



Tayside Recorders' Forum

2021 Tayside Recorders' Bulletin





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Global, National, Local – The Pace is Quickening

Catherine Lloyd

Last year was supposed to be one of the most important yet where the final year of the United Nation's 'Decade on Biodiversity' was concerned. It may have coincided with the growing biodiversity and climate change crisis, but because of Covid-19, the Convention on Biological Diversity Conference was cancelled. It is now scheduled to take place in China this year where a draft Global Policy Framework will be pored over by 196 countries and the final version will replace the 2010 Aichi Biodiversity Targets. The new decade will be the 'U.N. Decade of Ecosystem Restoration'. We don't have a minute to lose.



Closer to home, the 'Edinburgh Declaration on the Post-2020 Global Biodiversity Framework', sets out the Scottish Government's commitment in delivering for nature in the future. It is not working alone - there is a suite of Edinburgh Process partners. The document can be downloaded from: <https://www.gov.scot/publications/edinburgh-declaration-on-post-2020-biodiversity-framework/>.

In addition, Scottish Environment LINK has recently produced its report 'Scotland's Biodiversity & Its Conservation' - <https://www.scotlink.org/publication/scotlands-biodiversity-and-its-conservation/> to provide a wider context to biodiversity issues, including the development of relevant law and policy at international, European, UK and Scottish levels. This accompanies the publication of LINK's report 'Still Delivering the Goods'. These two reports hope to highlight the urgent need for a step change in funding, together with an effective policy framework and essential partnership working for biodiversity conservation. We have known for years that working together is the best way forward, but such is the scale of issues now arising, to halt, or even reverse, the increasing biodiversity decline shows just how vital this will be in the future.

All these immense global biodiversity issues, coupled with the crisis getting ever closer to home, makes it everyone's business. We can no longer leave it to others, organisations, 'the government' to sort things out. If we don't have the data to back up the science, we can't decide which direction is best. It brings it down to all our individual interests, whether these are undertaken for work or in our spare time; suddenly all our various surveys and recording efforts are becoming ever more important. We are creating (and ultimately providing) the baseline to making the big decisions.

With lockdown came the indirect opportunity to go online and we have all been fortunate to enjoy many high-quality webinars and training workshops. We may have had to curtail surveys in 2020 but 2021 will hopefully be a year for making plans and getting "out there" again to continue as many surveys as possible, even if it means major social distancing or lone surveys.

There has also been a surge of interest in how people of all ages and abilities can take part in wildlife surveys from the comfort of their own garden or nearby park. This is where we come in. Our scientific



surveys will continue, but there is a need to ensure that those keen on taking part in simple citizen science surveys are catered for. We can all help with this to spread the word, but there are likely to be issues where the experts are too thinly spread and cannot attend every BioBlitz or survey launch they are invited to. Those communities or groups asking for help may not be able to reimburse travel costs, let alone a fee to the expert if this is needed. A centralised system would be useful to encourage everyone to help everyone else, but who would set it up and how would it be funded? We have also long known that recorders are too few in number, so this still needs to be addressed – and is becoming ever more urgent. There is much to discuss to ensure as many people are engaged in undertaking or helping with surveys as quickly as possible. A case of “please discuss” within the Recorders’ Forum perhaps?

Finding Tayside’s Secret Butterfly

Chris Stamp

During 2020, the Purple Hairstreak’s status in south Tayside changed from ‘rare’ to ‘common’ in just a few weeks. This is probably not because the butterfly suddenly spread from its very few known oakwood strongholds, but rather because a small number of recorders discovered that it could be found anywhere that there are mature pedunculate (common) oaks, including urban areas and in hedgerows.



Two photos in article © Colin Edwards

The key is understanding its unusual (for a butterfly) habits – it flies mostly in the evening between 5pm and sunset and colonies keep



to the tops of mature oak trees, appearing as fast-moving silvery specks against the green canopy. Binoculars are initially helpful for an identification, until you learn to recognise it from its flight and behaviour.

It may be present in suitable habitat throughout Tayside, largely undiscovered, so keep an eye out around large oaks on warm evenings in late July through to the start of September.

The National Plant Monitoring Scheme: A short introduction

Dr Oliver Pescott

The National Plant Monitoring Scheme (NPMS) was launched in 2015 as a new initiative for collecting robust data on plant species in semi-natural UK habitats. This was the culmination of a lot of work by the Botanical Society of Britain and Ireland, Plantlife, the UK Centre for Ecology & Hydrology (UKCEH) and the Joint Nature Conservation Committee (JNCC) over the preceding years (e.g. Walker et al. 2010). The key elements of the scheme from a surveyor’s perspective are as follows:



- Recording is based on a stratified, weighted-random sample of 1 km squares, selected so that, on average, surveyed squares will have a higher chance of containing the semi-natural habitat types targeted by the scheme. Squares are available to recorders once they register for the scheme, and are also publicly displayed on an interactive map on the website (www.npms.org.uk).
 - Within each square, recorders are asked to record species abundance (in terms of % cover) within 5 small plots (usually 5 x 5 m) in a range of semi-natural habitat types. To minimise biases in plot selection as far as possible, surveyors are provided with a gridded set of up to 25 mapped plot locations from which to select at least 3 plots for survey. This step is only required during the first visit to a 1 km square, with the selected plots forming a permanent basis for future monitoring. Linear plots (e.g. for hedgerows, streams, or arable field margins) are also included in the scheme and setting up plots in these habitats also has a simple methodology associated with it. All survey guidance and forms are available on the scheme website at www.npms.org.uk/content/resources
- 
- A colleague helping to survey an NMPS plot*
© Oliver Pescott
- Surveyors can adopt more than one 1 km square if desired, enabling a rotation of visits between years, e.g. if one has two squares one could visit them in alternate years. Gaps between visits are also accommodated where squares may be remote.
 - The fixed plots are intended to be re-locatable (but not permanently marked) by others, so photos, sketch maps, the digital creation of a plot location on an interactive map on the website, and, ideally, GPS co-ordinates are all collected for sampled locations.
 - Within plots, recorders may choose to record all species, or just a subset of c. 400 habitat indicators (roughly 30 indicators per habitat type). The habitat indicators include a subset of 'easy-to-identify species to encourage participation. Species and habitat lists are also available on the website under the resources link above; the survey guidance booklet also includes an excellently illustrated guide to the UK habitats included in the scheme.
 - Many other resources are available through the website, including various species ID cribs, YouTube videos and PowerPoint presentations on habitat identification, as well as newsletters from every year of the scheme to date. The last newsletter, for winter 2020, is of particular interest, as this includes an overview of the first set of UK habitat indicators created using scheme data; these were published last year as experimental indicators in the Defra/JNCC UK Biodiversity Indicators publication. See <https://rebrand.ly/c7indicator> for more information.



If you are interested in taking part in the scheme, please see the website to register, or contact the coordinator at support@npms.org.uk. As noted above, the website also shows where squares are available, and allows available squares to be requested by surveyors.

Oli L. Pescott, Biological Records Centre, UKCEH Wallingford, Maclean Building, Benson Lane, Crowmarsh Gifford, Oxfordshire, OX10 8BB

References

Walker, K.J., Dines, T., Hutchinson, N. & Freeman, S. 2010. *Designing a new plant surveillance scheme for the UK*. Joint Nature Conservation Committee Report No. 440. JNCC, Peterborough.

Tayside Swifts Update and a Plea for Surveying Help

Catherine Lloyd & Daniele Muir

It is 20 years since the first swift surveys began in Tayside and we still feel as though we have only just begun. Much has been achieved in raising awareness about this ever-declining species, but if we don't know what we are losing and where, the situation is only going to get worse. It does not help that our swifts may be Scottish born but as they only spend three months here, they are often perceived as "birds from Africa" which implies they are not our problem. We have a long way to go to turn this round.

The new summary document outlines what we have achieved in Tayside to date: <https://www.taysidebiodiversity.co.uk/2021/02/23/swift-summary-report-2021/>. For minimal funds we have made a very good start, namely:

- 269 nest boxes have been erected across numerous small-scale projects
- We have worked with 36 businesses and 8 church groups
- 15 schools have each received a swift nest box for their building
- Within Perth & Kinross Swift Conservation Projects have been undertaken in the Carse of Gowrie, Pitlochry, Strathearn, Stanley, Kinross, Crieff and Tay Landscape Partnership area
- In Angus similar projects have taken place in Forfar, Kirriemuir, Edzell and Carnoustie

We are now looking to raise awareness beyond our shores, working with schools in Africa and to twin them with our local schools. We rely heavily on volunteers, local communities, and individuals. One of the easiest things anyone can do is to add all sightings of swifts to www.swiftmapper.org.uk, the RSPB's latest App. We also urgently need individuals who can 'adopt' their local area to survey existing nest sites and suggest new sites for nest boxes. If you can help with this, please contact either Catherine at caglloyd@pkc.gov.uk or Daniele at DMuir@taysideswifts.co.uk. We can provide you with maps and general advice.

In particular, if anyone can spare a few evenings during the summer in Forfar, as part of our latest Angus project, we need help with surveying for swifts. You can choose a few streets to watch for screaming parties and potential nest sites. We also have a number of nest boxes looking for homes



in the town so if you have a building which is over 4.5m high, not south facing and with a clear flight path, please contact Daniele direct at DMuir@taysideswifts.co.uk.

Last year we had planned several Swift community events in both Crieff and Forfar, along with the erection of many nest boxes in both towns. Unfortunately, these didn't take place, but we did manage to find new swift nest sites and screaming parties in Crieff and carried out a nest site survey of some of Forfar's town centre. We also managed a socially distanced guided walk/ survey training session. The highlight of the Forfar survey was finding a nest site with a swift chick peering out at the world! The nest boxes will now go up in both towns this year.

We urgently need funding to continue offering free advice and nest boxes to local communities so we would greatly welcome donations, large or small, via our PayPal Fund – <https://paypal.me/pools/c/8v4V2zA0t9>. Just £10 will make a huge difference. If you know of a local business which might like to become a Business Champion for Swifts, please let us know so that we can contact them and forward an information pack.

Butterfly monitoring in Tayside: help needed!

Anthony McCluskey

This year we are appealing again for volunteers to help monitor butterfly populations in Tayside. Reports on butterfly numbers indicate that about three quarters of species across the UK are in decline. For decades, people have been monitoring butterfly populations and reporting the numbers through the UK Butterfly Monitoring Scheme, and most people record butterflies on Butterfly Transects. These transects are 1-2km routes which are walked once per week between the beginning of April and end of September – 26 weeks in all.

It can be a large commitment for one person, but many transects are now walked by small groups of three or four people, meaning that each person only does the walk once a month or so.



Orange Tip on Bluebell © Iain H Leach

We desperately need more help with transects in Tayside! Unfortunately, there are fewer transects in some parts of Scotland than we would like. This means that the trends for butterfly populations may only reflect what's happening in places like Edinburgh and Glasgow, where there are many transects in a small area. But we know that Tayside is not the central belt, so we need to get more transects and transect walkers here, otherwise we risk this region being under-represented in the statistics. Here's a summary of where we're at with transects in Tayside.



In Dundee there are two existing transects, at the Dighty Burn near Broughty Ferry and at Dundee Law. Both transects have been very well-walked the past few years but could always do with more help. Fife is relatively well-represented with transects at Tentsmuir, Auchtermuchty Common, Lochore and Loch Leven.

We need more transects in Angus. The long-running transect at St. Cyrus continues to yield important information on a wide variety of species, but the rest of that region is seriously under-represented – there's only one other transect, as Crombie Country Park. If you live in Angus, or can visit regularly, we would really like to hear from you if you would like to establish a new transect. You can set one up anywhere, and we can assist with the whole process.



Pearl-bordered Fritillary on Bugle © Gilles San Martin

The same goes for Perth. We have transects along the cycle network at the North Inch in Perth and Dunkeld, but these are only walked a handful of times each year – both need extra walkers to help fill the gaps.

In Highland Perthshire we have some important populations of priority species like Mountain Ringlet, Pearl-Bordered Fritillary and Northern Brown Argus. These species require a slightly more targeted approach than a general transect, but if you're interested in monitoring them please

contact me and we can work together to find a site close to you where you can count these butterflies. **For priority species we encourage people to attempt a single-species transect which only needs to be walked for the flight period of that species, so it can be as little as four weeks!**

To book a space on a workshop visit the Butterfly Conservation Scotland Events Page at: www.butterfly-conservation.org/events/scotland or contact me about transects by emailing amcluskey@butterfly-conservation.org.

Mind the Gap Project - How You can Help

Catherine Lloyd

Anyone can become a Hedgehog Champion and the Hedgehog Street website is well worth exploring - <https://www.hedgehogstreet.org/>. **If you have seen a hedgehog recently, please add the details to the Big Hedgehog Map** - <https://bighedgehogmap.org/> and make sure your garden is part of a "hedgehog highway" by creating a CD-sized gap in the fence or hedge so that hedgehogs can come and go as they forage. The 'all about hedgehogs' pages are a very useful resource if you have any questions: <https://www.hedgehogstreet.org/about-hedgehogs/>.

Although Covid-19 scuppered plans to complete the Carnoustie & Barry Mind the Gap Project, we are still helping to raise awareness about gardening for hedgehogs and ensuring as many people as



possible within these communities have an opportunity to be part of the project. Two more Mind the Gap projects will be undertaken as part of the Biodiversity Villages projects – in Guildtown and St Madoes. In Scone, we are working with A&J Stephen Builders to help raise awareness not just about hedgehogs, but also ‘neat and tidy’ wildlife gardening (yes, it’s definitely possible!) and working with householders to make hedgehog highways. If you can suggest any new developments which could include hedgehog highways, please contact Catherine at caglloyd@pkc.gov.uk.

Recording Help Needed at Taymount and Five Mile Woods

Elspeth Coutts

West Stormont Woodland Group (WSWG - pronounced Wizzywig!) is working to bring Taymount and Five Mile Woods near Stanley and Bankfoot in Perthshire into community ownership by acquiring them from Forestry and Land Scotland through their Community Asset Transfer Scheme (CATS).

Since 2018, WSWG has been developing proposals for the woods through extensive networking and community engagement. An on-line Community Consultation ran until 19th March, the results of which will inform the final Proposal and Business Plan which will support the CATS application, hopefully later in 2021.



WSWG Vision: “Window on the Woods”

Biodiversity is a key theme in the WSWG project and, if we are successful in bringing Taymount and Five Mile Woods into community ownership, it is our wish to establish an ongoing survey programme as routine to both establish baseline data and monitor species and habitats in the woods as our management and improvements progress. It is envisaged that this will involve a mixture of formal survey and community engagement/citizen science.

We are keen to undertake a Bioblitz to start engaging and enthusing the local community, adults and children alike, in this vital part of understanding, appreciating, loving and helping our natural

environment. However, we were too late to organise a Bioblitz in 2019 (although we bug-hunted and identified wild flowers in Forest School!), Covid-19 prevented it in 2020, and so we are hoping very much we will be able to pull one out of the bag during the summer of 2021!





Although these woods are fundamentally mixed conifer plantation of commercial origin, their site characteristics, land-use history, recent management and other environmental circumstances have combined to produce surprisingly interesting and diverse woodland and other habitat which we wish to allow and help develop for significantly enhanced biodiversity over the coming years.

So, this is a direct appeal from WSWG to Tayside Recorders to be part of our amazing and ambitious project: **would it be possible to put together a small group of recorders to work with WSWG to plan, organise and deliver a (Covid-compliant) Bioblitz in Taymount and Five Mile Woods during the summer holidays in 2021?**

I really hope we can. The ecological value of these woods is crying out to be properly represented in our bid to hold and look after them in perpetuity. For people and for planet. If you can help in any capacity, please contact the Group via contact@weststormontwoodlandgroup.scot.

Elspeth Coutts
Secretary, WSWG Steering Group
www.weststormontwoodlandgroup.scot



All photos in the article © Elspeth Coutts & Nicky Bolland

Small Blue Butterfly Update

Glyn Edwards

As with so many other training sessions and surveys, 2020 turned out to be a strange year with lockdowns and travel restrictions. Some on-line training was carried out by Anthony McClusky and some Kidney Vetch planting sessions did thankfully take place.

Last year's spring weather, leading up to the Small Blue flight season, was warm and sunny and the first sightings were actually on 31st May. The warm, dry weather led to some patches of Kidney Vetch becoming shriveled and whilst these recovered with the rains in early June, it is not known if this will impact on the breeding success of the butterfly. Sites that were surveyed for Kidney Vetch towards the end of last June confirmed it was a good year for the plant.



Small Blue © Glyn Edward



A review of the individual sites is given in the 2020 Small Blue Newsletter which can be downloaded from <https://www.taysidebiodiversity.co.uk/wp-content/uploads/2021/02/SMALL-BLUE-2020-002-GE-CL-FINAL-25-2-21-1.pdf>. Thanks to everyone who sent in records, grew Kidney Vetch plants, and helped plant them out.

Events for 2021

Hopefully we will be allowed to undertake as much surveying as possible, as well as some Kidney Vetch planting at Elliot Links. There will be new interpretation panels placed at Carnoustie; these have been kindly funded by a Carnoustie Golf Links Community Benefits grant. The main activity will centre around the new Species on the Edge project where we hope to increase the number of surveyors and site visits to establish an accurate status of the current Small Blue distribution on the Angus Coast. It is also hoped a summer student will undertake baseline monitoring and mapping of Kidney Vetch abundance at every accessible site.

If you would like to help with the Small Blue surveying or planting of Kidney Vetch during 2021, please contact Glyn Edwards at perthshirebutterflies@eastscotland-butterflies.org.uk.

Share your Angus & Dundee Whale and Dolphin Sightings

Kelly Ann Dempsey

Do you explore Angus's coastal wildlife sites regularly? Did you know you can report your whale and dolphin sightings to an Angus-based community led conservation and tourism project specialising in recording cetaceans in Angus waters?

Now in its 10th year Marine Life Angus continues to promote Angus coastal sites and species, facilitates local beach cleans, leads coastal whale and dolphin spotting walks, and collects valuable sightings data. This data, gathered by the public, has proved critical to understanding how important Angus waters are

for cetacean species. Sightings have been used to create a [guide to land based viewing](#) and to provide a Realtime opportunity to see cetaceans on the Angus coast. A WhatsApp group 'Angus Cetacean Sightings' – inspired by the successful Shetland Orca watching group – has been set up for Angus residents and visitors.

Marine Life Angus also aims to publicise other local recording and volunteering schemes including local butterflies, maritime plants, and marine non-native species. The website www.marinelifeangus.co.uk will be updated in 2021 and you can follow the twitter account [@marinelifeangus](https://twitter.com/marinelifeangus).



Dolphin watching in Montrose Bay, Angus © Kelly Ann Dempsey



Since the project began there have been regular sightings at locations on the Angus coast of species including bottlenose dolphins, minke whale, porpoise, common dolphin and even humpbacks whales at Montrose Bay.



Sightings are always welcome, and the group encourages those regularly out on the coast or on inshore waters to regularly report what they see and encourage others to do so. Please contact info@marinelifeangus.co.uk for further information on how to get involved.

Bottlenose and baby © Claire Lacey

Snowdrops for Pollinators

Catherine Lloyd

Although snowdrops may not be the best flowers for helping early pollinators, they are very helpful in filling the hunger gap if there is a mild patch of weather in late winter. Planted near other early flowering spring plants such as aconite, crocus, primrose, muscari, and squill they not only cheer us up in early spring but can be a real lifeline for bumblebees. The only native British wild daffodil, the Welsh or Tenby daffodil, can also be added to the list but not daffodils per se which are not much good for our wildlife except that the grass can be left a bit longer around them!

Our first Snowdrops for Pollinators planting was part of the St Madoes Biodiversity Village project with the local community socially distancing but still planting 1,000 'snowdrops in the green' in the churchyard. This was the first of spring flower planting on banks and around trees in other Perth & Kinross churchyards as part of the Tayside Green Graveyard Initiative.

We are also looking into helping pollinators in graveyards further into the season – more details on this later. **If, in the meantime, anyone is willing to undertake surveys in churchyards, please let us know – in particular we need help with amphibians, lichens, invertebrates, vascular plants and trees.**

The Partnership's leaflet is here: <https://www.taysidebiodiversity.co.uk/2015/02/03/green-graveyards-initiative/>.



Volunteers planting snowdrops and aconites, St Madoes © Kate Barron



Angus and Perth & Kinross Local Nature Conservation Sites

Robert Wills

The Local Nature Conservation Sites project is a broad collaboration with the purpose of identifying local geodiversity sites and local biodiversity sites for protection in local planning policy.



The local Geodiversity Sites project, supported by the expertise of NatureScot and Tayside Geodiversity, is progressing well with a good proportion of surveys complete in Perth & Kinross, thanks largely to the efforts of Dr Carol Pudsey. A good start has also been made in Angus, with progress to step up once travel restrictions are lifted.

Bennybeg © Robert Wills

We are also well on the way to identifying survey requirements for local Biodiversity Sites, a project supported by NatureScot. We are benefiting hugely from the expertise of the BSBI, with all the vice-county recorders helping - especially Liz Lavery and Robin Payne. This work is also being supported by the contributions of the RSPB, Forest & Land Scotland, BTO, British Dragonfly Society and a number of Tayside recorders with specialist knowledge of plants, lepidoptera, odonata and bats. We have benefited hugely too from records that have been loaded onto the NBN Atlas - but local knowledge of sites has been, and continues to be, vital.



Portmoak Moss © Robert Wills

Local Biodiversity Sites may present good opportunities for recording once they are designated and any recording will help monitor their condition. Surveys will be required for the assessment of many of these sites, but owing to ongoing restrictions these are likely to be limited in the scope of the survey and the number of people that can be involved. Where opportunities arise, it would be invaluable

to be able to get in touch with the relevant experts who can advise on a local site or potentially help record it. We have had some interest already and would encourage any other experienced surveyors willing to share their expertise to get in touch. To find out more, please contact us at the following: Robert Wills in Perth & Kinross (robertwills@pkc.gov.uk) and Stewart Roberts in Angus (RobertsS@angus.gov.uk).



Scottish Biodiversity Information Forum Update

Jonathan Willet

The Forum has been a little quiet of late, but that is because we have been very busy! Rachel Tierney, the previous SBIF Development Officer, gave birth to a healthy baby boy in early January. This small matter(!) did not get in the way of the submission of the new funding application to NatureScot which was submitted before the Christmas break, just before Rachel went on maternity leave. Rachel and Gill Dowse did a power of work to get it over the line; I did my bit too.

'Who is this I'? Jonathan Willet, the new Development Officer. I started in early November 2020, courtesy of funding from NatureScot who extended the Development Officer post until March. The main reason for the post's extension was to provide continuity in dealing with funders and partners, and to undertaking future planning so that the new project can start in April (funding permitting).

I don't come into the role of SBIF Development Officer cold; as some of you may know I have had a twenty-year plus involvement with biological recording in Scotland and have been closely involved in the development and evolution of SBIF since its very beginning.

The new project proposal we submitted in December was a reaction of the failure of the full SBIF Infrastructure Project to secure funding. An ask of £15million over 5 years from our sector was exceptional and this bid coincided with the COVID-19 pandemic, meaning ambitious new projects not addressing the pandemic were not a focus for the Scottish Government. However, there was enough interest in the proposal to encourage SBIF to submit a more targeted project proposal addressing the highest priority action, that of ensuring the continuity and accessibility of the Scottish LERC (local environmental recorders centre) and recording group data.

SBIF still believes the full Infrastructure Project is the way forward, but it may take a series of steps to see it fully realised. In the meantime, the new project will be a two-year initiative that seeks to deliver three key actions by its completion:

1. To facilitate the closer working of the LERCs and Recording Groups in Scotland and the signing of a formal agreement to do this.
2. To create a single species record database for Scotland's LERCs and manage a phased transition from regional databases to this. By doing so we will secure the long-term future and accessibility of databases whose long-term future is uncertain.
3. To provide a single, standardised data product that is available nationally to aid land management decision making.

Another change in the focus of this project is that it would seek to generate income from supplying this data product. This would allow the project to start to cover its operating costs. One particular principle of the project is to not impinge on the current income streams of the existing LERCs in Scotland.



We believe that there is a legal requirement for better utilisation of biodiversity data by public and private bodies. If you have seen the [Position Statement](#) on National Planning Framework 4 you will know that it has an enormous, tacit requirement for a great deal of specific biological data products to make sure it is delivered. There are untapped income streams existing nationally and locally for supplying these data products.

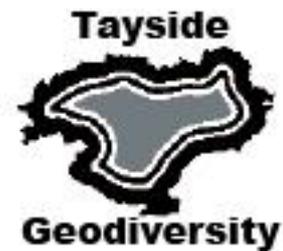
We should hear about the outcome of our funding bid soon so please check social media for an update. The future beckons with the promise of exciting times ahead.

Jonathan Willet - jwillet@scottishwildlifetrust.org.uk

Geodiversity Website Review

Catherine Lloyd

We have been fortunate, over the past decade, to welcome many University of Dundee students who can offer 30-hour placements as part of their studies. This year, because of Covid-19, we welcomed nine students (rather than the more normal one or two) and they have been immensely helpful in a myriad ways. One such student, Laurie, is a second-year environmental science student: she gamely took on a review of both the Tayside Biodiversity Partnership's geodiversity website pages and the newer Tayside Geodiversity website (<http://www.taysidegeo.org.uk/>), as well as checking how well the various social media platforms are helping to raise awareness about the subject. She says of her experience:



"In making suggestions for improvements within my review of the two websites, I have found strengths and weaknesses from both and have made recommendations for additional information and links to other geology-specific websites as well. This experience is allowing me to branch out and learn more about the local geology and also the importance of a clear and easy to navigate website for any organisation, whether it be on a national or international level. The internship has been really enjoyable and I look forward to seeing what changes are made based on my findings."

The Tayside Geodiversity Action Plan can be seen here - [Tayside Geodiversity – Introduction – Tayside Biodiversity](#).

Mountain Hares and Recording Mammals

Catherine Lloyd

Following the publication of the Red List which classes Mountain hares as 'Near Threatened', as of 1st March this year, the species has become a legally protected in Scotland. It is now illegal to intentionally kill, injure or take Mountain hares at any time unless a license is obtained. The decision for such legal



protection was influenced by the findings in “The Review of the Population & Conservation Status of British Mammals”. This came about by the efforts of volunteer surveyors and a huge input by the Mammal Society itself. Real conservation in action.

On 22nd March the Mammal Society launched its National Volunteer Mountain Hare Survey of Scotland so check <https://www.mammal.org.uk/>. In their recent online Newsletter, **the Society also asks for help in keeping track on how Britain's mammals are faring. The best way to do this is by using the Mammal Mapper app:** this can be downloaded from <https://www.mammal.org.uk/volunteering/mammal-mapper/>.

Anglers’ Riverfly Monitoring Initiative (ARMI)

John Clayton

The Riverfly Partnership is a dynamic network of organisations, representing anglers, conservationists, entomologists, scientists, water course managers and relevant authorities, working together to protect the water quality of our rivers, further the understanding of riverfly populations and actively conserve riverfly habitats. The Riverfly Partnership is hosted by the Freshwater Biological Association.

The Partnership’s certificated tutors deliver one-day workshops to volunteers and host organisations committed to establishing a group to monitor the biological water quality of their local waters.



Riverfly surveying © Riverfly Partnership

Anglers are natural guardians of the river environment and are in an ideal position to monitor the health of the watercourses they fish, by using the riverflies they aim to imitate with their artificial flies. Many angling and other interested groups are keen to carry out health checks on their waters. The Riverfly Partnership spearheads an initiative to help conserve the river environment, providing a simple monitoring technique for groups to use to detect any severe perturbations in river water quality. They are then put in touch with the local Ecological Contact in the appropriate agency, in our case Scottish Environment Protection Agency (SEPA).

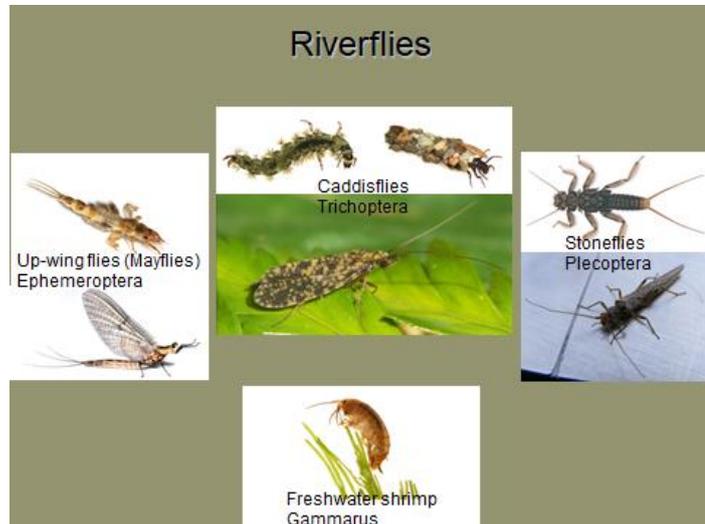
The monitoring scheme, used alongside routine monitoring by SEPA, ensures water quality is checked more widely and action taken at the earliest opportunity should issues be detected. The monitoring also acts as a deterrent to incidental polluters. Successful schemes are underway within catchments in England, Wales, Scotland, and Ireland.



Organisations interested in joining the initiative must have an individual prepared to act as a local co-ordinator (to act as a contact point between SEPA and the monitoring group) and attend an official Riverfly Partnership workshop, run by an accredited Riverfly Partnership Tutor.

ARMI volunteers learn to identify eight key groups of riverflies and to record their estimated abundances and then enter this information into a national database. The riverfly groups that are recorded are made up of four mayfly families, the order *Plecoptera* (stoneflies), caseless caddis flies, cased caddisflies and one non riverfly – the freshwater shrimp.

In Scotland SEPA ecologists should set a trigger level for each site that is monitored by volunteers and if they record, and subsequently confirm, a score below this trigger level then they should alert SEPA who can then investigate the issue.



Riverfly Identification © Riverfly Partnership

The number of volunteers trained in Scotland in recent years has increased but there are still hurdles to overcome:

- In England there is a co-ordinator for ARMI, but unfortunately there is no equivalent in Scotland. Some groups do not enter their results onto the ARMI database or may have stopped sampling. A local co-ordinator would provide support beyond the initial one-day training course, and also act as a point of contact for queries. The new Riverfly Partnership website and the improved ARMI database can be viewed, along with more information of the work of the Riverfly Partnership, at www.riverflies.org
- Following a review of the current ARMI trigger level setting and breach protocols, new guidance documents are set to be released to improve ARMI standards for all.
- The number of suitably accredited ARMI trainers in Scotland should increase soon. This can only help to stimulate more involvement in ARMI in Scotland.
- The Forth RT has ambitions to become an ARMI Hub which will replace the previous Hub at the Clyde River Foundation.
- With a few exceptions almost all groups are located in the central belt. There are currently no active groups in the north of Scotland, although the SMART Rivers project on the Halladale



River will have data that could be converted back to ARMI scores and supplement the ARMI database.

As could be expected, 2020 was almost a complete write off for ARMI monitoring. As the Covid situation improved some monitoring did resume and I managed to sample my own six sites between July and November. However, in October and December the Tweed river sites were all too high to permit safe sampling. During lockdown the ARMI co-ordinator developed online training to replace the classroom element of a training course. Training to collect samples will still need to be delivered face-to-face, but only when safe to do so and taking appropriate precautions.

SMART Rivers benchmark sampling in spring 2020 was also cancelled although we managed to collect the autumn samples from the Halladale River at the end of September. The collection of spring 2021 samples is scheduled for May (Covid restrictions permitting) and this will also include the training of volunteers to collect samples from then onwards (spring and autumn). Although volunteers can be trained to identify the specimens collected to species level, they can just collect the samples and send these to an approved contractor for analysis. The results are run through a series of biometrics to determine if sites are impacted by pesticides, herbicides and complex chemicals, silt, organic pollution, the level of nutrient enrichment, the community richness and relative rarity of its species and the flow velocity. Potentially two rivers in Perthshire will be included in this project in future.

SMART Rivers is also developing online training for as much of their two-day training course for volunteers as possible. It is hoped to include sampling in this, although there will be some elements of the training that will be more difficult to deliver online than others. It is intended to have this available this spring.

Ultimately both of these projects should recommence when it is safe to do so and in fact the provision of training will be more easily available in format, cost and greener in terms of reducing travel to training venues where possible. More information is available on Smart Rivers at www.salmon-trout.org

HogWatch Scotland Highlights

Kirsty Crawford

The Conservation Volunteers (TCV) Scottish hedgehog conservation project, [HogWatch Scotland](http://HogWatchScotland) is supported by The British Hedgehog Preservation Society and is now into an exciting second phase, expanding its reach across the country and hopefully working with others, including the Tayside Biodiversity Partnership.

The HogWatch Scotland project aims to map and monitor hedgehog populations across Scotland,





create habitat change and engage with local residents. European hedgehog (*Erinaceus europaeus*) numbers have been gradually declining for almost 60 years, with just 1.5 million left in the UK. The main reasons for decline are the severe loss of hedgerow habitat in the countryside and urbanisation of town areas. More gardens are being turned into patio areas, being fenced off, paved over and more roads installed which fragment the habitat.

This conservation project aims to find out more about the limited information on Scottish hedgehogs - it relies on people power and citizen science activities to help spread the message and record data. There are four main ways in which you can get involved.

Hedgehog Spotting

Since beginning our project we have had nearly 400 new hedgehog sightings across Scotland submitted directly to our project officer. We were lucky enough to hear some wonderful stories of survival, hoglets, unusual behaviours complete with photos and videos. Over 2,500 further records have been submitted for Scotland since April 2019 directly to the Big Hedgehog Map.



Hessilhead Wildlife Rescue – Hedgehog Training © Kirsty Crawford

We are keen to hear from you in Scotland, if you have a hedgehog sighting to report, please get in touch:

- **When**
- **Where**
- **Status (roadkill, alive, dead)**
- **Email directly to - Kirsty.crawford@tcv.org.uk**

Volunteers

We have worked with 115 dedicated volunteers who joined our nocturnal hedgehog surveys in different areas of Glasgow, as we surveyed through the night searching for hedgehogs in key areas and were able, under license, to tag those found to monitor the population. Our nocturnal survey work will hopefully resume in Glasgow during 2021. We hope, in due course, a similar survey can be rolled out in Tayside, so watch this space!



Hedges for Hogs in Seven Lochs Park – volunteer planting session © Kirsty Crawford

In the meantime, more than 20 people took part in the Garden Survey campaign, borrowing mammal tunnels to collect footprints for wildlife visiting their garden at night. We will begin this scheme again with



collection from our Glasgow office from April 2021. Please follow [TCV Scotland on Facebook](#) to find out more or contact Catherine at caglloyd@pkc.gov.uk to confirm your interest within Tayside.

We have a full training programme which includes hedgehog ecology and care courses, which have been delivered online for the past 12 months. **To book any of our training courses, see the [TCV Scotland Eventbrite](#) page.**

More trees please

We have worked with a great bunch of school pupils and volunteers to plant new habitat for hedgehogs. In total 1,000 hedgerow tree species were planted in Glasgow City Council areas and 400 to create new hedge corridors in the grounds of four primary schools. 300m of connective habitat were created in total.

To find out more about our Hedges for Hogs planting scheme visit [our OVO Energy 'I Dig Trees'](#) partnership. We are keen to hear from local community groups and schools who wish to rewild their landscape for hedgehogs and again hope to work with the Tayside Biodiversity Partnership and the Perth & Kinross Tree Wardens Network to expand the project.

Young People for Hedgehogs

We had a great response to our hedgehog outreach and hosted 26 sessions with 15 primary schools across Scotland. Children discussed ways to make their school 'hedgehog friendly', hosted litter picks, completed tunnel surveys, planted hedgerows, and opened up their school grounds with Hedgehog Highways. A big shout out to the pupils who began campaigning to a local housing development to install Highways in the gardens of new houses, and who created and printed posters for the local streets encouraging everyone to look out for hedgehogs. Well done to all who took part!



Survey volunteers – Nocturnal survey at Glasgow Botanic Gardens © Kirsty Crawford

Hedgehog Champions

We are proud to have contributed to the Hedgehog Street campaign, encouraging more participation from people living in Scotland (specifically Glasgow) to show their support for the 'hogs. A total of 200 new Champions are officially on board.

Look out for more updates coming in the following months – we can't wait to keep protecting hedgehogs in Scotland and to work with more volunteers, organisations and schools.

Follow us on social media – Twitter [@TCVCitSci](#), Facebook – TCV Scotland, Instagram - [@tcvscotland](#)



BTO Surveys - get involved!

Steve Willis

The British Trust for Ornithology (BTO) helps to run a range of citizen science surveys that cater to a wide range of abilities and interests. As spring advances now is a really good time to think about how you might like to get involved. All the schemes are fantastic for opening your eyes to the wildlife (not just birds!) around you. If you have a garden, then **Garden BirdWatch** is a great way to study the changing patterns of birds who visit your home patch. It's a really straightforward survey and a great way to get the whole family involved. Following that you might be lucky enough to find you share your garden with some nesting birds - if so then **Nesting Neighbours** lets you follow the progress of these nests through the season. There are highs and lows and you soon get carried away with the daily dramas of your nearest nest!



Beyond the garden, and underway already, the **Heronries Census** is the longest-running bird study in the world having started in 1928! There are several vacant heronries that need volunteers across Perth & Kinross and Angus. You can find a map of these [at this link](#). It's not too late to get involved!



Ring Ouzel © Stan Parrot

With the breeding season just getting underway we are always keen to get as many folk involved with the **Breeding Bird Survey (BBS)** as we can. BBS requires surveyors to make two visits to an allocated one-kilometer-square. Surveyors should be able to identify common birds both visually *and* by song and call - so it does require slightly more birding experience than some of the other surveys. Angus, in particular, could do with better BBS coverage. If you'd like to find out more follow the link below or email me at steve.willis@bto.org.

All BTO surveys and schemes are free of charge. More details about all our surveys and how you can help can be found here: <https://www.bto.org/how-you-can-help/take-part-project>.

BTO run training for anyone interested in our surveys and in mid-April we will be running some training on Scottish upland birds. The training will be run via Zoom and there will be a small charge for the course; places will be limited. Contact me to find out more - at the time of writing there are a few spaces left!

Steve Willis
Development and Engagement Officer
BTO Scotland
steve.willis@bto.org



The Tayside Recorders' Contacts' List

Catherine Lloyd

The online Tayside Recorders' Forum contact pages were last updated five years ago. Last year we were extremely fortunate that two students in England, Eleanor and Phillipa, who were caught up in the lockdown, gamely took on the task. Between them they reviewed the lists of individuals and organisations, contacted everyone to ensure their details were still correct and double-checked everything to ensure it was all GDPR-compliant. The list still needs finalizing but it will be uploaded to www.taysidebiodiversity.co.uk this summer. Thank you to everyone involved.

What's On in 2021

Check the Tayside Biodiversity website for 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.

Museum Updates

Angus Museums - Angus has eight museums and galleries for you to visit: listed here - www.angus.gov.uk/museums/.

The Gateway to the Glens Museum is situated in Kirriemuir Town House dating from 1604. The museum tells the story of Kirriemuir and the Angus Glens through a programme of temporary exhibitions, a model of the town as it was in 1604, a natural history diorama and a display of rare archaeological finds from the area, including the Glasswell coin hoard. Visitors can also uncover the history and personalities of the town, birthplace of Sir J M Barrie, author of Peter Pan, and Geologist Sir Charles Lyell. <https://www.anguslive.scot/museums-galleries/visit-a-museum-gallery/kirriemuir-gateway-to-the-glens-museum/>

Perth Museum & Art Gallery - from portraits and photographs to meteorites and Miss Ballantyne's salmon there is always a fascinating array of objects from the collections on display. Enjoy discovering about local history in the Beginnings Gallery, exploring the natural history of the area in Wild and Wonderful, or view a range of artworks. There is a changing programme of temporary exhibitions which offer something for everyone.

The museum also holds large and important collections of zoological, botanical and geological material. In numerical terms this is the largest part of the collection with 150,000 specimens. It is the 6th largest collection of natural history in Scotland. Details of upcoming exhibitions can be found at: <https://www.culturepk.org.uk/museums-and-galleries/perth-museum-and-art-gallery/>



Dundee Museums and Art Galleries - the McManus Galleries provide fascinating natural history exhibits and a deep insight into Dundee's history. There is also opportunity for "behind the scenes tours" giving you the chance to see collections not normally shown to the public! Details and dates of tours can be found on the website: <http://www.mcmanus.co.uk/content/galleries-displays/galleries>

New Exhibition - Thursday, 20th August 2020 – Sunday, 3rd October 2021

Time and Tide: The Transformation of the Tay at The McManus: Dundee's Art Gallery and Museum

Dundee would not exist without the Tay nor have transformed from a small medieval settlement to Scotland's fourth largest city. The Firth of Tay is well known for the quality of its landscapes and wildlife. This temporary exhibition looks at the influence the Tay has had on the City of Dundee, and how the growth of the city, particularly along the waterfront has affected the Tay, its wildlife, and the people. From early settlement to industrial giant to post-industrial leisure destination the waterfront continues to recycle and reinvent itself.



This is a multidisciplinary exhibition looking at how the Firth of Tay has affected the history of Dundee and how that development has affected the natural history of the estuary. The exhibition starts with the geological formation of the Firth of Tay and the evidence from the rocks beneath our feet. There are five themes exploring change:

Visitors and Residents - the Tay is an important area for wildlife and historically was home to some strange and rare fish. Whales and dolphins have stranded in the outer reaches of the Tay for centuries and oil pollution affected the bird life in the 1960s.

Development of the Waterfront - the expansion of the harbour and docks from the end of the 18th century to the early 19th century.

Across, Along and Over - looks at how the Tay has affected transport. It looks at the ferries, development of the railways and the building of the road bridge.

Continuing Development - looks at the 19th and 20th century developments of the docks and dockside industry

Recreation and Leisure - this final main section brings the story up to date. Describing the gradual decline of waterfront industries and the rise of sport and leisure and to the most recent developments, including modern day concerns with the environment and an examination of modern-day pollutants.



Tayside Recorders' Day 2021 and 2022

In the absence of holding our Recorders' Day at Perth Museum again this year, three half day online sessions were held in March. This brought together 19 speakers and 130 delegates. Unable to use Zoom, we struggled with Teams but everyone was very understanding and all speakers were able – thankfully – to give their presentations. We are really grateful for everyone's forbearance with the technology. We introduced a few breakout networking sessions and as these worked well we are thinking of holding more in the months to come. If you would therefore like to hold a "Species Surgery" to introduce a local survey, please contact caglloyd@pkc.gov.uk.

We have yet to set the date and format for the 14th Tayside Recorders' Day but please check the "What's On" section of www.taysidebiodiversity.co.uk for further details later in the year. We are likely to return to Perth Museum in 2022, but this will have to be confirmed nearer the time. If you can offer a presentation or an update on a specific species please contact Catherine at caglloyd@pkc.gov.uk.

Useful International and National Websites

- <https://www.nature.scot/scotlands-biodiversity> - gives details about the Scottish Biodiversity Strategy, the Biodiversity Duty for Public Bodies (Nature Conservation Scotland Act 2004) and the Scottish Biodiversity List
- <https://www.cbd.int/> - the official website for the Convention of Biological Diversity (new targets for 2021-2030 will be available mid-summer 2021)
- <http://www.bris.org.uk> - Biological Recording in Scotland
- <http://www.scottishgeology.com> - Scottish Geology: check out the 51 Best Places to See Geology in Scotland via <https://www.scottishgeology.com/best-places/>. There will also be a Scottish Geology Festival (and seminar) from 1st September until 17th October: check the website for further information



Copy for Recorders' Bulletin 2022

If you would like to contribute an article to the 2022 Tayside Recorders' Bulletin, please contact taysidebiodiversity@pkc.gov.uk. This is YOUR Bulletin so please use it to tell others about your local surveys, any help you need or any training you can offer. And please join the Tayside Wildlife Recorders' Facebook page as we share as many different organisations' news and training information as possible there. The deadline for the 2022 Bulletin will be 31st January 2022.



Editorial Opportunity

We have been extremely fortunate in past years to welcome a number of students and graduates who gain invaluable experience in researching and compiling the Bulletin. This is not a short-term newsletter, but a well-liked and heavily 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 in perpetuity: www.taysidebiodiversity.co.uk.

If you would like to be involved in compiling and editing the 2022 issue, please contact Catherine at cagllloyd@pkc.gov.uk. The task needs commitment throughout the first quarter of the year, i.e. mid-January through to March/April 2022.

Don't forget to share your surveying news with the Tayside Wildlife Recorders' Facebook page –



Tayside Wildlife Recorders / Tayside Biodiversity / Tayside Swifts / Tayside Amphibians & Reptiles



TayBiodiversity

The Tayside Biodiversity Partnership also shares news via its regular E-Newsletters so if you have any special survey or project news, please let Catherine know. Please keep articles short (c100-150 words) and if possible, please provide a photograph with copyright details. The current and past E-Newsletters can be downloaded from the home page of www.taysidebiodiversity.co.uk.

With thanks to all contributors to this Bulletin

Tayside Biodiversity Partnership



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The 2021 Bulletin was researched and compiled by Nicola Macfarlane,
and edited by Catherine Lloyd and Nicola Macfarlane
for the Tayside Recorders' Forum: April 2021

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This issue, together with past issues, can be downloaded from www.taysidebiodiversity.co.uk
If you would like extra paper copies for an event, please contact cagllloyd@pkc.gov.uk