NFBR

NATIONAL FORUM FOR BIOLOGICAL RECORDING

Newsletter 66: December 2024

Contents

Cover picture:

Parrot waxcap Gliophorus psittacinus (Clare Langrick, NEYEDC)

Not the Comfy Chair!

In spite of my best efforts, I still appear to be in the chair at NFBR Towers, and this year has been a rather exciting time with plenty going on to keep us occupied. Elaine will tell you about the triumph of a conference in her piece, and we have also attended the ALERC conference in October, where Graham and I ran a workshop on data standards, and mentioned our new campaign for better quality data (of which more in a moment).

We have had a change around on the Executive board, saying farewell and huge thanks to Elaine and Teresa, and welcoming Sam Amy on board. Graham continues to influence the State of Nature report on behalf of NFBR, and Martin Hicks has been amazing in being our NFBR link into Countryside link, ensuring that NFBR's perspective has been heard and registered on many issues.

I attended the NBN's Atlas stakeholder meeting (thank you Lisa Chilton and Mel Hardie – it's great to have this forum back again!) on behalf of NFBR, and Sam went to the BSBI's Annual Exhibition Meeting in London to exhibit a NFBR poster on our new Campaign for Real Ecological Data (CRED).

As always, it's been a fabulous privilege to work with Graham, Jodey, Clare, Simon and Sam on Executive – thank you all for your brilliant efforts on keeping our little organisation ticking over and still punching above its weight. Thanks also to our wonderful Advisory Council, peopled by stars from every corner of biological recording – thanks for your time and commitment and amazing biological recording brains.

Finally, I've been a little distracted this year by writing, and it's been great to find a book buddy, especially as we are both writing on biological recording. Pelagic Press is (hopefully!) launching two new publications next year – Pan-species Listing – how to become a Super-naturalist, by Graeme Lyons, and Biological Recording: the how and why of 'who, what, where and when' (by me), so do keep your eyes peeled for these in the latter half of 2025.

Happy recording, everyone, and hope to see you at next year's on-line conference.

Sarah Whild

Chair

December 2024

National Forum for Biological Recording (NFBR) Conference 2024

Elaine Wright (SEWBReC & NFBR)

Returning to Wales for the first time in 20 years, the NFBR Conference took place in Pontypridd on 9th – 11th May 2024. This annual conference brings together the recording community from across the UK, and is an opportunity for individuals from organisations such as National Recording Schemes, Local Environmental Records Centres, the National Biodiversity Network, the Biological Recording Company and the Biological Records Centre to meet and compare notes alongside inspirational and informative talks.

The theme this year was Next Level Recording, with talks highlighting the extra lengths recorders go to in terms of geography,

developing new technology and pushing at the boundaries of taxonomy with the discovery of new species. The event was organised jointly with LERC Wales (the consortium of four Local Environmental Records Centres in Wales).

Our extreme geography talks took us under the sea (*Magnificent Marine Life: Biodiversity, Health and Conservation of Our Local Sea*, Matthew Green, Seasearch), up onto the valley hillsides (*Unearthing Diversity: Surveying Invertebrates in Extreme Colliery Spoil Environments*, Liam Olds, Colliery Spoil Biodiversity Initiative), into the tree tops (*Extreme mothing: adventures with caterpillars that live in awkward places*, George Tordoff, Butterfly Conservation) and deep underground (*Life in the Dark: The Challenges*

of Monitoring and Recording the Invertebrate Biology Deep in the Caves of South Wales, Julian Carter, National Museum of Wales).

New technology talks covered groundbreaking genetic work (*eDNA in detection of waxcaps and other CHEGD grassland fungi*, Gareth Griffith, Aberystwyth University and *The Darwin tree of Life project; Sampling across Britain for invertebrates genomes*, Inez Januszczak, Darwin Tree of Life) and the use of remote sensing to capture records (*Martens on the Move: establishing a national monitoring programme for a recovering carnivore*, Lucy Nord, Vincent Wildlife Trust). We also covered lower tech recording techniques used in structured recording (*Fledgemore Nest Recording*,Tara Okon, Fledgemore Nest Recording Group) learning the importance of tapping sticks and extendable mirrors.

New species talks were of the invertebrate variety (*New Millipedes in south Wales*, Steve Gregory, British Myriapod and Isopod Group and *Non-marine mollusc distribution mapping by the Conchological Society of Great Britain & Ireland*, Ben Rowson, National Museum of Wales), both with interesting theories on the origins of some species found in south Wales including stowaway Spanish millipedes!

Talks also covered the ways in which organisations can help individual recorders, including targeting recorder efforts (*LERC Wales: supporting the recording community in Wales*, Jo Milborrow, BIS) and facilitating continued learning and expansion of skills (*BioLinks: Structured ID Training Pathways for Invertebrates*, Keiron Derek Brown, Biological Recording Company).

We ended the conference with a panel led discussion on the topic "*How can we help recorders reach their next level?*", a stimulating session full of ideas on how organisations in the recording community can inspire and support biological recorders in their important and valuable work.

The two days of talks was followed by an enjoyable field day to Dare Valley Country Park, concentrating on the colliery spoil area of the park. We had an iRecord activity running throughout the conference, to encourage delegates to record in Pontypridd and at the field day.

On behalf of NFBR and LERC Wales, I want to thank everyone involved in making this event a success; our excellent speakers, tireless conference working group members and everyone who joined us in south Wales.

You can learn more about NFBR on our website: www.nfbr.org.uk.

Deriving national biodiversity indicators from biological occurrence records

Diana Bowler & Michael Pocock

Biological occurrence records play important roles in helping to understand changes in the state of biodiversity in the UK. However, deriving biodiversity indicators that accurately represent change at the national level can be challenging due to patterns in where sampling efforts are targeted. The team at the UK Centre for Ecology and Hydrology have been carefully thinking about this problem and several possible solutions are already showing some promise.

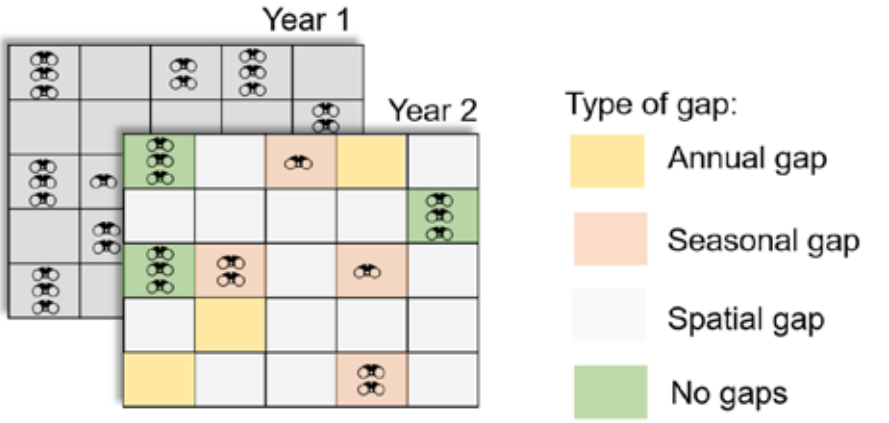
Sampling effort varies across the UK in different dimensions. Geographically, some regions and habitats are still not well-sampled. By contrast, more data are typically collected near human population centres, which is partly due to the accessibility of these areas, along with the number of active recorders living nearby. There are also changes in sampling efforts over time. For most taxa, monitoring efforts have increased over the last decade, with peaks in sampling effort associated with the production of species atlases. This variation in sampling effort could potentially bias estimates of species' trends if they are not taken into account when deriving biodiversity indicators.

A first possible solution to account for unevenness in sampling effort is based on a statistical adjustment. We presented several possible versions of an adjustment in a recent publication (Bowler et al. 2024) in *Biological Reviews*. The paper draws on 'missing data theory', a well-established statistical framework that deals with the more general problem of missing data that affects all disciplines in

science. Essentially, we reframed the pattern of sampling effort across the UK landscape as a missing data problem – some areas of the UK are sampled while other areas are not and represent a 'data gap'. By using missing data theory, we hoped to borrow learnings and solutions developed elsewhere and apply them to the specific problems found within biodiversity monitoring data.

Using this framework, we were able to establish some general principles for when data gaps lead to biased predictions of species' changes. We show that data gaps are problematic when the causes of gaps are linked with the factors that affect species trends. For example, if there is less sampling where species are faring poorly, then we could paint an overly optimistic picture of change if we analyze the available data without any adjustment for the gaps.

Multiple adjustments are already used to account for similar problems in other disciplines. For instance, the problem is analogous to making election voting predictions from a poll – often the people answering the poll are not representative of the UK population. Possible statistical adjustments include weighting (giving more importance



to data from regions with lower sampling coverage) or imputation (filling in missing data with estimated values). However, applying such methods is only possible when there is a good understanding of the causes underlying the gaps.

There are also limits to these statistical methods. If regions with distinct patterns of change are hardly sampled at all, then any form of weighting or imputation might simply add 'noise' to the analysis outputs since there is not enough information in the data to predict what the trend might be. When we don't have enough data or knowledge to inform the statistical adjustment, we instead suggested using sensitivity analysis (checking how different assumptions affect the result) to compare predictions of the biodiversity indicators under different plausible patterns of missing data.

A second possible approach to deal with the variation in sampling effort across the landscape is instead to increase coordination in where data are being collected. This could be especially useful for taxa that are not targeted by a national systematic monitoring scheme with a planned spatial sampling design. A new concept has emerged in recent years called 'adaptive sampling' – the idea behind this is to guide future sampling based on where past sampling has occurred. UKCEH have explored 'adaptive sampling' in several projects. For instance, as part of the DECIDE project, different 'virtual' versions of the UK landscape were generated and species occurrences were sampled in different ways. This work, published in Methods in Ecology and Evolution (Mondain-Monval et al. 2024), showed that even a small amount of coordination in sampling effort could increase the performance of models using the data. To test this in real landscapes, UKCEH have piloted

two tools to show the locations of sampling priorities based on past recording: the DECIDE tool indicates where species recording would be most valuable (based on intelligently filling gaps in butterfly and moth distributions) and the dynamic 'Targeting Revisits Maps' highlight squares that are most valuable to revisit, for grasshoppers, ladybirds, soldierflies and other species. We have received useful feedback on the value of these maps and hope to co-develop this idea further in the future.

We hope that our work in this area provide useful options for dealing with data gaps when analysing species monitoring data. But we expect that there is no one-size-fits-all solution. The complexities of species' ecologies, environmental changes, sampling patterns and data availabilities mean that need to draw on the combined expertise and passion of all those involved in monitoring. Ultimately, our goal is to ensure we make effective use of the large and growing biodiversity data sets for policy decision-making.

References

Bowler, D. E., Boyd, R. J., Callaghan, C. T., Robinson, R. A., Isaac, N. J., & Pocock, M. J. (2024). Treating gaps and biases in biodiversity data as a missing data problem. *Biological Reviews*. In press. https://doi.org/10.1111/brv.13127

Mondain-Monval, T., Pocock, M., Rolph, S., August, T., Wright, E., & Jarvis, S. (2024). Adaptive sampling by citizen scientists improves species distribution model performance: A simulation study. *Methods in Ecology and Evolution*. In press. https://doi.org/10.1111/2041-210X.14355

Most of the work presented here was supported by the Terrestrial Surveillance Development and Analysis partnership of UKCEH, JNCC and British Trust for Ornithology. The DECIDE Project was supported by the Natural Environment Research Council.

Waxcaps: the hidden jewels in our grasslands

Clare Langrick

Ideas and projects often start from a chance encounter and the work that the North and East Yorkshire Ecological Data Centre (NEYEDC) has been doing to identify and map Important Grassland Fungi Sites is no exception. An independent farm advisor colleague called in early 2020 to quiz me about what 'waxcap assemblage' records NEYEDC held. I had to rather embarrassingly reply, 'a handful', but that it genuinely was an area of concern given the rapid increase in requests for data that were coming through in relation to tree planting schemes: what if one of these schemes takes place on a grassland site important for its grassland fungi that had just never been recorded? At that time NEYEDC did not have access to many records or have the knowledge of where these sites might be, just a strong inkling that many parts of North and East Yorkshire 'should' be important for grassland fungi and that they should be recorded.

With this in mind, my colleague Claire and I hatched a plan to develop a project that could start to address this problem; a project that not only collected much needed and important grassland fungi records on previously unknown sites, but one that engaged with the public to help identify potential sites for further survey. In Spring 2022, and following the successful launch of Plantlife's Waxcap Watch and associated WaxcApp in Autumn 2020 to spur us on, NEYEDC successfully applied to Yorkshire Water's Biodiversity Enhancement Fund for three years' worth of funding to create an Important Grassland Fungi Site Register for North and East Yorkshire. At that time Claire and I had no

Meadow waxcap Hygrocybe pratensis (Lucy Baldwin, NEYEDC)

idea what the appetite for this project would be, just that we needed to find those Important Grassland Fungi Sites and if we could recruit willing volunteers to help us along the way, all the better.

What is an Important Grassland Fungi Site?

Important Grassland Fungi Sites are an indicator of long-established or ancient grasslands, sadly now a rare habitat in the UK. Whilst some such grasslands can be identified by their plant communities, others are best identified by their array of 'CHEGD' fungi species present in the autumn, each letter representing a different genera or group of fungi:

Clavariaceae, the fairy clubs, spindles and corals;

Hygrocybe sensu lato, the waxcaps (including *Cuphophyllus, Gliophorus, Gloioxanthomyces, Hygrocybe, Neohygrocybe* and *Porpolomopsis* genera);

Entoloma sensu lato, the pinkgills;

Geoglossaceae, the earthtongues;

Dermoloma and allies, the crazed caps, fanvaults and meadowcaps (including *Dermoloma, Hodophilus, Camarophyllopsis* and *Pseudotricholoma* genera).

They are often overlooked pastures, but with the key features of having low inputs, little or no nutrients added from fertilisers and herbicides, for many years, or even generations, and are usually grazed, especially later in the summer to keep the sward short. For North and East Yorkshire, with very few existing and systematically collected records, our starting point was sites with 10+ CHEGD species.

The irregular occurrence of fungi fruiting bodies and relatively short field season outside the traditional survey period for grassland flora

Parrot waxcap Gliophorus psittacinus (Clare Langrick, NEYEDC)

mean that important fungi sites, regardless of their habitat, tend to be under-recorded. That is what was important about our funding – secured for three years, it covered multiple field seasons, allowing us to re-visit key sites each year to start to build a picture of the breadth of CHEGD species present.

Our recording community

We contacted Plantlife early in the project, initially to ask if they would share their Waxcap Watch WaxcApp sites for North and East Yorkshire to give us a starting point of where to look to complete more comprehensive surveys, but they went one better and offered to create a Yorkshire version of their WaxcApp using ArcGIS's Survey 123 recording app. This has enabled us to be able to engage with casual recorders that may have a general interest in nature and wildlife near to where they live, but feel unable, or do not wish to, try and identify grassland fungi to species level. All the app asks for is the colour of the fungi to be recorded, and different colours are awarded different points. For example, the pink waxcap category which includes the IUCN vulnerable Ballerina waxcap, *Porpolomopsis calyptriformis,* scores a maximum 5 points whereas the green waxcap category, which includes the more common Parrot waxcap *Gliophorus psittacinus,* scores 1 point. It allows for records of waxcaps, clubs/corals/spindles and earthongues, but not pinkgills or crazed caps. Whilst the WaxcApp has its shortcomings, it provides a quick and easy broad-brush approach to identifying the location of potentially good sites that can be followed up with landowner liaison and hopefully further survey.

Golden waxcap Hygrocybe chlorophane (Claire Bending, NEYEDC)

Between 2022 – 2024 we have had funding to run 12 free training events, including introduction to grassland fungi sessions that

support beginners to differentiate between CHEGD and non-CHEGD grassland fungi and improver sessions that start look more in-depth at identifying CHEGD fungi to species level using keys. We have also led eight traditional fungi forays.

As well as our casual recorders, we have been lucky enough to have group of knowledgeable mycologists who have given up their time to visit sites that require follow-up survey, producing detailed species lists on a field-by-field basis.

What we've learnt so far

Our two key learnings during the three field seasons of the project are:

- There is a fascination for fungi! There are many people who are interested in fungi and keen to learn more. Even with a little knowledge these people are key in identifying potentially important sites through the WaxcApp;
- Our inkling that parts of North and East Yorkshire are important for grassland fungi has been proven correct.

Since the project began, we have recorded 101 sites on NEYEDC's version of Plantlife's WaxcApp and whilst some of them may only score in single figures, we have had many sites that score high enough to warrant further investigation. In fact, we have more sites for follow-up than we have had time to look at during the project funding timescales! From the 2022 and 2023 surveys we have formally identified 20 Important Grassland Fungi Sites and are working with landowners to raise awareness of the importance of their land and to encourage the continuation of existing management practices. There will undoubtedly be more sites from the 2024 surveys.

Scarlet waxcap Hygrocybe coccinea Claire Bending, NEYEDC)

What next?

Since 2022 the project has gone from strength to strength, with additional funding for detailed survey and training events coming from three of the protected landscapes in North Yorkshire. Whilst a number of Important Grassland Fungi Sites have been identified in North and East Yorkshire, this has only served to highlight how much more work there is to do to gain a better understanding of this important habitat. Over the coming months we will evaluate the first round of funding and look to develop follow-up work.

Acknowledgements

Thanks must go to Project Officer Claire Bending who has worked tirelessly to raise awareness of grassland fungi, run training sessions and identify the landowners of potential Important Grassland Fungi sites across North and East Yorkshire and Steve Hindle, Ancient Grassland Officer at National Trust, for providing training, undertaking surveys, and providing support.

Further Information

Information on Plantlife's national Waxcap Watch: https://www.plantlife.org.uk/waxcapwatch/

Information on NEYEDC's projects, including an interactive map of the WaxcApp records for Yorkshire: https://www.neyedc.org.uk/waxcaps

Contact: Clare.Langrick@neyedc.co.uk

Example site Low Thorgill, Rosedale, North York Moors (Clare Langrick, NEYEDC)

Earthworm Records and Habitat Associations in the British Isles

Keiron Brown

The Earthworm Society launched the National Earthworm Recording Scheme (NERS) back in 2014 with the aim of addressing the lack of earthworm records available for the UK. This has included training and supporting volunteer earthworm recorders and working with research institutions to incorporate the data generated through research projects.

As of September 2022, the NERS database held 21,790 occurrence records for 30 earthworm species from 2683 sites - likely making it the largest national dataset on earthworm distribution of any country in the world. The Earthworm Society of Britain partnered with Forest Research and others to analyse this data to address the following aims:

1. Update the current knowledge of British earthworm species occurrences.
2. Identify species-specific habitat and microhabitat associations of British earthworms.

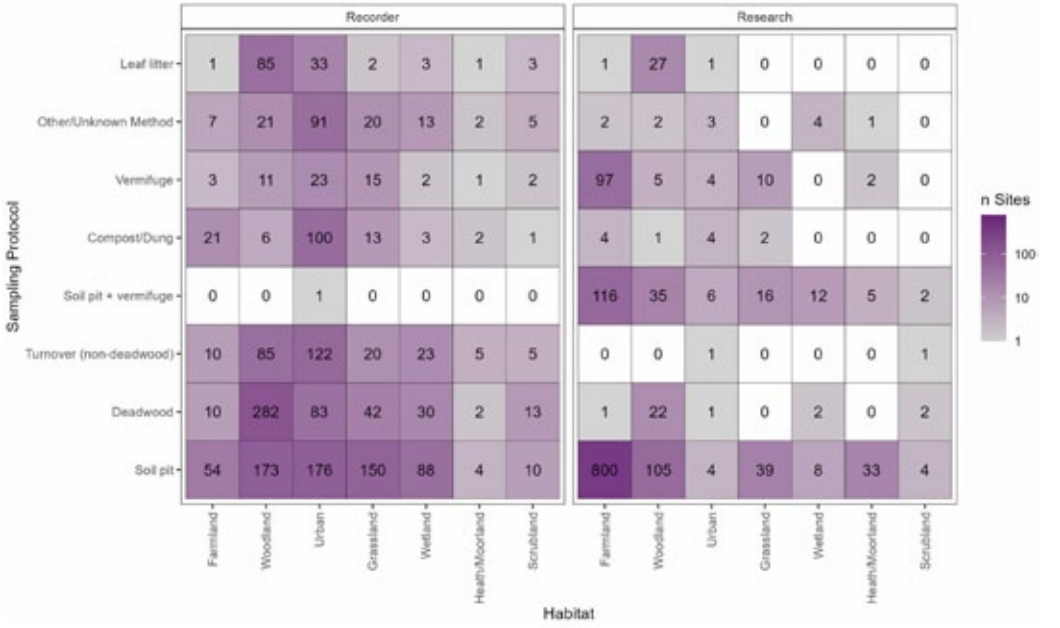


Fig. 1. Studies by habitat and sampling protocol in the NERS database, sub-divided by Recorder and Researcher (transparency of tile indicates number of sites represented).

3. Reveal any biases and complementarities between recorder and research earthworm collection.
4. Inform how future earthworm sampling can be better focussed to improve our knowledge of earthworm ecology in the British Isles.

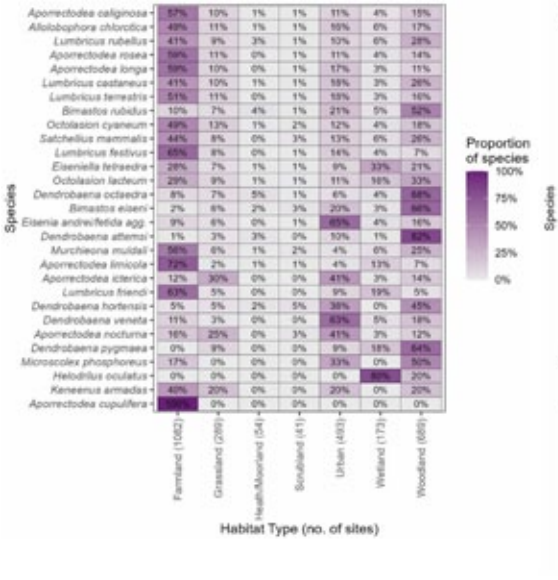
We're delighted to announce that the research has now been published in the European Journal of Soil Biology as an open access article for anyone and everyone to enjoy and use.

Some key research conclusions include:

- Researchers and public earthworm recorders tend to sample different habitat types.
- Most non-soil-based earthworm sampling is carried out by public recorders.
- Several British earthworm species demonstrate clear habitat-specificity.
- 'Rare' earthworm species were associated with under-sampled (micro)habitats.
- Future earthworm sampling should focus on uncommon habitats and microhabitats.

Dr Frank Ashwood provides an overview of the research in the presentation below. https://youtu.be/1riKZDaTqZ8

Read the full article in the European Journal of Soil ecology: https://doi.org/10.1016/j.ejsobi.2024.103642



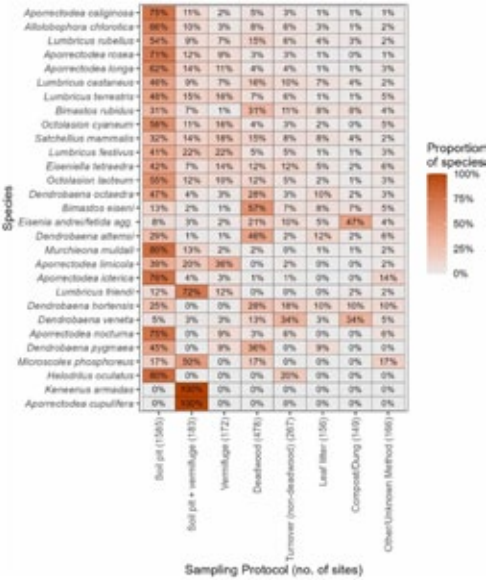


Fig. 3. (left) Proportion of each earthworm species per habitat type in the NERS database. Species ordered from most (top) to least (bottom) commonly occurring. Fig. 4. (right) Proportion of each earthworm species per sampling protocol in the NERS database. Species ordered from most (top) to least (bottom) commonly occurring.

NBN Trust update for NFBR – October 2024

NBN Awards for Wildlife Recording 2024 Winners

The NBN conference convened at the Merseyside Maritime Museum, Liverpool on Thursday 21 November. As well as a great line-up of speakers, and a panel discussion, the winners of the NBN Awards for Wildlife Recording 2024 were announced.

Roger Morris (Surrey) and Stuart Ball (Cambridgeshire), joint scheme organisers for the Hoverfly Recording Scheme since 1990, are the joint-winners of the inaugural NBN Lifetime Achievement Award 2024.

Stuart Roberts (Wiltshire) and Matt Smith (Berkshire), part of the verification team for Bees Wasps & Ants Recording Society (BWARS), were joint-winners of the inaugural NBN Verifier's Award 2024.

18-year old Ben Rumsby (Essex), an exceptionally dedicated birder, won the NBN Young Person's Award 2024.

Charlotte Shenkin (Jersey) won the NBN Newcomer Award 2024 and having first became interested in fungi in October 2022 has now has recorded 25+ species of fungi that were previously unseen in Jersey.

Charlotte Bolton (Dorset), leader of the Seasearch programme of the Marine Conservation Society since 2016, won the NBN Award for Marine Wildlife Recording 2024.

Katty Baird (from East Lothian) won the NBN Award for Terrestrial Wildlife Recording 2024, having taken the recording of moths in East Lothian to new heights.

MammalWeb is the winner of the NBN Group Award 2024. It is a national not-for-profit organisation, established in 2013 in collaboration between Durham University and Durham Wildlife Trust, to address the information deficit on the status and ecology of UK and European wild mammals.

You can read more about these inspirational recorders, as well those others who were highly commended in each category, on the NBN website

National Education Nature Park

The first annual report from the National Education Nature Park has been published, showing that more than 1 in 8 schools and colleges across England have joined the free programme in its first year. The programme is creating a network of green spaces across the education estate.

The NBN Trust is providing advice and support on biodiversity data collection, data standards, verification and data flows to ensure maximum value and onward use of the data collected. We are working closely with the partnership to support the visualisation of existing biological data, and the use of biological recording tools including iNaturalistUK and are producing resources to help facilitate its use.

NBN Trust team

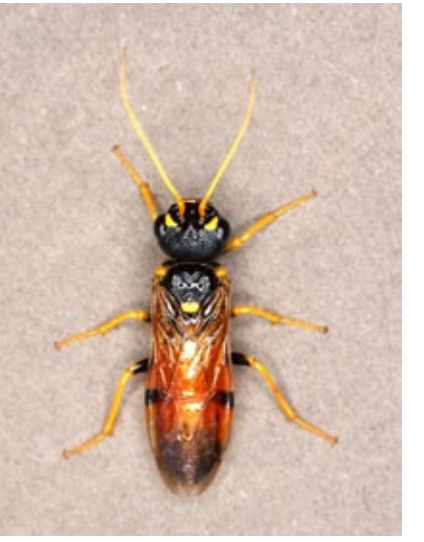
It's been a while since we shared information on the NBN Trust team in this newsletter. So, with a few new people having recently joined our small, but growing team, this seems the perfect opportunity to invite you to meet us! Read about all our individual roles and responsibilities and what led us to work for the NBN Trust.

Sawflies
The Phytophagous hymenoptera

Andrew Green

Sawflies are simply stunning. A bold statement perhaps but to my eye these plant-eating hymenoptera have so much more to interest the amateur naturalist than their cousins the bees and wasps. Their lifecycle is more akin to butterflies and moths with a caterpillar-like larval stage which are worthy of study in their own right. The adults are diverse in shape and colour from the bumbling Hairy-clubhorns to the slender Stem-sawflies, the sun-seeking Spinners, the bobble-headed Swordtails, and from the giant Woodwasps and Horntails to the diminutive Daggertails. They can be found in most habitats across these islands from the sub-arctic highlands of Scotland down to the coastal marshes. Some species will be well known to gardeners, foresters and farmers and any naturalist with a sweep net will regularly encounter them in their pursuits.

In a nation with a long history of naturalists, ecologists and conservationists, it is surprising that in the 250 years since Cameron published his Monograph of the British Phytophagous Hymenoptera in four volumes, there are still many species where we do not have complete knowledge of the early stages of the species. Only this year I have reared and photographed the larvae of the Distinguished Sawfly, *Tenthredo distinguenda* and these are perhaps the first photographs of these larvae in the public domain. Many sawfly species will readily oviposit onto the food plant and so rearing the larval stage is not difficult for the amateur enthusiast.



Acantholyda hieroglyphica – New to Britain

There are around 550 species in the UK which is manageable as a taxonomic group for those keen to learn. The taxonomy has been somewhat fluid but is slowly resolving and becoming more stable thanks in no small part to the Senckenberg Deutsches Entomologisches Institut (SDEI). We have good communication with the various European experts there who are highly supportive of our work.

My own journey of discovery began back in 2015 when I found my first sawfly. It was an Alder Swordtail, *Xiphydria camelus,* and I had no idea what it was. The following year I found 50 species, attended two identification workshops at Wildlife BCN and BENHS. It was also a great help at that time to meet David Sheppard, the county recorder for Lincolnshire and co-author of the then checklist, who was kind enough to provide some mentoring and confirmed my tentative identifications. At the time the only resource we had for identifying sawflies to species level in the UK was Benson's set of keys which were largely based on faded museum specimens. Those keys are frustrating and confusing to the beginner.

Following a spate of sawfly images being posted on the bees, wasps and ants Facebook group, in 2017 Stuart Dunlop posed the idea of setting up a similar group for sawflies and we got talking. Stuart set up the page with he and I as administrators, soon to be joined by Ian Andrews, County Recorder for Yorkshire, and Andy Musgrove, county recorder for Norfolk both of whom had started getting into sawflies at round about the same time as me. The Facebook group membership grew rapidly and now has around 2,200 members.

In late 2018 the Sawfly Recording Scheme of Great Britain and Northern Ireland, which had been dormant since 2012, was rebooted with an

Tenthredo distinguenda reared larva

initial meeting at NHM London. I had by then become the county recorder for Bedfordshire and at that meeting agreed to help clear the backlog of unverified sawfly records on iRecord. At that time, I also took it upon myself to begin work on developing a sawfly website (www.sawflies.org.uk). That has since grown to have 720 pages with over 2,700 verified sawfly images, a great many of which have been provided by our Facebook members.

The recording scheme is an informal construct coordinated by me, with Guy Knight acting in an advisory capacity, and with additional support from numerous other sawfly recorders including Andrew Halstead, Andy Musgrove, Ian Andrews, Krisztina Fekete, Laurence Clemons and Stuart Dunlop. Sawfly records can be added via the iRecord website and app, from where they are available to the national scheme and are shared via the National Biodiversity Network Atlas. Together we manage the verifying on iRecord, I manage the website and Andy Musgrove undertakes invaluable work on the datasets, having recently completed a review of the conservation status of all sawfly species in Britain for Natural England, the results of which can be found on the website. Ian Andrews verifies Yorkshire records, Andy Musgrove the Norfolk records, Krizstina Fekete the Tenthredo species, Stuart Dunlop the Northern Ireland records and I pick up the rest.

Moving forward, we need more verifiers, more county recorders, more identification training and up to date keys to the British and Irish species. There is a Sawflies of Fennoscandia book due out soon and this promises to be a high-quality body of work that hopefully includes most if not all British species. Recorders shouldn't be put off by these obstacles as the rewards and joys are many. Only this year I have found two species new to Britain in Bedfordshire and am discovering new life history information every week through observations and rearing experiments.

Updates from UKCEH Biological Records Centre

Martin Harvey

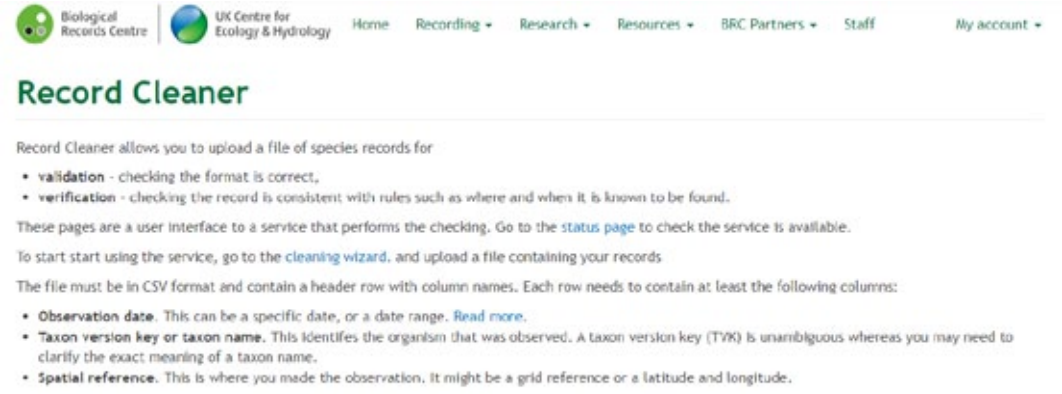
During 2024 BRC continued to work with colleagues at Natural England as part of the Natural Capital and Ecosystem Assessment Programme. This allowed a number of developments aimed at supporting the checking and mobilising of biological records.

Record Cleaner software

A major area of work this year has been to redevelop the Record Cleaner system as a web service. This will soon be available for testing via the BRC website, and will also support the use of automated APIs to allow other systems to interact with Record Cleaner and make use of the checks that is provides. Alongside this we have developed a revised procedure for storing and editing the rules for the various species groups that Record Cleaner covers, which should make it easier to update the rules where required, and to add new taxon groups.

The rules are maintained by the relevant national recording schemes, and BRC will be working with the schemes to support updates and additions to the rules. This includes the option of defining different phenology ('time of year') rules for different species life stages.

Test page for Record Cleaner online:



Consultation over the sharing of unverified records

There is an argument for sharing unverified records via NBN Atlas, strongly so in the case of invasive non-native species (where speed of response in order to control their spread can be an important factor), and potentially for biological records in general. BRC consulted with recording scheme organisers to gather

evidence on the pros and cons of making unverified records more widely available. At the same time we consulted over potential options for giving recording verifiers more direct access to unverified records that are already on the NBN Atlas, so that these could be reviewed by verifiers if they wished to do so.

There was a fairly even split between responses supporting the sharing of unverified records, and those that opposed it. The main topics raised in the responses are summarised in the tables below.

1. From those in favour of wider sharing of unverified records:

Theme	Responses
Unverified records need to be clearly separated on the NBN Atlas	10
Can trigger additional recording	7
Important to share records of INNS	3
Useful contribution to conservation	2
End users can make their own judgment of the records	1
Lack of unverified records could be mis-used (i.e. there are risks from sharing unverified, but also from **not** sharing)	1
Many unverified records are correct	1
Promotes trust if all records shared	1

2. From those not in favour of wider sharing of unverified records:

Theme	Responses
No benefit in sharing unverified records	7
Verification for my scheme is up to date	6
High proportion of misidentifications in records submitted	4
No INNS in this group	2
Unverified records could be mis-used	2

Reasons for these views were clearly expressed, and reflect the variety of views held by differing recording schemes and different data users, and the differences between the various taxon groups. It is clear that a one-size-fits-all approach will not be appropriate.

NBN intends to make changes to the way in which unverified records are displayed on the Atlas so that their status is clearer to users. BRC can support the sharing of unverified records for those schemes that wish to do so, with a priority given to records of invasive non-native species.

New developments in iRecord

The NCEA work has supported several new developments in iRecord that will be appearing on the website very soon:

- Additional tools to enable editing of sets of records (e.g. if a date or grid reference for batch of records needs to be changed)
- Enabling automatic blurring of sensitive species in line with the national guidance
- New data visualisations for the iRecord Activity pages

Preview of the Activity page visualisations:

Further details of the above developments will be posted on the appropriate websites, and if you have additional questions about these work areas please contact BRC.

Thanks to Defra for their financial support of the NCEA Programme, to Natural England for helping to develop this work, and to NBN for their input to the consultations.

National Forum for Biological Recording

The National Forum for Biological Recording is the premier UK organisation for practitioners engaged with biological recording across the UK. Membership includes individual naturalists, national organisations and recording societies, local records centres and their staff. This gives it a unique perspective and an important role.

Whether you are an experienced naturalist or taking your first steps in biological recording, we want to hear from you.

To offer an article for a newsletter, please contact our Newsletter Editor:

Sam Amy on editor@nfbr.org.uk

To join the NFBR, please contact our Membership Officer and Treasurer:

Clare Langrick on membership@nfbr.org.uk

For all other enquiries about NFBR please contact our Chair:

on chairman@nfbr.org.uk

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