

## COPY DEADLINE

December 12<sup>th</sup> 2019  
for January 2020

Articles are welcomed but also snippets of interesting recording news and details of events. Book reviews welcome too. Please include a picture of the cover, plus all the title details and price if available.

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

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# Recorder News

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ring any Nathusius' pipistrelle they catch and there have been ringing recoveries in the south of England – 4 from Latvia and 2 from Lithuania. In addition, there have been two recoveries of bats ringed in the south of England – one in the Netherlands and the other in Belgium. Some of these journeys are 1,500km long, which is an amazing distance for a small creature. Nathusius' pipistrelle sometimes turn up on oil rigs or supply boats in the North Sea and Norway is only 450km from Aberdeenshire.

## Nathusius' pipistrelle in the northeast

In 2018 we continued with our Nathusius' pipistrelle project. Bat groups across the UK are participating in the Bat Conservation Trusts National Nathusius' Pipistrelle Project which aims to find out more about the distribution, breeding status and migratory pathways of this interesting species.

The aim is to catch them and determine their age, sex and breeding status before ringing and releasing them. Bird ringing stations in Latvia and Lithuania



Harp trap

In May and June we managed three trapping sessions – one each at Culterty Ponds in Newburgh, Haddo Loch and Inchgarth reservoir. Nathusius' pipistrelle have been recorded at all three of these sites in the past but we had very little luck even hearing any Nathusius' on those nights.

We did catch some soprano and common pipistrelles so that new (and not so new) folk could get some experience of identification and measuring. Bat handling requires up to date rabies vaccinations. At Haddo the traps were great at catching but unfortunately none of the right species.

After the sensitive breeding period we were able to start trapping again in



August. We managed four more official sessions and a fifth short session during a training event at Inchgarth. The locations this time were Inchgarth reservoir, Loch of Strathbeg and two sessions at Meikle Loch. Inchgarth and Strathbeg catches were of Dauben-

ton's, common and soprano pipistrelles. Although we recorded plenty of Nathusius' calls around the visitor centre at Strathbeg, on the night they just weren't bothered to fly past our harp traps.

Finally, we had some success at Meikle Loch. On the first session we were inundated by eleven Daubenton's bats just as we were about to pack up and go home. It was not what was needed when you are feeling exhausted, but it turned out to be a great opportunity to compare adults and juveniles. The last trapping session, 7th Sept, we finally caught a Nathusius' pipistrelle ... and ringed it! None of us had previously seen a live one in the flesh so we checked and double checked the ID. They are very different in their facial features and are heavier than the other pipistrelles. It weighed 8.6g, compared to 4.8-7.0g for the common and soprano pipistrelles or from 7.1-9.3g for the Daubenton's which we caught. The ratio of the fifth finger to the forearm is an identification feature, as is its distinctive white fringed penis.

There were seventeen different people involved with the surveying and a big thank you must go out to you. It is time consuming and can seem like a long night when the bats are not leaping into the harp traps. It can also be hard

Book before the Early Bird ends on 1 September to get the best priced tickets!

### Two new NBN Trust team members

We are delighted to announce that we have successfully filled the recent NBN Atlas job vacancies.

Caroline Van Dierkson, the NBN Atlas Project Manager and Stephen Page, the NBN Atlas Systems Developer, started their new roles in July.

### Consultancy offers free technical support

Free technical support for smaller organisations or volunteer run schemes, to set up websites and social media channels, is being offered by one of the NBN Trust's Corporate Supporters.

White Rabbit Consultancy is offering 2 hours of free technical and digital marketing support each month. This time is to be used by and shared between NBN Trust members and data providers who may not otherwise have access to this support.

The aim is to help these, usually voluntary, groups and data collectors with a sounding

board for technical enquiries and to increase their online presence and awareness for their particular area of focus. This time can be given in the form of advice and also practical, cost effective (in most cases free) solutions to promote and market the group or organisation on the internet and social media.

If you are a member of the NBN Trust and are interested in using White Rabbit, please contact [support@nbn.org.uk](mailto:support@nbn.org.uk)

### Links to member projects or information

"What is a biological record?" and "Who's who in the world of biological recording?" These are two information articles written by the Field Studies Council. If you are a member of the NBN Trust and would like to share information on a project, or if you have a useful resource, then please let us know.

You can see the current list of projects on the NBN website: <https://nbn.org.uk/tools-and-resources/publications/nbn-member-documents-and-information/>



CIEEM Awards 2019 to SBIF Review : Spot the red heads!

What's next?

The next big changes for the UKSI in the coming year should be:

Flowering plants to be brought into line with the BSBI checklist – a major update to the names

Freshwater algae, long overdue major update to that taxonomy – though many ad-hoc updates have been done to algae & diatoms in the year 2018/19

### Issues fixed on NBN Atlas

As part of the update there were several issues fixed on the NBN Atlas:

1. The preferred English common name is now displayed as the primary name. This correction is on the species search and species pages, however the occurrence record is still displaying the first common name on the list which may not be the preferred name. We are investigating this.

2. Any name qualifier is now included in the scientific name.

### Launch of the NBN Atlas Northern Ireland

On Wednesday 29 May, the CEDaR partnership launched the NBN Atlas Northern Ireland, a new online platform that provides access to species- and site-based information from across Northern Ireland and its coastal waters.

As with the NBN Atlas, NBN Atlas Scotland, NBN Atlas Wales and NBN Atlas Isle of Man, the NBN Atlas Northern Ireland is based on the Atlas of Living Australia infrastructure. The NBN Atlas Northern Ireland is the newest addition to this suite of tools and is tailored to provide locally specific information and knowledge.

The various terrestrial, freshwater and marine datasets and the habitats data

stored by CEDaR are submitted to the NBN Atlas Northern Ireland on a monthly basis. Once uploaded, they are available to view, analyse and download. The Atlas is linked to local natural history resources, such as the Habitas suite of websites, and it also provides users with information on the various 'record submission portals', local recording schemes, recording initiatives, events, etc.

### NBN Conference 2019

This year's NBN conference is taking place on Wednesday 13 and Thursday 14 November and will once again be held at the Albert Hall in Nottingham.

The theme of this year's event is "Network, Knowledge and Narrative – sharing and using data across the NBN and beyond". Over the course of the two days we will be hearing from individuals and organisations from within the NBN and further afield, with a variety of speakers explaining how they are sharing and using data in their day to day work.

Speakers include: Tony Juniper (who will deliver the Sir John Burnett Memorial Lecture), Sir John Lawton and Dr Sandy Knapp who will give keynote addresses, Dr Roddy Fairley, SNH, Daniel Hayhow, RSPB to talk about the State of Nature 2019 and many others, with LERCs, National Schemes and Societies and academia all represented.

The programme can be found here: <https://nbn.org.uk/news-events-publications/nbn-conference-2/nbn-conference-2019/>

We will also have an afternoon of Knowledge Exchange sessions.

The NBN Conference matches CIEEM's Competency Framework so attendance automatically counts as relevant CPD.

going when they all leap into the traps just as you decide it's time to go home.

The intention is to carry out more trapping in 2019 but focusing on the site with most activity, Meikle Loch. The bat group has just been given £400 funding by the BCT towards a bat



box scheme at Meikle. There are relatively few roosting sites in the area around the loch so it will enhance the roosting options for all species of bats. We hope that perhaps some of the Nathusius' pipistrelles will use the boxes and this will enable us to gather data and ring bats at a more civilized time of day, in addition to carrying out activity surveys and trapping.

*This article was taken with permission from Nesbats (North East Bats Group) April 2019 newsletter. Speaking recently with Aileen Salway from North East Nature, she said they have been "scuppered" so far, by the weather.*



### Chairman's Column

**Chris McInerney**

I hope you have all been enjoying the summer period with the long days allowing you enjoy and record natural history.

The 2019 BRISC annual conference is fully organised with an exciting list of speakers. Please take a look at the advert in this Newsletter for the full programme, sign up to attend on the day through the website link, and contribute to the Annual General Meeting.

The conference will take place at the City of Edinburgh Methodist Church. The conference will focus on 'Museums, Collections & Biological Recording', and we have a number of excellent speakers lined up on this topic including Ashleigh Whiffin (entomology, National Museums Scotland), Elspeth Haston (botany, The Royal Botanic Garden), Richard Sutcliffe (museum collections, Glasgow Museums Resource Centre), and Bob McGowan (National Museums Scotland). We will also have a



Thrift clearwing (Pyropteran muscaeforme)

slot for short talks by students who have received bursaries to attend BRISC sponsored courses, which are always a highlight.

The AGM is short and sweet but do ask the BRISC committee members about what we do and see if you can help!

The date is Saturday 12 October 2019, so please mark this date in your diary.

We very much look forward to seeing you in Edinburgh.

Following on from my last Chairman's Column describing interesting moths I had seen during 2019, I have since have had luck and observed two species of clearwing. First, a number of Welsh clearwings, followed a few weeks later with Thrift clearwing. Both have a restricted range in Scotland and are difficult to find, so it was wonderful to see these beautiful creatures.

Best wishes, and good recording for the rest of 2019



Welsh clearwing (*Synanthedon scoliaeformis*)



## Editors piece

### Sarah Eno

My apologies again. I have been very stretched this summer - recording, personal matters and helping out at The

Wildlife Information Centre. I am afraid apart from the excellent Bursary Reports, there are even fewer original articles.

A number of people have commented on the abundance of buzzing and flitting that has gone on so far this summer with many people seeing species where not seen for many years. Painted Lady butterflies have been well covered in the media but I have seen many more Small Pearl Bordered Fritillaries and on tall grasses near Selkirk – too many Small Skippers to keep counting.

Our volunteers continued to survey Northern Brown Argus sites in the Borders this summer. We visited some cracking sites for Rock Rose in Roxboroughshire. We were slightly underwhelmed by flying adults until a third visit to Tofts Hill near Hawick where 50+ appeared in 15 minutes. By chance we were taken to a neighbouring hill where the bank was awash with Maiden Pink (*Dianthus deltoides*). We were truly astonished.

A full report on the NBA survey will be compiled later, but BCT have secured funding to do some conservation starting this September. These types of species-rich grasslands are under threat by the coniferisation which is rapidly expanding in the Borders. Recorders have been crucial in alerting Forestry Scotland, and even visiting threatened lepidoptera sites to advise redesign.

Anyway, I am looking forward to seeing you at the conference in October.



## NBN update

### Transforming the NBN Atlas

We are delighted to announce that the National Biodiversity Network Trust has received funding from Esmée Fairbairn Foundation. The grant, of £375,000 over three and a half years, will help us transform the NBN Atlas, into a world-leading source of environmental data.

Correctly resourced, through the help of funding such as this Esmée Fairbairn Foundation Grant, the NBN Atlas aims to be the single source of high-quality wildlife data at the national level.

On a larger scale, and in aiming to help address UK and global environmental concerns, the NBN Trust has identified three 'needs', which will be addressed through this grant:

- 1) engaging more people with the natural world,
- 2) making the data needed for evidence-based decisions more accessible, and
- 3) developing the NBN Trust's organisational sustainability to be able to deliver on the first two needs.

Already, anyone can access the NBN Atlas free of charge and discover more about wildlife in their locality or access information about local green spaces, but in achieving these additional aims, the NBN Atlas will become the leading website to share, view, analyse and use this data. Importantly, it will be accessible to

everyone from schoolchildren, students and academic researchers to commercial users, government agencies and the general public.

Furthermore, the unparalleled aggregation of biodiversity data on the NBN Atlas, along with the expertise within the NBN partnership means that the NBN Trust is uniquely placed to provide expert advice and input into the development of government biodiversity policy.

### NBN Atlas Species Dictionary update

On 30 April 2019, the Species Dictionary on the NBN Atlas was updated with the latest version of the UK Species Inventory (UKSI 20190425161941 Master Copy).

What has changed?

The main name changes and additions include:

- Hymenoptera brought up to date with Gavin Broad's checklist (an addition of 3200 extra taxa) and all names with subgenus brackets have reverted to unbracketed standard binomial names
- All Coleoptera also received the subgenus removal treatment
- 1300+ JNCC/MBA Marine updates to the MSBIAS checklist
- Very many changes/updates to the British Mycological Society checklist (thanks to Richard Shotbolt)
- JNCC SOCC (Species of Conservation Concern) list updated
- Bat mites have been included for the first time
- 1000+ synonyms in various families rounded up and synonymised with their correct taxa
- Approximately 260 requests for ad-hoc changes and copies of data

## SBIF Update

### *Rachel Tierney*

More urgently than ever before, in tackling the biodiversity crisis and climate emergency, we need relevant and up-to-date information to guide timely and effective action for a nature rich future. The SBIF ambition – for Scotland but also applicable to the UK – is to have an improved infrastructure for recording, managing, sharing and using wildlife data. The need to get this underway is urgent, whilst recognising that a degree of iteration and further thought will be required to determine the scale and pace of implementation.

Since our last update, the SBIF Review has been recognised by CIEEM, winning the CIEEM Best Practice Stakeholder Engagement Award 2019. We should take this opportunity to celebrate how far the SBIF Review has come in the last three years. Together we have the energy, commitment and vision to revolutionise the way Scotland collects, manages, shares and uses biological data. This Award celebrates the community spirit behind the Review, and recognition through this accolade will help us gain momentum as we move towards developing an implementation plan and securing resources.

It is fair to say that our shared vision for the future is compelling and the words 'SBIF Review' are becoming part of everyday language in meetings, workshops and conferences across Scotland. We remain in conversation with Scottish Government about how we can take our vision forward to the next stage. The Scottish Government Biodiversity Team have asked SNH to assist us in developing a business case of delivery options, in the light of prevailing circumstances and potential

routes to funding. An interim draft business case has now been issued for initial consideration by the SBIF Advisory Group, who are asked to think about how they and others could help with and champion this.

This business case groups the 24 Recommendations in the SBIF Review into seven strategic components which allows us to evaluate the range of ways each component could be delivered in practice:

1. biodiversity data network and coordinating organisation
2. central biodiversity database
3. system interoperability and affiliating data flows
4. increasing the use and utility of biodiversity data
5. enhancing the central UK hub
6. streamlining UK data management services
7. support for Super Partners

It will be another huge milestone when this is submitted to Scottish Government in the Autumn.

You can keep up to date with latest news from SBIF via :

<https://nbn.org.uk/blogs/sbif-blog/>

Contributions always welcome so please get in touch if you feel compelled to write a few words on the theme of biological recording.

Once again, a huge thank you to everyone for your support, we look forward to continuing to work with you over the coming months and years and to updating you with more exciting news!

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## Museums, Collections & Biological Recording Saturday 12th October 2019

City of Edinburgh Methodist Church, Nicolson Square, Edinburgh EH8 9BX

### Programme

- 0930-1000 **Arrival and registration**
- 1000-1005 **Chairman's welcome**
- 1005-1045 **BRISC bursary talks:**
- Jess Mason - **Mosses and liverworts**
  - Apithanny Bourne - **Leaf mining moths**
  - Alexander Paterson - **Marine mammals**
- 1045-115 Elspeth Haston (The Royal Botanic Garden Edinburgh)  
**Specimens as records: 250 years of collecting in Scotland**
- 1115-1130 **Tea and Coffee**
- 1130-1200 Richard Sutcliffe (Glasgow Museums Resource Centre)  
**Extracting biological records from a large museum collection**
- 1200-1230 Ashleigh Whiffin (National Museums Scotland) **Entomological collections: a hive of biodiversity data**
- 1230-1300 Bob McGowan (National Museums Scotland)  
**Improving collection access and data provision**
- 1300-1400 **Lunch and raffle draw**
- 1400-1430 **BRISC AGM**
- 1430-1440 **Conference close and briefing for afternoon activities**
- Screening of The Love Bugs <https://www.thelovebugsfilm.com/>
  - Visit to National Museum of Scotland, Chambers Street
  - Field visit to Holyrood Park
- 1700 **End of conference**

**COSTS** : Student: £10; member £20; non-member £25.

**BOOKING by Eventbrite**

<https://www.eventbrite.co.uk/e/brisc-conference-2019-museums-collectionsbiological-recording-tickets-61955611903> or search for BRISC at [www.eventbrite.co.uk](http://www.eventbrite.co.uk), or email [briscsecretary@live.co.uk](mailto:briscsecretary@live.co.uk) for other payment options.

**TRANSPORT**

The venue is 15 minutes walk from Edinburgh Waverly train station, 5 minutes by taxi, or can be reached by local buses from North Bridge. The National Museum of Scotland website has local travel information including car parking <https://www.nms.ac.uk/national-museum-of-scotland/plan-your-visit/>

**Trains:** Regular services from around Scotland. See <https://www.scotrail.co.uk/>

**Buses:** Regular services from around Scotland. See <https://www.travelinescotland.com/buscoach-operators>

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**BURSARY REPORTS**

**Identifying Hoverflies**

*Tereza Karckova*

As a keen taxonomy enthusiast I have always had a soft spot for under-recorded groups of organisms and last year I was given the opportunity to join the UK Pollinator Monitoring Scheme (UK PoMS) and work as a 1 km square PoMS surveyor.

During my seasonal field work I met a great variety of pollinators of which a large proportion is represented by hoverflies. Thanks to the BRISC bursary project and the Malloch Society I was able to attend the FSC Identifying Hoverflies course at Preston

Montford in Shropshire, led by the incredibly knowledgeable and enthusiastic dipterists Stuart Ball and Roger Morris.

Hoverflies (Syrphidae) are an astonishingly diverse family of the order Diptera fulfilling a host of important roles within various ecosystems, ranging from pollination and pest control to decomposition of dead plant matter and animal dung. At present, 283 species have been identified (Dipterists Forum: British checklist, updated Jan 2017) within 68 genera on the British Isles alone. Although, DNA sequencing recently made the precise taxonomical classification very complicated.

**Bryophytes**

*Ash-Lynn Tavener*

Having done my BSc in Zoology I'm definitely something of a novice when it comes to identifying plants. I've become aware that while many people chose to spend their lives painstakingly recording native Birds, Bees and Butterflies almost no-one seems to show any interest in a type of life both fascinating and prolific among us: Bryophytes. These inconspicuous plants can be seen everywhere from the epiphytes that decorate the bark of our native trees, to the pioneering forms that have adventured out across rocks and even concrete paths. Having noticed this niche in biological curiosity, I was excited to discover I had received funding from BRISC to spend a weekend on an FSC course in Shropshire, learning how to tell the difference between Pleurocarps, Acrocarps and Liverworts. I loved it!

The weekend was fascinating: long days spent kneeling in the field, hand-lens to eye, desperately trying to measure the length of the vein running through a 1mm moss leaf. The expert advice and



knowledge we gained on the course has since proved invaluable when trying some recording of my own. The British Bryological Society provides downloadable record cards to get you started and has contact details for local groups and regional recorders. If, like me, you still lack confidence in accurately identifying species then these contacts will no doubt come in handy!

I have started noticing Bryophytes everywhere I go and have got into the habit of carrying spare paper in my coat pocket which can be folded into a handy pouch for your moss samples. After collecting a small sample, it is important to write down where it was collected i.e. Ash tree, brick wall, boulder... the site it was collected from and of course the date. I've also found it handy to take a note of the bryophyte form - for example were they prostrate, cushioned or standing up vertically? This can often be a key element in later classification. On returning home and extracting the sample from the pouch, it will have course have dried out, but it can be easily brought back to life with a few drops of water (it is advisable to keep some of the material dry for examination). It never ceases to amaze me how the dried-up plant springs instantly to attention, often unwinding its branches and leaves to soak up the moisture and finally resembling a miniature forest in the palm of your hand. Watching this transformation through a microscope or hand-lens is a must do on any naturalist's bucket-list!

I am excited to explore the Bryophytes of Scotland, particularly in Shetland. I'm also keen to meet some fellow enthusiasts and benefit from their passion and expertise. As such I have recently joined the Glasgow Natural History Society and look forward to getting to know some of their members and going out to do some much-needed

any records south of the border, to my knowledge) our day spent at the limestone-rich area at Great Asby Scar was brilliant for introducing me to many of the plants we found during our survey of Schiehallion. We're soon to do monitoring of our calcareous flush plots on site, which will no doubt be another opportunity to refresh some of the learning from the course.

Over the next year or so, the John Muir Trust is aiming to assess the feasibility of a mountain woodland creation project on Schiehallion. This will again involve thorough habitat and vegetation surveys of the site, to identify areas of the hill most suitable for grazing protection and upland tree planting. I am leading on the site feasibility study, so the training gained through the bursary will be invaluable for this.



Oblong woodsia *Woodsia ilvensis*

Recent ventures to Glen Lyon, for field work as part of my MSc dissertation (a study of the habitats of *Betula nana*, *Juniperus communis* and *Salix myrsinities*) also put my new skills to the test. As part of this I'm looking at vegetation assemblage and other habitat variables where these plants are naturally found across Perthshire (give or take a few kilometres!) I've been doing field work at a variety of sites this summer – Loch Ossian, Loch Ericht, Beinn a'Ghlo and Ben Lawers. All three montane species are far rarer than they should be in the Scottish Highlands, with *Salix myrsinities* often reduced to cliff ledges, or over-grazed.

A recent ERASMUS-funded study course to Norway highlighted just how common *Betula nana* is there, and with huge climate and habitat similarities to Scotland, my study will hopefully draw conclusions on how best we can expand these diminishing populations.

The course was a brilliant introduction to the wealth of plants we find in upland areas. I've come away slightly confused and somewhat overwhelmed, but wanting to learn more and to keep consolidating my skills. When I've been out and about exploring upland areas in the central Highlands over the past few weeks, I've been quick to grab my wildflower ID book and take as many photos for expert identification as possible. I'm definitely not at the stage that I can confidently identify wildflowers out and about, but the course has certainly piqued my interest!



Pellucid Hoverfly *Volucella pellucens*

Recording and identifying hoverflies is very challenging. However, it can provide invaluable information regarding not only the distribution and ecology of individual species but also leads to more complex data with implications in understanding issues such as landscape connectivity or the effects of climate change.

As with many invertebrates, at the time of recording species, location and distribution, numbers are already alarmingly low. According to Stuart Ball and Roger Morris, Hoverfly data is especially lacking in Scotland with northern parts and islands being severely under-recorded. It is therefore difficult to determine any potentially changing trends in population distributions and abundance of individual species. The good news is that involvement of the general public seems to be on a slow rise and thanks to social

media and high quality digital photography the identification of the most common species can be done by skilled specialists from the comfort of their homes based simply on a pictures submitted by enthusiastic members of public. Every record counts!

I am currently helping out with a sample collection and identification of hoverflies for a research project at Edinburgh Napier University. Furthermore, I have been submitting casual records of hoverflies observed during my UK PoMS surveys throughout the season. I am hoping to pursue a career in academia to study pollinators and contribute to research leading directly or indirectly to a better understanding of pollinator roles within natural and man-made ecosystems. I hope such research could enable the formulation of evidence based conservation strategies or policies. I would like to share my knowledge with others and raise



*Lucozona lucorum*

awareness of hoverfly diversity and importance, not only as pollinators but as important indicators of the overall health of the global ecosystem.

I would like to thank the BRISC and Malloch Society for making it possible for me to attend such a high quality course helping expand my knowledge and skills, as well as contributing to my career goals.

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## Island

### *Alexander Patterson*



I close my eyes and I am brought back to Cumbrae. I feel the survey vessel, the R.V Actina, beneath me gently rocking as it slices like a hot knife through butter over the summer seas. We are set out on this day to survey seal behaviour. To be specific, vigilance. The boats engines were switched off and we floated quietly, in groups of three and began our count. For a period of 5 minutes, we would identify and count the seals basking on

the rocks, recording whether they appeared relaxed, or appeared aware of our presence. I remember with distinct frustration watching the seals disappear into the water, or change state between alert and asleep in a matter of seconds, making it difficult to know exactly how to count them. Still I valued this experience. I have gained a new patience and understanding as to what is required to survey live animals.

The second time we boarded the vessel, the day was just as fine, the sea even calmer than before. Perfect conditions to observe cetaceans. The Firth of the River Clyde, where the Island of Cumbrae is located is a hotspot for dolphins, porpoise, and even whales, owing to its deep and brackish water. We were not disappointed. as if on command, pods of Harbour Porpoise would wave their dorsal fins from the cold depths into the sunshine, as we followed the pre-set transect lines. Counting and identifying as we went, GPS readings and compass bearings were taken to mark the location of each sighting, so that the results could be plotted on a map. Another lesson was learned here – GPS cannot always be trusted. My first attempt at plotting the data landed me somewhere in continental Africa. Not quite right. The second attempt, after adjusting the co-ordinates, landed me much closer, though still a few miles out of position. More practise is required I suspect.

From the warm, balmy glow of the sunshine outside, to the cold, austere hum of the laboratory, specimens were

being prepared for examination. To the naked and untrained eye, fish bones are indistinguishable. Through a lens and the aid of a key, however, identification can be a quick and engaging process. Vertebrae are isolated, as they hold the most distinct part of a fish bone – prezygapophyses. These are the small ridges of bone on the spine, which are highly variable across fish species, and their size, angle and quantity all offer clues as to the name of the previous owner.

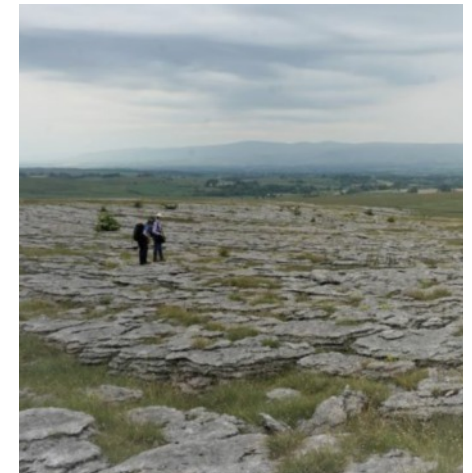
Also in the laboratories, an acoustics workshop was held. A sample of noise recorded from a hydrophone being dragged through water was listened to through headphones. Various sounds could be heard. A passing ship, a lightning strike, the haunting call of the humpback whale played, while a spectrograph was displayed on the computer screen, presenting the data visually.

My experience at the FSC centre of the Isle of Cumbrae was one of laughter, exploration, frustration and growth. Excellent lecturers aided our learning through their presentations, and the rest of the staff at the centre were just as welcoming and accommodating. But most importantly, the skills and knowledge required to monitor and preserve our degrading marine environment are being shared, and the future is made brighter, one person at a time.

## Mountain flora and Schiehallion

### *Izzy Filor*

Thanks to a generous bursary from the Inverness Botany Group, I was lucky to be able to attend a recent Field Studies Council course 'Discovering Mountain Flowers and Ferns' in the Lake District. The course tied in really well to my work with the John Muir Trust where I am already using my new ID skills as a result of the course, and my research as part of my MSc at the University of Stirling.



Botanising on Great Asby Scar  
limestone pavement

My work is based at Schiehallion, where we are in the process of doing a thorough survey of the site's montane willow plants. Our recent survey has revealed at least one willow we did not know existed on the site – *Salix reticulata*. Whilst this was not something we saw during the course (nor are there