Scottish Botanists Conference 2018 – Abstracts

A new inland population of *Hierochloe odorata* (Holy-grass) and other interesting species found along a stretch of the Black Esk in Dumfriesshire in 2018 (v.c.72)

Chris Miles

While recording a square including the Castle O'er hill fort (NY2492) on 25th August a new population of Holy-grass was found along the edge of the Black Esk in Dumfriesshire. This has so far been found in two places 3 km apart.

Holy-grass has one previously known population in Dumfriesshire, at the back of the merse at Caerlaverock NNR where I found in 1993. This is in a similar coastal habitat to some of the sites in Kirkcudbrightshire. This is 35 kilometres from the new population. It is known from only 18 hectads in Britain and 1 in Ireland. These new inland populations are in a similar situation to those in Selkirkshire where Rod Corner found it on the Ale Water in 1965 and the site on the North Tyne where it was found by Michael Braithwaite in 2004 (Watsonia 25.4 p 423).

This stretch of the Black Esk also supports other interesting species. These include *Equisetum variegatum* (Variegated Horsetail), small populations of *Eleocharis mamillata ssp. austriaca*, (Northern Spike Rush) and two populations of the hybrid willow *Salix x laurina (Salix cinerea x S. phylicifolia*) which are also exhibited.

PLANTS THAT MISSED THE BOAT – Alison Rutherford with assistance from Dave Lang

Two garden escapes which, mysteriously, seemed to become 'lost' from the floras of Ayrshire (v.c.75) and Dunbartonshire (v.c.99)

Alison Rutherford (AR), while exploring Largs (v.c.75) in the early 1980s, saw a silvery-white plant clothing a woodland floor. It was *Helichrysum petiolare* (Silver-bush Everlasting Flower). Prior to 2017 – when a record was accepted from Inveralligin (v.c.105) – *H. petiolare* had never been recognised by the BSBI as occurring 'wild' in Scotland. Although aware of the Largs find, somehow Allan Stirling, the then-VCR, did not enter it into his great ledger – which, pre-MapMate, was the repository of all notable Ayrshire records. Yet despite all this, a reference somehow appeared in Stace (2010) to *H. petiolare* occurring as far north as Ayrshire. The current VC75 recorder – Dave Lang – has now also been made aware of it!

Around the same time, while botanising land bordering a development above Helensburgh (v.c.99) AR spied an Aspidistra among the bricks, a builder's barrow and garden rubbish tipped over a bank. Pot-bound but rooted-down it was removed – as in the 1980s it was not known that they could grow outside. Re-potted, it soon became clear that it was *Aspidistra elatior* (Cast-iron-plant). However, the BSBI Database has only two records of *A. elatior* for the whole of the UK – both in England. A pot showing each plant is displayed.

Roxburgh and Selkirk Plants found in 2018 (v.c.79 & 80) R. Corner & Jeff Waddell

Isatis tinctoria (Woad) v.c.79 - a single plant of this striking species possibly derived from long buried seed, was found by Luke Gaskell from a disturbed road side affected by the Selkirk Flood Prevention Scheme near Philiphaugh. It was cultivated in the past for its dye.

Thalictrum aquilegiifolium (French Meadow-rue) v.c.79 - Jeff Waddell recorded a single large plant of this introduced species on the banks of the Tweed in woodland at Sunderland Hall. Not seen in v.c. 79 for 150 years.

Carex riparia (Greater Pond-sedge) v.c.80 - a BSBI group of Rod Corner, Luke Gaskell and Zoe Gardner found this large sedge introduced in an old pond at the Roxburgh Golf-course, Sunlaws.

Deschampsia cespitosa subsp. parviflora (Small-flowered Hair-grass) v.c.80 – found in woodland by a drive at Harestanes, Monteviot by Rod Corner. It appears to have few Scottish records which are all mainly in the south. It may well be overlooked or else it is genuinely local and rare.

Equisetum hyemale (Rough Horsetail) v.c.80 - Jeff Waddell with his botany group discovered a large colony (100m long) along the west bank of the Jed Water in a forested area, South-east of Southdean, only the second extant site.

Primula japonica (Japanese Cowslip) v.c. 80 – Rod Corner discovered this introduced species of wet ground was at the edge of Abbotsmoss, Melrose. Coincidentally it was seen again a few weeks later in a wet hollow on the Roxburgh Golf-course by a BSBI party.

Alstroemeria aurea (Peruvian Lily) v.c.80 – was refound by Jeff Waddell and party after a gap of over 40 years in unmanaged grassland at Cavers, Hawick. It was presumably derived from planted stock.

Peeblesshire Plants in 2018 (v.c.78) **Luke Gaskell**

With the 2020 Atlas deadline looming I have been filling the gaps in the less visited parts of Peeblesshire. The plants exhibited are not native to the area and have all probably arrived as a result of human activity.

Medicago sativa subsp. sativa (Lucerne) and *Cannabis sativa* (Cannabis) will have been deliberately planted though for somewhat different purposes (sativa = cultivated).

Conyza canadensis (Canadian Fleabane) is still rare in the VC but I expect that it will soon increase in urban areas.

Lepidium didymium (Lesser Swine-cress), *Chenopodium rubrum* (Red Goosefoot), *Stachys arvensis* (Field Woundwort) and *Persicaria lapathifolia* (Pale Persicaria) are all new or very rare in the Southern Uplands. These plants appeared growing by the roadside at Meggethead Bridge probably brought in with imported topsoil from the lowlands. It would be nice to find out where this soil came from as the area must have a rich weed flora.

Chenopodium polyspermum (Many-seeded Goosefoot) is rare in Scotland and may have arrived on forestry construction equipment. It was found in Cardrona Hill forest near Peebles where a new path had been constructed to improve public access.

Pilosella flagellaris subsp. flagellaris (Spreading Mouse-eared-hawkweed) was also near a heavily-used public road in the adjacent Glentress forest. A species which may be increasing.

Campanula trachelium (Nettle-leaved Bellflower) was also near the main forest drive in Glentress. It is likely to have spread from one of the wild flower mixes sown there. The forest is primarily managed for recreation. There are a lot of non-native species, not all of them deliberate introductions.

***Conyza* and Car Parks, two other rarities and a new record for Fife & Kinross (v.c.85)**
Sandy Edwards

In the pavement outside Dundee bus station I spotted some unfamiliar plants. These turned out to be *Conyza canadensis* (Canadian Fleabane). A week later in the park and ride car park at Inverkeithing there was a good clump of it! This is a new recent record for v.c.85, last recorded in 1936, also a rare species in the northern part of the UK as can be seen on the map.

This is reminiscent of *Senecio inaequidens* (Narrow-leaved Ragwort) which George Ballantyne found there as a new record in 2007. Since then it has rapidly spread and is common in the Inverkeithing area and totally dominant in some places. Will the Fleabane do

the same? Carparks are great distribution areas for some species whose seeds stick to tyres; the achenes of *Conyza* are well suited for this.

On a visit to Morton Lochs at Tentsmuir a small specimen of *Bidens cernua* (Nodding Bur-marigold) was found. There are no recent records for this but George has a mention in his book for a site at Loch Leven and there is a record in 1986 at Lindores. Again, a rare plant in the north of the UK.

I was sent a specimen of *Galinsoga quadriradiata* (Shaggy Soldier) from Liz Ingram found in an allotment in Inverkeithing. The second record for v.c.85, the only other record is from George in Kirkcaldy in 1970. It is very rare in Scotland.

Two large specimens of *Rosa multiflora* (Many-flowered Rose) have been recorded from the roadside at Leuchars. They may have been planted but have been there for several years, ever since the bypass was built. This is a new record for v.c.85.

A Mystery Sedge, West Perth (v.c.87) **Liz Lavery**

In late June Catherine Bell took me to see some plants of *Ranunculus lingua* (Greater Spearwort) growing at the edge of a small pond near the sewage works in Kincardine Village. This species has only been recorded once before in VC87 at Doune Ponds in 1995. She made this exceptional discovery when searching for plants to complete units for 'identiplant', the online botany plant identification course sponsored by BSBI and FSC. While there I noticed the leaves of a very large sedge growing in profusion around the edge of the pond. With some difficulty I collected a few flowering stems.

On showing the sedge to Jane Jones, joint recorder with me for West Perth, we both thought it might be *Carex acuta* (Slender Tufted-sedge) never recorded before from VC 87, with only about 8 sites north of Edinburgh. We sent it to Mike Porter, BSBI *Carex* referee for confirmation. At first, he agreed but then was not quite sure and asked me to collect some more plants. He thought there were utricles present with both 3 and 2 stigmas suggesting the sedge might be a hybrid between *C. acuta* and *Carex acutiformis* (Lesser Pond-sedge) = *Carex x subgracilis* (*C. acuta x acutiformis*). The second specimens I sent were past their best and most stigmas had dropped off. I will have to go back next June and look for early flowers. There is only one known site in Scotland for *Carex x subgracilis* near Ardrossan. The sedge I collected in 2018 is on display.

2018 highlights, puzzles and problems in Westerness (v.c.97)
Ian Strachan and Ian Bonner

In 2018 more records were made (about 20,000) than in any previous year, thanks to the efforts of many different people. A small selection of notable finds, such as new sites for *Cephalanthera longifolia* (Sword-leaved Helleborine) and *Pyrola* species (Wintergreens), and an impressive stand of *Lycopodium annotinum* (Interrupted Clubmoss), will be illustrated. The mystery of *Lysimachia thyrsifolia* (Tufted Loosestrife) in Westerness is apparently solved, then deepens! Spread of the invasive *Lysichiton americanus* (Skunk Cabbage), and what is being done about it, is also described.

***Scheuchzeria palustris* L. in Scotland, a new locality (v.c.97)**
Paul A. Smith & Ian Strachan

A new locality for *Scheuchzeria palustris* (Rannoch-rush) in Westerness is described, set in the context of the extant Scottish distribution.

RAILWAY STATION FLORA IN EASTER ROSS – 17 years on (v.c.106) Brian Ballinger

The 13 railway stations in Easter Ross (VC106) were visited twice in 2001 and twice in 2018 between May and August. All vascular plants in publically accessible areas were noted.

During this time rail services have increased and there has been an increased use of herbicide as well as the development and fencing off of some areas. Wild flowers have flourished in disused goods yards and car parks in the past, but these habitats have become less favourable in recent years.

In 2001 654 records were made of 203 species. In 2018 458 records were made of 137 species, a substantial reduction. 96 species recorded in 2001 were not refound in 2018 and in 2018 30 species were found not seen in the previous survey. A comparison with an incomplete survey in 2011 suggests that this reduction may now have levelled out.

Since 2000 new or first recent records have been made on stations for some species including *Orobanche minor* (Common Broomrape), *Sherardia arvensis* (Field Madder) and *Crassula tillaea* (Mossy Stonecrop).

Although management of stations sites is necessary, it is desirable that some wildflower sites are left undisturbed.

Recording in 2018 in West Sutherland (v.c.108) Ian Evans and Gwen Richards

Recording during 2018 focussed on eastern parts of the vice-county, from a self-catering base at Tongue. We are grateful to the Finnis Scott Foundation and the Caithness and North Sutherland Fund for help with expenses.

Three weeks' fieldwork generated some 3,500 records from 31 monads and noteworthy finds included:

Gymnadenia densiflora (Marsh Fragrant-orchid) found by Andy and Liz Amphlett near Ardvreck Castle (NC2423).
Goodyera repens (Creeping Lady's-tresses) spotted by Mike Donaghy beside the main path up Quinag (NC2327), an odd find, since nowhere near any trees.

Ophioglossum azoricum (Small Adder's-tongue) found by Clive Chatters in an old cultivation area at Cnoc Beag, Clachtoll (NC0426), far from its usual cliff-top habitats.

Two species of cultivated or waste ground plants new to West Sutherland occurred in gardens in Assynt: *Anagallis arvensis* (Scarlet Pimpernel) at Clachtoll (NC0427) and *Malva sylvestris* (Common Mallow) at Nedd (NC1331).

The limestone island, Eilean Choraidh in Loch Eriboll (NC4258) was visited on 20th July; there are no previous records? Amongst 112 species noted were *Coeloglossum viride* (Frog Orchid), *Draba incana* (Hoary Whitlowgrass) and a large stand of *Ophioglossum vulgatum* (Adder's-tongue) in a WW2 bomb crater. We also had a close encounter with a pair of otters. The wide variety of habitats recorded along the north coast and inland was illustrated by a selection of photographs.

Thanks to Gordon Rothero, Ro Scott and Francis and Margaret Higgins (Caithness) for their help with fieldwork, to other BSBI members for their records, and to Wildland Ltd. for transport to remote areas.

Progress towards a tetrad flora of the Outer Hebrides (v.c.110) Paul A. Smith

Concentrated recording in v.c.110 over approx 15 years towards a tetrad flora has considerably expanded our knowledge of its flora. In 2017 a milestone was reached with the

200,000th record for the vice-county. A progress report is presented, together with some of the interesting discoveries made so far.

HIRTA, ST KILDA an Island of Flowers (v.c.110) **Falgunee Sarker**

St Kilda consists of an archipelago situated in the North Atlantic. These islands formed from a volcanic event. Flora and fauna arrived here over time and developed unique characteristic to adopt and adapt to this archipelago. I visited Hirta with National Trust for Scotland's voluntary work programme from 20th June to 3rd July 2013. I have recorded flora within the village area, Cleit, Black houses, Houses, Graveyard and Head Dyke, in Abhainn Mhor, in the Quarry, in the Gap and in and around the Helipad, Beach and Jetty. Plants recorded in the Helipad, Beach and Jetty area showed human influence.

In Hirta evolution has been playing its role in designing and shaping the flora. Here the survival of the flora means a constant battle between strong wind and Soay sheep grazing. There were wet ground, rocky ground and slopes supporting many plant communities. The growth of plants at high altitude was stunted but the flowers were not compromised.

List of plant photographs used in the posters

Apium nodiflorum (Fool's-water-cress)	*Pinguicula vulgaris* (Common Butterwort)
Asplenium marinum (Sea spleenwort)	*Plantago maritima* (Sea plantain)
Athyrium filix-femina (Lady fern)	*Polygala serpyllifolia* (Heath Milkwort)
Dactylorhiza maculata (Heath spotted orchid)	*Rumex acetosa* (Common Sorrel)
Drosera rotundifolia (Round-leaved Sundew)	*Saxifraga oppositifolia* (Purple Saxifrage)
Festuca vivipara (Viviparous Fescue)	*Selaginella selaginoides* (Lesser clubmoss)
Hygrocybe splendidissima	*Taraxacum faeroense*
Hypericum pulchrum (Slender St John's-wort)	*Taraxacum pankhurstianum*
Pedicularis sylvatica (Lousewort)	*Thymus praecox* (Wild Thyme)

Dandelion Clocks **Michael Braithwaite**

A poem that sets out a mystery waiting to be solved by you!

Botany, Inspiration for Art! **Susan White**

I have been interested in drawing, especially plants all my life but as the years passed I seemed to be doing less and less drawing. After listening to BSBI Wildflower Half Hour Podcast and visiting their website I discovered an interesting link to "Identiplant", an online course for Beginner Botanists! I signed up for the course; I was fascinated by all the plant parts and loved dissecting and using a hand lens to discover the inner world of plants. **Identiplant has proved an Inspiration and I have enjoyed every minute.**

I joined BSBI and have been involved in recording expeditions. It was great to be outdoors, looking and helping to record British Wildflowers, experiencing all weathers. I have been to beautiful locations, been bitten by horseflies and waded through rivers up to my knees, all great fun! I decided to keep a notebook/diary and it has proved a turning point for me, as it has re-kindled my love of drawing, which has now become central to my life.

In the summer I volunteered in the Herbarium at RBGE for two weeks as part of the British Data Blitz Project. The Herbarium is a treasure trove of beautiful specimens. I was very kindly given permission to draw in the Herbarium, and am currently visiting the Herbarium for two days a week to sketch Marine Algae! I am now working on Textile Designs based on recent Art Work.

On display are examples of my notebooks and watercolours of plants and algae.

Proposed Multi-Access Keys for *Taraxacum* (Dandelions) **Leslie Tucker**

Dublin Naturalists' Field Club hosted *Taraxacum* studies in May 2018, providing good company, fine weather and luxuriant herbs. Unfortunately, John Richards' hip-replacement surgery intervened; exposing the rump group's jizz-recognition weaknesses.

First day out, a robust clump, evidently section *Ruderalia* (Weeds), precociously keyed "petioles white to green"; but only unrecognisable options followed.‡ Circumspect back-tracking revealed more-appropriate "pink" rosette forms. Belatedly, we also admitted getting 'first sight' prejudice from disorderly involucral bracts; subsequently justified*.

‡ Had Plant Crib characters actually matched latterly, *T. dilaceratum* (Lacerate-leaved D.) might have been first-recorded. Conversely, its typically Dutch-described "rosafarvede bladbaser" forms would be miss-keyed!

Retrospectively, Handbook advises: p11 "[Consider] the range of possible forms." p16. " … three-dimensional, subtleties of leaf-shape [accentuate on pressing flat. Conversely,] involucral bud characteristics are mostly lost in herbaria; *e.g. T. aequilobum* (Twisted-Bracted D.)* readily identified in the field." p17: "Because [developmentally] so plastic, identification depends on consideration of several characters at the same time; [so, dichotomous] keys are impracticable. [Alternative,.] multi-access character state profiles† [indicate] fewer species to be checked in systematic accounts."

Reviewing van Soest's (1969) pioneering interior and exterior leaf distinctions later, enabled identification of Dundee-growing plants as Swiss-described endemic *T.* (sect. *Hamata*) *paradoxachrum* (Lutescent Hook-Lobed D.). Tables condense descriptions into cryptic qualitative criteria and 5-grade least-most quantifications (or Handbook letter equivalents†), including intra-rosular lamination-dissection differences.

The ecology of hybrid speciation in Eyebrights **Max Brown**

Eyebrights (Also known as *Euphrasia*) are a group of 21 hemiparasitic plants in the UK. They poach resources from host plants yet can still photosynthesise. *E. vigursii* is an endemic hybrid species only found in Cornwall. It is thought to be the product of *E. micrantha* and *E. anglica*. For a newly formed hybrid species to establish, it must be reproductively isolated from the parent species. We hypothesise that reproductive isolation can be caused by differential specialisation of host species. To test whether *Euphrasia* species might be specialised on different hosts, we used common garden experiments, as they are ideal to study *Euphrasia* under standardised conditions. We firstly try to understand the variability in lifetime reproductive output (fitness) of one *Euphrasia* species on many different host species as a baseline. We then looked at the hybrid species *E. vigursii* with the parental species and grew them with hosts that occur in each of the *Euphrasia* species habitats. If there is specialisation of hosts we will see that some hosts confer large fitness benefits for one species while simultaneously lowering fitness for the other two. Results from two years' worth of common garden experiments in *Euphrasia* are presented.

Seed quality improvement for grassland restoration (Scotia Seeds) **Giles Laverack**

Habitat loss and degradation has led to increased grassland restoration and demand for native seeds. However there has been little work to establish quality testing of native seeds. A survey of 8 European native species from 25 EU suppliers was conducted and the results show the potential for developing testing methodology and the great variation in the quality of seeds available in the market.

Winter Twigs: identifying woody plants in winter **John Poland**

Identifying native and non-native trees, shrubs and woody climbers (xylophytes) once the leaves have dropped might seem impossible, but it is surprisingly easy and provides an enjoyable (and useful) activity on otherwise botanically dull winter days.

Following the culmination of six year's work, printed copies of the *Field Key to Winter Twigs* (visit http://www.bsbi.org/twigkey to order at pre-pub price) will be available for use alongside a wide selection of fresh specimens showing many of the unique characters found in twigs and buds. It will also be an opportunity for tree veterans to pit their ID skills against the specimens! Many will already know about the 3-whorled brown buds of *Fraxinus angustifolia* (Narrow-leaved Ash) compared with the opposite black buds of *F. excelsior* (Ash) but perhaps not about the stomata on the bud scales of *Salix repens* (Creeping Willow) - absent from *S. arbuscular* (Mountain Willow) or the helpful differences between *Quercus robur* (English Oak) and *Q. petraea* (Sessile Oak) buds.

This exhibit and field guide aim to make winter botany accessible by unlocking a whole new world of identification and aims to further extend the recording season to a year-round pursuit, as well as pique the interest of those who currently record by looking down and not up!

Botanical Society of Scotland (BSS) **Julia Wilson**

The work of the Botanical Society of Scotland is highlighted this year by a series of 4 posters, showing undergraduate student work by Seth Ratcliffe and Robert Engstrom, and progress on our Urban Flora project. Seth won our prize for the best undergraduate final year dissertation on a botanical topic and Robert was awarded a grant for a student project. We also have two posters about this year's progress on our Urban Flora Project, by John Grace and David Chamberlain.

Assessing Epiphytic Lichen Diversity at a Whole Tree Scale in Edinburgh
Seth Ratcliffe, BSS Student Dissertation Prize Winner

The UK's epiphytic lichen flora is important for biodiversity on an international level; however, since the onset of the industrial revolution many species have disappeared from the urban landscape. Epiphytic lichens promote biodiversity and ecosystem function. However, they face many threats in urban habitats, such as nitrogenous pollution and modern arboricultural management. Most contemporary urban lichen studies have focused on data gathered only from tree trunks. This can lead to significant underestimations of diversity at the whole tree level and represents a fundamental gap in our understanding of urban biodiversity.

This project applied the OPAL air quality lichen survey at a whole tree scale in *Acer pseudoplatanus* across Edinburgh and investigated the response of diversity metrics across pollution gradients. It has shown for the first time that the diversity of OPAL indicator taxa is highest in tree crowns, is spatially stratified across the canopy and is maintained in high pollution areas. This study has provided new baseline information in a understudied area. It highlights the importance of tree crowns for urban epiphytic lichen diversity and urban biodiversity. Finally, it raises the need for further research into the effect of arboricultural management techniques on urban epiphytic lichen diversity.

Alternative Treatments for Giant Hogweed (BSS-funded project)
Robert Engstrom, Charlotte Neary, Jay Mackinnon and Rob Briers

Heracleum mantegazzianum (Giant Hogweed, GH) is strongly competitive and can reduce species richness and diversity of other plants. It is a public hazard as its sap contains photosensitising chemicals which can cause serious blistering of the skin. Management of

smaller hard-to-reach stands is usually by glyphosate-based herbicide (GBH) and knapsack sprayers. Glyphosate is effective and cheap but can have adverse effects on non-target organisms and possibly on human health. The City of Edinburgh Council uses an estimated 4700 litres annually and is looking into alternatives to reduce this; however, little information is available to compare efficacy and practicality of alternatives.

Here we show that root cutting and a reduced concentration of GBH are not significantly different from the widely used standard when applied over consecutive years in difficult riparian terrain. In total, 75 quadrats were set up to record different GH growth variables (numbers, height, % cover) and one of three treatments randomly assigned (root-cutting, standard GBH, reduced GBH). Regrowth was recorded on average 23 days later. Data collection from permanently-marked quadrats is intended to continue for several more years. Future work will also test the effectiveness of above-ground cutting and stem injection in comparison to existing treatments and survey catchment area managers and conservation workers to explore acceptability of alternative treatments.

BSS Urban Flora of Scotland: Project Update **John Grace**

Since 2015 we have been recording the urban flora of Scotland, creating a database that will be available for anyone. We record all plant species including mosses and liverworts, and we tag the record with habitat information. In this way we can explore how the changing townscapes are bringing about floristic changes. Moreover, we will be able to make direct comparison of east-west and north-south differences, and track species which are moving north under the influence of warming. We work closely with BSBI and several natural history groups. So far, we have visited a large number of towns and cities but there are many more to look at. We have collected 25,000 records and encountered 1,218 species.

In the poster we illustrate a few of the interesting plants that have turned up in our survey, and we also present our species-accumulation curve, which relates the number of species found to the recording effort. This enables us to chart our progress and it also will provide an estimate of how many species there are altogether i.e. the species 'seen' and the 'unseen' species. For this we will use a family of theoretical models which began to be developed in the 1970s.

A Promenade along the Shoreline of Auld Reekie, BSS Urban Flora Project
David Chamberlain

This project has been designed to assess the effects of salt spray and urban pollution on the bryophytes along Edinburgh's shoreline. Mosses and liverworts have been recorded from each 1km square to a maximum of 100m from the High Tide mark between the city boundary west of S. Queensferry to the Musselburgh boundary at Eastfield. From the western semi-natural wooded shoreline to the uncompromising cityscape of Leith and Portobello the contrasts are stark, yet there are mosses and liverworts, even in the most challenging habitats.

Botanical news from Ben Lawers (v.c.88) and Glencoe (v.c.99)
Dan Watson (National Trust for Scotland)

Details of some of the work carried out by NTS ecologists over 2018, including monitoring of *Saxifraga cernua* (Drooping Saxifrage) and *Minuartia verna* (Spring Sandwort) at Ben Lawers and finds of new locations for nationally rare and scarce plants at Glencoe including *Carex lachenalii* (Hare's-foot Sedge), *C. saxatilis* (Russet Sedge), *Juncus castaneus* (Chestnut Rush) and *Poa glauca* (Glaucous Meadow-grass).

The point made is that interesting finds can be made in botanically interesting upland sites by searching areas other than the hotspots already known. Also, news of how *Sagina nivalis* (Snow Pearlwort) is faring on Beinn Heasgarnich, thirty-seven years after it was last recorded there.

BSBI Plant Families Workshops 2018 **Faith Anstey**

We held three very successful workshops this year: two on Plant Families, at Barony College Dumfries, led by Chris Miles, and at Hazlehead Aberdeen led by Aileen Meek, plus a Grasses workshop at Mugdock Park outside Glasgow. We also ran a Grasses workshop at the request of the BSS at Holyrood Education Centre.

There were two associated field meetings, for workshop participants and any other people interested in improving their field ID skills. One was at St Cyrus NNR and the other in Perthshire at Richard's Island on the Tummel.

Next year we hope to hold two or three Plant Families workshops – in the Borders, in the Aberdeen area and in Edinburgh, plus a Grasses workshop in the Stirling area. There is a new workshop in the pipeline, on Sedges and Rushes, which will probably be at Mugdock Park.

Plantlife Scotland **Alistair Whyte**

For over 25 years, Plantlife has had a single ideal: to save and celebrate wild plants, fungi and the places where they live. We work with land managers, government, businesses, local communities and conservation organisations to save wild plants and their habitats. We **conserve and restore** native plant diversity on nature reserves, Important Plant Areas and local habitats through innovative programmes that lead the way. We **develop and lead restoration programmes** for our most important habitats so their future is secured for wildlife and people. We work with citizen scientists and academics to **build a body of evidence** to ensure the value of wild plants and fungi are taken into account by decision makers. We **campaign** for better recognition, protection and conservation action for wild plants. We **reconnect people** with the extraordinary heritage of our wild plants and fungi. We work with global partners to **identify, protect and manage** Important Plant Areas in key bio-geographic regions around the world.

We can't do it alone! If you, like us, believe that wild plants and their habitats should be thriving, please help us realise our vision. We are looking for people to... **get involved** by volunteering on conservation projects or on our outreach and education programmes; **share knowledge** by joining in our citizen scientist programmes, and supporting our campaigns; **support us** by joining our membership or donating to our projects.

https://www.plantlife.org.uk/scotland

Botanical Society of Britain and Ireland (BSBI) **Jim McIntosh**

The BSBI is the leading organisation for amateur and professional botanists in Britain and Ireland.

- We promote the study of, and interest in, the British and Irish vascular plant flora
- We support and encourage, carry out and participate in research into the taxonomy, ecology, biogeography and conservation of our flora.

If you are not already a member of the BSBI - and would like to support and participate in our work – please join us! Pick up our membership leaflet and ask me, Jim McIntosh if you have any queries about joining. There is no better way to improve your field skills than by going on

our field meetings & workshops. BSBI membership is also a great line in your CV if you are looking for related work.

A range of leaflets, including the most recent BSBI Annual Review and BSBI News are available to take away; recent issues of BSBI Scottish Newsletter and other BSBI publications are displayed. I would be pleased to supply promotional material to anyone who plans to go to events, such as conferences or workshops, which potential new members might attend. Check out the BSBI Scottish webpages on https://bsbi.org/scotland.

Invasive non-native plants – priorities for surveillance SNH (Scottish Natural Heritage)

The EU Regulation on invasive alien species identifies twenty-three plant species whose potential adverse impacts are such that concerted action across Europe is required. As well as placing restrictions on keeping and selling these plants, the Regulation requires governments to consider how best to manage them within their territory.

The Scottish Non-Native Species Action Group has identified a Prevention List of species not yet established in the wild in Scotland and likely to become invasive here. It has also identified a short-list of established species as Management Priorities, which can be controlled effectively at a landscape-scale.

This poster highlights six of these species as priorities for recording in Scotland. Of these, two species (*Ludwigia grandiflora* (Water Primrose) and *Myriophyllum heterophyllum* (Variable-leaves Water-milfoil)) have not yet been recorded in Scotland, two (*Hyrocotyle ranunculoides* (Floating Pennywort) and *Myriophyllum aquaticum* (Parrot's Feather) have been recorded in a very limited number of locations and have been or are in the process of being eradicated, and two, *Lysichiton americanus* (American Skunk-cabbage) and *Gunnera tinctoria* (Giant-rhubarb) are already established in certain geographic areas but generally absent from others.

BSBI recorders can help with national surveillance efforts by being on the lookout for these species. Any records submitted to the BSBI database, Scotland's Environment Website or iRecord will be assessed by SNH and SEPA, enabling an appropriate response.

The British Pteridological Society for fern enthusiasts Bridget Laue

The British Pteridological Society (BPS) has a Scottish group that visits and monitors ferns in the wild and enjoys cultivating them in our gardens; everyone is welcome to join our excursions. We have leaflets offering suggestions for growing ferns and also an assortment of books about ferns and lycophytes (clubmosses and allies).

Please talk with us for more information. This year our display will also include information about a possible new species of moonwort (*Botrychium nordicum)* in Scotland.

BSBI Photographic Competition Natalie Harmsworth

A beautiful display of 74 photographs for this year's competition is on show. Vote for your favourites in each of the two categories: Plants and People and Plants and Pollinators. The winning photographers will be announced after the main talk and, if present, will be awarded their prizes. The winning photographs will be displayed at the prize giving and will also appear in future BSBI publications.

BSBI Plant Identification Table Douglas McKean

A great opportunity to get expert help with identification with so many experts in the audience! Remember to bring your specimens and handlens!

Introducing the iRecord plant card **Oliver Pescott**

iRecord (www.brc.ac.uk/irecord), and its associated app (https://irecord.org.uk/app), is an increasingly popular online biological recording system, allowing for both personal data management and flow to other organisations (including the BSBI and the NBN). This poster overviews a new "grid-based" or "Atlas" mode of recording available on that platform, developed in association with the BSBI and its recorders.

RBGE Library **Lorna Mitchell, Head of Library, Archives & Publications**

The Library of the Royal Botanic Garden Edinburgh (RBGE) is Scotland's national reference collection for specialist botanical and horticultural resources. With more than 60,000 books, the earliest of which dates back to the 15th century, 150,000 journal volumes, maps, nursery catalogues, botanical art, photographs and *hortus sicci* the RBGE Library is one of this country's largest research libraries. Subjects covered include systematic botany, floras, plant biodiversity and conservation, economic botany, medicinal plants, botanical illustration, plant collecting and botanical history and biography.

The RBGE Archives holds manuscripts, images and photographs relating to the history of the Garden from its beginnings in 1670 to the recent past. The collection also includes correspondence and diaries relating to plant collecting in India and China in the 19th and 20th centuries, for example papers relating to George Forrest and Joseph Rock.

The Library is open for anyone to use on a reference-only basis from 10am to 4pm, Monday to Friday. Access to the Archives and Special Collections (Rare Books collection, Illustrations, Nursery Catalogues, etc) is by appointment. The Library catalogue is available to search at https://rbge.koha-ptfs.co.uk/ and a collection-level listing of the Archives can be found at http://atom.rbge.info/.

RBGE Herbarium **Elspeth Haston, Deputy Herbarium Curator**

The Herbarium of RBGE currently houses 3 million specimens, of which we estimate that over 500,000 were collected in Britain and Ireland. These specimens are an incredible resource for botanists for a wide range of scientific research and we have many researchers from UK and from around the world coming to work with the collections. They represent over 300 years of plant and fungal diversity, including many rare or extinct species. We welcome more Scottish botanists to use these collections and we are also working to make them more accessible through digitisation.

We have been holding an annual Datablitz to increase the number of specimens with a basic catalogue record, we are managing projects to image more of these specimens, and we have been making these images available on citizen science websites for volunteers to transcribe the labels. There are now over 130,000 specimens catalogued from Britain and Ireland of which over 31,000 have been imaged. They are available on the Herbarium Catalogue at http://data.rbge.org.uk/herb. We also have a dedicated Herbarium Catalogue for the British and Irish collections where you can also search by Vice County at http://data.rbge.org.uk/search/herbarium/?british=1. You are very welcome to visit and use the collections. To arrange, please contact us at herbarium@rbge.org.uk. You can also follow us on Twitter @RBGE_Herbarium.