



Tayside Recorders' *Bulletin* 2023





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Introduction – our Annual Recorders’ Day

We are very grateful to Angus Council for hosting and arranging the 15th Tayside Recorders’ Day in 2023. It was a relief, last year, to see the Tayside Recorders’ Forum return to its annual in-person Recorders’ Day at Perth Museum. The only change was that in previous years we held the event at the start of the surveying season, whereas in 2022 we welcomed everyone to the event in September, i.e. very much the end of the surveying season. We are continuing that change this year but would welcome your feedback as to whether a March or an autumn date is preferred. Dundee is



hoping to host the event in 2024 – and so far another September date is being proposed unless we hear from you to the contrary!

Everyone is, as ever, very welcome to attend the Recorders' Day – this year we will be having an important update from the NBN (National Biodiversity Network) on its Better Biodiversity Data Project and hear presentations, as ever, on a very wide range of subjects. The programme can be accessed via [Tayside-Recorders-Day-Programme_23Sep23_2.pdf \(taysidebiodiversity.co.uk\)](#). Watch out for the 2024 date and venue of the next get-together via the home page of www.taysidebiodiversity.co.uk.

Young Recorders' Group (Tayside)

Just before Christmas last year an online meeting attracted 16 people from all across Scotland (and beyond) to discuss how best we could set up a new Tayside Recorders' Under-25s Youth Committee. Quickly agreeing on a change of name to the Tayside Young Recorders' Group, it was agreed that a handful of environmental NGOs (including BTO and Butterfly Conservation) would lead the way as they are already experts in involving young people in their organisations, and also have integral Health & Safety, insurance, and Child Protection Policies in place.

Although there has been a hiatus in going further than the original meeting – purely down to capacity, not keenness – a funding application has now been submitted to the British Ecological Society to help set up a small pilot project. This is so that we can test the initial interest in the area and to refine exactly what we want to offer in the long-term at a much larger scale. We are extremely fortunate in being able to work with the Perth & Kinross Countryside Trust in this; their Education Officer will be a key part of the project in liaising with the NGOs and setting up the volunteering paperwork. We will announce any funding we receive on the Tayside Recorders' Facebook page, so please keep an eye on social media.

We very much hope that this will be the beginning of a comprehensive Young Recorders' project which will encourage others across Scotland to do something similar. We are in touch with the NBN's Better Biodiversity Data staff and hope we can work at a larger scale to embed the idea into what is being planned across Scotland where the Biological Recording Hubs are concerned.

If you would like to be part of our initial sub-group to make all this happen within Tayside, please contact Catherine at cagllloyd@pkc.gov.uk in the first instance.

Improving the Biological Recording Infrastructure in Scotland

The Better Biodiversity Data (BBD) project launched in March 2023. It is led and managed by the NBN Trust and funded by the Scottish Government and NatureScot. Over two years the project will be taking forward some of the key recommendation from the [Scottish Biodiversity Information Forum](#) (SBIF) review on Biological Recording Infrastructure in Scotland.



BBD will develop the first steps in a strategic approach to the collection, collation and sharing of biological data across Scotland. This will involve working closely with Local Environmental Records Centres (LERCs), Recording Groups and other members of SBIF and the wider recording community

in Scotland. To help safeguard Scotland's biodiversity data, BBD will tackle three key objectives to support the ambitions of the Scottish Biodiversity Strategy and streamline access to *terrestrial, freshwater and marine data*.

1. Establish a National Hub that supports a consortium of partners to deliver nationwide biodiversity data services.
2. Develop a fit-for-purpose Data Management and Digital Services System for use by LERCs, Recording Groups and other partners.
3. Foster a well-connected and functional data infrastructure in Scotland, following FAIR and Open principles across all sectors.



The BBD project will develop the national infrastructure for biodiversity data, supporting data partners and responding to data needs in Scotland.

As part of the BBD project's engagement with the biodiversity data community in Scotland, the project team have been visiting partners around the country over the summer of 2023. Mike Tetley, the Scotland Programme Manager and Christine Tansey, the Partnership Officer for the BBD project, have met with those working in LERCs, ranging from the North East Scotland Biological Records Centre (NESBReC) to the South West Scotland Environmental Information Centre (SWSEIC).

Some areas of Scotland are covered by volunteer-led Recording Groups, and the team included visits to Outer Hebrides Biological Recording (OHBR) in South Uist and Highland Biological Recording Group (HBRG) as part of the tour. In Tayside, Mike and Christine met with representatives from Tayside Biodiversity Partnership, the Tayside Recorders' Forum and the three local authorities to talk about biological recording in the region.

Alongside these groups, the BBD team have engaged with those involved with historic data such as the National Museum of Scotland, and Royal Botanic Gardens Edinburgh. Conversations with representatives from the marine data community have also been an important part of the journey, and have included JNCC, SeaSearch, Hebridean Whale and Dolphin Trust and commercial consultancies.



Our terrestrial, freshwater and marine spheres have often been siloed from one another, and BBD aims to ensure that those working to safeguard Scotland's biodiversity have a better way to record, access and analyse biodiversity data, from source to sea.

Autumn and winter 2023/24 will see the BBD project establishing the consortium of partners, conducting the consultation for, and development of, the Data Management and Digital Services System. If you would like to speak with the Better Biodiversity Data team about the project, please contact Christine Tansey direct via c.tansey@nbn.org.uk.

Article by Christine Tansey

Recording Moths

Perthshire has had a long history of Lepidoptera recording. One of the first and most renowned lepidopterist in this area was Francis Buchanan White (1842-1894), whose large collection is housed in Perth Museum. He was the author of "Fauna Perthensis – Lepidoptera" (PSNS, 1871) in which Lepidoptera were listed with an indication of the area in which they occurred and some examples of localities where they were found "for the benefit of collectors". Another Lepidopterist who worked in the Kinfauns area was W. Wylie who published his list of the macro-lepidoptera in 1912 and in which he gave an indication of how common or rare each species was, with further details of some of the species. Sir Thomas Moncrieffe (1822-79), the Baronet and owner of Moncrieffe House, was another early enthusiast who compiled the Lepidoptera of Moncrieffe Hill. Twentieth century collections in the museum are those of Samuel T. Ellison and J.R. Miller. In addition, a collection of moths from Rannoch collected by David Barry during the 1960s has been deposited recently.

Dundee University's D'Arcy Thompson Zoology Museum and The McManus in Dundee also hold collections from key workers. The Kenneth Tod Collection (1930s-40s) in the university contains butterflies and moths from Angus, where he lived, as well as from other parts of Scotland. Derek Robertson's collection at McManus also has specimens from our local area, these collected somewhat later in the 20th Century. Together these collections represent a vital source of information about historical distributions for our area and span a range of dates. A problem with old collections is that although, if we are lucky, they include locality details (the provenance) for specimens, grid references may be lacking. This means that often we can only speculate about the site where a given specimen might have been collected.

Those collections that were made prior to recent agricultural intensification and other environmental changes such as afforestation, drainage, changes in air quality and a warming climate, can give us some valuable information about changes in the Lepidoptera fauna. While the northern parts of our area - the Angus and Perthshire glens and mountains - may still support a diversity of butterflies and moths, the more agricultural south has lost much of its unimproved species rich-grassland, moorland and wetland habitats.

On the "loss" side, some of the species recorded by early collectors and that are now known mainly from historical records are the Beautiful Yellow Underwing, Small Dark Yellow Underwing, Cousin German and Scotch Annulet. All of these were recorded from the Sidlaws in the last century, but now we have few, if any, recent records. On the other hand, there are not very many of us out there looking for moths, particularly common day-flying species which have been recently under-recorded! So, could some of those species collected by the early lepidopterists be hanging on out there somewhere? Some of the moths which have declined include those associated with species-

rich grassland and quality moorland. As well as those mentioned above, the Emperor Moth, Magpie Moth, and July Belle are also seen less often. Records from your local sites are therefore valuable. Having data on species-rich sites makes it more possible to locate new developments where they do least environmental damage and enable special sites to be designated for environmental protection.

Species “gains” - new to East Perthshire anyway - and not represented in the collections of those early entomologists, include the Latticed Heath, Red-necked Footman and Buff Footman. This summer we also had the first record of Blair’s Shoulder-knot for East Perthshire. This is a moth which first colonised Britain on the south coast in 1951 and has been working its way north ever since. Blair’s Shoulder-knot is now commonly caught by moth-trappers in Fife. Last year saw it also recorded at least three localities in East Perthshire and as far north as Blairgowrie. Its spread is thought to be linked to a warming climate and the planting of ornamental cypresses and Leylandii hedges on which the larvae feed.

The lichen-feeding Buff Footman turned up on the Carse of Gowrie in 2021 while the Red-necked Footman has worked its way north, too, over the last ten years or so. These lichen-feeding species may have spread because of reduced Sulphur Dioxide in the air, so that could be a good news story. The hot summer of 2022 also brought with it a wave of more southern species. The Southern



Wainscot, a moth associated with reeds, and the micro- moth *Orthotelia sparganella*, which feeds on Bur-reeds, were recorded for the first time in our area.

Light-trapping tells us which species are around which are attracted to light; however many day-flying moths are not so attracted and consequently under-recorded. A quick look at a Moth Atlas might suggest that many common species of both macro and micro-moths are absent from large parts of Perthshire and Angus! Is this true? So, if you are out and about walking in our area, please add your records of the day-flying moths that you see by taking a photograph and entering them on iRecord or submitting the information to your County Moth Recorder.

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<https://butterfly-conservation.org/in-your-area/east-scotland-branch/east-scotland-moth-recorders>

<https://butterfly-conservation.org/in-your-area/east-scotland-branch/recording-butterflies-and-moths>

Article by Cathy Caudwell, moth recorder for VC89 East Perthshire

The East Scotland branch of Butterfly Conservation has funded a project to make several bucket traps for County Moth Recorders to lend out to encourage moth trapping and recording. Both Cathy Caudwell and I have traps for loan. If anyone is interested please get in touch with me and Cathy - david.lampard@leisureandculturedundee.com and c.m.caudwell@dundee.ac.uk.

Tayside Swifts is Highly Commended!

We were thrilled to receive the Highly Commended Certificate in the Nature of Scotland Community Initiative Awards last winter. As ever there was very stiff competition and in an ideal world all those shortlisted would receive the recognition they deserve. The full list of winners is here: [2022 NoSA shortlist \(rspb.org.uk\)](https://www.rspb.org.uk/2022-NoSA-shortlist)

Saving our Swifts is a true long term community project. Without committed local groups and individuals our swift numbers would likely be far less. Over the years we have installed specialist nest boxes and run training sessions to encourage the surveying of not just the swifts' enigmatic nest sites, but also those swifts who use our village and town airspace to swoop and soar in the summer before departing for Africa.



We work with local groups, too, such as Stanley Swifts – and are setting up a sub-group to work with Perth & Kinross Council and the Perth & Kinross Heritage Trust to hopefully retain natural swift nests within listed buildings when they are being renovated, and also to help the local authority by surveying the integral swift nest boxes being installed in new-builds across the county – there is now a planning condition whereby 30% of all new housing developments must incorporate integral nest boxes.

We urgently need, therefore, a Perth & Kinross-wide group of swift surveyors who can adopt a local housing development to check each summer. It is not an onerous task, but consistency will be important so that the chosen developments are regularly checked every year and reported back on. This will be discussed in more depth this autumn, but if you can help, please contact either Daniele at DMuir@taysideswifts.co.uk or Catherine at caglloyd@pkc.gov.uk.

Issue 5 – the latest Tayside Swifts Newsletter has now been published – if you would like paper copies for any events, please let us know. Otherwise you can download it here: [Swift Newsletter August 2023 – Tayside Biodiversity](#)

Article by Catherine Lloyd on behalf of Tayside Swifts



Waxcap Survey – Help Needed

Across parks, graveyards and other grasslands across the UK, our most colourful fungi are now appearing – grassland waxcaps, corals and spindles.

Waxcaps are an indicator of rare, species-rich grassland. Knowing where waxcaps and other grassland fungi are thriving helps us pinpoint where fragments of ancient meadows survive, so we can protect them for the future, especially by reviewing the grassland management involved on the site. In Tayside this includes areas of greenspace as well as graveyards.

This autumn Plantlife is asking everyone to get outside and to see what we can find for the Waxcap Watch. By recording what we find, we can help protect them and the ancient grasslands they call home.

Not just important for the hundreds of wildflowers they can be home to, these important grasslands are also crucial in the fight against climate change as they can store up to a third more carbon than areas with just a few species.

It's easy to take part in the Waxcap Watch – all you need is a smart phone or access to a computer - [Take part in Waxcap Watch 2023 - Plantlife](#). Click through the instructions on the page to guide you from start to finish.

There is also a self-guided, interactive online course aimed at anyone with an interest in learning about waxcap grassland fungi, including how to identify them and best management practices. You might be confident in identifying other plants or animals, or a complete beginner to identification – it doesn't matter – please consider taking this course to help safeguard our rare waxcaps:

[Introduction to waxcap grassland fungi identification and management - Overview | Rise 360 \(articulate.com\)](#).

There is a downloadable guide to identification and management of waxcaps and grassland fungi available too - [Layout 1 \(plantlife.org.uk\)](#).

Coastal Butterflies – Species on the Edge

After much development and preparation, plus a few delays, the exciting and ambitious Species on the Edge project is now under way! Over the next four years the project will work to conserve 37 nationally and internationally vulnerable species across seven landscape-scale areas around Scotland's coast and islands.

Along the coast of Angus and Aberdeenshire, focus will be given to three species of invertebrate - Bordered Brown Lacewing *Megalomus hirtus*, Small Blue *Cupido minimus* and Northern Brown Argus *Aricia artaxerxes*.

Habitats suitable for Wood Sage along the Angus and Aberdeenshire coast will be managed, created, and restored to provide safe havens for the Bordered Brown Lacewing. Greater survey work will be conducted to determine the status of the species in the project area, alongside detailed ecological research, and involvement of local communities in searching for lacewings. The monitoring scheme will aim to further understand the distribution and ecological requirements of this rare lacewing on the East Coast.

Work targeted at conserving the Small Blue will involve working with local communities to maintain and create new habitats suitable for Kidney Vetch along the Angus Coast, very much building upon the fantastic work of the Tayside Biodiversity Partnership and Butterfly Conservation's Small Blue Group over the last decade or so. There will also be a focus on recording and monitoring of Small Blue and Northern Brown Argus so that we can gain a better understanding of how these species are faring in the area which will allow tailoring of conservation efforts to better suit their needs.

Work in the Angus and Aberdeenshire area will be led by a Buglife Project Officer. Please contact Buglife via scotland@buglife.org.uk for further information on how to get involved in the project.

Species on the Edge is a partnership of eight of Scotland's nature conservation organisations striving to conserve Scotland's native wildlife. Led by NatureScot with the Rethink Nature Partnership (Amphibian and Reptile Conservation, Bat Conservation Trust, Buglife, Bumblebee Conservation Trust, Butterfly Conservation, Plantlife and RSPB) and with funding from the National Lottery Heritage Fund.

Keep up to date with the overall project via [Species on the Edge \(SotE\) | NatureScot](#).

Article by David Hill

Supporting Young People to Spread Their Wings

In my first year of university, I was fresh into the world of birds - and I had no idea who the British Trust for Ornithology (aka the BTO) were. RSPB - yes, the free toy owl with a year membership had me sold at 8 years old, but the BTO was an undiscovered gem I hadn't stumbled upon before. An advert to be a BTO University Representative was sent by my lecturer and, almost blindly, not entirely sure what it meant, I signed myself up to the training day. That day turned my bird world upside down! Hooked by the passion of older birders, I craved their skill to ID a bird almost without thinking. Birding - a hobby not only personally satisfying but it could benefit so many others and the natural world by contributing your findings to organisations like the BTO.



From there the ball rolled and the University of South Wales' Nature & Ornithology Society came to be, with the hope to hook students from all subjects, backgrounds and interests on the bird hype. Leaving university, the BTO Regional Youth Representatives Initiative was taking off, and so the Youth Engagement Officer, Faye, allowed me to continue my BTO journey as the Dorset BTO Youth Rep.

BTO Bird Camp © Robert Read

This is the first golden nugget of advice I'd give to young birder or naturalists wanting to get involved with the BTO, their surveys and opportunities. First find your local Youth Rep, see what events they



have to offer: from nature ID walks to bird ringing demos, from rock pooling to biodiversity surveys - the Reps have exciting stuff going on across the UK, across the year. Not only in person, but there are so many online opportunities to learn and develop your skills as a young naturalist.

The webinar series Nature Natters is run by the Youth Team, interviewing experts in the conservation field, spreading their wisdom, and giving you the chance to ask your own questions. As well as Birding 101, educational sessions specifically designed to improve your bird ID and understand species ecology. With this you'll have foundational knowledge to contribute the species you see to the BTO's app Bird Track, and even get involved in Wetland Bird Surveys by contacting a local organiser.

The BTO can further support you on your own bird journey as a young person, with the BTO Youth Summer Camps, where bird and nature lovers are united in aesthetically pleasing places to learn, survey, have fun and spread the word of the bird. Participants have even gone on to join the BTO Youth Team either as Youth Reps or members of the Youth Advisory Panel. A former member of the Youth Advisory Panel and a former Youth Rep both now have jobs with BTO - so you never know where it could lead!

From scientific training to even providing you with your first pair of binoculars, scope or ID book with the BTO Equipment Donation Scheme, the BTO is full of opportunities for young people. It may be intimidating to reach out and get involved, you may feel like a lone young birder and naturalist, but the BTO has a way of bringing us together. I hope this gives you the tools you need to spread your wings within conservation.

Article by Steve Willis (BTO Scotland)

Scottish Pollinators' Blog and 2023 Conference

This blog is dedicated to all things pollinators. It is a platform to share information, tips, resources and good practices across Scotland. Scotland's Pollinator Strategy encourages and raises awareness of pollinator-friendly actions to create an environment where these vital insects can thrive – you can catch up on all current and archived blogs here - Visit: <https://www.nature.scot/scotlands-biodiversity/helping-scotlands-pollinators>.

Thanks to a range of excellent presenters, the Third Annual Pollinator Conference seemed to hit the mark in mid-June. The subject was monitoring, and the range of talks gave a real sense of the 'why?' and 'how?' behind monitoring our insect populations.

The aim of the conference was to demystify recording insect numbers and trends, whilst emphasising the value of monitoring in understanding and sharing information around changes in biodiversity. The speakers revealed how they gather information and what they do with it.

- **80% of UK butterfly species have declined in past 50 years**
- 'Habitat specialists' that require a narrow range of caterpillar foodplants or habitats like flower-rich grassland fared worst
- 'Wider countryside' species that can breed in farmland and urban areas fared less badly
- **How do we know?** 14 million records, and over 2,500 monitored sites!



Anthony McCluskey of Butterfly Conservation opened the day by talking about insect declines and the fact that it was repeat monitoring that allowed him to make such statements with confidence. Anthony gave a good example of the value of monitoring in noting general trends and picking up on individual anomalies. In the latter category he cited the example of the orange-tip butterfly, which surveys reveal to have doubled in the past 10 years. “Monitoring allows us to ‘take nature’s pulse’,” noted Anthony. It throws a spotlight on climate change impacts, and only with monitoring can his organisation know which species they should be concerned about.

“What makes a good monitoring record?” was a question that Anthony was keen to answer. He explained that a useful record requires a date, an approximate location, and a species identification. He gave us an insight into the iRecord butterflies app, the UK Butterfly Monitoring Scheme, and the forthcoming Garden Butterfly Survey.

Anthony was followed by Richard Comont, Science Manager at the Bumblebee Conservation Trust and well-versed in all things bumblebees. His talk on BeeWalks was an insight into monitoring across the board. His starting point was the assertion that any conservation organisation needs accurate up to date information to know where ‘their’ species are and how they are faring. He used the Great Yellow Bumblebee as an example for where monitoring paints a valuable picture.

He then gave us an insight into BeeWalk, which is one of a suite of biological recording projects in the UK. Richard outlined how volunteers count and identify bees as they go along a set route. Richard acknowledged that some bumblebees are hard to identify but noted that BeeWalk has an impressive record of training people in identification skills. BeeWalk has fired the public imagination across the UK, with over 250,000 records submitted.

Richard gave us a lovely Scottish example of public participation in the Cairngorms, where the face-to-face Skills for Bees project is drawing increasing input from a small army of volunteers. And he concluded that good data is a cornerstone of making progress in the quest to help bumblebees thrive.

Claire Carvell, ecologist at the UK Centre for Ecology & Hydrology, then gave us an insight into the increasingly popular PoMS FIT Count work. Claire explained how UK PoMS is the world’s first monitoring scheme generating systematic data on the abundance of bees, hoverflies and other flower-visiting insects at a national scale. She pointed out that UK PoMS provides much-needed evidence to the UK’s four national pollinator strategies.

She described how the Flower-Insect

Timed (FIT) Count survey works, pointing out that the aim is to collect data on abundance of flower visitors and plant-pollinator interactions across a variety of habitats. Participants are advised to count all insects that land on flowers of a target flower species within a 50×50cm patch during a 10-minute period and identify insects from broad groups.

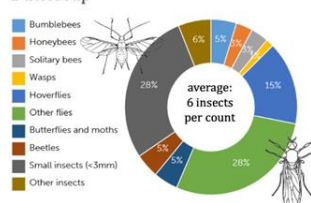
FIT Count charts



© Nadine Mitschunas
Buttercup

Number FIT Counts Completed: **939**

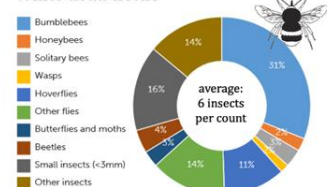
Total insects counted: **5,378**



© Nadine Mitschunas
White dead-nettle

Number FIT Counts Completed: **169**

Total insects counted: **967**



See target flower 'leader board' in the PoMS Annual Report 2022



Claire's attractive and informative diagrams and infographics showed us how FIT Counts are revealing the importance of different insect groups to different flower types, as she explained how this data is used and communicated.

After Claire's talk, colleague Martin Harvey, who was representing UKCEH Biological Records Centre, PoMS, and the Dipterists Forum, lifted the lid on the world of recording and monitoring flies. Given that hoverflies alone visit at least 72% of our global food crops, it was clear that Martin's subject was important. His talk was good on details, both large and small.

For the non-dipterists in the audience, Martin included a useful 'Fly Features' introduction, before giving us an insight into the resources available through the Dipterists Forum. We were also taken through the crucial 'data crunching' that follows monitoring exercises. It was a revealing journey noting challenges and methods, and ended with Martin having made his point on just how important flies are as pollinators.

'Trends and the importance of monitoring' was the title for Simon Foster's talk. NatureScot's Trends and Indicators Analysis commenced with the bald fact that we face the twin crises of climate and biodiversity issues, referred to the IPBES drivers for biodiversity loss, and emphasised that we need monitoring if we are to tackle these threats. "Indicators", he explained, "let us monitor changes in Scotland's species, habitats and landscapes, and reflect wider changes in the natural environment."

Making best use of robust indicators was very much part of Simon's presentation and he explained the value of a set of 'Smart' objectives, measuring specific, measurable, achievable, relevant and time bound elements. He then took us through some of the trends that have caught his eye, one of which was that warmer summers may cause short-term butterfly increases in Scotland but that this increase probably won't continue in the face of increased frequency of drought and fires resulting from climate change. Simon rounded up by acknowledging the role of citizen scientists.

We headed over to the Netherlands for our sixth presentation as John Smit, of the European Invertebrate Survey, introduced a talk about the Dutch Bumblebee Monitoring Program. John acknowledged that there was a lot of data in the Netherlands, such as the citizen science portal – waarneming.nl, but he conceded it was 'just not the right data'.

He explained that their goal was long-term data, gathered to a standardized protocol and gathered nationwide. The Netherlands, he informed us, has 24,000 insect species, over 1,000 of which are pollinators, with 370 of them comprising bees. Clearly that posed a challenge, and thus a decision was made to focus on the 22 species of bumblebee. The advantage of this approach is that bumblebees are relatively easy to find, common in many habitats, and 'fluffy and cute', which helps in getting wide public involvement. On the reverse side of the coin are challenges such as difficulties around identification, not being feasible to handle, and the fact that even willing volunteers usually need training.

As with other schemes in Europe, the Netherlands project used existing Butterfly Monitoring Programmes as a springboard, a particularly useful tactic as bumblebees and butterflies were roughly found in the same habitats at the same time of year. Good communication is key to engaging people, and a sequence of excellent bumblebee drawings were among the highlights of John's session.

A five-year pilot has now ended, and John stressed the value of sharing results. Tactics employed included publishing articles online, harnessing the reach of social media and networking, regular



volunteer meetings, frequent lectures and newsletters. The good news is that the pilot has resulted in the monitoring work being absorbed into the official Dutch Ecological Monitoring network.

The conference was wrapped up with a presentation from Petra Dieker from the Thuenen Institute of Biodiversity. Petra began by explaining that many of the 590 wild bee species recorded in Germany are found in agricultural landscapes, and that in Germany around 50% of the land mass is used for agriculture. Hence a focus on monitoring in an agricultural setting made perfect sense.

Work began with a four-year pilot scheme to create a nationwide data base describing changes to wild bee populations and their habitats. From this it is anticipated that identifying potential biodiversity-enhancing measures will follow. Such an ambitious project required a substantial team of trained volunteers, in particular farmers.

The method was interesting and adopted a non-lethal approach in sampling. Bee houses, or 'nesting aids', were installed at sites across Germany with a view to attracting bees that nest in cavities.. The 25-storey nesting aid provided a valuable source of data: nesting material, eggs, larvae and, of course, adult species all being observed by volunteers.

Petra's answer to the question "Could trained volunteers identify nesting aids inhabitants themselves?" was a resounding "Yes", with over 90 percent of their recording being correctly identified.

Petra also discussed a series of bumblebee identification courses which have been benefitting from the creation of small pollinator gardens. These are popular with pollinators and the feeding insects are more or less at eye-level and thus easy to observe.

And that brought to a close an excellent and well attended conference. You can follow the NatureScot Pollinator twitter account (@ScotPollinators) or contact Jim Jeffrey at NatureScot (jim.jeffrey@nature.scot), for further information. There is also the annual Pollinator Strategy Progress Report from NatureScot.

Article adapted from an earlier piece written by Jim Jeffries (NatureScot)

Museum Updates

The McManus, Dundee

Natural History Collection - from tiny snails to giant whales, the natural history collections reflect the wildlife of Dundee and its surrounding landscape. The geology collection has fossils which tell the story of prehistoric life in the Devonian period, 400 million years ago; and includes local gemstones such as agates. The herbarium throws light on the work of pioneering botanists such as Ursula K Duncan. The extensive collection of birds, mammals and fish demonstrates the richness of the Tay valley. The largest collections are invertebrates and contain shells, brightly coloured moths and butterflies, beetles, dragonflies amongst other natural wonders.

Keep up to date with what there is to see and special exhibitions via [the mcmanus | Dundee's Art Gallery & Museum](#).



Angus Museums

Angus has eight museums and galleries to visit: listed here - www.angus.gov.uk/museums/.
 Kirriemuir's Gateway to the Glens Museum tells the story of both the town and the Angus Glens.
 Keep up to date with what is happening via [Exhibitions • ANGUSalive](#).

Perth Museum & Art Gallery

The new Perth Museum in St. John's Square will open its doors in Spring 2024 after a £26.5 million redevelopment project. This world-class attraction will highlight the fascinating objects and stories that put Perth and Kinross at the centre of Scotland's story, including a natural history element. The Stone of Destiny will be returning to Perthshire for the first time in over 700 years and will of course be the centrepiece of the new Museum. Keep in touch with plans for the reopening - [Perth Museum - The new home of the Stone of Destiny](#).

Small Blue Butterfly Review

Looking back, 2022 was a mixed year for Small Blue in Angus. Whilst Glamis and the Deil's head area of Seaton cliffs recorded good populations there were no records for Barry Buddon or Carnoustie.

May 20th saw the first sighting at Glamis and 31st of May the first sighting at Seaton Cliffs. The weather in June and July was hot and dry and there is some concern that some areas of Kidney Vetch were parched, thus making them unable to provide food for the emerging caterpillars. We will report on the effect of the 2022 hot weather in a future report.

Maximum numbers recorded:

❖ Glamis: 50	❖ Deil's Head: 25	❖ Elliot Links: 5	❖ Carlingheugh Bay: 1	❖ Gaylot Pot: 1 (egg)
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Egg Survey

Continuing for 2022, on June 24th a group of volunteers carried out an egg survey along Seaton Cliffs. We used Deil's Head as the training and 'get your eye' in site and easily found 15 eggs. On the path to Auchmithie there was very little Kidney Vetch and only one egg was found at Gaylot Pot. Disappointingly we found no eggs on the fairly large patch of Kidney Vetch on the side of the harbour road in Auchmithie.

A focus for 2023 was to check the Barry Buddon and Carnoustie sites to assess the status of the butterfly populations here. There should be more suitable habitat for Kidney Vetch at Carnoustie as a result of the banks created following the Seagreen project. At Glamis, we received permission to extend the range of Kidney Vetch - there are several areas to the south-west of the sandpit good for Kidney Vetch. Sowing took place in March.

Meanwhile, 2022 saw the start of the Species on the Edge project funded by the National Lottery. The Small Blue is one of the species covered by the project and we are waiting to see the plan for the

Angus coast. More information is available here: [Species on the Edge](https://speciesontheedge.org/) | [Butterfly Conservation \(butterfly-conservation.org\)](https://butterfly-conservation.org/).

Finally, thanks to everyone who has been involved with monitoring SB colonies through the region. We look forward to reporting on what 2023 brought us in due course.

Article by Glyn Edwards

Perth & Kinross Council Champions Swifts

A new Protecting Swifts in Conservation Buildings Working Group was created within the council earlier this year to ensure swift nest conservation is considered when Listed Building Consents and Planning Applications for old buildings are submitted to Perth & Kinross Council. Council officers are working with the Perth & Kinross Heritage Trust as they distribute the Perth City Heritage Fund to improve the condition of listed buildings as often these contain nest sites for swifts. Also working with the Tayside Biodiversity Partnership and Tayside Swifts, this important species will be considered early in the process and the provision of nesting boxes or bricks considered where appropriate.



Inchtute Church renovations © Daniele Muir

Article by Joanna Dick, PKC

Toads on Roads – Records Needed

Perth & Kinross Council, in conjunction with the Tayside Biodiversity Partnership, TayARG and Froglife is looking to map as many toad crossings as possible to ensure new SuDS (sustainable urban drainage) ponds in developments are in the right place. If we can pinpoint the roads nearby being used by toads this can help make the surrounding habitat safer for them.

All records of amphibian migratory routes will go direct to Froglife; the council has a data-sharing agreement so will be able to create the map from the records. With more



Photo © C A G Lloyd



and more ponds projects being undertaken across Tayside this data is vital, so please help if you can!

You can register a toad crossing here: <https://www.froglife.org/what-we-do/toads-on-roads/register-a-toad-crossing/>.

Article by Catherine Lloyd

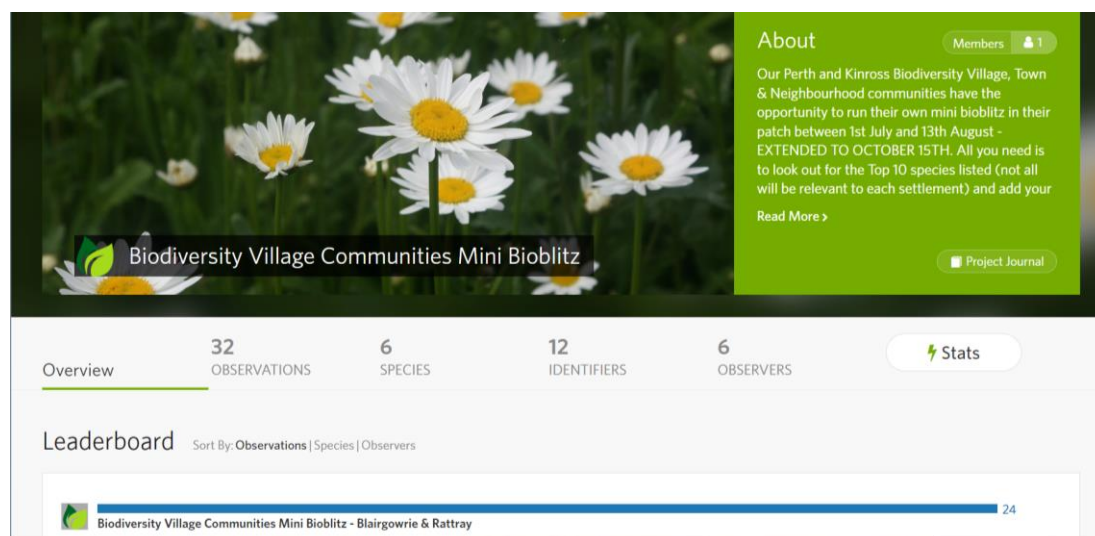
The Tayside 'Every Action Counts' iNaturalist Project

It is a year since we launched the Tayside Every Action Counts page on iNaturalist and it is being well used - <https://inaturalist.ca/projects/tayside-s-local-patch-project-perth-kinross>. This page will remain the same so please access it if you wish. There are separate sections for each local authority area – Angus, Dundee, and Perth & Kinross.

We have also now set up Biodiversity Village and Town pages for the Tayside Biodiversity Perth & Kinross project, so if you are part of this or live in the vicinity, please click on [Biodiversity Village Communities Mini Bioblitz · iNaturalist Canada](#) to find out more. We have extended the deadline for the very first mini bioblitz until mid-October and will be planning even more for 2024.

Each community within the Biodiversity Villages or Towns will be encouraged to choose a range of citizen science surveys, but in fact any knowledge you have about the settlements would be great to add to iNaturalist so that we can get as broad a picture of species as possible.

We will be arranging Village and Towns bioblitzes during 2024 and would appreciate as much help as possible from County Recorders, keen expert volunteers and NGOs. We can pay mileage/travel expenses to anyone willing to help with these events. Please get in touch if you can offer your survey expertise anywhere in Perth & Kinross – cagllloyd@pkc.gov.uk.



Surveying Grasslands and Pollinating Insects in Strathmore

There is no denying the fact that our wildlife and climate are in trouble, research papers and scientific studies continue to highlight significant levels of habitat loss and species decline. Pollinating insects such as bees, hoverflies and butterflies are essential to our ecosystems, but sadly

pollinator populations are particularly fragile and therefore vulnerable to declines. A major contributor to these declines has been the loss of flower-rich habitat; with remaining areas fragmented. In the UK we have lost over 97% of wildflower-rich grasslands since the 1930's!



But we can change this! Huge efforts are being made by numerous organisations to create and restore wildflower-rich habitats for pollinators. Buglife, through the B-lines initiative, are working with partners to create habitat corridors by connecting our best remaining flower-rich habitats.

Market Muir, Alyth - Lowland Dry Acid grassland, a UK Priority Habitat © Buglife

The Strathmore B-lines 'People and Pollinators in Strathmore' project focusses specifically on the Strathmore Valley. Through this project Buglife have been surveying a range of sites to understand if and how they are supporting a range of pollinating insects, and how these sites can be enhanced and conserved.

Fortunately, a scatter of flower-rich grasslands remain, and remnants can be found alongside road verges and in areas of greenspace where fertilizers have not been applied and the flower seed bank still exists. This is evident at sites within the Strathmore Valley including at Market Muir in Alyth and Kirriehill in Kirriemuir.

Up until recently these sites were cut on a fortnightly basis which meant that the existing wildflowers and grasses were not able to establish. A simple change was made by removing cutting which has allowed the vegetation to flourish, providing a burst of life and a much-needed feast for a range of pollinating insects.

The most abundant species of flora recorded within the grassland at Market Muir were Sheep's Fescue (*Festuca ovina*), Heath Bedstraw (*Galium saxatile*), Harebell (*Campanula rotundifolia*), and Common Cat's-ear (*Hypochaeris radicata*). These species are indicative of lowland dry acid grassland habitat. This is a priority habitat and is characterised by vegetation dominated by grasses and herbs. It occurs on free-draining, base-poor, mineral soils. Some of the other species recorded in this area, such as Sweet Vernal Grass (*Anthoxanthum odoratum*), Common Knapweed (*Centaurea nigra*), Lady's Bedstraw (*Galium verum*) and Common Birds-foot trefoil (*Lotus corniculatus*) share characteristics with mesotrophic grasslands which form part of the Biodiversity Action Plan (BAP) Priority Habitat Lowland Meadows.

The floral diversity within the grassland at Kirriehill was also a welcome sight. This area was surveyed for pollinating insects as part of Sustainable Kirriemuir's Bioblitz. Devils-bit scabious (*Succisa pratensis*), Common Cat's-ear, Tormentil (*Potentilla erecta*) and Purple-Loosestrife (*Lythrum salicaria*) were some of the wildflowers recorded.



Pollinator species recorded include social and solitary bee species such as the Orange-legged Furrow Bee (*Halictus rubicundus*), Willughby's Leafcutter Bee (*Megachile willughbiella*) and various bumblebees including the Common Carder Bee (*Bombus pascuorum*) and its associated parasitic species' the Field Cuckoo Bumblebee (*Bombus campestris*). The Marmalade hoverfly (*Episyrphus balteus*), Common Dronefly (*Eristalis tenax*) and Bog Hoverfly (*Sericomyia silentis*) were also amongst the pollinators taking advantage of the vital food source within the grasslands.

Marmalade Hoverfly © Buglife

All semi-natural grassland types are valuable to invertebrates, the different successional stages with a variation in sward and structure provide areas for

breeding, feeding, overwintering and hibernation. The Strathmore B-lines project which runs until March 2024 is continuing to survey grasslands and other flower-rich habitats along the Strathmore B-line, providing guidance and advice on habitat creation and management.

Add your sightings to Strathmore B-lines

An activity page for Strathmore B-lines has been set up on i-Record and we'd love to hear about your sightings. We are particularly interested in records of pollinating insects and wildflowers. You can join the activity by logging into your i-Record account, selecting activities and browse all activities. Find Strathmore B-lines in the dropdown menu and then select the star under Actions to 'add to my activities'. Then you're all set to add your records to Strathmore B-lines. Even better is that the i-Record app has been updated to be more user-friendly and will suggest species if you have photos!

To find out more about the Strathmore B-lines Project get in touch with Buglife Scotland Conservation Officer Claire Pumfrey: Claire.pumfrey@buglife.org.uk.

Article by Claire Pumfrey

Tayside Geodiversity

The Tayside Geodiversity Group had been relatively inactive for the past few years, partly due to the COVID lockdown, but also owing to members' moving away or retiring. A meeting of the Scottish Geology Trust has shown that more than half of Scottish geodiversity groups are in a similar position and sadly as we enter the autumn it has been decided to close this local group permanently.



However, the group goes out on a positive as members of the group were able to work with Robert Wills of Perth and Kinross Council Planning to designate Perth and Kinross Geodiversity Sites. One of the members, Carol Pudsey, surveyed all the potential sites and produced a series of standard format reports. Other members formed an Expert Panel to consider the sites under a number of criteria. These included:



- (i) **Value for geodiversity - the** geological interest and context of the site for professional and amateur Earth scientists. Sites help illustrate the geology or geomorphology of an area.
- (ii) **Site access and safety** - sites should be publicly accessible, and safe to visit.
- (iii) **Value for education and research** - sites should aid fieldwork in schools, at undergraduate level and in adult education courses.
- (iv) **Cultural, heritage and economic value** - includes such topics as significance in terms of the history Earth science, importance to local history and contribution to the local economy such as quarrying, mining and potential for tourism.

Forty-one sites were surveyed and considered in three main geological age groups:

- Dalradian (x11 sites) 800-MYA (million years ago) to 500Mya and associated with the highland boundary fault
- Devonian and Carboniferous (x23 sites) 419 MYA to 299 MYA
- Quaternary (x7 sites) from about 3 MYA to the present and associated with the Ice Age

Further information about what is happening across Tayside is in this leaflet – [LNCSFlyer.pdf \(taysidebiodiversity.co.uk\)](#); details about the Local Nature Conservation Sites (LNCS) designations can be downloaded from here: [Local Nature Conservation Sites | NatureScot](#).

All is most definitely not lost where geodiversity is concerned in Tayside. The Tayside Biodiversity Partnership will continue to oversee and report back on the Tayside Geodiversity Action Plan (2016-26) - [Tayside-LBAP-report-Geodiversity.pdf \(taysidebiodiversity.co.uk\)](#) so if you can help with this on any of the actions, please get in touch. The Tayside Geodiversity pages on the TBP website - [Tayside Geodiversity – Introduction – Tayside Biodiversity](#) will also be retained. This comprehensive site needs a tidy up, but you can access copies of the UK Earth Heritage journal, Scotland's Geodiversity Charter (2018-2023) and the Who's Who listing of famous geologists through the ages.

Importantly, since the setting up of Tayside Geodiversity, the Scottish Geology Trust was founded in 2020 so there is now a national organisation raising awareness – and organising an annual Scottish Geology Festival which involves guided walks and fossil hunts, practical learning, family outings and beach pebble events.

It is a very proactive charity so discover how you can get involved with the SGT via <https://www.scottishgeologytrust.org> and please join in. The page featuring its guide to the “51 best places for geology in Scotland” is worth a visit to the website alone - [51 Best Places – Scottish Geology Trust](#).

Article by David Lampard and Catherine Lloyd

Planning a BioBlitz (or Recording for the EuroBioBlitz)

There is now a special page on the Tayside Biodiversity Partnership's website with advice on how to run a bioblitz - [Let's Plan a BioBlitz! – Tayside Biodiversity](#). With East Haven Together there's a short video on the page encouraging communities across Tayside to get involved and hold their own BioBlitz events.

This year, from 29th until 30th September, there is also a huge wildlife recording event taking place across Europe and there is a chance for everyone to contribute, helping to shape conservation efforts and support scientific research. You can register via [EuroBioBlitz 2023 | 29 - 30 September | The Natural History Consortium \(bnhc.org.uk\)](https://eurobio blitz2023.org.uk/) or just search for the EuroBioBlitz iNaturalist page.



Remembering Alistair Godfrey

Alistair worked for many years at Perth and Kinross District Council, first as District Ranger, then as Countryside Management Officer, and finally retiring as Greenspace Project Officer in early 2015.

He was joint County Recorder of Mid-Perthshire v.c. from 2003 and a stalwart member of the BSBI (Botanical Society of Britain & Ireland). He was also the Chair of the Perthshire Society of Natural Science's Nature Section until the section's final year in 2022. He had an extremely wide botanical knowledge and encouraged everyone, whatever their level of knowledge, to study both the landscape and the plants.

Alistair died peacefully at the Cornhill Macmillan Centre on 7th December 2022. He will be very sadly missed.

Useful National and International Websites

- The State of Scotland's Nature 2019 - [State of Nature Scotland 2019 - Scotlink](https://www.scot.nhs.uk/scot/scotlink)
- United Nations – Biodiversity - [Biodiversity | United Nations - CEB \(unsceb.org\)](https://www.un.org/biodiversity)
- Considerable Change Needed to Stop Nature Loss (September 2023) - [Considerable change needed to stop nature loss in Scotland | NatureScot](https://www.nature.scot/scotlands-biodiversity-strategy-2022-2045)
- It is not too late to reverse biodiversity decline by 2030, UK's five leading nature bodies say – <https://www.gov.uk/government/news/its-not-too-late-to-reverse-biodiversity-decline-by-2030-uks-five-leading-nature-bodies-say>
- Scotland's Biodiversity Strategy 2022-2045 - <https://www.nature.scot/scotlands-biodiversity-strategy-2022-2045>
- 30:30 Explained - [30 by 30 explained | NatureScot](https://www.nature.scot/scotlands-biodiversity-strategy-2022-2045)
- National Biodiversity Network - [National Biodiversity Network \(nbn.org.uk\)](https://www.nbn.org.uk)
- Nature Networks Explained - [Nature Networks explained | NatureScot](https://www.nature.scot/scotlands-biodiversity-strategy-2022-2045)



What's On

Please check the Tayside Biodiversity website for a variety of events. If you have an event to publicise, please send brief details as early as possible to cagllloyd@pkc.gov.uk. Information can also be shared on the Tayside Biodiversity and Tayside Wildlife Recorders' Facebook pages. There is a quarterly Tayside Biodiversity E-News too and we are happy to include details there.

Editorial Opportunity

We have been extremely fortunate in past years to welcome several students and graduates who gain invaluable experience in researching and compiling the Bulletin. This is not a short-term newsletter, but a well-used document which is featured on the Tayside Biodiversity website for the entire year of its publication and is then available via the website's archives:

www.taysidebiodiversity.co.uk. If you would like to be involved in compiling and editing the 2024 issue, please contact Catherine at cagllloyd@pkc.gov.uk. Next year the task will need commitment throughout the first part of the year, i.e. mid-January through to March/April.

Archived Recorders' Bulletins

These Bulletins started in 2012 and we have not missed a year since! All of them can be downloaded via the TBP website, or just click whichever one you wish to read below -

- 2012 - https://www.taysidebiodiversity.co.uk/wp-content/uploads/2015/02/TaysideRecordersBulletin_March_2012.pdf
- 2013 - https://www.taysidebiodiversity.co.uk/wp-content/uploads/2015/02/TaysideRecordersBulletin_April_2013.pdf
- 2014 - https://www.taysidebiodiversity.co.uk/wp-content/uploads/2015/02/TaysideRecordersBulletin_April_2014.pdf
- 2015 - https://www.taysidebiodiversity.co.uk/wp-content/uploads/2015/02/TaysideRecordersBulletin_Feb_2015.pdf
- 2016 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2016/08/2016-Recorders-Bulletin-07-16.pdf>
- 2017 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2017/05/2017-Recorders-Bulletin.pdf>
- 2018 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2018/03/2018-FINAL-Tayside-Recorders-Bulletin-ED-CL.pdf>
- 2019 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2019/03/Tayside-Recorders-Bulletin-2019-ED-CL-edited-FINAL.pdf>
- 2020 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2020/03/2020-Tayside-Recorders-Bulletin-FINAL-11-03-20-CL.pdf>
- 2021 - <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2021/04/2021-Tayside-Recorders-Bulletin-FINAL-NM-CL-17-4-21.pdf>



- 2022 - [2022-Tayside-Recorders-Bulletin-FINAL-9-22-CS-CL-DL.pdf \(taysidebiodiversity.co.uk\)](#)

Don't forget to share your surveying news with the Tayside Wildlife Recorders' Facebook page –
or indeed any of the other Facebook pages we run:

Tayside Biodiversity / Tayside Swifts / Tayside Amphibians & Reptiles

The Tayside Biodiversity Partnership also shares news via its regular E-Newsletters so if you have any special survey or project news, please let us know. Articles can be between c100 and 450 words and if possible, please provide a photograph with copyright details. The current and past E-Newsletters can be downloaded from www.taysidebiodiversity.co.uk.

With thanks to all contributors to this Bulletin



***Tayside Recorders' Forum, c/o Tayside Biodiversity Partnership,
Pullar House, 35 Kinnoull Street, Perth. PH1 5GD***

The 2023 Bulletin was partly researched, compiled, and edited by Hari Sandhu (University of Dundee) with additions and updates by Catherine Lloyd, for the Tayside Recorders' Forum

Summer 2023

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Tayside Biodiversity Partnership



UNITED NATIONS DECADE ON
**ECOSYSTEM
RESTORATION**
2021-2030

