





1. *Sedum villosum* (hairy stonecrop) vc73, photo Jan Davidson (see p.7)
2. *Anisantha* (= *Bromus*) *rubens* (foxtail brome), Aberdeen vc91 (see p.26)
3. *Woodsia alpina*, Coire Ghamhnainn, Beinn Udlaigh vc98 , BPS excursion (see p.32)
4. *Bidens cernua* (nodding bur-marigold), vc85 (Fife, see p.21)



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General Recording

Square bashing continues to be popular even after Atlas 2020. An amazing 167,500 general records were made in 2021, digitised and uploaded to the BSBI Database. Some vice-counties have truly excelled. We've never had so many records in one year from either Dunbartonshire or Renfrewshire – thanks to Michael Philip and his local recording networks; nor from Dumfriesshire – thanks to Chris Miles and the Dumfries Local Botany Group. There has been an amazing recording effort in the two vacant vice-counties; by local member Anne Burgess in Banff and by neighbouring recorders and local members in Midlothian. At least three vice-counties have done a lot of field work, but for one reason or another their records haven't reached the BSBI Database (yet).

The trend to record at 1km resolution continues – with nearly all (99.4%) Scottish recording now at that resolution or better. Perhaps, even more surprisingly, one third of all Scottish records are at 100m resolution or better. Thanks are due to everyone who has contributed to this splendid recording effort.

Scottish HectAd Rare Plant Project (SHARPP)

Several recorders participated in a trial of the new SHARPP project that launched in 2021 with a SHARPP project page and a talk at the Scottish Spring Conference. The project is a sort of rare plant treasure hunt that aims to refind rare species not seen since before 2000 (despite all the effort that went into Atlas_2020) and make detailed records of them.

We sent out a feedback form to gauge the level of uptake and how it had gone. Generally, recorders found it very enjoyable even if the refind rate was only about 50%, or lower in more thoroughly recorded counties. But even when the target species weren't found, plenty of other nice records were made in lovely habitats. I still have to digitise the recording cards that were sent in. I plan to promote the project at this year's Spring Conference with a talk that will enthuse people just in time for the field season! Thank you to everyone who participated in 2021.

Urban Flora Project

The Urban Flora Project was developed by our sister society, the Botanical Society of Scotland, six years ago when BSBI members were pre-occupied with Atlas 2020. However, with Atlas fieldwork finished, we were keen to pro-

mote recording in this important and rather neglected habitat. So, we launched an initiative to promote the project to BSBI members in Scotland in June 2021.

Since then, several recorders have got involved including, most notably, Michael Philip. He has organised lots of great urban recording with his local networks in 12 large west central towns such as Greenock, Airdrie, Wishaw, Renfrew and Helensburgh. Consequently some 2,500 Urban Flora project records were digitised for an area where there had always been a major gap in the project's coverage.

Training

We held two online training workshops for beginners in 2021; one on Identifying Wildflower Families, led by Aileen Meek and the other on Grass ID, led by Matt Parratt. We tried to make the grass workshop as interactive as possible by sending out grass specimens in advance for participants to work on during the workshop. We also gave participants homework - to collect and identify six grasses and send them with their identifications to us. Both workshops were recorded and uploaded to the BSBI's YouTube Plant ID Training playlist where they have now been viewed over 1800 and 1330 times respectively, and are amongst the most "liked" of all the videos we have on YouTube.

We included two more advanced workshops in the Scottish Botanists Conference programme; one on Polypody Fern ID by Rob Cooke and the other on Larch ID by Matt Parratt. Again, the videos have been subsequently viewed by many more people than actually viewed them live.

In late 2021 we developed plans for three beginners' training workshops in 2022; Grasses by Michael Philip, Sedges & Rushes by Chris Miles and Yellow Composites by Faith Anstey. Booking pages have been set up and the events advertised. Please encourage anyone who might be interested to book. Many thanks to everyone who was involved with training in 2021 and who will be involved in 2022.

Scottish Spring Conference

130 people participated in the online Scottish Spring Conference in March. Analysis of the feedback shows that people particularly enjoyed the talk on the restoration of Carrifran Wildwood and Alan Walker's beautifully illustrated talk on Mountain Flowers. All the talks were recorded, edited and uploaded to the Scottish Spring Conference playlist.

Scottish Botanists' Conference

A record 282 people participated in the online annual Scottish Botanists Conference in 2021 and we had great feedback on the conference such as "all the talks were of such a high standard: as good as one would expect at any international scientific meeting" and "you did well to make us feel we were in the room; it was one of the best online events I have participated in". A major theme was National Nature Reserves: Ian Sargent and Sarah Watts gave very popular talks on, respectively, the plants and habitats of Beinn Eighe NNR to mark its designation 70 years ago, and on 40 years of rare plant monitoring on Ben Lawers NNR. The talks and online exhibition can still be viewed on the Scottish Botanists Conference site. Many thanks to everyone who contributed and participated.

2021 VC Annual Reports

Almost every Scottish vice-county submitted a 2021 Annual Report – mainly using the new system that enables County Recorders to directly upload their own reports and include photographs. They were collated and published in the Scottish Newsletter (on page XX) and will appear on County webpages. Take a look! I am always *really* impressed by the range of botanical endeavour and achievements. Although I thanked all contributors individually, I would like to reiterate my thanks for the splendid effort by BSBI County Recorders and members in Scotland in 2021!

Scottish Newsletter

Angus Hannah produced another great BSBI Scottish Newsletter in 2021, thanks to all contributors. It returned to a printed publication after lockdown disrupted printing and distribution in 2020. You can see it and all back issues on the Scottish Newsletter page.

Thanks

Thanks are due to all the BSBI recorders, members, volunteers and supporters who contributed to the BSBI's work Scotland in 2021. In particular, we are very grateful to NatureScot (SNH) and RBGE who continue to support the BSBI in Scotland.

Jim McIntosh, BSBI Scottish Officer, February 2022

***Sedum villosum* (hairy stonecrop) in Kirkcudbrightshire (VC73)**

David Hawker

Sedum villosum qualifies as a Near-Threatened Plant in GB and a Rare Plant in Kirkcudbrightshire. There are two old records for this species in the VC – “Moist places along the roadside between New Galloway and Minihive (Moniaive?; possibly hectads NX 68 or NX 78 DH) 1854 **BM**” and “Marsh at head of ‘Purgatory’ in Cargen Glen 1882 Grierson” (possibly hectad NX97 DH). And nothing after until I discovered a single flowering shoot on the lower slopes of Cairnsmore of Carsphairn in 1997, near a control plot surveyed for the Southern Uplands Environmentally Sensitive Area (ESA). Despite 3 searches in subsequent years this site was never re-found.

Much to my surprise two members of the Kirkcudbright Botany Group, Jan and Duncan Davidson, reported a flush with numerous flowering shoots, estimated at 260 or so, spread over an area of about 10 x 1 metres in July 2021. The location is NX 5810 9786 on the northern slopes of Standingstone Rig at approximately 475m.

This is approximately 300 metres from the single shoot of 1997. On a second visit to the site in September 2021, we noted that the general area was staked out for afforestation, with diggers constructing a forest track a couple of hundred metres away. The heathery ground in the photograph was also within the planting scheme.

I consulted firstly with Forest and Land Scotland in August following the site’s discovery, then Scottish Forestry who in turn contacted the agent for the afforestation proposal, in early September, and finally their ecological consultant/advisor, Cameron Ecology. Subsequently the landowner agreed modification of the planting scheme to safeguard this area. But the survival of the colony will be safeguarded only if

- the proposed planting is held back sufficiently to prevent over-shading by the mature trees, and
- the water regime for the flush is not altered.

This colony could so easily have been missed or overlooked; it highlights the vagaries of surveying large areas holding very small flushes. Further focussed and detailed searches of the general area of the VC’s North-Western hills (Cairnsmore of Carsphairn 679m, Benniner 710m, and Moorbrock 650m) may reveal other colonies, but none have been found during visits by individuals, the local botany group and by BSBI members in the last 20+ years. Forestry now encircles all these hills which stand as isolated peaks, with trees now planted or being planted at altitudes to at least 515m and in

some cases to 600m, with an exceptional one to 650m. Oddly *Andromeda polifolia* (bog rosemary) has been found growing in sloping rides and open ground within mature forests on Criffel in the SE of the VC, indicating that some unexpected and rare/scarce species may survive in maturing forestry.

Over the Fence

Sarah Cowan

I set off, with my usual excited anticipation of a plant recording trip on my home turf of the Isle of Arran (VC100). My rucksack was loaded with crib sheets, spare loupe, pencils, sample bags and my "brain" which is my ever-expanding black book of plant notes gained over the years. I open my notebook, record the date and monad and with loupe in hand, stoop to examine the plants. All is going well —the usual suspects of *Poa annua*, *Festuca rubra*, *Epilobium obscurum*, *Prunella vulgaris*, *Ranunculus repens*, *Ficaria verna*... and suddenly *Griselinia litoralis* (New Zealand broadleaf), *Hebe x franciscana* (hedge veronica), Geranium cultivar..... What? I had come across the result of the increasing practice of tipping garden waste over the garden fence. These horticultural escapees spread readily in the warm, damp and enhanced nutrient richness of a mixed heap of grass clippings, garden weeds, prunings and surplus garden plants.

A tradition has perpetuated on Arran where piles of garden waste from maintained gardens are tipped over the fence, down cliff faces, carried across the road and tipped onto the beach verges and foreshores, or marshland edges, and even moorland and just lately more commonly over the back fence into woodland, along countryside pathways and waterways.

These tips frequently contain plants that have been removed from gardens because of their aggressive spreading habit. Tipping plants or parts of them over the fence gives them free rein to rampage. An example of this is *Aster novi-belgii* (a Michaelmas Daisy) which has romped over an area of approximately 50m by 20m coastal grassland near the large village (well large for Arran) of Lamlash. The brown winter stems of the *Aster* can clearly be seen dominating any other vegetation.

The result of all this tipping is in some instances a "patch perfect" monoculture of invasive aliens. The corms of *Crococsmia x crocosmiiflora* (Montbretia) for example are widespread along Arran's north east coastal verges of Corrie. Not only new aliens are colonizing aggressively outside their garden constraints and overcoming the established natives and archaeophytes, but something more sinister is creeping out from the dumping sites. High nutrient content and in particular nitrogen seepage from

slimy mouldering grass clipping piles is altering the soil nutrient levels. Native species that prefer oligotrophic or mesotrophic ground are finding it difficult to survive, grow, flower or fruit with this regular shot of high rise in nutrient level.

Here is an ongoing example that is happening in my own coastal village:

A garden lawn is cut regularly and the clippings are tipped across the road onto the edge of the shingle and sand beach, in an expanding heap. Firstly, *Artemisia vulgaris* (Mugwort) which is well established along this stretch of foreshore, became noticeably absent from this site but prevails further along. Then *Honckenya peploides* (Sea Sandwort) disappeared from the shingle and sand area below the clippings heap and *Cakile maritima* (Sea Rocket) has not been seen on a 20m stretch below the heap in the last 5 years. Even *Arrhenatherum elatius* (False Oat Grass) was also smothered by the tip. The starchy roots of *Raphanus raphanistrum ssp maritima* (Sea Radish) and *Potentilla anserina* (Silverweed) appear to cope reasonably well with the high nitrogen run off below the heap and are now the dominant plants there. This winter I noticed that the slimy heap is sprouting its own array of seedlings, as yet too young for positive identification. Meanwhile the grass clipping pile continues to ooze throughout the year and despite asking and trying to educate the perpetrator, the tipping continues.

Further along this coastline wheelbarrow loads of "I don't want it, you can have it" garden waste have been deposited on the pebble foreshore, and now *Armoracia rusticana* (Horseradish) and the horticultural colonist *Lysimachia punctata* (Dotted Loosestrife) have elbowed out previous occupants *Daucus carota* (Wild Carrot) and the native *Centaurea nigra* (Knapweed), both of which attracted a wide variety of insects and bees.

"Over the fence" tipping along paths at the back of houses has tested my horticultural knowledge of exotics, the latest being *Allium sphaerocephalon* (Drumstick Allium) on a tip with Buddleia cultivars and *Hypericum x inodorum* (Tall Tutsan).

In another Arran village there is a favourite tipping area just under the river bridge. *Crocsmia x crocosmiliflora* (Montbretia), the purple flowered evergreen *Hebe x franciscana* and *Veronica salicifolia* (Koromiko) thrive on the riverbank, a colourful show but incongruous in the waterside native woodland of ferns and mosses. The cliff face below a row of established gardens in a coastal village further on is adorned with tangled garden waste out of which the tall blue spikes of *Echium pininana* (Tree Echium, endemic in the Canary Isles) cascade down the cliff face.

Another unintended consequence has arisen as gardeners' attention has been caught by publications promoting wild areas in our gardens. Some exotic garden plants are now being removed and tipped over the fence in favour of wild flowers which are in some cases being dug up from native woodland. Orchids, bluebells, wood anemones, and primroses are the most popular woodland "relocators". Sea campion, birds foot trefoil, ragged robin, and oyster plant (now vanished completely from its main sites on Arran) from coastal areas are miraculously travelling considerable distances overnight. Many garden wild patches are being resown in swathes. However, the seeds broadcast are not necessarily of plants native to the area.

Habitats evolve, that is true. However, our inadvertent manipulation of plant habitat by tipping our garden rubbish speeds up that change and not every native plant can adapt or cope with it. We are blissfully uninterested in the damage our "I don't want it, you can have it" over the fence tipping causes to our native species.

On the plus side, my plant ID knowledge is expanding!

Ben Lawers field meeting (Joint BSBI, NTS, PSNS) Sunday 25 July 2021

GRASSES, SEDGES & RUSHES (TRAINING)

This meeting was originally planned as a follow-up to graminoid workshops in 2020 and 2021 which, because of the pandemic, didn't take place. Car parking at Ben Lawers on a summer weekend having become something of a nightmare, we divided into two groups. The first group, led by Dan Watson, met at 8am in the main car park. This group comprised, by and large, the more experienced and fitter members. The second group met at the more civilised hour of 10am at the low level car park at Kiltyrie, leaders Faith Anstey and Marion Moir. The weather was glorious, almost too hot, especially at the lower level, and all participants declared they had a super day and learnt a great deal about graminoids.

GROUP ONE

Seven hardy botanists joined the group which met at 8:00 to reach the higher ground on Ben Lawers. We started by going through the differences between grasses, sedges and rushes, using some convenient Tufted Hair-grass (*Deschampsia cespitosa*), Green-ribbed Sedge (*Carex binervis*) and Soft Rush (*Juncus effusus*) close to the path. Common species such as Crested Dog's-tail (*Cynosurus cristatus*), Oval Sedge (*Carex leporina*) and Jointed Rush (*Juncus articulatus*) were inspected on the way through the nature trail, with flush

species including Dioecious Sedge (*Carex dioica*) and Bulbous Rush (*Juncus bulbosus*) being encountered as we continued up Coire Odhar.

A short diversion was made to see Water Sedge (*Carex aquatilis*) at the bealach between Beinn Ghlas and Meall Corranaich and the path was briefly left in the north corrie of Beinn Ghlas to visit a site for Chestnut Rush (*Juncus castaneus*). After that the mountain graminoids came thick and fast, with species such as Alpine Meadow-grass (*Poa alpina*), Spiked Wood-rush (*Luzula spicata*) and Stiff Sedge (*Carex bigelowii*) becoming apparent. I had promised to stop for lunch at Creag Loisgte below the summit of Ben Lawers, giving everyone the opportunity to take a break from utricles, ligules and awns and appreciate the botanical wonders of this craggy ground. Among many other species we saw Mountain Sandwort (*Sabulina rubella*), Alpine Fleabane (*Erigeron borealis*), Alpine Gentian (*Gentiana nivalis*) and Alpine Forget-me-not (*Myosotis alpestris*).

It was then time to get back to the graft, or so I thought. The trouble with Ben Lawers is that as soon as a keen botanist gets a whiff of the rarities, it's hard to resist their lure. So, fearing a mutiny I capitulated and we climbed higher to find Drooping Saxifrage (*Saxifraga cernua*), Highland Saxifrage (*Saxifraga rivularis*) and Rock Whitlowgrass (*Draba norvegica*), which at least has grass in its name! We then began the long descent, making a short detour to a crag which usually has Black Alpine-sedge (*Carex atrata*). Sadly, it couldn't be found, but compensation came in the form of Net-leaved Willow (*Salix reticulata*), surely Scotland's most attractive willow. With a bit of revision on the way down and another diversion to see Broad-leaved Cotton-grass (*Eriophorum latifolium*) close to the road, we reached the car park weary but contented after a fine day on the hills.

GROUP TWO

The tradition of starting to botanise in the car park paid off handsomely – without moving more than a few metres we immediately found 12 grasses, 6 rushes and 7 sedges, and stayed in the car park until lunchtime! These were all common species, giving the group ample opportunity for study, as some members needed a bit of revision at the outset as to the diagnostic differences between the three groups of species. Most had the booklets which accompany the workshops: Start to Identify Grasses and Start to Identify Sedges & Rushes. As their names imply, these are specially designed to help beginners get a handle on what to look for, and members of the group said they found them very helpful.

After lunch we started off towards the foot of the Ben, but we never actually got there, so rich was the hinterland in graminoids. We were not averse to looking at other species, to have IDs confirmed or suggested by the leaders. Although not actively recording, we could afterwards recall at least 80 species seen during the afternoon – none especially notable, but all of interest to members who were little acquainted with the interesting habitat that Ben Lawers affords. In all we found 22 species of grasses, 16 sedges, and 9 rushes. Of these, we noted five species not previously recorded in tetrad NN631: *Carex leporina*, *C. vesicaria*, *Arrhenatherum elatius*, *Eriophorum latifolium* (tbc) and *Elymus repens*. We also found five species not recorded there since 1997: *Agrostis stolonifera*, *Carex demissa*, *C. flacca*, *C. pulicaris* and *Luzula campestris*. We were able to observe *C. vesicaria* and *C. rostrata* growing next to each other, so that the differences between them could be pointed out.

We were also quite surprised to find that *C. demissa* (not recorded since 1997) was very common, while *C. lepidocarpa* (recorded in 2010) was nowhere to be seen. The *C. demissa* we saw was all very tall, with stems at least 20cm, more than twice the length of the leaves, so that we were tempted at first to call it *C. lepidocarpa*. However, one of the party happened to have a spikelet of *C. lepidocarpa* in his pocket, brought from a field meeting the previous day; on this, the downward-twisted utricles were very clear, a character we looked for in vain on any of the yellow sedges we saw. Could it be that some tall plants are being hastily labelled as *C. lepidocarpa*? Moral: don't jump to conclusions!

Comment on the last paragraph (above)

Editor

This raises interesting questions. If we agree that *lepidocarpa* may be defined by the deflexed *and arcuate* utricle, does it follow that all otherwise similar specimens not conforming in this way should be recorded as *demissa*? Does this not rather make a 'bucket taxon' of *demissa*, overlooking the distinction between 'ordinary' short *demissa* of acidic flushes and those plants sharing the growth-habit and base-rich habitat of *lepidocarpa*, and apparently differing from it only in the utricle character? Whether these plants should be regarded as a variant of *demissa* or of *lepidocarpa* or as a taxon distinct from both may be debated in the absence of better molecular evidence, but to record them as *demissa* without comment seems no more justifiable than recording them as *lepidocarpa*. There was a reason why *demissa* had not previously been recorded in the square.

There would seem to be a need here for yet another look at the taxonomy of this part of the *flava* complex. In the meantime, rather than jumping to conclusions,

let us record consistently and add notes to our records where plants differ from the standard descriptions.

Seaside Summer

Liz Lavery

Much of my botanising in 2021 was during coastal walks while visiting our newest granddaughter in Finnechty Village, VC 94 Banffshire. The Moray coast is a very beautiful part of the world and I recommend it to everybody. A new very exciting find for me was *Oxalis articulata* (Pink-sorrel), one small plant nestling at the base of the raised beach sea cliff on the southern side of Sandy Creek; this must be a garden escape naturalised here. However there are two other recent records for this species in VC94 from not far away at Slackhead and Bogmoor. Another unusual plant established in a rocky outcrop at the top of the shore was a Hebe, a favourite garden hedge plant in the village, perhaps *Veronica x franciscana* (Hedge Veronica (*V. elliptica x speciosa*)).

Two unusual weeds were seeding profusely in my son's stony seashore garden, *Malva arborea* (Tree-mallow) with its sturdy tap roots and the very smelly tiny yellow flowers of *Diplotaxis muralis* (Annual Wall-rocket). Both were common in rough ground around the shore. Locals were complaining about the spread of Tree-mallow as a nuisance thug of a plant. A single little plant of *Fumaria capreolata* (White Ramping-fumitory) was growing in the lee of a carpenter's shed.

I found beautiful *Asplenium marinum* (Sea Spleenwort) hiding in many cracks and crannies on sea cliffs along the Moray coast. Bright orange clumps of *Crocasmia x crocosmiiflora* (Montbretia (*C. aurea x pottsii*)) were common on grassy cliff slopes around the shore. Dense bushes of *Rosa rugosa* (Japanese Rose) with magnificent red hips grew in the shelter of the seawall. There were large patches of the wonderfully named *Honckenya peploides* (Sea Sandwort) at the top of the sandy beach together with a few straggly clumps of *Cakile maritima* (Sea Rocket), both are common plants on the upper shore of beaches.

All of these plants were a delight to me who normally spends most of her time botanising inland away from the sea. I even attempted to identify a few of the multitudinous seaweeds that appeared at low tide. All my finds will be submitted to the BSBI database and VCRs told so they can check them out.

2021 Reports from Scottish Vice-County Recorders

Dumfriesshire (vc72)

Chris Miles

Overall we had a profitable recording year with 10,500 records gathered in 110 monads. In the Moffatdale area 25 monads were visited. Some interesting refinds and new locations for the specialities were recorded. The aim is to complete monad recording for this area in the next year or so and produce a Flora.

A summary of some of the botanical highlights are given on the BSBI Dumfriesshire webpage. There were new vice county records for **Northern Yellow-cress** *Rorippa islandica*, **Diaphanous Hawkweed** *Hieracium diaphanoides* and **Stiff-haired Hawkweed**, *H. lasiophyllum*.

Among the highlights were two hybrids new to the VC. These are a generic cross of orchid species \times *Dactylodenia evansii* and a hybrid between the two thistles *Cirsium heterophyllum* and *C. palustre* (*Cirsium* \times *wankelii*). There are more details on the former on the poster I showed at the Scottish Botanists Conference in November.

The Dumfriesshire Botany Group managed 10 meetings despite ongoing Covid restrictions and write ups for each of these days can also be seen on the BSBI Dumfriesshire web page. An unusual experience this year apart from the lack of rain on nearly all the meetings was the flyby of a spitfire on the Moffat meeting.

Kirkcudbrightshire (vc73)

David Hawker

Despite Covid restrictions, we managed 9 field meetings, mainly in the south of the VC, with 4 dedicated individuals covering a further 40+ monads, most previously un-surveyed. Around 5500 records were submitted this year with **County Rare Plant** recording forms completed for:-

Seagrasses *Zostera marina* & *noltii*

Hairy buttercup *Ranunculus sardous*

Seaside centaury *Centaureum littorale*

Great burnet *Sanguisorba officinalis*

Common meadow-rue *Thalictrum flavum*

Spignel *Meum athamanticum*

Hairy stonecrop *Sedum villosum* (+SHARPP sheet)

Intermediate wintergreen *Pyrola media*

Holy grass *Anthoxanthum nitens*, now more extensive than previously known at its largest VC73 site

The CRPR (incomplete) and the Defence Infrastructure Organisation (new name for MOD) Kirkcudbright Training Centre Range RPR updated to 2021.

Refinds – at least 125 years after the only record

Sea fern-grass *Desmazeria marimum* 2008 (1883). Probably native.

Smooth brome *Bromus racemosus* 2020 (1882).

Hoary plantain *Plantago media* 2021 (1897); in a roadside seed mix, west of Dumfries

New County records – in 2021

Wavy bittercress *Cardamine occulta*

Fig-leaved goosefoot *Chenopodium ficifolium*

Great burnet-saxifrage *Pimpinella major*, first acceptable record – an unconfirmed 2008 record elsewhere

White-stemmed bramble *Rubus cockburnianus*

Narrow-leaved ragwort *Senecio inaequidens*

Lawn lobelia *Pratia pedunculata*

And in earlier years:

Cockspur *Echinochloa crus-galli* 2016

Hooker's fleabane *Inula hookeri* 2020

Greater duckweed *Spirodela polyrhiza* 2020

Other scarce species found included

Frog rush *Juncus ranarius* 1st record since 1996

Weld *Reseda luteola*, 3rd since 2000 The Glen A75 (Dumfries), probably sown seed

Slender pearlwort *Sagina filicaulis*, 4th since 2000

Lesser water-plantain *Baldellia ranunculoides* Loch Ornocknoch, NX5758

Elongated sedge *Carex elongata*, a third small Loch Ken population discovered

Finally, I did a Zoom talk to the Galloway NTS Members Group in November on Climate Change. Apparently well attended and received.

Wigtownshire (vc74)

Michael Jeeves

I prepared the first of what I intend to be annual newsletters on plant recording in VC74 (Wigtownshire) and arranged for it to be posted on the BSBI webpage for VC74. It was also promoted by the South West Scotland Environmental Records Centre.

The National Plant Monitoring Scheme organisers had been hoping to run a training day in Wigtownshire in 2020, but it had to be postponed because of Covid. Fortunately, it was possible to hold the event in the sum-

mer of 2021 and I led an introduction to grass, sedge and rush identification at an organic farm in The Machars area.

The RSPB invited me to help them update the information on notable plants in their Mull of Galloway Nature Reserve management plan. I also surveyed the Wigtownshire part of the RSPB's beautiful Wood of Cree Nature Reserve, finding the nationally scarce *Carex elongata* (Elongated Sedge) and nearly locally scarce *Trollius europaeus* (Globeflower).

In addition to some general recording to help the production of a Rare Plant Register, for which I now have a rough draft, I made a start at recording for the BSBI's new SHARPP project.

Few botanists seem to visit this corner of Scotland, so it was great to receive some really interesting records from Paul Stanley. The best of these, amongst several new VC records, was *Najas flexilis* (Slender Naiad). Paul first recorded this plant at Elrig Loch in 2014 and subsequently re-found it in both 2016 and 2021.

Ayrshire (vc75)

Dave Lang

Ayrshire recording in 2021 was largely organised around the BSBI's Scottish HectAd Rare Plant Project (SHARPP). With restrictions continuing, we did not (or at least not until towards the very end of the season) generally publicise these trips, and they were instead mainly carried out by the three joint-VCRs for Ayrshire, with occasional support from neighbouring VCRs and others.

The trips themselves were fairly successful – with stations for *Carex riparia* (Greater Pond-sedge - Locally Rare), *Centaureum littorale* (Seaside Centaury - Nationally Scarce and Locally Rare), *Euphrasia confusa* (Confused Eyebright – Data Deficient Nationally but thought to be threatened, as well as Locally Rare based on confirmed records) and *Scrophularia umbrosa* (Green Figwort – Locally Scarce) all re-found/reconfirmed for the first time in at least 25 years. Additionally, in cases where we did not manage to re-find particular old records, returning at more appropriate times of year may yet yield more positive outcomes. Many of us enjoyed this 'treasure hunt' approach to recording, as opposed to 'square bashing' - and our results (sometimes in tetrads that had in theory been covered by recent Atlas recording) demonstrate the possible (paradoxical?) risks of missing something interesting when you are trying to record everything!

Our data are pretty much up-to-date and confirmed on the Database. So

for the year ahead we hope to revisit more of the ideas for trips that had to be shelved since restrictions began, and possibly to open out our recording to a wider number of members.

Renfrewshire (vc76)

Keith Watson

The year has seen a great amount of botanical activity, with over 15000 records made - the highest ever recorded annual total. Records for 900 species were made from 189 monads, and there were 13 organised outings. Further details can be seen in the newsletters on the BSBI Renfrewshire vc76 page.

The pleasing increase in records is due to the efforts of Michael Philip extending his 'Team 77' network into Renfrewshire (and also Dunbartonshire). This has resulted in 36 folk subscribing and over 20 took part in fieldwork this year. The work has also been ably supported by Peter Wiggins, who regularly provides summary dot maps, which enable the targeting of survey work.

Lanarkshire (vc77)

Michael Philip & Peter Wiggins

2021 saw the adoption in neighbouring Dunbartonshire and Renfrewshire of the 'loose network model' developed successfully in Lanarkshire in recent years.

To facilitate this, several people in the Lanarkshire network have given moral and practical support to the new initiatives and, as a result, the level of recording activity in our own vice-county has been somewhat reduced.

Nevertheless over 8,000 records have been uploaded to the DDb. All Lanarkshire data has been handled this year by our new Joint Recorder, Peter Wiggins, whose hard work and enthusiasm have been invaluable.

The main progress has been further, very detailed recording by Malcolm Macneill in the Glasgow conurbation including many hortals and aliens. Of particular interest are some of our less common urban weeds: *Agrostis scabra* (Rough Bent) has been seen twice in 2021 - with only one previous record in the vice-county this century; *Picris hieracioides* (Hawkweed Ox-tongue) is now being found; and *Polypogon viridis* (Water Bent) is becoming widespread in the Glasgow area.

Across the wider vice-county the main challenge facing us is that, although Lanarkshire is generally well-recorded, much of the existing record is at tetrad, quadrant or hectad level: there are still well over 800 monads to be recorded at 1km resolution. Plenty of scope for everyone to get involved in our busy outings programme in 2022 - visiting botanists are welcome to lend a hand!

Peeblesshire (vc78)

Luke Gaskell

I have continued to explore sparsely recorded parts of Peeblesshire and have collected 2807 records from 453 taxa, all at monad resolution or better.

While no new natives were found the list of aliens and casuals continues to increase. Early monocots which are apparently spreading from gardens include *Scilla forbesii*, Glory-of-the-snow, *Scilla luciliae*, Boissier's Glory-of-the-snow, both around Eddleston and *Crocus tommasianus*, Early Crocus, in Walkerburn and Innerleithen. *Eranthis hyemalis*, Winter Aconite, was probably spreading from garden rubbish, Eddleston again and *Doronicum x willdenowii*, Willdenow's leopard's-bane, last seen at a single location by David McCosh in 1999 has now extended its range along the Eddleston Water to Peebles and will be something to look out for if it continues its progress down the Tweed.

Sanguisorba officinalis, Great Burnet, was found by Reuben Singleton in a meadow near the Tweed at Traquair. This is only the second possibly native site in Peeblesshire but like the other location at Calzeat it is very close to a mansion house and I suspect that it is an old introduction.

Another interesting pair of plants out of place were *Betonica officinalis*, Betony, recorded last year by Lindsay Mackinlay and *Berula erecta*, Lesser Water-parsnip, both above Crookhaugh in the upper Tweed valley.

I had been checking the Betony site and adjacent valleys when I came across the Lesser Water-parsnip and realised that both were very closely associated with the pipeline carrying water from Talla reservoir to Edinburgh 32 miles to the north. Lesser Water-parsnip has also been recorded further north by the pipeline in the Bryland Burn, there being only one other locality for it in VC78. The pipeline was completed in 1905 and upgraded when Fruid reservoir was constructed in the 1960's. It comprises rock-cut tunnels, cut and fill trenches, syphons and stone aqueducts. It seems possible that these plants which are outside their usual range arrived with the construction equipment or with the building materials which were shipped in on a specially constructed branch line from Broughton.

Last year I had feared that work on the A72 near Cardrona had destroyed the only location for *Agrimonia procera*, Fragrant Agrimony in VC78 but fortunately it now appears to have survived in a new location near-by.

Lastly I was pleased to find a new site for *Carex vaginata*, Sheathed Sedge at Ella's Cleugh in the South of the county. It's an area rich in arctic alpinines but

vulnerable to changes in land use such as afforestation and wind turbine construction and of course climate change itself.

Selkirk (vc79) & Roxburgh (vc80)

Rod Corner & Jeff Waddell

Luke Gaskell managed some recording in v.c. 80 with good results. *Valerianella carinata* (Keeled-fruited Cornsalad) from Kelso was new as was *Abutilon theophrasti* (Velvetleaf) as a single plant in a Kale field from his farm at Kittyfield. He recorded Yellow *Gagea lutea* (Star-of-Bethlehem) from several sites by the Tweed above Abbotsford (one of which was in a new hectad) and a new site for *Galium boreale* (Northern Bedstraw) in its typical rocky riverside habitat. Murdo Mutch's excellent record of *Neottia nidus-avis* (Birds-nest Orchid) from woodland to the South of Hawick in a hectad from which it was last recorded almost 150 years ago was noteworthy. Roger Manning has sent in number of interesting records from the east of Roxburghshire.

Commercial Sitka Spruce planting continues apace in the area and JW and RC have been involved with others in trying to modify forestry plans near an exceptionally rich mire (Muirfield Moss) which has been overlooked for SSSI status between Hawick and Selkirk. In a recent survey JW re-found *Juncus alpino-articulatus* (Alpine Rush), *Gentianella amarella* (Autumn Gentian) and *Sagina nodosa* (Knotted Pearlwort) from there with *Sanguisorba officinalis* (Great Burnet) nearby. We are hopeful that the site can be saved. JW has been updating species records on the SHARPP (Scottish Hectad Rare Plant Project) list including *Myosotis stolonifera* (Pale Forget-me-not) and *Potentilla argentea* (Hoary Cinquefoil).

In addition RC checked botanical records held by TWIC (The Wildlife Information Centre) sent in by Natalie Harmsworth and continues to make progress with his Flora of the vice-counties.

Berwickshire (vc81)

Rob Cowe

This year started with the New Year Plant Hunt, giving excellent numbers of blooms trying their best to put on a show.

Fieldwork was mostly centred around Greenlaw, but unlike last year there were forays further afield to more glamorous locations.

Greenlaw dean and its surroundings were looked at and surveyed for a fantastic population of *Genista anglica* (Petty Whin). I also did a little work at Drone moss looking at the population of *Trollius europaeus* (Globeflower)

I exchanged records with The Wildlife Information Centre and helped But-

terfly Conservation with *Helianthemum nummularium* (Common Rock-rose) records for Northern Brown Argus.

A good number of travelling botanists and locals combined to give us nearly 2500 records for the year all over Berwickshire.

Gnaphalium luteoalbum (Jersey Cudweed) – a new county record – appeared on a midden just outside Foulden with *Galinsoga quadriradiata* (Shaggy soldier), *Conyza canadensis* (Canadian fleabane) and *Chenopodium rubrum* (Red goosefoot).

East Lothian (vc82)

Helen Jackson & Marion Moir

Total number of records: 10,072

The East Lothian Botany Group met several times. Initially, we concentrated on policies around estate houses in order to learn more about unusual trees. We visited Bowerhouse, south of Dunbar and Huntington, near Had-dington, both of which had been previously recorded so our aim was to refine records.

Caspian Richards arranged a Taraxacum Zoom workshop with John Richards. Members of the Group were asked to provide detailed photos of five different Taraxacum that John could look at beforehand which he was then able to determine and use for the workshop. We hope more Taraxacum records can be determined photographically in 2022.

We also helped Telford College students with an exercise to record plants around churches in Lothian.

The Group visited a coastal area, Tantallon Castle and cliffs (photo); an up-land area near the Lammermuirs at Snawdon looking at *Carex* and looking for an old record of *Sedum villosum*; and recorded aquatics at Donolly Reservoir and Balgone Loch.

Under the Scottish HectAd Rare Plant Project (SHARPP), the Group searched for *Zostera* (Eelgrass) at Gullane but failed to refine it, however it was recorded in Aberlady Bay and at Tynninghame estuary.

In September, the Group was joined by East Lothian Rangers for a Rose ID workshop lead by Phil Lusby. We studied specimens that Phil had brought around a picnic bench before going to put what we had just learnt into practice in the field. Specimens were collected and sent to Roger Maskew (Rose referee) for confirmation.

Midlothian (vc83)

Following the retiral of Barbara Sumner there is now a vacancy for a Recorder in this most accessible and varied county. Anyone who feels they might take on this post should make themselves known to Jim McIntosh.

Fife & Kinross (vc85)

Sandy Edwards

There were no large outings this year but several visits to areas with one or two people for recording and/or identification.

I joined the Dundee Naturalists for a visit to Kinross for urban flora recording. We found a single plant of *Geranium columbinum* (Long-stalked Cranesbill), now the only site in vc85.

One of the Perth & Kinross Council wildlife sites which is in vc85 was visited with a member of the development team. This resulted in a third site for *Bidens cernua* (Nodding Bur-marigold, photo inside front cover). Also some recording for another site in vc85.

I visited some sites for the Fife Council Wildlife Sites research team and helped to update their records.

I spent an afternoon with two of the people involved, helping with identification at the new wildlife area at the Dreel Burn in Anstruther

Liaised with the University Transition Group, who are involved in the conversion of rough grass areas into wildflower meadows, to help with identification.

A day with two Torryburn residents who are very keen naturalists. A specimen of *Rumex* they found was confirmed by the referee as *Rumex crispatus* (Greek Dock); a new vc85 record. We also found a second site for *Typha angustifolia* (Lesser Bullrush).

A visit with the owner of a newly purchased wood in Fife. It contains the only site for *Umbilicus rupestris* (Navelwort) in vc85.

I spent a nice summer's day with the Director and staff of the St. Andrews Botanic Garden at Tentsmuir to study the dune system and associated plants. This is helping with their conversion of some areas for Fife based wildflowers. Also their Dune system which they have created from 600 tons of sand!

Checklists now on vc85 BSBI website.

I receive quite a lot of records in iRecord. An advantage is that the records

have to be verified by me before they are confirmed. They eventually will appear on the BSBI database.

Other interesting records include *Camelina sativa* (Gold of Pleasure), *Picris hieracioides* (Hawkweed Oxtongue) and *Anthemis arvensis* (Corn Chamomile).

Stirling (vc86)

Phil Sansum & Matt Harding

The botanical highlight of 2021 was a painstaking survey of the only *Coralorhiza trifida* (Coralroot Orchid) site in VC86, which indicated a significant increase in both numbers and spread of this enigmatic little orchid. A total of 104 flowering spikes were counted by Sarah Longrigg and Bill Parkes!

In contrast, the only *Hypopitys monotropa* (Yellow Bird's-nest) site held a much-reduced population – just two flowering spikes noted by Roy Sexton (compared to 24 in 2019 and 49 in 2017), with dry conditions potentially a factor. Searches at the only *Gagea lutea* (Yellow Star-of-Bethlehem) site were unsuccessful, with the plant last seen in 1997 and possibly now extinct.

Two new taxa to VC86 were recorded, with Roy identifying a colony of *Arabis collina* (Rosy Cress) flowering prettily along the King's Park boundary wall, and Andy Amphlett recording *Pilosella x stoloniflora* (Fox-and-cubs x Mouse-ear-hawkweed) near Kilsyth. Andy also noted a fine display of *Lysimachia thyrsoiflora* (Tufted Loosestrife) along the Forth & Clyde Canal here, and Roy recorded new populations of the locally rare *Ranunculus bulbosus* (Bulbous Buttercup) around Bridge of Allan.

Development of a Vice-county Rare Plant Register got underway, with a draft species list now produced and hopefully soon rendered obsolete by fieldwork in 2022! The identification and assessment of Local Nature Conservation Sites in Stirlingshire and Clackmannanshire also gathered pace, led by Natalie Harmsworth of TWIC, and supported by the BSBI through provision of data. These projects will enhance our understanding of and provide better protection for local biodiversity.

West Perthshire (vc87)

Liz Lavery & Jane Jones

Many records in the Aberfoyle area have been at tetrad level, so in 2021 Jane started re-recording at monad level. *Eleogiton fluitans* (Floating Club-rush) and *Lycopus europaeus* (Gypsywort) were found and *Osmunda regalis* (Royal Fern) re-found on the exposed shoreline of Loch Ard when water level was extremely low in the summer. Not so pleasing was another VC record for *Crassula helmsii* (NZ Pigmyweed) on a small fishing loch near Kippen Muir.

In 2016 Jane discovered *Lycopodiella inundata* (Marsh Clubmoss) on the north shore of Loch Katrine (photo inside back cover). At the moment Forestry and Land Scotland are re-doing the Land Management Plan for the Katrine catchment and we are encouraging them to consider and protect this important population in their plan.

We would, in particular, like to thank Roy Sexton and Matt Harding for their contribution of records in 2021. Roy for a continuous annual record of orchid numbers on several sites. In particular for his records from Braeleny (or the Commonty) near Callander which is a wonderful site with 8 species of orchids, more orchids than any other site in our vice-county, including our only site for *Pseudorchis albida* (Small-white Orchid) discovered by Roy and John Snodin.

And a special thanks to Matt for his record for *Scandix pecten-veneris* (Shepherd's-needle), an incredibly rare arable weed in Scotland. It was last recorded in VC87 as 'near Culross' by JH Balfour in 1850. In the 'Flora of Perthshire' by Francis Buchanan White, 1898 it is recorded as 'common in Gowrie'. There are only 2 other Scottish records since 1970.

Mid-Perthshire (vc88)

Alistair Godfrey & Jim McIntosh

It has been a difficult year, with restrictions and illness affecting the County Recorders. No Perthshire Society of Natural Sciences field meetings were held. Despite all this, some 3,800 records have been added to the DDb for Mid-Perthshire, with some records still to digitise. We are particularly grateful for contributions from Les Tucker, Ian & Marion Moir, Faith Anstey, Ron & Lynette Youngman and another 17 botanists.

Four taxa were recorded completely new to the VC; two Dandelions, *Taraxacum piceatum* (Leaden-bracted Dandelion) and *Taraxacum spiculatum* (Sagittate-lobed Dandelion) and two neophytes: *Saponaria officinalis* (Soapwort) and *Inula helenium* (Elecampane).

Three Nationally Rare species and 23 Nationally Scarce taxa were recorded. Some of these as a result of trialling the Scottish HectAd Rare Plant Project in two hectads. Jim had several great days in the field, searching for SHARP species all last seen more than 20 years ago in the hectad. The following were refound; *Astragalus danicus* (Purple Milk-vetch), *Carex capillaris* (Hair Sedge), *Corallorhiza trifida* (Coralroot), and *Carex vaginata* (Sheathed Sedge) and detailed records made. But even where the target species were not refound, in the case of *Lycopodium annotinum* (Interrupted Clubmoss) and *Carex diandra* (Lesser Tussock-sedge), the search took me into brilliant habitat which was usefully recorded - and that had been sadly missed for Atlas 2020.

Two mountains were thoroughly botanised – Schiehallion and Carn Gorm. On Schiehallion, several species were given detailed grid refs for the first time like *Saxifraga hypnoides* (Mossy Saxifrage) & *Alchemilla wichurae* (Rock Lady's-mantle) and a new altitudinal record for the British Isles was made for *Montia fontana* (Blinks) near its 1080m summit. Despite yet another search *Carex rariflora* (Mountain Bog-sedge) could not be re-found near An Sgòrr, Carn Gorm - its only Perthshire site, where it was last seen in 1979.

Alistair writes: Before the growth season got underway, I explored an area of woodland between Redgorton and Inveralmond where a large area of woodland was destroyed for a local authority roads project. Mapped in 1783, this woodland is included in the Ancient Woodland Inventory (AWI) as Long-established woodland of plantation origin. Jeanette Hall, working for SNH, pointed out many such woodlands "may be as rich as Ancient Woodland". Our language should not be faint-hearted in defending our precious environment.

The major tree composition was, as elsewhere in the area; mature *Quercus robur* (Pedunculate Oak) *Q. petraea* (Sessile Oak) and their hybrid *Q. rosacea*. In addition to planted trees, this is the only location where spontaneous hybrids were seen. I studied all of the wider woodland and wetland area in 2016/17; documenting and circulating the results in 2018. I recorded 58% of AWI indicators present in Carol Crawford's list. In conversation, the local authority's head consultant for the project brushed these values aside; contrary to the aims of Scottish Planning Policy and the Scottish Government's Policy on Woodland Removal. Do our woodlands have any protection?

There is oak woodland behind my home of 18th/19th century origin. It has acquired a ground flora in parts from local gardens, although some origins may result from an adjacent waste site. I recorded *Cyclamen Coum* (Eastern Sowbread) in March for the first time and in the following month a solitary *Erythronium californicum* flowered for the fifth year.

Other woods recorded were: Buckie Braes, Perth; Baldarroch, Murthly; Keltneyburn SSSI and Coldrochie near Battleby. Two woods at Methven were studied with other BSBI members for floral contrasts and similarities. Results can be read at <https://bsbi.org/perthshire>. Also available are the results and records of a survey of the banks of the River Tay from Luncarty to Inveralmond. Further north, the banks of the river were recorded at Kercock with Leslie Tucker, as at other sites.

East Perthshire (vc89)

Martin Robinson

For various personal and health reasons 2021 was a year of little achievement. I did get involved, however, with a Perth & Kinross Council project to revive the old Listed Wildlife Site scheme, which had been run by the Scottish Wildlife Trust in the 1980s and 90s. The plan is to reassess all the sites and re-designate as Local Biodiversity Sites if still appropriate, and there is, of course, the opportunity to add new sites. I feel that it is important to try to give these non-statutory sites some protection however little, and most of my recording this year resulted from visiting some of these places in vc89. I will continue in 2022.

There was a successful BSBI visit to the Cairnwell on 24th July, which unfortunately I wasn't able to attend, but Les Tucker ably stepped up to co-lead with David Elston and the fifteen attenders saw a great variety of montane plants.

Latterly I have been working on a new, much-expanded version of my RPR, which will cover the species more in the manner of a Flora.

Angus (vc90)

Mark Tulley, Robin Payne, Theo Loizou

In 2021 two of the three VCR team were not as active as usual due to health problems but luckily the remaining VCR was able to do plenty of recording. The Dundee Naturalists' Society continued with evening meets and some day trips and a local 'wildflower group' was reconvened and held four field trips. They submitted useful records to the VCRs. Many interesting records came from the re-survey of candidate Local Nature Conservation Sites by Clare Rickerby and Theo Loizou.

Hymenophyllum wilsonii (Wilson's Filmy fern)

An old 1914 record of *Hymenophyllum wilsonii* was re-found in Glen Esk (near the Mooran Ravine). The population was in good condition and many hundreds of fronds were noted. This is one of the more easterly populations of this pteridophyte in Scotland.

Bidens cernua (Nodding Bur-marigold)

New populations of this species, only recorded in recent years from Kinordy, were found at Red Loch and also at Powmyre.

Scirpus sylvaticus (Wood Club-rush)

This plant is extremely local in the county, but good populations were found along the banks of the River South Esk.

Ceratocapnos claviculata (Climbing Corydalis)

This is surprisingly scarce in Angus, but a few new sites were found at Den of Ogil Reservoir.

Kincardine (vc91)

David Welch & David Elston

We have continued to work towards a RPR, intending its Version 1 to be released before the 2022 recording season. We began a programme to obtain respectable post-1999 lists for all tetrads fully in the VC.

We made a site visit to the West Bradieston & Garvock SSSI after discussing access and parking with the landowners.

A paper was published (B&IB 3:2) describing and naming a new bramble species, *Rubus longiflorus*, that has its main occurrences in the VC.

The identity was investigated of plum types of *Prunus spinosus* found in a Kinneff copse and hedges in Strachan and Raemoir.

Selected interesting finds in 2021

Anisantha rubens (Foxtail Brome, pictured inside front cover) occurring by a roundabout near the River Dee in Aberdeen. The DDb has no other post-1999 BI record, but specimens collected in 1903 in Aberdeen City are in ABD.

New records of natives: *Arctium lappa* (Greater Burdock), Kincardine Castle, Fettercairn; *Hieracium prenanthoides* (Rough-leaved Hawkweed), close to the Esk at Marykirk;

also *Potentilla anglica* (Trailing Tormentil) and *P. x suberecta*, Drumtochty; *Salix x reichardtii*, Catterline.

New records of aliens: *Astilbe japonica* (False-buck's-beard), Inglismaldie; *Cupressus pisifera* forma *squarrosa* (Sawara Cypress), Blairs and Durriss; *Echinops exaltatus* (Globe-thistle), Hirn; *Sasa palmata* (Broad-leaved Bamboo), Auchattie.

Good rediscoveries: *Equistum pratense* (Shady Horsetail, pictured), Fettercairn; *Erysimum cheiranthoides* (Treacle Mustard), Auchenblae; *Salix triandra* (Almond Willow), Strachan, last seen respectively 1850s, 1875, and by 1919.

Other notable sightings: *Gentianella campestris* (Field Gentian), St Cyrus, 2nd post-1999; *Ornithopus pusillus* (Bird's-foot, pictured) and *Scleranthus annuus* (Annual Knawel), Durriss, 1st large populations.

South Aberdeenshire (vc92)

Ian Francis

Botanical activity during 2021 in South Aberdeenshire stepped up from a lull in 2020, with over 2,250 records from 27 botanists already in, or on their way, to the DDb, including some very interesting finds. A recording weekend by Lewis Donachy, David Elston, Shaila Rao and Dan Watson in the high-altitude corries of the Braeriach area on Mar Lodge Estate in the Cairngorms was very productive, with many rare alpine species recorded. These included *Taraxacum craspedotum* (Pale-leaved Dandelion), *Hieracium alpinum* (Alpine Hawkweed) and *H. hanburyi* f. *hanburyi* (a Hawkweed) – all confirmed by referees and each with very few or no Scottish records since 2000. Also in Upper Deeside, there were three records of *Diphasiastrum complanatum* x *alpinum* = *D. issleri* (Issler's Clubmoss), surely an overlooked taxon. The photograph of one specimen from Ben Avon, found by Andy Stronach and confirmed by Fred Rumsey, shows the colour and shape of branches and diagnostic under leaves (see inside back cover).

Away from the Cairngorms, there were three records by Ian Green of plants not recorded since before the recent Atlas 2020 date class period and many other useful records from the North-East Scotland Biological Records Centre (NESBReC) habitat survey project, plus a substantial recording input from Anne Burgess. I am very grateful to Andy Amphlett and David Elston for their support and to all who submitted records in 2021.

North Aberdeenshire (vc93)

David Welch & David Elston

1. On 17th July, successful visit with Richard Lansdown to collect *Carex maritima* (Curved Sedge) seed for the Millennium Seed Bank from Broad Haven (NK0530).
2. On 8th July, botanical survey of Den Wood, Oldmeldrum, for site owners the Woodland Trust, resulting in 298 records being made involving 103 taxa across the eight management compartments.
3. In August and September, trial SHARPP visits which confirmed some of the reservations expressed about the recording form.

Discoveries and refinds (year of last record in brackets)

Natives

1. *Cornus suecica* (Dwarf Cornel) refound near Creag an Sgor (SHARPP Target) and *Salix herbacea* (Dwarf Willow) refound on summit rocks in transit (both 1979).
2. *Galium boreale* (Northern Bedstraw) refound at Muckle Long Hill, the site

of last VC record (1992), whilst failing to find *Minuartia verna* (Spring Sandwort) on Brown Hill (1980).

3. *Hieracium strictiforme* (Strict Hawkweed) refound at Cabrach (1988) prior to seeking *Euphrasia nemorosa* (Common Eyebright) nearby.

4. *Festuca vivipara* (Viviparous Fescue), 3rd site for VC, found when visiting Suie Hill to search in vain for *Genista anglica* (Petty Whin)(1999).

Introductions / escapes

1. *Prunus cerasus* (Dwarf Cherry) found at Aberdour, 2nd hectad in VC.

2. *Rosa arvensis* (Field-rose) found at Rhynie, 4th site for VC, along with *Mentha x villosa* (Apple-mint) and *Geranium lucidum* (Shining Crane's-bill) (few 2000+ VC records for either).

3. *Carex riparia* (Greater Pond-sedge) found establishing where presumed planted by a pond at Oyne, 6th site for VC.

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

6108 records were collected in 2021, of 530 taxa. Records were from 135 tetrads (252 monads). 89% of the records were collected by Anne Burgess who continued to target monads with few or no previous records. 68% of records were new taxon x monad records. 5 new species were recorded and 6 species were recorded for the first time post 1999. 158 records of RPR taxa were made.

Acaena ovalifolia (Two-spined Acaena)

1st vc94 record. Rapid expansion of this species' range post 1999 in Scotland (and Ireland). (Anne Burgess and Hazel Milne).

Cyperus eragrostis (Pale Galingale)

1st vc94 record. Bird seed alien in garden. 5th Scottish record. (David Law).

Downingia elegans (Californian Lobelia)

1st vc94 record. A single flowering / fruiting plant at Dufftown Golf Course. Probably a grass seed alien. This is the first record for Scotland, and the first GB record since 1998. (John Milne and Ian McDonald). Photo inside back cover.

Hieracium duriceps (Hard-headed Hawkweed)

On rock outcrop on coastal slope. 1st vc94 record since 1905. (Peter MacKie, det. Brian Burrow)

Anaphalis margaritacea (Pearly Everlasting)

Beside track at windfarm. 1st vc94 record since 1912. (Anne Burgess and Hazel Milne).

Lepidium draba (Hoary Cress)

On roadside bank. 1st vc94 record since 1971. (Ian Green).

Eleocharis uniglumis (Slender Spike-rush)

In north Scotland this is almost exclusively a coastal species, typically found in the upper saltmarsh zone, or in areas within the reach of salt spray. It is most unusual to find it in a non-saline habitat (small damp clearing at the edge of woodland), albeit one within 2-300m of the shore. The location is under threat from a proposed housing development. (Andy Amphlett).

Neottia nidus-avis (Bird's-nest Orchid)

25 flowering spikes, plus 8 old spikes from previous year(s). In grass field layer under *Betula pubescens* (Downy Birch) beside River Avon. The 2nd post 1999 record for vc94, and by far the largest population recorded in the vc. (Pete Moore and Hilary Swift).

Epipactis atrorubens (Dark-red Helleborine)

Several rosettes and two flowering stems beside the River Avon near Tomintoul. The plants were growing amongst rocks at the margin of a channel excavated in September 2019 to reduce erosion to farmland on the opposite bank, by opening up an old river channel to accommodate peak flows. The plants were probably growing from rhizomes in situ, or that had been moved by the channel engineering works. 4th post 1999 location for vc94. (Pete Moore and Hilary Swift).

Moray (vc95)

Ian Green

In 2021, just over 17,000 records were made in VC95, input to MapMate and sent to the BSBI. Five field meetings were arranged, these were to survey sites for rare/interesting species. I am working on a monad Atlas Flora of vc95 of which 476 monads had some recording done in them during 2021, with 23 new species being found but all non-native. *Parentucellia viscosa* (Yellow Bartsia) was rediscovered in the grounds of RAF Lossiemouth after last having been seen there in 1989.

Easternness (vc96)

Adam Fraser & Andy Amphlett

35 recorders contributed 7860 records in 2021, of 735 taxa, with 5 recorders collecting more than 500 records each. The records were uploaded to the DDb, and all have been verified and validated. In addition, 3024 pre-2021 records were uploaded to the DDb. Records were collected from 188 tetrads (307 monads). All records were made at monad or better precision, with 65% at 100m or better precision. 50% of the records were new taxon x monad records, and 27% were new taxon x tetrad records. 6% of records (479) were of RPR taxa.

Dan Watson, Jim McIntosh, Matt Parrat and Jeff Waddell undertook an expedition to West Affric in search of alpine plants - and Jeff gave a talk on it at the Scottish Botanists' Conference.

Covid restrictions encouraged completion of a paper on Birch taxonomy and identification.

27 taxa new to vc96 were recorded and 7 species were recorded for the first time post-1999.

Crocus biflorus (Silvery Crocus) 1st post 1999 record for Scotland (Ian Green)

Crocus chrysanthus (Golden Crocus) 2nd Scottish record (Ian Green)

Crocus sieberi (Sieber's Crocus) 5th Scottish record (Ian Green)

Muscari botryoides (Compact Grape-hyacinth) 6th Scottish record (Ian Green)

Rhododendron thomsonii 1st record in the wild in Britain & Ireland (Andy Amphlett)

Spergularia bocconeii (Greek Sea-spurrey) A remarkable range extension of this south-western species (Ian Green). Also multiple records in vc75 this year.

Taraxacum exsertum (Pale-green Dandelion) 1st post 1999 record for Scotland (Sue Thomas)

Verbascum blattaria (Moth Mullein) 2nd post 1999 record for Scotland (Ian Green)

Hieracium nitidum (Shining-leaved Hawkweed) 1st vc record since 1951 (Ian Green)

Erythronium dens-canis (Dog's-tooth-violet) 1st vc record since 1967 (Sue Thomas)

Linum usitatissimum (Flax) 1st vc record since 1975 (Andy Amphlett)

Daphne laureola (Spurge-laurel) 1st vc record since 1976 (Ian Green)

Westernness (vc97)

Ian Strachan & Ian Bonner

A productive year (despite a broken wrist!) with several thousand records by a range of contributors. These have helped to fill some of the many gaps across the VC and provide updates elsewhere - all useful material for the RPR in preparation, as well as a projected flora.

Several notable finds resulted from reports by estate staff or members of the public, including a large population of *Platanthera chlorantha* (Greater Butterfly Orchid) under the 'Harry Potter' viaduct at Glenfinnan. Also in this category were two extraordinary finds at Corroul - *Baldellia ranunculoides* (Lesser Water-plantain) subsp. *repens* in Loch Ossian (photo on back

cover) and *Illecebrum verticillatum* (Coral-necklace) in Loch Treig - as reported at the Scottish Botanists Conference in a joint exhibit with Sarah Watts (Corrour Estate's Conservation Manager) and Richard Marriott.

In August staff of the RBGE and BSBI climbed Ben Nevis to mark the 250th anniversary of its first recorded ascent, by botanist James Robertson. They collected specimens for the Darwin Tree of Life project and valuable records of arctic-alpines.

Monitoring of two important populations of nationally rare or scarce species (neither in SSSIs) took place in 2021. Jim McIntosh remapped *Diapensia lapponica* (*Diapensia*) by 10m grid squares at its hilltop locality near Glenfinnan and showed its distribution to be essentially unchanged since IS mapped it in 2009. At Loch Ossian, IS and JM helped Sarah Watts to count Scotland's largest known population of *Melampyrum sylvaticum* (Small Cow-wheat). An account of this, together with several other botanical highlights from West-erness in 2021, was included in the Scotland roundup in September's BSBI News.

Argyll (vc98)

Gordon Rothero

Some 7000 records were made during 2021. Despite now officially retired as County Recorder, Carl Farmer continues to make an enormous contribution to recording in Argyll, for which I am very grateful. In addition to going on many recording expeditions by himself, he organised 10 Lorne Natural History Society outings, digitised all those records, as well as many others from me and other contributors and fed them all into the BSBI Database. I urgently need the help of a joint recorder in this big, mountainous vice-county, particularly one who is hill-fit, enthusiastic and good at data entry before Carl *really* retires! Please get in touch if you are interested.

There were notable efforts by Jim McIntosh on Lismore where he provided useful updates and some first records from the offshore island of Eilean na Cloiche; and by Marion and Ian Moir in the Glencoe area. Marion recorded micro-species of *Taraxacum* and produced three new records for the county, *Taraxacum hamatum*, *Taraxacum hesperium* and *Taraxacum marklundii*, with the help of the Referee.

A visit to Coire a' Ghabhalach, Beinn an Dothaidh by Jim & Ian Moir resulted in records of several noteworthy species being renewed including *Veronica fruticans* (Rock Speedwell) last recorded in Argyll in 1992 and *Adoxa moscatellina* (Townhall Clock) last seen at this site in 1950. An excursion by the British Pteridological Society, led by Andy MacGregor, to Coire Ghamhnainn, Beinn Udlaidh renewed records of *Woodsia alpina* (Alpine Woodsia, photo

inside front cover) and *Micranthes nivalis* (Alpine Saxifrage) both last seen on this mountain in 1992 and *Equisetum pratense* (Shady Horsetail) last seen here in 1983, amongst others.

Dunbartonshire (vc99)

Michael Philip

2021 saw the adoption in Dunbartonshire and Renfrewshire of the 'loose network model' developed successfully in Lanarkshire in recent years.

In Dunbartonshire this allowed the setting of an ambitious goal: to achieve a fresh record for every monad in the vice-county (702 in total) over a ten-year span. The response has been impressive, resulting in contact with 50 botany enthusiasts, 31 of whom have taken part in fieldwork. 19 field outings were held, and there was a lot of additional recording by individuals and informal collaborations.

Over 19,000 records have been uploaded to the DDb, including over 10,000 New Monad Records. The primary focus so far has been to target the 108 previously unrecorded monads (30 visited, with good lists in 25) and the 106 monads with no recording activity since before 1987 (34 visited, with good lists in 21). And significant increases have been made to the records for 35 monads with fewer than 10 species previously recorded.

In urban areas, highlights have included *Anemanthele lessoniana* (Pheasant's-tail) and *Cyperus eragrostis* (Pale Galingale). By contrast, some highlights of upland recording have been *Platanthera bifolia* (Lesser Butterfly-orchid) on a site feared lost, constant vigilance for *Neottia cordata* (Lesser Twayblade) found in 13 monads this season - and a huge colony of *Botrychium lunaria* (Moonwort) on the southern skirts of Ben Vane.

Dunbartonshire is a small vice-county with a delightful array of habitat, from coast to high hills and from urban sprawl to the western shore and islands of Loch Lomond. Come and help us sometime!

Clyde Isles (vc100)

Angus Hannah

A total of 7781 records from 2021 have been added to the DDb so far, with a few more still awaited. The largest number since 2014, this is largely due to the efforts of Sarah Cowan, who continued her recording of monads in the south of Arran. Around that coast the exceptionally mild climate supports a rich natural flora but also encourages the survival and spread of many garden outcasts, and Sarah has written an article on this subject (See p.8). Over 500 species have been recorded since 1980 in one tetrad (NS02F); of these 20 have not been seen since 2000, and these are nearly all arable weeds, providing clear evidence of the effects of land-use changes on the flora, since arable crops are no longer grown in the area.

For a second year I was unable to get to Arran, and since Bute remains well recorded, I visited vc76, recording a dozen monads around Wemyss Bay and Inverkip. Surprisingly, *Centunculus minimus* (chaffweed) proved to be a first Renfrewshire record since 1813 (Photo inside back cover).

My annual bramble workshop was based in Helensburgh (vc99); of interest was the rediscovery of *Rubus adenanthoides*, in the area near Rosneath where it was found by Alan Stirling in 1994. Over the season I helped to name many specimens from photos, principally of brambles, but including a wide variety of other species. A substantial and much appreciated set of records from Greater Cumbrae was supplied by visiting ecologists Mark and Jenni Duffel.

Kintyre (vc101)

Dave & Pat Batty

A new VC record was *Astragalus danicus* (Purple Milk-vetch) on the south coast of Gigha. We visited the site later in the year and found it in turf along the edge of the beach just above the high tideline in patches of 10+m. Overall the plant covered some 70-100m.

On the same day the finder recorded *Parietaria judiaca* (Pellitory-of-the-wall) in the same area, the first VC record since 1950.

In 2019 *Ophrys apifera* (Bee Orchid) was recorded for the first time in the VC. Covid prevented us visiting the site in 2020 but we visited in 2021. The site is a former airbase, now a business/ industrial park near Campbeltown. One flowering plant was seen in 2019 but in 2021 over 200 flowers were recorded in 5 monads. The site is large and it is likely that more plants were present. The site also has other orchid species of interest including a large population of *Anacamptis pyramidalis* (Pyramidal Orchid).

Two of the three Scottish mainland sites for *Cirsium dissectum* (Meadow thistle) were checked and found to be surviving, though at one colony there appeared to be a reduction in grazing with an increase in shrub growth.

South EbuDES (vc102)

Simon M. Smart & Malcolm Ogilvie

A quiet year but with one excellent find, of a colony of 14 flowering spikes of *Spiranthes romanzoffiana* (Irish Lady's-tresses) discovered by an island-based botanical surveyor scattered along about 1 km of the central grass strip of a stony farm track. Although reasonably plentiful on Colonsay, there are only three previous records on Islay, of 1, 2 and 1 spikes. The habitat seemed unusually dry but the plants were doing well.

Malcolm's annual orchid monitoring on Islay had mixed results, with more *Plantanthera chlorantha* (Greater Butterfly-orchid) at two regularly

monitored sites. 297 (117) and 125 (60), 2020 totals in parentheses) but it was a poor year for *P. bifolia* (Lesser Butterfly-orchid). The 218 flowering spikes of *Epipactis palustris* (Marsh Helleborine) at their main site were little different from the 224 seen in 2020.

Simon was on Jura in June completing the three Countryside Survey squares on the island and recording as he meandered west and south. Despite exhaustively recording the diverse monad containing Craighouse in the last few years, he noticed a new location for *Saxifraga x urbium* (*S. spathularis* x *umbrosa*) growing on a shaded rocky ditch bank near to the hotel. The first record for Jura as an unplanted casual. Another notable find on Jura during the year was *Orobanche alba* (Thyme Broomrape), spotted by Fiona Cameron north of Inver Cottage.

Mid-Ebudes (vc103)

Lynne Farrell

All nine NMPS plots on Mull at 2 main sites re-recorded in June. Greg Smith recorded NPMS plot on Coll.

Survey of *Calystegia* species carried out round villages of Salen and Tobermory in August.

Rare species updating on Mull

Carex aquatilis (Water Sedge), *Lysimachia vulgaris* (Yellow Loosestrife) and *Briza media* (Quaking-grass) relocated at Lochnameal, near Tobermory

Carex x boeninghausiana (*C. paniculata* x *remota*), *Pyrola minor* (Common Wintergreen) and *Umbilicus rupestris* (Navelwort) relocated at Aros Park and outside Tobermory

Vaccinium oxycoccus (Cranberry) refound at its second site in VC 103 on Calve Island, east of Tobermory

Gunna , Coll and Tiree

Pat and Dave Batty visited Tiree in May and added records for early species especially ruderals

John Bowler continued to send records for the rarer species

Lucy Panazon visited Gunna and found *Pimpinella saxifraga* (Burnet-saxifrage) new to the island

Greg Smith, based on Coll for the summer months, added records for rarer species including *Asplenium ceterach* (Rustyback)

North Ebudes (vc104)

Stephen Bungard

Over 130 new hectad records were made in VC104 in 2021. So far, over 8000 records have been transferred to the DDb. There are more, perhaps 2000, monad records of common plants that are not new at the tetrad level to be added, following a change of heart as to what to put on the DDb. Additionally, there are many thousands of such records from 2020 to add.

Skye Botany Group (SBG) has started a project with the Darwin Tree of Life project concerning *Polypodium* (Polypodies) and *Ophioglossum* (Adder's-tongues).

SBG was also involved in BSBI's SHARP Project with mixed success, re-finding old sites for e.g. *Potamogeton berchtoldii* (Small Pondweed), *Carex arenaria* (Sand Sedge) and *Gentianella campestris* (Field Gentian) but not e.g. *Pseudorchis albida* (Small-white Orchid) or *Potamogeton epiphydrus* (American Pondweed).

Members of SBG also surveyed Portree for the Urban Flora of Scotland project which resulted in a number of additions to the VC104 plant list. In total, 18 additions have been made this year, mostly garden escapes/throw-outs or planted in the wild.

An exhibit for the Scottish Botanists' Conference about plants new to vice-county 104 in 2021 showed the fourteen new species recorded by then.

Thirty-two *Hieracium* (Hawkweed) specimens were collected and determined.

Cotoneasters in the *C. bullatus/rehderi* group have been studied and it appears that all VC104 plants examined are the former, based on petiole length, leaf length, leaf width and pubescence. However, the fruit size is larger than that given for *C. bullatus* in reference works.

Wester Ross (vc105)

Duncan Donald

I'm grateful to several local residents for records: e.g. Will Soos for *Ajuga pyramidalis* (Pyramidal Bugle), Jim Alexander for *Lycopodiella inundata* (Marsh Clubmoss), Nik Bullivant for *Salix myrsinites* (Whortle-leaved Willow) [from his NPMS plot], and Isobyl la Croix for a set from Port Henderson including *Hammarbya paludosa* (Bog Orchid). I found *Hammarbya* myself in a new hectad, as well as updating known sites for *Dactylorhiza traunsteinerioides* (Narrow-leaved Marsh-orchid, photo on back cover), *Equisetum variegatum* (Variegated Horsetail) and *Rhynchospora fusca* (Brown Beak-sedge); two long-established bushes of *Frangula alnus* (Alder Buckthorn) near Kinlochewe were presumably unusual bird-sowings.

As usual, many other records emanated from visitors. It has been a good year

for ferns, particularly from Roger Golding's visit to Stromeferry, where he found the Scaly Male-ferns *Dryopteris lacunosa*, *D. affinis* subsp. *pseudodisjuncta*, and *D. [cambrensis subsp.] pseudocomplexa*; Christopher Fraser-Jenkins' 1986 collection of *D. pseudodisjuncta* from Stromeferry is now confirmed as its first British record. Further, James Merryweather, Seth Gibson and others determined *Dryopteris* × *deweveri* from NG82 ... a hectad also well-recorded by Marion Moir, who noted *Sorbus rupicola* (Rock Whitebeam) still there.

The Inverness Botany Group found *Lepidium heterophyllum* (Smith's Peppermint) at Lower Diabaig. The Rough Crew updated *Luzula arcuata* (Curved wood-rush) from hard-to-access Sgurr nan Ceathramhnan, last reported in 1947; Dan Watson also submitted a set of records from Laide – as did Sue Hazelwood [who also found *Cotula squalida* (Leptinella) elsewhere] – but I award Dan this year's palm for finding a new site on An Teallach for *Saxifraga cespitosa* (Tufted Saxifrage), last reported in 2009.

East Ross (vc106)

Brian Ballinger

Recording continued this year in spite of the constraints of Covid. I have entered about 5000 records for the vice-county. I am grateful to contributors for their work.

Talks: I gave a talk to the Inverness Botany Group (IBG) "Three Woods and a Pond" (YouTube).

I gave a short talk on my lockdown projects to the Scottish Spring Conference. I also gave a similar to talk to a retired doctors group.

Publications: I collated the "Checklist of the Urban Flora of Scotland" on behalf of the Botanical Society of Scotland (BSS) and published:

"50 walls in Dundee" in the BSBI Scottish Newsletter 2021.

"Plants on Walls in Easter Ross" Highland Naturalist 2021 17 14-15 '

"Wild Plants of Some Northern Scottish Railway Stations - the last 19 years". BSS news (2021) 116 43-47

"Plants Growing on Easter Ross Town and Country Walls" BSS News (2021) 116 39-42

I also contributed a few BSS blogs.

Urban Flora: I have continued to participate in the BSS Urban Flora Project and have entered about 4,500 records this year. I am continuing with prospective comparison studies of urban and rural flora in general and particular habitats.

Field Meetings: I co-led a successful field meeting with Mary Dean in Muir of Ord on behalf of the BSBI, BSS and IBG. I led three field meetings for the Dundee Naturalists and BSS in Dundee, Monifieth and Arbroath and co-led a BSS and PSNS meeting in Kinross.

East Sutherland (vc107)

Mick Crawley

As with many other recorders, the 2021 botanising season was modest in terms of sites visited (377) and records collected (10,193). Most of the effort was concentrated on remote areas of wet heath and, as usual, these turned out to be just as species-poor as one had expected. Still, the great joy of walking in East Sutherland is that you can guarantee to be on your own. The absence of Munros is a blessing in this regard (Ben More Assynt excepted, of course).

In July, Alexander Kennard carried out a very detailed survey of the famous *Moneses uniflora* (One-flowered Wintergreen) population in Balblair Wood on Loch Fleet, for which many thanks. It was good to see that *Myosurus minimus* (Mousetail) is still thriving at Lairg Auction Mart (despite all the herbicide). The highlight of my recording was *Cardamine heptaphylla* (Pinnate Corallroot) above Rosehall.

West Sutherland (vc108)

Ian Evans and Gwen Richards

It has been another curious year. However, with contributions from Andy Amphlett, we logged some 3000 records from over 25 sites.

In a week at Tongue in June, with Gordon Rothero and Ro Scott, we listed a further nine monads, including remote squares in the south of the parish (thanks to Wildland Ltd). At Ard Skinid on the Kyle (NC5961), we had *Viola canina* (Heath Dog-violet) and *Ophioglossum vulgatum* (Adder's-tongue). Mire pools south of Lochan Hakel (NC5652) yielded subspecies *incarnata* and *pulchella* of *Dactylorhiza incarnata* (Early Marsh-orchid) and, unusually, flowers on *Utricularia minor* (Lesser Bladderwort).

A visit to Invernaver (NC7060) with David and Anita Pearman was enhanced by thousands of plants of *Carex maritima* (Curved Sedge) along the tide-line and over 500 spikes of *Botrychium lunaria* (Moonwort) on the dunes. Cnoc an Fhreiceadain, just behind Coldbackie (NC6159), housed some curious bedfellows, including *Galium sternerii* (Limestone Bedstraw), *Salix herbacea* (Dwarf Willow) and *Silene acaulis* (Moss Campion).

A second week at Tongue in August explored six more monads, with an aptly isolated record of *Carex remota* (Remote Sedge) beside the Kyle (NC5653), and a large quantity of *Ceratocarpus claviculata* (Climbing Corydalis) in the village (NC5956), where it has not been seen since 1897.

Elsewhere, Andy Amphlett found *Conium maculatum* (Hemlock, NVCR) at Badnaban (NC0820), and a new site for *Alchemilla wichurae* (Rock Lady's-mantle) at Inchnadamph (NC2621). Other noteworthy finds were *Ranunculus sceleratus* (Celery-leaved Buttercup, NVCR) at Little Assynt (NC1525), *Sinapis arvensis* (Charlock, now rare in the north-west) at Clachtoll (NC0427), and *Datura stramonium* (Thorn-apple, NVCR) on tipped soil at Kylestromie (NC2234).

Outer Hebrides (vc110)

Paul A. Smith

A planned boat-based field meeting was cancelled for the second year in a row when restrictions did not allow (and is now scheduled for 2023 instead). But various visitors took advantage of holidays in the UK to visit, and there was a particularly impressive clutch of orchid records from Phil Smith, including many *Dactylorhiza* hybrids (duly confirmed by Richard Bateman).

The VCR managed a short spring visit and a shorter than usual summer visit (no house party this year), but managed to cover some further under-recorded areas, continuing progress towards a tetrad flora. And as usual, it generated some interesting records in unexpected places. 2500 records were added in 2021, which is the lowest total this century. Must do better in 2022!

A moorland loch in central Lewis looked like a standard loch with peaty water, but a speculative grapnel came up with a tiny charophyte – *Nitella confervacea*. One of those species you can't find if you're looking for it, and this was the first time I'd found my own.

A wander round Carlabhagh (Carloway), a large but diffuse settlement which has not had its roadsides investigated recently turned up *Diplotaxis tenuifolia* (2nd VC record) and *Allium porrum* (1st record) together on a verge, and then further along the road were *Symphoricarpos x chenaultii* (1st record) and a several bushes of a planted *Cotoneaster*, already self-seeding, which turned out to be *C. amoenus* new for Scotland (thanks to Jeanette Fryer for this and a range of other *Cotoneaster* dets).

Orkney (vc111)

John Crossley

Many enjoyable and productive outings this year, and some good finds. Our local Flora Group held meetings at an outstanding area of unimproved neutral grassland at Ring of Brodgar stone circle and another on sandy beach and dune. In July I went to North Ronaldsay to contribute to their island Science Festival, with guided walks on dune grassland and coastal heath; we found abundant *Carex maritima* (Curved Sedge, photo on back cover) at three sites (not all dune grassland), *Coeloglossum viride* (Frog Orchid) and both *Ophioglossum azoricum* (Small Adder's-tongue) and *O. vulga-*

tum (Common A-t). Islanders and visitors were more impressed however with patches of *Erodium cicutarium* (Common Stork's-bill) in flower, a very scarce plant in the far north.

Some other events have not been so happy. I and others had objected to a large wind farm proposal on Hoy. The site has many vulnerable species and habitats and is in a Wild Area. The independent reporter to the Scottish government recommended refusal but was over-ruled by ministers. It was distressing also to see elsewhere a sand dune site which had harboured *Carex maritima* and *Juncus balticus* (Baltic Rush) destroyed.

I did some recording on the summits and ridges of Hoy; these are only 350-450 m in altitude, but decidedly montane in character, with sparsely vegetated feldfields of loose rock and gravel. *Arctostaphylos alpinus* (Arctic Bearberry), *Carex bigelowii* (Stiff Sedge), and *Salix herbacea* (Least Willow) are frequent. It will be interesting to compare with results from higher elevations further south. It was exciting to find a long-lost site for *Polystichum lonchitis* (Holly Fern) on the way up.

Shetland (vc112)

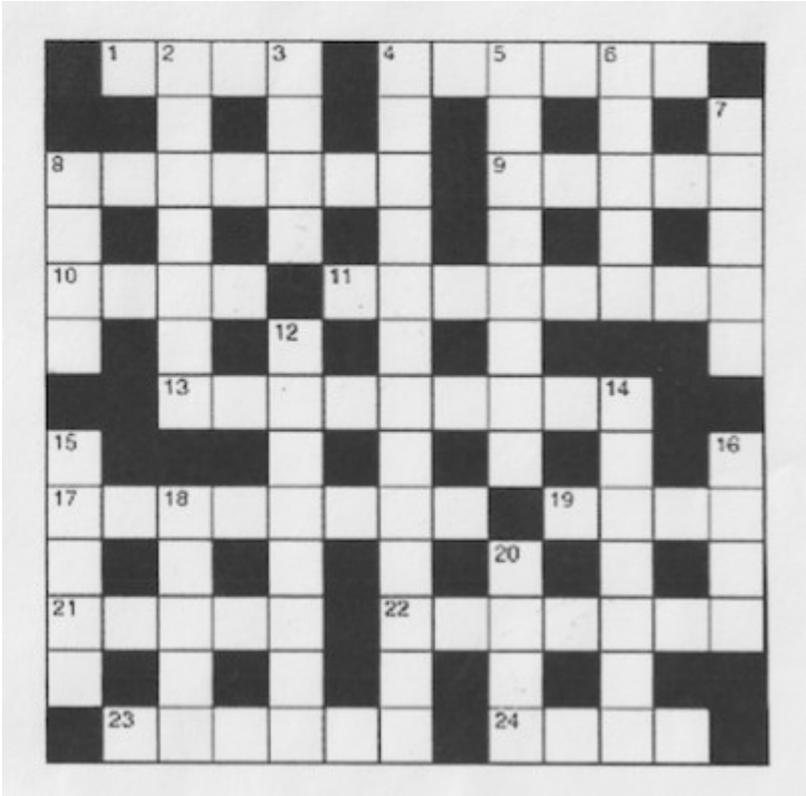
Paul Harvey

Highlights of the year were the discovery of two species new to Shetland. Three flowering spikes of *Neottia ovata* (Common Twayblade) were located on the side of a track in Cunningsburgh. They looked well established, rather than newly arrived, and indeed we later learnt that they had been recorded previously; the recorder presumably being unaware of the importance of his observation. The other new addition was *Lycopodium annotinum* (Interrupted Clubmoss) located during fieldwork on the Viking windfarm on hill tops in central mainland. Twenty nine separate plants have been found to date which suggests it is only a matter of time before it is found elsewhere in the islands. One reason it may have previously been overlooked is the habitat involved, relatively uninteresting degraded blanket bog - often where the ground appears to be recovering after earlier erosion.

In the face of the ongoing pandemic putting paid to any organised events, recorder efforts focused on trying to relocate species that had not been recorded for a number of years in the islands despite searches. It was heartening to see that a number of species were hanging on despite our fears with first records since 1991 for what is clearly native *Campanula rotundifolia* (Harebell) at Islesburgh Ness; 2003 for *Sparganium erectum* (Branched Bur-reed) near Lerwick; 2013 for *Oxalis acetosella*, Wood-sorrel, Collafirth Hill; 2014 for *Myriophyllum spicatum* (Spiked Water-milfoil), lochs on serpentine on Unst and 2015 for *Juncus triglumis* (Three-flowered Rush), flushes on Unst serpentine. Also good to report is the expansion of *Gymnadenia borealis* (Heath Fragrant-orchid) on the serpentine at the Keen of Hamar.

CROSSWORD No. 6

by Cruciada



Solution and Crib on page 48

CLUES ACROSS

1. Unyielding example of 19 with male support (4)
4. Conspires to lay trap initially in 23's study (6)
8. Socially awkward person from Virginia? (7)
9. Vail's torn, revealing collection of 19s (5)
10. An aid to study – a baby could use it! (4)
11. Quinoa, for example, brought doctor back to cover operation on female (8)
13. Arrangement of ten pens he found in pitcher plants (9)
17. Musical style of granite, perhaps (4,4)
19. One of 4, tall and long-lived, seen when saint leaves road (4)
21. One thousand and one upstanding Japanese mushrooms (5)
22. Vegetable for dessert? You're talking nonsense! (7)
23. Our subject is lad who's acquired a touch of the sun (6)
24. Feature of leaf of Allium member when seen from underside (4)

DOWN

2. Variety of garlic, i.e. brain builder (7)
3. Junk mail turned over to reveal form of distribution data (4)
4. Some pineapples, bananas, etc show this as found in Greek temple, almost complete, with fish and fork (13)
5. Labs in the interior produced drink flavoured with Artemisia (8)
6. You French have the cheek to name flower (5)
7. Arable field belonging to Irishman? (5)
8. Nothing's taken from nightcap as source of illegal drug (4)
12. Grass that takes part in a collection (8)
14. Are rest relegated to having marginal teeth? (7)
15. Almost colourless, a bit of grass (5)
16. Set off fizzy powder to get one of 4 that's not 19 (5)
18. Come back, all right, or I produce tropical 19 (5)
20. Sledge dog you originally lost to shell (4)

Foraging: a cautionary tale

Angus Hannah

Last summer, recording near King's Cave on Arran, Sarah Cowan found the first Sea Kale (*Crambe maritima*) plant on the island for 25 years (photo inside back cover). A few minutes later a young man asked if she was a botanist, and could she confirm the identity of his bag of leaves, which he thought were Sea Kale. They were so indeed; he had just defoliated the plant she had found. He apologised after being firmly told off, and said it was common in Kent where he lived, and he assumed it would be the same here.

This incident highlights one of the dangers of the current fad for promoting foraging to people otherwise unfamiliar with plants. It is especially important that any such encouragement should be accompanied by a warning not to do it other than in areas one is very familiar with, where the status of one's target plants is known and where in moderation it may be sustainable.

More broadly, the old argument 'What if everyone did it?' may become valid if large numbers of people are encouraged to participate in foraging. It can be useful up to a point in fostering interest in wild plants, but care and thought are needed both by those promoting it and those who practise it.

Doing brambles in Scotland *Angus Hannah* (butesedge@yahoo.co.uk)

I have been trying for several years to encourage Scottish botanists to look a little harder at brambles. We are well placed, as we have a relatively small number of species compared to many countries, and in many areas the number of common local species will not much exceed half a dozen. For the last few years I have held an annual weekend workshop in different VCs in my general area, but numbers have been limited, partly by covid and also because it is not practicable to teach a large group when the subject requires scrutiny of details in the field. This year I am also offering a one-day beginners' workshop for anyone who would like to like to get a taste of the subject (See field-meetings list, p.49).

The new Dandelion handbook has led me to wonder if there would be interest in a comparable format handbook of Scottish brambles. There are precedents in Hieracium for BSBI publications on regional or sectional groups, and the lack of a well-illustrated handbook on our brambles is one of the main disincentives for those thinking of getting involved.

Sue Thomas, who has participated in several of the workshops, has put into verse the substance of what she took away, showing I think that brambles can be a lot of fun! (See next page) Please contact me if you think you might wish to join us at the beginners' workshop or take a further interest in brambles in any way.

Brambles: what ID features to look for Sue Thomas

Find one from a sunny patch or ID features will not match!

If shady, leave it on the shelf, you'll just make trouble for yourself.

Two kinds of stems will be your guide, you'll need them both for features wide.

A Primocane grows the first year; it just has leaves, that makes it clear.

The second year canes you'll easily know, it's where the flowers and berries grow.

The primocane should be entire...

If it's been cut to clear the way, its features change, you'll go astray.

Ignore the tip for half a metre, the features further down are sweeter.

If you have to take a sample, 30 centimetres ample.

This first year cane, no flowers you'll see*, But will be good for features three:

(*Or if you do it has to be An upright group quite like raspberry.)

Look at the PRICKLES, many or few? Their shape and inclination too.

The STEM will be five sided but, Look at the shape where you have cut.

Does it have furrows? Is it round? What hairs or glands are to be found?

The colour too can be quite helpful, Dull or shining, red or purple?

Now check the LEAVES' and leaflets' trait Do they overlap? (That's imbricate.)

How many? Five's the usual lot: But more or less? What have you got?

Two leaflets can together fuse: A gibbous feature you can use.

Check the terminal leaflet, it's the best, For shape, serration, hairiness.

Now turn it over, what's to be seen? Is the underside white and felted, or green?

Now find yourself a flowering stem, Ignore the leaves, you don't use them.

Are the flowers white or pink, Large or small, what do you think?

There may be prickles so be wary! Using your lens, are the anthers hairy?

(If hairy anthers you can see, It probably is one of three —

If you have the key by Angus: *Errabundus*, *leptothyrsos*, or *mucronulatus*)

Sepals are the next en route: Patent or reflexed when in fruit?

Leafy tips, or a white border, Can help decide the proper order.

If you find a new young berry Check the carpels, are they hairy?

If your ID is not sure, Or to a ref you'll need to send,

Cut the inflorescence off, Though this time you will need the end.

And if of brambles now you're weary Enjoy the sun and eat the berry!

Sue Thomas

BSBI Scottish Annual General Meeting Minutes

Saturday 6 November 2021 online at 12.30

Chaired by Lindsay Mackinlay, Chair BSBI Committee for Scotland

1. Welcome

The Chair, Lindsay Mackinlay, welcomed everyone to the second online BSBI Scottish AGM. All BSBI members are entitled to vote at the Scottish AGM.

2. Minutes of the BSBI Scottish AGM 2020

Minutes of the BSBI Scottish AGM 2020 were displayed on screen, having been published in the Scottish Newsletter and displayed on the Scottish Botanists' Conference website. There were no matters arising. The minutes were proposed by John Crossley, seconded by Lindsay Mackinlay and approved by a unanimous electronic show of hands by all those present.

3. Committee for Scotland 2021-22 – composition and elections

BSBI Committee for Scotland 2021-21

- Lindsay Mackinlay (Chair) – *Re-election*
- Vacant - (Vice-chair)
- Liz Lavery (Secretary) - *Re-election*
- Liz Kungu (also BSS) – *Retiring (BSBI) – remaining as BSS representative.*
- Alan Walker – *Retiring*
- John Crossley - *Re-election*
- David Elston (Field Meetings Secretary) - *Re-election*
- Ron Youngman – *Retiring*
- Matt Parratt
- Andrew Rowley
- Michael Philip (*co-opted in 2020*)

Representatives:

BSBI staff: Jim McIntosh (BSBI Scottish Officer)
NatureScot – Iain MacDonald / Sarah Smyth
Plantlife Scotland – Alistair Whyte
National Trust for Scotland – Dan Watson
BSS/RBGE – Liz Kungu

Lindsay thanked the two retiring members Ron Youngman and Alan Walker for all the help and advice they have given the Cfs.

The following committee members were re-elected by a unanimous show of hands:

- Lindsay Mackinlay (Chair)
- Liz Lavery (Secretary)

- David Elston (Field Meetings Secretary)
- John Crossley

The following nominations were elected by unanimous shows of hands using the Zoom electronic voting system

- *Michael Philip – Proposed by Lindsay Mackinlay, seconded by Liz Lavery*
- *Sarah Watts – Proposed by Dan Watson, seconded by Lindsay Mackinlay*
- *Polly Spencer-Vellacott – Proposed by Ron Youngman & seconded by Lynne Farrell*
- *Louise Ross – Proposed by David Elston, seconded by John Crossley*

4. Chair's report

Covid-19 II: The Year of the Double-Jabbed!

- A few formal field meetings took place in 2021! - Urban Flora in Muir of Ord, a meeting at the Cairnwell, but not a full calendar of field meetings.
- We did have some formal field training in 2021! (Ben Lawers BSBI/NTS Workshop)
- There was no Annual Summer Meeting in the Borders.
- There was no (*physical*) Scottish Botanists Conference and sadly no chance to meet up with old & new friends in person.

Big issues were:

To DDb or not to DDb..that is the argument:

Cfs has been involved with internal consultations on the level of access to the BSBI database given to BSBI members: We continue to advocate full access at the highest resolution (*exceptions for a few sensitive species*) and encourage Scottish VCRs to permit this.

New Forestry (Sitka Spruce) Concerns:

Cfs remained concerned about the impact of the large number of forestry schemes in Scotland. Should Sitka Spruce be officially classified as an Invasive Non-Native Species?

Outreach Activity – Some highlights!

Engagement with younger audience (up to 30 yrs old!)....Andrew Rowley led the production of a video for students, big thanks! <https://bsbi.org/students>

A Grass ID workshop_ for beginners, led by Matt Parratt, with Dan Watson, Jay Mackinnon & Jim Mcintosh leading groups in breakout rooms. This innovative

and interactive event was fully booked (15). Plenary session uploaded to YouTube – viewed 1064 times!

Aileen Meek prepared a Webinar based on Faith's Wild Flower Families booklet. 46 people participated on the day. An edited [Webinar recording](#) can be viewed (1289 viewings to date)

Local Group & Network development has been very successful in Lanarkshire, Dunbartonshire and Renfrewshire and over 160 people have signed up to groups.

5. Scottish Vice-county Recorders

In memory:

Dr J.A. Rogers latterly of Peebles but Vice-County Recorder for West Sutherland from 1972 to 1993

Special thanks to:

- Helen Jackson, who has just retired from East Lothian, (leaving joint recorder Marion Moir in full charge).

Further Updates:

- Peter Wiggins (Vc 77) was appointed joint recorder in Lanarkshire alongside Michael Philip; allowing Michael Philip to be appointed as Recorder for Dunbartonshire.

Current Vacancies

- Banffshire Vc94 – Special mention to local member Anne Burgess who is doing great work up there!
- Midlothian Vc83 – vacant since 2019
- Argyllshire Vc98 joint with Gordon Rothero

Applications welcome. Please contact Jim Mcintosh, Scottish BSBI officer, if you are interested.

6. Scottish Newsletter

BSBI Scottish Newsletter No.43 was published on paper and online in April 2021. Angus Hannah, the BSBI Scottish Newsletter editor would welcome contributions to the next issue – by the end of Feb 2022, please! Many thanks to Angus for all his hard work.

7. Field meetings

In 2022 we hope to -

- Return to having regular field meetings [*subject to Covid regulations*] and to organise Rough Crew outings.
- Return to having live field workshops
- Hold the Annual Summer Meeting which was planned in Scottish Borders.

We are planning to hold outreach meetings, general meetings, recording meetings, meetings to study specialist groups of plants.

8. **Date of next AGM** will be during the Scottish Botanists' Conference November 2022.

9. Any other business

Lindsay thanked fellow CfS members and Scottish VCRs, all BSBI Staff, in particular Jim McIntosh, Julia Hanmer, Louise Marsh, fellow BSBI committee and board members and all volunteers. Thank you to NatureScot for their continued financial support. Lindsay hoped BSBI would have a brilliantly normal 2022!

* * * *

From Lindsay Mackinlay, Chair, BSBI Committee for Scotland

After over seven years, this is Angus's last Scottish newsletter as editor! What started as just filling in 'for a small while' turned into a much bigger journey. I think it is fair to say that Angus' work on the newsletter has been fantastic over the years and he has overseen the production of something that I, like many other members, genuinely look forward to receiving each year. I would therefore like to express a big thanks to Angus for all his hard work on the newsletter and hope that he will continue to contribute to it into the future, but from the ranks.

We are now, of course, looking for a new Scottish newsletter editor and we would welcome informal applications from anyone who wishes to take up this editorial opportunity to progress our very own newsletter into the future.

The editor wishes to thank Lindsay and the Scottish Committee for these kind words of appreciation.

Angus

From the Scottish Field Meetings Secretary

Aileen Meek stood down as Scottish Field Meeting Secretary at the 2021 AGM - many thanks to Aileen for her hard work in post.

In the short time available to pull together a programme of meetings for 2022, I contacted all recorders of Scottish vice counties and members of the Outreach Group and was delighted by the level of response received. The 2022 Yearbook contains details of: three one-day workshops and four field meetings with an educational focus organised by members of the outreach group; five field meetings with a focus on recording in remote areas led by vice county recorders; the Taraxacum workshop led by John Richards, BSBI referee and author of the new handbook; and a training day on plant identification for habitat surveys led by Lindsay Mackinlay, Chair of the Committee for Scotland. Many thanks to all who stepped forward to organise these meetings, all at a time of year when botanists are busy with end-of-season field visits and marshalling records for entry into the Distribution Database. As another plus, some people unable to commit to a meeting in 2022 have indicated a willingness in principle to organise field meetings for 2023.

But organising and leading meetings should not be limited to vice county recorders and those involved in BSBI committee work. So I would greatly welcome proposals from other people, or enquiries about what is involved, and indeed any comments you might wish to make about what members consider the role of nationally advertised field meetings should be as the number of local groups/networks increases.

David Elston, Scottish Field Meeting Secretary, elstoncox@yahoo.co.uk

Crossword Solution and Crib

ACROSS
1. FIRM 4. PLAN<T>S 8. double definition 9. anagram VALS 10. dd
11. reverse DOC round HEN/OP 13. anag TEN PENS HE 17. charade 19. (S)TREE(T)
21. rev 1/K/ONE 22. dd 23. BO<TAN>Y 24. rev LEEK
DOWN
2. anag IE BRAIN 3. rev SPAM 4. PARTHENON(N)/CARP/Y 5. IABS IN THE
6. TU/LIP 7. pun 8. COC(O)A 12. takes PART IN A 14. anag ARE REST
15. PALE/A 16. (S)HERB(ET) 18. rev OK/OR/I 20. HUSK(Y)
CRIB
1. FIRM 4. PLAN<T>S 8. double definition 9. anagram VALS 10. dd
11. reverse DOC round HEN/OP 13. anag TEN PENS HE 17. charade 19. (S)TREE(T)
21. rev 1/K/ONE 22. dd 23. BO<TAN>Y 24. rev LEEK
DOWN
2. IBERIAN 3. MAPS 4. PARTHENOCARP/Y 5. ABSINTHE 6. TULIP 7. PADDY 8. COCA
12. SPARTINA 14. SERRATE 15. PALEA 16. HERB 18. IROKO 20. HUSK
DOWN
17. ACID ROCK 19. TREE 21. ENOKI 22. RHUBARB 23. BOTANY 24. KEEL
ACROSS
4. PLANTS 8. CREEPER 9. SILVA 10. CRIB 11. CHENOPOD 13. NEPENTHES

BSBI Scottish meetings 2022

May 6-9	Taraxacum workshop John Richards	Portpatrick vc74 <i>hightreesgarden@btinternet.com</i>
May 14/15	Beginners' meetings Jim McIntosh	RBGE/Arthur's Seat vc83 see BSBI website for booking details
May 28	Recording + training Faith Anstey	Tummel shingle by Pitlochry vc88 <i>faithanstey@gmail.com</i>
June 4-5	Alpine recording (incl. <i>Diapensia</i>) Ian Strachan	Sithean Mor by Glenfinnan vc97 <i>imstrachan55@gmail.com</i>
June 17-18	Recording Duncan Donald	Mullach Coire Mhic Fhearchair & Sgurr Dubh vc105 <i>16dandk@gmail.com</i>
June 18	Sedges & rushes workshop Chris Miles	Dumfries vc72 <i>chris.miles01@btinternet.com</i>
June 23	Urban recording Brian Ballinger	Alness vc106 <i>brian@garrickwood.org.uk</i>
June 25	Grasses workshop Michael Philip	Chatelherault Country Park Hamilton vc77 <i>botany@opus44.co.uk</i>
June 25	Recording for SHARP project Liz Lavery	Doune vc87 <i>eldlavery@outlook.com</i>
July 2	Upland recording Michael Philip	Glen Douglas vc99 <i>botany@opus44.co.uk</i>
July 9	Brambles for beginners workshop Angus Hannah	Lochwinnoch vc76 <i>butesedge@yahoo.co.uk</i>
July 23	Graminoids workshop Dan Watson & Faith Anstey	Ben Lawers vc88 <i>faithanstey@gmail.com</i>
August 5-7	Loch Maree area incl. islands Duncan Donald	by Poolewe vc105 <i>16dandk@gmail.com</i>
August 6	Composites workshop Faith Anstey	Kinghorn vc85 <i>faithanstey@gmail.com</i>
September 3	Plant ID for habitat surveys Lindsay Mackinlay	venue TBC <i>lindsay@thefutureforestcompany.com</i>

BSS Meetings 2022 (some joint with other groups)

NB BSBI members are welcome on any of these meetings

Sunday 27th March, 11am Limekilns, FIFE

Introductory Dandelions Workshop Leader: Leslie Tucker
Book with Maria.Chamberlain@ed.ac.uk.

Sunday 10th APRIL , 10.30am River South Esk, EDINBURGH

Toothworts Leader: Richard Milne Book with R.Milne@ed.ac.uk.

Friday-Monday 13th-16th May North Ayrshire & Arran coastal towns

Urban Flora: Ardrossan, Saltcoats, Stevenston, Irvine and Lamlash
Leaders: John Grace with Carol Crawford and Angus Hannah (BSBI)
For information and booking contact j.grace@ed.ac.uk.

Tuesday 17th May , 7pm Invergowrie Burn, by DUNDEE

Leader: Brian Ballinger brian@garrickwood.org.uk.

Sunday 5th June 11am (all day) Aberlady Bay, EAST LOTHIAN

Leader: Richard Milne R.Milne@ed.ac.uk.

Sunday 19th June , 10.30 - 3.30 Tayport Heath and Tentsmuir FIFE

Practical help with PLANT ID APPS on mobile phones
Leader: Hamlyn Jones (joneshamlyn@gmail.com) or phone 07749880650.

Tuesday 14th June, 7pm Caird Park, Den o' Mains, DUNDEE

Joint BSS/Dundee Naturalists Mainly urban flora Leader: Brian Ballinger

Thursday 16th June, 7pm Chambers Institution, High Street PEEBLES

Urban Flora Leader: John Grace: j.grace@ed.ac.uk.

Thursday 23rd June, 10.30 am (all day meeting) AIness EASTER ROSS

Joint BSBI, BSS and IBG Leaders: Brian Ballinger and Mary Dean
Contact Brian Ballinger brian@garrickwood.org.uk.

Saturday 25th June, 10:00am, Ben Challum, MID-PERTSHIRE (V.C. 88)

Alpine Field Meeting Booking is essential; john.holland@sruc.ac.uk.

Friday-Sunday 8th-10th July ABERDEEN

Urban Flora, Leaders: John Grace with David Elston, (BSBI)
For information and booking contact j.grace@ed.ac.uk

Saturday 9th July, 10.30am Millerhill, EDINBURGH

Urban Flora. Leader: Richard Milne Book with R.Milne@ed.ac.uk



Left: *Arabis alpina* (alpine rockcress), Skye vc104.

Right: *Diphasiastrum complanatum* x *alpinum* = *D. issleri* (Issler's Clubmoss), vc92 (see p.27)



Left: *Lycopodiella inundata* (marsh clubmoss), Loch Katrine vc87 (see p.23)

Right: *Downingia elegans* (California Lobelia) Dufftown golf-course, vc94 (see p.28)



Left: *Crambe maritima* (sea kale), King's cave shore, Arran vc100. (See p.42; photo S. Cowan)

Right: *Centunculus minimus* (chaffweed), track to Kelly Resr. vc76. First vc record since 1813 (See p. 33; photo A. Hannah: pencil tip for scale)



1. *Corallorhiza trifida* (coralroot orchid) Gusach vc97.
2. *Fumaria densiflora* Sandwich Orkney vc111
3. *Carex maritima* (curved sedge) Orkney vc111 (p.39)
4. *Dactylorhiza transteinerioides* (narrow-leaved marsh orchid) Duncan Donald, vc105 (p.35).
5. *Baldellia ranunculoides* ssp. *repens* Loch Ossian vc97; Anne McCutcheon (p.31).