

## TWIC Spring Conference Report, April 2015

58 wildlife enthusiasts from across the region gathered for The Wildlife Information Centre's (TWIC) Spring Conference at Newtown St Boswells in April. The conference theme was 'Arrivals and departures: the changing face of wildlife in the Lothians and Borders'. The day provided an opportunity to find out about how wildlife is faring in our area, including recent arrivals – benign or otherwise – and the results of long term monitoring.

Sarah Eno, TWIC Chair, opened the event and warmly welcomed everyone to the conference. TWIC Manager, Graeme Wilson and TWIC Director, Rob Briers chaired the morning and afternoon sessions respectively.

### Update of TWIC Plans for 2015 and beyond - Sarah Eno (TWIC Chair)

Sarah referred to the 'white hole' in local environmental records centre (LERC) coverage – areas that currently do not have a LERC in Scotland. Partly in response to the lack of complete LERC coverage, TWIC, which currently covers the Lothians and Borders, is looking to expand its geographical coverage in the near future, into Falkirk, Stirling and Clackmannanshire Council areas as well as part of the Loch Lomond and Trossachs National Park. 2015 will be the development phase, with TWIC sourcing and collating records for the expansion area. Data will be sourced from the National Biodiversity Network (NBN) Gateway, recording schemes and individual recorders. Some data have already been received by TWIC for the expansion area and the plan is to launch as a fully functioning LERC in April 2016, when services will be offered to councils and other clients. Councils in the expansion area have already been approached regarding TWIC's plans and Stirling Council in particular is positive about the development. Scottish Natural Heritage (SNH) are also supportive of the plans.

### Wildlife Monitoring on the Forth Islands - Bill Bruce & Ron Morris (Forth Seabird Group)

Bill and Ron started their talk with some history. Bob Smith organised the first seabird counts on the Forth Islands in 1959 with the Edinburgh Natural History Society (ENHS). Annual counts were undertaken subsequently with help from members of the ENHS, Scottish Ornithologists' Club and Young Ornithologists Club. In 1994, Dave Fairlamb (RSPB) initiated the formation of the Forth Seabird Group. Ron and Bill took over organisation of the seabird counts following Bob's retirement. Annual seabird counts continue today and a sub-group has been set up to monitor seals in the Forth. The data generated from the surveys is shared with other relevant organisations.

The islands covered by the Forth Seabird Group range from the Isle of May at the mouth of the Firth, to Inchgarvie in the far west, which supports one of the

piers of the Forth Bridge. Ron and Bill's extensive knowledge of the islands was clear as they described not only the islands' seabird interest, but aspects such as the islands' past use and history (detail that cannot be adequately covered in this short report). Take Bass Rock. The island is renowned today for its Gannet colony – the largest in the world – but many are probably unaware of the island's many uses over the years, which included a retreat for monks, sheep grazing and Gannet farming!



Bill Bruce and Ron Morris. Photo: Mike Beard.

The next part of the talk was an overview of count methods. Methods were devised by the late Bob Smith and are still used today. Different methods are employed for different species. For species such as Shag, the number of occupied nests is counted from a vantage point on land or boat. For other species, alternative techniques are required. For Puffins, which nest underground, the number of occupied burrows in a colony is recorded. For some birds the number of occupied sites is recorded, as it may be impossible to determine whether an adult is sitting on an egg or whether a bird is occupying a site but not producing young. Photographs or aerial imagery are useful for estimating larger colonies. The accuracy of counts is affected by sea state and the individuals recording. As a result, smoothed trends should be used.

The group has now amassed over 50 years of data on the seabird populations of the Forth Islands. Graphs for various species were shown. Some notable changes observed over time include the crash in the Shag population between 1991 and 1993 when 80% of Shags

were lost. Other changes include declines in most tern species due to the arrival of large gull species. The increase in the Bass Rock Gannet population has resulted in a noticeable loss of vegetation on the island.

The group also undertakes other species recording. Grey Seals pups are monitored annually. Count methods are currently being devised for Harbour Seals. Other activities of the group include beach cleans, the production of an annual report and publications. Visit the Forth Seabird Group website for further information: [www.forthseabirdgroup.org.uk](http://www.forthseabirdgroup.org.uk).

*Natalie Harmsworth*

## **The Lothian Bat Group and the National Bat Monitoring Programme**

### **- Nigel Terry (Lothian Bat Group)**

Bat Conservation Trust's National Bat Monitoring Programme (NBMP) is the longest-running multi-species monitoring programme for mammals in the UK. Funded by JNCC since 1991, the NBMP monitors the conservation needs of British bats and alerts us to any rapid declines in bat populations. It also provides vital information to direct limited conservation resources.

The main surveys covered by the NBMP are: sunrise/sunset surveys; colony counts; field and waterways surveys and hibernation studies. There are surveys suitable for all abilities, from sunrise/sunset surveys suitable for the beginner to surveys suited to the intermediate to advanced surveyors such as hibernation studies.

The Lothian Bat Group comprises a team of dedicated volunteers interested in bat conservation. The group undertakes three of the NBMP surveys: colony counts, hibernation surveys and waterways surveys. Nigel undertakes a waterways survey at Linn's Mill each year. This survey involves walking a 1km transect along a water body on two evenings after sunset in August. The survey is aimed at monitoring Daubenton's Bats and is fairly straightforward. All that is needed is a heterodyne bat detector and a torch.

Hibernation surveys are undertaken by the bat group in January and February each year. For these surveys, a small team of volunteers visit a known or potential hibernaculum, accompanied by a licensed bat surveyor. The number of hibernating bats of each species is recorded. This survey targets species such as Daubenton's, Brown-long eared and Natterer's bats. Field surveys are undertaken in July and target Noctule, Common and Soprano Pipistrelles. Unfortunately, there are currently no volunteers for field surveys.

The group undertakes annual bat box checks from late August/early September to the end of October at several Lothian sites and sometimes also in the Borders. Anyone can join in these surveys. However, it is necessary to have someone with a license present when checking the boxes.



Bat box checks. Photo: Lothian Bat Group.

Nigel and his wife, Carol, also run the East Lothian Bat Hospital. Injured bats are brought to the bat hospital to recover before being released back to the wild.

The group also engage in walks, talks and education, for example by leading a Night Hunters Walk at Hopetoun House and regular bat walks at Blackford Pond for the Scottish Wildlife Trust (SWT). Two members of the group are also licensed bat trainers.

For further information on the NBMP visit <http://nbmp.bats.org.uk/Surveys.aspx>. The Lothian Bat Group have a Facebook page. See: [www.facebook.com/groups/169122086442511/](https://www.facebook.com/groups/169122086442511/).

*Natalie Harmsworth*

## **Open Mike Session**

**Cathy Hooper** (Penicuik Estate Ranger Service) updated the conference about a couple of public events that the Ranger Service are organising this year. The first is an evening bat surveying event on May 1st, which David Dodds will be leading. In the past, six bat species have been recorded on site. The second event is a Bioblitz on July 11<sup>th</sup>. Everyone is welcome to attend. The Ranger Service has 3-year funding from SNH and works with schools and other groups to improve biodiversity, access and people's enjoyment of the Estate.

**Sarah Eno**, Biological Recording in Scotland (BRISC), made a plea for people to consider joining BRISC, a charity that promotes the gathering of wildlife data. BRISC publishes a regular newsletter *Recorder News* and has provided financial support to various initiatives, such as a bursary scheme for FSC courses and the Scottish Biodiversity information Forum (SBIF). Individuals and organisations are welcome to join – visit [www.bris.org.uk/Membership.php](http://www.bris.org.uk/Membership.php) for further information.

**Christine Johnston** (SBIF) provided an update on Forum activities. A booklet of case studies *Making the Most of Biodiversity Data* has recently been published. The booklet is intended to be used to advocate the value of collecting and using biodiversity data. To order copies or to download a PDF go to:

[www.wildlifeinformation.co.uk/SBIF\\_Publications.php](http://www.wildlifeinformation.co.uk/SBIF_Publications.php).

The Forum has just held a successful conference at which updates on the Action Plan were given, and proposals for a National Data Flow Pathway (NDFP) were discussed. An updated map of LERCs and recording groups in Scotland has also been produced.

Over lunch delegates were able to network and view posters and displays from various organisations.

### Recent Discoveries and Changes to Invertebrate Populations in Central Scotland

- **Gabby Flinn (Buglife)**

Gabby Flinn of Buglife started her presentation with an overview of the importance of invertebrates. There are over 26,000 known invertebrate species in Scotland. Invertebrates make up approximately 85% of Scotland's biodiversity, playing a vital role in pollination, soil and waste management, pest control and food production. Invertebrates can also play a part as indicator species for other species. For example, a healthy oil beetle population is a good indicator of a healthy solitary bee population, as oil beetles rely on solitary bees to complete their life cycles.

Scotland's invertebrate populations are facing major problems however. Scotland holds 50% of the world's population of Freshwater Pearl Mussel (*Margaritifera margaritifera*). Yet, in the last 50 years one third of the Scottish population has been lost. The Great Yellow Bumblebee (*Bombus distinguendus*) population has decreased by 80% in the last 100 years and its geographical coverage has also contracted. A hoverfly study in 1982 found 106 species of hoverfly present in Central Scotland. By 2012 a similar study found only 47 species, with 6 species being new to the area.

Recent studies have shown that habitat generalist species are increasing whereas habitat specialists are decreasing. For example, bog specialists are struggling due to habitat loss/fragmentation, climate change, invasive species and land use changes. As they are widely recorded, butterflies and moths are good indicators of habitat quality and include both habitat generalists and specialists.

New species are arriving all the time, some moving quicker than others. The Fork-Palped Harvestman (*Dicranopalpus ramosus*) was first recorded in southern Britain in the 1940s and reached Scotland by 2000. The Tree Bumblebee (*Bombus hypnorum*) is moving north at a rapid rate and records in southern Scotland are increasing.

Some of the species moving north are invasive and have negative impacts on native wildlife. The Signal Crayfish (*Pacifastacus leniusculus*) has spread north and impacts on native crayfish as well as fish and other species. The Chinese Mitten Crab's increase is a concern as it carries lung fluke, a disease affecting the lungs and other body sites in humans and other mammals. The Harlequin Ladybird (*Harmonia axyridis*) impacts on our native ladybird population by preying on native ladybirds, and the New Zealand Flatworm (*Arthurdendyus triangulatus*) can wipe out local populations of our native earthworms. These latter two can lead to issues such as pest species increasing, as the ladybird population falls, and flooding of land as there are no earthworms to assist with drainage.

There are plenty of opportunities to get involved by taking part in Buglife's wildlife surveys, such as the Seashell Survey, Oil Beetle Survey and Ladybird Survey, as well as by taking part in events such as a Bioblitz. Details can be found on the Buglife website, [www.buglife.org.uk/](http://www.buglife.org.uk/), and also in their *Invert News*. Information on the Scottish Entomologists' Gathering and ID and Survey Training will also be detailed there.

Graeme Wilson

### The State of butterfly species in South East Scotland

- **Iain Cowe (Butterfly Conservation)**



Small Skipper (*Thymelicus sylvestris*). Photo: Mike Beard.

Iain Cowe, Borders Butterfly Recorder, focussed most of his talk on six species: the Large Skipper (*Ochlodes sylvanus*), Holly Blue (*Celastrina argiolus*), Speckled Wood (*Pararge aegeria*), Wall Brown (*Lasiommata megera*), Comma (*Polygonia c-album*) and Small Skipper (*Thymelicus sylvestris*). All these species have declined drastically in the Lothians and Borders in the past, with the exception of the Small Skipper, and are now returning to varying degrees. The Small Skipper is a new species to the area, first being recorded in 2006.

The first real effort to record butterfly distribution took place in 1970, but there was a huge increase in recording effort from the late 1990s onwards. This has

led to such findings as Commas being recorded as far north as Aberdeen and 400 Speckled Wood butterflies being spotted in a wood in East Lothian. The latter species has strongholds to both the north and south of the area, so are recolonizing from both directions. The Holly Blue seems to have made a jump through the majority of the Borders and is turning up in numbers in Edinburgh. Hundreds of Small Skippers are showing up in some areas, and it seems likely that the Large Skipper will probably follow the same pattern.

However, as well as these good news stories Iain also mentioned species that were giving concern. Two species of high priority are the Small Blue (*Cupido minimus*) and Large Heath (*Coenonympha tullia*) mainly due to the lack of remaining suitable habitats, especially in case of the Large Heath. Two species of medium concern are the Small Pearl Bordered Fritillary (*Boloria selene*) and Northern Brown Argus (*Aricia artaxerxes*) which are being threatened through “land improvement” works. Two other species of some concern highlighted by Iain were the Small Heath (*Coenonympha pamphilus*) and Grayling (*Hipparchia semele*).

Iain explained that without the vital work of all recorders inputting into butterfly atlases, it would not have been possible to give such a detailed talk. Anyone can contribute to the knowledge of butterfly populations in our area by taking part in online surveys. There are also online branch forums where discussions can take place and where people can get help with species identification.

An important take home message from Iain’s talk was the importance of local engagement and dealing face to face with local communities to encourage them to get out recording on their local patch. He made it clear that without local engagement – simply going out with a few people for a walk to encourage them to get involved in butterfly recording – it would otherwise be difficult to get the type of atlas coverage required.

Graeme Wilson

## Changes in the Bryophyte Flora of the Lothians and Borders

- David Chamberlain (British Bryological Society (BBS))

David Chamberlain, Lothians BBS Recorder, illustrated some of the challenges associated with assessing changes in the bryophyte flora. Very little information exists by which to gauge such changes – and over what scale should change be assessed? The majority of the records in both the 1991-94 and 2014 *Atlas of British and Irish Bryophytes* are for 10 km squares, but some bryophyte populations may cover less than 10 cm<sup>2</sup>. Historical records are useful, but may be inaccurate or give inadequate information. For example, the *Flora Edinensis* of 1825 provided the first really full account of the bryophyte flora of the Lothians, but its information

on the localities of species is very poor. In total, it is thought that about 14 species have been lost from the Lothians, but apparent extinctions may be just that. For example, *Grimmia anodon*, Britain’s rarest moss, was recorded on Arthur’s Seat in 1864 but by 1912, McAndrew thought it extinct (a victim of increasing pollution). However, in 2005 David Long re-found the species at the same site, where it still survives, its only site in Britain.

Meanwhile, some “alien invaders” have made conspicuous advances in their territories. *Campylopus introflexus* was first found in Sussex in 1941 and in East Lothian in 1972, but its ability to outcompete almost everything in a wide range of habitats has ensured its spread throughout Britain. *Dicranum tauricum*, first recorded in the Lothians in 1971, now occurs through most of Scotland; its spread is thought to have been encouraged by increased pollution. *Hennediella stanfordensis* and *Hennediella macrophylla*, both unrecorded in Britain before 1950, are now found along the Water of Leith and River Tweed respectively and have been spread by fishermen’s boots!



David Chamberlain (British Bryological Society)

Many bryophytes are very difficult to identify, so mis-identification and confusion of species can cause problems when interpreting distribution change – and increases in the number of records for a species may reflect more systematic surveys and improved recorder awareness rather than range expansion.

Where changes in bryophyte distributions have occurred, various pressures such as habitat loss, pollution or climate change may have contributed. Two species now dropped from their vice-county lists are *Catascopium nigrum*, known on Luffness Golf Course but lost by being buried under sand, and *Habrodon perpusillus* recorded on a single tree at Traquair – but now extinct because the tree fell down. *Aloina rigida* used to be common on lime-washed walls, but as these are now rare the species has also declined. Industrialisation may lead to species loss, but this is not always so, and some species such as *Bryum pallescens* thrive on polluted sites. Global warming appears to have contributed to the spread northwards of *Weissia*

*longifolia*, first recorded in East Lothian in 1974, and the easterly spread of *Colura calyptriifolia* in Roxburghshire, in response to changes in humidity.

The BBS is keen to help and encourage new recorders and its recent publications include the updated *Atlas of British and Irish Bryophytes* and the excellent *Mosses and Liverworts of Britain and Ireland: A Field Guide*.

Jackie Stewart

## The Tweed Invasives Project - Alex Baillie (Tweed Forum)

Alex's talk about the Project drew on lessons learnt since it was set up. Three invasive plants, Giant Hogweed (*Heracleum mantegazzianum*), Japanese Knotweed (*Fallopia japonica*) and Himalayan Balsam (*Impatiens glandulifera*), have been targeted over the last 10-12 years. At the start, over 300 miles of the Tweed catchment were badly affected by the plants, and issues such as piecemeal control, and a lack of laws advocating control had resulted in their spread.

In 2000, after an initial meeting, it was agreed between the Tweed Forum and other interested parties that control of Giant Hogweed should be a priority. Individuals agreed to champion control in different sections of the catchment by preventing the plant from flowering, and the Forum provided support by, for example, providing training and certification in the use of chemicals and supplying equipment. This control of Giant Hogweed has been successful.

Japanese Knotweed and Himalayan Balsam have also been controlled. It is found that where Japanese Knotweed is controlled and eradicated locally, native plants tend to return. Himalayan Balsam is still ubiquitous.

Project costs to date have been over £1 million. Over time annual costs have flattened out. Material and chemical costs have reduced, whereas contractor costs are largely fixed.

Important lessons learned included: seeds are longer lived than expected; new stands of invasives appeared further away from the riverside than predicted; Himalayan Balsam can move in to replace Giant Hogweed. The project increased public awareness of invasive plants, but it was found that public interest tailed off with success. The main challenges of the project were: securing continued funding; investigating other potential sources of support; motivating people to continue their involvement; finding new supporters.

The final part of the talk focussed on the search for a biological control for Himalayan Balsam. The plant is Europe's tallest annual, good for pollinators, but very invasive especially in riparian areas. If a biological control is to be introduced it must be host specific and not itself invasive. Biological control is environmentally friendly, cost effective, sustainable, not a threat to

humans, and enables gradual re-colonisation by native plants, but one cannot be sure what the actual response to the introduction of a biological control will be, nor is it a cure.

A rust fungus that makes Himalayan Balsam susceptible to other pathogens and insect damage has recently been found and may offer a control method. Trials are already underway in parts of England and Wales, and a trial in the Lower Tweed area (in England) has already started. The Forum is keen for people to report any sightings of rust spots on Himalayan Balsam.

To report invasive species sightings within the Tweed catchment, or evidence of the rust fungus on Himalayan Balsam, email [info@tweedforum.org](mailto:info@tweedforum.org).

Christine Johnston

## Summing up

Rob Briers (TWIC Director) thanked the speakers for the quality of their talks and the range of subjects covered within them. He noted that several interesting and important points could be taken away from the day:

- The value of long-term recording schemes to allow the examination of trends and statuses and the need for more volunteers to continue the work.
- Changes in recorder effort over time and differing survey methodologies can make detecting real change difficult.
- Significant changes in species populations have already taken place in the Lothians and Borders. However, the drivers of change and effects on other species and habitats need to be better understood.
- Invasive species control can be successful, but requires substantial (and sustained) input of resources over the longer-term.

Rob concluded that it had been a very interesting day. He thanked the TWIC team for organising the event, Scottish Borders Council staff for providing the venue and logistical support, and the conference delegates for their contributions.



Rob Briers (TWIC Director).