



Tayside Recorders' Forum

2020 Tayside Recorders' Bulletin





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Front page photographs - Common Darter ©Craig MacInnes; Golden Bootleg (*Phaeolepiota aurea*) ©Jim Cook; All other photos © C A G Lloyd: Perth Station Biodiversity Garden Moth Hunt (x3); Seaweed Search, Auchmithie; St Madoes Biodiversity Village Young Vlogger; St.Madoes Biodiversity Village mapping; Small Blue Butterfly Awards Gathering; Kidney Vetch ready for planting (Small Blue project). Left (this page) ALGE Certificate



Tayside Biodiversity Partnership





National Accolades for the Small Blue Project Community

In December 2019 the 'Back from the Brink - Saving our Small Blue' Project received the prestigious RSPB Nature of Scotland's Community Initiative Award. Catherine Lloyd and Kelly Ann Dempsey attended the ceremony in Edinburgh and received the Award for the Small Blue Butterfly Interest Group. Initially planned as a five-year project (which was started in early 2012), it is still going strong and will not be finishing any time soon!



© Simon Williams



To ensure as many people as possible could see the Awards, the Tayside Biodiversity Partnership arranged a celebratory get-together in Carnoustie. Craig Boath from Carnoustie Links very kindly hosted the event in January 2020 at which the Provost for Angus spoke about the project's success. Cllr David Fairweather, the Species Champion for the Small Blue, was also present as were two other councillors closely involved in our biodiversity projects, Cllrs Bell and Whiteside. Pupils from Woodlands Primary School also came along to be part of the event as they are the Angus School Champions for the Small Blue.



Photo above © The Courier / Photo (right) © C A G Lloyd



Quite separately, the same project also received the UK Biodiversity Project Award from the Association of Local Government Ecologists as part of ALGE's special Silver Anniversary Awards. Catherine Lloyd travelled to London to take part in the well-attended national conference and to again receive the award on behalf of the Small Blue Interest Group.



© ALGE

Biodiversity at the Burnie

Nicole Pearson, Dighty Connect

What do a wingless moth, a kingfisher, an otter and a band of enthusiastic, talented volunteers have in common? They can all be spotted exploring the length and breadth of the Dighty Burn. The Burnie as it is affectionately known by locals in Angus/Dundee flows through 14 miles of winding countryside, manicured parkland, industrial estates, forgotten fields and even a Local Nature Reserve before entering the Tay at Monifieth. The mostly urban nature of this burn means it can be neglected and overlooked but, for those who take the time to visit, a whole multitude of secrets are waiting to be uncovered.

Dighty Connect helps support an active Citizen Science volunteering group who, between them, have recorded a vast array of wildlife. Volunteers do not need any prior experience but many of them bring expert knowledge with them. Dighty Connect is lucky to have the help and support of



two licenced bird ringers as volunteers – Ken Slater and Mike Nicol. They started helping out as part of a mutual partnership for their Angus Dipper Ringing project

(left) Citizen science volunteers carrying out a river health survey by recording the invertebrates found in the burn © N Pearson

but, now, they often lend helping hands to all other forms of citizen science. They have uncovered lots of information about Dippers,



their survival, life cycles and their territories at the Dighty and tributaries through this project. In addition, they lead other bird ringing projects throughout the year, including a Blue tit moult pattern project and ringing at a designated bird feeding station. One session at the bird feeding station saw 25 birds caught in only a few hours, including a Goldcrest, 18 Blue tits, 4 Great tits, 1 Robin, 1 Coal tit and a Chiffchaff. Interestingly, they also heard the call of a Water rail at this highly urban site. The success of this site is thanks to the hard work of volunteers Michael and David who ensure the birds are well fed and also maintain bird boxes in the winter months.

The group also records a number of other species, including moths (moth traps are led by Heather Barnes – who is a moth enthusiast), bats, air quality surveys, butterflies, river health surveys and pollinator surveys. Setting up moth traps can be a tricky task in the urban stretches of the burn as we never want to attract too much attention. Despite this, we have had a number of successful moth traps, including attracting moths such as Burnished brass, July high flyer, Dunbar and various different carpets (to name only a few). The group also takes part in wider citizen science initiatives, such as the National Bat Monitoring Programme and the Big Butterfly Count.



In addition to the citizen science group, a butterfly transect is walked each week from April-September by dedicated volunteers, Grace and Susan – helped out by Margaret. This is the second year they have walked this transect and we are keen to observe the changes from last year.

Dighty Connect would like to offer a huge ‘thank you’ to the volunteers past and present – this project would be impossible without their help.

*Ken Slater holds a robin caught at the bird feeding station
© N Pearson*

BeeWalk: More Help Needed in Tayside!

Helen Dickinson, Bumblebee Conservation Trust Surveys Officer

Working to protect our bumblebees requires a good understanding of what is happening to all of our species, from the rarest to the most common. To gather this information, the Bumblebee Conservation Trust established the National Bumblebee Monitoring Scheme: BeeWalk.





BeeWalk is a standardised bumblebee-monitoring scheme active across Great Britain. The scheme protocol involves volunteer BeeWalkers walking the same fixed route (a transect of around 1-2 kilometers) at least once a month between March and October (inclusive). This covers the full flight period of the bumblebees, including emergence from overwintering and workers tailing off. BeeWalkers count the bumblebees they see and identify them to species and caste (queen, worker, male) where possible. 'Bumblebee sp.' and 'unknown caste' are options where the species and/or caste cannot be confidently identified.

Collecting data on the abundance of bumblebees enables us to work out the size of populations and how they change over time on a national scale. This data acts as an early warning system for population declines, ensuring that the advice we provide to policymakers, researchers and the public is as accurate as possible. It also allows us to assess the success of habitat management for bumblebees and best target our conservation work.

We currently **only have eight active transects in Tayside and we need more!** If you could set up and walk a transect in your area, you would be part of improving our understanding of bumblebee populations and contributing to how we best protect all our species into the future. Transects can be established anywhere with flower rich habitat, from nature reserves and wildflower meadows to urban green spaces such as parks and gardens. We also have a number of established transects which are no longer being walked: these are available for new BeeWalkers to "adopt".

See the BeeWalk website (www.beewalk.org.uk) resource page for full details on getting involved or email beewalk@bumblebeeconservation.org for more information.



Bombus pascuorum, Common Carder Bumblebee © Les Moore

World Swift Day (7th June) & UK Swift Awareness Week: 27th June to 5th July *Catherine Lloyd, Tayside Swifts/TBP*

We are always pleased to be part of large-scale events as it helps to raise awareness not just of issues close to home but allows us media space to demonstrate our projects and achievements. This is particularly the case where our swift projects are concerned. Over the years we have successfully run community-based events in the Carse of Gowrie, Pitlochry, Strathearn and Kinross, and in Angus in Kirriemuir, Edzell and Carnoustie. In 2020 we are now focussing on projects in Crieff and Forfar (the latter thanks to new funding from the Town Centre Fund).



In the lead up to World Swift Day on 7th June the Perth & Kinross Biodiversity Ambassadors will host a lunch time Swift Talk and Walk where PKC staff will learn about the ecology of swifts and have the opportunity to join Daniele Muir in exploring the area around Pullar House in the middle of Perth to get an eye in as to where swift nest sites might be.

On 6th and 7th June Catherine Lloyd will run two afternoon 'drop in' surgeries at the RSPB's Loch Leven Vane Farm Nature Centre so that everyone can explore the problems facing swifts and suggest what can be done at home to help. On Sunday 7th June Daniele will also be offering an evening ramble around Crieff to spot existing nest sites and discuss the best places for the new nest boxes which have been provided by funding from the Community Environment Challenge Fund.



2020 also sees the third UK Swift Awareness Week and as ever we fully intend to be part of it to publicise our past and ongoing projects! So far RSPB Loch Leven Vane Farm Nature Centre has agreed to host a Tayside Swifts information desk and we will be running an event in Forfar to celebrate our latest swift conservation project. Contact Daniele for further details - DMuir@taysideswifts.co.uk.

Don't forget you can access the SNH Swift Guidance Note to help with siting swift nest boxes - <http://www.taysidebiodiversity.co.uk/wp-content/uploads/2017/03/2017-SNH-Swift-Best-Practice-Advice-Note.pdf>. A copy of this year's Tayside Swifts Programme of Events can soon be downloaded from the What's On section of www.taysidebiodiversity.co.uk.

Butterfly Monitoring in Tayside – Urgent Help Needed!

Anthony McCluskey, Helping Hands for Butterflies Project Officer

The most recent reports on butterfly numbers indicate that about three quarters of species across the UK are in decline. We can only make statements like this because we have over forty years' worth of data about butterfly populations. 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 a 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.

We desperately need more transect walkers 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 having this region be 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 they could always do with more help.
- Across the water **in Fife**, there are several transects at Tentsmuir and transects at Auchtermuchty Common, Lochore and Loch Leven, so Fife is relatively well-represented.
- But it's **in Angus** we urgently need more transects. 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 - at Crombie Country Park. If you live in Angus and would like to establish a new transect, we would certainly like to hear from you. You can set one up anywhere, and we can assist with the whole process.
- The same goes for the area **around Perth**. We have two nice existing 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 could do with extra walkers to help fill the gaps!

This summary doesn't go much into **Highland Perthshire**. 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, and if you're interested in monitoring them just 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!



Pearl-bordered Fritillary © Andrew Cooper

Finally, as part of Scottish Small Blue Week, I will be running a butterfly transect training event in **Arbroath on 3rd June**. This event will cover butterfly identification and recording on transects, and we'll go by vehicle to Carnoustie in the afternoon to see a new butterfly transect we're establishing there and hopefully some Small Blue butterflies! To book a space on the workshop or to contact me about transects, email amcluskey@butterfly-conservation.org or call 01786459811.



Mind the Gap Hedgehog Projects in Tayside and Further Afield

Catherine Lloyd, Tayside Biodiversity Partnership

In just the last decade, over half the population of rural hedgehogs has been lost – and a third of the original urban hedgehog populations. The “State of Britain’s Hedgehogs” report was published last year and brings together all survey data from the RSPB, BTO, PTES and the British Hedgehog Preservation Society. It can be downloaded from <https://www.hedgehogstreet.org/about-our-hedgehog-street-campaign/stateof/>.

Our first Mind the Gap Project was launched in Forfar and last year funding from the Carnoustie Golf Links Community Benefits Grant has ensured a second project in Carnoustie and Barry is now under way. AngusAlive Rangers have been working with the Tayside Biodiversity Partnership in raising awareness on how to help urban hedgehogs thrive – and we will soon be running a workshop to give advice on how to garden with hedgehogs in mind, especially how to work with neighbours to ensure hedgehogs can move between gardens to forage, breed and hibernate.

In Perthshire, a new opportunity has recently arisen with A & J Stephen Builders to create an extensive hedgehog highway at a new development in Scone, mapping existing and new landscaping which will encourage hedgehogs to use the new housing site. Later this year, the TBP will provide a Householders’ Biodiversity Pack as each property is finished and work with the landscapers at the show house to demonstrate how to “think wildlife”, all the while creating a neat and tidy urban garden fit for birds, pollinators – and, importantly, hedgehogs.

There is a comprehensive 20-page guide on how to survey for hedgehogs: <https://ptes.org/wp-content/uploads/2018/05/Guidance-for-surveying-hedgehogs-2018.pdf>.

St Madoes and Glencarse BioBlitz 2020 – Can you Help?

Kate Barron, St Madoes & Glencarse Biodiversity Villages



As part of the new Tayside Biodiversity Partnership project to set up Biodiversity Villages across Perth & Kinross, St Madoes and Glencarse are pressing ahead with a wide range of projects. The local community is keen to discover what mammals, birds, invertebrates and plants are present in the area. All this will be mapped and added to iRecord in the coming year, but we need as much expertise as possible so that we can advise future Biodiversity Villages on the best way to achieve this.

If you are a Recorder, or indeed an NGO or local group which can help, please contact Catherine as soon as possible on cagllloyd@pkc.gov.uk so that a 24-hour BioBlitz can be planned this summer (date yet to be confirmed). Mileage or travel expenses will definitely be reimbursed, but there may be some small-scale funding available too (we are awaiting news of this).



Small Blue Surveyors Urgently Needed in Angus!

Catherine Lloyd and Glyn Edwards

The recently-published 2019 Small Blue Butterfly Newsletter is full of information as to the analysis of where Small Blues are currently found along the coast and where Kidney vetch has been planted to aid the butterfly's population expansion. You can download a copy here:

<http://www.taysidebiodiversity.co.uk/get-involved/projects/projects-butterflies/>.

Achievements in 2019 included Kidney vetch counts at Seals Cave, Carnoustie Golf Links, Barry Buddon, Elliot Links and Glamis - by monitoring these populations we can react to any declines by planting or sowing local provenance seeds – thus maintaining the suitability of the sites for Small Blue. Transect routes were established at inland Glamis and on the coast at Carnoustie. Glamis currently holds the largest Small Blue population anywhere in Angus.

The Carnoustie Food is Free group did us proud with growing on a lot of very healthy Kidney Vetch plants from seed donated by Scotia Seeds.

These were planted at Elliot Links and Carnoustie. At Elliot Links it was hoped such planting would help the recently found colony there to expand. The butterfly was also found on the cycle track between Monifieth and Carnoustie: two patches of Kidney vetch were found on the route. This is an area we will be looking at to be improved with volunteers from the Monifieth EcoForce. Carnoustie Links Golf Club has been extremely supportive and has hosted two events with Woodlands Primary School who have helped plant more Kidney vetch. The School continues to be the Angus School Species Champion for the Small Blue.



Small Blue Butterfly ©C A G Lloyd

At Barry Buddon – which is a very important traditional stronghold for the Small Blue - Landmarc has carried out some clearing/seed sowing in areas that have potential to support the butterfly; further activities are planned for 2020 and there will be a Survey Training Day arranged to coincide with the MoD's Open Day on Sunday, 14th June. Please make a note of this in your diary: we need as large a turn out as possible!

The one thing that is missing is a good number of surveyors and **this year we really need as many surveyors as possible** to “adopt” an area on a weekly basis for 5 to 6 weeks from the end of May and throughout June. If you are a dog walker who has a favourite spot - or you would be willing to visit a site not far from you - please contact Glyn Edwards as soon as possible:

perthshirebutterflies@eastscotland-butterflies.org.uk or glynedwards19@yahoo.com.



Our 4th Scottish Small Blue Week is shaping up well with events in Angus and everyone, whatever their level of knowledge, is welcome to be part of it. Anthony McCluskey of Butterfly Conservation Scotland will be running a Butterfly Identification & Recording Workshop - followed by



the setting up of a transect in Carnoustie – on 3rd June. No experience is required so please consider booking a free place – everyone welcome. Please contact Anthony direct at amclluskey@butterfly-conservation.org / Tel. 01786459811.



*Clrs Fairweather & Bell planting Kidney Vetch at Carnoustie
© C A G Lloyd*

To be part of the Small Blue project please contact either Glyn Edwards at perthshirebutterflies@eastscotland-butterflies.org.uk or David Lampard at david.lampard@leisureandculturedundee.com. There is a Factsheet to download via <http://www.taysidebiodiversity.co.uk/2017/04/10/small-blue-factsheet-2017/>.

Angus Cetacean Sightings WhatsApp

Kelly Ann Dempsey, Marine Life Angus

Since 2011 Marine Life Angus and the Tayside Biodiversity Partnership have been collecting whale and dolphin sightings data for the Angus Coast. Public sightings have helped map feeding and socialising hotspots and highlight where animals can be best viewed from land.

As an aid to allow Tayside residents and visitors to Angus to experience marine mammals in their natural habitat, Marine Life Angus has created a WhatsApp group – Angus Cetacean Sightings – where real time sightings are posted. Contributing to the group allows opportunities for many more



people to view cetaceans, raises awareness of our wonderful coastal wildlife and aids in identifying areas of the coastline that may need more protection. If you spend time on the Angus Coast and would like to get involved contact info@marinelifeangus.co.uk or @marinelifeangus for more details.

© Marine Life Angus



Can You Update the Tayside Recorders' Contacts' List?

The online Tayside Recorders' Forum contact pages are seriously out of date and we urgently need someone to undertake a short desk-top "placement" to go through the lists of individuals and organisations, contact everyone to ensure the details are correct and to double-check they are all GDPR-compliant. This is a task that can be undertaken from home at times to suit the volunteer. We are aiming for the lists to be refreshed by mid-summer. If anyone can help, please contact Catherine at taysidebiodiversity@pkc.gov.uk.

Taking Action Against Alien Invaders

Mark Purrmann-Charles, SISI

Non-native (or alien) species are those that historically don't belong to Scotland, having been introduced (accidentally or deliberately) by humans. Many of these non-natives have been here for centuries and have found their niche

within our native ecosystems, doing no harm and often being considered *naturalised*. But some non-native species find the conditions in their new country ideal and are often better adapted (e.g. grow larger, faster and earlier or are resistant to pests and diseases) and they spread wildly, taking over and causing a negative impact to our environment, our economy, our health or the way that we live. Such species are known as *invasive*. It is these *invasive non-native species* (INNS) which are estimated to cost Scotland £300 million per annum and are considered to be the one of the greatest threats to our biodiversity.



Scottish Invasive Species Initiative

Scotland's freshwater habitats – our lochs and rivers, are particularly under threat and are ideal conduits for the spread of invasive species. Plant seeds are washed downstream finding new spots to re-seed and germinate until whole river corridors are enveloped by non-native invasive plants and our native wildflowers, which play an essential role in the riparian ecosystem, are banished. This has knock-on consequences for the riparian fauna and can cause other impacts such as contributing to erosion and flooding. The semi-aquatic invasive American mink thrives in the network of burns, canals and rivers with their plentiful supplies of prey: small mammals, fish, amphibians, ground nesting birds and their eggs. This voracious predator is known for its ability to decimate populations of native water voles, ground nesting seabirds and domestic fowl.

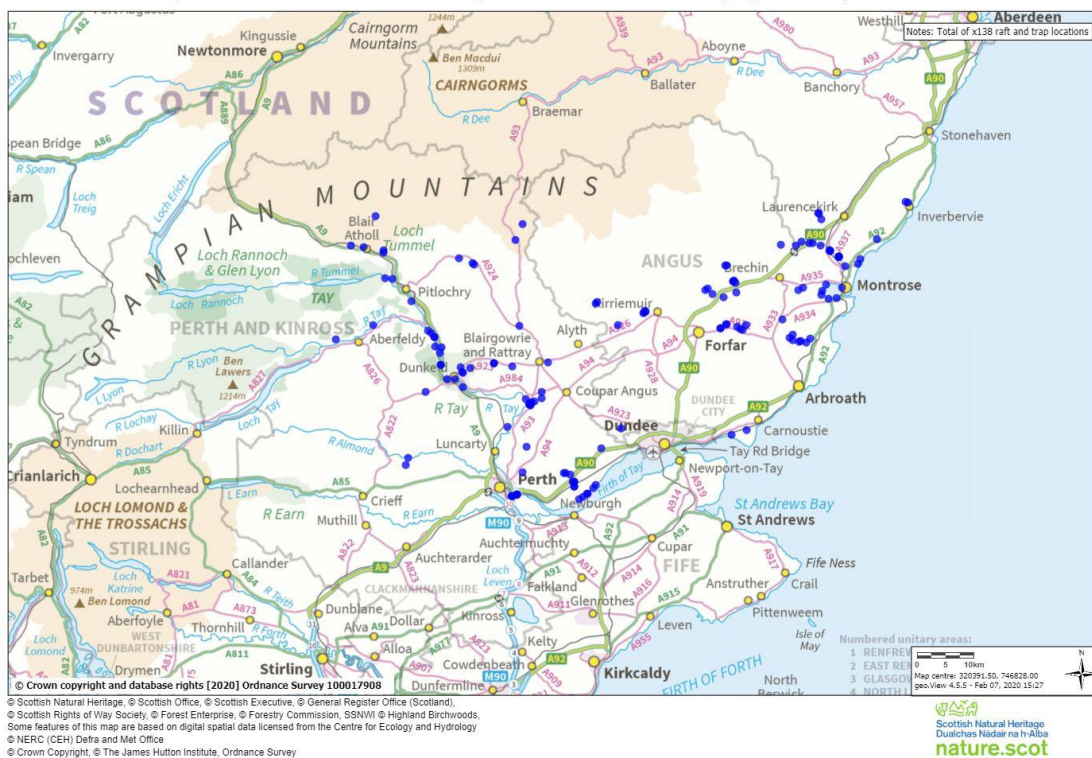
The [Scottish Invasive Species Initiative \(SISI\)](#) is a 4-year project, led by Scottish Natural Heritage, and funded by the National Lottery Heritage Fund, which is working with ten Fishery Trusts/Boards across northern Scotland to tackle key invasive non-native species. The project is taking a new and innovative approach to tackling invasives, spending as much time and investment in people as it is on removing plants and mink. Recognising that removing invasive species isn't a quick and simple task, much emphasis has been placed on the long-term sustainability of the work - and creating a legacy to carry on the work when the four-year project comes to an end in Autumn 2021. This is being done through building an army of volunteers, equipped with knowledge, skills and qualifications, and enthused about carrying on the invasive removal work. These aren't ecological



crusaders either, they are everyday people willing to give a few hours of their time to getting involve and do their bit to help conserve the countryside.

Here in Tayside, SISI Project Officer Mark Purrmann-Charles, with the Eks Rivers Fishery Trust and the Tay District Salmon Fishery Board, has been working since 2018 with many enthusiastic local volunteers and groups to tackle several species which are causing real problems in the area - Himalayan balsam, Japanese knotweed, Giant hogweed, American skunk cabbage and the American Mink. The SISI project is focusing its work along the main stem of the River Tay and it's eastern and northern tributaries and North Esk and South Esk river catchments.

Scottish Invasive Species Initiative Mink Raft and Trap Locations 2018 and 2019 (Tay and Eks)



Your help is needed in Coupar Angus, Alyth and Errol! If you have a favourite riverside walk that you undertake at least twice a month, you are the perfect person to adopt a mink monitoring raft! You just need to visit it once every 1-2 weeks and check the clay pad on the raft for footprints – this helps us detect the presence of mink, which can then be trapped.

Our aim is to have a comprehensive network of monitoring rafts across each river catchment so that we can detect mink presence quickly. We already have 68 fabulous volunteers helping, and a network of 83 rafts and traps on the River Tay which has resulted in 40 mink being caught and dispatched.



On the Esk Rivers there are 55 rafts and traps and 49 mink have been caught. However, we would like to improve the coverage around the River Isla and the

Positioning a mink raft © SISI

Firth of Tay, so if you live in the Couper Angus, Alyth or Errol areas and could adopt a mink raft, please get in touch. Tayside is the southern boundary of the SISI project and our mink control work, so the battle is on to stop mink spreading north.

Please join a Conservation Volunteer Day in Dunkeld, Aberfeldy or Pitlochry. Can you get involved in

removing invasive plants? If so, we need help in June and July, where you can give a hand pulling up

Himalayan balsam from riverbanks where it is taking over and out-competing our native flora. Anyone can do this and it's a great way to get outdoors, make a difference and have some fun! This year Mark will be running sessions in locations across the area but including Dunkeld, Aberfeldy and Pitlochry.



There are also opportunities to work alongside Mark to treat Giant hogweed and Japanese knotweed with herbicide, and we can support regular volunteers to gain their pesticide application qualifications.

Last year in Tayside, with the help of volunteers, we were able to treat 75km of Giant hogweed, stem inject 24,000 stems of Japanese knotweed and cleared loads of Himalayan balsam over 20 conservation days. That's a great effort - so thank you to all the folk who got involved and supported this work.



Taking part in the UK Invasive Species Week 2019 – Brechin © M Purrmann-Charles

Everybody can make a difference

Even if you don't get directly involved in the project, everyone can help stop the spread of invasive species:

- **Be Plant Wise!** – if you are a gardener make sure you don't let any non-native species spread from your garden into the countryside. This is how many invasive plant species have become



established (and it's still happening). Don't forget this also applies to pond plants, and think about what you are putting out as compost too, it just takes one seed to spread...

- **Practice good Biosecurity** – make sure if you are angling, kayaking, boating, walking or mountain biking that you “Check, Clean, Dry” all your equipment, footwear etc. between visiting sites. Don't be the person who spreads an invasive species from one river to another, or a tree disease from one forest or woodland to a new one.

Report your sightings – if you see a mink, please report this immediately to Mark so that we can take swift action.

To find out more about the project please visit www.invasivespecies.scot where you can sign up to the E-newsletter, or follow on social media ([Twitter](#), [Facebook](#) & [Instagram](#)). For more information about volunteering with the SISI Project, to adopt a mink raft or report a mink sighting please get in touch with local SISI Project Officer, Mark Purrmann-Charles: markeskrivers@gmail.com /Tel. 07741 639556.

The Scottish Biodiversity Information Forum

Rachel Tierney, SBIF Development Officer

The Scottish Biodiversity Information Forum (SBIF) was formed in 2011 to provide strategic leadership following a public petition (PE1229) calling on the Scottish Parliament to: "*urge the Scottish Government to establish integrated local and national structures for collecting, analysing and sharing biological data to inform decision making processes to benefit biodiversity*".

During 2016 and 2017, SBIF undertook a 'Review of the biological recording infrastructure in Scotland'. This Review (published in 2018 and winner of the CIEEM Award for '*Best Practice Stakeholder Engagement*' in 2019) obtained unprecedented insight into problems that have persisted for over 45 years. These problems limit Scotland's ability to achieve the Scottish Biodiversity Strategy, Aichi Biodiversity Targets and Sustainable Development Goals and impede the use of evidence in environmental protection and decision-making.

The primary conclusions of the Review were that our biological recording infrastructure (the systems and people who collect and support the flow of records) is chronically inefficient and under-resourced (exacerbated by Open Data expectations and public austerity) with keystone volunteers experiencing fatigue and lead organisations unable to secure sufficient sustainable funding. Having considered how these issues could best be overcome, the Review put forward 24 recommendations to the Scottish Government in November 2018 which seek to achieve the following outcomes: transformed data flows, transformed service provision, transformed governance and culture and transformed funding by 2025.

Setting the scene - since the publication of the SBIF Review, two flagship reports (the IPBES Global Assessment of Biodiversity and Ecosystems, and the State of Nature (Scotland) 2019 Report) illuminated the drivers and severity of biodiversity declines happening at the global scale and in Scotland. These reports (and many others) showcase the value of citizen science and the underpinning infrastructure and volunteer participation that facilitates data collection, provision and



use which in turn underpin the assessment of the state of nature and achievement of our Aichi Targets and Sustainable Development Goals.

Negative as these reports are, the one positive, if it can be called that, is that the biodiversity decline is now on the global agenda with phrases such as “climate emergency” and “biodiversity crisis” being reported across all mainstream media and being mentioned in a myriad of reports and funding issues. The scene has been set to position the importance of biological recording at the heart of the issue if we are to make any headway with turning thing around.

The future - building on a year of advocacy across Scottish Government and Scottish Parliament, as well as with other key stakeholders, SBIF has now presented a programme proposal to Scottish Government outlining the investment necessary to implement the SBIF Review recommendations. It sets out six projects that will undertake the necessary transformation by 2025.

The first project is focussed on the necessary feasibility studies and project development. This sets the foundations for the next project to establish a National Hub for Biological Recording and a network of Regional Hubs, transforming our current incomplete Local Record Centre network. A further project then develops a shared technical road map and invests in our Super Partners who provide invaluable Infrastructure support and services across Scotland. The newly established National and Regional Hubs will then have capacity to undertake three projects to facilitate improved data flows, develop value-added services, and build capacity with recording groups and community groups to maximise engagement and participation.

Once we have clarity on the funding outcome from Scottish Government, we look forward to providing an update on our plans for the forthcoming year. We look forward to working with all the recording communities across Scotland to strengthen and enhance our current recording infrastructure and make sure our collective recording efforts are put to best use to protect Scotland’s biodiversity for future generations.

Angus Council Species Champions

Kelly Ann Dempsey, Angus Council

This programme, launched two years ago, currently has 15 local elected members and three schools representing 30 species and habitats. Each champion has pledged their support for local

biodiversity and engaged in projects listed within the Tayside Local Biodiversity Action Plan 2016-26. Many local and national Priority Species have been a focus of action including badger, hare, swifts, otter, hedgehog, small blue butterfly, bumblebees, wildflowers, bottlenose dolphin, pine marten, red squirrel and wildcat.





*Isla PS giving their Wildcat presentation at the 2020 Species Champions meeting
© C A G Lloyd*

They have assisted in awareness raising with local communities, businesses and schools and have been involved in activities focusing on marine litter, coastal erosion, farmland management, invasive non-native species, meadow creation, pollinators, natural flood management, woodland creation, climate change adaptation, wild food foraging and habitat corridors.

The latest report can be downloaded here: <http://www.angus.gov.uk/sites/angus-cms/files/2020-02/Angus%20Species%20and%20Habitat%20Champions%20Summary%202020.pdf>

Perth & Kinross Biodiversity Ambassadors

Catherine Lloyd, TBP and Patrick Higgins, PKC

Although the Biodiversity Ambassadors were only set up in the summer of 2019, staff within Perth and Kinross Council have been meeting regularly to discuss how best to integrate biodiversity into their day to day work. This has led to an opportunity for a few lunchtime working parties being available to volunteer at a local sheltered housing complex in Perth where gardening advice has been offered to make the already-attractive courtyard more wildlife-friendly. A Fernery is being planned in a dark corner and PKC staff are helping to prune back the shrubs around the exterior of the property, at the same planting a few spring bulbs to attract earlier pollinators. The Ambassadors also met last December during the Tree Council's 'National Tree Week' to plant some trees.



Both photos – above and next page © Patrick Higgins, PKC



New opportunities are opening up all the time for improvements to services with architects and landscape architects meeting on site with Catherine from the Tayside Biodiversity Partnership and Joanna Dick, the council's Tree & Biodiversity Officer. In the coming months Catherine will also be rolling out more BeeWild pollinator projects to care homes, sheltered housing and schools, as well as looking into

funding for a school orchard project via the council's proposed Food Growing Strategy.

A key aspect of the Biodiversity Ambassadors' scheme is to offer Species Identification training opportunities so that council staff can better understand biodiversity – and possibly expand their personal knowledge where citizen science surveys are concerned. The first "Learn More About Wildlife" events brought in experts from the British Dragonfly Society, Buglife Scotland, the Bumblebee Conservation Trust and Tayside Bat Group. Staff were invited to a Moth Trapping Breakfast before they went to work, a lunchtime talk on bats and special lunchtime visits to the South Inch pond and the Perth Station Biodiversity Garden to find out more about dragonflies and bees. Similar opportunities will be repeated in 2020 with more moth hunts, butterfly ID strolls, an evening bat walk and a lunch time swift talk and walk all being planned.

Year of Coasts and Waters 2020

Details are not yet available but keep an eye open for two Tayside festivals which will be part of the Scottish Year of Coasts and Waters.

The Perth & Kinross Wild Waters Wildlife Festival will include some 45 events and there will also be a Riparian Rivers Seminar taking place in Perth on 17th June.

The programme will be available from the Tayside Biodiversity website from

Easter. Check out the link, too, in due course, for the Wild Waters programme of events.



12-21 June





The Angus Rivers Festival will be a celebration of Angus waters, wetlands and wildlife. Join Angus communities and organisations in exploring freshwater habitats across Angus, from the Cairngorms to coastal estuaries where meandering rivers meet the North Sea. There will be an opportunity to



learn about freshwater species and habitats - thriving and threatened – as well as discovering nature’s important role in protecting wildlife and people from the impacts of climate change. As before, details will be included on www.taysidebiodiversity.co.uk and further information will also be available from DempseyK@angus.gov.uk.

(left) Loch Tummel at Sunset © C A G Lloyd;
(right) Rottal Sky © K A Dempsey



What’s On in 2020 - More Events

Check the Tayside Biodiversity website for events. If you have an event to publicise please send brief details as early as possible to cagloyd@pkc.gov.uk. Information can also be shared on the Tayside Biodiversity and Tayside Wildlife Recorders’ Facebook pages.

Scottish Dragonfly Conference - 18th April 2020 - Soutar Theatre, AK Bell Library, Perth. There will be a host of interesting speakers and the opportunity to chat to other dragonfly fans. Please book your place on [Eventbrite](https://eventbrite.com); more information is available from <https://british-dragonflies.org.uk/event/scottish-dragonfly-conference-2020/>.

Identification Workshop - 23rd May 2020 (11am to 1pm) – Larvae ID, Morton Lochs Dragonfly Hotspot, near Tayport, Fife. An opportunity to find out how to identify the larvae of the dragonflies and damselflies of Dragonfly Hotspot, Morton Lochs. Please e-mail Daniele to book: daniele.muir@british-dragonflies.org.uk. Further information available from <https://british-dragonflies.org.uk/event/larvae-id-workshop-at-morton-lochs-dragonfly-hotspot-near-tayport-fife/>

Northern Brown Argus Survey Day – 18th July 2020 (check date with Cathy Caudwell): Join the Butterfly Conservation’s East Scotland Branch on this survey training day and butterfly walk to look for the Northern Brown Argus and its eggs. Meet at grid reference NO263360 (nearest postcode:



PH13 9LA) at the Tullybaccart car park, c10 km N of Dundee. Please pre-book with Cathy via perthshire.butterflies@fireflyuk.net (or tel. 01828 686709).

The Dundee Naturalists' Society always has a fantastic array of summer outings and winter meetings. In the coming months there will be opportunities to visit the Shiell Street Local Nature Reserve, in Broughty Ferry; Rottal Lodge in Glen Clova; Moncrieffe Island, Perth; and the Murton Trust Reserve near Forfar. Each meeting has a theme and is led by a local naturalist so this is the best way to learn. Contact Lorna Ward, the Hon. Secretary, for further details – tel. 01382 778839.

Tayside & Fife Fungi Group – 21st September 2020: with the Dundee Nats, a joint fungal foray between Pitlochry and Faskally. Check availability with Jim Cook - Jim.strath91@gmail.com.

The Perth & Kinross Tree Wardens' Network has an annual programme of events to train its members and their guests. New members are very welcome. The AGM will be on 4th April in Perth; check www.perthandkinrosstreewardens.co.uk for further information. The Tree Wardens will be getting involved in new projects in the coming year – the Tree Council will be introducing its Orchard Fund later in the year and will also be re-launching its hedge project (and surveys). The Perth & Kinross Bluebell Trail leaflet will also be launched this year. More volunteers are urgently needed to expand the Ancient Tree Inventory surveys – this can be done via PKTWN field trips with the Scottish Ancient Tree Verifier or can be undertaken alone - see <https://ati.woodlandtrust.org.uk/>.

The Angus & Dundee Bird Club welcomes non-members to join a wide range of outings. <http://www.angusbirding.com/html/adbc.html>. There will be trips to Glen Esk and Killiecrankie, as well as visits closer to home at Montrose Basin and Lunan Bay. Indoor meetings also start in September.

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.

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 - 27th March until 15th November 2020
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.

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 complemented by in-gallery activities for families. 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/>

Dennis Dick

Dennis died on 3rd February 2019 and almost exactly a year later we were honoured to be invited to plant an apple tree in his memory as part of the extension of the Tillywally Orchard on Kinnoull Hill. Dennis and his wife Mary lived very close to this spot before they retired to Edinburgh.

Dennis was a very proactive Chair for the Tayside Biodiversity Partnership. As he was born in Dundee, we hope it might be possible to also plant a tree in his memory there. He lived in Angus many years ago and we would like to add a third tree there if anyone knows of a suitable site.

A few weeks after Dennis' death we were saddened to hear that his only son Jonathan had died. He was only in his 50s. We hope the trees planted in Tayside will acknowledge Dennis and his family. If you would like to contribute further to this Fund, please contact Catherine as soon as possible at caglloyd@pkc.gov.uk.



Orchard Expansion on Kinnoull Hill © C A G Lloyd

Tayside's Batty Graveyards

Jean Oudney

Graveyards are hotspots of biodiversity: they are sometimes ancient parcels of land that have not been ploughed for many centuries (if at all) and many pre-date the use of chemicals and the agricultural revolution so they contain plants and insects protected from the effects of herbicides and pesticides outside their walls - similar to organic farms which have been proven to have greater bat biodiversity. They often contain large old trees, increasingly rare in today's landscape which provide nesting holes for bats and birds and rotting wood for insects. Graveyards can provide pockets of refuge if we are able to connect them up through parks, gardens and other green areas.

My honours research project involved six graveyards across Tayside. Its basic aim was to find out what bats are using the graveyard and whether they are commuting through or staying around to feed. Measuring the bat activity and foraging levels against various factors also led to recommendations. These factors were the quality of the graveyards, how much vegetation and how



many trees they contained, the light pollution, the maintenance levels (i.e. grass cutting), and the quality of the surrounding landscape that included commuting routes and nearby water. The graveyards were a mix of rural, town and city: Clunie Kirk, Kirkton of Lethendy, Hill Kirk in Blairgowrie, Blairgowrie Cemetery, Dundee Howff and Carmyllie Kirk. Here are some of the findings.

One of the biggest maternity colonies of Brown long eared bats (*Plecotus auritus*) in Tayside was recorded. The Howff cemetery in the middle of Dundee is isolated from any connecting habitat but had one Common pipistrelle (*Pipistrellus pipistrellus*) present on every survey, showing that even the most unlikely of places can have sufficient resources to support at least one bat. All the graveyards in the project had bat activity, even isolated graveyards surrounded by intensive arable farmland, and roosts were found in three of the six graveyards.



The lower graveyard of the Hill Kirk, where all five species of bat found in Tayside are found
© Jean Oudney

All five species of bats found in Tayside were present in the lower graveyard in the Hill Kirk, including the locally rare and internationally important Natterer's bat (*Myotis nattereri*). It was clear from the study that the mature trees and bushes are the main foraging area of the pipistrelles; however the long grass and well developed understory is essential to the closed-clutter specialist bats that use passive listening and specially adapted echolocation to forage on moths and insects found in ground vegetation, showing the Hill Kirk graveyard is an important foraging area for all species of bat.

This small research project shows that even the most unlikely graveyards have potential to support bat populations and simple measures can be taken by graveyard managers to protect the mature trees and understory to preserve the foraging areas of their bat populations and avoiding insecticide use. Where appropriate, wild areas could be left to provide long undisturbed grass and native flowers for insects that require this habitat.

Light pollution can be prevented in graveyards by ensuring the mature tree canopy is protected which stops light from shining during the important summer season when female bats are raising their pups. Installing directional lights that shine only on the paths and roads needed by humans can help preserve the dark areas used by wildlife and red light can be a useful substitution when light is necessary. Roosting areas can be provided by installing bat boxes in the graveyards and cemeteries



and greater value should be placed on landscape features such as hedgerows and tree lines that connect smaller areas of habitat and which are vital to the movement of bats and other wildlife.

New members are always welcome to join the Tayside Bat Group which is dedicated to the conservation of bats and their habitat in Tayside. The group meets regularly for bat walks and surveys, as well as installing and checking bat boxes – contact: taysidebatgroup@gmail.com. The Tayside Green Graveyard Initiative’s leaflet can also be downloaded via <http://www.taysidebiodiversity.co.uk/2015/02/03/green-graveyards-initiative/>.

Tayside Recorders’ Day 2021

We have yet to set the date for the 14th Tayside Recorders’ Day but check the “What’s On” section of www.taysidebiodiversity.co.uk for further details later in the year. Provisionally we will be going to Camperdown in 2021 and will be back in Perth in 2022. However, as we achieved the most bookings ever for the 2020 Recorders Day (95 people), it may be necessary to find a larger venue than Camperdown for 2021. If anyone can suggest such a venue in/around Dundee, the cost of which can be sponsored or heavily discounted, 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 at the end of 2020)
- <http://www.brisc.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) this autumn: check the website for further information





Copy for Recorders' Bulletin 2021

If you would like to contribute an article to the 2021 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.

The deadline for the 2021 Bulletin will be 31st January 2021.

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 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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With many thanks for all the contributions to this edition

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