



BIOLOGICAL RECORDING IN SCOTLAND

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Recorder News

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Led by the Scottish Wildlife Trust and funded through the Heritage Lottery Fund, the partnership project's main objective is to protect red squirrels in the areas where they are most under threat from the spread of non-native invasive grey squirrels. Grey squirrels out-compete red squirrels for food and living space, and some also carry squirrelpox - a virus that doesn't affect them but is deadly to reds.



Gillian Hacker

Saving Scotland's Red Squirrels (SSRS) has launched an online Community Hub where people all over Scotland can help the project by reporting red and grey squirrel sightings or by getting involved with a local volunteer group.

In the Central Lowlands, the project is preventing grey squirrels from spreading further north from the Central Belt and towards Scotland's core red squirrel populations north of the Highland Boundary Line. In the North East, grey squirrel control work is focused on removing an isolated population of grey squirrels that was introduced to Aberdeen in the 1970s and proceeded to spread further into rural areas.

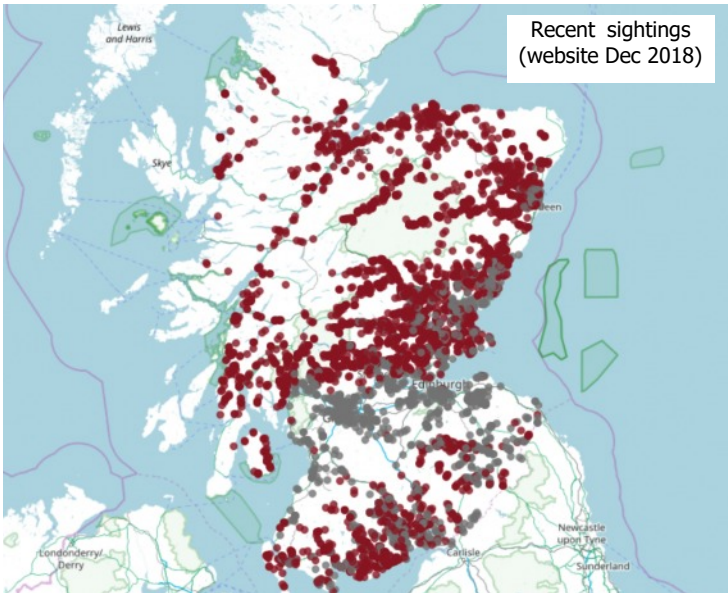
In South Scotland, targeted control focused on priority areas is protecting viable red squirrel populations and managing the risk of squirrelpox. This was first detected in Scotland in 2005,

and unfortunately is now prevalent throughout the south. However, modelling has shown that when grey squirrel numbers are kept sufficiently low, red squirrel populations can successfully recover from the major decline caused by a squirrelpox outbreak.

SSRS has been monitoring red and grey squirrel populations across Scotland since 2009, through a combination of annual feeder box surveys and public sightings. This data helps monitor changes in red and grey squirrel distribution over time, and it also enables the project to identify the best areas for targeting red squirrel conservation action.

with four feeder boxes per tetrads. Sticky tabs collect hair samples from visiting squirrels and are collected three times during the survey period before being returned to SSRS for analysis.

Both the 2017 and 2018 spring survey results indicate that overall Scottish red squirrel populations have remained stable, a sign that with continued effort their decline can be halted. The most positive results were found in North East Scotland, where red squirrels have significantly increased their range, particularly around Aberdeen. This correlates with a recent flurry of red squirrel sightings reported increasingly close to the city centre.



In Tayside and the Central Lowlands, red squirrels have maintained their range, indicating that the project is successfully protecting Scotland's largest red squirrel population north of the Highland Boundary Line.

There were however more

The feeder box survey takes place between March and April each year and is carried out in 2km square tetrads

mixed results in South Scotland. While red squirrels have successfully maintained their range in many areas,

particularly in Dumfries & Galloway, the survey produced no positive results in Berwickshire, where reds are now very rarely reported.

In recognition of the ongoing challenges to maintain a sustained effort to protect Scotland's most vulnerable red squirrel populations, The Community Hub was developed as part of the project's latest 'Developing Community Action' phase. An inter-connected, landscape scale volunteering effort will be essential to the long-term survival of red squirrels in Scotland.

One of the simplest things people are encouraged to do is report their sightings of both red and grey squirrels online. Each verified sighting is added to the Scottish Squirrel Database on NBN Atlas Scotland, administered by the Scottish Wildlife Trust. Sightings can also greatly influence decision making on the ground and enable swift action to be taken. Grey squirrel sightings in or near red squirrel territory are particularly valuable.

The Community Hub adds a new incentive to report squirrel sightings. Now dedicated squirrel spotters can create an account to keep a personal record of their own sightings, whether they want to monitor their local area or simply have fun collecting sightings as they travel round the country. With over 7000 sightings, 2018 has proved a record-breaking year for the project.

There are of course still gaps to be filled. The project is particularly keen to

receive more red squirrel sightings in the Scottish Borders to build as true a picture as possible of the decline in this region and determine the potential for recolonization. As the Aberdeenshire grey squirrel population continues to retreat, outlying sightings are becoming increasingly crucial.



Saving Scotland's Red Squirrels volunteers who join the Community Hub can also enjoy the added benefit of managing their red squirrel conservation data online. Survey volunteers can log in to view their results as soon as they appear, as well as explore results across the country. Grey squirrel control volunteers can submit their trapping data to the project online and explore national results to see how their efforts are contributing to the bigger picture.

'Community action' for the long-term protection of red squirrels will also require volunteers to combine efforts and work together on a landscape scale. SSRS is working to connect volunteers in priority areas and support existing groups to ensure they have the resources and skills to continue to

protect their red squirrels beyond the duration of the project. The Community Hub has been designed to provide local volunteer networks with an online space to promote themselves, stay connected and manage their regional conservation data.

To report a squirrel sighting or find out more about volunteering opportunities in your area, visit the project website at <https://scottishsquirrels.org.uk/>



Chairman's Column

Chris McInerney

A very happy New Year to all members and readers of BRISC.

I'd like to report on the success of the BRISC annual conference at Kelvingrove Museum, Glasgow on the 13th October 2018. It focused on *Recording Urban Wildlife* with a number of speakers giving talks, including presentations by Cath Scott (Glasgow's grassland water voles), Scott Ferguson (Seven Lochs Volunteers) Suzanne Burgess (Glasgow's Buzzing), Fiona Weir (Connecting communities to nature), and Anthony McCluskey (The Urban Butterfly Project).

We also had excellent short talks by students who have received bursaries to attend BRISC sponsored courses. A most enjoyable day.

We look forward to seeing you at the next BRISC conference on Saturday 12th October 2019, which will be held in Edinburgh, at the Methodist Church, Nicolson Square. Please mark this date in your diary.

Another important event late last year was the [Review of the Biological Recording Infrastructure in Scotland](#) published by SBIF, which BRISC has contributed extensively to. Please take time to read this important document. We very much hope that the recommendation described in the review will receive support from government.

Best wishes, and good biological recording through 2019



Editor's column

Sarah Eno

No column this time - conference report pgs 7 to 9 instead!

This conference was especially encouraging because it showed the importance of ID skills and the ways in which these are integrated into what are often limited projects because funding ends. However, in some cases the project is continued by other means and one hopes some of those people involved remain supporters of our mission.

My photo by the way, is a selfie from Beanrig Moss where I was surveying Coral root orchid (*Corallorhiza trifida*) for a BSBI contract. I was reminded by Anthony's bursary talk on orchids, of my question about why the orchid is thriving here but is dying out on neighbouring but similar fen sites. What is its fungal associate, what does it depend on? A research project for someone please!!

NOTE: If you are a member you get access via an email message, to a printable copy in A4 or A5 and in glorious colour!

Want to Study Wildlife?

BRISC have been offering bursaries to help people in Scotland attending a training course in natural history field studies since 2009. Along with various partners we have helped fund over 60 participants to attend courses such as "Introduction to solitary bees" and "Introduction to mosses and liverworts". Generally, courses are run by the Field Studies Council, though applications from any professional programme are welcome.

In 2019, we are offering the following:

- BRISC and the Glasgow Natural History Society bursaries are open to all.
- SNH (Scottish Natural Heritage) bursaries are targeted at those aged 25 and under.
- The Malloch Society sponsors courses to study true flies (Diptera).
- The Inverness Botany Group welcome applications from those living/recording in the Highlands.

Bursaries are open to anyone living in Scotland and will be for £200 or 75% of the cost of the course, whichever is lowest. We ask those who attend a course to write a short article for Recorder News; reports can be found in previous issues that show the range of courses attended and the benefits that bursaries bring to people. BRISC considers this a key part of what we do, and we are happy to welcome new partners to help keep the funding for bursaries running.

Full details and an application form for 2019 (closing date is 31 January) can be found on the BRISC website.

BRISC PROJECTS BURSARY REPORTS

Bryophytes

Andrew Painting

Biological recording involves two processes. The first is noticing the life forms with which we share our world, and the second is sharing with other people about what we've noticed.

Introductory courses open up whole new worlds and ways of understanding ecological processes. They break through the seemingly impenetrable barrier of incomprehension which often looms large over those attempting to understand new groups of species. Such courses cannot hope to teach you everything about a new group. Instead they give the student the leg-up needed to push into new scientific realms. Beyond identification, this course opened up a whole way of life to me - the complex reproductive arrangements of mosses, their curious dealings with water,



the intricate differences between mosses and liverworts. Being one cell thick, their leaves are ideally suited to microscope work. There is a skill to preparing slides and using keys, but it is a learnable skill. Equally impressive, though learnable, is the skill of 'jizz'; learning to recognise species (or the potential to find certain species) by their

habitat, growth form and distinct 'mossiness'.

So now I am beginning to notice bryophytes it is time to start informing others. New bryophyte records will soon be filtering into the books from upper Deeside. A foray onto scree slopes, flush edges and bog pools around Mar Lodge Estate NNR with fellow course attendee Petra Vergunst, has already yielded a chunky haul of species new to me, if not to the area. I'll be writing up bryophyte crib sheets for environmental workers in upper Deeside. After a bit more practice with a scalpel and microscope, I'll be running some 'moss days', to help other people notice the bryophytes around them. The list maker in me is already working out what species I should be searching for and what rare surprises await around the Cairngorms. I'll soon be rarely finding, wading through the blanket bogs to find hummocks of *Sphagnum austinii*, checking the logs of the Caledonian pinewood for *Buxbaumia viridis* and searching the snow patches for their unique bryophyte assemblages.



I'll certainly be trying to share what I've learned in the coming months, and putting to good use a new 'way of seeing' the bryological world around me.

Water Beetles

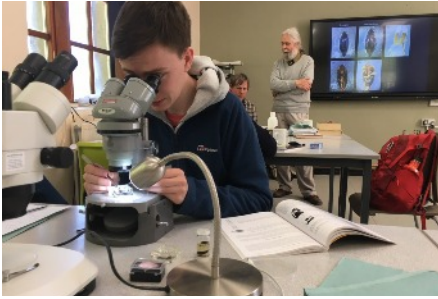
Alistair Lemon

Ponds and freshwater habitats in general have always fascinated me because such a variety of species can call these habitats home yet they remain hidden to us as they live under the surface or hidden around the edges. One group that I have never really had the confidence to delve into more is Water Beetles, so thanks to the BRISC/GNHS/SNH bursary I was able to attend a 3 day workshop on identifying and recording water beetles at FSC Malham Tarn.

Most train journeys I undertake do not end in such quaint destinations as Settle and the beautiful final stop of Malham Tarn.



The course was led by Peter and Sharon Flint, both superb ecologists, who provided a weekend full of learning from showing us aquatic survey techniques to helping us get to grips with identification keys and water beetle anatomy (I even found myself extracting some genitalia). The course provided a really good introduction on where to start when looking at water beetles, highlighting the resources available and where to go for help. It was great to be able to sit down and just spend a few hours each day going through specimens and being able to compare similar species.



Going forward I now have a better understanding of where to begin when I am trying to identify water beetles I have collected during surveys and am looking forward to getting more to grips with this group. The course has also given me greater confidence to talk about water beetles while I am out doing pond dipping sessions with schools and at public events, allowing me to share the knowledge I have learnt with a wide audience of people and hopefully helping to inspire the next generation of freshwater biological recorders.

BRISC Conference report

Recording Urban Wildlife

The conference took place in a lecture theatre in the Kelvingrove Museum on 13th October 2018. About 56 people attended including again a good proportion of students which is always encouraging to us silver surfers.

The conference opened with four bursary recipient's reports although Logan's course was yet to take place. So he gave us an engaging history of his growing up and learning about natural history in Shetland. Because Shetland is under recorded for Bryophytes, this was to be Logan's bursary focus in late October. We look forward to his report!

Anthony McCluskey had some further interesting information on Orchids (see September 2018 news for his bursary report). All orchids have a mycorrhizal fungal association especially in the early stage of seed development. Some, such as the almost non-chlorophyllous *Neottia nidus-avis* Bird's Nest Orchid depend on the association throughout the life cycle.

A third bursary recipient, Catherine Cumming had decided to focus on lichens. "An ecosystem in your hand" are her words because of their complex associations with fungi and bacteria. The *Peltigera* (Dog lichens) genus for example can have a cyanobacteria partner. All lichens are named after an associate fungi. Gillian Simpson who had done a Phd on Dung Beetles, wanted to widen her knowledge of this enormous group. She felt she gained much confidence and learnt not only how to pin and ID more species but also, how to build your own equipment, as their patient and excellent tutor had done. Her bursary report should be in the next issue.

Glasgow's grassland water vole talk by Catherine Scott was a delight. Land living (or fossorial) water voles were identified after a call to Environmental Health about rats. Such water voles are uncommon in the UK but can be found commonly in upland meadows in mainland Europe where they can reach pest proportions. Why they are so widespread in Easterhouse on the north side of Glasgow is uncertain. Their status of national importance (SNH) has spawned a raft of research. Much has already been published - see for example Urban grassland support water voles <https://academic.oup.com/jue/article/3/1/jux007/4097929>. Also follow on www.facebook.com/GlasgowWaterVoleProject/

Glasgow is thriving with conservation projects and the 'Glasgow's Buzzing' meadow creation project talk by Suzanne Burgess of Buglife, was inspiring and reassuring. A mix of establishment methods was used from scarifying and seed sowing to plug planting. Success was varied and also was difficult to measure and record due to lack of time and a wet summer. However, 139 invertebrate species were recorded including several species new to Glasgow such as the parasitic solitary bee *Sphecodes geofrellus* seen foraging on Ragwort at Kelvingrove Park and Alexandra Park and the leaf beetle *Galeruca tanacetii* observed feeding on Common Knapweed at Linn Park. The 3 year partnership project finished in 2014 but all the excellent work to create 13 ha of pollinator-rich meadows across parks in the city is continuing to be appropriately managed by the Glasgow Council park staff. Search for more stories via <https://www.buglife.org.uk/>



2016 plans were well laid and £6.3 million partnership and HLF funding had been secured. The main objectives are to create access routes, visitors gateways, improve archaeological, cultural, industrial and natural heritage understanding, enhance species and habitat networks.

See events for 2019 appearing on <http://sevenlochs.org> <https://www.facebook.com/sevenlochs/> .



Fiona Weir's talk about Giving Nature a Home in Glasgow and Edinburgh was primarily about reconnecting nature and people, so outreach and public engagement are strong driving forces. There are numerous specific projects like pledging to help House Sparrows in your garden, planting feed plots for this species; promoting knowledge and support for Swifts or creating pollinator trails such as along Gibson Street in Glasgow. The RSPB is the major force in this and they are very clever at hooking into previous events so the 30th anniversary of the Garden Festival became the August 2018 Glasgow Wildlife Garden Festival. The Sparrow Project was one of BRISC's two afternoon 'field' trips.

The Seven Lochs Wetland Park described by Scott Ferguson, is an ambitious plan to create the largest urban park. The park stretches from east to west across Glasgow, encompassing about 17 sq km of land. Many urban areas are within the boundary as well as the seven lochs and numerous parks but only 1/3rd of the land is owned by the City Council. You can imagine the planning complexity of getting everyone on board in the early years but by summer

More can be seen at: <http://ww2.rspb.org.uk/community/ourwork/b/glasgow/default.aspx>

Anthony who opened the conference, also closed the event by describing the two year Urban Butterfly Project. This has concentrated on the training of 240 people in butterfly ID, mapping, recording and reporting skills. He also trained volunteers in using iRecord and then took us through slides of the iRecord app screens. I (your editor) still mainly use a notebook but then I have to be vigilant in transferring the data to relevant organisations!

In all the talks, what struck me forcefully was not just the levels of energy of the people involved and the ambitions and success of projects but also the range of organisations involved in partnerships. City Councils figure strongly as do many NGO's such as Buglife, RSPB, the University of Glasgow, Central Scotland Green Network, and Scottish Natural Heritage. Many of the people involved are also younger generations (than mine that is) and we hope that some will follow careers in, or continue to support nature conservation. It is sorely needed!

The mornings presentations were followed by lunch and then the BRISC AGM which went a smoothly as usual. BRISC funds are healthy and the raffle raised £101. The new committee can be found on pg 12.

Rachel Tierney and also Christine Johnson gave brief updates on the SBIF Review - see following pages for much more detail on developments and the proposed future actions.

JOIN BRISC and get 3 newsletters and conference benefits

Individual £15
Student £5
Corporate, LRCs etc £50

See BRISC website.

The Review of the Biological Recording Infrastructure in Scotland

Rachel Tierney

SBIF Development Officer

Huge steps have been made towards joining up our biological recording community over the last 40 years, and BRISC has continually been at the forefront of this vision.

At the BRISC BioRec Conference in 1975, Dr Morton Boyd stressed that

"the current diverse and uncoordinated network of data bodies should be improved to cope with the increasing amount of biological information"

and

"that there is a great need to coordinate the local schemes with national ones".

In 2009, the public petition from BRISC, "to urge the Scottish Government to establish integrated local and national structures for collecting, analysing and sharing biological data to inform decision making processes to benefit biodiversity", resulted in the formation of the Scottish Biodiversity Information Forum, SBIF.

In 2010, Scottish Government tasked SBIF's cross-sectoral membership "to develop a strategic approach (by consensus) to the collection, collation and sharing of biological data across Scotland".

This has now been achieved!

A blueprint for the future

Under the leadership of Ellen Wilson, SBIF Chair, a complete review of our biological recording community has been undertaken. Over the past two years we held four

workshops attended by 39 organisations, received 290 responses to a public questionnaire and interviewed 42 individuals.

It has been a huge community effort and we are grateful to everyone who has contributed their valuable insight by sharing with us what works well; what isn't working so well and how things can be improved.

The accumulation of this knowledge has been brought together into [A Review of the Biological Recording Infrastructure in Scotland](#) which was launched on the 14th November 2018.

24 Recommendations

This review is a visionary blueprint for transforming Scotland's biological recording infrastructure and details 24 recommendations on how we can achieve this transformation.

Fundamentally, this Review sets out the need for increased investment in our biological recording infrastructure. We need to overcome the on-going challenges of uncertain and inadequate funding, so that Scotland can become a world leader in understanding, nurturing, cataloguing and improving the natural world.

By 2025, the SBIF Review aims to:

1. Improve geographical and taxonomic data coverage through supporting the network of biological recorders across Scotland who already do so much for our understanding of Scotland's land, freshwaters and seas.
2. Empower new biological recorders to build their taxonomic skills so they can contribute to our shared knowledge and understanding of Scotland's changing environments in the future.

3. Embrace the use of new technology to deliver efficient services so that we can relieve the pressure on key individuals in the network.
4. Bring our data services together at a regional, national and central level so that those who need access to data can rapidly access consistent data services anywhere in the country.
5. Champion a single, central repository for biological records and simplify data submission routes.

In the words of the late John Sawyer whose vision kick-started this Review, "we will grow our commitment to share biological data and information to provide a comprehensive, unparalleled and authoritative understanding of our natural world". Together we need to ensure that our biodiversity information is sufficiently up-to-date, and accessible, so we can collectively inform sustainable action for the wildlife and people of Scotland.

How will the recommendations support recorders?

The Review strives to ensure everyone involved in biological recording, from individual recorders and verifiers to local Recording Groups and National Recording Schemes, has consistent access to high quality training and support. Plus, that they feel valued for their contribution and their skills.

Data submission will be easier with clearer, affiliated data routes, eliminating confusion over where to submit records. Automated feedback systems will be built in to the NBN Atlas Scotland ensuring that that recorders are informed on how their records are being used.

A Community Fund will be established to support recorders with travel, training and

equipment. With more people empowered to engage in species identification and biological recording our collective knowledge will increase, and taxonomic and geographic data gaps will be reduced. Some of these recorders will become verifiers too, relieving pressure from our currently under-resourced verifier network.

So what next?

SBIF Development Officer, Rachel Tierney, funded by Scottish Natural Heritage and hosted by the Scottish Wildlife Trust, will be driving forward the recommendations of the Review alongside the SBIF Advisory Group and SBIF Chair.

An Implementation Team will be established to start putting the recommendations of the review into practice and discussions with interested parties are underway to identify how best

to secure the funding required to implement the recommendations.

How can you get involved?

Download a copy of the Review from the [SBIF pages](#) on the NBN website, and learn more about how the SBIF Review will benefit you. You can follow us on Twitter ([@SB_info_forum](#)) to keep up to date and join in the conversation.

You can also read views from the community through the SBIF blog (<https://nbn.org.uk/blogs/sbif-blog/>) and if you feel inspired by the Review, why not write your own blog post? Together, we need to raise our collective voice and talk openly about the recommendations set out in the Review.

To find out more contact Rachel: rtierney@scottishwildlifetrust.org.uk

The Review aims to enable the following benefits for biological recording in Scotland.

The infographic is divided into three main sections, each with a green header and a grid of icons representing specific benefits:

- Transformed Data Flows:**
 - Clear data flows (arrow icon)
 - Clear submission points (paper plane icon)
 - Data of known quality (magnifying glass icon)
 - Affiliated data channels (thumbs up icon)
 - Definitive evidence base (database icon)
 - Central data repository (gear icon)
 - Links to metadata (document icon)
 - Links to voucher specimens (bug icon)
 - Online data management portal (globe icon)
 - Online verification portal (laptop icon)
- Transformed Services:**
 - Accessible, universal services (cloud and monitor icon)
 - Data easily accessed through single location (cloud with arrow icon)
 - National and Regional Hubs (network icon)
 - Access to high quality training (screen icon)
 - Feedback on quality (megaphone icon)
 - Feedback on use (person at screen icon)
- Transformed Governance and Culture:**
 - Happy staff and volunteers (smiley face icon)
 - Efficient use of resources (organizational chart icon)
 - Sufficient sustainable funding (stack of coins icon)
 - Access to support (group of people icon)

At the bottom of the infographic is a logo of a green plant with blue flowers, with the text: "National biodiversity centre with regional hubs for Scotland" and "Definitive provider of biological records in Scotland".

COPY DEADLINE - MAY ISSUE

APRIL 14TH

Articles are welcomed but also snippets of interesting recording news and details of events. Anyone who has received a new and book over Christmas - and there must be many of you - please consider writing a review!

Please send articles in Word or Open Office format. Photos are welcomed but best as jpeg files and less than 800kb in size. Please do not embed them in your text as it sometimes can be hard to extract them!

Please send by email to the editor.

Very nice one

Juvenile Rose Coloured Starling seen by a committee member, Andy Wakelin in late November 2018!



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