

# TWIC Autumn Conference Report, December 2015

Despite the effects of Storm Desmond, 51 wildlife enthusiasts from across the region turned out for The Wildlife Information Centre's (TWIC) Autumn Conference at the Burgh Halls, Linlithgow on Saturday 5th December. The conference theme was **"The Wildlife Information Centre: East meets West"** to tie in with TWIC's expansion plans in 2016.

The morning session covered the work of TWIC, how biological records are vital for local decision making and how TWIC fits into the National Biodiversity Network and Atlas of Living Scotland project. In the afternoon session, delegates learned about a variety of conservation initiatives underway in the region.

Sarah Eno (TWIC Chair) welcomed everyone to the conference. Sarah Eno and Graeme Wilson (TWIC Manager) chaired the morning and afternoon sessions respectively.

## The Wildlife Information Centre: Where we fit in the jigsaw!

### - Graeme Wilson (TWIC Manager)

Graeme Wilson, TWIC Manager, was first to present at the conference. As some of those attending the conference had not been involved with TWIC before, he began by explaining that TWIC was the Local Environmental Records Centre (LERC) for the Lothians and Scottish Borders, a not-for-profit company with charitable status based at Vogrie Country Park in Midlothian. The centre is funded by Scottish Natural Heritage (SNH), through Service Level Agreements (SLAs) with 5 local authorities, and through income from consultants and special project work. TWIC has 5 members of staff plus many volunteers. The volunteers include the Board of Directors that oversee the work of TWIC, office based volunteers who assist with the important task of data processing and field volunteers who collect data on local sites.

TWIC works with other key organisations and neighbouring LERCs and is expanding into Falkirk, Stirling and Clackmannanshire Council areas and Loch Lomond and Trossachs National Park from April 2016.

2016 also marks the 25<sup>th</sup> anniversary of TWIC's existence in one form or another, as it started in 1991 as a Scottish Wildlife Trust (SWT) project.

Graeme went on to describe the different ways TWIC gathers data; this includes accessing existing datasets from National Schemes and Societies (NSS), conservation organisations, local groups, individual recorders and members of the public. TWIC also gathers data directly through its programme of recording excursions and public surveys and by organising and taking part in events such as BioBlitz. Since 2011, TWIC has launched three Public Surveys – the Hedgehog

Survey, Leopard Slug & Badger Survey and Record-a-Raptor Survey. These surveys help increase the number of records held and help plug gaps in recording, but also raise public awareness of biological recording.

As well as using the data held to supply services to local authorities and consultants, TWIC also supplies data to individuals for academic research and to conservation bodies and local groups for conservation purposes (something Steve Hannah covered in more detail in his presentation).

TWIC, as a LERC, is a local node of the National Biodiversity Network (NBN), the partnership of organisations that are committed to making biodiversity information available. TWIC shares its own data through the online portal, the NBN Gateway, and supports projects that promote open data, such as the new Atlas of Living Scotland.

In addition to data collation and dissemination, TWIC has an important role to play in supporting local recorders. It does this by, for example, running twice yearly conferences to bring recorders together to share knowledge and contacts and by organising occasional workshops to help individuals develop their identification and survey skills. For TWIC, a key task is to support and engage with both the current generation and the next generation of recorders.

*Graeme Wilson*

## The Wildlife Information Centre: Where data comes alive

### - Steve Hannah (TWIC GIS and Data Officer)



Steve Hannah. Photo: Mike Beard.

Steve Hannah was up next and delivered a talk titled TWIC: Where data comes alive! The talk covered 7 ways that TWIC utilises data: screening planning applications, data requests, assessing potential Local Biodiversity Sites (LBS), SLA services, Local Biodiversity

Action Plan (LBAP) support, the NBN Gateway, and data sharing with NSS and local groups.

TWIC screens planning applications for several local planning authorities. Each week the local authorities send planning application boundaries to TWIC. These are then checked against biodiversity data to highlight potential biodiversity constraints. TWIC sends a report to the planning authority contact, copying in Scottish Natural Heritage (SNH) and Scottish Wildlife Trust (SWT), and the local authority interprets the report and informs the planner of any survey requirements before the application can be considered fully.

Data requests are carried out by TWIC for various parties, but only those done for commercial entities are charged for. This is not a charge for data, but to cover TWIC's time in processing the request. Public and academic requests are provided free of charge. TWIC can supply species data, habitat information, and information on locally, nationally or internationally designated sites. These data can be supplied in a variety of formats, usually PDF maps and reports, ArcGIS shapefiles, Google Earth KML files or Excel spreadsheets.

TWIC sits on the LBS Steering group for several local authorities. TWIC participates in the groups by organising meetings, producing assessment documents, preparing site statements for approved sites and notifying landowners. A standard methodology to assess sites is used, but is tweaked slightly for each local authority to reflect local circumstances. Sites are assessed on 5 biodiversity criteria and social scores – though the latter is only taken into account for sites that are borderline for their biodiversity.

TWIC has SLAs with all 5 local authorities in its area. In addition to planning screening and LBS work, other services TWIC provides to councils are: provision of site reports, maps and notable species data; support for the countryside rangers; training for local authority staff in biological recording and interpretation of species data; and support for the implementation of the LBAP. As part of LBAP work, TWIC has previously provided training in the online reporting system BARS and carried out special projects.

As Graeme described earlier, TWIC uploads its own data, such as records from the public surveys, to the NBN Gateway. These data are freely available for non-commercial use such as academic research, but cannot be used for commercial purposes. TWIC also manages data on the NBN Gateway on behalf of other organisations, such as BRISC. In the near future, TWIC hopes to mobilise other datasets such as individual recorders' collections.

"Enter once, use many times" is an important mantra for biological recording. Therefore, TWIC shares data with various NSS, conservation organisations and local wildlife groups. Data are shared on a regular basis,

typically annually, and this normally involves a two-way data exchange. In many cases, the NSS representative or local expert also helps TWIC with the process of data verification (checking that the data are accurate). This helps improve the quality of our data holdings and ensures the data are fit for purpose. TWIC has a standard base agreement that can be modified to suit each data participant's needs. Having such an agreement ensures each party understands what data is to be shared and when.

*Steve Hannah*

## A Council's Use of Biodiversity Data

**- Stuart MacPherson (East Lothian Council Biodiversity Officer)**



Stuart MacPherson. Photo: Mike Beard.

Stuart MacPherson of East Lothian Council (ELC) gave an interesting presentation on how TWIC's data holdings are used within a local authority context. He highlighted that one of the main reasons that ELC works with TWIC is that TWIC works closely with so many different organisations. This gives the council confidence in the coverage and quality of the data TWIC holds and that it can be used for a variety of purposes by the council.

Data inform the management of the 12 countryside sites owned or managed by ELC, such as Yellowcraig where data have been used in decisions regarding tree management. Biodiversity data are also critical to the Local Biodiversity Sites (LBS) System in ELC. LBS are non-statutory sites that are highlighted as being important



locally and that deserve some sort of protection from development.

Data from TWIC are also used in Biodiversity planning, specifically in developing the East Lothian Local Biodiversity Action Plan (LBAP). It is not only species data that are used in LBAP planning but also Priority Habitat and Phase 1 Habitat data.

Stuart went on to describe how data inform local authority planning decision-making. When planning a development there are many different aspects that need to be considered and biodiversity is often low down the priority list. However, as Stuart highlighted, information is power and with data from TWIC he is sometimes able to show where biodiversity issues need to be taken into account. He presented examples of various housing development sites and their potential impact on local biodiversity. All were low, except one where Water Vole was present. This site required further survey work to be requested.

One major aspect of TWIC's work for ELC is planning screening, as described by Steve Hannah earlier.

Stuart sees the work undertaken by TWIC to gather and disseminate biological data as vital to allowing ELC to carry out their Biodiversity Duty, as he uses data from TWIC on an almost daily basis.

*Graeme Wilson*

## The Atlas of Living Scotland

### - Christine Johnston (Scottish Biodiversity Information Forum Coordinator)

Christine, speaking on behalf of the Atlas development group, gave an update on progress with the Atlas, looked at how to interact with the data, and at how individuals can contribute to the Atlas development.

### Current infrastructure

Currently the NBN Trust facilitates collaboration

between its members across the UK, linking all sectors of the biodiversity data community from public sector to LERCs, from researchers to consultants.

Data sharing nationally is currently conducted via the NBN Gateway, which is one of the largest collections of data for any country in the world. However the Gateway infrastructure is now considered as not being fit for purpose, and there is strong support for change to improve the data infrastructure and accessibility.

### The 'Atlas of Living...' infrastructure

Inspiration for the Atlas of Living Scotland came from the Atlas of Living Australia, a successful open source infrastructure introduced in 2009. The Australians are keen to share their knowledge and code, and Scotland is joining countries such as France and Portugal that have already developed their own Atlases, benefitting from shared code and knowledge of a global community of developers.

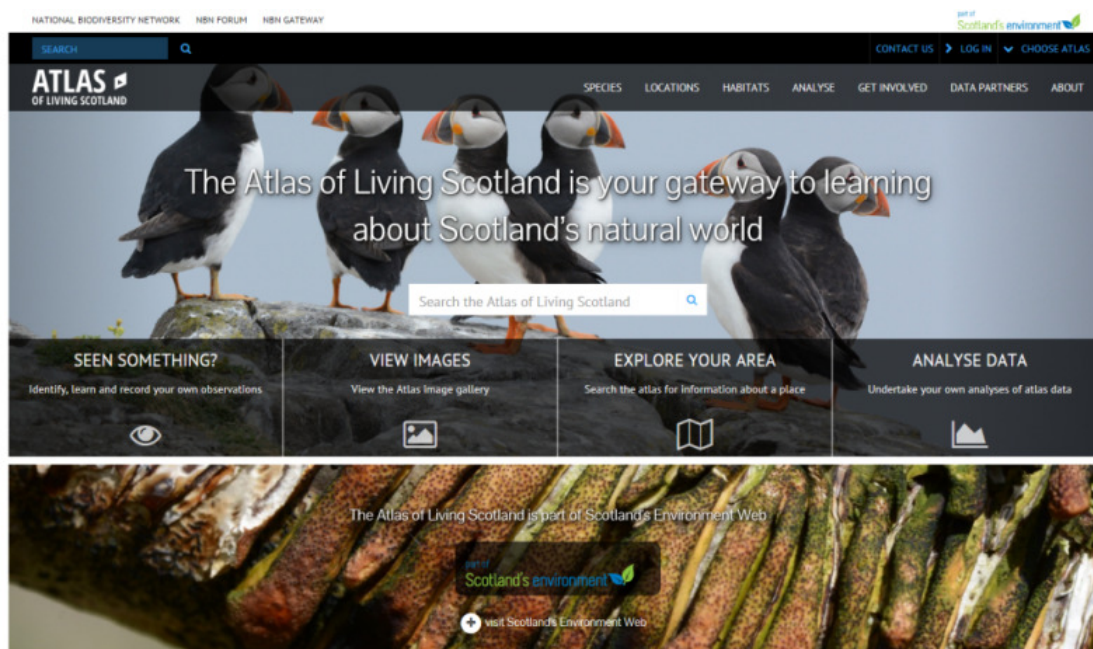
The Atlas provides a platform to engage, educate and inform people about the natural world. The main partners are Scotland's Environment Web (SEWeb), of which the Atlas is a daughter site, Scottish Environment Protection Agency (SEPA), the NBN and SNH. The project has received some funding from the European LIFE+ Programme.

The intention is to develop an atlas for each of the UK countries and in time they will replace the Gateway.

### Using the Atlas

The Atlas can be used to help with identification, to learn more about species and to upload records. It enables interrogation of all data types including species occurrences, habitats, images and spatial environmental layers such as climate and soils data. Various aspects of the Atlas interface were introduced:

- The **species pages** – these include links to maps, images, the UK species inventory, genetic



Screenshot of the home page of the Atlas of Living Scotland website, [www.als.scot](http://www.als.scot).

sequencing information, reference library and data providers.

- The **interactive mapping interface** – where species and habitat data can be searched and the results mapped. The results can be filtered by different criteria, such as species sensitivity or the Scottish Biodiversity List, the map design can be customised and the data downloaded in different formats. Data can be explored by pre-defined regions and area biodiversity reports produced.

Not all the spatial layers are available yet, but as more are added increasingly complex analyses (including predictive species distribution modelling) will become possible. In the future it is expected that data about forestry, land cover, marine information and water quality will be amongst the layers to be added. Data are held under creative commons licenses, with four options offered to data partners.

The conference participants were encouraged to contribute comments about the Atlas, to join the user group and to consider sharing data. The website is: [www.als.scot](http://www.als.scot) and the contact email address is: [info@als.scot](mailto:info@als.scot).

Christine Johnston

During the lunch break, delegates had the opportunity to browse the posters and displays and network. TWIC's AGM was also held during the break.



Delegates enjoying the displays and posters. Photo: Mike Beard.

## Presentation of the Bob Saville Award

### - Sarah Eno (TWIC Chair)

Sarah Eno announced that the 2015 recipient of the Bob Saville Award was botanical recorder, **Michael Braithwaite**. The award was made in recognition of the enormous amount of recording Michael has done over so many years and for his many publications that make his work accessible to everyone.

Michael was not able to attend the conference in person to pick up the award, but sent TWIC the following message:

*"Thank you for your kind letter. I much appreciate the honour that your committee is bestowing on me. I do my plant recording for the love of it, but I do try to do things that might interest others and to share the results in the hope that just maybe it might help the plants along their way."*

Michael was born in Northumberland. He took up the study of flowers as a hobby after moving to work in Hawick as a chartered accountant in 1969. His first project was the flora of the old Waverley Railway. In 1981 he was appointed Botanical Society of Britain and Ireland (BSBI) vice-county Recorder for Berwickshire. Michael continued as vice-county recorder until his retirement in 2014, after 35 years botanising in Berwickshire, finishing with supplying data for the Botanical Society of Britain and Ireland *New Flora of the British Isles 2020*.

Over the years, Michael has produced many publications, which he makes accessible for conservation purposes.

Now Michael continues his searches and writings closer to home with the Flora of Hawick. Sarah said she has heard he is researching the etymology of Berwickshire place names and is planning on surveying the verges of the A7 in 2016!

Natalie Harmsworth

## Forth Without Borders

### - Kate Fuller (Inner Forth Landscape Initiative Community Engagement Officer)

Kate Fuller, Community Engagement Officer for the Inner Forth Landscape Initiative (IFLI), spoke next. Kate gave a useful overview of the IFLI project and showcased examples of how the initiative is transcending boundaries and promoting involvement in citizen science.

Funded primarily by the Heritage Lottery Fund, IFLI is a partnership project, working around the upper Firth of Forth. RSPB is the lead partner, but there are 7 other organisations that make up the partnership and a range of other organisations and groups that help deliver the projects. IFLI's project area covers some 202 km<sup>2</sup> of the Forth estuary, including the river, estuary and intertidal zone, floodplain and coastal margins and settlements on both sides of the Forth.

Before discussing the specific projects, Kate introduced the overarching IFLI vision:

*"Our vision is of an Inner Forth landscape where the natural, cultural and historical wealth of the area is revealed, enhanced and made accessible for both residents and visitors. Important historical and natural landscape features will be in good condition, and the future will be embraced by a landscape better able to cope with change."*



Between 2014 and 2018, fifty projects will be delivered covering four areas: 1) conserving and restoring; 2) recording and celebrating; 3) exploring and learning; 4) skills and training. Kate gave an overview of each of these in turn, providing examples of how projects are being delivered on the ground. Many of the projects aim to leave a lasting legacy beyond the lifetime of the project, e.g. by increasing heritage skills in the local population, providing visitors with better access to sites or inspiring the citizen scientists of the future.

The final part of the talk focussed on the Forth Nature Counts project – a project of particular relevance to the recording community. The aim of this project is to increase the number of verified biological records for the Inner Forth area. In 2015, a programme of identification and survey skills workshops were delivered. The project uses the online recording system, iRecord, to capture their wildlife sightings. Free to use, iRecord allows users to view others' recordings – but not sensitive sightings – and to add their own records to the map. Photographs can be uploaded with records to aid verification. To date, a modest number of records have been entered onto iRecord using the Forth Counts form (circa 4,000 records). However, this comprises c. 80% of the records on iRecord for the Inner Forth area. Verification is one of the biggest challenges associated with iRecord. However, this is likely to improve over time as specialists from National Recording Schemes and the like engage with the system.

Kate encouraged anyone interested in volunteering with IFLI or attending an event to visit their website, [www.innerforthlandscape.co.uk](http://www.innerforthlandscape.co.uk).

Natalie Harmsworth

## The Importance of Brownfield Sites for Nature Conservation

- Suzanne Burgess (Buglife Conservation Officer)



Suzanne Burgess (Buglife). Photo: Mike Beard.

Brownfield sites, defined as sites disturbed or altered by human activity and currently not fully in use, tend to be concentrated in or near urban and former industrial

landscapes. They include, for example, abandoned factory sites, disused quarries and old railway lines. Although they differ according to their previous use and local conditions, brownfields typically have early successional habitats and are not closely managed. Over time, their value for biodiversity increases and **Open Mosaic Habitat (OMH)** may develop. OMH on Previously Developed Land is now a UK Biodiversity Action Plan (UKBAP) Priority Habitat, though many sites have already been lost to development.

To qualify as OMH, a brownfield site must cover at least 0.25 hectares, have a known history of disturbance and have a mosaic of habitats including bare ground and early successional vegetation. Such a mosaic provides homes for a wide range of species and allows many to complete their life cycles on site. Areas of bare ground heat up quickly and are especially important for thermophilic (warmth-loving) species, including solitary bees, wasps and ground beetles. 12-15% of rare and scarce invertebrates have been recorded on Britain's brownfields. These include the Shril Carder Bee, Distinguished Jumper spider and Dingy Skipper butterfly. In fact, brownfield sites may have as many Red Data Book species and nationally scarce invertebrates as ancient woodland. Brownfields can also provide important links or "stepping stones" between more natural habitats in the landscape.

The Inner Forth area has a strong industrial heritage and many types of brownfield site. Spoil heaps or "bings" left by the coal industry are common and many have been studied by Buglife. For example, **Manor Powis Bing**, near Stirling, is dominated by Giant Hogweed but areas free from this are disturbed regularly by dirt bikes, and harbour interesting flowers and insects. The usually coastal wolf spider (*Arctosa perita*) and ground beetle (*Paradromius linearis*) have been recorded on the open spoil, along with the ground beetle *Pterostichus cristatus* and jumping spider (*Talavera aequipes*), both of which have few Scottish records.

**Garibaldi Bing** near Falkirk, and **Fallin Bing** near Stirling, are part of Buglife's "Bings for Wildlife" project which aims to work with volunteers to manage the sites for wildlife. So far, 104 invertebrates have been recorded at the Garibaldi Bing, notably the tortoise beetle (*Cassida rubiginosa*). At Fallin Bing, the 115 species recorded include the Nationally Scarce (Notable B) beetle *Amara praetermissa*, leafcutter bee *Megachile willughbiella* and ant hunting spider *Steatoda phalerata*. Volunteers have helped create bare ground by clearing scrub, and Yellow Rattle has been seeded to help suppress vigorous grasses and encourage a diverse flora.

Another Buglife project, "Bridgeness Biodiversity", is based on the site of an old ship breakers in Bo'Ness. This site currently supports 90 flowering plants and 80 invertebrates and will be managed for OMH. The site

value will be further enhanced by creating a wildflower meadow. The site is crossed by the John Muir Way which brings visitors to the area, and volunteers from the local community are involved in creating and maintaining a valuable resource – not only for wildlife but for people to enjoy. Clearly brownfields have a lot to offer!

Jackie Stewart

### The Bog Squad: Conserving Lepidoptera in lowland bogs in central Scotland

- David Hill (Bog Squad Project Officer, Butterfly Conservation)



Large Heath Butterfly – a bog specialist. Photo: Jim Black/ Butterfly Conservation Scotland.

David gave an interesting talk about the work of the Bog Squad, which is part of the Peatland Action project, and why it is important.

#### The importance of peatland habitat

The distribution of 72% of UK butterfly species is in decline owing primarily to habitat loss, and garden butterfly species distributions are down 24% in the last 10 years. Bog Squad's work is to restore Lepidoptera-friendly habitat on Scottish lowland raised bogs, which comprise small isolated patches of habitat surrounded by fields, and which are vulnerable to drainage, grazing pressure and peat cutting. David explained that globally, peatland habitat has an important role as a carbon sink, storing more carbon than all the world's forests. Bogs provide other ecosystem services, such as flood prevention, water purification, and harbouring biodiversity.

#### The work of Peatland Action and Bog Squad

The Peatland Action project, started in 2013 and running until 2016, has received £8 million funding and has restored habitat on 100 sites, covering 8,500 hectares. Bog Squad has removed trees and invasive species (Rhododendrons) and installed over 100 small dams to retain water. They have held 30 work parties so far, collaborating with community groups and organisations such as the SWT, Buglife, Trees for Life and the British Dragonfly Society. Bog Squad also

conducts butterfly surveys, moth trapping and peat depth surveys, which contribute to our understanding of these species and habitats, and demonstrates the importance of Bog Squad's work.

#### Butterflies, moths and bogs

David went on to focus on a few species that use peatland habitat.

The Large Heath butterfly is a peatland specialist using Hare's-tail Cottongrass (*Eriophorum vaginatum*) as its main food plant. The average adult life span of the butterfly is 2 days, and as the species is thought to travel up to only 650 metres, it is vulnerable to habitat fragmentation and predation. It is known to be present on about 40 Scottish lowland bogs, but is thought to have declined in distribution by 43% since the 1970s. It may however be under-recorded, as Bog Squad has found it on two previously unknown sites.

Bogs are also important for the Small Pearl-bordered Fritillary which feeds on Marsh Violet (*Viola palustris*), and Green Hairstreak larvae that feed on Blaeberry (*Vaccinium myrtillus*). About 80 species of macro-moth, including the Emperor moth and the Northern Eggar, depend on peatland, and species such as Wood Tiger and Argent & Sable use peatland fringe habitats.

David's talk really brought home to me the importance of recording; we need to know as much as possible about species distributions and habitats in order to take necessary and effective action. As it is thought that bogs are a generally under-recorded habitat, it would be worthwhile for recorders to use existing data to target recording efforts on these sites.

Christine Johnston

#### Summing up

- Graeme Wilson (TWIC Manager)

Graeme thanked all the speakers and attendees for their contributions and commented that it had been a most enjoyable event. Graeme picked up on particular highlights from the different talks. One of these was David Hill's quote about bogs: "Conservation not conversation". Graeme said that recording was also about doing something, as data underpins conservation action.

Graeme finished by announcing that the spring conference would be held in the April 2016 at a venue in the Scottish Borders that will be accessible via the Borders Railway line.