

Continued from page 15

There are 62 INNS that can be reported via INNS Mapper, including freshwater and terrestrial plants, freshwater invertebrates and mammals. The species included have all previously been reported in GB and are either widespread and under management, widespread where management efforts are less widespread or species present in GB with high impact, but difficult to manage. Data reported to INNS Mapper is open access and publicly available for anyone to use.

INNS Mapper was developed and funded by multiple organisations. Please visit the app or [the website](#) for more information.

iNaturalist is now an independent nonprofit organisation

After beginning life as a master's project at the University of California, Berkeley, and launching in 2008, iNaturalist became a LLC, then joined the California Academy of Sciences in 2014. In 2017, it became a joint initiative with the California Academy of Sciences and the National Geographic Society. Now, it is an independent, US-based nonprofit organisation. This change won't affect the user experience and the platform and all of the features the contributors love about it will remain the same, and all the data can still be accessed free of charge.

You can read the official announcement on the [iNaturalist blog](#) and a set of [FAQ's](#).

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**Next newsletter deadline will be in Jan / Feb 2024 depending on new editor!**

# BRISC

BIOLOGICAL RECORDING IN SCOTLAND



[www.brisc.org.uk](http://www.brisc.org.uk)  
[www.facebook.com/BriscScotland](https://www.facebook.com/BriscScotland)

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## Recorder News

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Location of Rousay (Janine Johnston)

### **The Importance of a Long-term Recording Study of Great and Arctic Skuas in Orkney to enable measurement of the Impact of Avian Flu in 2022 and 2023**

**Helen and David Aiton**  
**September 2023**

In this article we will show that long-term recording of both Skua species in Orkney, allowed us to accurately detect the effect of Avian Flu in the breeding season of 2022 and monitor what happened next in the breeding season of 2023.

We have been measuring productivity and ringing chicks of Arctic Skuas and Great

Skuas on the Island of Rousay which lies off the west mainland of Orkney since 2014. Our Study site is a triangular area of coastal moorland approximately 2km by 1.5km. The site varies from 5 -115 meters above sea level. Our detailed study builds on survey data from approximately every ten years from 1982- 2010.

## Arctic Skua Populations

The area was chosen as a long-term study site because of the relatively high breeding density of Arctic Skuas, although this species has suffered a rapid population decline in the past decades (see table below derived from Meek et. al (2011)). The breeding populations of our study area alone were recorded as 122 pairs in 1991 (Whyte, 2004); representing the vast majority of the Rousay population.

Arctic Skua	1982	1992	2000	2010
Rousay	96	137	115	37
Orkney	1011	1043	720	380

## Great Skua Populations

The study site also held an increasingly high density of breeding Great Skuas. See Table below. Recent Orkney and Rousay surveys. Meek et. al (2011).

Great Skua	1982	1992	2000	2010
Rousay	13	31	81	85
Orkney	1647	2019	2209	1710

## Baseline Data

In 2021, our study site held 19 pairs of Arctic Skuas and 59 pairs of Great Skuas. This provided the baseline data for comparison to the 2022 and 2023 season.

### Methods

2023 was the tenth year of the Skua project. In each year the site is visited at least eight times during the breeding season for the purposes of this study.

We record territorial pairs, nesting pairs, numbers of eggs and numbers of small, medium, large, fledged young for each Skua species. Since Avian Flu in 2022 we have added a visit in September after the breeding birds had left to allow us to look for bodies. We locate nests by sitting at vantage points at least 200m away and then one person will remain at the vantage

point and direct the other to as many as five nests at a time using sightlines and vegetation to memorise the nest position because the bird will have flown from the nest. We only undertake nest and chick finding in dry warm weather.

### 2022

The first two visits in late May and early June allowed us to GPS active nests and count eggs laid in both species. We also counted and marked dead Great Skuas. We chose not to enter the colonies after the 5th of June as we had received the news from DEFRA on the 8th of June that Avian Flu had been confirmed in two freshly dead birds collected from our Great Skua Colony after we had reported the numbers of dead Great Skuas.

## The Wildlife Information Centre (TWIC) & Biological Recording in Scotland (BRISC)

*are pleased to present a joint*

## AUTUMN CONFERENCE

**Saturday & Sunday  
11-12 November 2023**

*Attracting new people to biological recording, including young naturalists and the role that technology can play*

### Presentations (Saturday)

- Christine Tansey - Better Biodiversity Data Project,
- Per Smiseth - Cemetery Wildlife Watch
- Claudia Caporusso - Life as trainee bird ringer
- Matt Larsen-Daw - Mammal Society Mapper app.
- Plus stalls, information, meeting and greeting....

**!!!! Promote your recording initiative - use the open mike session, a stall or bring a poster !!!!** *If interested in one of these, please provide details on the Eventbrite booking form.*

### Field meetings (Sunday)

- Stirling / central Scotland (sites TBC)

See TWIC and BRISC websites for further details on times, transport links, field events, costs and booking via Eventbrite.

<http://www.wildlifeinformation.co.uk/>

<https://www.brisec.org.uk>

## Membership Report BRISC 2022

In 2022 BRISC had 55 paid up Ordinary Members and 10 paid up Corporate Members. We have had a few members who have not continued their membership and a few new members have joined. The numbers are fairly stable.

The Corporate membership increased above 2020 levels. With two Corporate Members not re-joining but new memberships (or returning Corporate Members) increased this number to 10.

Year	Ordinary Members	Corporate Members
2020	63	8
2021	57	2
2022	55	10

*Jonathan Willet. Joint BRISC Membership Secretary. September 2023.*

### Optimism for Ardeer and Garnock, North Ayrshire ?

#### Editor update

In the light of the depressing "State of Nature Report 2023" (see NBN website: <https://nbn.org.uk/news/state-of-nature-2023/>), examples of inspiring restorative work are very much needed. These do however, feel as if we are winning some battles while the war is being lost, to re-use an old phrase.

So, in September 2017 the BRISC newsletter ran an article by Iain Hamlin about biological recording on the Ardeer Peninsula, a brownfield site situated along the River Garnock in North Ayrshire. The recording efforts by that time, had resulted in the site being recognised as the most biodiverse Local Nature Conservation Site in the region.

Things have moved on a bit with the Scottish Wildlife Trust and a coalition of other

groups and individuals asking in July 2022, for NatureScot to look at designating the area as a SSSI. It is a long process and it seems a decision may come in 2023. <https://scottishwildlifetrust.org.uk/our-work/our-advocacy/campaigns/ardeer/>

There is an excellent article on the site's biodiversity in the Glasgow Naturalist online newsletter [http://www.gnhs.org.uk/gn28\\_1/Philp\\_Garnock\\_Ardeer.pdf](http://www.gnhs.org.uk/gn28_1/Philp_Garnock_Ardeer.pdf)

Meanwhile the neighbouring Garnock Connections Landscape Partnership was established by 2018, finishing this year. Under the "Connecting People and Places within the Landscape" banner, they have delivered a whole host of projects addressing and involving people in nature, culture, access and landscape. There's a lovely video of many of the projects. <https://www.garnockconnections.org.uk/>

(NB Place for next years BRISC's event?)

Thereafter, Avian Flu regulations prevented access to our study site after mid-June 2022. We added a visit in September after the breeding birds had left, to search for new corpses.

However, due to the topography of the site we were able to monitor the main Arctic Skua colony from the road. Likewise, we monitored all but one of the remaining Great Skua pairs (a long dead adult was found on that territory in Sept). For the period prior to the confirmation of Avian Flu we imposed our own hygiene restrictions, choosing to first visit areas only with Arctic Skua colonies, disinfecting our boots then only visiting Great Skua colony areas after and always disinfecting boots when we had finished; this footwear remained unused between visits. We wore masks and gloves when close to dead birds.

#### 2023

From mid-June, Avian Flu Regulations from Nature Scot banned access and disturbance of Great Skuas on their territory as there was concern that stress may cause the birds to be more susceptible to Avian Flu. However this year we were able to monitor Arctic Skua pairs as normal without disturbing Great Skuas and monitor Great Skua pairs from vantage points.

#### Arctic Skuas

There were 21 territorial Arctic Skua pairs in our study area in 2022 compared to 19 in 2021; five new territories were used in 2022 and three previously used territories were not used. Avian Flu did not affect Arctic Skuas in our study site and 2022 was a successful breeding season. In 2023 there were 17 Arctic Skua territorial pairs; compared to the previous years there were five previously used territories not used and three new territories.

Avian Flu did not affect Arctic Skuas in our study site in 2023.

#### Why were Arctic Skuas not affected by Avian Flu in 2022 and 2023?

The Arctic Skuas in our study share the same freshwater bathing pool close to their colony. This pool could potentially be a source of infection for Avian Flu. We have not observed Great Skuas using the pool, probably because any Arctic Skuas present would react strongly to their presence and move them on before they could land.

Arctic Skuas feed mainly by parasitising other seabirds and stealing their fish, and although the literature states they do eat carrion, we have not observed this in the field. They do not nest close together on cliffs like other seabirds who have been badly affected which may be another reason why they have luckily remained unscathed so far. We have not read of any reports of dead Arctic Skuas due to Avian Flu from elsewhere in Scotland.



A newly hatched Arctic Skua with an egg tooth

## Great Skua Populations

In 2021 there were 59 territorial pairs in our study area. For the purposes of this analysis we adjusted this figure to 49 to account for pairs that in our experience from data collected over the previous five years, would normally not return to the territory they used in the previous year "on-avian flu normal no show" The number of new territories over the previous 5 years had varied considerably so we decided not to adjust this figure. There were only two new territories used in 2022.

Prior to 2022 it would have been highly unusual to find an adult dead adult Great Skua in the study area. Thirty dead Great Skuas were recorded between 21st May to 6th June, a further a further four long-dead birds were found on 10th September. Dead birds were marked with yellow spray paint on their wings to avoid double counting; 24 were found on previously occupied territories mostly beside pre-prepared nests and seven were not found on a known territory but were within the study area.



A dead Great Skua showing the classic twisted neck pose typical of Avian Flu

Fifteen remaining birds were monitored throughout the season and recorded alive and present on territory in early August: six surviving pairs; two fledging one chick each and three individual birds that remained on territory after their mate died on territory.

Assuming 51 pairs returned to breed in 2022 (an underestimation as there are normally more than two new pairs), six territories (12%) had surviving pairs, 27 territories (53%) had one or more dead birds and a possible 18 territories (35%) had no prepared nests or birds present.

These figures lead to the sad conclusion that there has been a reduction of at least 88% of breeding Great Skua pairs due to Avian Flu and if the missing birds have died elsewhere, the mortality rate due to Avian Flu could be as much as 85% in Great Skuas.

### 2023

Of the six pairs and the three individual Great Skuas that survived 2022, four of the pairs returned to breed and lay eggs, and they fledged a total of two chicks, and two of the individuals returned to their territories but remained alone throughout the breeding season. A further 11 pairs appeared on new territories and prepared nests, ten pairs going on to lay eggs and incubate. A total of 14 pairs and two single birds in all. However, from mid-June we were unable to continue our nest monitoring because of the disturbance ban. However, we were able to monitor from vantage points for all bar three pairs without disturbing the birds. We recorded a minimum of three fledged chicks from 14 pairs.

When we visited all the nests in September, we did not find any dead adult Great Skuas or chicks. Avian flu had not affected the Great Skua Colony this year.

Of the £13810.24 of total funds, £680.58 are restricted funds for bursaries, of this £270.58 are restricted funds for Botanical bursaries. This leaves £13129.66 as unrestricted funds. £5000 of the unrestricted funds are a designated fund for supporting the SBIF Better Biodiversity Data Project when it starts.

### 4. Policy on Reserves

BRISC's future was discussed at the AGM on 23rd November 2022, based on the options paper that was sent to all members. The members present voted unanimously to select Option 3 as the way forward.

This means that BRISC will continue for the following three years, after which there will be a review of the situation and a decision will be made by the membership whether to continue, or to wind up.

During the AGM, some key challenges were raised to be actioned, including spending the large balance in the accounts. Options for delivering this include:

- Further and/or more generous bursaries
- Supporting small biological recording projects in Scotland
- Supporting delivery of SBIF recommendations

Implicit in this was that BRISC would have a much smaller balance in the bank account in three years' time, so that if the BRISC membership does confirm they wish to wind up BRISC then there would be a much easier to manage sum to disburse, as detailed in the constitution:

"9. Dissolution

If upon winding up or dissolution (except in the case of a reconstruction or amalgamation) of BRISC there remains, after the

satisfaction of all BRISC debts and liabilities, any property or moneys, the same shall not be paid to or distributed among the members of BRISC but shall be given to or transferred to a charitable body or bodies having similar objectives, to be determined by the members at or before the time of dissolution, or in default thereof by a competent Court of Law; and if and so far as effect cannot be given to the aforesaid provision, then to some charitable object."

In the past BRISC has aimed to have at least one year's worth of running costs as the surplus in the accounts, with the account still having a large sum of money in comparison with its historic expenditure this situation will continue for the next three years, but with a diminishing surplus.

The Committee will report back to the membership at the AGM in 2023 to outline how they are addressing the challenges highlighted above.

The reserves will be solely applied towards the promotion of BRISC's charitable objects. It is intended that the reserves will be used mainly as seed funding for projects in the BRISC Business Plan, to support Natural History bursaries and to assist in matched funding for grant applications relating to the Scottish Biodiversity Information Forum's new infrastructure.

### 5. Conclusion

With the above decision and a stable membership income BRISC's end of year bank balance will start to reduce more rapidly from 2023. This is following the wishes of the BRISC Membership, noted in Section 4. This situation will still allow the operating costs of BRISC to be covered for the next 3 years.

*Jonathan Willet, BRISC Treasurer, September 2023*

## BRISC 2022 REPORTS for AGM (11<sup>th</sup> November)

### Treasurer's Report

#### 1. Summary

BRISC's income for the year was £1310, all derived from Ordinary and Corporate memberships. Expenditure was £1558.68, the cost of redesigning the website (£700) was the only exceptional payment. This led to a small deficit of -£248.68 for the year.

With the membership's decision to reduce the large balance in BRISC's account (see Section 4), the expectation is that BRISC's next three sets of annual accounts will all be in deficit to achieve the memberships' wishes of reducing the amount in BRISC's bank account.

At the end of 2022, there was £13810.24 total funds.

NB. The Independent Examiner would like the BRISC Membership's approval of his appointment to be minuted at the 2023 AGM. Copies of signed accounts will be available.

#### 2. Income and Expenditure

BRISC's income for the year was £1310, all derived from Ordinary and Corporate memberships. Expenditure was £1558.68, this included the cost of redesigning the website (£700) was the only exceptional payment from this year. The Spring Meeting and AGM being online meant there was no income from these events as would have happened in the past when they were in-person. This resulted in a small deficit of -£248.68 for the year.

Going forward it looks like BRISCs income from memberships will remain stable, and this currently is BRISC's only income. Its expenditure going forward will increase due to the bursary payments increasing in value and number of potentially small sums given to other biological recording projects (see Section 4).

A payment has been made to the SBIF BDD project in 2023, so this will significantly reduce the balance of BRISC's bank account in the 2023 Treasurer's Report. However, there will still be at least three years of funds to sustain BRISC's current core (non-bursary) annual expenditure. This will take BRISC into 2025, when the membership will make a decision about its future.

#### Closing Balances (Total Funds) 2018-2022.

2018 -	£9535.72
2019 -	£11,475.15
2020 -	£13,670.48
2021 -	£14,058.92 *note A
2022 -	£13810.24 *note B

Note A: (Unrestricted Funds £13197.34 of this £5000 Designated Funds (SBIF BDD). Restricted Funds (bursaries) £861.58).

Note B: (Unrestricted funds £13129.66, £5000 Designated Funds (SBIF BDD). Restricted Funds (bursaries) £680.58).

#### 3. Designated and Restricted Funds

Following the advice of our Independent Examiner the BRISC account was formally sub-divided into one Designated Fund and two Restricted Funds. This was unaniously approved at the 2022 AGM.

#### Why were Great Skuas affected so badly by Avian Flu?

In 2022, we had heard of large numbers Pink-footed Geese dying of Avian Flu from mid-April onwards, in the north of Caithness and on the islands lying in the Pentland Firth. In early May large numbers of dead Gannets around Orkney were being reported too. Great Skuas will feed readily on carrion, and it is our opinion that the geese were the early source of infection of avian flu followed by gannets. Since by the third week in May, half of our previously occupied territories had one or more freshly dead or dying birds beside prepared nests, and another third of our pairs had not made it back to their territories, it is likely that the birds had become infected around the time the Pink-footed geese were dying relatively close to Rousay providing an easy but deadly food supply.

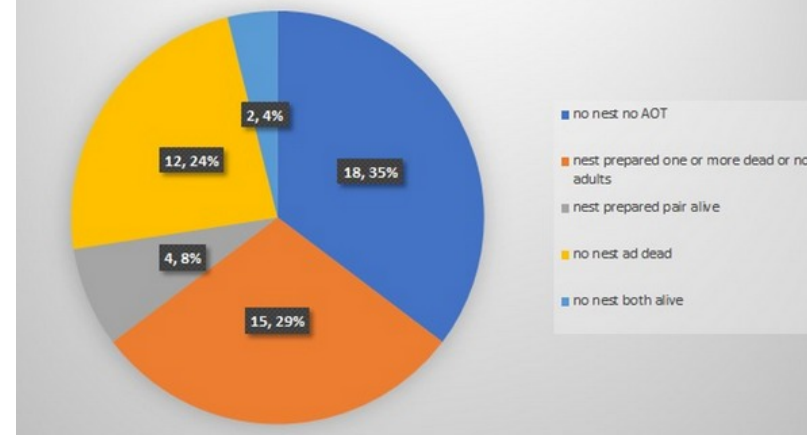
In 2023 there were no reports of large numbers of geese and gannets dying from Avian Flu near Orkney which may explain why there have been no further deaths due to Avian Flu in 2023

#### Reflection

As researchers we provide reports that are factual. However for the 2022 breeding season we think it is important to express how emotionally difficult and distressing it has been to record the deaths of breeding birds some of which we have been observing for the past nine years.

The sheer scale of deaths in the colony and the silence that followed was very difficult to process. We observed with pleasure the successful Arctic Skua colony which was unnaturally silent because there were so few predators to cause them to defend

Effect of Avian Flu in 2022 on territories with prepared nests in 2021 adjusted for "normal" no show (n=51)



their territories and the two Great Skua pairs with a chick each. Each time we left there was an underlying dread of what we might find the next time we returned.

It was with some relief that when we returned to walk all the territories in September 2022, we found only long dead corpses most of which we had marked previously in early June with yellow paint. During the 2023 breeding season although there were no further deaths due to Avian Flu, there was the same concern between visits of what we might find and the same relief when the birds fledged young and left to migrate to their wintering territories. Seabird monitoring is no longer the pleasurable and relaxing task it used to be!

#### Acknowledgements

We wish to thank the SOC for grant funding this project. We used the funds to cover our travel expenses; mainly ferry fares.

#### References

**Meek, E R. Bolton M. Fox D. and Remp J.** Breeding skuas in Orkney: a 2010 census indicates density-dependant population change driven by both food supply and predation. SEABIRD 24 (2011): 1-10

**Smith, C and Jones T** Breeding ecology and diet of Great and Arctic skuas on Handa Island 2005.  
[http://www.handaskuas.org/downloads/Handa\\_skuas\\_report\\_2005.pdf](http://www.handaskuas.org/downloads/Handa_skuas_report_2005.pdf)

**Whyte 2004** The Wildlife of Rousay, Egilsay and Wyre, published by Brinnoven

#### SOME AUTUMN CONFERENCES

- ALERC "Citizen & Community Science: Benefits & Challenges for LERCs" Thursday 19th October. Online.  
<https://www.alerc.org.uk/conference-2023.html>
- Scottish Botanical Conference - Sat 4th November. Royal Botanic Garden, Edinburgh.
- TWIC & BRISC - 11/12 Nov. for details of the conference see page 19.
- Dipterists Day 18th Nov. National Museums of Scotland. With Malloch Society - great programme. To book contact Ashleigh Whiffin (A.Whiffin@nms.ac.uk).
- NBN Conference 23rd Nov. "Making data work for nature" see page 15 for details and link.

#### ***!Hello from BRISC and HELP!***

The BRISC committee is a friendly bunch of recording enthusiasts most of whom are in full time employment. We hold meetings online which enables everyone to participate and reduces our carbon footprint. So the Conference will be our opportunity to actually meet up and please, do offer yourself for the committee!

We are especially looking for a chair and also a new editor! Contact Sarah Eno, current editor for a description of this occasional and stimulating job!

*See page 20 for contacts*

#### NBN Conference

This year's NBN Conference will take place on Thursday 23 November at the National Museums Scotland, Edinburgh. The theme is "Making data work for nature" and we are delighted that Màiri McAllan MSP, Cabinet Secretary for Transport, Net Zero and Just Transition will give an opening speech. All of the confirmed speakers are listed on the NBN Trust website:

<https://nbn.org.uk/news-events-publications/nbn-conference-2/nbn-conference-2023/>

You can also register to attend on the website: <https://nbn.org.uk/news-events-publications/nbn-conference-2/nbn-conference-2023/nbn-conference-bookings2023/>

We hope you'll join us for an inspiring day of talks, discussion and networking!

#### Improving the NBN Awards for Wildlife Recording

The NBN Trust has been running the annual NBN Awards for Wildlife Recording for eight years. During that time we have celebrated the work and achievements of over 65 biological recorders! Before we launched the 2023 Awards' scheme with the same format as previously, we thought it was time for a thorough review to see how we might be able to make them even better. As a result, we will not be having any Awards in 2023, but will launch the next scheme in January 2024. You can read more about the review and the key findings on the NBN Trust website.

<https://nbn.org.uk/news/improving-the-nbn-awards-for-wildlife-recording/>

#### NBN Trust - new recruits

We are pleased to introduce Rhiannydd Stock, who has joined the NBN Trust team as the NBN Atlas Support Officer, a role that has been funded by The National Lottery Heritage Fund via the New to Nature programme. Rhiannydd is the first line of support for NBN Atlas users.

Marise Astall-Palin has also joined the team as Finance and Business Officer. Marise brings with her a wealth of financial experience and will support Sarah Hyslop, our Finance and Business Manager, in all things financial, business and HR related.

<https://nbn.org.uk/about-us/who-we-are/nbn-staff/>

#### UK returns as GBIF Voting Participant

The UK, as one of the 23 founding national members of GBIF (Global Biodiversity Information Facility), has returned to Voting Participant status. This means it has rejoined the 42 other national governments that contribute financially to GBIF's core global budget. The NBN Trust will continue its crucial role in coordinating national activities as the UK's GBIF node.

<https://nbn.org.uk/news/uk-returns-as-gbif-voting-participant/>

#### INNS Mapper/Mapiwr INNS has launched!

INNS Mapper, a new app and website for reporting sightings, surveys and management of invasive non-native species (INNS) in England, Wales and Scotland has launched. INNS Mapper, which will also be known as Mapiwr INNS in Wales with Welsh language options, is free to use and aims to provide an effective resource to support INNS programmes and coordinate efforts.

*Continued on page 20*

## NBN Trust update for BRISC September 2023

### Better Biodiversity Data project update

In March 2023 the Better Biodiversity Data project (BBD) welcomed its first staff; Mike Tetley – Scotland Programme Manager, and Christine Tansey – Partnership Officer. Mike joins the project with a background in marine biology and conservation, with extensive experience working on projects for the Convention on Biological Diversity (CBD) and the International Union for Conservation of Nature (IUCN). Christine's background is in research and conservation, with a focus on phenology and citizen science and she has previously worked on developing research and training partnerships for conservation NGOs.

You can find out more about the team here: <https://nbn.org.uk/news/better-biodiversity-data-project-key-roles-appointed/>

The BBD project is addressing some of the key recommendations set out in the 2018 Scottish Biodiversity Information Forum (SBIF) Review. The BBD team will continue to work alongside the SBIF advisory group and other key partners to address three key objectives:

1. The establishment of a National Hub that supports Local Environmental Records Centres (LERCs) and Recording Groups in Scotland.

2. The creation of a shared online data management and digital services system that can be used by LERCs, Recording Groups and other partners to streamline biodiversity data flows and help deliver data services in Scotland.

3. The development of a more connected and better supported biological recording community in Scotland.

The first six months of the BBD project have seen Mike and Christine meet with LERCs, Recording Groups and other key partners both online and in-person around Scotland. These discussions have highlighted the differing circumstances faced by LERCs and Recording Groups, and demonstrated the need for central support and tools to facilitate the work they undertake. The next phase of the project will continue to scope out what is needed to enhance biodiversity data flows for the biological recording community in Scotland.

The BBD team will be joined by a Data and Digital Services Manager and Business Analyst in Autumn 2023, ready to lead the development of the new online data management and data services system. More information on the BBD project is available here: <https://nbn.org.uk/news/better-biodiversity-data-project/>

You can read Christine's entertaining blog about the BBD team's travels around Scotland here: <https://nbn.org.uk/blogs/the-better-biodiversity-data-project-on-tour-standing-stones-sailing-and-a-stray-hippo/>

### Editors report

*Sarah Eno*

My apologies yet again for the absence of newsletters this year. My life has become too divided between Asturias and Scotland, plus other changes mean that this is probably the last newsletter I will produce. It's been a happy time when I get stuck in, a bit stressful when too busy to solicit copy!

Many thanks again to the authors of the articles in this issue and also my colleagues who helped out. The seabird deaths from the H5N1 virus which originated in domestic water fowl in China in 1997 and then spread to poultry in eastern Asia by 2005. It subsequently made its way westward, appearing in wild birds. It is a salutary reminder to us about industrial poultry production and how we eat.

Despite my walking disability, and my rusty ID skills, during this summer I did get to botanically survey seven fairly level grassland sites whose owners are part of a Tweed Haymeadows Project in the Scottish



The editor in her first meadow, very rank, difficult to walk in and sadly, botanically poor.

Borders. This is an ambitious project with a 10 year time frame initiated by Merlindale Nature and working with 18 landowners managing, creating and restoring biodiverse meadows along the Tweed river from upper to lower reaches.



One of the potential sites smothered in harebell, (*Campanula rotundifolia*), Autumn Hawkbit *Leontodon autumnalis* and Burnet Saxifrage (*Pimpinella saxifraga*)

**BRISC Conference is with TWIC** on Saturday & Sunday November 11<sup>th</sup>-12<sup>th</sup> at Stirling High School. Some details still have to be finalised, but **see page 19** for the programme. Local field trips are proposed for Sunday. The AGMs of both BRISC and TWIC will occur during the conference.

Sadly Glasgow Museums Biological Records Centre closed on Friday 17 March. This closure is planned to be temporary. The Centre is unable to process new enquiries, however where possible it is still accepting new records and data sets.

Any questions please contact: [biological.records@glasgowlife.org.uk](mailto:biological.records@glasgowlife.org.uk).

Solitary bee identification course

Stephanie Glendinning

From the 2<sup>nd</sup> - 5<sup>th</sup> of June, I attended a course on the identification of solitary bees at Preston Montford FSC centre in Shropshire, taught by Ian Cheeseborough. I was particularly interested in this course as I am starting a PhD in pollinating insects this autumn. There are over 250 British species of solitary bee; as a consequence, this group has typically been less thoroughly recorded and studied. I hope to use my new knowledge to more accurately identify and record my sightings.

After the long journey down, we gathered on the first evening to meet our tutor and the other course members, and to have an introductory lecture on bee anatomy. We learnt the names of important features, and practiced spotting these with the eye, and under a microscope, using specimens from the cleptoparasitic *Nomada* genus. It was great to have the chance to meet people

who shared my passion for pollinating insects, including ecologists, students and volunteers.



Cliffe field trip: Examining an *Andrena* species with a hand lens.

On Saturday, we met in the morning for another lecture on bee ecology and behaviour, and to look at some common genera. We then set out on a field trip to the Cliffe Countryside Heritage Site, a sandy lowland heath habitat. The weather was warm and sunny, perfect for spotting bees. I learned how to catch specimens using a net, and transfer them to a tube (without being stung!) to better observe their features. We saw an amazing variety of species, including *Andrena* mining bees, more *Nomada* species and *Osmia* mason bees. The highlight was spotting *Andrena* *barbilabris*, which 'swims' through loose sand to reach its nest beneath. Through Ian's expertise and patient guidance, I felt like I was beginning to be able to distinguish between the genera.

We started early on Sunday afternoon for a field trip to Llanymynech Rocks nature reserve, an old limestone quarry. There was amazing floral diversity: bird's-foot



A cleptoparasitic *Nomada* species (possibly *N. fucata*) at the Cliffe Heritage Site.



Figure 5. Dominic McCafferty demonstrating the iNaturalist app to potential citizen scientists

side Mary Redmond from The Bee Garden, and Lyn Mooney and Sarah Wilson from Glasgow Museums facilitated some bug related craft activities. The displays attracted hundreds of people through the afternoon, and the experts fielded many interesting questions and encouraged people to download and use the iNaturalist app.

Further outreach events are being planned for the next few years as the GALLANT project develops, it is hoped that more schools and community groups will be encouraged to get involved and that the pilot plan for the River Kelvin wildlife corridor can be duplicated in other parts of Glasgow.



Figure 6. Emma Plant providing a close up look of a bee to the public

Editors note - I had a look at the GALLANT website. It's wonderfully clear and simple with a map of the River Kelvin showing brightly coloured flags for records. That makes it a rewarding visual stimulus to a community doing recording. I also liked the listing of recorder names (aliases) and species under the headings of Most Observations, Most Species and Most Observed Species. It can really bring out a competitive element in humans!

This model could be replicated for any community looking at a biodiversity audit along a river. There are a few projects getting going.....



through LERCs, recording schemes or apps such as iRecord and iNaturalist (Fig. 4). Next, she spoke about how to access data through NBN and GBIF and then gave examples of the many schemes currently out there, such as Bugs Matter, UK Pollinator Monitoring Scheme, RSPB Big Garden Birdwatch, The Big butterfly Count and Road Lab. Dominic then introduced the GALLANT project and detailed how people could directly contribute to the biodiversity monitoring parts of it using iNaturalist.



Figure 4. Jeanne Robinson speaking at the *How to Become a Citizen Scientist in Glasgow* event

A dedicated project page has been set up ([www.inaturalist.org/projects/river-kelvin-wildlife-glasgow](http://www.inaturalist.org/projects/river-kelvin-wildlife-glasgow)), which automatically includes all observations made in a 1 km wide band along the River Kelvin from the northern edge of the City of Glasgow boundary near Bardowie to the southern end where the Kelvin meets the River

Clyde. This matches the area covered by the GALLANT survey team.

At the time of writing there were around 7,400 observations in the project so far, these are of almost 1,300 species and were made by more than 600 observers. The majority of the records are plants, insects and fungi, but unfortunately some of the most observed species are introduced ones such as the grey squirrel, Asian lady beetle, Himalayan balsam and giant hogweed.

Mike then demonstrated how to use iNaturalist both by downloading the app and using a smartphone and by taking photos using a camera and uploading them directly to the website. He also gave tips on how to make a more useful observation by taking multiple photos, checking geographic accuracy and following up on identification suggestions. After the talks the presenters then led a walk around Kelvingrove Park where they showed the iNaturalist app in action (Fig. 5).

The second event, on the 9<sup>th</sup> August, was a Biodiversity Day in partnership with Glasgow Museums and conducted at the Riverside Museum, at the mouth of the River Kelvin. This event was organised by Robyn Haggard, Zoology Curator, and consisted of indoor and outdoor activities and displays. Jeanne and Mike set up temporary displays inside the museum of various specimens from the University collections, including butterflies, bees and other common insects and skins and skulls of the mammals found in Glasgow from common seals to pygmy shrews.

An RSPB outreach display and officer were also present. Outside GALLANT team members Dominic and Emma Plant, a post-graduate researcher, helped with insect collection and identification (Fig. 6) along-

trefoil, oxeye daisy, hawkbit and bee orchids. Given this bee haven, we observed surprisingly few individuals. However, again, we found *Andrena*, *Nomada*, and *Osmia* species, as well as *Chelostoma florissomne*, the males of which are often found resting in flowers. The evenings after both field trips were spent going through the complex genera key, and cementing our knowledge by studying specimens under the microscope.



*Dasygaster hirtipes*, the Pantaloon Bee, under the microscope.

On our last day, we explored the grounds of the field site. *Andrena haemorrhoa* was particularly abundant, with its distinctive bright orange hairs at the tip of the abdomen.

It was fascinating to see the variety of species using the centre's bee hotel, including cavity-nesting *Chelostoma* and *Osmia* species. The hotel included blocks with clear Perspex on one side, so it was possible to see the nest cells lined up inside, some stocked with bright pollen. We also looked at the resources available on the UK Bees, Wasps and Ants Recording Society (BWARS) website, and the importance of

distribution data for informing solitary bee conservation.



Bee hotel: A bee hotel shows nest cells lined up along the cavities, filled with pollen for the grubs.

I am very grateful to BRISC for this amazing opportunity, which the bursary towards course costs made possible for me. I am looking forward to being able to put my new knowledge to use during my PhD, and being able to submit records of my sightings with confidence.

## The GALLANT project and biodiversity monitoring along the River Kelvin

**Anna Bracken and Mike G. Rutherford**

GALLANT or 'Glasgow As a Living Lab Accelerating Novel Transformation' is a cross-disciplinary project run through the University of Glasgow, in partnership with Glasgow City Council and many other groups, to develop a sustainable city approach to tackling climate change. The five solution areas GALLANT is focusing on are: addressing flood risk; halting biodiversity loss; trialling new ways of regenerating derelict and polluted land; enhancing active travel and inclusive mobility; and tackling sustainable energy to achieve net zero carbon. For more information see <https://www.gla.ac.uk/research/az/sustainable/solutions/ourprojects/gallant/>

One important way of tackling climate change is to increase and conserve biodiversity. Though habitat loss through urbanisation tends to reduce the number of species present, urban centres are often home to threatened species, and can even act as refuges for certain groups of animals such as insects. Pockets of high-quality green and blue space in a city can therefore locally host a diverse set of species. Enhancing these areas by increasing the connections between them can support animal movement, aiding dispersal and gene flow.

A core aim of GALLANT is to support the development of these connections, or 'wildlife corridors' within Glasgow, through the mapping of potential corridors, as well as assessment of current connectivity.

The River Kelvin field study aims to examine how the riparian area around the

river functions as a wildlife corridor in Glasgow, both along its length (in space) and across seasons (through time). To study this, we compared biodiversity, microclimate and vegetation along the river by setting-up 10 riverine monitoring stations, from the city centre to surrounding rural areas, and then matched these with in-land stations at distances of 250m and



Figure 1 Anna Bracken setting up an acoustic logger near the River Kelvin to monitor birds and bats

500m from the river. At each station we deployed an acoustic recorder (Fig. 1) to monitor bird and bat diversity, a trail camera to capture images of birds and mammals in the area, as well as a temperature and humidity logger to monitor the microclimate at each location (Fig. 2).

Additionally, we examined invertebrates using sweep net and pitfall trapping and conducted vegetation sampling (Fig. 3) to obtain information on tree and ground plant



Figure 2. GALLANT team setting up a temperature/humidity logger with radiation shield



Figure 3. GALLANT team conducting vegetation sampling at one of the city centre locations

species abundance in each area. The study has been running from March to September 2023 to cover the spring and summer seasons.

Importantly, we would like to compare citizen science recording to these systematic methods. We currently use biological records to map areas in Glasgow that provide suitable habitats for a range of species, and to model potential connections that might link these habitats. Therefore, whilst our field study allows us to empirically test the functionality of a current wildlife corridor, it also provides an opportunity to assess the efficacy of biological recording against more standardised methods.

To help recruit citizen scientists, members of the Hunterian Museum at the University of Glasgow worked with the GALLANT team and others to run outreach events during 2023.

The first one was titled "How to Become a Citizen Scientist in Glasgow" and was held at the Hunterian Zoology Museum at the University on 18th May. The purpose was to attract amateur enthusiasts based locally to come and learn more about biological recording, citizen science and the GALLANT project. The presenters were Jeanne Robinson, Curator of Entomology, Mike Rutherford, Curator of Zoology, and Dominic McCafferty, Senior Lecturer at the School of Biodiversity, One Health and Veterinary Medicine and co-lead of the GALLANT Restoring Biodiversity Team. Around 20 people attended the talk and demonstration.

Jeanne gave a very detailed breakdown of why citizen science was so important and the benefits of it to people and the environment, she then went on to highlight the process of submitting observations either