





TAYSIDE RECORDERS BULLETIN

2025







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INTRODUCTION - THIS YEAR'S RECORDERS' DAY



We have been extraordinarily lucky for the past 16 years in that every three years Perth, Dundee and Angus each host the Day, invariably covering the venue costs and sometimes the catering. The Tayside Biodiversity Partnership organises the programme, bookings and offers speakers' expenses and any other costs. This year, for the first time, the TBP is securing the Perth Art Gallery theatre (museum, as was) at its full commercial fee and covering other costs so we are very grateful for any donations received to defray all this. Perth & Kinross Countryside Trust have also been extremely generous by offering to pay for the catering and handling the bookings for the day – thank you PKCT!

So this year for our 17th Tayside Recorders' Day we are back in Perth. Hopefully 2026 will see us head to Angus – and it may be possible to be in Dundee for 2027, but we will confirm these arrangements once we get into the new year. This year's very full programme can be downloaded via the What's On section of www.taysidebiodiversity.co.uk.

As more and more people become "wildlife recorders" there is a great need for a focus on citizen science to show just how easy it is to take part in national surveys. They can be extremely important indicators on what is happening not just in one area, but over the various UK countries too. Look at the success of the Big Butterfly Count. The 2024 data flagged up a long-term decline as butterflies struggled against habitat degradation, climate breakdown and pesticide use. Butterfly Conservation's 2025 strapline shows just how important simple surveys can be: "We need everyone to get involved. No lab coats. No science degrees. Just 15 minutes of your time." The charity asked help from school children, grandparents, dog walkers, hikers, and office workers on their lunch break! And their sightings – and reporting back via a straightforward App - will be invaluable in seeing exactly what is happening across the UK at a large scale.

But equally we would be completely lost if the County Recorders, the amateur and not-so-amateur recorders were not involved. They fill an extremely important niche – and there are few places bar the annual Recorders Day where we can catch a glimpse of all the important work they do. There is, however, an urgency to train up a younger generation to continue all the good work that has been going on for decades, centuries in fact. We need wildlife recorders of all ages, all abilities and all interests to continue this important work. Can we count on you?

THE 2024 TAYSIDE RECORDERS' DAY



Last year we enjoyed an excellent day at the Wellgate Centre Library's theatre in Dundee so that we could specifically celebrate 150 years of the Dundee Naturalists Society. Colin Mcleod, from the Society, gave a very interesting outline of its history and what it plans to achieve in the future. We were extremely grateful that lunch for the event was also sponsored by the Dundee Nats.

During the morning we heard updates from the National Biodiversity Network Trust on its ongoing Better Biodiversity Data project in Scotland and Fife Nature Records Centre on the key species of interest in both Fife and Kinross. Alison Abercrombie of Dundee City Council outlined Dundee's Nature Network and its Biodiversity Action Plan. Kelly Ann Dempsey from Angus Council then outlined the various projects underway in the North Esk Catchment.

David Lampard from Leisure & Culture Dundee chaired the morning and then handed over to Kelly Ann who took the chair for the afternoon. The first speaker post-lunch was Glenn Roberts from the North East Scotland Biological Records Centre who gave the very welcome news that NESBReC has now extended its boundaries to include all of Angus. You can find out more here: https://nesbrec.org.uk/. Robin Payne, the BSBI County Recorder for Angus v.c. 90 gave an interesting update on botanical recording in Tayside, followed by Rachel Mackay-Austin of Riverwood Ecology who outlined Freshwater Recording in Scotland.

After a networking session, Cathy Caudwell, East Perthshire's Moth Recorder, gave an update on Perthshire moths and Sophie Olejnik of Oleo Ecology demonstrated just how successful the Carnoustie Bioblitz had been in 2024. Elspeth Coutts of the West Stormont Woodland Group (in Stanley, Perthshire) showed the outcome of many citizen science surveys in both Taymount and Five Mile Woods. This is helping to decide how best to manage both the woodlands which are currently being bid for to create community woodlands. Catherine Lloyd then gave a brief round up of the 16th Tayside Recorders' Day before thanking everyone for attending the event.

SMALL BLUE SURVEY REPORT- ANGUS COASTLINE

AUTHOR: FIONA BASFORD

On Tuesday 4th June, a dedicated field day was held to survey for Small Blue (Cupido minimus) along key coastal sites in Angus, including Carnoustie, Elliot Links, and the Arbroath cliffs. The event formed part of ongoing conservation efforts under the Small Blue working group and the wider Species on the Edge programme.

The survey team included Fiona Basford (Buglife), David Hill (Scotland Manager, Butterfly Conservation), Glyn Edwards (County Butterfly Recorder for Central Perthshire and Angus), David Lampard (Angus Moth Recorder), and Geoff Ballinger (Chair, East Scotland Branch of Butterfly Conservation), along with local volunteers and enthusiasts. These sites were targeted for their known or potential Kidney Vetch habitat, which is essential for the butterfly's breeding success.

Around seven adult Small Blues were recorded, alongside several eggs—giving a strong indication of active breeding across the surveyed sites. Arbroath cliffs once again proved to be a reliable location for egg sightings and remain a great place to "get your eye in" when learning how to spot Small Blue eggs on Kidney Vetch.

All records will be submitted to Butterfly Conservation and local recording networks to support ongoing monitoring. Habitat enhancement work is currently in the planning stage, with proposals including Kidney Vetch sowing, creation of scrapes, and other targeted management actions to support Small Blue populations along the Angus coast.

If you're interested in taking part in future Small Blue surveys or joining habitat management parties, contact Fiona.Basford@buglife.org.uk. For more information on the Species on the Edge programme, visit speciesontheedge.co.uk.









Until the 16th century, the Eurasian beaver was native to Scotland, but over hunting by humans drove it to extinction. In 2009, Scottish Natural Heritage reintroduced the species, and it is now recognised as a protected species. But why are these mammals so important, and how has their reintroduction shaped the landscapes in which they live? Last year, some of my classmates and I studied the beaver population at the Banff Estate as part of a university research project. Here, I'll share what we found and highlight why these biodiversity builders play such an important role in Perthshire's ecosystems.

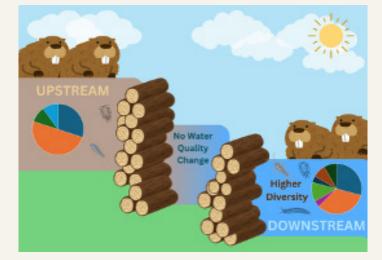
We sampled sites both upstream and downstream of one of the 40 dams created by beavers living on the estate. Our aim was to investigate whether the presence of beavers improved water quality and how this, in turn, affected invertebrate species richness downstream. To collect our invertebrate samples, we used a kick-sampling technique at both sites. We also measured three physical characteristics of the river: turbidity, flow rate, and pH.

Our results showed that invertebrate diversity was higher downstream from the beaver dams, demonstrating the benefits these animals bring to biodiversity. We found 4 species of invertebrate upstream, almost doubling downstream with 7 species identified. In addition to this, since these freshwater macro-invertebrates can also be an indicator of water quality, this finding provides evidence that beavers may also improve water quality. To fully understand the benefits to biodiversity that beavers bring to Banff, more data on this site would need to be collected. However what we found it that there are undoubtedly positive effects of their reintroduction.

If you live in Perth, you're likely aware of, perhaps even directly affected by, the issue of flooding, often linked to increased rainfall caused by climate change. In this context, beavers can be part of the solution. Through the creation of wetland habitats and the improvement of water quality, beavers help regulate river flow and create natural water barriers, reducing flood risk. These wetlands also enhance the landscape's resilience to climate change by helping it cope with extreme weather events, including both heavy rainfall and drought.

So why has their reintroduction faced some backlash? There are two main reasons, both stemming from an anthropocentric perspective. First is a recurring theme in species reintroductions: the fear of losing control. Once an animal is brought back, we cannot fully control its behaviour, leading to concerns about potential negative impacts on the landscape. The second reason is land management conflicts. Beavers can be perceived as destructive because they can transform large areas and fell many trees. However, by integrating their presence into land management strategies, we can harness their abilities to help address larger issues—such as flood damage—while promoting a healthier overall ecosystem. For more information please visit the Bamff Wildland website:

https://bamff.land/



Images © Lauren Wright, Polly Holloway, Katy Galbraith, Tarana Edwards, Tihani Binti Shahrudin, Zara Bathurst, and Elena Barbary



TAYSIDE MOTH UPDATE

Twenty years ago, when I first became interested in moths, I started off with the naïve notion that everything I came across in my home locality - basically Angus and South Aberdeenshire – would already have been found locally, and recorded. That idea vanished with a first new record for Angus. Not a moth to write home about as it happened, but it still did not prepare me for the rash of new records for the area that have been recorded by many dedicated moth-trappers over the last couple of decades.



Palpita vitrealis



Evergestis extimalis

Various factors are driving this increase. More recording effort for a start. Honing skills in the different methods for finding moths - for example, leaf mining for the tiny moths which, even if you saw them in the trap, would be almost impossible to identify without dissection. Being ready to trap when migration seems likely - especially on the coast. And the impact of climactic change allows species to colonise areas previously unsuitable.

All of these factors have contributed to the increase of moth diversity this area in recent years.

Migration partly driven by weather patterns has brought in large numbers of rarely recorded moths to the area. Anticipation mounts in the hope of something different, something exciting. Over the last few years, many unexpected moths have blown in. Both the Brown-tail and Yellow-tail have found their way up the east coast of Angus. The Blackneck also made its way up from the Borders coast courtesy of a strong southerly. Other notables include Red Underwing, Dark Spectacle, Buff Arches, Figure of Eighty, and numerous Gems. The latter arrived in late October – early November, when some have already put the traps away for the long winter



Euproctis Chrysorrhoea

Notable Micro moths also come in on these airstreams. Palpita vitrealis (aka Olive-tree Pearl), Evergestis extimalis (Marbled Yellow Pearl) and Anania coronata (Elder Pearl) all made landfall. Also, Euchromius ocellea (Silver-spotted Veneer) and Endotricha flammealis (Rosy Tabby). This last is now being found yearly on the coast around Auchmithie. Recently, Ancylosis oblitella (Salt-marsh Knot-horn) turned up on the coast of Angus and S. Aberdeenshire.

In addition to individual weather events that bring moths in, there is also the gradual effect of climate change, which is clearly allowing moths to move generally northwards and eastwards to colonise this area. Many species rarely seen in the vicinity 20 years ago, are now becoming commonplace. Pale Pinion and Blair's Shoulder-knot have become established, as have the Copper and Svenssons Copper Underwing. Shuttle-shaped Dart and Powdered Quaker, have appeared and taken residence and continue to put in appearances further north year on year. Alder Moth is another that is showing up, pushing its way northwards. The list goes on and the boundaries continue to be pushed. To regular moth-ers, some of these names may appear commonplace now. But as little as a decade ago, they were not.

And in addition, there are the moths that have always been there, but take a while, sometimes a long while, to be found.

Climate related issues certainly raise major concerns worldwide, but at least for the moth-er it allows the opportunity for new species to move in and be enjoyed. And the evidence suggests it will only continue.



Catocala nupta

4 Images © Paul Brooks



HEDGEHOG HIGHWAYS: HELP THE LITTLE WANDERERS OF TAYSIDE



The Tayside Biodiversity Partnership launched their "Mind the Gap" hedgehog project back in 2019, aiming to raise awareness about the decline in rural hedgehog populations and to share information how improve on to resources and accessibility hedgehogs. Since then, the project has grown to involve many schools and community groups, and it has now become an integral part of Biodiversity Towns and Villages Project.



Hedgehogs are increasingly making use of our urban green spaces, with parks and gardens often providing refuge and resources preferable to open farmland or habitats where competition and predation from badgers can be a challenge. Hedgehog numbers are declining in both urban and rural areas. The reasons are complex and not yet fully understood, but many ecological factors — along with the depletion of Scotland's natural resources — are at play. However, one major cause is undisputed: road traffic. The number of hedgehogs killed by cars each year is estimated to be over 300,000 in the UK.

Although we don't yet fully understand all the factors behind hedgehog population changes, conservation action can still be straightforward — provided we can get enough people involved. A key first step in tackling any wildlife conservation issue is gathering information, but we can also act immediately using what we already know. Simple, evidence-based measures can reduce risks for hedgehogs sharing our gardens and green spaces.

One well-proven strategy is the creation of hedgehog highways — small 13 cm x 13 cm holes at the bottom of fences or walls to allow hedgehogs to travel freely between gardens. These little mammals can roam up to 2 km in one night, which is impressive for such short legs! Highways offer three main benefits:

- 1. **Increase carrying capacity** More connected gardens mean more habitat, enabling a greater number of hedgehogs to live in an area.
- 2. **Improve resource availability** Foraging for beetles, worms, and other snacks becomes easier when hedgehogs can access a variety of gardens.
- 3. **Reduce road deaths** Highways limit the need for hedgehogs to walk along dangerous roads. For this to work, it's all about connectivity one garden hole isn't enough. Neighbouring gardens need to commit together to form a nature network that links habitats.

This is the aim of the Auchterarder Hedgehog Highway Project, jointly run by the Tayside Biodiversity Partnership and the Perth and Kinross Countryside Trust. The two-year project began in November 2024 and uses hedgehog monitoring techniques to track their movements and create access routes between gardens. This summer has been key for gathering data and recruiting volunteers, so we can plan next year's highway installations. Getting every homeowner to cut holes in their fences is ambitious, but even one street where all neighbours join in can make a big difference.



Alongside highways, there are other ways to make gardens more hedgehog-friendly:

- From April to October, provide food and water. This doesn't just have to be specialised hedgehog food increasing invertebrate diversity through wild corners, leaf piles, and compost heaps is just as valuable. These features provide both shelter and foraging opportunities.
- · On hot summer days, water sources can prevent dehydration and heat stress.
- · Avoid pesticides and herbicides, which reduce insect populations and harm biodiversity.
- · Check for hedgehogs before mowing or strimming long grass.
- Build bonfires on the day you burn them to avoid hedgehogs moving in beforehand.





For those who love collecting wildlife data (and as this is for the Recorders' Bulletin, I'm sure that's most of you!), monitoring is a particularly rewarding way to get involved. Hedgehogs are elusive nocturnal mammals, often sticking to long grass and undergrowth. In our projects, we use two main survey methods:

- 1. Trail cameras Motion-sensing cameras that capture night-time images and videos.
- 2. Mammal footprint tunnels Baited tunnels with non-toxic ink that record the footprints of visiting hedgehogs.



We often encourage volunteers to use both methods, but trail cameras tend to be more popular, perhaps because footprint tunnels require nightly checking and rebaiting. However, I think footprint tunnels are underappreciated: they're cheaper, don't need batteries or SD cards, and the only "data storage" you need is a plastic sleeve for the footprint sheets. They can confirm a hedgehog's presence and offer the animal a snack — a win-win! Cameras are of course fantastic too, but both tools have their place.

Once we've learned about hedgehogs, built highways, made gardens wildlife-friendly, and collected data, the next step is mapping sightings. We want to know where hedgehogs travel, which gardens they can access, and which resources they prefer. This helps identify danger zones and potential habitat opportunities.

Urban hedgehogs play an important role in Scottish ecology — dispersing seeds, controlling invertebrate populations, and adding to our biodiversity. They are a charismatic species loved by many, so it's vital we learn more about them and create safer, healthier environments with fewer human-related threats.

If you live in a town, village, or neighbourhood within Perth and Kinross and would like to help hedgehogs, please email us at HedgehogHighways@gmail.com.

If you spot a hedgehog we also ask that you share any hedgehog sightings on the Big Hedgehog Map: https://bighedgehogmap.org/holes-for-hedgehogs-home/map-hedgehog-sighting





7 Images © Elena Barbary

LETTERS FROM HIGHLAND PERTHSHIRE

AUTHOR: ANTHONY MCCLUSKEY

Butterfly Conservation has received almost £16000 in funding from the Scottish Government's Nature Restoration Fund to help develop our work in Highland Perthshire. Work on the project started in April, and focusses on conducting surveys for the rare butterflies and moths that are found here, and working closely with landowners to agree management which will help those species.



3 Images © Anthony McCluskey

We got off to a flying start, with BC staff and volunteers making the first sightings of the Kentish Glory here since 2019! The moth was found flying at six different sites, all around Loch Tummel. Surveys were assisted by a new 'pheromone lure' which attracted males of the species. It's very encouraging that this iconic species is still found here, however we are very concerned that no sightings of the moth were made north of Tummel Bridge, on sites where it was once seen in good numbers. This was despite extensive survey work there, and apparently suitable habitat.



As Kentish Glory season ended, we were straight into Pearl-bordered Fritillary flight time. The butterfly started flying here in the first week of May – a full three weeks earlier than normal! The sunny weather meant that we were able to survey for the species almost every day for three weeks. This unprecedented opportunity meant that we were able to finally complete a survey of all Highland Perthshire sites. Most remarkably, we found the species doing well near Fearnan on the north end of Loch Tay – a region where the butterfly had not been seen in over two decades. Other new sites for the species were found in Glen Lochay, along Loch Tay, Glen Lyon and at Coshieville near Aberfeldy. Our knowledge of the extent of known sites has improved too, with volunteers having the luxury of time and good weather to push on into new territory and find the butterfly.

At the time of writing we are moving on to the Northern Brown Argus, which fortunately can be found by searching for its eggs. Three new sites for this lovely little butterfly have already been found in Highland Perthshire this year!

So keep your eyes peeled for more updates on Highland Perthshire, where we are doing our best to secure a future for these species.



POMS' FLOWER INSECT TIMED COUNTS

AUTHOR: ELENA BARBARY

The UK Pollinator Monitoring Scheme (PoMS) has developed two ways to track pollinators: a citizen science method open to everyone, and a systematic approach where trained volunteers collect samples for lab analysis. This article focuses on the first-showing you how simple, fun, and rewarding it is to get involved.

The Flower-Insect Times Count (FIT-Count) was launched in 2017 and has been running ever since as a way to monitor interactions between flowers and pollinators. One of the best things about it is how quick and flexible it is, taking just 10 minutes and can be carried out anywhere in the UK. Personally, I find it the perfect "brain break" when studying or working. It feels much nicer to step outside and watch insects that to scroll on my phone! In our busy, stressful lives, even 10 minutes of quiet observation can feel calming. And once you start to get really invested Its such a boost when a solitary bee chooses to land on a flower inside your quadrat - what a treat!



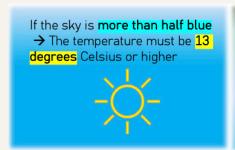
Images © Elena Barbary



So here is your simple step by step guide to completing a FIT-Count:



First, check the weather. Counts can only be carried out when it's warm and dry - ideally above 13°C and not raining. If conditions are right, grab your quadrat and head outside.









Find a patch of flowers. This could be in a park, garden, roadside verge, or even a strip of grass by a car park. PoMS provides a list of "target flowers" to help with identification, but any patch of flowers will do. Once you've chosen your flower species (e.g. buttercups), place your quadrat over them.



Count the number of flowers of that species within your quadrat. If there are several different species present, just focus on one for your count.





Sit back, get comfortable, and begin your 10-minute count. Record every insect that lands on your chosen flowers. To make things easier, PoMS only asks you to identify insects into broad groups (such as bumblebees, hoverflies, butterflies, beetles). To avoid last-minute confusion, check the FIT-Count app or website beforehand for handy ID tips.





When your 10 minutes are up (always a disappointment!), upload your results via the FIT-Count app or on the PoMS website. If you're based in Tayside, you can also choose to share your data with the Tayside Biodiversity Project.

And that's it — simple, relaxing, and incredibly valuable.

So why does it matter? PoMS aims to gather large-scale data on pollinators across the UK, helping scientists track long-term trends in pollinator numbers and flower-insect interactions. Every FIT-Count contributes to this bigger picture. The more people who take part, the stronger the data becomes — which in turn helps inform conservation efforts and protect the pollinators we all depend on.

These FIT-Counts run from April to the end of September. So theres something to look forward to next Summer when the sun is shining, why not give it a go? Ten minutes, a patch of flowers, and a few insects might just make your day.

If you want to find out more, or have FIT-Counts to log, please visit the PoMS website here: https://ukpoms.org.uk/fit-counts



THE BETTER BIODIVERSITY DATA + 1 PROJECT: DEVELOPING A BIODIVERSITY DATA MANAGEMENT SYSTEM

AUTHOR: CHRISTINE TANSEY



The Better Biodiversity Data (BBD) project, led by the NBN Trust and funded by the Scottish Government and NatureScot completed its initial 2-year period at the end of March 2025. The BBD team and project partners have contributed to shaping a more connected, functional and forward-looking biodiversity data infrastructure in Scotland. The project was extended as BBD+1, with an additional year's work commencing in April 2025 on the further development of a new Data Management System.

With the input and collaboration of a wide range of partners, between 2023-2025 the BBD project:

- Developed the model for a new Scottish Biodiversity Services
 Consortium (SBSC), and the newly formed NBN Scotland CIC, which
 can assist in coordinating the future delivery of local-to-national
 biodiversity data services in Scotland.
- Completed the first phase of a new Data Management and Digital Services System for biodiversity data, with user-led design and agile development to meet the needs of users in Scotland.
- Helped refresh the Scottish Biodiversity Information Forum (SBIF) Recommendations (2024) and align them with the Scottish Biodiversity Strategy Delivery Plan (2024–2030), reaffirming the role of biodiversity data in national planning and conservation. These were presented at a three-day exhibition at the Scottish Parliament in September 2024, alongside biodiversity data stories from a wide range of organisations to demonstrate the importance of biological recording and the biodiversity data infrastructure in Scotland to policymakers.

You can access the full BBD Output Report from the NBN Trust website.

The BBD+1 project extension will run until 31 March 2026. This phase will focus on the delivery of an operational Data Management System, to support biodiversity data management and reporting by enabling secure data migration, user onboarding, and alignment with Darwin Core Archive and NBN Atlas standards.

BBD+1 will continue to work towards creating a financially diversified, sustainable, and nationally relevant system that facilitates biodiversity monitoring, reporting, and decision-making at every level.

If you would like to speak with the BBD +1 team about the project, please contact Mike Tetley - Scotland Programme Manager - <u>m.tetley@nbn.org.uk</u>



'FRAGILE' MOTHS PROJECT CONTRIBUTES TO BIO-RECORDING EVENTS IN TAYSIDE

FRAGILE is an innovative art and ecology project, running from Spring 2024 to Spring 2026. It is funded by the Scottish Government through Creative Scotland. Jan Hendry is a visual artist and naturalist who lives in Perthshire. She writes:

'I designed this project to let me do my favourite thing - to be immersed in the natural world while recording useful information. Sharing discoveries is an important part of the work. So far I've been doing this using social media (Instagram and Facebook), running workshops and taking part in other people's events.

I'd been wanting to develop an 'art & ecology' project for a while. My working life has always criss-crossed between conservation and creative projects. I decided to focus on moths in 2023 after attending two events in Tayside - a moth-morning with lan Ford at Campy Growers community garden in Dundee; and a Buglife moth-day at Scotia Seeds near Brechin. At both events I was really impressed by everyone's enthusiasm, especially when the moths were 'safely' contained in pots! And I was bowled over by the moths themselves. I was hooked, and the more I read, the more I wanted to find out about moths and their lives.



The first thing I did when I received my project funding from Creative Scotland was order a light-trap, pots and field guides. Then I started asking for advice about recording. Cathy Caudwell is County Moth Recorder for East Perthshire and she set me on the right track. She asked me to submit my data using iRecord and I've been doing this from the beginning. It was very reassuring to know that my identification efforts would be checked and verified by experts!



To date I've taken the light-trap to 26 sites across Scotland and set it on 57 nights. The moth habitats have ranged from semi-natural woodlands to urban (outside my studio in the centre of Perth) and suburban. The most diverse and abundant catch so far was outside a friend's house on the Fife Coast, in St Monans, which we were all amazed at! More than 200 moths of 44 species.

13 of the trapping sites are in Tayside, with most repeat visits, being close to home. How were the sites selected? I decided I wanted to trap moths in places where the data might be useful, eg sites in the early stages of ecological restoration, like Bamff and Taymount Wood. This year I've prioritised Taymount as there was no moth recording being done there. I also wanted to find out what moths live in less obviously biodiverse places, like urban and suburban gardens

The results have been amazing really, to me anyway! 217 species caught and recorded so far. Every new moth seen is exciting of course, but some of the regulars now feel like old friends (maybe not the Large Yellow Underwings!). Some species verified on iRecord have been outside their known range in Scotland, eg the Drinker and Lilac Beauty caught at Taymount Wood.





I've been working with Elspeth Coutts of the West Stormont Woodland Group (WSWG) to investigate the moth populations at Taymount Wood. WSWG have been working for many years to bring Taymount and Five Mile woods into community ownership and I can see why. These woodlands are wildlife oases in the arable farmlands of lowland Perthshire, and this is certainly reflected in the moths we've caught there. We've trapped at Taymount 4 times this year - in April, May, June and July - at 3 different locations in the wood. 80 species of macro-moths found to date. The June trapping was for a Bioblitz event, using two light-traps, mine plus the Stanley Biodiversity Village trap. I've now learned that mid-summer trapping is the hardest work, with about four hours sleep and LOTS of moths to identify. We had some beauties to share with the people who came to the wood in the evening and they enjoyed finding suitable places to release the moths after a guided walk through the wood with Elspeth. We had some good chats about moth camouflage and behaviour. The Poplar Hawk-moth's dead leaf impersonation was particularly impressive.

The Stanley trap was in use again in August, this time in the village itself, c/o local artist Claire Dalby. We set the two traps in her garden and caught 51 moths of 18 species, a good variety for a village garden on a damp and chilly night. The moths were guests at a workshop next day in the village hall. We introduced them to a group of 11 local children and adults and followed up with some very expressive moth life-cycle artwork. I've developed an art activity using the four sides of a folded-paper 'flexagon' to describe the stages of moth lives. It seems to work! I took along my own biggest moth-make to date, a rag-rug inspired by the forewing of a female Emperor Moth.







The best possible outcome for my project would be more people getting obsessed with moths and contributing data to the national recording schemes. I'm happy to help train anyone in the Stanley area who would like to use the village moth-trap, it's a very good one!

An exhibition of my project artwork, including the Emperor Wing, is being curated by Helen Reid, to be shown at Birnam Arts next March. The Moth-wing rug will also be on display at the Butterfly Conservation Autumn Gathering in Perth on 18th October this year.

Thanks to Cathy Caudwell, Elspeth Coutts, Ian Ford and all the others who have been helping with this project.'





NATURAL HISTORY AT PERTH MUSEUM

AUTHOR: ELENA BARBARY

Images © Elena Barbary

Perth Museum has now been open to the public for over a year. With over 500,000 objects from around the world in their collections. This includes specimens of natural history from local to international significance.

Upon entering the museum, turn to your left to find the first display of animal specimens (pictured below). These represent species that were once native to Scotland—some still present today, while others are now extinct.







The skull display at the far end is particularly interesting, highlighting the diversity of species and the unique adaptations that have enabled them to thrive in Scotland. Some described below:

Skull 1: Wild Boar

Part of the Suidae family with pigs and warthogs.

Skull adaptions include:

- very articulate jaw for grinding and eating plants.
- angled front teeth for eating insects
- longer snout for intake of leafy matter





Skull 3: Wolf

Part of the Canidae family, with foxes and dogs

Skull adaptions include:

- no side to side jaw articulation, with a scissor like bite, for catching and eating prey
- Sharp canines and incisors

Skull 4: Beaver

From the Castoridae family within the Rodentia order: Skull adaptions include:

- · loss of canines, leaving diastema (gap in the teeth)
- long strong iron reinforced incisors for breaking and chewing wood
- flat molars for eating plants

Skull 2: Brown Bear

Part of the Ursidae family, with other bear species <u>Skull adaptions include:</u>

- flattened and elongated post canine teeth for their omnivorous diet
- sharp canines for eating meat some months of the year



Upstairs in the museum, you'll find species that can still be seen in Scotland today. The displays feature taxidermy animals from a wide range of families, alongside interactive boards that help you identify each species and listen to the sounds they make. It's a great way to become more familiar with the wildlife around us—not only the animals we can spot, but also those we might hear.





If you'd like to explore the finer details of the natural world, try out the museum's microscope. Ever wondered what the scales on a butterfly wing look like, or been curious about the delicate structure of a feather? These are just some of the fascinating details you can discover.







Moving beyond the animal kingdom, Perth Museum also features a display of fungi. These models represent the fruiting bodies—commonly known as mushrooms—whose role is to release spores for reproduction. Each model is carefully labelled, and you can find more details about the species on the display case information board.

To find out more about different collections in the museum visit their website here: https://perthmuseum.co.uk/about-the-museum/



SCONE PALACE BIODIVERSITY PILOT STUDY

Scone Palace is a well-known historical landmark, once the crowning place of Scottish kings and queens. Today it is a popular visitor attraction, where people can explore not only the history within the palace but also wander its beautiful grounds, taking in both woodland and grassland habitats.



When I first began thinking about a biodiversity project with Scone Palace, my original idea was to investigate whether a hedgehog population lived within the grounds. However, after meeting with Brian Cunningham, Head Gardener at Scone, his enthusiasm inspired me to consider a broader summer project: a 6–8 week survey of invertebrate diversity, mammal abundance, and plant variation. Unfortunately, a lack of volunteers meant this larger study wasn't possible this summer.



instead, I designed a smaller "Plan B" pilot study, intended to explore what species could be found on site and to lay the groundwork for a larger survey next year. My focus remained mammals. but - 1 included elements of invertebrate and plant surveys as well. I set aside six mornings (5:30-8:00am), and some evenings to be on site, mapping out four study sites chosen for their suitability for hedgehogs—areas with overgrown vegetation, log piles, or dense undergrowth. At each site I placed a footprint tracking tunnel baited with hedgehog food, as well as two trail cameras at different locations.

Initially, I also planned a vegetation survey and freshwater kick-sampling in the burn. However, these methods were adjusted: the burn was too far from the study sites to provide meaningful context, and the plant survey proved unsuitable, as food baiting would influence mammal activity regardless of vegetation type. Instead, I decided to focus on surveying ground-dwelling invertebrates, as these form a major food resource for insectivorous mammals such as hedgehogs.

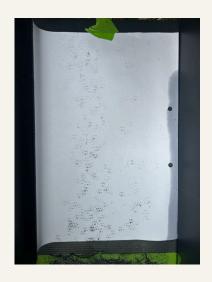


Results

Interestingly, some of the most notable species were recorded simply by being present on site at dawn, rather than from the survey equipment.

- Footprint tunnels identified: wood mice, bank voles, rats, snail trails, and bird prints.







- **Trail cameras captured**: roe deer, fox, robin, blackbird, grouse with chick, magpie, wren, grey squirrel, and more mice, voles, and rats.





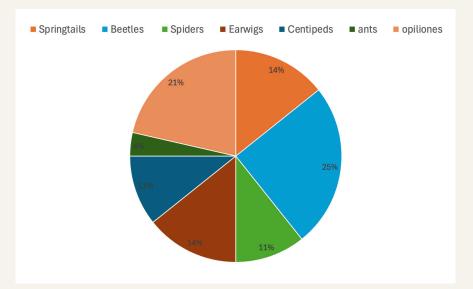




- **Direct observations included**: hares, rabbits, barn owl, frogs, bats, and several common bird species.



The insect survey, using pitfall traps left overnight, found the following:



The biggest percentage of invertebrates being beetles - at 25% or a quarter off all species identified.





Although no hedgehogs were detected during this short survey, this does not rule out their presence. The grounds are extensive, and a larger, longer-term study would be needed to draw firmer conclusions. The pitfall trap results, however, suggest that hedgehog food resources are available—particularly beetles, which form the largest part of their diet.

This pilot week offered only a small snapshot of the wildlife at Scone Palace, but it highlighted the site's huge potential for further study. With more volunteers, a larger survey could reveal much more about the biodiversity within the grounds.

If you would like to take part in a bigger survey next summer, please get in touch at HedgehogHighways@gmail.com

I would like to thank Brian Cunningham for his support and for allowing me to spend such an enjoyable week exploring the grounds. Hopefully, this will be the start of a longer-term project to monitor and improve biodiversity at Scone Palace—creating a space that both wildlife and people can enjoy.



NORTH EAST SCOTLAND MOSSES AND LIVERWORTS

AUTHOR: LYN JONES

mages © Lyn Jones

There is increasing interest in mosses and liverworts (Bryophytes) as environmental indicators of the health of ecosystems. The North East Scotland Bryophyte group is a friendly group of interested enthusiasts and beginners who enjoy learning to identify and record the rather special moss and liverwort flora in the Tayside region (which for our purposes extends from Fife, Angus and Perthsire in South as the Aberdeenshire in the North). We operate under the auspices of the British Bryological Society but welcome non-members and especially beginners to our field meetings which run mostly throughout the cooler

months. In addition to our field meetings we have also run a number of training workshops for beginners with access to

microscopes.

In the past few years we have visited a wide variety of interesting sites ranging from riverside walks such as The Hermitage, Dunkeld and river gorges in the Angus Glens through lowland woods and meadows such as Gillingshall and Fleecefaulds nature reserves in Fife and the Muir of Dinnet in Aberdeenshire, through a number of coastal sites such as Dunottar Castle and Boddin Point to rich mountain sites such as Corrie Fee in Angus, Norman's Law in Fife and Craig Leek in Aberdeenshire. We have much still to record in the area!

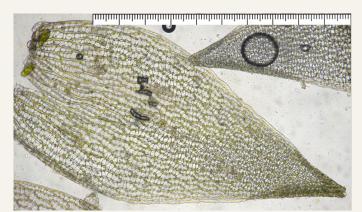
Contact Lyn Jones (joneshamlyn@gmail.com) for further information. See also

https://www.britishbryologicalsociety.org.uk/





Marchantia polymorpha (Common liverwort)



Sphagnum russowii leaf under the microscope.



Learning about mosses



THINGS ARE LOOKING UP IN STANLEY

AUTHORS: ELSPETH COUTTS AND ELENA BARBARY

The Stanley Swift Project has now been monitoring the village's swift population for over a decade, beginning back in 2014. In 2025, a dedicated core group of four local surveyors, joined by visiting student volunteers and many supportive residents, have once again helped us track the comings and goings of this remarkable colony.

Natural nest sites in Stanley continue to shift over time. Some disappear, others return, many remain regular and in Encouragingly, the strongest sub-colony at Mill Street (front) recorded nine active nests this year - a level not seen since around 2015. Mill Street's inner quad has remained stable, though Percy Street shows fewer swifts than in previous years. The greatest decline has been at the Perth Road flats, where twelve natural sites once used by swifts are now down to just three in 2025, following building upgrades and construction work.

Nest boxes have brought good news. At Stanley Village Hall, all six single boxes were occupied this year, along with one nest in a double box — the best season since installation in 2016. The usual nest box at the Tayside Hotel was also active, though the camera box remains unused. Of the seven new boxes installed in 2025 through the Stanley Biodiversity Village project, one was taken up in its very first year. However, eight other boxes elsewhere in the village, including two triple boxes in Percy Street, are still waiting for their first swift residents.

The real breakthrough this year has come from the swift bricks installed in the Strathord estate. Twenty-five bricks were built into thirteen houses, and by 2025, fourteen were in use across eleven homes. This is a dramatic increase from just three occupied bricks in 2024. Our initial assessment of brick positioning suggested that only a third were ideally placed, with others less suitable. Yet the swifts surprised us, taking to bricks across all categories. This result underlines the value of nest bricks as a powerful conservation tool, even when placement is not perfect. The Tayside Biodiversity Partnership is currently preparing a guidance leaflet for the construction industry to ensure new developments install bricks in the most effective positions for swifts.



Images © Elena Barbary

Weather conditions this summer also worked in the swifts' favour. Almost constant good feeding conditions meant there was little need for the birds to range far for food. At one point in mid-June, 40-50 swifts were seen flying over King Street - a thrilling sight so early in the season, almost certainly composed of breeding adults. Later in the summer, around 35 swifts in the skies included juveniles and likely fledglings.



Images © Elena Barbary

As project organiser Elspeth Coutts summarises:

"We've seen a rise in overall swift nest site occupancy in Stanley from 40 in 2024 to 52 in 2025, with most of this due to a thrilling increase in swift brick occupancy on the Strathord housing estate from 3 to 14 over the same period. Whether swifts native to Stanley or colonisers from elsewhere we will never know, but it is clear to us that swift bricks are an excellent means of supporting our declining swift populations."



Images © Elena Barbary

Image below © Elsbeth Coutts





BRISC UPDATE

BRISC members have made the decision to wind up the charity at the end of this year. Whilst this is sad news, BRISC has achieved so much in its 50 years. The BRISC papers will be archived and digitised, as will the website if possible. The BRISC funds, after any debts have been settled, will be divided into two with half going to the Glasgow Natural History Society to continue the BRISC bursary scheme; the other half will be given to SBIF to work towards delivering its recommendations.

There is still the BioBlitz in September (see the poster) and there are plans to partner with another biological recording organisation for an in-person final event in Central Scotland in the Autumn, so there will still be a chance for the BRISC community to reflect on the great achievements of a small but impactful organisation. The final AGM will take place in November to sign off the accounts and beyond that BRISC will cease to be a Scottish Charity or membership organisation. If you wish to send any memories of BRISC over the years, then please jot down a few lines and pass them on to info@brisc.org.uk.



The Chair, Jonathan Willet has said "On behalf of the BRISC committee I would like to sincerely thank you all for your many years of collective and individual support. The world of biological recording has changed so much in my time being involved in half the life of BRISC (no record cards anymore!) but in many ways it hasn't – gaining great enjoyment from the natural world and doing something to protect it through the use of the data we have gathered."

Big BRISC Bioblitz Finale 22 - 28 Sep

Take part in a week long bioblitz to celebrate biological recording in Scotland, as BRISC as an organisation comes to a close.

Join in across Scotland and keep an eye out for theme days during the week

iRecord: http://bit.ly/4mX8BBI

iNaturalist: http://bit.ly/4mX8BBI









SCOTTISH SWIFT CONFERENCE 2025

This article is based on one originally written by Anna Cowie (photos © Nick McKinlay).

In May, Angus Council hosted the long-awaited Scottish Swifts Conference, organised by the Tayside Biodiversity Partnership, Tayside Swifts and Angus Council. The event, held in Arbroath, brought together swift enthusiasts and conservationists from across the UK to share knowledge, experiences, and inspiration.

Speakers highlighted the dramatic 66% decline in swift populations and reminded us of the vital role these birds play in our urban landscapes. Presentations covered the best types of nest boxes, ways to engage communities in providing nesting spaces, and the importance of safeguarding existing nest sites in older buildings. Encouragingly, a wide range of innovative projects underway Scotland across were showcased. demonstrating how much is being done - and how much more still needs to be done - to protect this remarkable species.

Monitoring remains key to conservation success. Attendees were introduced to the SwiftMapper App, which helps target survey efforts across the country. Training sessions took place over the summer in Angus and Perth & Kinross, with participants encouraged to contribute their sightings to SwiftMapper

Conference presentations can now be downloaded from the Tayside Biodiversity Partnership website: Projects – Swiftshttps://www.taysidebiodiversity.co.uk/get-involved/projects/projects-swifts/



Looking ahead, a 2025 Tayside Swifts Newsletter will be published later this year – compiled by summer intern Jillian McCleary. Keep an eye on the TBP website for details.

Meanwhile, Tayside Swifts' Daniele Muir has been running a popular series of walks and talks, including the Goodbye Swifts events. Locally, activity in Stanley continues to provide useful insights into swift behaviour and opportunities for community involvement.

The conference itself formed part of the wider Angus Coastal Towns Swifts Project, funded by the Angus Council Climate Change/Net Zero/Biodiversity fund. This ambitious project is installing nest boxes from Montrose to Monifieth while working closely with developers, planners, and the public to safeguard swifts for the future.





STANLEY HEARTS AND MINDS PROJECT

This summer we have begun to plan a new initiative to run alongside the Stanley Swift Project. The "Stanley Hearts and Minds Project" will focus on house martins, aiming to encourage a more positive view of these seasonal visitors and highlight their ecological importance.

While house martins are admired by many, others find their presence challenging. Concerns often include droppings beneath nests, their vocal nature, or the possibility of minor staining on buildings. As a result, some residents try to discourage nesting by hanging objects such as plastic bags or bunting under eaves.

However, the absence of house martins would have wider consequences. These migratory birds arrive back in Scotland during spring, feeding on midges, flies, and aphids before returning to Africa in autumn. Without them, insect populations could increase, affecting both people and agriculture. Predators such sparrowhawks would also lose a food source, potentially leading to further imbalances. In addition, abandoned nests provide shelter for other small creatures, such as sparrows, spiders, and insects, offering further ecological value.

There are practical ways to reduce potential problems while still supporting house martins. Options include fitting beneath droppings boards nests, encouraging nesting in less sensitive areas of a building, providing artificial nest cups, or simply waiting until chicks before fledge cleaning. These approaches allow people to enjoy the benefits of natural insect control while keeping properties easier to maintain.

Through the Stanley Hearts and Minds Project, we hope to share the value of house martins and encourage their welcome as important and beneficial visitors throughout summer.

For further information, you can explore the BTO House Martin Survey: https://www.bto.org/our-science/projects/house-martin-survey





GREEN GRAVEYARDS PROJECT

Recently the Perth & Kinross Council's Biodiversity Initiative Officers have begun assessing graveyards for suitability to be included in the next phase of the Tayside Biodiversity Partnership's Green Graveyard Initiative, due to begin in 2026. The surveys have involved visiting sites, assessing the quality of grasslands, presence of species of interest, existence of provisions for wildlife (bird/bat boxes etc) and what trees are present and their ages. Alongside this we have been cross referencing our collected data fifty botanical with nearly surveys Undertaken by Liz Lavery, the VC87 County Recorder for West Perthshire, and then making recommendations to improve the cemeteries.

Burial grounds visited so far have had some wonderful lichens and mosses, signs of hedgehogs, swallows ducking and diving through old church buildings, beautiful clusters of blue harebells and the odd hare bounding out from behind a grave stone!



As part of this work, we are also looking more closely at waxcap fungi, which are excellent indicators of grassland management. We are currently checking all PKC graveyards for the presence of waxcaps, as their occurrence often reflects short, unimproved grass being maintained over time. Perthshire in particular is well known for its rare waxcaps, but without more data our knowledge of their local distribution remains very narrow.



We would love your help: if you spot waxcaps—whether in graveyards or anywhere else—please let us know via taysidebiodiversity@pkc.gov.uk. A short note and a photograph would be invaluable, and if you would like to get more involved there is also Plantlife's Waxcap Watch 2025 survey which is a great way of contributing records more formally: https://www.plantlife.org.uk/waxcapwatch/

Highlighting where these fungi occur will not only help us understand their distribution across Perthshire, but will also guide our Green Graveyard project in protecting these special sites.



FINAL NOTES

Useful National and International Websites

The State of Scotland's Nature 2019 - State of Nature Scotland 2019 - Scotlink

United Nations – Biodiversity - <u>Biodiversity | United Nations - CEB (unsceb.org)</u>

Considerable Change Needed to Stop Nature Loss (September 2023) - <u>Considerable change needed to stop nature loss in Scotland | NatureScot</u>

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-20 30-uks-five-leading-nature-bodies-say

Scotland's Biodiversity Strategy 2022-2045 - https://www.nature.scot/scotlands-biodiversity-strategy-2022-2045

30:30 Explained - <u>30 by 30 explained | NatureScot</u>

National Biodiversity Network - <u>National Biodiversity Network (nbn.org.uk</u>)

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 caglloyd@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 2026 issue, please contact Catherine at caglloyd@pkc.gov.uk.



FINDING US & GETTING INVOLVED

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 (https://www.taysidebiodiversity.co.uk/), 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

• 2023 -

https://www.taysidebiodiversity.co.uk/wp-content/uploads/2023/09/2023-Tayside-Recorders-Bulletin-HS-CL-09-23.pdf

2024-

https://www.taysidebiodiversity.co.uk/wp-content/uploads/2024/09/Tayside-Recorders-Bulletin_2024-EB-CL-FINAL-VERSION-11-9-24.pdf



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.



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

The 2025 Bulletin was researched, compiled, and edited by Elena Barbary (The University of Edinburgh) for the Tayside Recorders' Forum Summer 2025

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