NFBR

NATIONAL FORUM FOR BIOLOGICAL RECORDING

Newsletter 48 – July 2014

Seven years of the National Moth Recording Scheme: see page 5
(Photo © Sally-Ann Spence)

John Newbould – an appreciation

Paul Harding, NFBR Council

Sadly for us, after 15 years on NFBR Council, John has decided to resign as Secretary and as a Trustee of NFBR. One's priorities in life change with time and John wants to spend more time doing fieldwork in his adopted county of Dorset (and further afield) and taking life just a little more gently. We wish him well and hope to see him again soon!

John Newbould checking his moth trap as part of the local Garden Bioblitz event in May 2014 , at Thomas Hardy's Cottage, near Dorchester, Dorset,.

John joined NFBR Council in 1999 and has filled the roles of Membership Secretary, Treasurer and finally Secretary, carrying out those often tedious administrative duties that are so essential to the success of voluntary bodies such as NFBR. His experience in running his own business as a community pharmacist ensured that John was always well prepared and dependable, but his contribution was also notable for his enthusiasm and wealth of practical good sense. He single-handedly took on the administration of NFBR's very successful series of annual conferences – finding suitable venues, dealing with bookings and making sure that the event ran smoothly. In the last few years he has led the process of establishing NFBR as a registered charity. In this he drew on his experience with other organisations: as General Secretary and later President of the Yorkshire Naturalists' Union, and in his various roles with the Dorset Natural History and Archaeological Society, Dorset Environmental Records Centre and the National Trust's Cyril Diver Project.

John is a prime example of the best tradition of amateur naturalists that are committed to studying natural history, sharing their results and promoting enthusiasm in others. With typical Yorkshire forthrightness, John described aspects of his own roles in biological recording in the January 2012 NBN eNews – Recorder insight. The YNU published a biographical note on John in his presidential year (*The Naturalist*, April 2013, Vol 138, pp 2–3), and John's thoughtful and wide ranging Presidential Address "What can natural history societies achieve" has also been published (*The Naturalist*, April 2014, Vol 139, pp 2–14). John's contributions have been recognised by the YNU with Honorary Membership in 2010, and in 2012 with Honorary Membership of the National Biodiversity Network Trust.

The membership of NFBR, and in particular the Council and Trustees, owe John a great debt of gratitude – he will be a very hard act to follow.

Thank you John.

Contents

Cover photo: moths in the hand by Sally-Ann Spence of Minibeast Mayhem.

Editorial

Welcome to the 48th NFBR Newsletter. This issue carries a report from our very enjoyable and successful 2014 conference, but with scarcely a pause for breath preparations are already under way for 2015! (see page 24).

This issue contains another mix of articles and updates on biological recording and related activities, from local natural history museums (page 18) to global data issues (page 14). Our spectacular cover photo (by Sally-Anne Spence) highlights the fun of recording moths, but fun can be translated into lots of data and serious information (page 5). There is a lot going on, and NFBR does its best to communicate, be involved with and where relevant provide a steer to all this activity. But we can only do this with your continued support and feedback, so thank you for joining if you already have, and please consider doing so if you aren't yet there.

We will also have a vacancy for Honorary Secretary, following the resignation of John Newbould, who after many years of dedicated service to NFBR has decided that the time has come to hand over to a successor (page 2). We will miss John's enthusiasm and good sense at our meetings. Steve Whitbread has taken on the secretary role for the rest of this year, but at next year's AGM we will be looking to recruit a new Hon Sec and there will also be vacancies for NFBR Trustees – please get in touch if you'd like to know more, or would like to 'test the water' by joining our advisory council first.

We intend to get the next Newsletter out in January 2015, so please get in touch if you have biological recording news, reports, articles or photos to share. Contact me, or share your views more widely via our email discussion forum, our Twitter feed, or on our Facebook page. And don't forget to check in to the recently-refreshed NFBR website.

Many thanks to all the contributors for this issue.

Martin Harvey, July 2014
editor@nfbr.org.uk

The **deadline for sending in articles for newsletter 49** is
24 November 2014

Vacancy: NFBR Honorary Secretary

NFBR is seeking a new Honorary Secretary to take up this important post in 2015. You would be expected to become a Trustee of NFBR and be the formal point of contact for the group, arrange management meetings, keep our records and be an active member of the Executive and Council. This is an interesting time in UK ecology, conservation and biological recording so come and join us and make a contribution. We will do our best to help and make you welcome! Please contact Graham Walley by email (graham.walley@leics.gov.uk) if you would like more information or to discuss further.

The National Moth Recording Scheme

Dr Zoë Randle, Surveys Officer, Butterfly Conservation

The National Moth Recording Scheme (NMRS), now in its 7th year, is going from strength to strength. There are in excess of 17 million moth records in the database and we still have several more data refreshes to import. Butterfly Conservation and the NMRS team are extremely grateful to the moth recording community for their continued support of this important scheme.

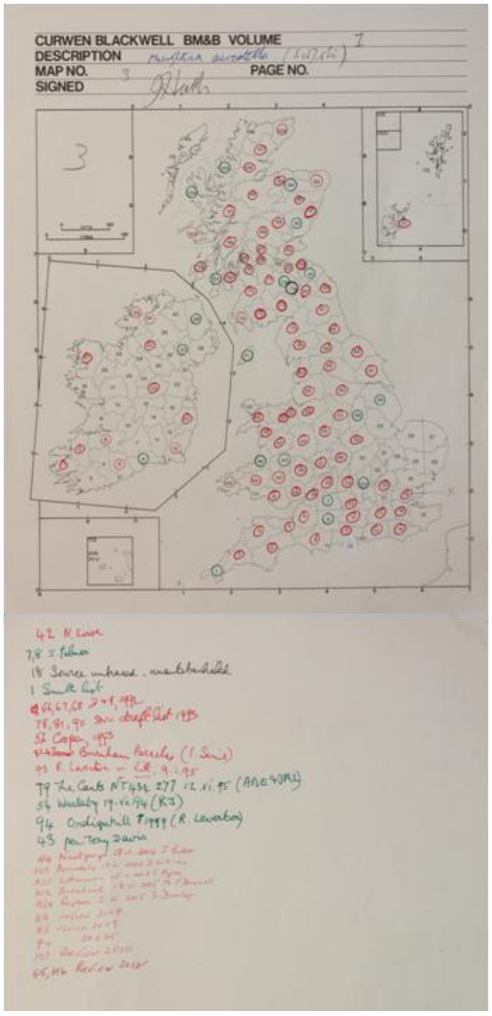
The NMRS was established to create a database of the 900 or so macro-moths from the UK, Channel Islands and Isle of Man, to provide up-to-date species distribution maps. The collation of existing local and national datasets of moth records to the central database provides an essential historical background against which to measure change and define conservation priorities. The database also provides a rich source of information for research into a range of ecological questions, including the impact of climate change on insect biodiversity and the links between declines of moths and their predators such as birds and bats.

Data from the NMRS has been used in collaboration with Rothamsted Research in the publication of the State of Britain's Larger Moths report 2013 and with the Centre of Ecology and Hydrology for a scientific paper published in the Journal of Applied Ecology. These two important publications will help to raise the profile of moths and also inform conservation strategies in light of climate change and habitat loss. To get involved in the scheme, submit your moth records to your County Moth Recorder (contact details can be found on the Moths Count website).

In collaboration with MothsIreland we plan to publish a Macro-moth Atlas for Britain and Ireland in 2018. We feel that the timing for this is appropriate due to the success and progress of the NMRS so far. The atlas will include all records in the NMRS and MothsIreland databases up to the end of 2016. There is still a significant amount of work to be done between now and then; however, it is encouraging to see the moth recording community rising to the challenge by actively targeting under-recorded areas during the current field season. After this year there are still two more seasons to improve the coverage of the NMRS and the winter months to harvest records from museum collections, old notebooks and the like. Please contact your County Moth Recorder in the first instance if you wish to help increase recording in under-recorded areas or if you would like to assist with harvesting historical records.

The stunning Yellow-barred Gold micro-moth, *Micropterix aureatella*.

We have recently upgraded the NMRS hardware and have migrated the NMRS database to a new server; this demonstrates Butterfly Conservation's continued commitment to the NMRS.



Hand-annotated maps of micro-moth distribution (left) have been scanned and digitised (above) - this example shows *Micropterix aureatella*.

We are also in discussion with the NBN Gateway and our web developers to update and improve the web services on the Moths Count website.

Another important development earlier this year was the scanning of the hand-annotated micro-moth maps and record cards originally compiled by A. Maitland Emmet, and more recently by Dr John Langmaid and Dr Mark Young. This was possible due to a grant from the Department for Environment Food and Rural Affairs. These maps are available on the Moths Count website. We were also able to digitise vice-county level maps for 756 species. Currently the digitised maps include data up to 31st December 2012; we plan to update these annually and seek further funding to digitise the remaining 862 species record cards. We are extremely grateful to John Langmaid and Mark Young for making the original paper maps available, and to Dave Green for taking on the digitisation.

Every year we hold a National Moth Recorders' Meeting, these are successful events which enable the moth recording community to hear about the latest developments in moth conservation, moth recording and moth research at a local, national and international level. Next year's meeting will be held on Saturday 31 January 2015 at the Birmingham and Midland Institute, Central Birmingham. Further details and information on how to book will be made available on the Moths Count website in due course.

Acknowledgements: The ongoing Moths Count project is supported financially by Natural England, Natural Resources Wales, Forest Services, Forestry Commission England, Northern Ireland Environment Agency, Royal Entomological Society, Scottish Natural Heritage and many other individuals and partners.

NFBR Conference 2014 – report

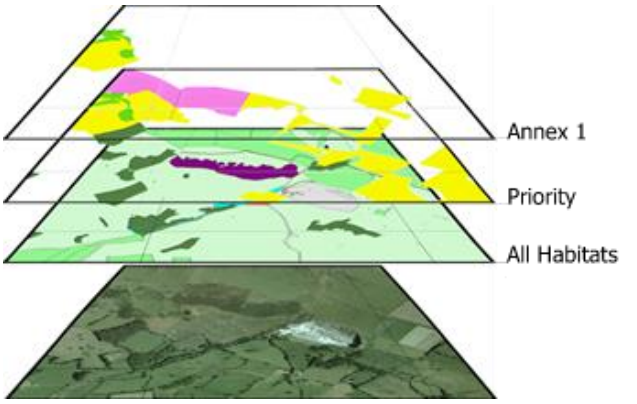
Trevor James (Conference Co-organiser) and Graham Walley (NFBR Chairman)

Some 70 or so delegates from across the country, NFBR members and others, gathered together in the rather fine surroundings of the former British Rail Training Centre at Derby last April, for what turned out to be a stimulating two days.

Our theme was "Habitat – what is it, and why do we need to know?" For some this might have seemed to be 'old-hat' – we have thrashed the subject of habitat around for at least the last 50 years, and have come up with all manner of classification systems to account for it. But, somehow, we still can't seem to put a precise finger on what it is, and, most importantly of all, exactly how (and why) species relate to it. The aim of the Conference, then, was to get people to consider 'habitat' really from the species point of view; and then also to consider what this might imply for organising recording and the resultant data.

The first half day, as has been the norm for the last few years, was a discussion session. Some 40 or more people arrived for this – and we deployed in 'cabaret' style around our room, eventually splitting up into four groups to discuss a set of basic questions; but not before we had had some introductory talks, to get people thinking. The session was led by Trevor James, NFBR Trustee and past-Chairman. **Owen Mountford** of CEH Wallingford, well-known as a leading European botanist and expert on its habitats, gave us a very quick, but brilliantly concise overview of habitat classifications, including how our concepts of Phase I and NVC fitted in with European systems, such as EUNIS and CORINE. A key point that emerged was the potential confusion that the proliferation of systems had caused, and he pointed up the attempt by Somerset Environmental Records Centre to develop the Integrated Habitat System, seeking to 'bridge the gap'.

The key issue remained though – how well (or otherwise) do our attempts to 'classify' habitats allow us to relate species' occurrence in the environment to habitat characteristics that we can record? This talk was followed up by **Trevor James**, who basically posed a few awkward questions as a follow-up: how do we recognise and document the origin and potential of 'habitats' e.g. when a 'heath' scrubs up to become a wood?; how do we record 'habitat' at different spatial scales to take account of species occupancy?; can we determine (micro-) habitat from the species' perspective, not our own (e.g. species occupying a wall)?; how do animal species really relate to a 'habitat'; and what about 'ephemeral' habitats, not just ones that come and go, but also historical habitats, such as hay-stack refuse, which no longer exist – where do species that inhabited these now live (or not), and what was their perspective on these habitats?



SERC's Integrated Habitat System.

The real question was – how can we adapt our 'rigid' habitat classification and recording systems to account for these details, which are all-too essential if we are to understand how species communities work? One of our delegates from Natural England, **Helen Mitchell**, gave us a verbal summary of what Natural England is doing in relation to habitat information – trying to draw together what are very disparate and difficult datasets to work with, with the aim to produce a more flexible tool to assess the 'health' of habitat, partly for EU reporting needs.

The gathering was asked to consider four questions:

- What do we mean by 'habitat'?
- How and why do we use a particular habitat recording system?
- How can habitat data be used to understand 'ecosystem services' (e.g. pollination)?
- How do we link species occurrences with relevant habitat data?

A good definition of 'habitat' was: "habitat is the total environment where a species occurs and lives". As for which system we might use – while it was recognised that existing habitat classifications might not be ideal for especially animals (and fungi), we need to be pragmatic, and not 're-invent wheels' unnecessarily. For the 'ecosystem services' question, a useful thought to emerge was the role species mapping can play in acting as a surrogate for understanding the functioning of habitats in an area. Finally, concerning recording species in habitats, the thought that especially surfaced was that very precise 'occupancy' information about a species occurrence is most useful, and that we need to enhance this level of detail to make best use of recording effort.

On day 2, Graham Walley, NFBR Chairman, led the sessions, and we listened to a series of talks aimed at exploring some of the issues we had touched on the day before from different perspectives. We were especially pleased to have our Keynote Address from Dr **John Hopkins**, Honorary Fellow in the Environment and Sustainability Institute at the University of Exeter, and well-known for his work on conservation. He spoke on the theme "Landscape-scale conservation – better, bigger, more, and joined" – following the relatively recently published thinking promoted by Prof. John Lawton in a seminal report.

Are we putting too much emphasis on 'charismatic' habitats?

His talk pointed up the vital importance for overall environmental sustainability of the quality of habitat for species, even more than quantity/size; and also how we can lose perspective on what this means by not recognising 'quality' when we see it. While size of a particular area of habitat is important, he pointed out that some kinds of 'habitat' have had a disproportionate amount of attention, partly because they are relatively easy to define or are in some way 'charismatic'. The definition (and recognition) of some habitats has been poor, and therefore their importance under-estimated and their species under-recorded.

As for 'More', he suggested that we need to be less prescriptive about securing sites for conservation, and that we should be focusing on things like nutrient levels, rather than specific habitat types. But we should not expect miracles from habitat and species conservation – it is uncertain just how these things can produce what we think we need for 'ecosystem services'. The benefits of 'Joined' are well-known, but we need to know more about how species cope with fragmentation. As a round-up, he reinforced what we all really knew – that we need more data on habitat variety and quality (not just in 'protected' areas); more information on species occurrence and changes in range and occupancy; along with the tools to help us make use of the data. As he pointed up (following Mark Avery): "species keep us honest".

Next, **Paul Robinson** from JNCC talked about "The possible role of remote sensing in UK habitat evidence", focusing on JNCC's recent work developing the use of remote sensing

for habitat mapping and assessment, with pilot work in Norfolk and Wales in particular. Owing to the problems of existing data incompatibility, the cost and difficulty of updating surveys by ground survey, remote sensing offers us a great opportunity to at least do some of this at much reduced cost. He showed the effects in relation to north Norfolk, but pointed out that the techniques worked best with some single-species stands, or simple habitats, of some habitat characteristics, such as dampness. While these techniques are very valuable in reducing costs, they do need ground-truthing and augmentation with species survey.

Oli Pescott, from the Biological Records Centre, CEH Wallingford, gave us a talk: "Habitat-based surveillance: challenges and opportunities for biological recording", aimed at exploring the potential role of 'citizen-science' surveying for habitat and species monitoring, expanding from the 'traditional' recording for distribution mapping. As he pointed out: the demand for information is growing and measuring trends would be more straightforward with more repeatable recording. The clever bit is designing surveys that people can and want to help with. A principal driver in all this is the government's need to have a better understanding of 'change'. Working with voluntary organisations has always been the key to this, and BRC's work with BSBI, Plantlife and the British Lichen Society to develop a National Plant Monitoring Scheme was the basis of Oli's talk. He did, however, point up many of the issues – identifying exactly what it is that we are surveying, and why; balancing statistical demands with practicalities on the ground; and integrating surveys from different sources so that we can get the best out of them. The effects of 'change' on habitats is also important – can we be sure our 'indicators' will cut the mustard in years to come?

So far, we had had talks from the 'official' stand-point – demand-led perspectives with an expected approach to the way we as recorders might view habitat. **Keith Alexander**, well-known entomologist, specialising in ancient woodland and wood-pasture recording, had been asked to give a thought-provoking talk that might challenge some of our preconceptions about how species relate to 'habitat', using woodlands as an example. Keith's talk: "Talking rot about trees – recording species in a dynamic habitat" did just that. He pointed out that, for most species involved, 'woodland' did not matter, but 'trees' did. The specific occurrence of micro-habitats associated with particular trees was the key. He also pointed out that most ecologically valuable trees occur in more-or-less open situations, not in a closed 'wood'.

Natural woodland, in fact, is a dynamic environment of open space and tree/shrub species, along with everything else that lives alongside these, driven by herbivore grazing pressures, and their history is also important. For effective conservation of the vast array of species associated with trees, we need to recognise this, and to document especially veteran trees and their species communities, wherever they occur. He also pointed out that habitat classifications based on 'land-use' fail to recognise the crucial difference between real, dynamic wood-pasture habitat and closed-canopy (essentially semi-artificial) 'woodland' environments, with the result that tree-dependent species communities are failing to be effectively conserved.

The importance of open-grown trees.

Our afternoon session focused on some neglected species/habitats on the one hand, and on a local/regional approach to habitat recording on the other. The first 'neglected' species group we heard about was the fungi. **David Minter** of CABI and the British Mycological Society, who has had a lot to do with especially European studies of the group, gave us an intriguing talk: "Recording fungi and habitats", not so much about the fungi, but on the need to be able to handle complex data, if we are to be able to effectively record such things. In particular, he demonstrated online the data structure behind www.cybertruffle.org.uk, which aimed to capture the dynamic relationship between fungal species and their environment, enabling researchers to approach fungal relationships with other taxa and substrates from all angles. This kind of data management is essential if we are to be able to see fungi (and other organisms) in their true relationships, and to document these dynamic 'habitats' properly.

Charlotte Bolton from Dorset Wildlife Trust gave us our first 'local' talk, but also on a potentially neglected area – marine habitat recording. Her talk "DORIS and her legacy: using remote sensing and volunteer recording to map Dorset's marine environment" showed the use of volunteers from the SeaSearch community in the DORIS (Dorset Integrated Seabed Survey) project to map detail of marine habitat, based on multi-beam echo sounding and side-scan sonar survey data, augmented by sub-surface habitat photography on a grid basis. The conservation benefits and fisheries enhancement produced have been substantial, along with adding to marine habitat recognition techniques, and this will help other projects around the coast of the UK. One thing also emerged – the need to re-assess existing marine habitat classifications, because observed facts did not fit the expected pattern – a theme present in many of our talks!

Finally **Hannah Cook**, from Kent & Medway Biological Records Centre, presented: "The 2012 ARCH Habitat Survey and using habitat data to steer species conservation work in Kent". ARCH stands for "Assessing Regional Habitat Change", and was a project re-examining Kent's habitats, using the SERC Integrated Habitat System. This (second) re-survey used remote sensing, satellite imagery and ground-truthing across about 8% of the county with sophisticated field survey equipment. The result is the ability in Kent to have a very detailed understanding of priority areas for conservation and planning, as well as a good baseline against which to monitor further change. The IHS classification was enhanced for the purpose, and correlated to the CORINE system, to enable comparisons to be made with French habitats. A Connectivity Assessment Tool was developed, enabling assessments to be made of landscape habitat connectivity for species. From the survey, continued pressures and declines of semi-natural habitat were confirmed, as might be expected in this area in particular. Despite the losses, the data such surveys develop are vital in attempts to steer development, mitigate losses, and identify opportunities for habitat creation and enhancement. Kent's use of the IHS also brought the Conference full-circle, as it demonstrated the usefulness, for this kind of work at least, of using such a pragmatic system, even taking account of the caveats on understanding habitat that the Conference had identified.

The follow-up discussion, led by **Graham Walley**, started with some specific questions following from the last talk, but broader themes soon surfaced, in particular the issue of improving the quality of recording if we are to get the best out of survey work. In particular, the need to associate 'attributes' to species occurrence records was highlighted, and how these might be standardised and applied effectively without shoe-horning information into unsuitable data structures. Finally, the importance of straight 'natural history' of species was highlighted, and the importance of knowledge about autecology being recorded alongside records of species. This gives a vitally important role for traditional 'naturalists', but to get the best out of their efforts, recording systems and protocols need to be greatly enhanced, and the power-that-be need to be galvanised into supporting their development, as well as using the outputs effectively.

NFBR Conference 2014 – field meetings

Saturday 12th April saw a small contingent from the NFBR Conference taken to sites in the Derbyshire Peak District, under the helpful guidance of members of the Sorby Natural History Society, visiting Rainster Rocks at Brassington, and Derwent Moors. The day was organised by Paula Lightfoot (NFBR Trustee). We are very grateful to the Sorby NHS and Derek Whitely and Steve Price in particular for their help with this, and although only a relatively small number of delegates were able to take up the offer, those that did enjoyed some interesting and useful insights into the natural history of this area, which is well-studied, but, like so much of our environment, under some threat.

Mountain Hares, Oil Beetles and Red Grouse – a visit to Derwent Moors

Report by Richard Comont, photographs by Paula Lightfoot

On Saturday five of us headed northwards from Derby to the Derwent Valley for a day out with the Sorby Natural History Society, guided by local naturalist Derek Whitely. Scrambling up a precipitous hillside, we stumbled almost immediately across a pair of red grouse, then a couple of violet oil beetles, *Meloe violaceus*. Normally these are huge, with great big fat abdomens, but that's the result of a couple of weeks' solid eating – these were tiny, freshly emerged individuals with elytra longer than the small, pointed abdomen.

A freshly-emerged oil beetle.

Continuing up the path, we were stopped in our tracks by a grey bird quartering low over the moor – a male hen harrier! These beautiful raptors are virtually extinct in England now, with continuing persecution of nesting pairs, so it was fantastic to get good views as it soared lazily by, less than twenty metres away.

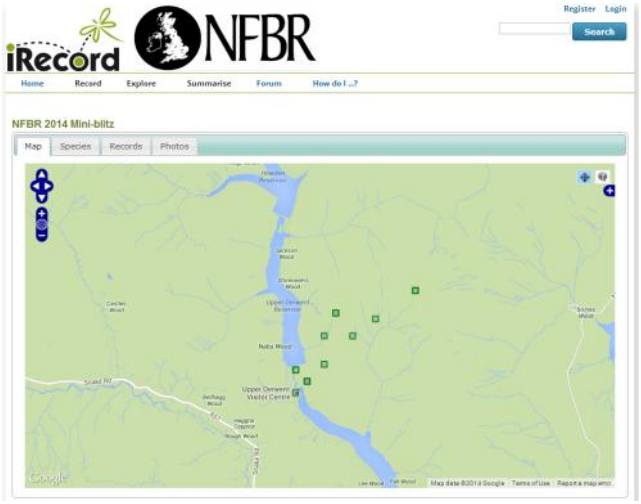
Hard at work recording by Derwent Water: curlew above, oil beetles below.

Later in the day we began to see tufts of white fur caught up in the heather. In spring, in the Peak District, that can only mean one thing – moulting mountain hares! The theory was quickly proved correct – a strange pale lump moved, revealing itself to be a piebald hare, still mostly white on top, but with plenty of brown fur low down on the sides. These animals – *Lepus timidus*, the only native British member of the rabbit family – live up in the mountains of Scotland, the Peak District, and the Isle of Man, and they change colour seasonally, white in the winter

to hide in the snow, and brown in the summer. One hare quickly became several – half a dozen in the end, all caught mid-change in their seasonal uncertainty.

On the way back down I was distracted from whistling Golden Plovers and posing Wheatears by a couple of bumblebees – both stranded on the ground wondering what happened to the sun, both new to me – *Bombus sylvestris* and the beautiful *Bombus monticola*, my new favourite bee. Clearly I can't spend too long ignoring invertebrates!

The excellent *Bombus monticola*



Details of the records from this Derwent Moor field trip (along with records made at the Derby Conference Centre) can be seen on the iRecord survey page set up for the conference by John van Breda.

Lichen meeting to Rainster Rocks, Brassington

Report and photographs by Graham Walley

Three NFBR conference delegates joined members of Sorby Natural History Society to study and record lichens on Rainster Rocks and the surrounding area, which lies just outside the Peak District National Park near the village of Brassington. The northern part of the Peak District, including the wild Derwent moors, is known as Dark Peak due to the colours of the peat uplands and exposed gritstone. In contrast, the geology of the Peak District to the south of Castleton is predominantly carboniferous limestone, whose whiteness gives this area the name of White Peak. The angular, jagged and very picturesque Rainster Rocks are dolomite, and are quite distinctive from the surrounding White Peak limestone.

This site was chosen by Sorby lichen recorder Steve Price, as these outcrops of dolomitised carboniferous limestone should hold species that are rare on or absent from the limestones of the Peak District dales. The area was first identified as being of lichen interest by Oliver Gilbert, the renowned local lichenologist and ecologist who was based at Sheffield university.

In Steve Price's words: We did not have to hunt far to find *Lecanora campestris* subsp. *dolomitica* – stepping out of the cars it was waiting for us, displayed on the drystone walls. These walls provided an opportunity for an introduction to lichens to be found on limestones.

On approaching the main outcrops some outlying rocks were inspected and these

gave three notable records as well as plenty of more widespread lichens. Here in abundance was *Physcia tribacia* spread across both the rocks and an adjacent elder bush (second county record for the species). The same elder bush also revealed a specimen of *Lecanora impudens*. This is the third British record, all found in the Derbyshire limestone area and all found by Craig Levy (pictured right with the hand lens). Additional specimens were found after lunch in a different 1km square. Surely VC57 cannot be the only county where this lichen exists? The outcrop itself also held *Pertusaria albescens* var. *coralline*, a variety of a species normally associated with tree bark (third county record).

The main outcrop of Rainster Rocks was interesting for the abundance of *Diploicia canescens* on its main vertical faces. This species, which is not uncommon, is not found in such abundance on the carboniferous limestones in the Peak District Dales. Here the group also had the opportunity to compare and contrast several of the more jelly-like lichens in *Leptogium* and *Collema*, and to appreciate sheets of the foliose 'dog-lichens' *Peltigera canina* and *P. praetextata*. Oli Pescott is pictured on the previous page next to an unusually large sheet of *P.canina*.

To end the day Craig Levy maintained his reputation as a good ‘spotter’ by showing us a specimen of *Diploschistes muscorum* growing over moss on a drystone wall. This species whilst being widespread in the county is nowhere very common.

A full list of 76 lichen species was compiled for the day by Steve Price.

Lichens were a new group to me and I enjoyed learning a lot through having the benefit of expert knowledge and good company. I and NFBR would like to thank Derek Whitely and Steve Price from Sorby Natural History Society for organising such interesting field trips and with their local knowledge giving us an insight into such a wide variety of habitats and the wildlife they support.

What is GBIF and why should I care?

Tom Hunt

Surprisingly, whilst doing the research for an ALERC response to the GBIF consultation on copyright, I discovered that not everyone in the biodiversity data community actually knows what GBIF is. Essentially GBIF, the Global Biodiversity Information Facility, is like a larger, worldwide version of the NBN Gateway. The chances are, if you have done much in the way of wildlife recording, you will have a record on it. GBIF data from the UK comes from the NBN Gateway, supplied at the same resolution as that set as "public resolution" by the Gateway's data providers. So a record publicly available via the Gateway also becomes available via GBIF (in principle, although it may take some time to get there), and this includes download availability.

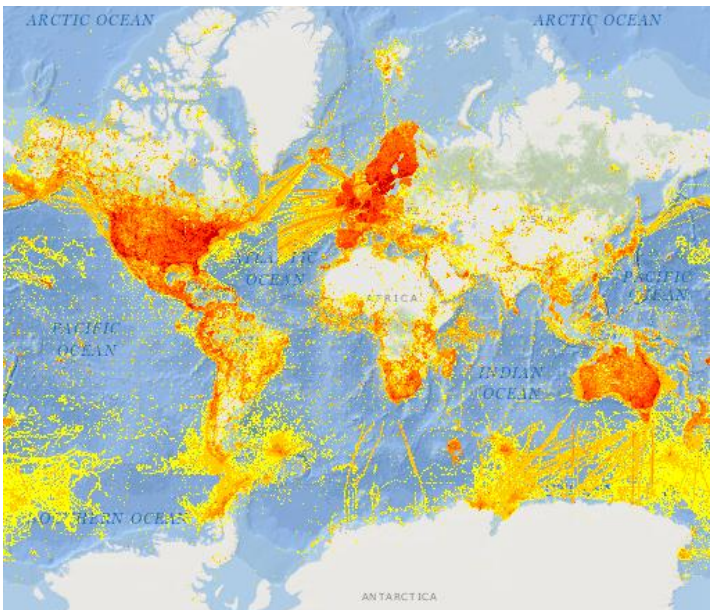
Given that most of the people I have worked with over the last eight years or so have been involved in one way or another with data sharing, at least in part, through the Gateway, it took me by surprise that there were people unaware that data they had handled will have made its way to GBIF. To be honest, I can't remember when I myself first learned about GBIF, but it was some time ago. What I can remember is that the record I found on GBIF that proved to have been handled by me was up there, was a ladybird record (a seven spot *Coccinella septempunctata* I think).

This was the last time I even thought of GBIF for several years, apart from the odd conversation with colleagues, until Charlie Barnes of Lincolnshire Environmental Records Centre posted on the ALERC forum to alert other local records centres that GBIF had launched a consultation on proposals for waiving copyright over data. Essentially, the proposal is that people providing data to GBIF should either waive copyright over it, so its use is unrestricted, or not submit it at all. In considering ALERC's response to the proposal I delved into the world of GBIF, and the world of data copyright, and I'm glad I did, as it not only threw up some interesting and important questions about GBIF, but also about data sharing generally here in the UK, which I think are worthy of discussion.

So, for the benefit of people not *au fait* with GBIF, what actually is it, and who set it up? GBIF's history is briefly described on its website, where it explains that it arose out of a declaration from the Organisation for Economic Cooperation and Development (OECD) who decided a biodiversity data portal of this type could help encourage sustainable development, amongst other things. It adopted Copenhagen as a home in 2003 and launched the portal in 2007. GBIF works towards its vision of "a world in which biodiversity information is freely and universally available for science, society and a sustainable future", which is not too far removed from the NBN Trust's own statement "making all biological records freely and easily available to everyone".

If you want to get a little more of a feel for where data is coming from and who's using it, it is worth looking through the monthly statistics update that GBIF publishes. There you will see that the major contributors, in terms of countries, are the Anglophone ones and northern Europe, which I suppose is no surprise considering the long

tradition of natural history in these countries, and the dominant part Carl Linnaeus and Charles Darwin played in the history of biology and continue to play in the collective imaginations of naturalists. Interestingly, the countries that actually use data from GBIF seem to be varied in their geography, and not limited to an area or group of people.



The worldwide distribution of data held by GBIF.

For me the most interesting, and possibly most important part of my investigation into GBIF was the chance to read some of the responses from other organisations to the copyright consultation, and to see where they came from. There are 44 to read plus a summary, all of which are available on the GBIF website [including NFBR's response - ed.]. I did not have the time to read every response, but I have read a few and paid a lot of attention to the people and institutions produced them, which I believe is quite revealing.

The submissions come from a range of sources, the main ones of which are museums and collections, government agencies (many of whom are the country nodes for GBIF – NBN provides the UK node for GBIF), scientists and academic institutions, independent individuals, and British Local Records Centres (who sent in about half a dozen responses). From what I can tell, the only responses from local records centres, or organisations like local records centres, have come from the UK. This may well be because the rest of the world doesn't have local records centres, or it may be for other reasons. What is also noticeable is that I could not find a single submission from an organisation that claims to represent a part of the voluntary sector from any of the non-UK respondents. Does the rest of the world not have or use data collected by volunteers?

This is significant I think. Look at the examples of data use cited on the GBIF website. These are all from academic institutions and museums. Although there are good examples of research being carried out to inform conservation policy and practice, there is a danger that GBIF is seen as being run by academics, for academics. The data that comes from UK volunteers, via NBNG, I suspect is a massive bonus. This is of course something to be proud of, but it does mean we (the volunteer recording community) have to be to be careful when considering the policies of organisations like GBIF. GBIF is a great way of enabling the global professional scientific community to share its data, and carryout important research. However, it is not designed as a tool for volunteer recorders to share their data and this should be borne in mind.

The connotations of this go beyond this single consultation. GBIF's attempts to open up access to data on its own site are part of worldwide drive for "open data". In simple terms this concept is about making data that was collected for an original purpose freely available for other uses. It can be a hugely powerful concept as it can allow researchers to access large and well-structured datasets and provide people like journalists with an opportunity to call decision makers into account.

The Wikipedia entry for open data refers only to two sources of such data, government and scientists. The declaration from the Global Open Data Initiative only refers to data from governments.

How important are rare species for ecosystems?

Research using records available through GBIF, in combination with other data, studies the role of rare and common species in the functioning of ecosystems.

Brazilian forest reserves in a changing climate

Study uses GBIF-mediated data to look into the effectiveness of current forest reserves in conserving 16 forest plant species under changing climate conditions.

Finding patterns in bee-plant relationships

Brazilian researchers use data published via GBIF to analyse the impact of climate on interactions between bees and the plants they pollinate.

Examples of data use from GBIF.

So what of the unusual and seemingly peculiarly British phenomenon of volunteer data? I suspect that this is just not something on the horizon of those pushing the open data agenda, whose main target will be government and possibly scientists. If this is the case, it is very important. Government data, scientific data, corporate data and other sources of potentially useful data has all been paid for, mostly by governments in one way or another. Volunteer data is not paid for in the same direct way, although some money is required to liberate it from notebooks or spreadsheets, or to provide the training to enable recorders to use online recording, and this is often supported financially by the public sector. However, in my opinion there is no way that this can possibly be considered the same as government datasets or scientific data, which could essentially be thought of as being "owned" by the country's taxpayers who paid for them. Volunteer data comes with a completely different set of considerations. For example, who mediates the relationship between data users and data providers? Who provides the resources necessary to digitise volunteer data where necessary? Who provides the resources to train new volunteers, and who supports these volunteers on their way to providing masses of hugely useful data? I have not read anything recently that suggests these things are being considered by the open data lobby.

So, having had a relatively quick tour around GBIF, and then a look at its contributors and the wider open data movement, I have concluded that the voice for volunteer recorders, as a completely unique sector of data providers, needs to be strengthened. Otherwise there is a danger that it may get drowned out as other, louder, voices engaged in the arguments over the open data concept move to enforce their notion of "freely available" data. If this happens, and the special considerations for volunteers and their data are not taken into account, then the number of biodiversity records available to everyone my start to decline as volunteers become less engaged. I believe the volunteer biodiversity data community needs to decide what open data means from its own point of view, then create and publicise its own narrative around this. Let's make sure open data works for volunteer recorders.

It is with this in mind that at the same time as submitting this article to NFBR, I am also submitting my NFBR membership application.

For his day job, Tom Hunt works as the National Coordinator for the Association of Local Environmental Records Centres. Having previously worked for the RECORD, the local records centre for Cheshire, Tom built up a lot of experience working with volunteers as well as professional data users. As a volunteer himself, Tom also has experience from the other side of the fence.

News updates

Scottish Biodiversity Information Forum

Update from Christine Johnston, SBIF Co-ordinator

With news (see box below) that the Forum has received funding for a further three years from Scottish Natural Heritage (SNH), work is continuing on delivering the Forum's Action Plan (see *NFBR Newsletter 47*, page 10). In recent weeks progress has been made in taking forward most of the actions, although much of the work has been happening in the background. Below is a flavour of some of the work.

- The compilation of five case studies (Action 6) is now complete, and they are just going through the editing/page make-up stages. The case studies have been chosen to highlight the importance and value of biodiversity data to researchers and decision-makers. As an example, one of the studies, on mapping the risk of an invasive plant transmitting disease to local ecosystems, highlights the importance of records held in local records centres. We will be creating a booklet that will be disseminated as widely as possible and will act as an advocacy document for the work of the Forum.
- Background work has continued on designing a set of questions for a data needs survey of Forum supporters (Action 3) which will give an insight into whether and how data needs are currently being met. In understanding these needs the Forum should be better placed to inform activities and discussions surrounding how data needs can best be met in the future. Aspiring to meet data needs is in turn related to levels of recording and data collection activity, and to supporting recorders.
- A statement of best practice on data sharing (Action 4) is currently being worked on by members of the commercial interests sub-group. The aim of the statement is to increase the amount of data mobilised by different sectors of the data community.
- On the organisational front a new smaller Executive group has been formed to support the work of the Co-ordinator. Recent discussions have included plans to run an Event in 2015 at which SBIF supporters will be updated on progress so far.

If you would like to get involved with the Forum, or would like to be added to our contact list, please contact me – tel. 01875 825968, email coordinator@sbif.org.uk, Twitter @SB_Info_Forum.

Three more years! (of funding for SBIF)

Jonathan Willet, BRISC Chairman

I'm delighted to say that Scottish Natural Heritage have committed £15,000 per year for three years towards the Scottish Biodiversity Information Forum's Co-ordinator post. There are conditions attached with this funding, most notably that it shouldn't be the only source of funding. Quite rightly SNH want to see buy-in from other partners that use and collect biodiversity information.

Biological Recording in Scotland (BRISC) were the first organisation to put their hands in their pocket to support this funding, offering £1,000 per year over the three years. For a small charity this is a significant sum, so it shows we believe strongly in what SBIF are trying to do. BRISC was one of the key organisations pushing for the creation of SBIF and for its partners to work together to deliver the actions identified during its wide-ranging consultation with stakeholders two years ago.

The two past years of funding for an SBIF Co-ordinator has allowed us to get to the point where action is about to happen. If SBIF had folded it would have stymied progress in creating a national forum and collective action for biological data issues in Scotland for a generation. This is not mere bluster, the idea of something like SBIF was first mooted in 1975!

Progress has been slower than hoped for, but the issues SBIF is trying to tackle are large and a major problem has been getting organisations to discuss the issues and then take action. So it isn't going to happen quickly. BUT. IT. WILL. HAPPEN!

Natural Sciences Collections Association (NatSCA): putting natural history collections on the map

Update from Paolo Viscardi

Collections of any size can support biological recorders by providing specimens, expertise and resources that help verify identifications. They hold verifiable data that can provide a historic baseline for population distributions, allowing changes to be mapped. Some collections also offer opportunities for lodging voucher specimens from biological recording activities, improving the quality and scientific value of data records.

The Natural Sciences Collections Association (NatSCA) is currently trying to find every natural history collection in the UK & Ireland, discover what they have and get an idea of what state they're in as part of a project called Natural History Near You. NatSCA wants to make this information as accessible as possible, in order to support users of collections. Hundreds of collections have already been identified, many with details about the quantity and types of material they hold, and you can see them on the online map at the link above – just click on the dots to see details of the collection.

This is a crowdsourcing project and we need your help to add more collections to the map, improve the data for collections already on there, and to spread the word about the project. New collections can be added using the form below the map and more information can be added to existing collections entries by clicking the 'edit' link in the top of the information boxes that pop up on the map. Sharing the information can be done using social media, by email or by word of mouth; the more people who hear about it, the more people who can use it and help improve it.

National Biodiversity Network

Update from Mandy Henshall

NBN workshops

The NBN Trust will be inviting interested parties to attend two workshops in London, which are being held on Thursday 20th and Saturday 22nd November, either side of the Network's annual conference on 21st November. The purpose of these workshops is to immediately start to engage members in NBN strategy implementation. The workshops will provide an opportunity for members to work together creatively, and strengthen the Network. They will also create a shared ownership of the Network's work programme.

The workshops are part of the Network's implementation of the new NBN Strategy which is still being refreshed. The focus of these two workshops will be to:

1. Undertake an NBN Gateway user needs analysis with the aim of developing a more user friendly NBN Gateway interface; and
2. Revise the NBN Gateway Terms and Conditions

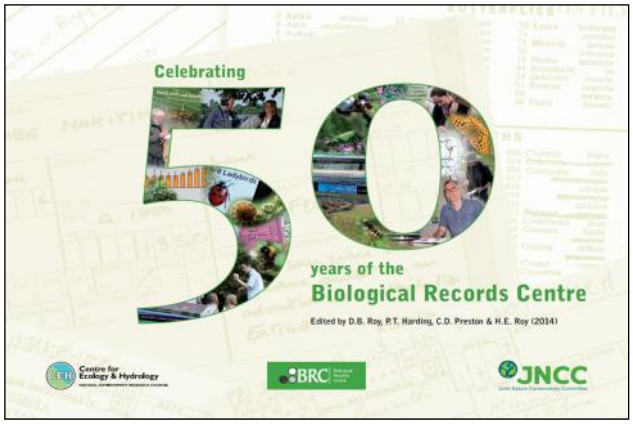
We will be running the two workshops twice each day so that those that are interested can attend both, but numbers will be limited. Please keep an eye on the NBN website and NBN eNews for more details and how to register your interest.

NBN Annual Report

The NBN Trust has just published its [Annual Report for 2013–14](). On reading the 62-page report it is clear to see how much happened during the year, and also how much progress has been made collaboratively. The NBN Trust thanks all of its members and NBN participants for their work over the last year and looks forward to an equally productive 2014–15!

[Biological Records Centre]() – 50th anniversary

A number of NFBR members were able to attend the 50th Anniversary conference of the Biological Records Centre, in Bath last June. A splendid anniversary brochure has been produced by BRC, and is [available as a PDF download](). As well as telling the story of BRC itself, this document provides a valuable and readable overview of many of the biological recording advances made by BRC and its many partners over the last half-century.



NFBR Council updates

NFBR's trustees and advisory council members have been busy iun recent months:

- A Development Group are working on a business plan for the Forum.
- A new Recording Schemes and Societies Group was established at the June meeting.
- NFBR will be looking at the possibility of establishing an 'awards' scheme for recognising contributions in biological recording.
- A fresh new website will be launched in 2015.
- Following on from #SkillsTalk (see page 21), a further series of online discussions will be organised in autumn/winter 2014.

FSC and the Millport field centre

Daniel Moncrieff, Head of FSC Scotland

From the 1880s scientists have studied the waters and coastline of the Isle of Cumbrae from a base in Millport. Local naturalist David Robertson led the way, undertaking research from *The Ark*, a boat moored in the bay in the town. He was also instrumental in the foundation of Millport research station which opened in 1897. This long history was recently threatened with the decision to close the facility in early 2013. With much campaigning, including nearly 10,000 followers signing up to a Facebook petition, an agreement was reached to transfer the ownership of the station from the University of London to the Field Studies Council (FSC). We, the FSC, took ownership of the facility early in 2014 and have just completed the first phase of a five-year reinvestment and rebuilding programme.

FSC Millport is one of a network of 15 residential and four day centres which the charity runs, all of which aim to promote fieldwork and provide outdoor learning opportunities for students. FSC Millport aims to continue the focus on supporting courses for undergraduates and Masters level students. We also aim to fully utilise the different research facilities at the site (which include our research vessel the *R.V. Actinia,* scanning electron microscope, microbiology facilities, temperature control rooms, large seawater tanks, and saltwater system which is connected to all our laboratories) by making them accessible to the wider research and scientific community.

With the generous support of the Scottish Government, North Ayrshire Council and Highland & Islands Enterprise, we have begun re-establishing the centre's considerable reputation for marine and coastal ecology teaching. At the start of this year we created a large new workroom and extra recreational spaces for visiting students to use whilst on residential courses at the Centre. We have also upgraded our wireless and IT facilities. We have secured funding for a new 150 seat lecture theatre, extra classroom and new accommodation wing which will have 30 comfortable twin en-suite rooms. By making these significant upgrades, we hope to both increase the number of professional development courses we run and attract even more university students and researchers to our facility. In the year when the FSC is celebrating its 70th anniversary it is exciting to be working at what is both our newest and oldest centre.

NFBR's #SkillsTalk project

Steve Whitbread

Following on from the enjoyable online discussion about Social Media with Charles Roper, some of us decided to organise a series of two hour interviews under a Twitter-advertised #SkillsTalk theme, prompted by some of the issues raised at our 2013 conference. What resulted was a very satisfying afternoon and evening. Many thanks to everyone who joined us.

#SkillsTalk kicked off with **Paula Lightfoot** interviewing **Sue Townsend** and **Rich Burkmar** of the Field Studies Council about the training which the FSC is so experienced in providing, and its attempts to evolve and address gaps in provision, with **Martin Harvey** one of those posing additional questions.

ST: We have picked up this evidence from Invertebrate Challenge – mobile equipment, a focus on day rather than residential courses, access to electronic resources are all contributing to make the workshops accessible – and we are happy to collect further information to apply for funding to continue to support those just starting out in identification and recording.

PL: How much can you realistically cover in a one-day course? Getting involved in local projects is definitely a good motivator to carry on learning and recording. Do you also put participants in contact with their local records centres, county recorders and local natural history societies?

ST: I agree Paula – there is a real issue as the residential helps so many people to be immersed in their subject and develop and practise with others. I suspect there is a growing body of evidence for a progression approach to enable people to come for days – then attend a longer course – and perhaps then be supported by regional workshops. As to the networks for other supports yes we certainly encourage people to join the national recording scheme and make contact with other regional groups.

MH: In the latest NFBR newsletter John Newbould makes some interesting points about the value of encouraging and supporting local mentoring networks to provide follow-up support after training courses. Online mentoring is available through iSpot and many other sites, and I'm sure there is lots of scope for developing more online tools, but these work best in the context of people learning from each other in the field and lab. Need to support all these things!

ST: I agree Martin – we all learn in such different ways and we need to maximise the connectivity between all these fab resources. I think John is absolutely right in his pleas for consideration of local mentoring groups. The connectivity makes it all so much more sustainable.

Thence, we travelled to Scotland to join Buglife's **Craig MacAdam** and (former TCV Natural Talent apprentice) **Suzie Bairner** to hear about a very different approach to training. This time with **MH** as chair.

CM: Natural Talent is all about training the next generation of naturalists through an apprenticeship scheme, supported by the Heritage Lottery Fund and delivered by TCV and key partners in the UK conservation sector.

MH: Was it hard to persuade people, partners or the funders that these species groups and subjects should be the focus of an HLF-funded project?

CM: Not at all! HLF were keen to fill the gaps in knowledge and skills so there was a natural bias to those under-recorded groups and habitats. Natural Talent gave placement providers an opportunity to tackle those groups or habitats that were difficult to get involved in because of the time and knowledge constraints.

SB: It is such a shame that some Universities don't do more training on taxonomic identification. It is the one thing I felt I really missed out on at University.

Skills development is also crucial to the Continuing Professional Development of many a consultant ecologist, especially with fewer graduates emerging with field skills. **Sally Hayns**, CEO of the Chartered Institute for Ecology & Environmental Management (CIEEM), exchanged views with **Ben Deed**, **Paula**, **Martin** and others too.

PL: Could there be a role for NFBR here? With CIEEM and ALGE and ALERC of course. Thinking about Nicky Court's excellent presentation at the NFBR conference, "*50 ways to use local biodiversity data*" – those 50 ways were certainly not based solely on records of protected species.

BD: Not wanting to go off topic but, as an example of where I am coming from regarding the 'protected only' outlook … As an LRC we provide information on all designated species of those of conservation concern in our area. However, I have recently been received feedback that even though it makes no difference to cost, some consultancies only want to know about protected species.

PL: Not off topic at all, Ben, this is a very important point – there is a cost to supporting the development of bio recording skills, even if in the case of volunteers it is a relatively low and excellent value cost – and if funders only pay to support the development of skills in species which are perceived as 'important' for one reason or another, we need to ensure there are plenty of opportunities for informal learning (e.g. through local or national societies) so people can develop skills in what interests them and to keep the flow of data coming from them, because it is all 'important' even if not everyone perceives it as such.

MH: There's also an important role in using records of the non-protected species to build up interest and support in a site – even if this doesn't lead to any statutory protection, it's certainly part of the story when it comes to getting support for site protection and getting people interested in their environment.

As Martin Hicks pointed out in NFBR's Newsletter there's lots in the local planning framework that talks about local authorities needing to map ecological networks and have up-to-date information available.

And we only know what the 'important' species are because there has been enough recording undertaken to prioritise from the whole range – species and priorities change, and data needs to be up-to-date to cope with this. But I realise that doesn't always feed through to hard commercial decisions about what consultants get asked to do!

SH: It's not only what consultants get asked to do (which as you say is based around the commercial need), it is that local planning authorities don't always seem to want to know anything more than the minimum required. And the Government certainly doesn't want them to ask developers for more than the minimum. It is very short-sighted – but there are many consultants who are frustrated by the lack of opportunity to gather more data as well.

I think that it is vital that the voluntary sector and professional sector continue to engage and work together – indeed many CIEEM members have their feet in both camps. I think that the voluntary sector should continue to provide learning opportunities for all – amateurs and professionals alike – and to foster the 'community of recording' such that the value of knowing more about species distribution to make well-informed decisions is recognised. And yes I agree with you, Paula, that there is a key role for NFBR here which I am sure it will want to take up.

And that doesn't even take us to the grand finale: a discussion of training (and cake) with **Sarah Whild** of Manchester Metropolitan University (and many others). You can now find all four talks on the NFBR website. There were a number of excellent ideas and some important issues were discussed. You're more than welcome to comment further via our Facebook Group. We're currently lining up another series of online discussions so let us have your have views on what we might cover in these.

Steve has very modestly omitted to include any of his own contributions to these debates, but he was fully engaged with them! Thanks to Steve for helping to set up the #SkillsTalk series, and to all who took part - Editor.

Book review

- Harvey, M.C. 2014. ***Surveying wildlife in the Chilterns***. Chilterns Conservation Board (free PDF download).

This booklet provides an excellent introduction to surveying inland terrestrial habitats. It's just the thing for stimulating small-scale, interesting and really useful local investigations, the sort of thing that wildlife trusts, friends groups, natural history societies or record centres might foster more of, given some support. Whilst aimed squarely at audiences in the Chilterns, it is easy to imagine it being recycled for much wider use.

A general overview of the whys, wherefores, and (of course) the who, what, where and when of recording is followed by a brisk stroll through surveys for different taxon groups: plants; vertebrates (various); invertebrates (especially butterflies), fungi and lichens, before leading on, via other survey types, to a look at habitat mapping and evaluation, particularly from a conservation viewpoint.

From long established methodologies to the newest techniques, online recording and smartphone 'apps' there is likely to be something for everyone who, beyond honing their identification and recording skills, wants to put them to use in framing and answering questions about a site. Where does Species X occur most frequently? Where are the features of main conservation interest on this site? How is habitat changing in response to management – or its lack? For those seeking to get to grips with such questions, *Surveying Wildlife in the Chilterns* offers an excellent place to start.

It would be unreasonable to expect 30 pages to provide all the information that everyone needs but the text is well supported by links to online resources and a bibliography of key references. Perhaps the Chilterns Conservation Board website, from which you can download a copy, will eventually publicise and report on some of the surveys underway or prompted by this slim volume. And perhaps a subsequent edition might also link to these and examples from beyond the Chilterns.

Review by Steve Whitbread

NFBR Conference 2015:
A question of ecology – answers from biological recording

We are delighted to announce that next year's NFBR conference will be organised as a joint event in collaboration with the British Ecological Society's Macroecology Special Interest Group.

Use of volunteer-collected biological records by the professional scientific community is widely encouraged and celebrated. Considerable efforts are being made to raise awareness of this valuable resource, to compensate for sampling bias in 'big data', to develop recording methodologies informed by ecological sampling theory and to make records more easily available for research use, (e.g. through the new rNBN package).

However, much interpretation of biological records is carried out by the amateur naturalists themselves, who may not even think of themselves as 'scientists', but who are uncovering new ecological knowledge from their own records and sharing that knowledge with others. Biological recording is not just about producing checklists, dot maps or providing 'big data' for others to analyse; it is a way of engaging with the natural world which both raises questions and provides answers to them. New tools, technologies and methods for collecting and interpreting biological records are opening up new avenues of interest, enabling amateur naturalists and the organisations that support them to go beyond the biological record, taking us back to the roots of natural history and improving our understanding of ecology and ecosystem functions.

The 2015 conference will celebrate achievements, highlight opportunities and seek to overcome obstacles regarding the use of biological records to answer ecological questions. The conference aims to:

1. Raise awareness of how biological records can be interpreted to answer ecological questions, and how this analysis can lead to conservation action at a site-specific, local, national and international scale.
2. Empower volunteer recorders and the organisations that support them to get more out of their biological records by highlighting effective approaches to data collection and analysis.
3. Foster collaboration between the professional research community and volunteer recording community through examples of good practice.
4. Discuss barriers to the use of biological records for research and start a dialogue between the biological recording and research communities about how to overcome those barriers.

The date and venue are still being finalised, but the conference will be a three day event in late April or early May. As in previous years, it will include a discussion workshop and a field meeting with local naturalists. We also plan to offer a free training session on using open source tools to interpret biological records. Further details and a call for papers will be released soon via our website, Facebook group and Twitter.

The British Ecological Society celebrated their centenary last year. Their vision is to advance ecology and make it count. The Macroecology Special Interest Group aims to provide a UK forum to unite researchers who work in, or who are influenced by, macroecology (the study of large-scale ecological patterns over time and space).

We look forward to working with the BES Macroecology group to bring together the skills and expertise of BES and NFBR members to discuss issues, identify opportunities and recommend practical outputs to ensure the conference has a lasting impact.