BSS News

Botanical Society of Scotland

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Field Excursion Reports for Summer 2024

John Grace reflects on the success of the Plant of the Week blog

2024/5 Lecture Programme

Rich Wilson shares some tips for getting the best out of your smartphone's camera

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Cover photo: Common spotted orchid, *Dactylorrhiza fuchsii* © Chris Jeffree

Editorial

Jonathan Silvertown & Jill Thompson

A new look

We hope members will like the new design of BSS News. Despite the steep increase in postage costs and the extra outlay involved in producing the full-colour newsletter that you now hold in your hands, we are sticking with print, or what some non-botanists like to call dead-tree format. An exception to this is for our members with non-UK addresses who will from now on receive BSS News only in pdf format by email. This will of course mean that they receive the publication more promptly, but also that we will not need to pay, or consider charging such members, the high cost of international postage. We hope that our international members will recognise the need for this change and that the upside is a better publication.

We are thrilled to see more students joining BSS and there is a report from Katie Riccio, the student representative on BSS Council, in Society News. From past experience we know that students often change their addresses from one academic year to the next, so henceforth we are making special arrangements to make sure BSS News reaches them. All students will receive a pdf version of BSS News by email and hard copies will be distributed to members at in-person student events and lectures. A print copy will be mailed to any student member with a UK address who requests one.

One of the functions of BSS News in the past has been to record lists of species that members have seen on excursions. Highlights are of interest to readers, but BSS News is not the best place for extensive species lists, which ought to be submitted to iRecord or other databases where they will be of greatest scientific value. However, readers who are interested will find all lengthier species lists associated with items in this issue gathered together and published online on our website at **www.botsoc.scot** as a Species List.

This is the last issue that Jill Thompson will help with after seeing some 25 issues through the press and on to member's doormats. The BSS heartily thank Jill for all her hard work in this role and also for serving until last year as President of the society. Jill will continue as Vice President of BSS for this year. Jonathan Silvertown has taken over as interim editor of BSS News while we put together a new editorial team. We are delighted that Chris Jeffree has already joined us as photo editor. We thank all the contributors to this issue of BSS News. It is written largely by and entirely for members, so why not contribute yourself?

If you would like to write for BSS News, please drop Jonathan a line at BSS-contact@botsoc.scot Anything of botanical interest will be considered. The deadline for copy for the March 2025 issue is January 15th.

Society News

Changes to Officers and Council membership

There have been several changes of BSS council members this year that were announced at the AGM and some changes to officers. We are very grateful and really appreciate the past efforts of David Chamberlain (BSS treasurer), Liz Lavery (general secretary), Kevin Gaffney (membership secretary), Sandy Hetherington (social media) and Ellie Bestington (student representative) for their years of support and work for the BSS. We are very happy to welcome Sim Tang as our new treasurer (David Chamberlain will continue as assistant treasurer to assist Sim), Rachel Thomas is our new general secretary, Maria Chamberlain is acting membership secretary and Katie Riccio (student rep).

Plant Ecology and Diversity is going online-only

Our journal, *Plant Ecology and Diversity* (PE&D), published for us by Taylor and Francis is rare among academic publications in still being published in both print and digital editions. From the next volume, this will change and no print edition will be produced. This has many advantages, such as fewer dead trees and a substantial reduction in the costs of production and distribution. The savings for the society are significant and enable us to spend more on the production of BSS News and also to pass savings on to members who subscribe to PE&D. From October 2024, all members can get an online subscription to PE&D for just £10. This means that the cost of membership and PE&D will be just £30, or £15 for students. If you pay by direct debit this change will be made automatically. Membership alone remains just £20, or £5 for students.

Subscribers will have noticed that PE&D has been appearing rather intermittently of late, for which the editors apologize. Papers in the digital edition appear on the Taylor & Francis website as soon as they have been processed, so with a digital subscription members will receive a more immediate flow of interesting papers. If you prefer to read print, then the reduction in the journal subscription should defray the cost of printing out the papers you want.

What do Members want?

Rich Wilson

Hello everyone, from the Publicity Officer for BSS. So many things are happening in the Society and the botanical world, it's difficult to keep pace. So, I thought I would make a request of the many members and see if any or all of you can help with some ideas for engaging our members. It is nice to have a variety of things to do that just get you out of the house and are often even inspiring. Would really like to hear what is it that you would like in the Newsletter, or maybe on our new website. Maybe suggestions for field events or even a lecture on a topic that piques your interest? Maybe you would like to share some of your expertise or experiences?

Inula hookeri, Hookers Fleabane. Rich Wilson

Please don't restrict yourself and when you think of something – jot it down and send it to me. How to send? Simple send a mail to **BSS-contact@botsoc.scot** with the word **SUGGESTION** in the title. I promise to review every suggestion.

Some ideas that have been offered already are about socialising a bit more with other members of the Society. Things like an online forum for various topics such as endangered Scottish species, garden ecology, meet other members and share interests either in local meetings or online groups. Maybe a notice board about potential jobs or volunteer opportunities that involve botany or related topics? As it is expensive to travel, online/interactive meetings can be fun and interesting but still probably costs a cup of tea while you're involved. See if you have other ideas and topics?

Dionaea muscipula, Venus Flytrap. Rich Wilson

Should we offer some knowledge sharing and discussion about botanical topics our members find interesting? Sounds like a good idea – but do let me know what those topics and interests are. Do we go in-depth or maybe offer a wider breadth of information? Maybe more illustrations or photographs to share with the membership? As an example, even with the smartphones today, the picture capabilities and quality are outstanding. Maybe some sharing of expertise in getting better photos of the wonderful plants we encounter?

Some other ideas have been to collect lists of places to experience, gardens to view, a weekend sojourn that gives that botanical rush... Just keep thinking, and I will keep collecting and sharing those ideas to enhance the BSS experience for our members. It's our society, let's enjoy it!

Botanical Society for Students

Katie Riccio, student rep on BSS Council reports

Getting more students interested in the botanical world is a vital part of increasing its prominence for the future, and as the student representative within the BSS, I have a great interest in showing my fellow students all the fascinating aspects of plants and fungi. The recent creation of a new subgroup, led by and created for students, has been an excellent opportunity to help promote the society and make students feel more welcome here.

In its first year of existence, the student group has held a wide range of events. We started by hosting a plant-themed pub quiz, which was a great chance to meet lots of students. We also conducted a foraging walk that led into a cyanotype printing workshop, using plants to create amazing designs. Five students from the group have also gone on to reach the quarter-finals in this year's Botanical University Challenge! At each event, we have seen lots of eager and interested students taking part, which has been fantastic. We have also done a lot to help spread awareness of events run by the BSS as a whole, so that students know how welcome they are at these.

Members of the Botanical Society of Scotland, Dirty Weekenders, Edinburgh University Green Party, Palaeontology Society and Permaculture Gardening Society gathered at Pleasance for Eco Ceilidh 2024, an evening of socialising and dancing.

As the next academic year gets started, you can expect to see another broad array of events taking place. We already have quite a few ideas planned out, ranging from social get-togethers to even more creative workshops, from exploring bryophytes to designing your own terrarium. All events and other news will be posted on both the BSS website as well as our own social media channels for the student group, allowing every student to stay updated on our activities. Anyone is also encouraged to get in touch with us if they have any questions, or ideas for future events!

How to get in touch

If you would like to learn more about the student group, we have our own section on the BSS website, at https://botsoc.scot/students/

We also have our own Instagram page at https://www.instagram.com/botsocscot/

You can contact us via the student email address at BSS-Students@botsoc.scot

Plant of the Week (2020–2024)

John Grace reflects on the origins and success of the blog

In May 2020 we launched a blog site on behalf of the Botanical Society of Scotland, called ***Botany in Scotland – notes and conversations on all things Botanical***. It was a COVID-lockdown project, to keep our members interested, active and up-to-date. However, there were rather few 'conversations' (there were more of these on the BSS Facebook page) but the part we called Plant of the Week turned out to be popular and so when the lockdown was over we kept the site going.

We were astonished to find that the site was being used not only by our own members but by many others, and that we rapidly acquired an international audience. We were soon being featured at number 18 on the worldwide list of '60 best botanical blogs'.

We've been launching weekly blogs non-stop since May 2020. Each Plant of the Week consists of text (1000–2000 words) and photographs of the selected plant. Several of us have contributed text and images, with a focus on plants that are flowering at the time of writing. We have some excellent images from Chris Jeffree whilst the text reflects the style of that month's author, sometimes being long and scholarly, more often short and pithy. The winter months more challenging for us but we have always found something to write about. Non-flowering taxa and fungi occasionally feature and we would welcome a few fossil species and greenhouse specimens for the winter months.

One advantage of having a dedicated site is that we can check to see how many visitors we have had. After launching a new Plant of the Week on a Sunday evening I anxiously check the following morning to see how well it is doing. Even better, we can download long-term statistics on how many views each plant has had.

Readers may like to see which species have had the most views. I should really apply some sort of weighting to the data to adjust for how long the plant has been 'up' on the site, as the blog is increasingly becoming a resource for enquiries. For example, when we Google *Arum maculatum* the top hit is the Wikipedia entry, then comes he RHS and few nurseries trying to sell me plants for my garden, then the Sussex Botanical Recording Society and after that, we come 9th. We haven't used any trickery to get into Google's list and we haven't paid anyone for this publicity.

One of my reasons for wanting to know how many views each plant has been getting relates to my interest in the concept of 'charismatic species'. This term is widely used in the animal conservation literature. For example, the Giant Panda is charismatic and so is the Robin. We don't know why, except that animals that look a bit humanoid or are naturally colourful and friendly score highly. The potential trouble here is of course that the charismatic ones get more protection whilst the others may suffer neglect from conservation organisations just because people don't like them especially.

So here is the top 10 in the list of plant views on our blog site, but note that some of them are not presented as Plant of the Week but may be in the form of enquiries like 'telling them apart':

Three common buttercups **7640 views**

Armeria maritima **6299 views**

Lesser trefoil & black medick **4812 views**

Leycesteria formosa **4113 views**

Reynoutria japonica **4034 views**

Allium paradoxum **2909 views**

Calystegia sepium **2547 views**

Urban orchids in Scotland **2482 views**

Allium triquetrum **2160 views**

Euphorbia helioscopia **1996 views**

The reasons why people might want to view a species are varied. The second most popular, Thrift, is quite unworthy of its high-up position. Its launch date coincided with National Thrift Week, which was nothing to do with Botany but it seems people chanced upon our blog which searching for ways to be thrifty.

Many in the top 20 are nuisance plants such as invasive aliens, and I expect gardeners were looking to 'know the enemy'. Three of them are about telling the difference between closely related species and we presume beginners look closely at those. The remainder, I submit, are 'charismatic species': orchids, sun spurge, broomrape, bluebell, fairy foxglove, sea mayweed and Scottish thistle (you'll need to read the blog about the thistle to unravel that particular controversial case).

Full species list at www.tinyurl.com/SppLists

Field Excursion Reports *Summer 2024*

By BSS Meetings organiser Maria Chamberlain and others

Annual Foraging Walk and Taster Picnic, Craigmillar Park, Edinburgh, 18th May 2024

Led by Nenya Milne

Nenya's foraging walks have been so successful, that I decided that they should be a regular event in the BSS calendar (for as long as Nenya is willing).

Most of the 25 people assembled at Bridgend Farm were newbies, including several children. This year's event was held three weeks later than last year's, so many of the edible plants described last year (BSS News 121, September 2023, p43) were over. However, we still collected a good list of species.

We were lucky to have with us the legendary Les Tucker from Dundee ('the dandelion and willow man', as some call him) for he entertained the children by demonstrating how whistles are made from the woody shoots of ash and sycamore. The walk finished with a picnic of some freshly collected, and some preprepared dishes laid out on picnic tables at Bridgend. The fare included nettle pie, nettle soup, nettle bread, *Allium paradoxum* and *Allium ursinum* pesto (in two jars to compare), salad containing freshly gathered leaves of *Tilia x europea, Rumex acetosa, Myrrhis odorata*, flowers of *Lamium album*, corollas of *Pentaglottis sempervirens* and bulbils of *Allium paradoxum* (all freshly rinsed and spun), washed down with cool spring tonic water containing goosegrass, dandelion and ribwort plantain.

It was a very happy occasion in glorious sun. The finale was Les Tucker's amusing and entertaining demonstration of rope twisting using rods from a local willow pollard. (He identified it for us of course – *Salix alba* subsp. *vitellina*).

Evening Crash Course in Flowering Plants, King's Buildings, Edinburgh, 30th May 2024

Led by Richard Milne

This annual event was so well attended this year (about 50), that we nearly ran out of Richard's famous laminated sheets. Unlike plant apps on phones (many are available), which offer the answer (sometimes the right one), Richard's method is based on familiarisation with plant families. The laminated sheet takes you through a number of options, culminating in a box in which are listed the possible families for the plant in question.

The British Flora comprises over 1100 native species plus 600 common introduced species (and another 3000 rare introductions). Interestingly, about half these plants belong to just 10 common families. Familiarise yourself with these ten and you are half-way there to identifying our wild plants. You gain a much deeper understanding of the plant than you would from simply pointing a smart phone at one. By the end of the session attendees were able to identify at least five families from among the 100 specimen plants displayed in the lab: *Brassicaceae, Lamiaceae, Caryophyllaceae, Boraginaceae, Apiaceae, Asteraceae.*

Excursion to Millerhill (near Edinburgh), 2nd June 2024

Led by Richard Milne

Richard Milne demonstrating the species rich plant community on the bing at Millerhill

Following on from last year's outing to Millerhill (described by Milne in BSS News 121, September 2023, p44), we decided to go again as it is an excellent place for beginners to consolidate the knowledge gained from Richard Milne's successful and well attended Introductory ID course (see above). We were disappointed to find that a large part of this superbly rich botanical area is fenced off for development. Nevertheless, 11 of us scoured the remaining grounds to find about 180 species, a good list by any standards. Among the finds were some that we did not see last year, including *Briza maxima, Anthriscus caucalis, Carex muricata* and *Lycopsis arvensis*. It is a shame that the Council do not prioritise botanical diversity.

Excursion to Knox Wood (part of Bolton Wood), East Lothian, 8th June 2024

Led by Sim Tang

Knox Wood is a five-acre plot of mixed conifer and naturally regenerated birch woodland with a diverse ground flora. The plot was recently purchased by our own Treasurer, Sim Tang and her partner Alan Mitchell, and she invited the BSS for a blitz. Sim met 5 members of the BSS at the property's double-gated entrance, and we set off into the enchanted woodland recording as we went. Although there wasn't anything terribly rare, and the list mostly included plants found on the 'no man's land track' between the plots, we recorded 118 vascular plants and 43 bryophytes. We were pleased to see the high pH-loving grass Brachypodium sylvaticum, Red Bartsia (*Odontites vernus*), the exquisite yellow pimpernel (*Lysimachia nemorum*) and 3 species of Rose (*R. canina, R. spinosissima, R. micrantha*).

Excursion to Campbell Park, Colinton, Edinburgh, 1st July 2024

Led by the Friends of Campbell Park

We were met in the afternoon by the Park's lively and active Friends Group: Jonathan Davey (also BSS Member), Shona Harrower, Estelle Gill and photographer, Rosemary Burke. The aim of the exercise was to provide a plant list of all the unplanted species in the Park, so as set a baseline for assessing and monitoring management changes. Although the park is small, its biodiversity is improved by newly created 'biozomes' of a woodland path, wildflower meadow and an orchard area. Our urban Flora team was boosted on the day by Sue Jury, Vladimir Krivtsov and Richard Ennos. There were also a few very keen beginners, for whom this exercise was tailor made.

The rain held off and the sun came out as we set off from the pavilion anti-clockwise recording and explaining as we went. We recorded over 100 vascular plants and 16 bryophytes. Notable finds were: *Barbarea verna* (American Wintercress, a scarce alien for Midlothian), *Trifolium medium* (Zig-zag Clover), *Sanicula europea* (Sanicle), and the moss *Hennediella macrophylla* (a rare moss that is becoming more common in the Edinburgh area).

We finished the survey by tea-time and were generously hosted in the pavilion with tea and treats. Thank you, Friends of Campbell Park.

Fort William Residential Weekend, 5th – 8th July 2024

The recorders, left to right: Julia Jeffree, John Grace, David and Maria Chamberlain, photo Chris Jeffree

The group that assembled in Fort William on Friday evening consisted of the core team of John Grace, Julia and Chris Jeffree, Maria and David Chamberlain. Our urban flora map had no entries for Fort William, so we set off on Saturday morning in joyful anticipation of gathering as many records as time would allow. My first impression of Fort William was that every nook and cranny was covered in the cudweed *Gnaphalium uliginosum*. It's not an uncommon plant in the Lothians, but I have never seen it growing in such profusion. However, my most treasured memory of that first morning is standing by the River Ness in an orchid meadow full of flowers. I did wonder if this was really urban till a friendly dog walker informed us that the river's bank was recently restructured using waste soil from a nearby housing development. The meadow had certainly not been sown; the plants just found their own way there.

Fort William is home to many urban habitats variously shaped by marine or montane influences. Over the weekend we surveyed 4 of the 5 monads of the town, altogether clocking up 698 records and 266 species of vascular plants. Notable finds for me included the Northern Marsh Orchid (*Dactylorhiza purpurella*), the Skullcap (*Scutellaria galericulata*), a very beautiful bluey-purple Eyebright (which we could only record as *Euphrasia sp*) and the hybrid Hypericum (*Hypericum x desetangsii*). Also notable were some invasive aliens and rampant garden escapes that are threatening to take over in places, particularly the Japanese knotweed (*Reyonutria japonica*), the Giant Japanese Knotweed (*Reyonutria sachalinensis*), the Goat's Beard (*Aruncus dioicus*), and the Pyrenean Valerian (*Valeriana pyrenaica*).

A strongly purple-pigmented *Euphrasia* at Fort William, photo Chris Jeffree

David Chamberlain was recording bryophytes throughout the weekend and brought some of the trickier species home to identify microscopically. His most notable find was *Didymodon icmadophilus*, a rare moss of mountaintops, here found growing on a gabion by the Fort. Other interesting finds were *Tortella fasciculata* and *Preissia quadrata*. Altogether his bryophyte list came to 189 records and 100 species from four monads.

Reres Hill Dundee 21st May 2024, jointly with the Dundee Naturalists' Society

Brian Ballinger

Reres Hill in Broughty Ferry Dundee was acquired by the city in 1868 and is now a public park of 6 acres overlooking the Tay. It is probably of volcanic origin and has resisted building development, probably partly because of its hilly nature. The entrance arch was created in 1867 to commemorate the jubilee of Queen Victoria. Today the park has mainly planted trees, but some of the park has been managed with a light hand. There has been some recent storm damage to trees in the park, as in so many other places, and this has been mainly cleared by the Council.

The evening was mainly dry, but somewhat overcast and 15 members and friends attended. Over 70 vascular plant species were recorded, all in the same 1km square. Near the entrance *Anthriscus sylvestris* (Cow Parsley) and *Alliaria petiolata* (Garlic Mustard) were prominent. *Geum urbanum* (Herb Bennet) and *Hedera helix agg.* (Ivy) were frequent. Some typical woodland species were noted, including *Allium ursinum* (Ramsons) and *Moehringia trinervia* (Three-nerved Sandwort). The widespread Bluebells or Wild Hyacinths appeared likely to be of garden origin (*Hyacinthoides x massartiana*).

Moehringia trinervia, three-nerved sandwort, ©Chris Jeffree

Near the road *Plantago coronopus* (Buck's–horn Plantain) was found in the mown area, being more usually associated with the shore and perhaps present here because of road salt. The mortared boundary wall featured *Asplenium ruta-muraria* (Wall-rue), so commonly a feature of walls in Dundee near the sea, perhaps partly because of the influence of sea-mists or haar. In all over 70 vascular plant species were recorded. I was told that the summit area was more heath-like in the past, so some species may have been lost by the development of woodland.

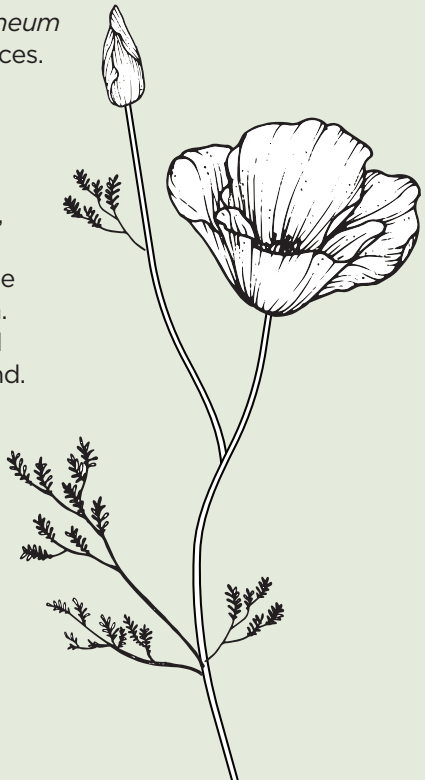
Seaboard Villages, jointly with Inverness Botany Group 11th July 2024

Brian Ballinger and Mary Dean

The Seaboard villages include Shandwick, Balintore and Hilton and they are joined together as a coastal strip with fine views over the Moray Firth. We were blessed with a dry day, as the day before had seen heavy rain. 13 members of the Societies attended, together with representatives from the Tain Field Club. This meeting aimed to record for the Botanical Society of Scotland's Urban Flora project and to enjoy the flora of the coast.

We started at the Seaboard Centre and walked west in the morning and east in the afternoon, remaining in the urban area. There was generally a good coastal path with a wild edge, although recent storms had caused damage in places and, in the east, Atriplex (orache) species were present on the path, sometimes extending into private gardens.

As well as a range of native species, some alien plants (neophytes) were present, probably representing garden throw outs and at times requiring some time to identify. It all made for a colourful display. *Anthyllis vulneraria* (Kidney Vetch) and *Geranium sanguineum* (Bloody Crane's-bill) were present in several places. This had formerly been a site for Scot's Lovage (*Ligusticum scoticum*), but it was not re-found and had probably been destroyed during path improvements. Tree Lupin (*Lupinus arboreus*) was in flower and a variety of poppies bloomed, including *Papaver dubium, Papaver somniferum* and *Eschscholzia californica*. Lesser Meadow Rue (*Thalictrum minus*) was seen alongside the path. We did not cover a great distance, but recorded 80 species in the first tetrad and 72 in the second.



At the end of the meeting some of us visited Fearn Station on the road back to see the Common Broomrape (*Orobanche minor*), more than 100 miles north of its nearest location.

North Berwick Seaweed workshop, 16th June 2024

Led by Professor Alastair Lyndon

By Maria Chamberlain and David Chamberlain

"It was meant to be a family picnic and sunbathing on the beach", I thought, as eleven attendees (+ Sasha the dog) braved the lashing rain to meet outside the North Berwick Seabird Centre. We drank cups of Seabird Centre tea, ate our picnic lunches, and waited for Alastair and the ebbing tide. At about 1.30pm the tide had receded enough to make a start.

Alistair suggested we spread out over the exposed rocky shore and collect different seaweed samples (with holdfasts where possible) into polythene bags. After 45 minutes in the rain, we returned to base, soaked, but happy with bags of jumbled thalli. Vladimir had the brilliant idea to organise an impromptu out-doors laboratory under the eaves of the Centre using restaurant tables (the Centre staff did not mind at all!) and soon our colourful specimens were floating in plastic trays, arranged by their position on the shore. Alistair guided us through the process of identifying about twenty species, assigning them to the green, red and brown categories.

As low tide approached, and in much improved weather, a second foray was organised to collect further nineteen species, from further down the shore. Surveying our spectacular haul of thirty-nine species Alastair explained the large-scale zonation patterns for those species that occurred close to the high-water mark, through those that were intertidal, or occurred in rock pools and finally the sub-tidal species that only occur in a zone where the period of exposure was short or non-existent. Some species serve as indicators. For example, *Ulva intestinalis* grows rapidly in nutrient-rich water and is tolerant of a wide range of salinities. As a result, it can colonise storm-scoured rocks and rain-filled hollows, especially where there is sewage pollution, in the inter-tidal and upper zones. Also worth noting was what was not there. *Ascophyllum nodosum*, which I have seen on many beaches, is a species of more sheltered shores.

By the end of the session, we had an understanding of the characters that can be used to identify seaweeds and with an appreciation of the significance of the marked zonation in the occurrence of the individual species. The table below summarises the species recorded. The species that we collected demonstrate that the rocky shore close to the Seabird Centre is clearly very exposed to winter storms. Thank you, Alistair for an inspiring introduction to a group of plants that pass most of us by.

See photos overleaf →

Field Excursion Reports *Summer 2024*

Searching for seaweeds at North Berwick, with Bass Rock in the distance.
Photos by Ernestine McKay

Full species list at www.tinyurl.com/SppLists

Coul update

Tom Dargie is optimistic that the golf course threat to Coul Links will once again be defeated at the second inquiry, but meanwhile the threat remains.

A sense of *déjà vu* prevails in SE Sutherland. In December, Highland Council's North Planning Applications Committee voted to approve a golf course mostly sited upon protected ground (SSSI/SPA/Ramsar) at Coul Links. NPAC first did that in June 2018.

A second public local inquiry was announced early this year. This time it will last only a week (11–15 November 2024), compared to four for the first in 2019.

The two Reporters, representing Scottish Ministers, have decided on a hearing session format throughout. This is an important difference from the 2019 Inquiry. There will be no grandstanding by cross-examining lawyers, instead discussion topics are being set in advance by the Reporters.

Three inquiry days are devoted to Ecology under five different hearing sessions. Two days feature botanical and lichen themes: effects on SSSI sand dune habitats and the Coul Links plant assemblage, including SSSI species.

Inquiry details are available from **www.dpea.scotland.gov.uk** (search on NA-270-010). More informative content is on the Not Coul website **www.notcoul.org**. Donations to Inquiry costs can be made there. Not Coul is fairly confident the result will be refusal, *déjà vu*.

Dr Tom Dargie FBSS FRSGS
Campaign Lead, Not Coul

Coralroot Orchid *Corallorhiza trifida* was rediscovered at by NatureScot in 2021. The plant has actually shifted position several metres in 2024, moving uphill by 20cm elevation, perhaps to cope with increased wetness at Coul.© Tom Dargie

Fungal Fairyland:

Insh, Cairngorms, early September 2023

Maria Chamberlain and Vladimir Krivtsov

The Chamberlain family have for the past 30 years used a wonderful cottage in Insh to satisfy our annual fungus fix. For the last few years, we shared the week with friends, in particular Vlad and Tanya, both keen mycophiles. Unfortunately, the cottage is now sold, so Vlad and I thought it was time to record our fungal finds for posterity. Our collecting trips necessitated two baskets, one for eating and one for ID, and anything vaguely poisonous was strictly isolated. On our return, Tanya and I would disappear into the kitchen to cook, pickle and dry the edible finds, while Vlad and David repaired to the lounge where two microscopes (dissecting and compound) were set up along with dissecting instruments, reagents, and literature (see the list at the end). The ID sessions on both fungi and mosses extended late into the night.

The weather was glorious, but too dry, so it was not a particularly good bolete week. They were there before we came and there was a fine crop after, but during the week we were there our haul was disappointing. Nevertheless, we cooked, ate and preserved a few choice *Boletus edulis, Imleria badia, Leccinum scabrum* and *L. versipelle*. The 'jacks', *Suillus grevillei* and *S.luteus* were pickled for the winter months according to a traditional Eastern European recipe. However, the staples for breakfast, lunch and dinner were the chanterelles, *Cantharellus cibarius*, and the hedgehog fungus, *Hydnum repandum*. We had those on toast, in stews, in lasagne, and we still had enough to supply the entire neighbourhood on our return.

Of the 119 species of fungi which we identified (listed in the online Species List for this issue), several were deadly poisonous, including the death cap, *Amanita phalloides*, and the Deadly Webcap, *Cortinarius speciosissimus*. The latter has received some publicity in recent years as it has been responsible for several poisonings in Scotland. The most famous was that of the author, Nick Evans, who is said to have mistaken them for a cep (*The Daily Mail*, 2010). Really? It seems to me more likely that Nick Evans would have mistaken young specimens of the poisonous Cortinarius (many species of that genus are deadly) with young specimens of the Slippery Jack (Suillus luteus). See **Figure 1**. Nick and his family suffered kidney failure but survived after dialysis and transplants.

Figure 1. Young specimens of *Cortinarius* and *Suillus*. Guess which is which? Of course, the colour of the spores is different. Also, one has gills and one has pores, butyou need to cut them and inspect them carefully.

The other notable finds were *Cortinarius claricolor* (**Figure 2**), *Volvariella murinella* (edibility unknown), and a truly gigantic specimen of *Tricholoma sejunctum*, whose stipe measured > 20cm long (surely a Guinness record!). Our favourites, however, were various species of Bankeraceae, including the genera of *Sarcodon, Hydnellum* and *Bankera*, particularly *B. fuligeneo-alba* (now in *Phellodon fuligeneoalbus*) because of their very interesting spores. None of those are probably rare, but it was just good to sort them out and look at the details. It is also of note that David revealed a strong allergy to the mere presence of these toothed fungi in 'the lab'. He has also sadly developed an allergy to chanterelles, but strangely enough not to *Hydnum*, even though these are toothed like the Bankeraceae. It would be interesting to find out which active ingredient is responsible.

Figure 2. *Cortinarius claricolor* found at NH831036. There are very few records of this species in Scotland. Its identification is aided by the fact that, unusually for *Cortinarius*, it has almost smooth spores. French literature praises it as a good edible fungus, but in our opinion should be avoided due to its rarity and potential confusion with related poisonous species.

Figure 3. Photos of the gigantic specimen of *Tricholoma sejunctum*, beautiful with its yellowish hues. The middle panel shows it next to the fence, through which it was originally growing in long grass. The shape of the stipe resulted from the necessity to negotiate 2 lower wires. The human hand is shown for scale and also to illustrate the path of the growth.

Reference: *The Daily Mail*, (2010). The deadly dish that poisoned our lives: How *The Horse Whisperer*'s Nicholas Evans almost killed his own family with wild mushrooms. (https://www.dailymail.co.uk/femail/article-1308997/The-deadly-dish-poisoned-lives-How-The-Horse-Whisperers-Nicholas-Evans-killed-family-wild-mushrooms.html). Accessed 22 July 2024.

Full species list at www.tinyurl.com/SppLists

Dundee walls: a plant count

Brian Ballinger

Mortared walls in towns often provide a habitat for plants and some species adapt well to this environment. Other species may also put in more transient appearances on walls.

I previously reported on the plants growing on 50 Dundee walls (Ballinger 2020). A striking finding was the presence of more species on the higher parts of the walls 1–2m above ground in comparison to the lower parts of the walls 0–1m above the ground. The base of the walls had a different flora, which was more akin to the wild plants usually seen on pavements and the wall tops also differed in other ways.

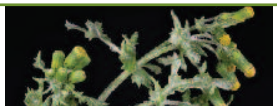
The present study reports the numbers of individual plants growing on the lower and higher parts of the walls in a sample of Dundee walls. The bases and tops of the walls were not included in this survey.

Method

Twenty 50-metre sections of walls were studied in West Dundee near the author's house. The numbers of individual plants of the various species were noted, as well as their position on the walls. Some immature plants could only be identified to genus level. The study was carried out in May 2024.

Results

The number of individual plants of the more numerous species appear in the table. The species with the largest number of plants recorded on the 20 walls were: *Asplenium ruta-muraria* (190 plants), *Asplenium trichomanes* (113) and *Cymbalaria muralis* (72). Most of the *Cerastium* plants were all on one wall.

Species	NUMBER OF PLANTS		
	0 – 1m	1 – 2m	Total
 *Asplenium ruta-muraria*	31	159	190
 *Asplenium trichomanes*	21	92	113
 *Cymbalaria muralis*	18	54	72
 *Cerastium* spp.	6	25	31
 *Senecio vulgaris*	8	0	8
 *Polypodium vulgare*	0	6	6
 *Epilobium* spp.	3	1	4
 *Poa* spp.	3	2	5
 *Cardamine* spp.	1	2	3

Species only recorded once at each height were:

0–1m above ground one plant only: ***Festuca rubra, Sagina procumbens, Dryopteris filix-mas, Arabidopsis thaliana.***

1–2m above the ground one plant only: ***Lamium purpureum, Festuca rubra, Centranthus ruber, Taraxacum, Dryopteris filix-mas, Pseudofumaria lutea.***

Comment

The usual "wall specialist" species, *Asplenium ruta-muraria* (Wall-rue), *Asplenium trichomanes* (Maidenhair Spleenwort) and *Cymbalaria muralis* (Ivy-leaved Toadflax) were the most frequent species, as in my earlier report. Also, as in the earlier report, these species were considerably more frequent in the upper metre of the walls. An earlier study of individual plants suggested that individual plants of Asplenium trichomanes may have a limited lifespan, but appeared to colonise readily. Possible reasons for this distribution include salt application to roads and paths in winter and the frequent use of herbicides at the base of the wall.

There are also other habitat differences between the upper and lower section of the walls, including light exposure and water availability. The possible effect of other factors such a wall cleaning by humans, competition by bryophytes and grazing by invertebrates is uncertain. This part of Dundee on the east coast of Scotland experiences frequent sea-mists or haar, which may bring extra moisture to the walls and influence plant growth.

The number of plants of other species is small, so it is difficult to reach any conclusion about their distribution on walls. The majority of the *Cerastium* plants were on one wall. A similar study of mortared stone walls in some small Easter Ross towns showed a similar trend for the Asplenium species but not for *Cymbalaria* (Ballinger in preparation)

These mortared stone town walls are an important habitat, especially for small ferns.

Reference

Ballinger B. (2020) *50 Walls in Dundee* BSS News 115 24-27

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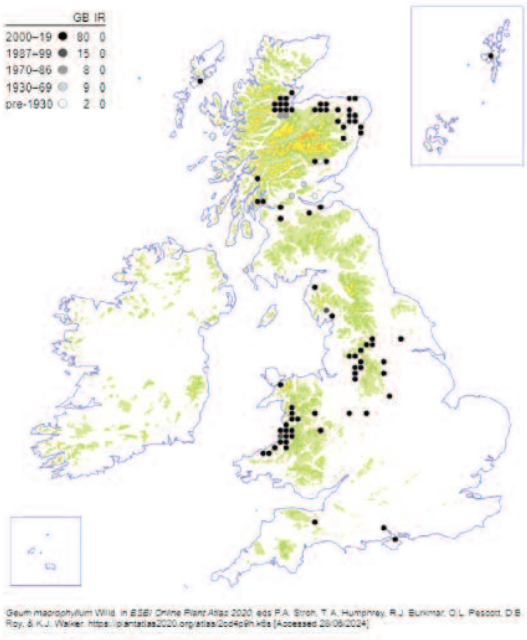
Full species list at www.tinyurl.com/SppLists

Geum macrophyllum
An alien that is spreading

Maria Chamberlain and Chris Jeffree describe how to distinguish this plant from *Geum urbanum*



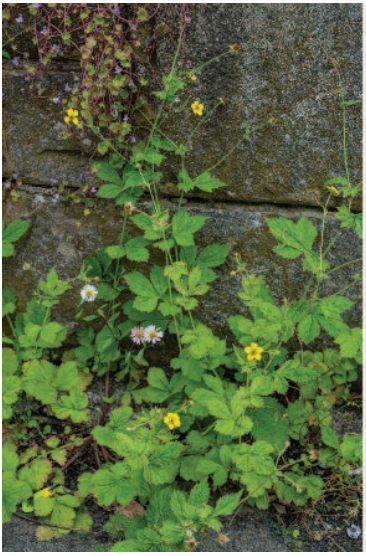
Geum macrophyllum Willd. in *BSBI Online Plant Atlas 2020*. eds P.A. Stroh, T.A. Humphrey, R.J. Burkmar, O.L. Pescott, D.B Roy, & K.J. Walker. https://plantatlas2020.org/atlas/2cd4p8h.kds [Accessed 28/06/2024]

The large-leaved avens, *Geum macrophyllum* Willd., is larger showier and brighter than our native *Geum urbanum*. Its native range extends across North America, over the Bering Sea to north-eastern Russia (Gajewski, 1957).

The BSBI map shows that it is now gaining strongholds in several areas of the UK, although there appear to be none in the London area. In 2003 Stace recorded it in 17 vice-counties; in 2013 the BSBI Distribution Base showed records from 25; in 2019 it showed up in 80.

It was first reported in our home area of Stockbridge in 2010 (McKean and McHaffie, 2012). However, we first became aware of it in our local park just this year, although we did do a thorough survey of the area during lockdown. Although, this species was not mentioned in Plant Life of Edinburgh and the Lothians (2002), it was reputedly already here in the Botanic Garden on Inverleith Row, introduced as a bona fide collection in 1967 from the University of British Columbia. There were then additional collections from Kyoto in 1980 and Hoyt Arboretum in 1988 (Hinchcliffe, pers. comm). Is it possible that these collections in the RBGE and/or the changing climate are responsible for its subsequent spread?

The differences between morphological characters of *Geum urbanum* and *Geum macrophyllum* are summarised by Chris Jeffree in the following table:



Left:
Geum urbanum at the base of a wall, Comely Bank, Edinburgh

Right:
Geum macrophyllum, by the pond in Inverleith Park, Edinburgh

Geum urbanum	*Geum macrophyllum*
Calyx patent or weakly reflexed	Calyx fully reflexed
Calyx visible when flower viewed from above	Calyx not visible from above
Petals, narrowing from half way and bluntly pointed	Petal broader, tips incurved giving a notched appearance
Flowering stems thin, 1 – 1.5mm	Flowering stems thicker, 2 – 4mm
Sparse cyme with few 2(3)4 flowers	Crowded cyme with 8 – 15 flowers
Peduncles long >10cm and thin	Peduncles short 2 – 7 cm and thicker
Glands and long hairs on peduncle, shaggy	No glands, short hairs on peduncle, velvety
Foliage dark green	Foliage light yellow-green
Stem leaves sparsely hairy, no glands	Stem leaves sparsely hairy, no glands.
Leaves coarsely toothed; red hydathodes	Leaves less coarsely toothed with large white hydathodes*
Stem leaves 3-lobed, stipulate	Stem leaves 3-lobed, stipulate, larger
Leaf lobes elliptical	Leaf lobes rounded
Receptacular hairs long, up to 2.5mm or half the length of ripe achenes	Receptacular hairs absent or microscopically short

* Poland (2009) says both have red hydathodes – not so on our samples.

Left: Flower of Geum urbanum. The flowers are borne on long pedicels, the sepals patent and visible between the petals which are flat and taper to a blunt point

Centre: Flower of Geum macrophyllum face view, showing incurved petal tips. The sepals are not visible between petals

Right: Geum macrophyllum side view, showing the very short pedicels, bringing the flowers into crowded groups, the sepals strongly reflexed

Left:
Geum urbanum. An exposed receptacle showing long hairs

Centre:
Geum macrophyllum, exposed receptacle without visible hairs

Right top:
Red hydathodes on leaf teeth of *Geum urbanum*

Right bottom:
White hydathodes on leaf teeth of *Geum macrophyllum*

The question we are now asking is whether some of the plants we are seeing are in fact hybrids between these two species. There is of course also our native *G. rivale*, which is well known to hybridise with *G.urbanum*. The fact that hybrids between all three species exist has been confirmed by Wilcox (2015). He describes the hybrid as *Geum x convallis* M.P. Wilcox, hybr. nov. (*G. macrophyllum* Willd. x *Geum urbanum* L.) with sterile pollen and achenes. McKean and McHaffie (2012) reputedly discovered hybrids in our local area of Stockbridge in 2011, but Wilcox, who subsequently examined all the sites carefully, concluded that all were fertile and hybrids were not present. Our own findings corroborate that because none of the plants we found had sterile achenes, but... the search continues.

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Poland J. and Clement E.J., (2009). The Vegetative Key to the British Flora: A New Approach to Plant Identification.

Smith, P.M., 2002. Plant Life of Edinburgh and the Lothians. Edinburgh University Press.

Wilcox, M.P. (2015). *Geum x convallis* (*G. macrophyllum x G. urbanum,* Rosaceae): a new *Geum* hybrid from England. *New Journal of Botany* 5, 26-31.

Robert Burns' Poppy

Peggy Edwards continues her scholarly series on the plants that appear in the works of the national poet.

Although Robert Burns, Scotland's National Poet, referred to plants over 400 times in his writing, he only mentioned the common red poppy, *Papaver rhoeas*, once in the first line of his epic poem, *Tam o Shanter.*[1]

> But pleasures are like poppies spread,
> You seize the flow'r, its bloom is shed;
> Or like the snow falls in the river,
> A moment white – then melts for ever;
> Or like the borealis race,
> That flit ere you can point their place;
> Or like the rainbow's lovely form
> Evanishing amid the storm.
> Nae man can tether time or tide;
> The hour approaches Tam maun ride:
> That hour o night's black arch the key-stane,
> That dreary hour Tam mounts his beast in:
> And sic a night he taks the road in,
> As ne'er poor sinner was abroad in.[2]

Photo: Common Poppy *Papaver rhoeas* at Stirling Castle ©David Sibbald

Left: Common poppy *Papaver rhoeas* Johann Georg Sturm 1796. Public Domain
Right: Common Poppy *Papaver rhoeas* with black cross and purple stigma rays © David Sibbald

Of this interlude, Burnsian David Sibbald, writes, "There is a long pause now, and the echoes of the preceding lines, 'Kings may be blest but Tam was glorious, O'er a' the ills of life victorious!' die away in the reader's ears. Then, in a most interesting transitional passage, the tone suddenly changes, and the narrator, using standard English and talking with deliberate sententiousness, brings the cold world of reality into this warm atmosphere. First, we have a series of deliberately poetic generalisations about the transitory nature of human pleasures, and the application is then punched home with a proverbial statement in simple, direct language and a return to Scots diction and to Tam.

Mr. Edwin Muir cites the eight lines in standard English as proof of his thesis that ever since the end of the Middle Ages the Scot, because of the peculiar linguistic and cultural situation in which he found himself, has had to feel in Scots and think in English... The point here is not that the poet is introducing thought and must therefore employ standard English, but that he is being deliberate, cold, and formal, in order to contrast the unwelcome truth about pleasure with Tam's cosy feeling about it.

The English in these lines is a deliberately "fancy" English, piling up simile after simile as though to draw attention to the literary quality of the utterance. Mr. Muir's explanation of these lines takes no account of this very conscious poetic diction, he sees it simply as English. Burns is seeking a form of expression which will set the sternness of objective fact against the warm and self-deluding view of the half-intoxicated Tam, and he wants to do this with just a touch of irony.

What more effective device than to employ a deliberate neoclassic English poetic diction in these lines?"[3]

In folklore common poppies were said to be a test of fidelity[1]; picking them was believed to bring thunder and poppies were placed among the timbers under a roof to ward off lightning. Common poppies have been used medicinally as a mild narcotic and sedative for ague (malaria) endemic to Scotland from the Borders north to Shetland. Large low lying and poorly drained areas were particularly suitable for vector mosquitoes while rural labourers of the time generally worked long hours outside and lived in poor housing conditions with little or no sanitation. Eventually land drainage and spraying eliminated mosquito habitat, and the disease was gradually brought under control.[5] Medicinal preparation of the poppy consisted of pulling the petals and spreading them to dry in the sun followed by infusing the dried petals into a cup of water making an herbal tea.[5]

Opium poppy *Papaver somniferum* by Franz Eugen Köhler – Köhler's Medizinal-Pflanzen Public Domain

Another association of Robert Burns with poppies, this time *Papaver somniferum*, the opium poppy, occurred in Irvine in 1781. Burns had been determined to better the family farm and so became an apprentice to a flax-dresser in Irvine to learn how flax was processed. In November of that year Burns suffered a period of illness and depression. Doctor Charles Fleeming visited him five times in eight days, as the doctor noted in his daybook which was discovered in 1956 by pharmacist Charles Balcombe in his attic at 40 Kirkgate. 1781 Robert Burns Lint Dresser Dr "line 3: November 19 & 20 anodyne (probably opium in some form as a painkiller or as an astringent).[6]

After eight days, Burns recovered from what may have been malaria or a severe recurrent attack of rheumatic fever. "Smallpox, malaria and typhoid have all been postulated and dismissed. Whatever the doctor's diagnosis, the medicines appear to have been effective. If it was rheumatic heart disease that killed Burns in 1796, was this the episode of rheumatic fever that precipitated that condition?"[7]

Years later in 1795 Burns referred to ague in the poem *Address To The Toothache*, in which he wrote:

When fevers burn, or ague freezes,
Rheumatics gnaw, or colic squeezes,
Our neebours sympathise to ease us,
Wi pitying moan;
But thee! – thou hell o a' diseases –
They mock our groan![2]

The upside of Burns' time in Irvine is that it was here that Captain Richard Brown encouraged Burns to publish his poems, thus starting him on his literary path.

The common poppy *Papaver rhoeas* is also the flower mentioned in the poem, *In Flanders Fields*, by John McCrae:

In Flanders fields the poppies blow
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie,
In Flanders fields.

Take up our quarrel with the foe:
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

Poppy appeal poppy, © Keith Ratcliffe

During World War I, due to the extent of ground disturbance on the Western front, common poppies bloomed prolifically between the trenches and No Man's Land. In 1915, McCrae had noticed poppies blooming on a battlefield in Belgium and was inspired to write the poem. Not long after the poem was published, Europeans and Americans alike wore silk and paper red poppies to commemorate those who lost their lives in World War I – a tradition that continues on Armistice Day and Remembrance Day.[8]

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7 Murray, David, (2010). Robert Burns and the Medical Profession: Part II (or what did Burns die of?) published in the Homecoming 2009 Edition of the Burns Chronicle Robert Burns World Federation. pp 524- 53 https://electricscotland.com/burns/MedicalProfession.pdf

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A plant-directed Edinburgh introduction

Rachel Thomas, our new Honorary Secretary and Council member, and her partner Bob Parker reflect on the importance of plants in their new life in Edinburgh.

As a lapsed, and distinctly rusty, botanist returning to Edinburgh two years ago it is revealing to realise how much of my new life has been influenced and even directed by plants. Some of these points are common to anyone moving house, especially to a new city, while others are, I suspect, a reflection of my particular botanical interests, those of my partner and of circumstance.

First deciding where to live. Having chosen Edinburgh for reasons of culture and ease of transport to family in the south, our choice of house was determined by the usual practical considerations around rooms, light etc but also for us a green and leafy outlook over a small park with sufficient broadleaf trees (lime, horse chestnut, rowan, wych elm and various species of ornamental *Prunus*) to satisfy my previous life in forestry and enough outdoor space to create a garden to satisfy both our needs to keep our hands in the soil, grow some fruit and veg (raspberries Glen Ample, gooseberries Invicta, Dwarf French beans and Bob's passion – parsnips (Gladiator), and bring some floral colour and foliar diversity into our lives; to say nothing about space to consume plant-derived beverages as the weather permitted. But maybe it was the ceiling lampshade in the kitchen resembling a metre wide dandelion clock that did it. The artificial grass was up, out and sold within a week of our moving in and we now do regular battle with *Taraxacum officinale* agg. and this year after our wet winter strips of umbrella liverwort *Marchantia polymorpha* between the rather attractive paving slabs.

Our local exploration on foot and push-bike continued along the well vegetated former railway lines that connect parts of the city for pedestrians. We've followed the seasons through these linear, urban woods and I've brushed up some of my botanical skills as we've walked although I did puzzle over *Allium paradoxum*, few flowered garlic, for some time until BSS came to my rescue. Further afield on holiday exploring Scotland, I've enjoyed renewing my acquaintance with and introducing Bob to the Black Wood of Rannoch, the regeneration at Dun Coillich Community Woodland, Kinloch Rannoch where deer and sheep are excluded, and searching for Primula scotica in Caithness and Orkney.

Blackwood of Rannoch, Thomas & Parker

Being back in Scotland has enabled me to renew and expand botanical friendships with a former colleague now managing a rewilding project, and with fellow botany students one now a very successful independent funeral celebrant.

A chance meeting at the Queen's Hall as we shared a table over a pre-concert coffee with an initially unknown couple led to my signing up as a voluntary garden guide at RBGE. Friendships, learning and exploration have followed. Our three-month training course was a fascinating whistle-stop tour of the garden's history, plants and management. It's an ongoing, but thoroughly enjoyable, task to keep up to speed on what's looking its best to show off to visitors and deepen our understanding of how the garden is addressing some of the botanical issues of our time including the conservation of the Scottish flora, the management of new, introduced pests and diseases and the role of plants in helping urban communities adapt to climate change. My weekly opportunities to discuss and share these insights with visitors from around the world help, I hope, support RBGE's commitment to exploring the world of plants for a better future.

Music, books and art are a big part of Bob's life, and these too have botanical aspects. The RBGE choir gave their first plant-focused concert on a damp midsummer evening, *The Fair Botanists*, Sara Sheridan was an enjoyable, if not strictly accurate, read while *The Overstory*, Richard Powers reviewed on p34. was an inspiring read. A house with blank walls requires paintings to fill them and we've enjoyed visiting galleries and auctions on the lookout. Some floral still life paintings have been within budget although a stunning piece *Marguerites in a White Vase* by Anne Redpath was not.

Visitors have generously brought plant-based products as house-warming gifts – the usual tea, coffee, chocolate, jam, wine, gin and whisky (a growing interest with potential botanical and ecological elements) have been delightfully abundant although my Ugandan friend, albeit an entomologist, introduced us to the slightly challenging but thankfully insect free, peanut flour. However, once again, her knowledge and local contacts have identified many delicious uses and I'm now rather disappointed that she only brought 2kg with her amongst a host of other gifts.

Finally, this initial dip into our plant-based world would be incomplete without a reference to craft work. Our local community centre is aiming to raise funds for their great work in support of the Newhaven community by knitting the tallest Christmas Tree in Scotland and so I have been knitting green, six-inch squares – over 10,000 required – and am now folding and stitching 'leaves' to slip on the 'branches'. We're well on the way and anticipate completion in time for Christmas 2024.

We hope this diverse selection of botanical connections provides a slightly entertaining and possibly revealing insight into the power of plants to connect so many aspects of our lives.

Book Reviews

Overstory by Richard Powers,
Published by Vintage, 2019

Maria Chamberlain

The book has won lots of plaudits; it was short-listed for the Booker, won the Pulitzer, the Grand Prix de Literature Americaine, and the William Dean Howells medal. It is a school text in parts of the United States, and if you look it up on google, it has pages and pages of websites and study notes.

So, what is it about? It's about trees (the Overstory) and people (the understory), but all get horribly intertwined. The 9 main protagonists are all clever and I have to say that I warmed to none of them. Probably the most likeable is the young Adam Appich, who daubs nail varnish on ants' abdomens to research their adventures and Dr Patricia Westerford, who is modelled on a real tree scientist called Dr Suzanne Simard. It has been claimed that Simard's work on tree communication and cooperation was novel and ground-breaking, many people believing that it showed trees of different species within a forest to be social creatures, cooperating by sharing resources and information. In fact, these conclusions have been shown by a recent review to be exaggerated to the point of myth (Karst et al 2023).

Another of the characters, Olivia, a beautiful girl who dies in a miscalculated act of eco-sabotage, is also modelled on an actual person, called Julia, who lived in a redwood tree for over two years. A redwood's canopy can be home to an entire floral community of ferns, forbs, shrubs, even other trees, and pools in which live endemic salamanders. I think that was probably the best bit of the book for me, as it introduced me to new facts and ideas.

The main idea coursing through the book is that Homo sapiens, the wise guy, sees the living world as a resource to be used and any surviving wilderness to be subdued. Only about 2% of N America's primary forest is left (I think the figure is 4% in Scotland). Loggers think that trees are there to be cropped. It's a problem I have often come across in our objections to developments that threaten fragile ecosystems. The reply from the developers is always 'we will reinstate it'. The fact is that you can't, because everything is connected. The right mix of fungi, bacteria, mosses, liverworts, bugs and birds which underpins each ecosystem can't easily be recreated.

These ideas are worthwhile, and it did need a narrative to communicate them. But what I don't understand is why Powers made the narrative so abstruse, his characters so unlikeable and the text so unreadable.

The use of the present tense throughout is off putting. Also, there was too much about these boring people and not enough about the fascinating trees. The trees are not even named right. We are told that Mimas is a giant sequoia, but giant sequoias are *Sequoiadendron giganteum*, and the tree that salamanders live in in fact the Coastal Redwood, Sequoia sempervirens. Maybe he thought it did not matter.

However, the book is worth reading, whatever you think. Its prophetic message is loud and clear: "Earth will be monetized until all trees grow in straight lines, three people own all seven continents, and every large organism is bred to be slaughtered."

Reference: Karst, J., Jones, M. D., and Hoeksema, J. D. (2023), Positive citation bias and overinterpreted results lead to misinformation on common mycorrhizal networks in forests, *Nat Ecol Evol.,* 7, 501–511.

Nature's Ghosts. The world we lost and how to bring it back **by Sophie Yeo**

Harper North, Manchester, 2024

Jonathan Silvertown

Fixing the biodiversity crisis requires not only protecting what is left, but also recovering what has been lost. This raises two practical questions: 1. How intact is nature now? and 2. To what state should we aim to return it? Both require a historical perspective, which raises two more issues: how far back should we go for a point of reference? and how relevant is the past when we know that the climate is changing so fast? Nature's Ghosts explores these issues with examples drawn from across the planet, including Carrifran in the Borders and Glen Affric in the Highlands. It is an illuminating journey, well told.

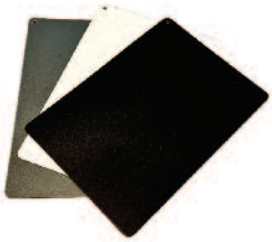
Sophie Yeo is unafraid to be iconoclastic when the scientific evidence contradicts received wisdom, which it often does. Rewilding projects such as Knepp in Sussex are inspired by the theory of Frans Vera who proposed that the European wildwood was of open aspect, heavily disturbed by large herbivores. Yeo concludes that this may have been correct, but only in a previous interglacial and not the present one. This is an inconvenient truth. Also inconvenient is the truth about the Great Wood of Caledon that never existed as the continuous pine forest of romantic imagination. Equally inconvenient is the discovery that reafforestation on highly organic soils emits carbon rather than sequestering it. More welcome will be the discovery that the first farmers probably increased biodiversity in the landscape rather than reducing it, which explains why so many sites of conservation importance in Britain today depend on low-intensity management. Conservation depends on sentiment as well as science, but we shouldn't let the fact that we desperately care about nature cloud the evidence required to care for it.

Photo Tips

Rich Wilson, our publicity officer and new member of Council, shares some tips for getting the best out of your smartphone's camera.

Close-up: The Background

Try using a blank card behind your subject (e.g. black, white, grey, or coloured) to simplify your content focus and not be distracted by other out-of-focus images behind your subject.



Keeping Steady

When taking close-ups, keeping you, the camera, and the subject steady greatly improves the sharpness of the photo. The slightest wind can ruin the shot. Try using both hands by holding the subject steady with one hand and rest the camera/phone on hat same hand/arm. If there is movement – you, the camera, and the subject all move as one – results in a sharper image.

The Focus

When you first look at a photograph, you are often drawn to what is sharp, in-focus. When everything is sharp, the viewer may wander, searching for a focal point – but that single point may not exist! Maybe the eyes of a portrait, or the stamen of a flower is your focal point for the image. Controlling the depth of field (what appears sharp from front to back) is the key (traditionally the f-stop). The closer you are to the focal point, the shallower the depth of field.

*SEQ Figure * ARABIC 2 limited depth of field at f 4.5*

*SEQ Figure * ARABIC 1 improved depth of field at f 7.1*

The Whole Story

A picture may be worth a thousand words, but sometimes a single picture doesn't tell the whole story. An example is a simple wildflower. A photo of a wildflower in a field – pretty, but no detail. A close-up of the wildflower – pretty, but no sense of its size or the environment.

Try making a storyboard of near, far, close-up, the stalk, your hand in the background (for size). Then make a collage of all the photos – The Whole Story.

Sea thrift, *Armeria maritima*, on limestone at the Burren.
© Chris Jeffree

BSS News is published by the Botanical Society of Scotland in March and September each year and is available exclusively to members.

The society welcomes all enthusiasts of plants and fungi.

- Join us at the society's website **www.botsoc.scot**
- Attend our free monthly lectures, held September – May in Edinburgh, Dundee, Tain and Inverness – details overleaf and on our website
- Come along to field meetings, held June – September. see details on our website
- View videos of past lectures on our YouTube channel (Search Botanical Society of Scotland)
- Connect with us on our socials. We are on FaceBook, LinkedIn, X and Instagram.
- Participate in student events – see **@botsocscot** on Instagram for the latest
- Contribute to BSS News – deadlines for copy are 15th January and 15th July.
- Contact us at **BSS-Contact@botsoc.scot**

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Botanical Society Of Scotland
Lecture Programme 2024/2025

The Edinburgh monthly lectures are held jointly with the Royal Botanic Garden, Edinburgh. They will take place at the usual venue: Lecture Theatre at 20A, Inverleith Row, Edinburgh EH3 5LR usually at 6pm (check below). Tea is available from 5.30pm. Members who have email addresses will be notified with information about each lecture. We will endeavour to record the lectures and make them available on our YouTube channel at a later date.

EDINBURGH LECTURES 2024/2025

THURS 26th SEPTEMBER 2024, 6.30pm
(the later time is to allow students to return from field excursion)

Cal Flyn, Journalist and Author

Islands of Abandonment: ruderal species, metallophyte plants and other strange and beautiful residents of the wasteland

THURS 17th OCTOBER 2024, 6pm

Dr Andrea Harper, University of York

Rising from the ashes: why do some trees survive ash dieback disease?

SAT 2th NOVEMBER 2024 all day

Scottish Botanists' Conference
Joint with BSBI

Lecture Theatre, Royal Botanic Garden, Edinburgh

All participants must register.
Please check the BSBI website.

THURS 21st NOVEMBER 2024, 6pm

Dr Greg Kenicer, Royal Botanic Garden, Edinburgh

From adder's spear to Zostera: plant and fungal names in Scotland

THURS 19th DECEMBER 2024, 6pm

Prof. Fiona (Boo) Maisels, University of Stirling

What have elephants ever done for us? An update.

THURS 16th JANUARY 2025, 6pm

Ben Averis, Botanical Consultant

Scotland's western rainforests and increasing hints of it further east

THURS 13th FEBRUARY 2025, 6pm

Christine Reid, Woodland Trust

FLS Glen Prosen: ecological blank canvas or botanical hotspot?

THURS 20th MARCH 2025, 6pm

Prof. Simon Hiscock, Oxford Botanic Garden

The Oxford Ragwort and the Bristol Whitebeam: tales of hybrid speciation

THURS 17th APRIL 2025, 6pm

Dr Edwige Moyroud, University of Cambridge

Nature's palette: understanding how flowers pattern their petals

THURS 15th MAY 2025, 6pm

Nev Kilkenny, Field Mycologist

The role of fungi in carbon sequestration

The lecture will be followed by the AGM

DUNDEE LECTURES 2024/2025

Joint with Dundee Naturalists

7 for 7.15pm, Dalhousie Building, University of Dundee, LT1

TUES 26th NOVEMBER 2024

Matt Harding, BSBI

The work of the BSBI Scottish Officer

TUES 1th February 2025

Professor Alastair Lyndon, Heriot Watt University

Sea grass in Scotland: past, present, and future

TAIN LECTURE 2024/2025

TUES 14th JANUARY, 2025, 7.30pm
Duthac Centre

The lecture is joint with Tain and District Field Club

Dr Brian Ballinger

20 years of recording the Flora of Easter Ross – change and persistence

INVERNESS LECTURE 2024/2025

11th MARCH, 7.30pm 2025

Please check the BSS website
www.botsoc.scot