

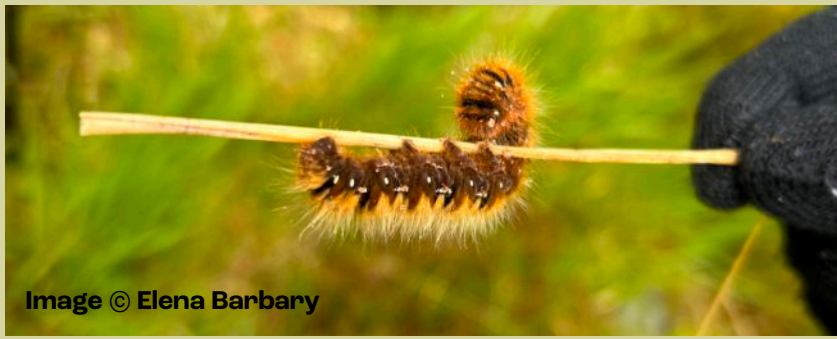


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TAYSIDE RECORDERS BULLETIN

2026



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WELCOME TO OUR 2026 ISSUE

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THE 2025 TAYSIDE RECORDERS' DAY

AUTHOR: CATHERINE LLOYD



This popular event was last year held in Perth's Art Gallery (or museum as was) and we welcomed, as ever, an eclectic mix of speakers. Elena Barbary outlined the ongoing 'Hedgehog Highways Project' which is a joint project between Perth & Kinross Countryside Trust and the Tayside Biodiversity Partnership. She quickly gave an update on the volunteer project itself, but primarily focussed on how this local initiative is contributing to national surveys.

Fiona Basford, Buglife Scotland then spoke about the wide-ranging 'Species on the Edge Project' but specifically on the Angus Small Blue Project, a project dear to many!

As the partnership with the North East Scotland Biological Recording Centre was new in Angus in 2025, we really appreciated Aileen Salway's talk on 'New Records, Species Records of Note, Gaps to be Filled' as that gave a great introduction to the work of NESBReC in Angus. This was followed by Lindsay Bamforth of the Fife Nature Records Centre speaking on 'Exploring Kinross Wildlife Records with Local Focus.'

Just before lunch, Chris Stamp introduced 'New Butterfly Species to Tayside' and Elena came back with her second talk: 'Undertaking the Flower-Insect Timed Count 1km.sq Survey.'

The weather had been fine in the lead up to the 2025 event, but the day had dawned to a severe gale, and we were very concerned that some of the speakers who were coming a distance would not make it. Only one person got stuck – Janet Ullman from the Amphibian & Reptile Conservation Trust, had made it down from the Isle of Skye but got stuck in Glasgow. She still managed to give her talk via her 'phone, sitting in her car on the west coast, with a lot of help moving on the slides by one of the team in Perth! She treated us to 'Great Crested Newt Surveys in Perth & Kinross Ponds' and an 'Update on National Amphibian & Reptile Surveys'.

Back in the comfort of the gallery theatre, there followed a talk by Jim Williamson of Scottish Forestry, on 'Tree Health in Scotland - Current Threats, Biosecurity, Monitoring & Reporting via Tree Alert' and this was followed by Elspeth Coutts, Stanley Swift Group, reporting on the Swift survey in her local patch and what happened when issues became apparent (there is an article in the Bulletin about this).

To complete a fascinating day, the subject of 'Red Squirrel Conservation & the Introduction of the Kinross-shire Red Squirrel Group' was covered by Hollie Sutherland of the Eastern Lowlands Red Squirrel Group. Liz and Alistair Lavery then jointly gave a talk about their 'Survey of Biodiversity in 48 Perth and Kinross Graveyards'.

That rounded off the 17th Tayside Recorders' Day. Mention must be made of the 'behind-the-scenes' team on the day: Elena, Douglas and Nick and of course the staff at the Art Gallery. Everyone contributed to the success of the event: thank you! There was a noticeable unavoidable absence of two Forum stalwarts: Mark Simmons of Perth Museum and David Lampard, recently retired from McManus Galleries. Neither were able to attend the event but both have been part of the Forum since day one. David had kindly hosted the very successful 16th Recorders' Day in Dundee during 2024 where we celebrated the centenary of the Dundee Naturalists' Society.

Over previous years, McManus Galleries, Angus Council and Perth Museum each hosted the event every three years; throughout, the Tayside Biodiversity Partnership organised the programme, bookings and settled speakers' expenses and any other costs. As a sign of the times, last year, for the first time, the Partnership had to pay the full commercial fee to use the Perth Art Gallery theatre. The Perth & Kinross Countryside Trust, however, very kindly sponsored the catering and managed the bookings which made a huge difference – thank you PKCT.

This year for our 18th Tayside Recorders' Day on 3rd October we are back at Montrose Museum and Angus Council has very kindly agreed to host the event. We are planning to be back in Perth during 2027 – but for our 20th anniversary in 2028? No idea – it all depends on funding! If there is anyone out there who could sponsor the venue or catering in either 2027 or 2028 please contact Catherine via caglloyd@pkc.gov.uk.

RECORDERS' DAY 2026

There is an interesting programme for the 2026 event in Montrose – we can look forward to talks on research at Glen Prosen and monitoring along the River South Esk, together with an outline of the new Angus Nature Networks and Local Nature Conservation Sites. There will be a NESBReC update and then presentations on a variety of local projects – Seagrass, Slow worms, Northern Damselfly, Swifts and goose monitoring. Lunch will be provided – please book as soon as possible via [Tayside Recorders' Day 2026 Tickets, Saturday 3 October • 10 AM - 4 PM | Eventbrite](#)

COUNTY RECORDERS, SPECIALISTS AND CITIZEN SCIENCE RECORDERS

In our first Recorders' Days, the focus was very much on bringing together specialists and County Recorders to discuss their surveys and findings. A few amateur wildlife recorders attended or course, but nowadays they are very much part of the event – and for some years now we have offered 10-minute sessions from anyone who has undertaken a study or survey of a species.

The focus on citizen science in the media and on TV has really jump-started the understanding that anyone can take part in a survey – sharing that information is the next step to show just how important it is to contribute to both local and national surveys. Our next aim must also be to encourage young people to take part – they are already participating via some of the larger NGOs, but this needs to be mainstreamed right across the board – anyone with an enthusiasm or interest in wildlife can be encouraged to take part in the recording aspect – it is very much a case of 'anyone can be involved, any age, any ability.'

JELLYWATCH: HELPING THE MARINE CONSERVATION SOCIETY TRACK CHANGES IN OUR SEAS

AUTHOR: ANNA BUNNEY

Jellyfish are among the most distinctive and misunderstood creatures found in UK waters. Did you know that there are over 2,000 described jellyfish species? With estimates suggesting up to 300,000 species may exist, many yet to be discovered. Since 2003, volunteer citizen scientists have been reporting jellyfish sightings in UK waters to the Marine Conservation Society through the Jellywatch programme.

Jellyfish play a crucial role in the ocean, helping to move carbon through marine food webs, supporting biodiversity and acting as natural indicators of changing ocean conditions. Their presence and behaviour can reveal important information about variations in sea temperature, ocean currents and wider ecosystem conditions, and how these change over time.



Images © Lousie Heap



Images © Peter Bardsley

Jellyfish have been floating in our seas for 500 million years, and fossil evidence suggests that their design has barely changed. Jellyfish are passive drifters, characterised by their umbrella-shaped bell and trailing tentacles, which contain cells used for stinging and paralysing prey.

Taking part in Jellywatch is easy - anyone spotting a jellyfish along the coast or at sea can submit a record through the Marine Conservation Society's online reporting form. Observers are encouraged to provide details of the location, date and species seen, along with photographs whenever possible. ID guides showing the size, shape and colours of commonly spotted jellyfish are also available on the Marine Conservation Society's website.

For recorders in Tayside, Jellywatch offers an excellent opportunity to contribute to a national dataset while exploring local beaches and coastlines. The Angus and Fife coasts regularly support a variety of marine life, and jellyfish sightings can add valuable information to our understanding of species movements in the North Sea. Even a single observation can be useful, especially when combined with thousands of records from around the country.



Images © Kirsty Andrews

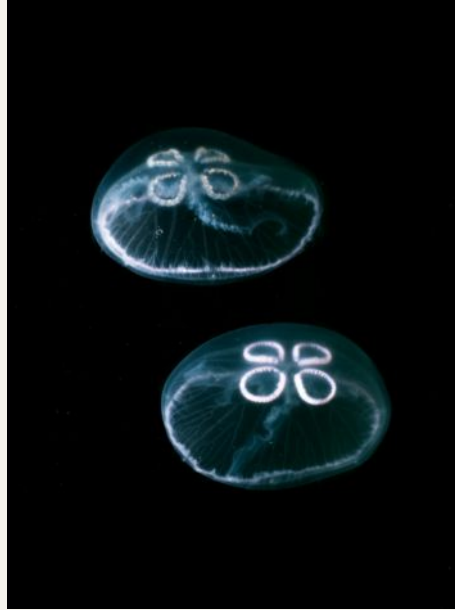
From over 300 jellyfish reports in Scotland throughout the reporting year 2024 to 2025, we know that;

- The most spotted species in Scotland were the barrel jellyfish (which can be up to the size of a dustbin lid!), followed by the moon jellyfish and lion's mane jellyfish.
- 47% of all lion's mane sightings across UK were in Scotland – showing it's a hotspot for them.
- Peak months for sightings are June, July, August in Scotland with 55% of all sightings in July and August, although spring sightings seem to also be on the increase.

Highland, Argyll & Bute, North & South Ayrshire recorded the most sightings in Scotland.



Images © Joanna Clegg



Images © Mark Kirkland



Images © Andrew Smith

The data gathered through Jellywatch can also be used to investigate links between jellyfish distribution and other species, including leatherback turtles, which feed largely on jellyfish. Turtle sightings can also be recorded through the Marine Conservation Society.

Every recording is central to the programme's success. The UK coastline is extensive, and professional scientists alone could never monitor every beach and bay. Volunteers, also known as citizen scientists, greatly expand the reach of conservation research, providing observations from locations and times that might otherwise go unrecorded. As a result, Jellywatch demonstrates how local wildlife recording can contribute directly to national marine science.

The next time you encounter a moon jellyfish drifting in a rockpool or a large barrel jellyfish stranded on the beach, consider reporting your sighting. Every sighting contributes to our understanding of these incredible creatures and our wider understanding of UK seas.

Further information, jellyfish ID guides and reporting: www.mcsuk.org/sightings

Anna Bunney – Citizen Science Programme Developer



Last year I wrote about my moths project 'FRAGILE' for this Bulletin. The project was funded by the Scottish Government through Creative Scotland and ran from April 2024 to May 2026. It concluded this Spring with an exhibition (also called 'FRAGILE') at Birnam Arts near Dunkeld.

In the last article I described the inspiration for the project, going to public 'moth events' in 2023 and being amazed by these mysterious insects and people's reaction to them. Here's an update on some of the work that came out of those beginnings.

In 2024-25 my priority was learning as much as I could about moths, how to light-trap them, identify and record them, and what to do with the records. Moth Recorder for East Perthshire Cathy Caudwell helped me get started and by the end of the project I'd recorded 214 species from 27 sites around Scotland.

I was amazed at the diversity I was seeing and became a bit obsessed with the relationships between moth markings, moth habitats and their predators. Some moths have obvious camouflage, eg markings that match green lichens (Green Carpet) or bleached grass stalks (*Agriphila tristella*). Some camouflage is more subtle and goes beyond markings, involving body structure and behaviour. My favourite is still the Pale Prominent, the one I tried to brush off the outside of the trap thinking it was a little piece of rotten wood! It is a master of staying very still.



After nearly a year's immersion in studying moths, I felt ready to start making artwork inspired by them. I started with a challenge to myself to work with the materials I already had in my studio, including fabric from years of running rag-rug workshops. Could I describe moth markings in a rag-rug? It felt like a suitable medium, it would be soft and the tags of fabric might look like wing-scales. I decided to start with the 'eyespot' on the wing of an Emperor Moth, a striking black, yellow and white marking. I drew the wing first from a photograph using coloured pencils and noticed that the 'highlight' in the eye is pale blue – the colour of the sky. Once I'd made the eye I kept going and expanded it to make a whole wing, five feet wide by three feet high. After three months I felt as if I knew that wing scale by scale. I managed to find all the colours needed in my collection until near the end, when I ran out of brown. My son and daughter-in-law donated a t-shirt and a fuzzy cardigan that worked perfectly for the soft patch where the wing attaches to the thorax of the moth.



I learned a lot while making the wing-rug. Questions often came into my head while working, I wrote them down and looked for answers. One of the most interesting: what are eye-spots 'for'? What survival benefit do they give a moth? It turns out there are several theories about eye-spots, on moths, butterflies, even fish. Do they give would-be predators a fright and the creature a chance to escape? Or do the spots act as 'targets', distracting predators from more vulnerable body parts? Probably both. I came to the conclusion that moth-markings are multi-functional adaptations and absolutely fascinating (that's without even beginning to consider the caterpillars. Lots more work to be done).



Once the rug was finished I started painting. I chose seven moth photographs from the hundreds taken during light-trapping and set out to paint watercolour portraits of seven individual moths, larger than life-size and as life-like as possible. All have associations with wealth and treasure in their names or their markings, my tongue-in-cheek comment on their value eg Gold Spot, Silver Y and Small Emerald.

After the portraits came 'Fragments', a series of paintings of parts of moth wings on torn watercolour paper. I managed to express something with this work, a feeling of desperation at what we are losing in the world as habitats are fragmented and their species decline. I pinned the pieces to the wall with entomology pins, unframed, vulnerable to damage like the moths themselves.

The exhibition at Birnam Arts was a good conclusion to the project. Comments in the visitor's book were very positive and some people said the work had changed how they felt about moths. That makes me feel the project was worthwhile. Even if visitors to the exhibition don't get directly involved, they are now more aware of why biological recording and moths really matter.



FRAGILE doesn't end here, I'll keep recording moth data, the work will be shown again and I'll be running more moth workshops in future. You can follow what's happening on Instagram @janhdy and on facebook.

(Jan Hendry is a visual artist and naturalist who lives in Perthshire)

TAY RINGING GROUP

PROMOTING CONSERVATION THROUGH RINGING

AUTHOR: LES HATTON

Images © Les Hatton



The Tay Ringing Group (TRG) covers sites in Tayside, Angus, Fife, Perth & Kinross, and Central Region. Within Tayside the group is involved in raptor, owl, seabird, wildfowl, and passerine monitoring.

A core area for the TRG is the Tay reedbeds, where the group has been involved since 1972. Why the focus on the Tay reedbeds? Simply because it is the largest (and best!) reedbed in Britain. Monitoring, including pioneering work by TRG, indicates that the Tay reedbeds supports up to 6% of the UK water rail population, the largest population of bearded tits in the UK (estimated at c250 pairs in 2007), as well as nesting marsh harrier, a growing population of reed warbler and spectacular hirundine roosts through the summer and autumn.

Group members Robert Patchett and Derek Roberston have recently published an article on the result of a six-year geolocator study of water rails. What was thought to be a resident population has proven to be partially migratory, with some birds leaving to winter in Ireland, whilst birds from north-east Europe arrive to winter on the Tay.

The group undertake two Retrap for Adult Survival (RAS) projects in the reedbeds, specialist studies of individual species to help understand population changes. These are for the stunning bearded tit and the expanding reed warbler population.



Male Bearded Tit

First noted on the Tay in 1991 and proven to be breeding in 1992, when three juveniles were ringed, the bearded tit has undergone highly cyclical peaks and troughs but until recently with the underlying trend creeping upwards. The peak catch was in 2022, when exactly 1000 new birds were ringed. Since then numbers have dropped back considerably, and as of 1st August 2026 only 159 new birds have been ringed, indicating the importance of long-term studies of volatile species. The longevity record for this species was established on the Tay, when a bird originally ringed there in 2013 during a PhD study by Iain Malzer on bearded tits and reedbed management, was recovered in the same spot in 2022. This was 8 years, 10 months and 22 days later.

The capacity for surprises never ceases however, and despite bearded tits appearing to have skipped flight school, these tiny whirring wings managed to get one from the Tay to a modest reedbed in Norway across 618km of cold inhospitable North Sea in October 2018. Incredibly there have been three ringing recoveries of bearded tits from the UK to Norway, one of the others also to the same reedbed.

At a completely different scale is the majestic marsh harrier, a species that breeds in the expanses of the reeds, with spectacular sky diving and acrobatic food passes. The population on the Tay has been monitored since 1991 soon after colonisation. The group monitors 6-8 nests per year, although the number of young ringed can reflect the difficulty of finding nests in 3m tall reeds from year to year. 2026 saw a minimum of ten nests and 21 young fledged and the Tay population may well play a significant role in the expansion of the Scottish population elsewhere.



Marsh Harrier Brood

TRG, particularly through Steve Moyes, has also had the opportunity to highlight the reedbeds and the work of the TRG on several TV documentaries, most notably the BBC Scotland Grand Tours of Scotland's Rivers.

None of the work done by TRG's volunteer ringers would be possible without tremendous support from several key landowners on the Tay, and bodies such as NatureScot, RSPB and private companies such as Michelin that have provided financial or material support. Without such broad based support and partnerships the long term monitoring of this important habitat would have been much less successful.

The Scottish Invasive Species Initiative is a partnership project working with volunteers and land managers to tackle invasive non-native species (INNS) alongside rivers and watercourses in northern Scotland. We have been operating in Tayside since 2018, targeting five invasive plant species and one mammal.

One of our key target species in Tayside is giant hogweed – this plant is a priority species as, in addition to impacts on biodiversity, it also poses a serious human health hazard due to its phototoxic sap. In Tayside North (excluding the Earn and Eden rivers) we are controlling all infestations from the upstream source near Dull, down to Stanley. Additionally, we are controlling all infestations on the River Almond down to the confluence with the Tay.



Image © Ashley Coombes

Within these areas all known infestations are under management. No giant hogweed plants have been allowed to mature and produce seed for many years; this is critical to move towards eradication. Numerous control sites are showing signs that the seedbank in the soil is near exhaustion, with very few plants germinating each year.

Another key plant species for us in Tayside is Japanese knotweed. Japanese knotweed is widely distributed throughout the Tay system, with upstream sources at Loch Tay and Loch Rannoch. Control work in Tayside North covers the Tay, Tummel, Ericht, Isla and Almond. As with giant hogweed, our downstream limits are at Stanley and the confluence of the Tay and Almond. Abundance has been greatly depleted at most sites and many have been moved to a biennial control programme, as the problem has been so reduced it is not necessary to carry out treatment every year.

One plant species where we are seeing great success in Tayside is Himalayan knotweed – this presents a very localised problem between Dunkeld and Stormontfield. Infestations are now mostly eradicated, with only a few minor areas of regrowth remaining.

American mink is the one mammal species we are targeting in the Initiative. This semi-aquatic mustelid has severe impacts on native biodiversity, particularly ground nesting birds and the endangered water vole. We had a record-breaking year for mink captures in 2025, both across the project as a whole (261 captures in total) and in the Tayside region (112 captures). In 2026 we are seeing fewer captures in Tayside North – our trapping efforts have remained consistent so we hope this is a sign that mink populations have been reduced.



Image © Jane Hamilton

That's all the latest from Tayside North, where we have been operating since the Initiative began in 2018. However, we have some very exciting news... we are delighted to announce that in April this year the Initiative expanded to cover two new rivers! We are now working in the Earn and Eden catchments, with newly recruited Project Officer Douglas Traynor leading the project in this area.

Image © Jane Hamilton



We are still in the early days of INNS control in 'Tayside South' but had a successful first season treating giant hogweed on the River Eden and Motray Water and have begun Japanese knotweed control on the Earn, which has a severe infestation. We're also currently working to expand our mink trapping network in Tayside South area – please [get in touch](#) if you'd like to get involved.

Visit our website for more details on this [project expansion](#) and [progress so far](#).

The Scottish Invasive Species Initiative is led by NatureScot and funded by the National Lottery Heritage Fund and NatureScot (2017 – 2023), the Scottish Government's Nature Restoration Fund (2023 – 2028) and the Ossian Offshore Wind Farm project (2026 – 2028), with in-kind support from project partners and volunteers. Our delivery partner in Tayside is the Tay District Salmon Fishery Board.

A recent meeting of the Tayside Lichen Group (TLG) was a visit to Nether Craig, by Drumore Loch, part way between Blacklunans and Brewlands Bridge, just inside the western boundary of Vice-County 90 (Angus).

The area consists of a south-facing slope with rich calcareous grassland, bouldery scree and no tree cover. At a typical TLG meeting, we might expect to find ourselves among a mixture of broadleaved and coniferous woodland, examining the accompanying epiphytic lichens, together with the lichen mosaics found on dry-stone walls and rocky outcrops, usually of a siliceous nature. Nether Craig is somewhat different because the underlying geology provides a jumbled mixture of both calcareous and siliceous rocks.

Equipped with hand lenses, chemicals, kneeling mats and rather worn copies of lichen field guides, we set about identifying and recording our finds. Fortunately, the day was fine and dry, allowing us to pick our way through the scree and kneel down to examine carefully those lichens that caught our eye as being different, interesting and often challenging.



Xanthoria parietina



One fascinating find was a 12 cm jawbone, complete with teeth, creating a very calcareous substrate, which was host to its own little community of lichens. The dominant and eye-catching yellow of the ubiquitous *Xanthoria parietina*, characteristic of nutrient-rich sites, was particularly striking against the bleached white of the bone.

On closer inspection, another foliose lichen, of a mottled grey appearance, was found securely attached at the base of a tooth, where it was embedded in the bone and water might gather. This proved to be a *Physcia* species, although it was not yet sufficiently developed to provide all the characters needed for a full identification.



Physcia species

In contrast to these two relatively straightforward foliose species, two crustose lichens presented more of a challenge. After carefully noting the field details, tiny apothecia were collected from both specimens so that microscopic examination could be carried out at home.

The crust whose crowded apothecia showed a white rim surrounding a brown centre keyed out as *Myriolecis dispersa* sens. lat. The second crust, with scattered yellow-orange apothecia and no discernible thallus, produced polarilocular spores whose size and shape led to *Athallia holocarpa* sens. lat. It is worth reminding readers that confidence in naming a lichen, particularly a crustose lichen, to species level is, as in any other area of natural history, dependent on the knowledge and experience of the observer hence settling for the sensu lato status for now. The detective work continues!



Myriolecis dispersa sens. lat.



Athallia holocarpa sens. lat.

In total, we recorded, with some confidence, 70 species of lichen at the site. Knowing that many more remain to be found and identified, this location will certainly feature in the TLG programme again. The records are submitted to the British Lichen Society database, where they are accessible to all.

In addition to the lichens, nine different species of butterfly were spotted, reflecting the rich flora of the site.

The Tayside Lichen Group holds meetings on the second Wednesday of each month throughout the year. It is a beginners/improvers group, and we welcome new people with an interest in lichens.

More information can be found on the Events Page of the British Lichen Society website <https://britishlichensociety.org.uk/> or e-mail mgtlichenchapman@gmail.com

Much of the raptor data in Tayside is captured by members of the Tayside & Fife Raptor Study Branch, which covers Perthshire, Fife, Tayside & Angus and is one of the twelve branches which makes up the Scottish Raptor Study Group, which nationally has 360 members, <https://www.scottishraptorstudygroup.org/>. Other individuals and organisations also contribute to the annual effort. Monitoring can begin as early as January with eagles and can run through to September for species such as honey buzzard and hobby. Typically data is captured over three to four visits, to establish occupancy, record any breeding attempt, confirming successful breeding and fledging. Anyone making nest visits to schedule one species must have an appropriate disturbance licence issued by NatureScot or BTO, (British Trust for Ornithology), although much of the monitoring is undertaken from a safe distance using powerful optics. Collectively around 6,000 sites are monitored annually across Scotland and around 270 in the Tayside and Fife branch area. During a survey year such as the UK merlin species survey in 2026 this can be even higher.

Data is submitted to the SRMS (Scottish Raptor Monitoring Scheme) and curated by the BTO, (British Trust for Ornithology), and published annually, <https://raptormonitoring.org/annual-report>. The SRMS <https://raptormonitoring.org>, is a partnership of nine organisations, NatureScot, Forestry Land Scotland, Scottish Forestry, BTO, Rare Birds Breeding Panel, Scottish Raptor Study Group, Cairngorms National Park, RSPB, Scottish Ornithologists Club, each of which plays a key role in Scottish ornithology, notably with expertise in undertaking and reporting on scientifically rigorous monitoring of birds of prey. Data is ideally submitted either via an on-line reporting system or on an excel spreadsheet and is reported by species and geographical areas which follow local council boundaries. The data is available to the Scottish Government to help inform policy development and other matters such as the impact of the HPAI virus and species trends. The SRMS currently focuses primarily on the annual monitoring of diurnal birds of prey and owls native to Scotland which regularly occur within Scotland and include, golden eagle, sea eagle, hen harrier, marsh harrier, sparrowhawk, goshawk, kestrel, merlin, peregrine, hobby, osprey, common buzzard, honey buzzard, red kite, short eared owl, long eared owl, tawny owl, barn owl, and the raven, (an honorary raptor).

The scheme has four key aims:

Co-operation: to promote better co-operation between the various bodies responsible for gathering information on Scottish raptors, to increase the coverage of raptor surveys in Scotland; **Survey and monitoring:** to provide robust information on Scottish raptor populations, in order to report on trends in numbers, range, survival and productivity, to understand the causes of population changes and constraints on raptor populations, and to enhance the volunteer base available to contribute to data collection **Data and information standards:** to maintain and enhance consistent and high standards for the collection, collation, auditing, analysis and curation of data; **Analysis and reporting of information:** leading to the production of annual reports on raptors in Scotland, and to support national and international reporting requirements



Image © Amy Challis

SLOW WORMS SCOTLAND (PERTH AND KINROSS) SURVEY!

AUTHOR: CALLUM ULLMAN-SMITH

The Slow Worms Scotland project began in May 2024 as a public outreach and citizen science project across the Scottish Highlands to increase public engagement in slow -worm (*Anguis fragilis*) conservation and provide a more accurate distribution of the species *Anguis fragilis*. The project accepted records through our dedicated Facebook page and email. Also, the provision of English and Gaelic language records was a unique aspect to the design of the study in comparison to many other studies in bilingual areas. I decided to take this approach as a core part of this study was for it to be essentially community focused and as accessible as possible. A focus on breaking down the barriers between researchers and communities to allow the general public to have open access to the knowledge of why slow-worms are so vital to our natural world, our environment and our gardens. Often mistaken for snakes it presents the slow-worm on the backfoot in public conception, when this species of docile legless lizard is a gardener's best friend. Slow-worms live on a primary diet of slugs and snails and so can often be found in the compost bin or the green house. The survey was a success in the highlands with a high level of engagement and public outreach, we managed to establish a better understanding of *A. fragilis* distribution and I like to think, a new community of slow-worm enthusiasts. This is what I'm hoping to bring to the Perth and Kinross area, and get to realise the importance of Slow-worms in the ecology of Scotland especially an area like Perth and Kinross, which is somewhat unique in being a border area between highland and lowland geography along with being exceptionally located in the centre of Scotland.

Established slow-worm distribution seems to suggest that the heavily urbanised central belt essentially acts as a way to cut Scotland's slow-worm populations in two. This isolation of the northern population makes it all the more vital that their conservation status is understood, and not at risk of decline because there seems to be no easy way for them to repopulate if the central belt is truly a nonporous barrier. Perth and Kinross' location means that we can have a better understanding of the slow-worms population density through the Perthshire glens and into the north lowlands and whether there is a notable decline or even increase as they get closer to the central belt.



Image © Bruce Shortland

I am greatly looking forward to this project in partnership with Tayside Biodiversity Partnership and Tay ARG. I hope we will uncover some new insights into the slow-worm and bring some enthusiasm for one of the most enigmatic and misunderstood species in all of Scotland. further information – and sightings – can be recorded via this link - [\(17\) Slow Worms Scotland | Facebook](#)



STANLEY SWIFT PROJECT

Stanley Swift Project has been monitoring flying and nesting swifts in and around Stanley village since 2014. Initially we surveyed natural nest sites in buildings plus a few existing swift nest boxes and noted how nesting activity was clustered in different parts of the village in what we termed sub-colonies. Over time, with support from Tayside Swifts and Tayside Biodiversity Partnership, we have installed 25 more nest box spaces and, in conjunction with Stanley Development Trust and the RSPB, successfully lobbied Perth and Kinross Council for swift (and bat) bricks to be installed in the extensive housing developments being carried out in Stanley.



Image © Daniele Muir

In 2015, we counted 34 natural nest sites and 1 occupied nest box with 40+ maximum swifts flying above the village at one time, and 80+ congregating over nearby rural Kinclaven. Maximum flying numbers always occur in July once returning juveniles and new fledglings have joined the throng.

Annual surveying continued and improved: between 2016 and 2021 swift numbers fluctuated but with a clear suspicion (which we tried hard not to believe) of a slight downwards trend, in some years to less than 25 active nest sites and a low maximum of 30 flying swifts.

However, 2022 and 2023 were uplifting years with 30 and 31 active nest sites confirmed respectively, including our first occupied swift brick on the Strathord estate, and a record 80-100 flying swifts over the village in 2022.

In 2024, we saw a big leap in active nest sites. Natural nest sites rose from 25 to 30, nest boxes from 5 to 7 and swift bricks from 1 to 3, a combined total of 40.

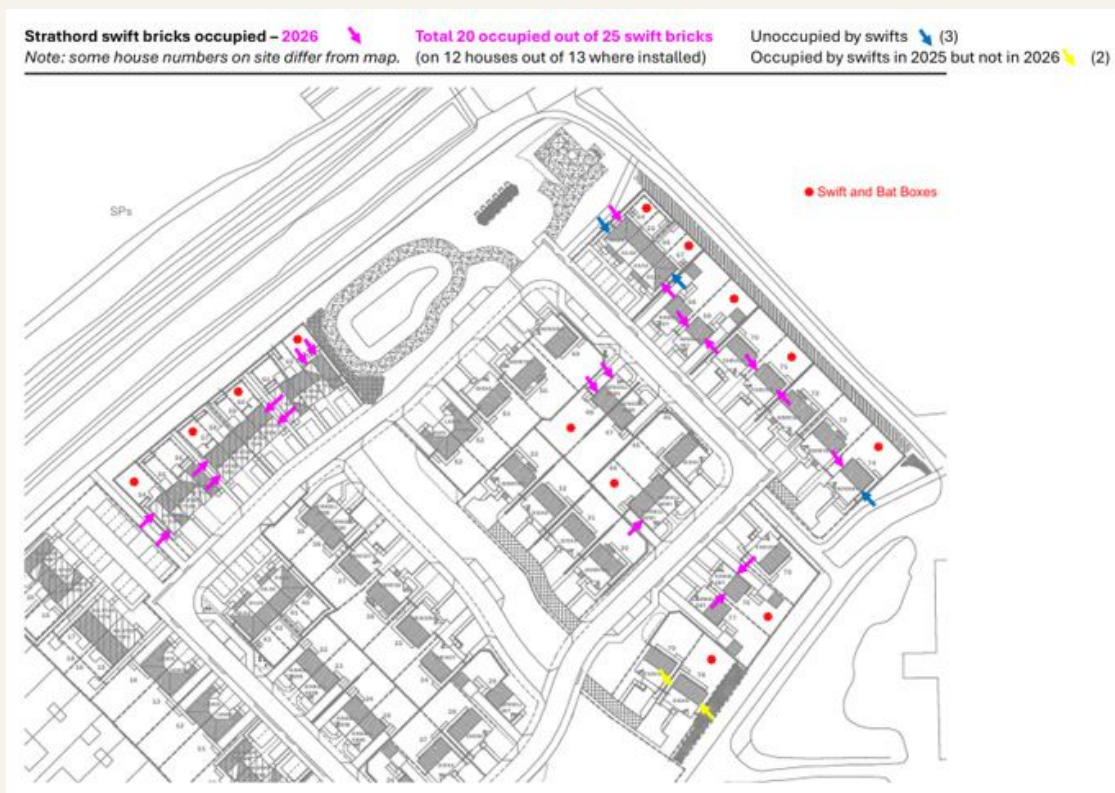
In 2025, our surveying revealed 29 natural nest sites, 9 nest boxes and a large increase in swift brick occupancy from 3 to 14, totalling 52.

We have found ourselves wondering if some of the uptake of swift bricks in 2025 could be 3-year-old juveniles (fledged in 2022) speculating for future nest sites for themselves. As such, we planned to undertake a full round of surveying in 2026 before the end of June so we could be pretty sure all nest site activity up to that point was breeding adults. Any additional nest sites above this baseline showing activity during July and August might more reasonably hint at interest from returning juveniles. Unfortunately, volunteer capacity meant that was not possible timewise, but our full 2026 season total and nest-type breakdown continues Stanley's interesting, positive and tentatively hopeful story as follows.

This year, at 51 active nest sites, we nearly maintained the high 2025 total, but in a very different combination of nest site types. For some unknown reason, our natural nest site tally dropped from 29 to 21 (although an additional 2 were suspected but not confirmed). Our nest box tally rose from 9 to 10, including all 8 nest boxes on the village hall and 1 cavity of a triple nest box hitherto unused by swifts since its installation in 2018. Most positively, the occupancy of swift nest bricks at the Strathord estate increased from 14 to 20 out of the 25 swift bricks installed there. In 2026, the maximum number of swifts seen flying at one time was 50-60.

In summary:

- natural nest sites remain important to the Stanley swift population;
- only 10 of the 34 cavities provided in nest boxes have been adopted by swifts since 2014;
- 20 of the 25 cavities provided in swift bricks have been adopted by swifts since 2021;
- maximum flying swift numbers are difficult to monitor with genuine accuracy but still useful.



In 2027, we do hope to try to differentiate going forward between early and late season nest site activity and to expand the village-wide survey to include swift bricks on the two other new housing estates currently under construction at Deer Pines and Millside Park. If anyone would be able to help increase our volunteer capacity for achieving this, please do email us at stanleyswiftproject@gmail.com

SAFEGUARDING SWIFTS

AUTHOR: CATHERINE LLOYD

It is sobering to realise that for every ten birds flying over our towns in 1999 there are now only three. In the meantime, Perth & Kinross Council has been working hard to incorporate integral swift nest boxes in new housing developments across the region. The birds are Red Listed and are at risk of extinction so this was a significant step to safeguard these charismatic birds. Any help we can all give our local-born swifts is important - whether this be safeguarding existing natural swift nest sites, adding long-life woodcrete or fibreglass specialist external boxes to buildings, or developers incorporating the integral nest boxes now becoming more popular. The TBP has long been championing the installation of long-life nest boxes in its various projects and encouraging everyone to share their sightings with the RSPB App [Swift Mapper](#).



Tayside Guidance Note

Safeguarding Swifts in Development

Swifts are the sound of summer
They are migratory birds that travel 3,400 miles to spend three summer months in Scotland where they breed. Swifts form evening acrobatic 'screaming parties' and are found in many of our towns. They eat, sleep, drink, and even mate on the wing and rarely land other than to nest.

Why do Swifts need our help?
Swifts nest within small cavities in buildings across the UK. **Their numbers have fallen drastically, by 66%, over the past twenty-five years.** This is largely due to the holes where they nest being filled in when buildings undergo renovation or re-roofing, which greatly reduces places to nest. Swifts are at risk of extinction and have been 'Red listed'.

The Natural Environment Bill (Scotland) now requires developments to make provision for swifts by installing nest boxes. This is a simple solution to help Swift numbers recover, and this guidance has been produced to show how easy it is.

For every ten birds flying over our towns in 1999, there are now only three.

From a planning condition in Perth & Kinross requiring 25% of all new-builds to include these nest sites, the Natural Environment (Scotland) Act 2026 now requires developments to make provision for swifts by installing nest boxes. To this end, Tayside Swifts and Angus Council set up a sub-group to create a new guidance leaflet for developers in Tayside. This has now been published; it was produced as part of the Angus Coastal Towns Swift Conservation Project funded by Angus Council's Biodiversity, Climate Change & Net Zero Fund. It can be downloaded via [Safeguarding-Swifts-in-Development.pdf](#).

Image "Swifts and Development" – Tayside Guidance Note

LOOK OUT FOR WAXCAPS

AUTHOR: NICK MCKINLAY

With wildflowers gone to seed and the leaves soon to fall, it may seem that what grows out the ground is winding down for the year. Some of our short grasslands, however, will tell a different story as they suddenly become dotted with bright reds, yellows, oranges and greens of rare and beautiful waxcap fungi. These eye-catching species are among the most colourful wildlife that can be found in a Scottish autumn, and Plantlife are asking you to join them for the seventh year of their Waxcap Watch Survey. The survey runs from September to late November, and is critical citizen science, providing useful data to both Plantlife and to Perth & Kinross specifically.



Image © Nick McKinlay

Waxcaps belong to a group of grassland fungi known for their distinctive appearance. Their uniqueness isn't just about looks, however; their physiology and their relationship with the surrounding plants makes them 'fussy' about where they can exist. They are extremely sensitive to fertiliser, and thrive in nutrient-poor grassland. In other words: areas that have avoided intensive agricultural 'improvement'. This makes them a key indicator for old, invaluable, healthy grasslands.

Great places to start when looking for waxcaps are graveyards and cemeteries. These ivy-covered, walled-off habitats are already wildlife oases area already full of growth and nooks and crannies, and are sometimes hundreds of years old. This is a long time to go without fertiliser but due to the care and maintenance they receive, have their grass regularly cut short — a vital requirement for waxcaps. This helps the fungi fruit more readily and removal of the cuttings keeps the low-nutrient conditions they prefer.

Tayside Biodiversity Partnership and Perth & Kinross Council have been surveying the biodiversity of burial grounds, and the presence of waxcaps help inform decisions about how to best manage these sites for wildlife. This is especially relevant as the Grow Wild initiative alters historic cutting regimes to increase grass growth across many sites. Waxcaps have already been confirmed at over twenty graveyards in Perth & Kinross, from Cleish to Glenshee. This violet coral waxcap was found in St Madoes Churchyard and is listed as vulnerable on the IUCN Red List of Threatened Species.

Getting involved is as easy as clicking Waxcap Watch: [Survey Britain's Grassland Fungi](#) | Plantlife: the survey is straightforward and accessible. A survey can be carried out in as little as ten minutes, but once you get your eye in, it's very easy to get roped into identifying all the fungi you can. You don't need specialist fungi skills to take part, and the survey provides a great entry point to discovering these remarkable mushrooms. If, however, you would like to increase your skill level, Plantlife offer free learning materials on grassland fungi, which can even take you down to species level - see [Free Online Nature Courses - Plantlife](#).

Surveys of insects at Blairgowrie Cemetery were conducted as part of Cemetery Wildlife Watch, an iRecord recording activity that aims to record wildlife in cemeteries, churchyards and burial grounds. This recording activity has so far recorded over 3,000 species of animals, plants, fungi, lichens from across the UK.

I conducted 24 surveys of Blairgowrie Cemetery from October 2021 to August 2026. These were non-intrusive surveys, based on taking photos of insects and other invertebrates resting on gravestones under trees, and were done with respect to any other visitors to the cemetery. The total tally from Blairgowrie Cemetery is 400 records of 128 species. These records include a mix of common, scarce and likely under-recorded species. Below I highlight some interesting finds. More information can be found on the Cemetery Wildlife Watch Facebook page: <https://www.facebook.com/groups/257026872679440/>

Beetles (Coleoptera), including ladybirds

I had 70 records of 23 species of beetles. I recorded 10 species of ladybirds. The most commonly recorded ladybirds were 2-spot Ladybird (*Adalia bipunctata*; 11 records), 7-spot Ladybird (*Coccinella septempunctata*; 10 records), Cream-spot Ladybird (*Calvia quatuordecimguttata*; 5 records), Orange Ladybird (*Halyzia sedecimguttata*; 5 records), and 10-spot Ladybird (*Adalia decempunctata*; 4 records). Other ladybirds recorded were Striped Ladybird (*Myzia oblongoguttata*; 2 records; see photo), 18-spot Ladybird (*Myrrha octodecimguttata*; 2 records), Eyed Ladybird (*Anatis ocellata*; 3 records), Larch Ladybird (*Aphidecta oblitterata*; 2 records), and Pine Ladybird (*Exochomus quadripustulatus*; 1 record). Some of latter are associated with Scots Pine or other conifers present in the cemetery. Harlequin Ladybirds (*Harmonia axyridis*) were not recorded. Other commonly recorded beetles include *Dromius quadrimaculatus* (4 records), and Nut Leaf Weevil (*Strophosoma melanogrammus*; 4 records). Some nationally scarce species were also found, most notably *Rabocerus gabrieli* (1 record, November 2023), and *Cantharis obscura* (1 record; May 2024).



Striped Ladybird (*Myzia oblongoguttata*) found on 15 August 2026. This species is normally associated with Scots Pine but this individual was resting on gravestone under cypress.

True flies (Diptera)

I had 25 records of 17 species of true flies. One species of note is *Dilophus bispinosus* (1 record, August 2026; see photo), a nationally scarce *bibionid* fly with only 11 records from Scotland.

Female *Dilophus bispinosus* found on gravestone on 15 August 2026. This species has been recorded previously from Angus, but this looks to be the first record from East Perthshire (VC89).



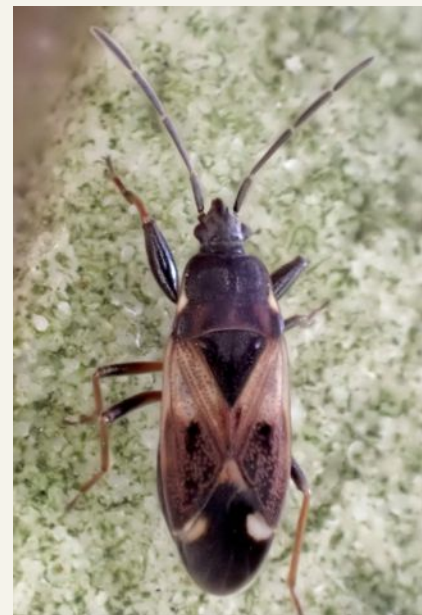
Moths and butterflies (Lepidoptera)

For moths, I had 13 records of 9 species, mostly of micro moths. Two species of note are White-spot Mompha (*Mompha langiella*; 4 records) and Speckled Bittersweet Moth (*Acrolepia autumnitella*; 1 record, March 2025). The latter is likely new for East Perthshire (VC89).

True bugs (Hemiptera), including shieldbugs

I had 66 records of 21 species of true bugs. This included 5 species of shieldbugs: Red-legged Shieldbug (*Pentatoma rufipes*; 16 records), Birch Shieldbug (*Elasmotethus interstinctus*; 11 records), Hawthorn Shieldbug (*Acanthosoma haemorrhoidale*; 7 records), Juniper Shieldbug (*Cyphostethus tristriatus*; 1 record, October 2021) and Parent Bug (*Elasmucha grisea*; November 2023). Other true bugs of note include, *Eremocoris abietis* (1 record, August 2026; see photo), and the leafhopper *Eurhadina pulchella* (1 record, August 2024), possibly the first record of this species from Perthshire.

Eremocoris abietis found on gravestone under cypress on 21 August. This is a nationally scarce groundbug and this might be the first record for East Perthshire (VC89).



Barkflies (Psocoptera)

Finally, I had 105 records of 17 species of barkflies. Barkflies have a reputation for being small and boring and many are therefore under-recorded. Blairgowrie Cemetery seems to be a very good site for barkflies, potentially due to the presence of mature conifers. The most commonly records species was *Ectopsocus petersi* (18 records), a common species across the UK. Notable species include *Pteroxanium kelloggi* (8 records), *Chilenocaecilius ornatipennis* (7 records; see photo), *Valenzuela piceus* (4 records), *Epicaecilius pilipennis* (4 records) and *Loensia fasciata* (1 record; May 2024).



Chilenocaecilius ornatipennis found on gravestone under cypress on 15 August. This is a non-native species originally from Chile and Argentina that was first recorded in Britain in 2015. It is now widespread across Britain.



PKC ASH DIEBACK AND ROADSIDE TREES STRATEGY

AUTHOR: JOANNA DICK

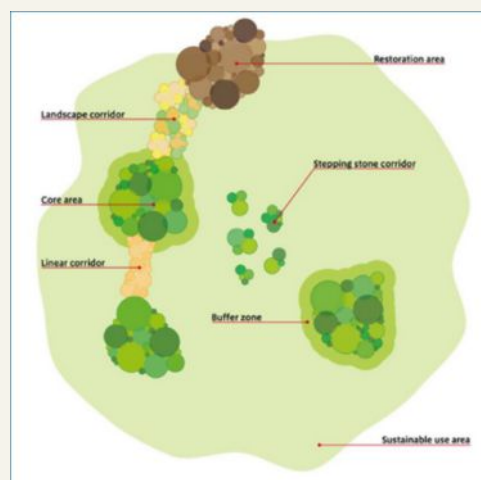
Perth and Kinross Council (PKC) Community Greenspace have been busy implementing their Ash Dieback & Roadside Trees Strategy, undertaking surveys of all Council maintained greenspaces and roadside trees. Over 15,000 ash trees have been surveyed and mapped, with the size, age and stage of dieback recorded. Thankfully, many trees still only exhibit early stages of dieback giving some hope that a good number of trees will recover from the disease. Works have begun to remove trees with significant dieback, prioritising those that pose significant risks to the public. Where possible, Greenspace will be planting replacement trees using a variety of different species to compensate for canopy loss and to support the flora and fauna reliant upon these trees. While trees on private land must be managed by the landowners, PKC have surveyed all trees close to public roads and will be notifying landowners so that they can take appropriate action. Through these surveys, a small number of trees required immediate removal to ensure the safety of road users.

If you are aware of a dangerous Ash tree on Council-owned land or next to a public road, please report this to us via [MyPKC \(Ash Dieback disease - Perth & Kinross Council\)](#) or by phone on 01738 475000.



To support the Scottish Biodiversity Strategy aims for Scotland to restore nature by 2045, each local authority in Scotland is required to have a Nature Network in place by 2030. The Nature Networks map will form part of the next Local Development Plan (LDP) and is an aspirational plan that outlines how we can restore biodiversity by connecting nature-rich sites across Perth and Kinross. The image shows a simplified landscape with discrete core areas, important for biodiversity, that are isolated from one another. It shows various ways in which the health of these core areas, and their positive contribution to biodiversity, can be increased.

The map highlights nature-rich sites known as Core Sites and suggests ways to link these areas through corridors. These corridors act as pathways that allow wildlife to move between Core Sites, ensuring a healthier, more diverse and resilient ecosystem.



While developers are under an obligation to consider how their projects affect, and can contribute to, nature connectivity, the primary purpose is to provide a strategic approach to delivering biodiversity enhancements and actions. Perth and Kinross Council held an initial online consultation in 2024 on the principles of nature networks, and then online and in person discussions with stakeholders to identify locally important sites for nature and restoration projects. We mapped Core Sites, proposed local biodiversity sites, biodiversity towns, and community nominated sites and projects. Links were then mapped between core sites with similar habitat needs, incorporating relevant community sites wherever possible, and linking up with neighbouring authorities. The approach has been expressed through four primary categories of network riparian, woodland, upland and “other” habitats - which are bespoke open or mixed habitats. Each individual network has a specific description of actions that can support the connected Core Sites.

Consultation will be taking place later in 2026 to review and sense check the nature networks before they are taken forward into the next LDP. Through the Scottish Government allocation of the Nature Restoration Fund, we have been fortunate to be able to support landowners, communities, and organisations to promote nature recovery across the Perth and Kinross area. Nature Network delivery will depend on continued collaboration and the availability of funding, but the Council will continue to play a supporting role. More information is available: [Perth and Kinross Nature Networks - Perth & Kinross Council](#)

Red squirrels are found across the Tayside region, and are a wonderfully charismatic creature to spot in our gardens and woodlands. Sadly, the UK population has dramatically declined from 3.5 million to fewer than 300,000 in recent decades, with around 83% of remaining individuals residing in Scotland. The primary driver of this population decline is the invasive non-native grey squirrel, which outcompetes the reds for food and habitat and can transmit squirrelpox virus which, although harmless to greys, is lethal to red squirrels with a mortality rate of 90-95%.



Image © Keilidh Ewan

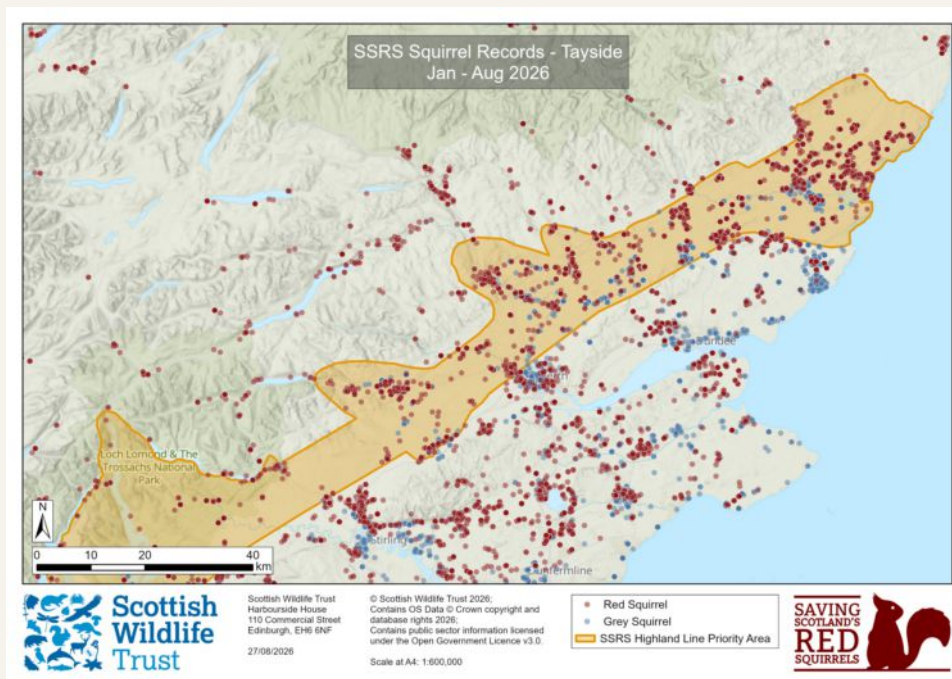
However, there have been recent successes for this native mammal in Tayside, with a dedicated team of staff from the Scottish Wildlife Trust's Saving Scotland's Red Squirrels (SSRS) project working across the area, alongside a network of passionate volunteers. By removing grey squirrels, SSRS staff and volunteers have created areas where red squirrel populations are able to recover, and as a result, residents are now reporting seeing more red squirrels in a number of locations.



Image © Robert Trevis-Smith

On the eastern edge of the Highland Line, the Mearns is a key location as a potential corridor for greys moving northwards towards Aberdeen. Extensive work by SSRS since 2009 has reduced the grey population here significantly. The area is now monitored using a Rapid Response Monitoring system (RRM), which means any grey squirrel detection can be immediately actioned. The Mearns RRM is a network of nearly 200 squirrel feeder boxes which collect hair from any visiting animals. A hard-working team of over 30 volunteers collect the hair samples, which are then analysed using a microscope to determine which species has visited. If any grey hairs are found, SSRS will deploy live traps in the area. Grey detections are extremely low, only a handful per year, and staff and communities have noted an expansion in the range of red squirrels.

South of the Mearns in Montrose, particularly around the Links, red squirrels are being reported more frequently by members of the public. Angus Council planted Scots Pine here a few years ago which have clearly encouraged them in!



In Angus, SSRS has had major success on the Strathmore Estate, with grey squirrel density significantly reduced enough to move to RRM next spring. Lord Strathmore said “We realise how important the Strathmore area is in pushing back grey squirrels, and therefore it gives me immense pride to see the Estate and SSRS working together to achieve this.” Meanwhile the combined approach of active grey control and RRM together in East Angus has reduced grey populations enough that SSRS has expanded further south to tackle the higher numbers of grey squirrels here.

Further afield, in Perthshire, the River Tay acts as a corridor for grey squirrels travelling north from Perth, meaning ongoing monitoring and control work is crucial. In Luncarty, residents have been seeing red squirrels in their gardens for the first time in 20 years! And not far from here, in Lochty, just west of Perth, the SSRS Monitoring and Control Officer for Strathearn met a delighted resident, thrilled to tell him that she has seen a red in her garden for the first time in 15 years.



Image © Raymond Leinster

For more information about SSRS's work, and to sign up as a volunteer, check out scottishsquirrels.org.uk

HUNTING FOR GALLS IN THE ANGUS GLENS

AUTHOR: ANDREW HART
Images © Andrew Hart

Oak trees, often referred to as biodiversity powerhouses, support a far greater diversity of life than any other trees native to the UK. Like self-contained ecosystems, they can provide food and a home to thousands of animal species, with several hundred of these relying solely on oaks for survival. Gall wasps are a fascinating example of this, using the oaks to build galls - unique, cocoon-like growths on trees that provide developing wasp larvae with protection and nutrients. The wasps themselves are usually only millimetres long, and are wind dispersed from tree-to-tree. Once an egg has hatched, the larva releases a cocktail of chemicals that hijack the tree's growth, encasing the wasp in a resilient shell. Galls can then host communities of their own, as wasps and other insects invade the ideal habitats. Although the wasp larva becomes a parasite by draining nutrients from the tree, galls generally don't cause significant damage to its overall health.



Oyster gall (*Neuroterus anthracinus*)

You'll be able to find galls on sessile or pedunculate oak trees between late spring and autumn, and they're usually quite easy to spot too. They take a variety of unique and intricate forms, so keep an eye out for anything on the leaves that looks a bit abnormal. Marble galls and cola nuts commonly grow on leaf buds, and look hard and spherical like a malteser. Another good place to look is on the underside of leaves, along the veins, where galls are mostly ball- or disc-shaped, although figuring out exactly which species these are is sometimes difficult.



Red-pea gall (*Cynips divisa*)



striped-pea gall (*Cynips longiventris*)



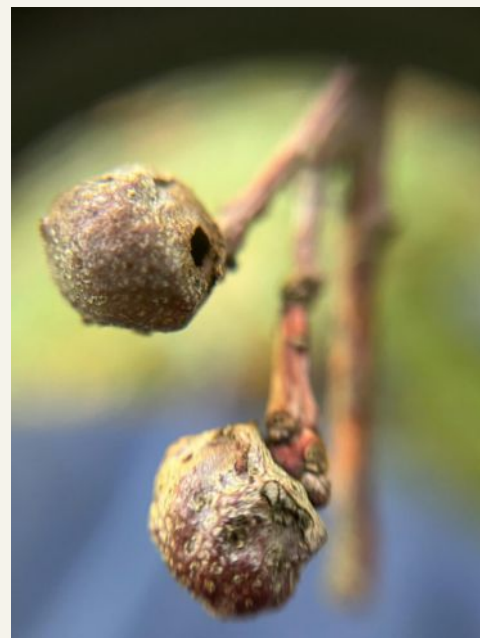
Knopper gall (*Andricus quercuscalicis*)

Understanding why some oak trees host considerably more galls than others can be complex. A key question about parasites such as these is whether infestation is driven by exposure or susceptibility. In other words, are trees with more neighbouring oaks more likely to be colonised because they are easier for wasps to find, or are some trees more vulnerable to infestation than others as a result of their health? Previous research has produced different results, with studies finding relationships between gall numbers and both the number of nearby trees and tree health.

During a field course in Glen Prosen, a secluded valley on the western edge of the Angus Glens, I studied how the density of surrounding oak trees and an oak tree's growth rate (as a measure of tree health) could influence the number of galls found on a branch. In Glen Prosen, Forestry and Land Scotland is planting oak trees as part of a project to restore native woodlands which have been damaged by a history of managed plantations. To collect the data we needed, we sampled 86 branches for galls across areas with different oak tree densities.

So, did the density of neighbouring oak trees or the tree growth predict how many galls we found on a branch? The answer was: both! We found that oak trees surrounded by more oak neighbours not only had more galls, but also a greater diversity of gall species. Clusters of oaks may be easier for gall wasps to find and move between, while also providing a concentrated group of suitable host trees. In contrast, faster-growing trees hosted fewer galls. This may indicate that vigorously growing trees are less suitable hosts for gall-formers, perhaps because they are better able to resist or limit gall development.

The results of our project suggest that the abundance of galls is related to both the number of nearby oak trees and condition of the tree itself. Woodland restoration projects that plant oak trees together, such as in Glen Prosen, could make it easier for specialised insects to get between trees to lay their eggs. Next time you're out by some oak trees, look for the squirrels, beetles, birds, lichens and moss, but also take a minute to look for galls!



Cola nut (*Andricus lignicola*)



Artichoke gall (*Andricus foecundatrix*)



Silk button galls (*Neuroterus numismalis*)



Smooth spangle (*Neuroterus albipes*)

The Phenoweb project is a long-term research project led by a team at the University of Edinburgh, investigating phenology (the timing of seasonal biological events) in blue tits, trees and caterpillars. The project spans 44 woodland sites along a 200 km transect from Edinburgh to Tain, allowing researchers to investigate how the timing of these events varies across Scotland and between years.



I joined the Phenoweb field research team for a week at the start of June, helping to collect data during the peak of the blue tits' breeding season. Several of the Phenoweb research sites run through Perthshire, so it was a particularly rewarding experience to take part in research being conducted in areas where I grew up. As an ecology student, I was really pleased to learn more about this research and to discover how the blue tits in the woods I used to walk through regularly have been monitored over the past 12 years.

During the week I joined the field team, much of our time was spent checking nest boxes and monitoring the blue tits that occupied them. We recorded key events such as nest building, egg laying, incubation and chick hatching. Once the chicks were old enough, they were ringed, weighed and measured, providing information on their growth and development. Adult birds were also ringed, allowing individual birds to be identified and their breeding activity followed in future years.

At each site, researchers also monitor the trees and the insects that provide an important food source for the chicks. The development of selected trees is recorded throughout the season, from bud burst through to leaf development, while branch beating is used to sample caterpillars and other invertebrates living in the trees.

The aim of the project is to record when the blue tits' phenological events occur and understand how the timing of these events varies across latitudes and between years. Researchers can then compare these patterns with changes in the timing of the trees and insects that provide food for the chicks.

One of the key concerns is that the phenology of birds and their food sources could become mismatched. Ideally, blue tit chicks should hatch around the same time as peak caterpillar abundance, when there is plenty of food available for growing chicks. However, if warming temperatures cause trees, caterpillars and birds to respond to seasonal changes at different rates, this timing could become mismatched. This could reduce the amount of food available when chicks need it most and potentially lead to lower fledgling success.

This long-term monitoring project is particularly valuable because it covers such a wide range of latitudes, elevations and types of woodland across Scotland. This allows researchers to investigate differences in the timing of biological events between birds and trees across geographical gradients. As climate change becomes an increasingly important issue, long-term monitoring can help us understand and predict how species such as blue tits may respond to changing temperatures and seasonal conditions.

If you would like to find out more about the Phenoweb project and the work they are doing, please visit their website at phenoweb.org. There, you can also find several publications that have already been produced using data collected through the project.



Image © Richard Turner



Image © Joe Bliss

The Phenoweb project has all the necessary bird ringing licenses issued by the British Trust for Ornithology (BTO), as well as land owner permission.

As part of my MSc at Dundee University on Spatial Planning and Sustainable Urban Design I examined the role of planning in supporting the delivery of Scotland's ambition to become nature positive by 2030 and fully restored by 2045. It explored how nature is being understood and integrated in Scottish planning policy and decision-making and whether nature is viewed as an asset or constraint in planning. It also assessed planners' capacity for transformative change to understand whether planners are agents of change in reversing the nature crisis.

Background

Nature is in crisis, with biodiversity declining at an accelerating rate, threatening both the basic and complex needs that society depends on (IPBES, 2022). In response the Scottish Government has passed the Natural Environment (Scotland) Act (2026) which aims to make Scotland nature positive by 2030 and have fully restored nature by 2045. Achieving this requires a transformational change in how nature is valued and understood, recognising its intrinsic values and how it is placed in society (IPBES, 2022). Planning has an important role in reversing the decline of nature by guiding and controlling land use change and alterations impacting, for better or worse, its wide range of benefits to people (IPBES, 2022; Scott and Kirby, 2024). Planners can play a key part in this change and have been cited as change agents in achieving transformative, nature positive outcomes (Bulkeley et al., 2020).

Conclusions

The results from both the interviews and policy assessment demonstrated that although there has been a steady acceptance of nature's value in the planning system there is still much further to go to fully mainstream nature into all planning decisions. The large variation in results across plans reflect a disconnect from national strategies down to local level which will not create meaningful nature recovery. The most cross cutting finding was that nature is still systematically undervalued relative to economic and technological priorities. This does not reflect a truly nature positive approach that will be required to meet the statutory targets of the act. A radical shift in how nature is viewed and valued is required throughout society and in planning practice to reach these global targets (IPBES, 2022). Planners often were equipped with the positive attitudes towards nature recovery, but skills were varied when dealing with ecological focused decision making, and multiple institutional and capacity barriers were identified which will lead to uncertain outcomes for nature. This study recommends that nature should be mainstreamed into all areas of planning policy and practice, recognising nature for its intrinsic value beyond only economic purposes. This could be done by creating stricter policy wording and creating environmental implications additions onto all policies to further mainstreaming nature into the planning process.

Hedgehogs are one of my personal favourite garden visitors. They arrive at night, using overgrown areas of grass, hedges and other sheltered spaces to forage for beetles and other invertebrates. Their presence in urban and suburban environments makes this charismatic animal a great ambassador for citizen science and nature conservation. Hedgehogs can help make biodiversity conservation more accessible, encouraging people to create wildlife-friendly gardens and habitats because who wouldn't want a hedgehog to visit their garden?

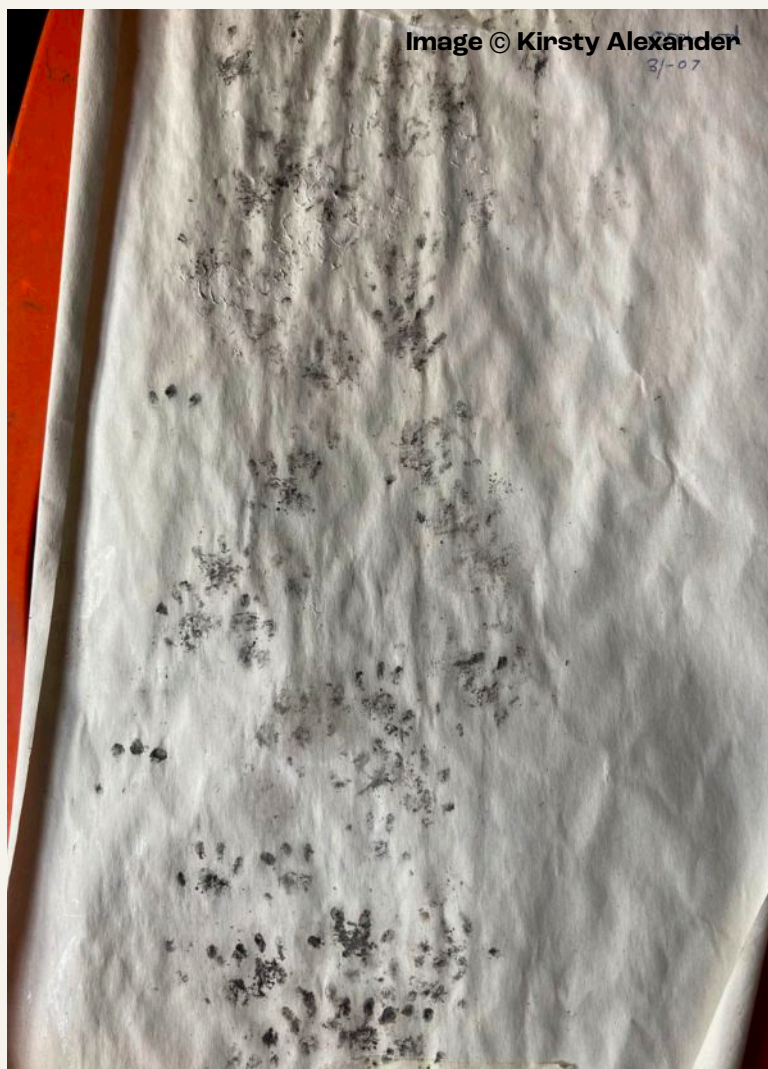
It is fortunate that hedgehogs are so well loved, as their numbers have been declining across Britain. There are several factors contributing to this decline, including habitat fragmentation, changes in land management and predation. Roads are also an important threat, particularly because hedgehogs are nocturnal and often have to cross roads while foraging. Their small size can make them difficult to spot on dark roads, so taking extra care when driving at night can help reduce the risk of collisions.



Two hedgehogs spotted in a garden Auchterarder

The Auchterarder Hedgehog Highways Project has aimed to harness people's interest in hedgehogs and recruit local volunteers to help monitor the population in the town. The project began in November 2024 and, as a two-year project, is now coming to an end. One of its aims has been to encourage residents to create hedgehog highways: gaps in garden boundaries that allow hedgehogs and other wildlife to move freely between gardens. Improving access between gardens not only increases the resources available to hedgehogs, but can also provide safer routes through urban areas.

Over the past two summers, volunteers have helped us map hedgehog activity using footprint tracking tunnels and trail cameras in gardens and other green spaces. This has allowed us to identify areas that appear to provide particularly good habitat and food resources for hedgehogs.



One notable hedgehog hotspot has been the grounds of Ochil Tower School. The school grounds contain a range of features that provide valuable habitat for hedgehogs, including wild corners for foraging, large trees with sheltered root systems, ponds that provide a source of water during warmer weather, and compost heaps that can provide places for hedgehogs to shelter during the day. The grounds are a great example of how creating a variety of habitats can benefit not only hedgehogs, but a much wider range of wildlife too.

Hedgehog footprints from Ochil Tower school

As the project comes to an end, we hope that the workshops and drop-in events held throughout the town have helped raise awareness of hedgehog conservation and encouraged practices that can continue in local gardens and green spaces. By creating connected, wildlife-friendly spaces, local communities can continue to make a real difference for hedgehogs and other urban wildlife.

If you spot a hedgehog, we encourage you to share your sighting on the **Big Hedgehog Map**: <https://bighedgehogmap.org/holes-for-hedgehogs-home/map-hedgehog-sighting>. Every sighting helps build a better picture of where hedgehogs are found and how they are using our towns and gardens.

PONDS FOR PUDDOCKS 25/26

AUTHOR: DANIELE MUIR (TAYARG AND PERTHSHIRE WILDLIFE)

Phase 4 of the Tayside Ponds Project/ Ponds for Puddocks took place over autumn and winter 25/26, with previous phases having taken place from winter 2021/22 onwards, thanks to funding from ScotGov's Nature Restoration Fund (NRF). The aim of the NRF is to restore wildlife and habitats on land and sea and address the twin crises of biodiversity loss and the climate emergency.

The project involved carrying out practical on-the-ground habitat enhancement and restoration work with volunteers, clearing invasive vegetation, creating different depths and zones within each pond and planting locally-grown native pond plants and wildflowers.

These actions are part of the Council's commitment to biodiversity as set out in the Tayside Biodiversity Partnership's Action Plan 2nd Edition (2016-2026).

We worked on six ponds across Blairgowrie, Perth, Inchtute, Abernethy and Murthly with different groups of wonderful volunteers from TayARG, SSSSEN and Aviva. Most of the work involved removing Bulrush from ponds to create more open water for amphibians to spawn in, along with planting native wetland wildflowers for pollinators. We had a real treat at the pond in Inchtute where there were hundreds of clumps of frogspawn! And a Heron waiting nearby to feed on the spawning frogs.



Images © Daniele Muir

Additionally, we ran a Toads on Roads training workshop in Bankfoot, where Great crested newts had been recently found in roadside drains, along with two Amphibian ladder workshops. The Toads on Roads involved ID training of our commoner amphibians, health and safety around rescuing them from roads and recording animals found. The Amphibian Ladder Workshops took place in Kirkmichael and Alyth, where numerous amphibians and other wildlife, had been getting trapped in gullypots. With a lot of help from volunteers, we made and put many ladders in gullypots to enable trapped wildlife to escape.

Huge thanks to everyone who has helped with the project – hundreds of lives have been saved as a consequence!

GETTING TO KNOW YOUR GRAVEYARD DAYS

AUTHOR: CATHERINE LLOYD

Images © C A G Lloyd

Over late summer and autumn, the Tayside Biodiversity Partnership has been working with the Perth & Kinross Council Ranger Service to run a suite of exploratory days. These have been made available to the twenty Friends of Cemeteries groups who volunteer in their local graveyards, but have been open to anyone with an interest in graveyard wildlife.



The programme for the day has been very varied and each event has been slightly different to the previous one. Participants have been able to find out more about swifts, bats, amphibians and reptiles, as well as find out more about citizen science opportunities such as the FIT Count (Flower-Insect Timed Count), the BTO Birds in Greenspace Survey and Plantlife's Waxcap Watch. In two of the events lichenologist Petra Vergunst from Aberdeen has given not only an introductory talk, but an hour's ID training in the graveyards themselves. The same goes for another two events with Cathy Caudwell setting up her moth trap the night before and then inviting participants to find out more when they first arrive for the day.

The Ranger Service has been running scything demonstrations and there has also been a talk on how to install bat roosting boxes and bird nest boxes. All this fits in with the council's Grow Wild campaign in its greenspaces and links to the Partnership's long-running Green Graveyard Initiative. The last event will take place in Blairgowrie on 10th October – everyone is welcome. Places must be booked beforehand via [Getting to Know Your Graveyard Event \(Hill Kirk\) Tickets, Saturday 10 October • 9:30 AM - 4:30 PM | Eventbrite.](#)

Using these days as a precursor, 2027 will see a programme of events being offered right across Perth & Kinross, again fitting in with the council's Grow Wild campaign, but also with a focus on citizen science surveys, learning about biodiversity and the potential for volunteering. Several BioBlitzes will be hosted, plus a series of species days where we hope specialists can run small events in the county's larger parks and graveyards. If anyone would like to help with this, or offer their time as a species specialist, please contact Catherine this autumn or winter: caglloyd@pkc.gov.uk.

FINAL NOTES

Useful National and International Websites

The State of Scotland's Nature 2019 - [State of Nature Scotland 2019 - Scotlink](#)

United Nations – Biodiversity - [Biodiversity | United Nations - CEB \(unsceb.org\)](#)

Considerable Change Needed to Stop Nature Loss (September 2023) - [Considerable change needed to stop nature loss in Scotland | NatureScot](#)

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](#)

National Biodiversity Network - [National Biodiversity Network \(nbn.org.uk\)](#)

Perth and Kinross Council - [Nature Networks](#) -

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. A special 'thank you' is owed to Elena Barbary for skilfully taking on the task again this year and creating yet another bumper issue full of interest. Thank you Elena.

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 2027 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](https://www.taysidebiodiversity.co.uk/wp-content/uploads/2022/09/2022-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

- 2025

<https://www.taysidebiodiversity.co.uk/wp-content/uploads/2025/09/TaysideRecorders25.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 2026 Bulletin was researched, compiled, and edited by Elena Barbary (The University of Edinburgh) for the Tayside Recorders' Forum Summer 2026

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