

Scottish Botanists' Conference 2024 – Exhibition Abstracts

James Baker, UKCEH: Genetic diversity in Juniper populations

The common juniper, *Juniperus communis* (Juniper) is one of only three conifers native to the UK. Despite being one of the most widespread conifers in the world, juniper populations in the UK and Europe have been in a state of decline for the past century due to several factors, including habitat fragmentation and the introduction of *Phytophthora austrocedrii*. This project aims to measure the impacts of these effects by quantifying the genetic diversity in juniper populations using genetic fingerprinting, common garden trials and a germination trial. Our findings suggest distinct genetic groups among UK *Juniperus communis* populations and identifies both conserved and plastic adaptations. These findings can provide valuable insights to conservation managers about the resilience and adaptability of remnant juniper populations.

Brian Ballinger: 1. The Flora of Bus Stops- while you are waiting for that bus

16 bus stops in Easter Ross and 20 bus stops in Dundee were visited twice and all wild vascular plants within 10m recorded. In Dundee a mean of 7.5 species per site was found, with a total of 40 species, including 8 neophytes (aliens). In Easter Ross a mean of 12 species per site was noted with a total of 66 different species including 3 neophytes. The difference may be accounted for by the proximity of wild land and relative lack of disturbance in Easter Ross.

Brian Ballinger: 2. Easter Ross town Wall- a Plant Count

10m sections of 20 walls in three Easter Ross towns were examined and the numbers of individual wild plants noted. In the part of the walls 0-1m above ground 15 *Asplenium* plants were counted, *Asplenium trichomanes* and *A. ruta-muraria* (Maidenhair Spleenwort and Wall Rue). In the part of the walls 1-2m above ground 179 *Asplenium* plants were seen. This trend was not apparent for the other species present. Possible causal factors include salt application, herbicides, moisture, light exposure etc.

Will Brown, University of Stirling: Mapping *Rhododendron ponticum*: Distribution and pathways of invasive spread in the temperate rainforest zone

Will Brown walked over 150km to gather *Rhododendron ponticum* distribution data to explore the role of human disturbance corridors on its spread through temperate rainforest zone. Using a variety of modelling methods, he revealed the importance of roads, road traffic, footpaths and railway lines on the probability of *R. ponticum* presence, informing the long-term and landscape-scale management of geographically defensible areas against this highly established invasive plant species.

Butterfly Conservation Northern Ireland: Moths Matter

The Species on the Map project has undertaken monitoring of a variety of Lepidoptera, including three rare moth species: Yellow ringed Carpet (*Entephria flavicinctata*), Scarce Crimson and Gold (*Pyrausta sanguinalis*), and the Dusky Rose Moth (*Lampronia pubicornis*). To understand more about our priority species, we first need to survey the habitat and locate their foodplant. Utilising data provided by the BSBI, we are able to successfully ground truth the locations of foodplants and map them alongside our own species distribution data.

Kirsty Cambell: Seabuckthorn Scotland CIC

We are a small social enterprise based in Edinburgh/East Lothian, finding uses for Seabuckthorn plants. We focus on using as much of the plant as possible and harvesting to support the Ranger Service to control the growth of the plant within bounds. Winner of the Golden Fork for Sustainability at the Great Taste Awards 2024.

Maria Chamberlain and Chris Jeffree: *Geum macrophyllum* (Large-leaved Avens)

Geum macrophyllum is a newcomer that is spreading fast. The poster shows how to distinguish it from *G.urbanum* (Wood Avens). The two species often grow in close proximity, but no hybrids between the two have so far been found in the Edinburgh area.

Rebecca Cornwell: Precious Persistence Project

'Precious Persistence' is a SGSAH funded PhD project at the University of the Highlands and Islands exploring the ecological legacy of historical Shetland botanical writing for our modern understanding and experience of rare plants in the face of climate change. The project aims to mitigate against the chronic issue of shifting baseline syndrome where knowledge is lost between generations leading to an incomplete understanding of how nature is changing.

Jake Dalzell: Plants and plant communities of Strangford Lough Islands

Strangford Lough is a large sea lough in Vice-county H38 (Down), in the North-East of Ireland. Formed by glaciation, it has many iconic drumlin islands. These are of conservation importance, especially for their grassland and saltmarsh, and for birds and seals. However, the flora of the islands is poorly studied, if at all. I kayaked out to the islands, which is much cheaper, easier, and lower-impact than using any other kind of boat. I used 2x2m quadrats following the NVC. These data and satellite imagery were used to classify and map the plant communities on each island. This is a great way to do fieldwork - I'd recommend it!

Liza Downie and Heather McHaffie (BPS): British Pteridological Society Report



2024 saw the discovery of two interesting new fern sites in Scotland.

Kevin Byrne found *Asplenium ceterach* (Rustyback Fern) on the Isle of Colonsay, a first record for the island. Additionally, the late Mary Gibby found a new site for *Hypolepis ambigua* (Pigfern) on Kintyre, indicating that this non-native is spreading and may be in more places on south-west Scotland. Professor Mary Gibby died suddenly in the summer. With an international reputation she generously provided the Society with her knowledge and expertise, participated in our field trips and provided expert verification. She is already sadly missed.

Dunbartonshire, Lanarkshire and Renfrewshire:

Malcolm Macneill - Glasgow urban botanist extraordinaire

Malcolm has made a huge contribution to urban recording throughout the greater Glasgow area in recent years. We highlight some of his recent 'first vice-county records' and reflect on his specialism of hunting for *Saxifraga tridactylites* (Rue-leaved Saxifrage).

West Central Scotland Botany Network

This new 'network of networks' evolved in early 2024. Although most people associate our part of the country with urban sprawl, we have chosen to spotlight recent outings in remote moorland locations in Renfrewshire, Lanarkshire and Dunbartonshire - and some of the plants we found.

Trifoliolate is the revamped newsletter for field botanists across Dunbartonshire, Lanarkshire and Renfrewshire https://bsbi.org/wp-content/uploads/dlm_uploads/2024/07/Trifoliolate-Summer-2024-Final-for-publishing.pdf

David Elston, VC93 North Aberdeenshire: Campaign Cabrach

The parish of Cabrach includes some of the highest and most remote land in North Aberdeenshire. 'Campaign Cabrach' involved three intensive record days in parts of the parish and surrounds that were not well represented in the Distribution Database. As a result, three new native species were added to the county list *Ulex gallii* (Western Gorse), *Omalotheca supina* (Dwarf Cudweed) and *Hieracium dipteroides* (Aberfeldy Hawkweed) and many good finds and refinds were made.

David Elston, VC91 Kincardineshire: Rediscovery of *Astragalus glycyphyllos* (Wild Liquorice)

Astragalus glycyphyllos (Wild Liquorice) was rediscovered at Thornyhive Bay, Kincardineshire in 2024. The first Scottish record of *Astragalus glycyphyllos* (Wild Liquorice) was from Thornyhive Bay in Kincardineshire. Although the species had not been recorded from this site since the late 1800s, a visit on 10th June 2024 found four plants at an early stage of development. A return visit later in the season would be beneficial to get a better estimate of population size.

Jen Farrar & Micheline Sheehy Skeffington: *Plant Atlas 2020*, Mapping Changes in the Distribution of the British & Irish Flora

A poster compiled by Kevin Walker describes the BSBI Plant Atlas 2020 and some of the information that it contains. <https://bsbi.org/plant-atlas-2020>, <https://plantatlas2020.org/atlas>

Luke Gaskell: Plants from Peeblesshire

Crataegus x subsphaerica (Large-sepalled Hawthorn), new to VC78 is an overlooked but apparently widespread hybrid hawthorn. *Senecio inaequidens* (Narrow-leaved Ragwort), this ragwort seems to be extending its range northwards. *Cardamine pratensis flore-pleno* (Double Cuckoo-flower), an attractive clone was growing in profusion by the Glenkinnon burn, Manor Valley.

John Grace: Urban Specialists

Andy Griffiths: Darwin Tree of Life Project

The Darwin Tree of Life, a collaborative project between biodiversity, genomics, and analysis partners, has the ambitious goal of producing reference quality genomes of all eukaryotic species in Britain and Ireland. Within this project The Royal Botanic Garden Edinburgh is leading botanical sampling in Scotland. Our display summarises progress made so far, illustrates sampling locations, and highlights some focal species.

Natalie Harmsworth: The Wildlife Information Centre (TWIC)

TWIC is the Local Environmental Records Centre for SE/central Scotland. We organise a programme of events to support new and existing recorders and to inspire a new generation of naturalists. Visit our stall to find out more and pick up a flyer on our forthcoming conference on 16 November 2024. <https://wildlifeinformation.co.uk/>

Matt Harding, Michael Jeeves & Jim McCleary: A 20-year resurvey of the nationally rare *Ononis reclinata* (Small Restharrow) at Port Kemin, Wigtownshire (VC74)

Ononis reclinata (Small Restharrow) is known from one site in Scotland, on sea cliffs at Port Kemin in Wigtownshire. Due to scrub encroachment, the population had not been visited since 2004. The site was accessed by abseil in July 2024, with just 16 plants recorded in two sub-populations. Although populations of this species are known to fluctuate markedly year on year, the current status of the plant here is of concern. More survey work is required to ascertain the true extent of the population and assess the long-term survival of one of Scotland's rarest plants.

Matt Harding & Mark Lynes: Highlights of the 2024 Alchemilla workshop at Glen Shee and Fealar Estate (VC89 & 92)

BSBI Alchemilla Referee Mark Lynes, ably supported by Martin Robinson and Les Tucker, delivered a fantastic two-day Alchemilla workshop in the south Cairngorms this July, covering species including *Alchemilla sciura* (Cairnwell Lady's-mantle), *A. glomerulans* (Clustered Lady's-mantle) and *A. wichurae* (Rock Lady's-mantle). This poster showcases some of the highlights of the weekend.

Matt Harding, BSBI Scottish Officer: Identification Help Table

If you need help to ID any specimens, bring them along to display on the Identification Help Table! Remember to add a note of who collected it and where and when it was collected. Conference participants can add their determinations to the accompanying note.

Frazer Henderson: Exploration Awards and Study Grants - Scottish Rock Garden Club (SRGC)

The SRGC is promoting its UK and Overseas Exploration Awards (up to £1000 per trip per person and open to all), its Training & Development Grants (up to £3000 per person), and its *Free* Membership offer to horticultural and botanical students.

Sue Jury, BSBI Recorder for VC83: Notable finds in Midlothian VC83 in 2024

These include *Juncus antheratus* (Lax-leaved Rush), *Bromus secalinus* (Rye Brome), *Sisymbrium irio* (London Rocket) and *Salix x friesiana*, specimens displayed

Liz Kungu, BSBI Handbook Editor: BSBI Handbooks

<https://bsbi.org/bsbi-handbooks>

Ophélie Lasne: Wild Strathfillan

Wild Strathfillan is an ambitious nature restoration initiative working across 50,000 hectares of the Loch Lomond and The Trossachs National Park. Through targeted ecological restoration work in partnership with multiple land managers, Wild Strathfillan will build a nature recovery network across the landscape. Delivery phase is underway with projects including habitat creation, habitat restoration, habitat management, invasive species, ecological monitoring, community engagement and research.

Liz Lavery: Biodiversity Survey of Graveyards in Perth & Kinross

During late spring and early summer Alastair and I had fun surveying 47 churchyards and cemeteries for Perth and Kinross Council Green Graveyards Initiative. Some Highlights were amazing Pictish stones, meeting a villager in St Maddoes who had lived in our house in Carnbo, and lots of *Ranunculus bulbosus* (Bulbous Buttercup) and *Luzula campestris* (Field Wood-rush).

Richard Mabbutt: The Basal Project

The Basal Project is a collection of photographs designed to help with the identification of basal and juvenile leaves of plants in the wild in Britain and Ireland, freely available online. It is intended as a guide only, as plant leaf shapes and sizes can vary. As of October 2024, there are 99 plant families containing 1060 species. The intention is for this to grow with the help of all who wish to contribute, so if you have a query or would like to offer photographs to add to the project, please email me at:

richardmabbutt@aol.com

Lindsay Mackinlay, Head of Ecology, Future Forest: Sticky Catchfly Survey, Dumyat, Stirlingshire/Clackmannanshire, VC87

Silene viscaria (Sticky catchfly) is one of the UK's rarest flowers, with a stronghold in the Hillfoots east of Stirling. A comprehensive survey of its main populations on Dumyat was carried out in 2024 by local botanists in order to update a similar survey carried out in 2013. The survey collected data on the number of flowering plants and their distribution on the crags around Dumyat, with some good news.

Aileen Meek: BSBI Scottish Outreach 2024

A total of eleven Outreach Workshops were held this year encompassing 3 Training Field Meetings and one Plant Families Wildflower Tutor-led Walk. Seven separate Training Workshops focussed on (Identifying) Plant Families; Grasses; Sedges and Rushes; Composites; Plants for Habitat Surveys and Ferns. Three Training Field Meetings had the separate subjects of (Identifying) Grasses, Sedges & Rushes, Plant Families and a General Training Field Meeting. The Training the Trainers Workshop took place at the seasons' end.

Feedback from participants, tutors and leaders taking part in Workshops and Training Meetings in Scotland will help to shape our future actions. We invite you to suggest training topics and locations, and you might want to volunteer to engage with new botanists, inspire, teach and encourage! Booklets to help beginners begin to identify 'Wildflowers', 'Grasses', 'Sedges and Rushes' and 'Composites' by Faith Anstey are available to buy.

Chris Miles: Some highlights from the botanical year in Dumfriesshire in 2024

In the display there are details of four botanical events during the year. There are details of a new population of *Hierochloa odorata* (Holy-grass) from WWT Caerlaverock Reserve. There is information on a very small isolated but long-standing population of *Ajuga pyramidalis* (Pyramidal Bugle) in the Southern Uplands. There is an update on the further work done on Brambles and Hawkweeds in the vice county this year.

Ian Strachan, VCR for Westernness: Montane Scrub Restoration Feasibility Study, Glen Nevis

In summer 2024 as part of the Nevis Nature Network project (funded through the Nevis Landscape Partnership) a team of botanists surveyed montane scrub on ground mostly above 650m altitude around Glen Nevis, including Ben Nevis-Aonach Beag and the western Mamores. This took us to many exciting and hardly explored locations. As well as montane shrubs we also took the opportunity to record other vascular plants resulting in many new records for arctic-alpines. Some preliminary findings will be presented.

RBGE Herbarium

Elspeth Haston, RBGE Deputy Herbarium Curator

RBGE Library and Archives

The RBGE Library is home to Scotland's national collection of botanical and horticultural literature; this poster provides more information on the collection and how you can access it online and in-person. Look out for the 'Free to a good home' trolley provided by the Library, that contains books, journals, etc. that are looking for a new home!

Dr Annie Robinson: 2 Posters - Green Jobs for Nature and CIEEM

1. Green Jobs for Nature - a campaign aimed at raising awareness and increasing understanding of careers related to the natural environment and how BSBI attendees can contribute by writing a job profile. There are over 170 [job profiles](#) on the Green Jobs for Nature website to help young people and career changers find out about nature related roles that exist, what they involve, and how to get them. <https://greenjobsfornature.org/>
2. A poster all about CIEEM <https://cieem.net/>

Jonathan Silvertown: The Botanical Society of Scotland

<https://botsoc.scot/>



Sarah Smyth, NatureScot: Progress Update on the Scottish Plant Biodiversity Strategy

The Scottish Government made a commitment to establish a Plant Biodiversity Strategy in December 2020. A diverse group of stakeholders has actively participated in determining the contents of this strategy, culminating in the publication of the vision document available at <https://www.nature.scot/doc/building-plant-biodiversity-strategy-scotland> in 2022. We are now in the process of developing a delivery plan that will complement the Scottish Biodiversity Strategy and align with the Global Biodiversity Framework (<https://www.cbd.int/gbf>).

Polly Spencer-Vellacott, Secretary BSBI Committee for Scotland: BSBI Photographic Competition

<https://bsbi.org/bsbi-photographic-competition>

Les Tucker: *Salix* (Willow) Science & Wickery

Craftwork exhibit incorporating local plant materials. Following trial workshops in Dundee University Botanic Garden, presentations were given to BSS members. Traditional folkloric designs were analysed for training exercises: shoot selection, flexing, twisting, splitting, weaving, etc., to develop apprentices' skills and artefact choices.

Waterways Ireland: Monitoring How Aquatic Plant Communities Respond to Physical Disturbance

Cyclical dredging is an essential practice to maintain canal depth for navigation. There is limited understanding of the response of aquatic plant communities. Sampling by grapnel throws was carried out along sections of canal that had been dredged at different intervals. Notable trends, including the response of charophytes to dredging, are discussed.

Dan Watson, NTS: National Trust for Scotland's species and habitat restoration, Ben Lawers NNR

A poster is displayed showing information on the successful work at Ben Lawers saving *Saxifraga rivularis* (Highland Saxifrage) and pioneering creation of montane willow scrub and tall herb habitats.

Susan White: PERFECT PARTNERS

I have always loved this small Orange tip butterfly, *Anthocaris cardamine* and, after researching which plants it prefers to feed on, I discovered how inextricably linked it is to the *Cardamine pratensis* (Cuckoo flower). They are frequently found in damp meadows, and 100 yrs ago the Orange

Tip was absent in Scotland. The female lays a single egg on a leaf stalk, and then on emerging as a caterpillar, 2 weeks later it feeds mainly on young seed-heads, moulting its skin many times, in the process. It pupates overwinter and finally emerges as a butterfly in May.

It is the male which have the orange tips, but both have a vibrant citrine mottled under wing pattern.

The Cuckoo flower is one of the main sources of nectar for the butterfly as it is in flower in May.



To conclude, the Orange Tip benefits from the plant, at all stages in its development, and the Cuckoo flower is in turn pollinated by the butterfly.

I am very interested in all nature and as wet meadows and hedges are under threat, so are these 2 interlinked species.

They are perfect partners, and exquisite subjects to study and paint

Other BSBI displays:

Matt Harding, BSBI Scottish Officer: BSBI

<https://bsbi.org/> , <https://bsbi.org/scotland>

Louise Marsh, BSBI Communications Officer: BSBI New Year Plant Hunt

<https://bsbi.org/new-year-plant-hunt>

Louise Marsh, BSBI Communications Officer: What can the BSBI do for you?

<https://bsbi.org/>

Louise Marsh, BSBI Communications Officer: Identiplant

<https://identiplant.bsbi.org/>

Louise Marsh, BSBI Communications Officer: Field Identification Skills Certificate

https://bsbi.org/wp-content/uploads/dlm_uploads/2021/05/FISC-booklet-2021.pdf