998) studied nearly a thousand walls in Norfolk and recorded 418 species of vascular plants.

There is little information available for wall vegetation in Scotland. I studied the walls in 12 small towns in Easter Ross and identified 64 species, a lower total than the English surveys, but the latter also included rural areas (Ballinger 2014).

Method: 50 mortared stone walls of at least 2m in height nearest to my home in West Dundee were visited on 3 occasions between April and June 2020. I noted all vascular plants over an approximately 100m stretch of wall and their height above the ground was determined. Mosses and lichens were not recorded.

The plants growing within 1cm of the base of the walls were also listed separately.

Results: A total of 54 vascular plant species were recorded on the walls. The commonest being *Asplenium trichomanes* (Maidenhair Spleenwort) (40 walls), *Asplenium ruta-muraria* (Wall-rue) (37 walls), *Cymbalaria muralis* (Ivy-leaved Toadflax) (25 walls), *Taraxacum* (21), *Epilobium sp.* (20) and *Buddleja davidii* (15).

The full list appears in Appendix 1. There also were other species on other sections of walls in Dundee which were not studied on this occasion.

As described in the table below, in those parts of the wall less than 1m above the ground, 22 species were found. In the 1-2m above ground section 38 species were seen. The tops of the walls yielded 31 species. The small ferns were recorded in approximately twice as many 1-2m above ground sections as opposed to the 0-1m sections (see table).

Most common species on 50 walls	Total walls	0-1 m above ground	1-2m above ground	Top
<i>Asplenium trichomanes</i>	40	20	36	1
<i>Asplenium ruta-muraria</i>	37	18	37	0
<i>Cymbalaria muralis</i>	25	12	19	7
Total species on 50 walls	54	22	35	31

For the commonest small ferns, individual plants were counted on 19 walls. *Asplenium trichomanes* plant totals were 19 in the 0-1m high sections and 228 in the 1-2 m high sections. For *Asplenium ruta-muraria* the totals were 39 for 0-1m and 152 for the 1-2 m parts of the walls.

With regard to the aspect of the walls, the numbers were limited, but fewer plants seemed to thrive on south facing sections.

34 species (not included in the totals described above) were found in the area of ground immediately adjacent to the wall and within 1cm of the wall. The commonest were *Poa annua* (Annual Meadow-grass) (25 walls), *Epilobium* species (23 walls), and *Arabidopsis thaliana* (Thale cress), *Senecio vulgaris* (Groundsel), *Taraxacum agg* (all on 19 walls) and *Cardamine hirsuta* (Hairy Bitter-cress) (17 walls).

I paid two winter visits to the same wall sections in January 2021 and 36 species were recorded. Once again, the *Asplenium* plants were considerably more numerous in the upper parts of the walls

Discussion: These mortared urban walls provide an important location, particularly for some small ferns. Some other plants also appear to be well adapted to this situation, including *Cymbalaria muralis*, *Pseudofumaria lutea* (Yellow Corydalis) and *Linaria purpurea* (Purple Toadflax). Some widespread species are also relatively successful on walls including *Taraxacum* (Dandelion) and *Epilobium* species (Willowherbs), but others often only put in casual appearances.

The species distribution here differs from some other reports, perhaps reflecting climate and substrate differences. The small ferns were less predominant in the Easter Ross study reported in 2014 and a possible factor is the frequent occurrence of sea mists (haar) in Dundee.

The reason for the greater botanical diversity found in the parts of the wall over 1m is not clear. Possible causes include herbicide spraying of the wall bases, salt treatment of roads and pavements, other pollutants and cleaning by owners. Many of the walls studied were on busy roads.

I suggest that these walls are important locations for urban plants and these should be preserved wherever possible (English Heritage 2014).

References:

- Ballinger B. R. (2014) Some man-made Habitats in Easter Ross *BSBI News* 126 11-12.
- Ballinger, Brian (2020) "50 Walls in Dundee". *BSS News* 115 24-27.
- English Heritage (2014) *Landscape Advice Note: Vegetation on Walls*.
- Payne R. M. (1998) *The Flora of Walls in West Norfolk*. Privately published.

Appendix: Species recorded on the 50 walls.

Agrostis sp., Arabidopsis thaliana, Asplenium adiantum-nigrum, Asplenium ruta -muraria, Asplenium scolopendrium, Asplenium trichomanes, Antirrhinum majus, Aubretia deltoidea, Barbarea intermedia, Betula sp., Bromus sterilis, Buddleja davidii, Campanula poscharskyana,, Cardamine hirsuta, Centranthus ruber, Cerastium fontanum, Cerastium glomeratum, Cerastium tomentosum, Chamaecyparis lawsoniana, Chamerion angustifolium, Cochlearia danica, Cotoneaster horizontalis agg, Cotoneaster sp, Cymbalaria muralis , Digitalis purpurea, Dryopteris sp., Epilobium ciliatum, Epilobium montanum, Erinus alpinus, Festuca rubra, Galium aparine, Hedera helix sl, Helleborus foetidus, Hieracium agg., Lamium purpureum, Linaria purpurea, Mahonia sp, Meconopsis cambrica, Mycelis muralis, Papaver rhoeas, Parietaria Judaica, Poa annua, Poa pratensis, Polypodium vulgare, Pseudofumaria lutea, Sagina procumbens, Sambucus nigra, Sedum forsterianum, Senecio jacobaea, Senecio vulgaris, Sonchus oleraceus, Stellaria media, Tanacetum parthenium, Taraxacum agg., Viola riviniaina.

Cryptic rarities: a cautionary tale

Sandy Edwards

It can happen (well it has to me!), that an apparently common plant turns out not to be that species but another very similar one of the same genus. Sometimes only the common one is in the field guides and the description (apparently) fits. The example here is recording of the Great Mullein, *Verbascum thapsus*, of which there is a large colony on waste ground near me at Guardbridge. Prof. Hamlyn Jones, who often sends me interesting records, sent one of *Verbascum densiflorum* (Dense-flowered Mullein) from that site, where several were growing with *V. thapsus*. This species is not in The Wild Flower Key (2nd ed., Rose & O'Reilly 2006), Collins Wild Flower Guide (2nd ed., Streeter & Hart-Davies 2016) or Wild Flowers of Britain and Ireland (2nd ed., Blamey, Fitter & Fitter 2013), and as it is similar in appearance is easily assumed, from illustration and description, to be *V. thapsus*.

In the New Flora of the British Isles (4th ed., Stace 2019), the two are separated at the end of the dichotomous key by stigmas, *V. thapsus* being capitate and *V. densiflorum* being spatulate.

It is only too easy, when two very similar species grow together, just to record the first few plants you see, and not realise that there are two species

present. The record of *Verbascum densiflorum* is remarkable as it is a new county record for Fife & Kinross, and only the second record in the wild for Scotland.

For the same reason, I think I under-record *Hirschfeldia incana* (Hoary Mustard) as it often grows with *Brassica nigra* (Black Mustard), the difference here being the seed pods which need to be seen when mature. Building up a knowledge of species which are difficult to separate and remembering the need to look carefully is obviously a good exercise!

A new site for *Melampyrum sylvaticum* (Small Cow-wheat) in VC97 (Westernness).

Ian Strachan

Melampyrum sylvaticum (Small Cow-wheat) is a Nationally Scarce annual which in Britain is almost entirely restricted to northern Scotland, where it is most commonly found in birchwoods. Westernness (vc97) has a large and well-studied population beside Loch Ossian on Corrour Estate. There are old records elsewhere in the vice-county (Glen Roy and Glen Buck) but recent searches have been unsuccessful. So it was very exciting to chance upon a new location this summer on Locheil Estate, beside the River Arkaig.

Site description

The new site is on a river terrace in an area of open birchwood (NVC type W11) at NN 177880, a new hectad record. I counted about 150 plants on 26 June 2020, scattered over an area of 20m x 10m under a canopy of *Pteridium aquilinum* (Bracken). Here it is mixed with the much commoner *Melampyrum pratense* (Common Cow-wheat) but is largely separate at a micro-habitat scale. Associates include *Lotus corniculatus* (Bird's-foot Trefoil), *Prunella vulgaris* (Self-heal), *Oxalis acetosella* (Wood Sorrel) and *Hypochaeris radicata* (Cat's-ear). I suspect that mineral-rich sand and gravel deposited by occasional flooding benefits the *M. sylvaticum*. A first hectad record for *Botrychium lunaria* (Moonwort) in the same area was a bonus find.

Recognition

The small cow-wheat attracted my attention because of its bright yellow colour, compared to the paler yellow of common cow-wheat (though a brighter yellow form does occur). The flower shape is also very different, (See photo on inside front cover). *Melampyrum sylvaticum* flowers are short and wide with a down-turned lower lip and spreading sepals.

However it becomes very difficult to spot after flowering, so it is important to search at the right time – I was just lucky! Sandy Payne had a similar experience this summer, finding several large populations in the well-botanised Moniak Gorge SSSI near Beauly, where it was previously unknown.

Threats

Most of the surrounding area beside the River Arkaig has mature amenity conifers with much *Rhododendron ponticum*. The estate has a large control programme for rhododendron but unfortunately *Gaultheria shallon* (Shallon) is taking its place. It is encroaching into this area too, posing a threat to the Small Cow-wheat.

Tetrad distributions for some selected pairs of British species

Michael Braithwaite

Background

I have been wondering what I wish to learn from the BSBI Atlas 2020 project. At hectad scale I already have the *New Atlas of the British and Irish Flora* with its species captions. For change at tetrad scale I have BSBI's *Change in the British Flora 1987-2004*, and for detailed species accounts I have my own *Short Flora of Berwickshire* and a range of other County Floras. These together enable me to interpret the stunning detail now available on the BSBI DDb, with its facility to allow searches for individual records.

It has occurred to me to experiment with the tetrad distributions of two species superimposed. I have found the exercise rewarding and recommend it to others.

The project

The tetrad distributions that have been building up on the DDb during the BSBI Atlas 2020 project are fascinating. Detail, that has until recently only been available for those vice-counties with recent tetrad Floras, is now available for most of Britain, albeit on a sample basis in much of the north and west. I have sought to leave aside the study of change to examine the patterns of the distributions. The patterns are at their most interesting in species that are neither scarce nor very widespread as, for them, texture is apparent at 2km scale over much of their distribution range.

I turned to the species groupings in BSBI's *Change in the British Flora 1987-2004* as a source of inspiration in choosing the pairs of species, biased towards species that I know well and that are unexpectedly plentiful or scarce in the Scottish Borders. I have also examined supposedly native species that might be introductions.

I present here the maps for two pairs of species (See inside back cover). [Others can be seen on the web, *ed.*] The maps relate to the period 1987-2019. Zooming in to the online maps is recommended to enable the full detail to be seen.

Adoxa moschatellina* over *Mercurialis perennis

The intricate and seemingly improbable distribution of *Adoxa moschatellina* is brought into focus by comparison with *Mercurialis perennis*.

Adoxa moschatellina favours damp woodland along river valleys and woods on calcareous rocks while *Mercurialis perennis*, though less demanding in its habitats, is also almost confined to ancient woodland sites, though it often survives unfavourable management.

Carex dioica* over *Carex echinata

In the Scottish Borders, I know *Carex dioica* as a local species of slightly calcareous hill flushes, while in the west of Scotland I have found it to be plentiful in low altitude moorland where it grows in much more acidic conditions. One of its associates is *Carex echinata*. This map confirms my field experience of *Carex dioica* and contrasts it with *Carex echinata* which is frequent in all types of moorland.

Mystery Brome solved!

Luke Gaskell

Last season, once the first lockdown restrictions were eased, I decided to survey a nearby hectad in VC79, Selkirkshire. This includes part of the town of Galashiels, a mill town that expanded rapidly in the 19th century with many woollen mills built along the Gala Water, along with terraced housing for workers and more substantial villas for the mill owners in the surrounding countryside. Since then, the town has continued to expand as a regional centre despite the closure of the mills. Notwithstanding all this development some nice areas of mixed deciduous woodland and scrub remain along the Gala Water. These wooded banks also contain planted species and quite a few casuals and garden throw-outs. It was at the top of these banks, next to

the A72 and a row of council housing, that I came across a tall grass that I did not recognise.

I could see that it was a brome from the erect spreading culms with somewhat pendulous spikelets along with short awns. Other more puzzling features were that unlike most bromes it was glabrous and rhizomatous. I tried to identify it using "Grasses of the British Isles" but didn't feel confident that I had the right answer, in part because I had not realised that the awns were a variable feature of the species and that only a third of our plants have awns. I circulated some pictures and tried sending it to a referee but did not get a reply due I think to covid restrictions. I then put up a request for help at the Edinburgh autumn meeting and was very gratified to receive a number of helpful suggestions. Feeling more confident of its identity I took Lynn Farrell's advice and sent it off to Arthur Copping who immediately confirmed it as *Bromus inermis*, Hungarian Brome. Interestingly he grows a large number of grasses including this one in his garden.

Bromus inermis is classed as a neophyte and was first grown in the UK in 1794. It was introduced as a fodder grass but although it does well on light and stony ground it is not particularly palatable and is no longer used. It is hard to guess how it came to be established at the edge of Galashiels; the nearest records are at Musselburgh 38 km to the north and a pre-1987 record in North Northumberland 80km to the south east. Another feature that I noticed when I went to check the plant in the autumn was that despite there being plenty of well formed spikelets no viable seed had been set. Tom Cope does say that the species is normally outbreeding so unless other plants appear nearby it is unlikely to spread far.

Reference. *Grasses of the British Isles*. Tom Cope and Alan Gray. BSBI Handbook No 13 2009.

2020 Reports from Scottish Vice-County Recorders

Dumfriesshire (vc72)

Chris Miles

Shortly after the Dumfriesshire Botany Group met on 10 March to look back at 2019 and forwards to 2020, we went into lockdown. Botanical recording thereafter followed government guidance through its various versions. We were variously restricted to walking from home, only travelling within 5 miles from home, botanising as single households or with a maximum of 5 households. Across the County we still were able to come up with some interesting finds. This Summary of highlights was presented at the Scottish Botanists' Conference. In all we were able to send over 5k records to the BSBI Database (DDb).

Only four of the planned meetings of the Dumfriesshire Group took place. In all of these meetings we were restricted to a maximum of 5 households. Accounts of these meetings can be seen here:

- Dalswinton wind farm, 26th July 2020
- Mitchellslacks, 9th August 2020
- Barr and Wauk Hill, 20th August 2020
- River Nith, Closeburn, 6th September 2020

The Dumfriesshire Rare Plant Register was brought up to date and is now available on the Dumfriesshire BSBI page.

Kirkcudbrightshire (vc73)

David Hawker

Despite Covid-19, three meetings took place. First was the NYPH where 11 KBG members recorded 31 flowering, & 65 non-flowering, species. In early August, a bramble course, leader Angus Hannah, with 4/5 VCRs, recorded 15 species of which the most noticeable/identifiable was *Rubus tuberculatus*. Another August KBG event surveyed a newly-created Community Field - 70 species in neutral grassland, marsh and recently tree-planted areas - to suggest suitable site management.

Throughout the season, individual recording efforts and fortnightly newsletters were the order of the day. Currently the 2020 records number 3350, thanks to the 28 contributors including 6 visiting VCRs. Highlights included *Ranunculus sardous* (Hairy Buttercup) at Auchencairn, after the only previous record (1863); *Allium subhirsutum* (Hairy Garlic), a garden discard, near Kirkcudbright (NCR) - given the article in the BSBI News 145, this will be reviewed in 2021 when flowering; *Equisetum hyemale* (Dutch Rush), introduced some time ago, near Kirkbean, only previous record 1863; *Carex elata* (Tufted-sedge) at its only VC site, Carlingwark Loch, last seen in 1979; Various couch grasses (*Elytrigia* spp) and their hybrids, including *E. x obtusiuscu-*

la (NCR), from coastal sites, part of a Michael Wilcox project; *Pulicaria dysenterica* (Fleabane) east of any known sites, in a reed-bed rather than the usual cliff-top habitat in the VC; *Urtica dioica* subsp. *galeopsifolia* (Stingless Nettle) from Kirkcudbright (NCR); *Potentilla recta* (Sulphur Cinquefoil), a garden alien (NCR), Auchencairn; and *Ruppia maritima* (Beaked Tasselweed), Fleet Estuary where last seen in 1959.

At present I am objecting to a SPEN power line upgrade proposal that threatens the only UK native population of *Hydrilla verticillata* (Esthwaite Water-weed).

Wigtownshire (vc74)

Michael Jeeves

I took on the role of VC Recorder for Wigtownshire part way through the year, during the Covid pandemic, having only lived in the area for just over 12 months. Not the best time in many ways, but it gave me the opportunity to think about what I would do.

To make a start on raising the profile of botany in vc74 I decided to produce a webpage for the BSBI website. I obtained the invaluable assistance of long-time resident botanists Alan Wake and Jim McCleary to comment on the text and Alan generously made available some of his excellent photographs to illustrate it. Louise Marsh, the BSBI's Communications Officer, provided the expertise needed to make the webpage a reality. It can be viewed here <https://bsbi.org/wigtownshire>.

My intention is also to produce a new checklist and Rare Plant Register and to make them available on the website. I have already nearly finished drafting RPR entries for the nationally notable plants known to occur in vc74 and my idea is to recruit the help of local botanists in monitoring them. I will also organise some field meetings when that is possible.

A total of just over 2200 records were made in 2020. These included three new vice-county records (all non-natives), but perhaps the most intriguing record was the second for *Umbilicus rupestris* (Navelwort) which was first recorded in 1836.

My thanks go to Dr Alan Silverside, the previous Recorder for vc74, who contributed so much to botanical recording in this area.

Ayrshire (vc75)

Dave Lang

2020 was a difficult year for botanising. We had no formal field meetings - although two or three socially distanced field trips were carried out by the Joint-VCRs. Other members who either live or are active in the area

contributed a few records where they could as well - but at the time of writing (some records from the year are still promised) we had barely met 2,000 new records for 2020. One interesting project however was by a member who contributed 66 new Hawkweed records identified (and where necessary referee determined) to species level.

Out of the field we did however manage to finish checking and verifying all the records on the Database and we also updated and re-published our County Rare Plant Register.

Notable records included:

- *Anacamptis pyramidalis* (Pyramidal Orchid) - at Waterside Bing in East Ayrshire. Only the second ever record for the VC.
- *Ophrys apifera* (Bee Orchid) - a fourth site for this species in Ayrshire as it continues its march northwards, this time in Kilmarnock.
- *Hieracium duriceps* - in the River Garnock's headwaters above Kilbirnie - the first record in the hectad since 1888.

Lanarkshire (vc77)

Michael Philip

The cancellation of a whole season's outings programme was a huge disappointment. However, the need to keep personal exercise very local gave rise to two contrasting, in-depth projects.

The urban project, undertaken by Malcolm Macneill in western Glasgow, focussed on compiling a full list of plants found in a single monad across the whole season. Working outward from his home monad, Malcolm has used 2020 to provide such lists for no fewer than 11 urban monads, giving us invaluable insight and a benchmark for future comparison.

The rural project was a similar exercise carried out by myself in the bounded area of the Parish of Dalsersf - a 28 monad portion south-eastwards from Larkhall. As various colleague vice-county Recorders have also noted, being 'forced' into visiting and revisiting the same locations several times through a season results in a much fuller understanding of the flora - something which cannot be achieved on a single-day field outing.

The resulting dataset has been 'tagged' in the DDb and can be viewed by searching in attributes/tag/'Dalsersf Parish'. Over 4,700 records have been uploaded this year, and placing this data alongside that from western Glasgow will make an interesting study.

Other members of our Lanarkshire team have contributed records from assorted locations, and the overall result is that 2020 - against the odds - has been our second-most productive recording year, with some 15,000 records!

Notable records included:

- *Hypopitys monotropa* (Yellow Bird's-nest): Huge population discovered on brown-field site near Kirkintilloch (hundreds of plants).
- *Lactuca virosa* (Great Lettuce): First vc record of a plant likely spreading into our area.
- *Polypogon viridis* (Water Bent): Now recorded in numerous locations across urban Glasgow.
- *Fumaria officinalis* subsp. *wirtgenii* (Common Fumitory): First hectad record (NS84) of this subspecies - found as a weed in a potato field.
- *Picris hieracioides* subsp. *hieracioides* (Hawkweed Oxtongue): Another urban invader, likely set to increase significantly.
- *Rubus pictorum* (a Bramble): Several records, showing that this Bramble species is likely more common, farther south in Scotland than previously realised.
- *Lathraea clandestina* (Purple Toothwort): New colony discovered on Clyde riverbank at Crossford (first record outside Glasgow Botanic Gardens), traced to hortical population in frequently-flooded ground 12km upstream.

Peeblesshire (vc78)

Luke Gaskell

Very little recording has taken place in the vc in 2020 with only 248 new records entered into the DDb.

Lindsay Mackinlay found *Betonica officinalis* (Betony) at Crookhaugh in the upper Tweed valley which is the first apparently native record for this species. Previous records are probably introductions for instance sown in wild flower mixes on road verges.

Reuben Singleton discovered a colony of *Ophioglossum vulgatum* (Adder's-tongue) which is rare in Peeblesshire, while carrying out an ecological survey in connection with a commercial forestry application. Large areas of upland pasture are currently being afforested helped by generous incentives from the Scottish Government. Although it is likely that this patch of Adder's-tongue will be left unplanted the rate at which good semi-natural grasslands are disappearing is alarming.

Staying with forestry I was interested to see *Filago minima* (Small Cudweed) spreading along a forest access road in Cloich forest. These roads are apparently a good habitat for this species but I had previously only seen it on river gravels and will need to look out for it in the future.

Most of my botanising in 2020 has been close to home in Selkirkshire where I was recording monads in a 10km square. I found that concentrating on a relatively small area was very rewarding and I hope to do something similar in Peeblesshire.

With help and encouragement from Andy Amphlett I have been validating records in the DDb. I am attempting to remove or correct suspect entries but unfortunately, I still have a long way to go.

Selkirkshire (vc79)

Rod Corner & Jeff Waddell

Significantly more field work was undertaken due to Covid. Luke Gaskell was unable to travel to Peeblesshire, so instead focussed on Selkirkshire within a few miles of his house, when restrictions allowed. 7,868 records were collected, more than the previous four years combined and more than twice as much as any previous year. 98% of these records came from the hectad NT43, Galashiels and the Tweed Valley.

Luke's efforts found many significant records, amongst native species a large colony of *Sedum villosum* (Hairy Stonecrop) at 370m asl on Ashiestiel Hill and a colony of *Myosotis stolonifera* (Pale Forget-me-not) at 300m asl on Long Philip Burn. Both of these are 10km disjunct from the nearest extant colonies in the central Southern Uplands. Despite there being only small and decreasing amounts of good arable weed habitat in the county Luke found three populations of *Stachys arvensis* (Field Woundwort), the first county records for 28 years.

Luke made many new non-native county records, including the grasses *Anisantha diandra* (Great Brome) and *Bromopsis inermis* (Hungarian Brome), confirmed by Arthur Copping, both by roads and the aquatics *Spirodela polyrhiza* (Greater Duckweed), *Apium nodiflorum* (Fool's Watercress) and *Rumex hydrolapathum* (Water Dock), the former together in an artificial pond at Hollybush and the latter on the banks of the Tweed.

Jeff undertook limited field work including a trip in January with BSBI conifer referee, Matt Parratt, which found *Abies cephalonica* for the first time in the county (and third time in Scotland) at the Haining. It was also nice to

see *Cyclamen hederifolium* (Sowbread) in flower early in the year, where it's naturalised at Bowhill. Another early spring bulb, *Leucojum vernum* (Spring Snowflake) at High Sunderland, was new for the county. Jeff's last trip in the year was in mid-March to GPS the *Juniperus communis* population on Moory Hass, The Wiss, where large areas of the Juniper woodland were found dead sadly with *Phytophthora* suspected.

A significant effort was also put into validation, with the majority of the records displayed on the BSBI DDB validation page thoroughly checked and validated. Many of the records flagged for validation were wool shoddy aliens from the Adventive Flora of Tweedside (Hayward & Druce 1919). This was very time consuming as the taxonomy and geography (county boundaries) were often complex and ambiguous. Rod continues progress with his Flora of Selkirkshire.

Roxburghshire (vc80)

Rod Corner & Jeff Waddell

Less field work was undertaken with 1,831 records collected. As it was the first year of a new recording period an effort was made to record as many hectads as possible, seven different hectads were visited. We took the opportunity to visit good sites, to re-record them in the new date class.

In early spring Jeff used Mick Crawley's Narcissus key and recorded three new taxa for the county. March searches were made for *Gagea lutea* (Yellow Star-of-Bethlehem), with the Bedrule colony mapped in detail, much larger than previously thought and a new site found at Hawick. We didn't get out again until July with a trip to Hoscotte Burn, where one of the few county sites for *Melica nutans* (Mountain Melick) was refound after 32 years. A lovely northern haymeadow with *Trollius europaeus* (Globeflower) and *Neottia ovata* (Common Twayblade) was a special treat here, after lockdown.

Some visits were made to the basin mire SACs, which are better developed here than anywhere else in the UK but sadly they are neglected and overgrown with Common Reeds (*Phragmites*). Jeff met NatureScot staff and landowners to discuss solutions. During these trips, records were made of rare and scarce plants, including *Corallorhiza trifida* (Coralroot) and *Potamogeton coloratus* (Fen Pondweed) at Adderstonlee plus *Juncus alpinoarticulatus* (Alpine Rush), *P. coloratus* and *Chara aculeolata* (a stonewort) at Branxholme Wester Loch.

New populations of *J. alpinoarticulatus* and *P. coloratus* were found at Woo Burn on a visit to record a site subject to afforestation. BSBI worked with

Scottish Wildlife Trust and the owner to significantly redesign the scheme to avoid important habitats. Jeff found a new population of *Hymenophyllum wilsonii* (Wilson's filmy fern) at Dinley Burn. This fern is elusive in Roxburghshire, last seen 20 years ago. The hybrid sedge *Carex x boenninhausiana* (*C. paniculata* x *remota*) was refound at Linton Loch after 19 years, its only county site. Douglas Methven discovered *Scrophularia vernalis* (Yellow Figwort) at Springwood Park, Kelso almost 150 years after Ida Hayward last saw it there, showing its persistence. Roger Manning has been active in the east of the county and reported the roadside population of the county rarity *Allium scorodoprasum* (Sand Leek) near Morebattle was doing well with 52 heads this year.

Progress was made with validation with all 2020 records validated and inroads made to prior records, but progress is slow and Atlas 2020 validation far from complete, particularly due to the time taken to validate the vc79 records. Rod continues progress with his Flora of Roxburghshire.

Berwickshire (vc81)

Rob Cowe

This year's recording was mostly centred around Chirnside and the river Whiteadder in the spring. As the year went on, I opened up my recording activities which yielded some good finds in *Genista anglica* (Petty Whin) on a forestry track near Abbey St Bathans and *Filago minima* (Small Cudweed) at the old quarry near Reston. I continued ongoing projects on roadsides and began to map the better of the agricultural weed flora near Chirnside. Having the use of the database for the first time this year, I was able to detect and search woods that had never been recorded before. One wood near Fogo turned up *Goodyera repens* (Creeping Lady's-tresses) in a new 10K. A little over two thousand records were collected by eight recorders.

East Lothian (vc82)

Helen Jackson & Marion Moir

We collected a total of 14,318 records in 2020, some by Botany Group members within a radius of their homes in East Lothian. Before the first lockdown, we re-recorded *Petasites fragrans* (Winter Heliotrope) and then *Lathraea clandestina* (Purple Toothwort) on the River Tyne banks, starting near Fala, through Humble, past Haddington and down to East Linton. In early July we checked the *Ophrys apifera* (Bee Orchids) on the verge of the A1 and at Torness Power Station counted the *Orobancha minor* (Common Broomrape).

During July, we increased records of *Parapholis strigosa* (Hard-grass) and re-found *Sagina nodosa* (Knotted Pearlwort) on the edge of the dunes beside the saltmarsh at Belhaven Bay. The Botany Group did a study day at Belhaven Bay looking at the special plants of the dunes including *Festuca arenaria* (Rush-leaved Fescue) and Carexes on the saltmarsh; this was arranged, because of Covid, in a small group of those interested. At Hedderwick Hill Plantation we found a Tor Grass and as a result of this, we consulted Arthur Copping who helped to sort out the 3 different Tor Grasses: - *Brachypodium rupestre* at Yellowcraig, *B. sylvaticum* in the dunes at Belhaven and along the steep grassy slopes around Tantallon Castle, and *B. pinnatum* at Hedderwick Hill. We increased the records of *Scabiosa columbaria* (Small Scabious) found beside the golf course at Dunbar, and along the cliffs at Tantallon Castle.

The beginning of August was spent up on the Lammermuirs, and we re-found old records of *Berula erecta* (Lesser Water-parsnip) near Whiteadder Reservoir; the water was very low and we recorded *Rorippa palustris* (Marsh Yellow-cress) on the mud presumably brought by the geese. An interesting day was spent with David Long at Kate's Cauldron below Soutra Hill to try to re-find *Hymenophyllum wilsonii* (Wilson's Filmy-fern) but to no avail; an interesting find on the cliffs were several plants of *Rubus saxatilis* (Stone Bramble).

Our 2020 records were sent to The Wildlife Information Centre (TWIC) and the Council Rangers received records for Aberlady, Gullane and Yellowcraigs.

Midlothian (vc83)

Barbara Sumner

4815 records were entered into MapMate and more 2020 records are expected. Thanks to all recorders and determiners. Lockdown for COVID-19 restricted recorders to their home patches, thereby giving opportunities for local projects. Street weeds flourished and were recorded in detail, e.g. in Melville Street and streets in south Edinburgh and Penicuik. A second edition of the Rare Plant Register for Midlothian was produced in 2020. (Available on the Midlothian [BSBI page](#)). The VC recorder represented the BSBI on steering groups for Local Biodiversity Sites, and for the Edinburgh LBAP.

Notable records included:

- A new wild occurrence of *Nemesia floribunda* in the UK, reported in 2020, but actually recorded in 2019 by Richard Milne. Weed at edge of car park for glass-house staff at RBGE.
- A new VC record of *Parietaria officinalis* (Eastern Pellitory-of-the-wall) recorded by Maria and David Chamberlain in Sundial Garden, Inverleith Park.
- A new VC record of *Limonium vulgare* (Common Sea-lavender) recorded by Stuart Maxwell at Joppa, east of Rockville Hotel.
- A new VC record of *Nicandra physaloides* (Apple-of-Peru) recorded by Henry Noltie – a single flowering plant by path up to summit of Calton Hill (left).

West Lothian (vc84)

Jay Mackinnon

The early part of 2020 was occupied with data validation: fascinating and rather addictive detective work! I am grateful to Jackie Muscott for answering my various queries about sites and records so patiently. Events in spring crushed all efforts but recorders living in the county are still sending records (thank-you) and I intend to revive the activity of our local botany beginners' group when possible.

Fife & Kinross (vc85)

Sandy Edwards

I have been recording "pavement plants" on a 1km length in St. Andrews as no spraying was done by the council. About 40 species including *Vulpia bromoides* (Squirreltail Fescue) which is notable here and a lot more *Mycelia muralis* (Wall Lettuce) than usual.

An *Epipactis* that was found locally caused much debate and was thought to be *E. leptochila* (Narrow-lipped Helleborine). Also, an unusual large number of *Epipactis helleborine* (Broad-leaved Helleborine) spikes were recorded in 2020. *Conyza canadensis* (Canadian Fleabane), first recorded two years ago, is now appearing in car parks, bus stations etc. It would be interesting to see if this is moving up from the south where it is very common.

I am helping with recording species on one of the local golf courses. Some of the new records were found by members of the Fife Botanists and were confirmed by me. I attended meetings of the Fife Wildlife Sites Steering Committee which is involved in enlarging and making more accessible some of the richer habitats in Fife. I am a tutor to three students on the FSC Identiplant course. I have provided photos for the "Doorstep Botany" collection for the St. Andrews Botanic Garden and met with Harry Watkins, The

Director, to discuss the introduction of more local wildflowers and habitats to the Garden.

Notable records in 2020:

- *Verbascum densiflorum* (Dense-flowered Mullein). – new VC record. See page 9 and photo on inside cover.
- *Galega officinalis* (Goat's Rue) A new record for vc85.
- *Hirschfeldia incana* (Hoary Mustard) first record since 1962.
- *Galinsoga quadriradiata* (Shaggy Soldier) Second record for vc85.
- *Lactuca virosa* (Great Lettuce) A new site in east Fife, the other two sites are near Newburgh.
- *Campanula glomerata* (Clustered Bellflower) Rare in vc85

Stirling (vc86)

Phil Sansum & Matt Harding

After a productive final Atlas year in 2019, botanising in VC86 ground to a near-halt in 2020 due to the pandemic restrictions. One new species was added to the vice-county flora, *Impatiens noli-tangere* (Touch-me-not-balsam), discovered during a survey of Burghmuir Ponds in Stirling; an excellent record. Examination of an interesting patch of waste ground next to the railway line at Cornton revealed *Draba muralis* (Wall Whitlowgrass) and *Veronica peregrina* (American Speedwell), the fourth and second modern records for the vice-county respectively. *Veronica peregrina* appears to be spreading in the region and more records are expected. A supermarket trip to Stirling also revealed *Aethusa cynapium* (Fool's Parsley) in the car park – a locally scarce species but probably under-recorded. Elsewhere, locally interesting species including *Carex riparia* (Greater Pond-sedge), *Bidens tripartita* (Trifid Bur-marigold), *Eleocharis acicularis* (Needle Spike-rush), *Neottia cordata* (Lesser Twayblade) and *Lysimachia europaea* (Chickweed-wintergreen) were reported as present and correct at known localities.

West Perthshire (vc87)

Liz Lavery & Jane Jones

Both Liz and Jane have recorded locally to their homes. Liz explored some of the road verges near Carnbo and found 70 to 100 species on each of two outings, which was more diverse than the grass fields round about. Jane discovered four more locations for *Osmunda regalis* (Royal Fern) on Loch Ard, near Aberfoyle. They were alerted to a find of *Alopecurus aequalis* (Orange Foxtail) on exposed mud at the western end of Loch Venacher, Callander so duly went to investigate and found it scattered over the large area of

mud along with *Apium inundatum* (Lesser Marshwort), *Eleogiton fluitans* (Floating Club-rush), *Lythrum portula* (Water-purslane), *Persicaria amphibia* (Amphibious Bistort) and a small area of *Crassula helmsii* (New Zealand Pigmyweed).

Mid-Perthshire (vc88)

Alistair Godfrey & Jim McIntosh

1,888 records were collected in 2020, of 509 taxa in Mid Perthshire. The major contributors were Dan Watson & Alistair Godfrey, although another 20 recorders made significant contributions. Most records are clustered near recorders' homes, though some are from seven widely scattered mountains that were visited when restrictions allowed.

The lockdown provided an opportunity to explore local flora, in this case from the Shochie Burn (really a river) north of Luncarty down the banks of the River Tay and River Almond to where it passes under the A9 bridge. Most recording took place from May to August, coinciding with low levels on the Tay, exposing areas usually inaccessible.

Divided into eight habitat sections, each habitat falls within one of seven definable monads. 1,159 records were made; 309 taxa, excluding critical taxa. Thirteen new taxa were recorded in the habitats of the 7 monads, mostly small populations. These included: *Geranium sanguineum* (Bloody Crane's-bill), *Agrimonia eupatoria* (Agrimony), *Lythrum salicaria* (Purple-loosetrife) and *Lysimachia nummularia* (Creeping-Jenny). This small, glandular plant is considered native in VC88 (by AG). *Crocasmia x crocosmiiflora* (Monbretia) is definitely unwanted. *Allium carinatum* (Keeled Garlic) is spreading, attractive in flower, but not invasive like *A. paradoxum* that clothes the Shochie banks. *Hedera algeriensis* (Algerian Ivy) established on *Alnus glutinosa* (Alder) at the Tay's edge is a new county record.

Petasites fragrans (Winter Heliotrope) was found new to the VC, at Silver Walk, Bridge of Earn by Liz Lavery. Two arable weed species *Sinapis alba* (White Mustard), *Linum usitatissimum* (Flax) were recorded for the first time since 1971 and 1958 respectively, by Dan Watson in a field near Acharn, Loch Tay. Dan also made the first record of *Spiraea alba x douglasii* = *S. x billardii* (Billiard's Bridewort) since 1959 on an island at the west end of Loch Tay. *Cardamine impatiens* (Narrow-leaved Bitter-cress) was recorded for the first time since 1991 in two widely separated locations – at Killin by Dan and at Luncarty by Alistair.

48 records were made of Nationally Rare or Scarce species. Mostly notably, Dan & John Holland undertook a systematic survey and count of *Corallorhiza trifida* (Coralroot Orchid) at the west end of Loch Tay and Dan continued his survey, first begun in 2018, of Mid-Perthshire's only *Sabulina verna* (Spring Sandwort) site, at Meall Dhuin Croisg, near Killin, finding new populations a little further west. NTS (Dan again!) has also been systematically surveying *Sabulina rubella* (Mountain Sandwort) on Ben Lawers, and has found that it is in decline apparently, even here at its UK stronghold.

East Perthshire (vc89)

Martin Robinson

I only made 971 records, concentrating more on trying to get to grips with certain groups than with recording. The glorious, traffic-free spring lockdown was a great chance to look at dandelions on some local road verges that are normally a bit risky, and some progress was made. The vc list now stands at about 116 microspecies, but we know that there are a lot more out there. In the summer I spent some time among the Alchemillas, adding *A. glomerulans* (Clustered Lady's-mantle) sites and discovering how abundant *A. xanthochlora* (Pale Lady's-mantle) can be in the uplands. I met Mark Lynes at the Cairnwell to see his *A. sciura* site just over the boundary in vc92, but haven't yet made a confirmed record in vc89. I made it up to Fealar on 9 Aug to check on the *Saxifraga hirculus* (Marsh Saxifrage), and found that I was about a week too early. Nevertheless, I counted 284 either in flower or bud, remarkable really in view of the close proximity of a herd of 530 red deer.

Lysimachia thysiflora (Tufted Loosestrife) was reported by Lyn Jones at Redmyre Loch in the Sidlaws. I went to have a look and was astonished to find it forming a zone all the way round the loch. A new site for it, and the only one known in the Sidlaws. The loch is otherwise unremarkable and has obviously attracted very little attention in the past.

Angus (vc90)

Mark Tulle, Robin Payne, Theo Loizou

Very little recording was done, but we are grateful to all contributors and especially two stalwarts – John Edgington and Anne Burgess - for their continuing contributions during the year.

The VC90 Recorder team has been working with Angus Council, as part of a wider Tayside initiative, to identify and schedule an updated set of Local Nature Conservation Sites (LCNS). A considerable amount of survey work and analysis to develop a list of candidate sites was carried out by Scottish Wildlife Trust (SWT) teams in the mid-1990s. The SWT work is being re-

viewed and will guide new targeted fieldwork which, delayed by Covid-19 in 2020, will hopefully progress in 2021 and lead to the most valuable sites gaining LCNS status in the planning process.

Andy Amphlett has been a great help in sorting out some of our dubious records. He has meticulously been searching through the records for VC 90 and other VCs and his assistance has been invaluable.

We can confirm that the rare and possibly overlooked *Lycopodium lagopus* (Hare's-foot Clubmoss) is present in Upland Angus. Only one site is known but it is hoped that others will be found in the future. It was first noted in 2012 and has now been confirmed.

Kincardine (vc91)

David Welch & David Elston

Major efforts this year were preparing a Rare Plant Register and checking on locations of candidate species. I dug out older records for these which hadn't been submitted to DDB, while David Elston (DE) did much of the hunting legwork. The vice-county is sufficiently compact that Covid didn't greatly hinder summer fieldwork, and some useful new records were made.

Interesting finds in 2020:

- DW added *Epilobium x limosum*, in the den margin at Benholm, and *Euonymus latifolius* (Large-leaved Spindle), planted in policy woodland south of Banchory, to the vc list.
- DW made the second and third records of *Hieracium sabaudum* forma *bladonii*, from a farmyard in Durris and by Stonehaven railway carpark.
- DE added *Melilotus altissimus* (Tall Melilot) by (safely) going on foot to see some flowers he had spotted when driving along the A90 near Muchalls.
- DE also ventured into Eslie Moss (Fettercairn) to obtain precise records of *Briza media* (Quaking-grass), *Carex diandra* (Lesser Tussock-sedge), *Menyanthes* (Bogbean) and *Neottia ovata* (Common Tway-blade), and into Whitewater Moss (Garvock) to find *Carex disticha* (Brown Sedge) and *Carex vesicaria* (Bladder-sedge), the first record for this latter species in a vc 91 moss.
- An exciting find of a big colony of creeping Potentillas was made by Alison Peaker and Carol Blow in Drumtochty Forest, which will need refereeing help in the coming season to sort out.

- Considerable time was spent by DW on checks of a distinctive big-flowered bramble (*Rubus*) species, ready to produce a paper naming it; colonies occur near the vc 91 coast and more near Dundee.

South Aberdeenshire (vc92)

Ian Francis

2020 was a very quiet year in the vice-county, with very limited fieldwork due to the lockdown and a certain relaxation after the Atlas efforts in 2019. Around 1300 records came in from 25 botanists, including a major contribution by Gus Routledge, and there were some useful finds. The first few months of the year were occupied by some final Atlas data entry and validation, especially the capturing of some important aquatic macrophyte records from SNH site condition monitoring surveys of a number of Aberdeenshire lochs during the Atlas period, helping to rectify significant under-recording of water plants during 2000-2019. Once again, many very useful records came from the North-East Scotland Biological Records Centre (NESBReC). I am very grateful to all those who submitted records in 2020. The aim is to begin some more targeted recording in 2021, assuming we are able to range freely once more!

North Aberdeenshire (vc93)

David Welch & David Elston

Field visits were limited compared to other years due to Covid-19 travel restrictions. Whilst relatively few in number, these visits led to some notable discoveries:

New records

1. *Alopecurus aequalis* (Orange Foxtail), abundant in a seasonal pool at Sands of Forvie NNR. Discovered by David and Elsa Plant, excellent pictures taken later by Alison Peaker (See inside back cover).
2. *Elytrigia x laxa* (a hybrid couch), in sand dunes at the mouth of the River Ugie.
3. *Cotoneaster divaricatus* (Spreading Cotoneaster), in an old quarry at Pitcapple, where it was probably planted.
4. *Vicia sepium* (Bush Vetch) *var. ochroleuca*, along 100m of a roadside bank at Leslie, an attractive, large-flowered variety, rarely recorded in Great Britain.

Revisiting old locations

5. *Acer mono* (Painted Maple), two trees along the entrance avenue to Fyvie Castle, confirming a 2002 NTS record.

6. *Chenopodium bonus-henricus* (Good-King-Henry), just one flowering stem seen near Old Meldrum at a site known since 1998.
7. *Geranium pyrenaicum* (Hedgerow Crane's-bill), in an old quarry at Pitcable, found here once before in 2011.
8. *Salix herbacea* (Dwarf Willow), in rock crevices on Craigshannoch during a visit to show the colony on nearby Oxen Craig to staff from Forest and Land Scotland and from Aberdeenshire Council.
9. *Artemisia maritima* (Sea Wormwood), on sea cliffs at Sands of Forvie NNR, confirming the continued existence of a colony last recorded in 1990 close to the species' northern limit.
10. *Anagallis tenella* (Bog Pimpernel), in coastal flushes at Rosehearty, substantially expanding the known population at its only 2000+ site.

Banffshire (vc94) Currently Banffshire is vacant, so this report was written by Jim McIntosh

Remarkably for a vacant vice-county, 3,489 records were collected in 2020, of 495 taxa. 85% of records were by just one recorder, Anne Burgess, but significant contributions were made by Rob Potter and neighbouring recorders. Most of the records are from the north-west of the county but there is a thin scattering of records from across the vice-county – right up to the highest mountains in the vice-county, thanks to Lewis Donaghy & Ian Moir. Despite restricted opportunities for fieldwork, five species were found new to vc94. A very puzzling *Potentilla* was also found resembling Rock Cinquefoil (*P. rupestris*), but differing in some features and in autumn flowering. Seed was collected and is in cultivation, hopefully to provide a firm identification in future. In addition, four species were recorded for the first time post-1999 though one (*Myriophyllum spicatum*) was thought to have been planted. 128 records were collected of the Banffshire RPR taxa.

Taxa new to vc94 in 2020: *Cryptomeria japonica* (Japanese Red-cedar) – planted, *Holodiscus discolor* (Ocean Spray), *Oxalis articulata* (Pink-sorrel), *Pilosella caespitosa* (Yellow Fox-and-cubs) & *Weigela florida* (Weigelia) – planted.

Taxa recorded for first time in vc94 post 1999: *Barbarea intermedia* (Medium-flowered Winter-cress) previous most recent record 1988, *Geranium phaeum* (Dusky Crane's-bill) 1983, *Myriophyllum spicatum* (Spiked Water-milfoil) 1988 - planted & *Rosa caesia* (Northern Dog-rose) 1995.

Moray (vc95)

Ian Green

With collecting records for an Atlas Flora of vc95, there has been lots of field work done across vc95 during 2020 with around 25,000 records made. The flora is being done on a monad basis, and it is hoped that it will be completed by the end of 2025.

- *Allium sphaerocephalon* (Round-headed Leek) Anne Burgess found several plants on rough grassy area on edge of Fochabers, first record for vc95.
- *Carum verticillatum* (Whorled Caraway) Audrey Turner found a second site in vc95 for this species, only one small patch at Lochindorb.
- *Linaria x dominii* (*L. purpurea x repens*) (Purple Toadflax x Pale Toadflax) Audrey Turner found a patch on edge of parking area for Aviemore railway station growing with both parents, first record for vc95.
- *Meum athamanticum* (Spignel) Andy Scobie found a large population at Clachaig, Nethy Bridge, only the fourth time this species has been found in vc95.
- *Cotoneaster x watereri* (Waterer's Cotoneaster) I found this self-sown on a wall in Forres, the first record for vc95.
- *Bromus arvensis* (Field Brome) I found a single plant by path in Forres, the first record for vc95 since 1871.

Easternness (vc96)

Adam Fraser & Andy Amphlett

5835 records were collected in 2020, of 520 taxa. 85% of records were by three recorders, Audrey Turner, Sue Thomas and Stewart Taylor. They mostly stayed close to home, and therefore 82% of the records were from Badenoch & Strathspey, in the south-eastern part of the vice-county. Despite restricted opportunities for fieldwork, six species and one sub-species were found new to vc96. In addition, thirteen species, one sub-species and one hybrid were recorded for the first time post-1999. 426 records were collected of 92 vc96 RPR taxa. A second location for *Calamagrostis stricta* (Narrow Small-reed) was found by David Elston and Judith Cox in late November, beside the outflow from Loch Insh, c. 2km from the only other vc site. The second record for *Carex muricata subsp. pairae* (Prickly Sedge) was made by David Tompkins from Culbin Forest, in a similar area to the only other record, in 1989. Two articles were written for BSBI News: Amphlett, A. (2020). *Lysimachia minima* (Chaffweed) – another roadside halophyte? BSBI News 145, 14-17, and, Amphlett, A. (2021). *Sagina maritima* (Sea Pearlwort) as an inland roadside halophyte. BSBI News 146, 25-28.

Taxa new to vc96 in 2020: *Blackstonia perfoliata* (Yellow-wort), *Helminthotheca echioides* (Bristly Ox-tongue), *Leucjum vernum* (Spring Snowflake), *Oenothera cambrica* (Small-flowered Evening-primrose), *Puccinellia distans* subsp. *borealis* (Northern Saltmarsh-grass), *Taraxacum altissimum* (Tall Dandelion) and *Taraxacum pachymerum* (Dirty-leaved Dandelion).

Taxa recorded for first time in vc96 post-1999: *Aster novi-belgii* s.s. (Confused Michaelmas-daisy) year of previous most recent record 1983, *Brassica rapa* (Turnip) 1990, *Eupatorium cannabinum* (Hemp-agrimony) 1987, *Festuca rubra* subsp. *juncea* 1975, *Hypochaeris glabra* (Smooth Cat's-ear) (1974), *Iberis umbellata* (Garden Candytuft) 1975, *Mentha aquatica* x *spicata* = *M. x piperita* (Peppermint) 1976, *Pastinaca sativa* subsp. *sylvestris* (Wild Parsnip) 1972, *Taraxacum ekmanii* (Ekman's Dandelion) 1973, *Taraxacum euryphyllum* (Wide-stalked Dandelion) 1971, *Taraxacum exacutum* (Imbricate-bracted Dandelion) 1982, *Taraxacum gelertii* (Gelert's Dandelion) 1973, *Taraxacum naevosum* (Squat Dandelion) 1975, *Taraxacum nordstedtii* (Nordstedt's Dandelion) 1975 and *Taraxacum subnaevosum* (Pale-bracted Dandelion) 1984.

Westernness (vc97)

Ian Strachan & Ian Bonner

Winter was spent extracting records for Atlas 2020, including aquatics from SNH SCM reports for freshwater lochs across Scotland. Lockdown in spring gave an opportunity for local exploration in Glen Spean and Glen Roy, including monitoring of road verges for the Lochaber Biodiversity Group, and survey round Fort William. With council spraying on hold the town yielded some surprises, such as *Mycelis muralis* (Wall Lettuce) and *Vulpia myuros* (Rat's-tail Fescue), and Jim McIntosh spotted *Anthoxanthum aristatum* (Annual Vernal-grass) on re-instated ground - the first Scottish record since 1984.

The Ben Alder hills received visits later in the summer from several different botanists (by chance) resulting in a tremendous haul of detailed arctic-alpine records for this superb but under-recorded area. Records were also collected or received from a range of other sites, including more than 1,000 records from local hills by Ian Moir. Other highlights included new sites for *Hammarbya paludosa* (Bog Orchid) in Ardnamurchan, *Pulicaria dysenterica* (Common Fleabane) near Kilmalieu, and *Alchemilla wichurae* on the splendidly named Callert Lump. Despite the intermittent restrictions on travel, more than 8,000 records were obtained by botanists in VC97 over the year.

As VCR, IS gave a talk on 'Wild fruits in the Highlands' to Lochaber Natural History Society in February and again to Inverness Botany Group (by Zoom) in November. At the SBC he presented an exhibit about a botanical highlight of 2020, a new site for *Melampyrum sylvaticum* (Small Cow-wheat) beside the River Arkaig (See p.10 and photo inside front cover).

Argyll (vc98)

Gordon Rothero

Over 13,000 records were made during 2020, not a bad total considering the restrictions that we all faced during the year although it may be that the rigours of the lockdown were an incentive to get out and about when we had the chance. Inevitably much of the recording was local to the recorders, in Cowal where the Recorder is based, from Carl Farmer in mid-Argyll and Marion and Ian Moir who visited several areas in the north of the county where coverage was poor. There were no outstanding additions to the flora but many useful records made of some uncommon plants in VC98 like *Potentilla crantzii* (Alpine Cinquefoil), *Carex atrata* (Black Alpine-sedge) and *Micranthes nivalis* (Alpine Saxifrage) during an excellent day on Beinn Dorain, *Juncus castaneus* (Chestnut Rush) and *Lycopodium annotinum* (Interrupted Clubmoss) from the lonely corries on the north side of the Aonach Eagach and the clubmoss again from the granite hills south of Loch Etive. A number of aliens were recorded for the first time but it is not easy to be sure of the status of these but *Pieris formosa* (a Chinese garden shrub) in Clachaig Gully is surely worthy of note.

Clyde Isles (vc100)

Angus Hannah

This year 4582 DDb records were made, the highest number since 2014. This was largely due to the efforts of Sarah Cowan, who on regular walks mostly near her home in Kildonan visited 27 monads, mostly several times, making this the best-recorded area on Arran.

Being almost entirely confined to Bute I undertook three local projects. In spring I looked at dandelions along pavements in town and (*Erythrosperms* and *Celtica* mainly) on a short section of coastal grassland in the west of the island. In later May and early June, I was able to revisit all the known hawkweed sites on Bute (mostly coastal crags), and with help from referee Brian Burrow all specimens including the abundant town plants were identified, confirming some older records and adding a few new ones. By June all exposed sites were seriously droughted. My only sorties off island were for brambles, firstly a day to meet up with two Ayrshire recorders in Kilbirnie and in August a four-day visit to Galloway when four other recorders were able to

join me in the field to investigate the brambles of the Kirkcudbright area. This was a happy and fruitful occasion, in splendid weather fortunately, as we could not meet indoors. Fifteen species were recorded.

A substantial new population of *Hypolepis ambigua* (Pig-fern), so far known only from Bute outside its Australasian homeland, came to light after felling of a Sitka plantation in Cnocnicol wood (NS0960). How long until it turns up somewhere else?

The addenda pages to my Bute Flora are periodically updated (link via VC100 webpage), with a trickle of new species being found, and some other changes noted.

Kintyre (vc101)

Dave & Pat Batty

We had few opportunities to botanise in the VC during 2020 and these were in Mid Argyll. We did have the time to check on several rare or local species when they were flowering. *Lathyrus palustris* (Marsh Pea) at its one site did very well with 16 plants in flower and 600+ non-flowering plants. The colony of *Platanthera bifolia* (Lesser Butterfly-orchid) on the Tayvallich peninsula had the best year we've ever seen both in terms of number of plants (hundreds) and extent (present in areas not seen before). Both these species may have benefitted from the sunny, warm and dry spring experienced on the west. We checked one of the *Cirsium dissectum* (Meadow Thistle) sites that we had not visited for some time and found the plant as extensive as in the past. Changes in land use in the VC have had a major effect on the flora and so we went to check a *Dactylorhiza traunsteinerioides* (Narrow-leaved Marsh-orchid) site in a flushed clearing on a conifer hillside. Despite the vegetation having grown rank with few open flushed areas we did locate 12 flowering plants and 1 non-flowering. It was almost impossible to find non-flowering ones. The only record we received from the south of the VC was for *Platanthera chlorantha* (Greater Butterfly-orchid) from Machrahanish.

Despite seeing these rare species, we took particular delight in the spectacular show of spring flowers, particularly Bluebells, Ramsons and Greater Stitchwort which really raised our spirits.

South EbuDES (vc102)

Simon M. Smart & Malcolm Ogilvie

Recording in the vice county was curtailed in 2020. Malcolm Ogilvie, who lives on Islay, was able to conduct some of the annual orchid monitoring with results pretty similar to 2019. These sites are all on Islay: The main *Platanthera chlorantha* (Greater Butterfly-orchid) site was strimmed in early spring

in the absence of former sheep grazing and produced 117 flowering spikes (cf. 31 in 2019). *P. bifolia* (Lesser Butterfly-orchid) were in noticeably reduced numbers at their regularly monitored sites. The *Cephalanthera longifolia* (Narrow-leaved Helleborine) site was not visited, but the main site for *Epipactis palustris* (Marsh Helleborine) held 218 spikes (224 in 2019).

Despite a much-restricted field season deskwork carried on apace validating and checking records from vc102 in advance of the new Atlas. The groups of records usefully prioritised by the DDb were tackled, sometimes necessitating enquiries with recorders while also addressing the very useful taxon-specific prompts emailed through from Andy Amphlett. A very different year from 2019 when the high-point for this author was recording new post-2000 locations for *Alchemilla alpina* (Alpine Lady's-mantle) and *Salix herbacea* (Dwarf Willow) on Beinn Shiantaidh while competing in the Jura fell-race. Looking forward to be being back in 2021 with an interesting list of records to check following validation work.

Mid-Ebudes (vc103)

Lynne Farrell

I've not been into my VC at all this year but local residents have provided some interesting records, including annual reports from John Bowler, Tíree and Ben Jones, Coll, RSPB officers.

Advice has been given on Bee-Lines project run by Buglife, and to Mull rangers on new and upgraded walking and cycling routes.

Many records have been validated during the year.

Some species have fared well this year and *Mertensia maritima* (Oysterplant) has reappeared in one site and has significantly increased in another round the west coast of Mull. A new site for *Cephalanthera longifolia* (Narrow-leaved Helleborine) was found in Aros Park, Tobermory and both species of *Platanthera* (Butterfly-orchid) had a good season. An additional population for *Hieracium maritimum* (Maritime Hawkweed) was found near the known location and *Ribes rubrum* (Red Currant) has been found in the wild near Treshnish farm, where it has presumably grown from bird-sown seed from the bushes in the farm garden. *Pimpinella saxifraga* (Burnet Saxifrage) was found on Gunna during a local boating trip.

Control of *Allium triquetrum* (Three-cornered Garlic) on Iona continues, and it has now been found on Erraid. The locals have included a recipe for making a pesto out of it in the local magazine!

- *Scrophularia auriculata* (Water Figwort) Only the second record for Mull, the first being in a garden near Salen. This is in a ditch near Bunessan on the Ross and was spotted by a local.
- *Nicandra physaloides* (Apple-of-Peru) One plant found along the beach near the village on Iona by local resident, Joyce Watson. A new VCR which may have originated from bird seed.

North Ebudes (vc104)

Stephen Bungard

It was not possible to hold Skye Botany Group meetings during 2020. Despite the restrictions caused by the pandemic, nearly 3,300 plant records were made in VC104 in 2020, including 11 plants new to the vice-county.

Only one of these is native, *Hieracium silvaticoides* (Wood Hawkweed) found at two sites on Raasay. Two weeds were amongst the new species, *Lepidium didymum* (Lesser Swine-cress) on Skye and *Solanum nigrum* (Black Nightshade) on Eigg. The remainder were planted or garden escapes.

A total of 60 *Hieracium* specimens were taken for expert determination which have made a useful start to updating county hawkweed records, a project it is intended to continue in 2021.

As usual, my blog records findings as they happen, though the scope continues to broaden from plants to include other aspects of the local environment.

The Raasay Flora has been updated to Stace 4th edition nomenclature and taxonomy.

Wester Ross (vc105)

Duncan Donald

There have inevitably been fewer visitors this year, and many have understandably headed for remote areas. For example, I've had several reports from Cul Mor: *Artemisia norvegica* (Norwegian Mugwort) obviously had a good year, and Peter Ashworth newly added *Pseudorchis albida* (Small-white Orchid). Jim McIntosh and Dan Watson contributed a splendid set of records from Beinn Dearg including, amongst a plethora of rarities (e.g., *Artemisia norvegica* again), *Helictochloa pratensis* (Meadow Oat-grass), new for this hot-spot.

I much enjoyed a socially-distanced excursion with the Inverness Botany Group in fine weather on Glas Bheinn, where we added *Juncus triglumis* (Three-flowered Rush) and a fine stand of *Parnassia palustris* (Grass-of-

Parnassus) for NG94. Jeff Waddell sent in many records from the Balmacara area – as did David Morris from near Lochcarron, adding a new *Equisetum hyemale* (Rough Horsetail) site and taking the palm for the best find of the year, *Trichophorum cespitosum* ss (Northern Deergrass) in only its second Vc locality. Newcomers Genevieve and David Tompkins have their eye in well for *Arctostaphylos alpinus* (Alpine Bearberry), adding this from Beinn Ghobhlach and Beinn Liath Mhor – but also raising an intelligent question about how to network better to encourage visiting mountaineers to submit noteworthy finds. Local resident Nik Bullivant continued reporting *Sibbaldia procumbens* (*Sibbaldia*) records; worryingly, I found *Cotula alpina* (Alpine Buttonweed) escaping north from the vice-county at Kirkaig.

- *Dactylorhiza purpurella* var. *cambrensis* (Western marsh-orchid) Found and photographed (inside front cover) by Irene Brandt on 'her' verge north of Ullapool; its 7th recorded Vc locality.
- *Trichophorum cespitosum* ss (Northern Deergrass) Found by David Morris in three places at only its second Vc locality.
- *Equisetum hyemale* (Rough Horsetail) Found by David Morris at only its 4th Vc locality.

East Ross (vc106)

Brian Ballinger

The travel restrictions have made this an unusual year, but I was able to spend time in the field in Easter Ross from January to March and again from July to October. I was also fortunate to receive records from local and visiting botanists. More than 8000 records have been entered on the DDb for 2020.

I also completed some small studies during the year. I updated my review of railway station flora, which confirms the decline in biodiversity since 2001. A follow up of my review of wall vegetation in Easter Ross towns showed no loss since 2011, but distinct differences from rural walls (reports in preparation). The second part of my comparison of the rural and urban floras in Easter Ross appeared in BSS News no 114.

I have been much involved with the Botanical Society of Scotland's Urban Flora project and a report written with John Grace appeared in BSBI news 145. During lockdown I have followed up my 2001 study of 25 streets near my west Dundee home and showed some trends but no loss of diversity. (BSS News 115 and BSS [blog](#)). I also reported on a study of sections of 50 walls in Dundee, (See pp.6-8) which showed a preponderance of small ferns, particularly on the upper parts of the walls (BSS news 115 and BSS [blog](#).)

We have a postponed field meeting in Muir of Ord planned for 2021 (with Mary Dean), but this depends on the Covid situation.

East Sutherland (vc107)

Mick Crawley

Heather McHaffie re-discovered *Asplenium marinum* (Sea Spleenwort) on the seaside crags at Strathsteven (between Brora and Golspie) after a gap of 123 years, which is terrific. A new alien garden escape was recorded from Helmsdale in the form of *Leontodon rigens*, a very distinctive plant with enormous, regularly-spaced, marginal leaf-teeth. A great debt of gratitude is due to Dr Tom Dargie for his sterling work at the enquiry into the proposed golf course at Coul Links between Embo and Loch Fleet; that battle was won but not, apparently, the war. A fresh proposal has been submitted, so the defence of this fantastic site may have to be re-enacted. Let's hope not, and that the planning authorities see sense and reject it out of hand.

West Sutherland (vc108)

Ian Evans

It was an unexpectedly productive recording year, with a long season, for the far north-west, from 21st March to 23rd December.

The pandemic confined Gwen Richards and I mostly to listing 17 previously unrecorded monads in Assynt. Eight were a contribution to the Quinag Wildlife Project, run by the John Muir Trust and Assynt Field Club.

Shorter local visits resulted in the discovery, amongst others, of the pink-flowered form of *Ajuga pyramidalis* (Pyramidal Bugle), which Stace (2019) describes as found 'rarely abroad' - see inside front cover, photograph Gwen Richards on Stoer cliffs, NC030286, on 6/5/2020; a third site for *Neottia nidus-avis* (Bird's-nest Orchid) and, coming down to earth, the first local record since the 1950s of *Sagina apetala* s.s. (Annual Pearlwort).

We were also able to spend two weeks during July and August at Tongue, joined, with due discretion, by Gordon Rothero and Ro Scott. We listed 13 monads, both nearby and, with the help of Wildland Ltd., in very remote areas in the south of the parish. Interesting finds included *Lotus pedunculatus* (Greater Bird's-foot Trefoil) and *Trisetum flavescens* (Yellow Oat-grass) on the Kyle and a cliff-top sward on Neave Island with the unusual pairing of *Salix herbacea* (Dwarf Willow) and *Scilla verna* (Spring Squill). This island, ungrazed for many decades, also had large quantities of *Ophioglossum vulgatum* (Adder's-tongue Fern) in mats of dead grass. The high points in August were sea-cliffs at Port Vasgo, with numerous *Primula scotica* (Scottish Primrose) and a new site for *Carex maritima* (Curved Sedge).

Outer Hebrides (vc110)

Paul A. Smith

Recording activity was curtailed by COVID for locals and visitors, but Outer Hebrides Biological Recording supplied a batch of records, and a 'house party' recording trip for three weeks in August was eventually allowed. This covered part of the west coast of Lewis which was relatively under-recorded, and contributed to recording for a new vc110 flora. There were interesting finds of *Aster tripolium* var *condensatus*, which proved to be frequent on the sea cliffs, *Salix herbacea* (Dwarf Willow) at low altitude (160m), and *Hippuris vulgaris* (Mare's-tail), not seen in this area since the 1940s. There were some scarce taxa too – *Rumex* × *propinquus* (*R. crispus* × *longifolius*), twice, and *Juncus tenuis* (Slender rush), third record. Continued a debate with Pat Acock over the existence of *Equisetum* × *dycei* (*E. palustre* × *fluviatile*, Marsh × water horsetail), but none of the specimens I provided (from a revisit to previous sites and from a new one) were it.

Calm weather and COVID effects on tourism allowed us to take a boat to the Flannan Isles and update records, but some tetrads remained inaccessible due to the swell.

Aster tripolium var. *condensatus* (Sea Aster) is a fleshy variety characteristic of rocky shores (see inside back cover). It has been recorded in vc110 before on rocky offshore islands, but not on the main land masses. It proved to be widespread on the cliffs in NB24, even though there were no previous records here even for the species. In part this demonstrates how under-recorded parts of vc110 remain.

Orkney (vc111)

John Crossley

With Atlas recording past, and restrictions on travel and meeting fellow botanists, it was a year for progressing some overdue projects and tackling critical taxa. Some of these were the result of questions that have arisen over years of extensive recording. For example, a paper on *Tripleurospermum* (Mayweed) hybrids and subspecies has reached its final draft, also a shorter piece on the occurrence of glands in *Dryopteris* (Buckler-ferns). Comprehensive data on native *Betula pubescens* (Downy Birch) on the island of Hoy has been gathered but not yet written up – some of the variation is unexpected and interesting.

At the same time there has been some more general recording and good records in the VC. Jenny Taylor, a BSBI member living in Stromness, found *Cochlearia danica* (Danish Scurvy-grass) growing around slipways and marshalling

areas at the ferry port, a new VCR. She also found *Atriplex x taschereaui* (a hybrid Orache), also new. *Dactylorhiza incarnata* ssp. *cruenta* (Flecked or Leopard Marsh-orchid) was found on Hoy in 2019, the third Scottish record, by Andrew Upton, another local BSBI member.

The Orkney Field Club and I organised an on-line bioblitz during lock-down, participants recording living things of all kinds in their gardens or close by in a 24-hour period, then posting lists and photos to a dedicated Facebook page. More plants than anything else were recorded, including some unusual ones, by more than 40 contributors. Much to be recommended.

Shetland (vc112)

Paul Harvey

The Covid pandemic put paid to most attempts to organise systematic botanical surveys or botanical training events in Shetland, although a number of members of the public did engage with efforts to promote recording flowers in their gardens or alongside roadside verges during their daily exercise. Some limited work focused on designated sites and rare species.

Efforts to survey some arable areas in the sandy South Mainland were rewarded with the second vice-county record of *Silene gallica* (Small-flowered Catchfly), the first being found in sown grass near Scalloway in 1991. The first records of *Viola arvensis* (Field Pansy) since 1998, and refreshingly large numbers of *Arctium nemorosum* (Wood Burdock), *Euphorbia helioscopia* (Sun Spurge) and *Papaver dubium* (Long-headed Poppy) were found, all three declining markedly in the islands in recent years.

Dactylorhiza traunsteinerioides (Narrow-leaved Marsh-orchid) was first found in Shetland in 2018 and further searches of *Schoenus* flushes revealed two more sites in 2020, one on Unst and the other close to the initial station in the North Mainland. The island's only known *Crambe maritima* (Sea-kale), near Lerwick, gave rise to a further 10 plants nearby, which will hopefully secure its position in the islands for at least a few years. A small clump of flowering *Campanula rotundifolia* (Harebell) was found on a heathy roadside verge between Lerwick and Scalloway representing the first record here since 1991, its origins though are unclear.

Scottish Recorder's Lifetime Achievement Award

Congratulations to **David Welch**, who was the recent recipient of the North East Scotland Biodiversity Partnership's 2020 Award for Lifetime Achievement in Ecology, Conservation and Biodiversity. The citation underpinning his award is as follows.

"He is the BSBI recorder for both North Aberdeenshire and Kincardineshire. His interest in plants was kindled at school in Lancashire, and his records from the 1950s found their way into the first Atlas of the British Flora published in 1962. At Cambridge University, he continued his studies in botany, but also sang in the Downing College Choir and was Captain of the College Chess Team. He joined the Nature Conservancy as resident botanist at Moorhouse Nature Reserve and Research Station in the Pennines, undertaking research in moorland ecology. After seven years there, he was head-hunted by David Jenkins who was establishing a mountain and moorland research centre at Blackhall near Banchory. In 1973, the research staff of the Nature Conservancy were split off to form the separate Institute of Terrestrial Ecology and a new base was established nearby at Hill of Brathens. A 1991 fire started there by animal activists almost destroyed the only copies of all his plant records which were stored on card files. Theoretically retired in 2000, he continued his range and woodland ecology work on Mar Lodge Estate and Ballochbuie, recently completing two major reports and the Third Atlas of the British Flora will also have his contributions. Definitely one of the giants of Scottish ecology."

Not mentioned in the above citation are: his 1993 Flora of North Aberdeenshire; his rigorous determination of difficult species groups such as Hawkweeds and Brambles in North Aberdeenshire and Kincardineshire; his long-standing work as BSBI *Myosotis* referee and more recently as senior Bramble referee for Scotland; and the use to which he has put his extensive local knowledge both by advising Aberdeenshire Council which areas should be protected through the planning system as Local Nature Conservation Sites and by helping the Council defend these areas when threatened.

A giant indeed, and a role model for us all.

David Elston

PS From a personal perspective, this would seem an appropriate time to express my gratitude for his being an encouraging and supportive mentor as my botanical recording activities have developed, culminating in his inviting me to become co-Vice County Recorder. He has passed on his cumulated knowledge during field trips, making identifications from photos when not present, carefully sifting out and helping to correct my many inaccurate identifications, and amassing a remarkable set of records that have been the basis of my fledgling forays into the murky depths of *Hieracium* and *Rubus fruticosus* agg.

Minutes of the BSBI Scotland Annual General Meeting 2020

Chaired by Lindsay Mackinlay, Chair BSBI Committee for Scotland (CfS)

12.30 Sunday 1 November 2020 by Zoom

1. Welcome

Lindsay Mackinlay welcomed everyone to the first BSBI Scotland online AGM and reminded participants that only BSBI members are entitled to vote.

2. Minutes of the BSBI Scottish AGM 2019

Minutes of the BSBI Scottish AGM 2019 have been displayed on the website and were displayed in Lindsay's PowerPoint. No amendments have been received. Approval of the minutes was proposed by David Elston and seconded by Liz Kungu, and confirmed by a show of hands.

3. Committee for Scotland – composition and elections

BSBI Committee for Scotland 2019-20

- Lindsay Mackinlay (Chair)
- Vacant - (Vice-chair)
- Liz Lavery (Secretary)
- Aileen Meek (Field Meetings Secretary) - Retiring
- Natalie Harmsworth – Retiring
- Liz Kungu (also BSS) - see Nominations
- Alan Walker – see Nominations
- John Crossley
- David Elston
- Ron Youngman

Two members retired - Aileen Meek, Field Meetings Secretary and Natalie Harmsworth, organiser of the BSBI Photographic Competition. Lindsay thanked them both for all their hard work.

Representatives:

BSBI staff: Jim McIntosh (BSBI Scottish Officer)
SNH (*now NatureScot*): Iain MacDonald/Sarah Smyth
Plantlife: Alistair Whyte
National Trust for Scotland: Dan Watson

A number of organisations have representatives on the Committee for Scotland. Lindsay thanked them all for their very valuable contributions to the committee.

Two members were due for re-election: Liz Kungu and Alan Walker proposed by Lindsay Mackinlay, seconded David Elston and approved unanimously by a majority electronic yes vote (of 53).

Two new members were proposed for election: Andrew Rowley, who has been acting as Young Persons Representative, and Matt Parratt, formerly a member of BSBI Council and BSBI Conifer Referee, proposed by Liz Lavery and seconded by Lindsay Mackinlay and approved unanimously by a majority electronic yes vote (of 49).

BSBI Committee for Scotland 2020-21:

- Lindsay Mackinlay (Chair)
- Vacant - (Vice-chair)
- Liz Lavery (Secretary)
- Liz Kungu (also BSS) – re-elected
- Alan Walker – re-elected
- John Crossley
- David Elston
- Ron Youngman
- Andrew Rowley – new member
- Matt Parratt – new member

4. Chair's report

Lindsay likened 2020 to wading through dense tussocks of *Molinia* grass. Because of Covid-19 there were

- No formal field meetings in 2020.
- No formal field training in 2020.
- No summer meeting in the Borders.
- No physical Scottish Botanists Conference and chance to meet up with old & new friends in person.

BUT

- Lots of data digitisation, uploading and validation (for Atlas 2020)
- Lots of opportunities to explore local areas and collect more records!
- Zoom meetings galore
- A new BSBI Strategy, Governance Plan, Committee meetings and the last Council meeting.

And you can still spend too much money on that *really* nice book at Summerfield Books online!

Committee for Scotland: 'Campaigns'

Coul Links Update: On 21 February 2020 the Scottish Government announced that the plans were refused due to the unacceptable impact on the natural heritage value of Coul Links.

NTS Restructuring Concerns: Several key ranger posts saved but sadly many countryside posts have also been lost. NTS are guardians for many iconic places in Scotland for example Glen Coe, Ben Lawers, Iona and Mar Lodge.

Outreach Activity

- Engagement with younger audience, up to 30 yrs old - Jay Delves and Andrew Rowley were co-opted on to the committee in January. They have come up with some great ideas; Jay with suggestions about mentoring for new botanists, and Andrew about advertising BSBI to students, he is producing an *Introduction to the BSBI* video for university students. Jay has had to stand down from the committee for now but we very much hope she will have time to join us again at some point. A very big thank you to them both.
- Faith Anstey is working on a new beginner's guide *Start to Identify Composite Flowers* which she hopes will be out in 2021. This will complement her excellent beginner's guides to *Grasses*, *Sedges* and *Identifying Wildflower Families*.
- Aileen Meek is working on a webinar on Plant Families; being able to recognise common plant families is the easiest way to begin identifying wild flowers and so get into botany.

5. Scottish Vice-county Recorders News

In Memory: Very sadly **George Ballantyne** passed away this summer. He was VCR for Fife and Kinross for 51 years, latterly jointly with Sandy Edwards (See photo inside front cover). He was an expert on brambles and Scottish referee; author of *Wild Flowers in Fife and Kinross: A Concise Checklist* and had almost completed a *Flora of Fife and Kinross*. It is hoped that this can be completed with the help of his family. A full obituary will appear in BSBI News.

Special thanks to:

- Alan Silverside, who retired at the end of last year as Wigtownshire Recorder after 42 years.
- Pam Murdoch (Dunbartonshire) & Carl Farmer (Joint Argyll) who both retired before the end of Atlas 2020 but completed fieldwork for it.
- Barbara Sumner (Midlothian) who will retire at the end of 2020.

Further Updates:

- Michael Jeeves started as Wigtownshire VCR during the summer, after retiring as VCR in Leicestershire a few years ago before moving up to Newton Stewart.
- Andy Amphlett has retired from Banffshire and moved over to help Adam Fraser in East Inverness-shire (our biggest VC), but leaving a vacancy in Banffshire
- Robin Cowe is the new VCR for Berwickshire.

Current vacancies:

- *Banffshire Vc94*
- *Midlothian Vc83 – from the beginning of 2021*
- *Dunbartonshire Vc99*
- *Argyllshire Vc98 joint with Gordon Rothero*

6. Scottish Newsletter

2020 was the first time in 40 years that there has been no printed Scottish Newsletter, but it is published on the website <https://bsbi.org/scottish-newsletter>. Lindsay thanked the editor Angus Hannah for producing another excellent Newsletter. Angus will welcome contributions for the next edition by the end of February 2021.

7. Field meetings

Depending on Covid restrictions it is hoped to reschedule the 2020 programme of field meetings in 2021. We are open to offers of other field meetings. Ideas for more field meetings and field group activities will be discussed at the next CfS meeting. Plans for the next BSBI Annual Summer meeting in Scotland are moved to 2022.

Proposed Field Meetings Programme 2021 Bookings will be essential on all meetings. [See page 50]

8. Date of next AGM – to be announced.

9. Any other business

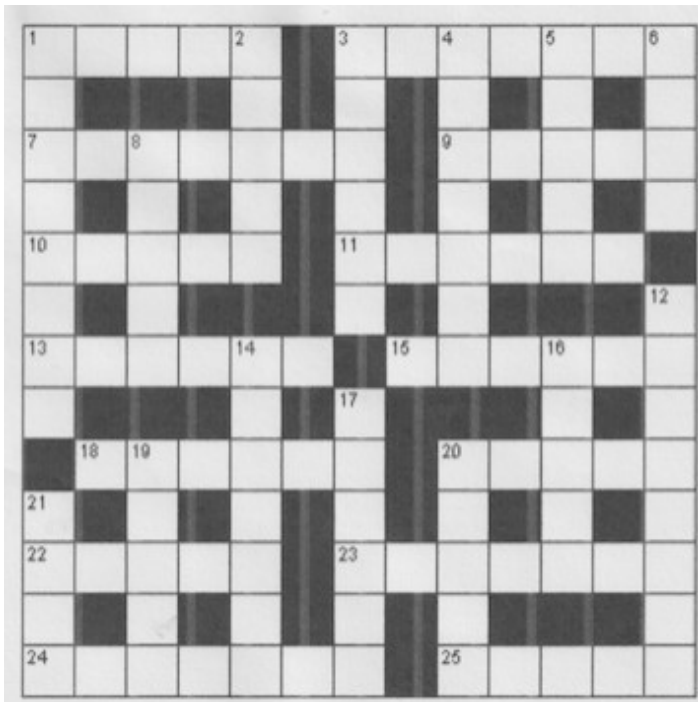
- David Welch and Angus Hannah have taken over from George Ballantyne as Scottish Brambles Referee.
- Jim McIntosh is working with George Ballantyne's family to transfer his collection of Bramble specimens to RBGE.

- Aileen Meek agreed to continue taking emails about field meetings for now until a new contact is arranged. She is still on the Outreach committee.

Lindsay thanked the Cfs (Committee for Scotland) members, VCRs, BSBI staff, committee and board members. Thanks also to all volunteers and to NatureScot for their continuing support.

SN Crossword No.5

by *Cruciada*



CLUES ACROSS

1. French writer felled subtropical tree (5)
3. Grow towards maturity – how sad Eve lopped in the process (7)
7. Renounce wickedness at church gate to catch fly of old (7)
9. Cutting down plant of disturbed ground is not so civil (5)
10. Throws out chunks of grass (5)
11. Water plant found when lucky charm's topped and tailed (6)
13. Sow again, we hear, with a Mignonette (6)
15. Flower part displays badge of shame (6)
18. She removes superfluous parts of 21 with initial readiness (6)
20. Beet is seared, they say (5)
22. Latin heroine with character of grass (5)
23. Heath sets teasing puzzle (7)
24. Verbascum that is brought back by name on island (7)
25. Highly impressed to see number introduced with bristles (5)

DOWN

1. Tory sail hoisted alone (8)
2. Strobili often found on roads (5)
3. Furthest revision of last ID (6)
4. Confirmed diagnosis, perhaps, on lively drive out to scan (7)
5. Conducted Greek character to Labrador tea (5)
6. Fairy's around in combinations (4)
8. Pome carpels score badly (5)
12. Come down with foster child, say, in Scottish countryside programme (8)
14. Feature of leaf seen in study at gallery (7)
16. For example, return answer of trees related to 21 (5)
17. Does this Arum prove to be a bit of a bore? (6)
19. In diagram a leaf is situated on a branch (5)
20. Island lily (5)
21. Fruit to explore in depth but without breadth (4)

Solution and Crib on page 49

Atlas 2020

Scottish recorders, including me, continued to plug Atlas gaps well into the final months of 2019, which resulted in a huge backlog of records to digitise and upload by New Year - the Atlas deadline. A massive validation task then continued well into the spring. Despite this Herculean effort by recorders, some areas and habitats were still rather under-recorded in Scotland. So, we continued work, first started in 2019, to prepare large national datasets for uploading to the BSBI Database. In 2019 we uploaded major datasets from Scottish Wildlife Trust, National Trust for Scotland and SEPA. In early 2020 we uploaded 60,000 Coastal NVC records collected by Tom Dargie and major datasets from South West Scotland Environmental Information Centre records, North-East of Scotland Biological Recording Centre and The Wildlife Information Centre. Thank you to all those Local Record Centres and Andy Amphlett & Jeff Waddell and, of course, Tom Humphrey, our Database Officer.

In a major project, 4,750 very detailed records (including 750 negative records) of Nationally Rare or Scarce target species were painstakingly extracted from 103 NatureScot Site Condition Monitoring reports with the help of a contractor, Clare Rickerby. In addition, 18,600 records of species associated with those target species were extracted and also uploaded to the BSBI Database. The dataset includes records for 34 vice-counties, and both the target and associated species records make an invaluable contribution to Atlas 2020, especially in remote and mountainous areas such as the Cairngorms and the north-west Highlands.

The final total number of Scottish records in the BSBI Database for 2019 is an amazing all-time record of 388,000. Interestingly, with the addition of so many third-party datasets, the totals in each of the previous five years also exceed 300,000. Well done everyone who was involved in gathering, digitising and validating all those Atlas 2020 records in Scotland!

Recorder Network Support

- The recording community support newsletter was produced and published monthly with the help of colleagues. It was renamed Recorder [eNewsletter](#) in November to distinguish it from the new newsletter for members & supporters (BSBI eNewsletter). We also published a Christmas Newsletter for Scottish Recorders.

Thank you to everyone who contributed a VC Annual Report for 2019. They were gathered in spring 2020, collated and published in the Scottish Newsletter and on the Scotland BSBI webpage, where they made for some fascinating reading.

- The Committee for Scotland and Records & Research Committee appointed a new County Recorder (Michael Jeeves) to the previously vacant vice-county of Wigtownshire, and I had a successful remote training and induction session with him. We also set up a new Wigtownshire county page on the BSBI website.
- I've had a surprising number of requests for help with MapMate - on a variety of topics – mainly related to moving MapMate to a new computer, syncs not getting through and on correcting records.
- Several County Recorders have used their lockdown time to produce or update Rare Plant Registers or Checklists, and I have commented on drafts and uploaded the finalised versions to the website.

Conferences, Workshops & Field Meetings

Thanks to BSBI volunteers across Scotland, we had a great programme of events planned for 2020:

- Two Recording Conferences planned for early April in Edinburgh & Strathpeffer
- Two beginners' training workshops on sedges and two on grasses
- An introductory Plant Families workshop
- A long weekend Annual Summer Meeting based in Melrose
- Three field meetings for beginners and folk who had never been on a BSBI meeting before.

We had even begun taking bookings but all the events had to be cancelled and refunded which was very disheartening. Hopefully we will be able to hold these events in future, so all the effort put into planning and preparation has not been entirely in vain.

More positively, the Scottish Officer co-hosted three Zoom training events that the BSBI in Ireland held – an Introduction to Sedge ID, a Vegetative Grass ID and a Botanical Recording for Beginners event. They attracted large audiences – in some cases over 200 participants – and were all recorded and made available on the BSBI's YouTube channel where they continue to attract many views.

Scottish Botanists' Conference

We successfully held the first ever online Scottish Botanists' Conference – with 350 folk registered and up to 250 participating at any point in the ambitious two-day programme. It was a great technological challenge for everyone concerned – organisers, speakers and audience! Prof Peter Hollingsworth gave an excellent keynote talk on 350 years of botany by RBGE. After the morning talks, we held four one-hour long beginners' training webinars. All the exhibits, talks and webinars remain available to view on the dedicated website (and the talks and webinars are on our YouTube channel). Several have been viewed over 1,000 times (e.g. Matt Parratt's *Introduction to Conifer ID*).

Scottish Newsletter

Angus Hannah produced another great BSBI Scottish Newsletter in 2020, thanks to all contributors. For the first time ever, it was published online only as lockdown disrupted printing and distribution. You can see it and all back issues on the Scottish Newsletter page. Angus would welcome any articles of interest to Scottish botanists – so please drop him a line if you would like to contribute.

Thanks

Thank you to all the speakers, facilitators and volunteers who battled gremlins to make the new online Scottish Botanists' Conference format such a success. More widely, thanks are due to all the BSBI recorders, members, volunteers and supporters who contributed so magnificently to the BSBI's work in 2020. In particular, we are very grateful to NatureScot (SNH) and RBGE who continue to support the BSBI in Scotland.

A Plea for Specimens: *Tolmiea* and *Tellima*.

Michael Wilcox

Tolmiea menziesii (Pick-a-back Plant) and *Tellima grandiflora* (Fringecups) have increased in Britain & Ireland and can be found in suitable places.

In N America they record two taxa in *Tolmiea* (a diploid and a tetraploid), but the differences are slight. I would be interested in a flowering stem (including a few basal leaves) of *T. menziesii* to assess any potential for both taxa. Also, (in the past) a species or variant of *Tellima* was recognised, ('*breviflora*').

Thus, specimens of either Pick-a-back Plant or Fringecups are welcome. They should be relatively straightforward to identify from each other (the former only has 3 stamens and filiform petals and the latter c.10 stamens and larger, lacinate petals). Other similar species in this group (Saxifragaceae; such as *Heuchera* etc.) would be welcome: fresh specimens if possible and with good grid reference (in case there is a need for a live plant to check to see if anyone could be persuaded to do a chromosome count) etc.

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

Crossword Solution and Crib

ACROSS
1. SUMAC 3. DEVELOP 7. LYCHNIS 9. RUDER 10. TURFS 11. ALISMA
13. RESEDA 15. STIGMA 18. PRUNER 20. CHARD 22. LEMMA 23. GENISTA
24. MULLEIN 25. AWNED

DOWN
1. SOLITARY 2. CONES 3. DISTAL 4. VERDICT 5. LEDUM 6. PERI
8. CORES 12. LANDWARD 14. DENTATE 16. GEANS 17. DRAGON 19. RAMAL
20. CANNA 21. PLUM

CRIB

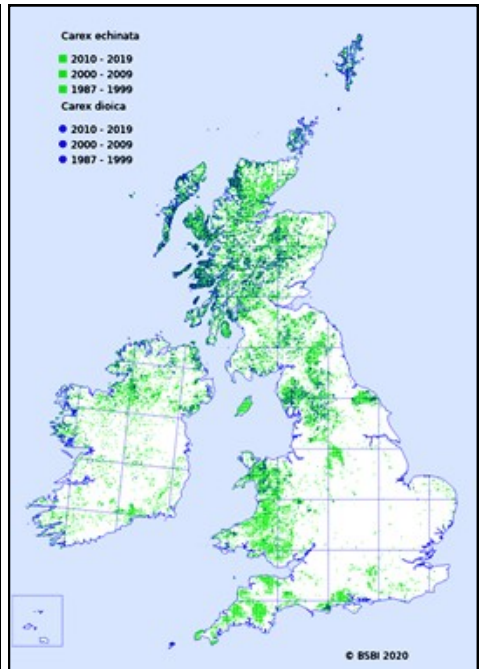
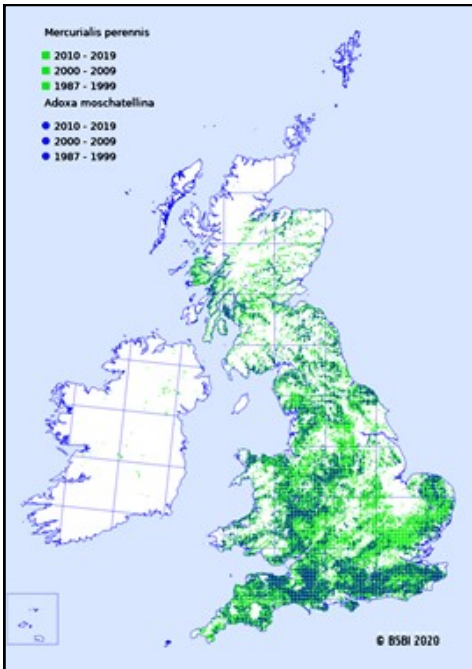
ACROSS
1. reverse CAMUS 3. sadEVELOped 7. LYCH/rev SIN 9. RUDER(AL) 10.
double def 11. (T)ALISMA(N) 13. reseed a 15. dd 18. PRUNER 20. charred
22. L/EMMA 23. anagram TEASING 24. MULL/rev IE/N 25. AW<N>ED

DOWN
1. anag TORY SAIL 2. dd 3. anag LAST ID 4. anag DRIVE/CT 5. LED/rev
MU6. dd/pun 8. anag SCORE 12. charade 14. charade 16. rev EG/ANS 17.
DRAG/ON 19. diagRAM A Leaf 20. dd 21. PLUM(B)

BSBI Scottish Field Meetings Programme 2020

Date	Place	Leader
30 April – 3 May	<i>Taraxacum</i> training and recording workshop, Portpatrick, Wigtown (v.cc.74, 75) Specialised. Friday to Monday	John Richards
8 May	Rothsay, Isle of Bute (v.c.100); General. Saturday	Angus Hannah
24 June	Muir of Ord (v.c.106). Urban Flora recording. Thursday	Brian Ballinger & Mary Dean
26 June – 2 July	Barra Islands, Outer Hebrides (v.c.110). Recording. Saturday – Friday	Paul Smith
24 July	Glenshee & The Cairnwell (v.cc.89, 92). General. Saturday	Martin Robinson
25 July	Grasses, sedges and rushes, Ben Lawers (v.c.88), A joint meeting with NTS & PSNS. Training. Sunday	Dan Watson & Faith Anstey

This programme was planned in the autumn and it is not clear at the time of going to press which meetings may be able to go ahead. Please check the BSBI Website and confirm with the leader of any meeting you are planning to attend. Booking will be essential on all meetings this season.



Above: tetrad distribution maps: left *Adoxa moschatellina*/*Mercurialis perennis*, right *Carex echinata*/*C. dioica*. See Michael Braithwaite's article p.11 (maps better on-line).

Below left: *Aster tripolium* var. *condensatus* (Druce), a plant of sea cliffs, found to be frequent on the W cliffs of Lewis (photo Paul Smith, see p. 37).



Below: *Alopecurus aequalis* (orange foxtail) at Sands of Forvie, vc93. Found by D & E Plant, see p.27 (photo Alison Peaker).





1. *Myosotis alpestris* on Ben Lawers (Sarah Watts).
2. *Cerastium arcticum* (Arctic mouse-ear) at the same site (see p.5).
3. *Galinsoga quadriradiata* (shaggy soldier) in Fife (p.23).
4. *Galega officinalis* (goats' rue) a 1st record for Fife.
5. *Erigeron borealis* (Alpine fleabane) on Ben Lawers.
6. *Hypopitys monotropa* (yellow bird's nest) in Lanarkshire (p.17).

