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An tIonad Náisiúnta Sonraí Bithéagsúlachta
National Biodiversity Data Centre
ag Doiciméadú Fiadhúlra na hÉireann | Documenting Ireland's Wildlife

Biodiversity IRELAND

ISSUE 29 AUTUMN/WINTER 2025

Asian Hornet
Responding to the threat from this invasive alien

Hosting GBIF
17th meeting of GBIF Europe and Central Asia Nodes

Annual Report 2024 published

Message from the Chief Executive Officer

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Biodiversity Ireland 29
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Cover: Asian Hornet *(Vespa velutina)*
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We have just celebrated *Samhain*, an important event in Ireland's natural and cultural calendar. *Samhain* marks the end of the harvest or bountiful season of autumn and the beginning of darker winter months. Overshadowed by the more commercialised Halloween, the importance of the Celtic celebration remains significant for anyone interested in biodiversity.

The changing of this season is everywhere to be seen. Birds that spend the summer on our island have returned to the more benign weather conditions of their wintering quarters. Our wildflowers have all but finished flowering and the flying phase of most of our insects has come to an end for the year. The last of the bats are flying in the longer, cooler evenings.

One of the great things about working in the National Biodiversity Data Centre is being able to track seasonal progression by the sightings of species submitted to Ireland's Citizen Science Portal. Almost 160,000 sightings of more than 6,000 different species have been submitted so far in 2025, information that tells us a great deal about the changing seasons and how the populations of different species are doing from one season to the next. As I write, I see that our hedgerows are laden down with haws and sloes, and around me here in Kilkenny, the pink and orange seeds of the spindle. This will be an important resource for our overwintering songbirds when they arrive from northern latitudes to spend the winter months.

By just tracking the number of sightings we receive each year, we can get a sense of how populations are faring. So far this year, for example, 1,729 sightings of the Red Admiral butterfly were submitted to the Centre, compared with only 425 from all of last year. This reflects what the data from our more structured monitoring programmes are telling us; 2024 was one of the poorest seasons for butterflies since our monitoring programme began 16 years ago, but given favourable conditions, some of our insect populations can bounce back relatively quickly.

We know this because the large network of volunteers doing more systematic monitoring of our biodiversity each year produce data that allows us to quantify exactly how populations are changing from season to season, and between years. Last year alone, volunteers managed a network of 279 monitoring transects, completed 1,926 point counts, carried out 302 site surveys and monitored 289 plant populations. This is a remarkable network of volunteers, and we are extremely grateful to everyone who participates in these monitoring programmes.

Just as *Samhain* marks the beginning of winter in the Celtic calendar, it also marks the end of our formal monitoring scheme season. The winter days ahead give us time to harvest the data from the schemes, assess what these data are telling us, and reflect on what has been achieved during the year.

Dr Liam Lysaght
CHIEF EXECUTIVE OFFICER
National Biodiversity Data Centre

SOME OF OUR

highlights from 2024

John McCarthy, Chairperson of the National Biodiversity Data Centre Board presents the Annual Report 2024 to Christopher O'Sullivan, Minister of State at the Department of Housing, Local Government and Heritage with special responsibility for Nature, Heritage and Biodiversity.

In our recently published Annual Report, we take a look back at some of our achievements in 2024:

Growing the organisation

- Published our *Strategic Plan 2024-2028*.
- Agreed our organisational structure and grew the staff complement from 12 to 21.
- Established a dedicated Invasive Species Unit to expand our capacity to deliver a large work programme on Invasive Species in support of policy implementation.

Improving knowledge on biodiversity

- Published 395,985 new occurrence records and 13 new datasets to Biodiversity Maps. This included occurrence data on 39 new species.
- Updated the suite of 71 sub-indicators of the National Biodiversity Indicators.
- Developed an online Tracker to track progress with delivery of the 194 actions contained in the National Biodiversity Action Plan 2023-2030.

Assisting better evidence-based actions for conservation

- Continued to coordinate implementation of the *All-Ireland Pollinator Plan 2021-2025*, reporting that 127 of the actions have been completed, 50 are still in progress, and only 11 remain to be progressed.
- Organised the inaugural Shared Island Biosecurity and Invasive Species Forum, attended by around 100 delegates from different partner organisations.
- Managed the Action for Biodiversity website ***actionforbiodiversity.ie*** as a resource for local action.

Promoting the use of biodiversity data

- Published 108,705 new occurrence records to the Global Biodiversity Information Facility.
- Contributed almost 67,000 occurrence records to assist the National Parks and Wildlife Service in reporting under Article 17, EU Habitats Directive.

Strengthening the citizen science and research networks

- Supported a network of 8,301 citizen scientists, who generated 152,711 new occurrence records.
- Managed a network of 279 monitoring transects, 1,962 point counts, 302 site surveys, and 289 monitored plant populations.
- Reported on the trends of Ireland's butterfly and bumblebee populations by managing the Irish Butterfly and All-Ireland Bumblebee Monitoring Schemes.
- Managed the National Pollinator Monitoring Scheme.
- Agreed a new Training and Engagement Programme to build taxonomic expertise across the citizen science and scientific communities.

Communicating Biodiversity

- Published two issues of *Biodiversity Ireland*, the Centre's bi-annual magazine
- Published monthly eNewletters providing updates on Centre activities.
- Produced a suite of 18 new resources to improve knowledge of, and provide advice on, different aspects of Ireland's biodiversity.

Hosting GBIF Europe and Central Asia Nodes

The National Biodiversity Data Centre hosted the 17th meeting of the Global Biodiversity Information Facility (GBIF) Europe and Central Asia Regional Nodes in Waterford on May 20th-23rd.

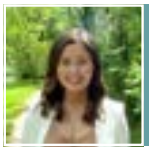
GBIF is an international network and data infrastructure funded by the world's governments to work together to share data and information on the world's biodiversity.

Ireland has been a voting participant of GBIF since 2008 and since then, the National Biodiversity Data Centre has been Ireland's GBIF node. This means the National Biodiversity Data Centre has responsibility for coordinating GBIF-related activities within Ireland. The event took place in the ArcLabs Research and Innovation Centre, Carriganore, SETU West Campus, Co. Waterford, and was attended by over 40 node managers, staff, and invited observers, from across 14 countries in Europe and Central Asia. The Europe and Central Asia Regional Node Meeting is held annually and has the following objectives:

- Support regional coordination
- Facilitate regional collaboration
- Provide feedback to the Secretariat on the Nodes Steering Group on regional issues and priorities
- Develop stronger regional engagement in GBIF

The meeting commenced with a full day excursion and BioBlitz to three locations along the Copper Coast – Fenor Bog, Anne Valley Nature Park, and Annestown beach. Staff from the National Biodiversity Data Centre were on hand to lead the walks and aid in species identification. Observations were recorded using two recording applications – iNaturalist and ObsIdentify (BioBlitz GBIF ECA 2025 - Observation.org and *inaturalist.org/projects/gbif-eca-2025-waterford-ireland*). Over 1,000 observations were recorded across 277 different species. Two species in particular that stood out to the group were the Chough spotted on the headlands at Annestown beach and the eggs of the Orange-Tip butterfly spotted on the Cuckooflower in Fenor Bog.

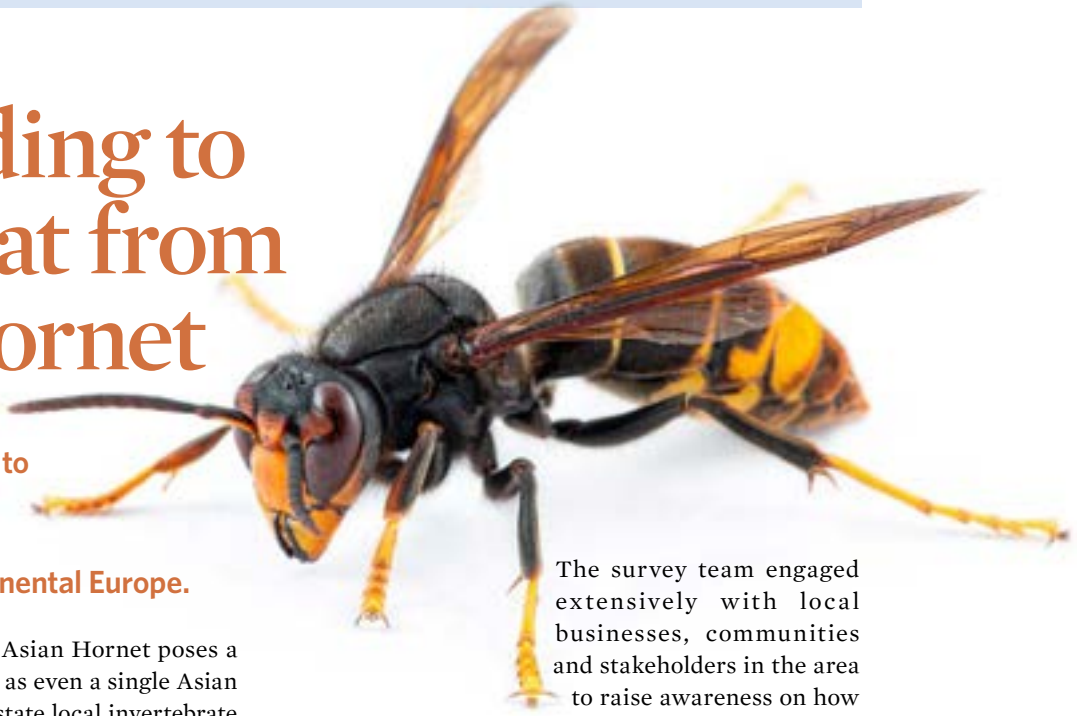
Over the following days, technical meetings were held, as well as two half-day workshops, which were open to external attendees. The first workshop was based around a GBIF-funded project 'AI for Specimen Labels', and included a presentation on the digital transformation of specimens and a demonstration of the newly developed digitisation tool 'SpLAT' (Specimen Label Automated Transcriber). This workshop was led by node staff from Poland, Norway, and the organisation Distributed System of Scientific Collections (DiSSCo). The second workshop was based on 'Private Sector Data' and was led by node managers from Ireland, the Netherlands and Sweden. The aim was to highlight what was being done in these countries and to outline how node managers and staff can encourage and support data mobilisation from the private sector. As well as a webinar on how businesses engage with the All-Ireland Pollinator Plan, Dr Emer Ní Dhúill, from Business for Biodiversity Ireland, joined the workshop to offer guidance on business engagement and data mobilisation. Both workshops concluded with lively discussions and the generation of action points for future work. The meeting was a fantastic opportunity to connect, share knowledge, and strengthen our collective efforts in advancing biodiversity data sharing.



Michelle Judge

DATA MANAGER AND GBIF NODE MANAGER
National Biodiversity Data Centre

Responding to the threat from Asian Hornet



The Asian Hornet *(Vespa velutina)* is native to southeast Asia, but it is an invasive species that has spread through continental Europe.

Without taking action, Asian Hornet poses a major ecological risk, as even a single Asian Hornet nest can devastate local invertebrate and honeybee populations. Ireland has, so far, remained largely free from this invasive species, making early interception efforts particularly crucial.

On August 13th, the National Parks and Wildlife Service (NPWS) confirmed a sighting of an Asian Hornet in the Cork area, marking a biosecurity alert. The sighting was first reported to the National Biodiversity Data Centre's website *records.biodiversityireland.ie/record/invasives* by a member of the public. A photograph was included, which was confirmed by entomologists at both the National Museum of Ireland and NPWS, triggering a rapid response protocol. This prompted a government-led response, with the establishment of a new task force. The Asian Hornet Management Group, chaired by NPWS, and including the Department of Agriculture, Food and the Marine, the National Biodiversity Data Centre and the National Museum of Ireland, coordinated efforts, gathered further information, and monitored the situation over the weeks that followed.

A team was quickly deployed to Cork, and extensive surveying was conducted. No evidence of a Hornet nest or activity was initially observed, however subsequent surveillance led to the trapping of an Asian Hornet.

Claire Deasy (NPWS), Sam Bayley (NPWS) and David Law (David Law Tree Care) following the removal of one of the Asian Hornet nests in Cork.

The survey team engaged extensively with local businesses, communities and stakeholders in the area to raise awareness on how to identify Asian Hornet. Beekeeping associations were briefed and gave support.

This sighting was the second verified record of this invasive species in Ireland. The first record was of a single individual in Dublin in 2021 and was not associated with a viable wild population. Another Asian Hornet was recorded in Dublin on July 22nd 2025. Following substantial monitoring and targeted efforts, two Cork nests were finally located and removed in early September: one from Cork city and one from Cobh. Speaking about the incident, Minister of State for Nature, Heritage and Biodiversity, Christopher O'Sullivan TD said: 'This incident shows us that members of the public are our eyes on the ground. Early detection is key if we are to prevent the establishment of this invasive species. I urge everyone to be vigilant and inform themselves so that they can recognise and report any sightings of the Asian Hornet to help us contain this invasive species and protect our biodiversity.'

> *"members of the public are our eyes on the ground. Early detection is key if we are to prevent the establishment of this invasive species"*

Members of the public are asked to report any suspected sightings through Ireland's Citizen Science portal: *records.biodiversityireland.ie/record/invasives*.

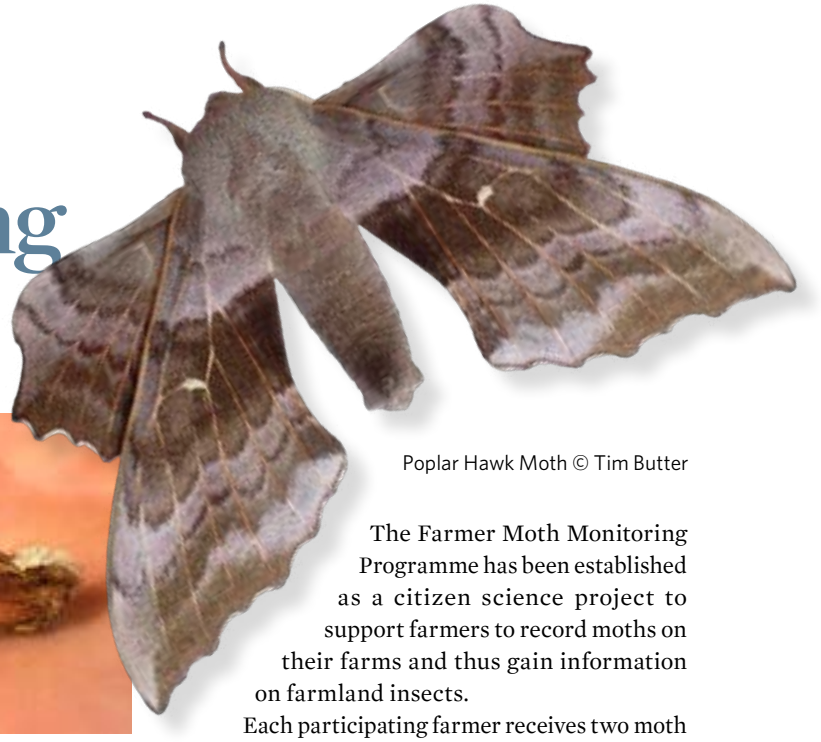
It is important to note that Asian Hornet can be easily confused with native species such as the Giant Woodwasp, the Dark Giant Horsefly, and the Common Wasp. For help on identification, see *biodiversityireland.ie/app/uploads/2025/08/AH-ID-chart-final_13August2025_NMI.pdf*

If you suspect you have spotted an Asian Hornet, do not attempt to disturb or capture it. While not generally aggressive, it may sting if provoked. Any photographs, location coordinates, or samples (if safe to collect) are extremely valuable to the response team. For updates, see *invasives.ie/asian-hornet-rolling-update-2025/*

The Farmer Moth Monitoring Scheme

Oblique Carpet © Tim Butter

Coxcomb Prominent © Colm Scully



Poplar Hawk Moth © Tim Butter

Our moths are an under-appreciated group of pollinating insects. In fact, they are vital for the pollination of many plant species, but their night-time visits to our garden flowers and crop plants generally go unnoticed by most people.

We have around 1,500 moth species in Ireland, so as a group they constitute a considerable proportion of our insect biodiversity. However, in common with many other groups of insects, the numbers of most moth species appear to be declining. The All-Ireland Pollinator Plan, managed by the National Biodiversity Data Centre, promotes actions to encourage pollinating insects and reverse this decline.

The largest land use in Ireland is agriculture. Although many farms actively participate in the All-Ireland Pollinator Plan, it is difficult to know what is happening to insect populations on farmland, including the pollinating insects that are so vital in transferring pollen between flowers and fertilising them.

The Farmer Moth Monitoring Programme has been established as a citizen science project to support farmers to record moths on their farms and thus gain information on farmland insects.

Each participating farmer receives two moth traps. These are based on a plastic bucket and use an LED light system, powered by a rechargeable power bank, so are relatively low cost and simple to use. The traps are deployed for one night every two weeks from mid-April to the end of September, with one survey taking place in the middle of a field and the other taking place next to a hedge in the same field. Participating farms are spread across the entire country and include a wide range of farm types.

This combination gives an idea of moth diversity in a relatively complex habitat (hedge) to compare to the larger land area habitat of the open field. Detailed analysis of the data will continue over the winter, but some standout figures include almost 1,400 sampling nights, with approximately 22,000 individual moths recorded, of around 350 species.

Tim Butter

FARMER MOTH MONITORING SCHEME OFFICER
National Biodiversity Data Centre

New online course on mining bees

Ireland is home to 27 *Andrena* mining bees, which make up approximately a quarter of our wild bee species. They are important pollinators and many are among our most widespread solitary bees. This new course includes tips on where to find these mining bees, how to identify them; as well as an overview of submitting records. The value of citizen science has already been demonstrated with the rediscovery of the Tawny Mining Bee (*Andrena fulva*) in 2012, plus the discovery of several other solitary bees in Ireland over the past 10 years, all thanks to you! The course is completely free and can be accessed on the National Biodiversity Data Centre's online learning platform: ***learn.biodiversityireland.ie***

Guide to Irish hoverflies

A beginner's guide to the 180 species of Irish hoverflies is now available to download. It is intended as a guide to help make hoverflies more accessible to beginners. It refers only to genera/species currently known from Ireland and efforts have been made to keep technical terminology to a minimum.

If you're interested in learning to identify hoverflies, it will hopefully be a useful resource and help bridge the gap between starting and moving to the use of scientific keys. You can download the guide here: ***pollinators.ie/wp-content/uploads/2023/03/Beginners-guide-to-Irish-hoverflies-July-2015-1.pdf***

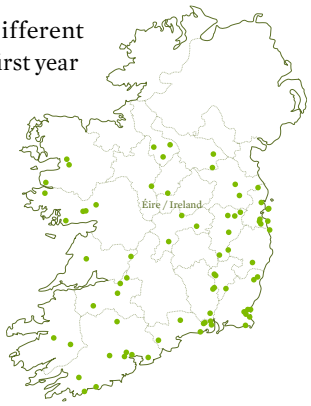
Garden Butterfly Monitoring Scheme

The Garden Butterfly Monitoring Scheme was established on a pilot basis in May 2020 and rolled out as a full national scheme in 2021. The purpose of the scheme is to generate counts of the butterfly species and numbers that commonly visit gardens, and to track changes in populations from year to year. With six years of data, the scheme is now showing its value for tracking change in the populations of our commonest butterfly species. The Garden Butterfly Monitoring Scheme will complement the data generated from the transect-based Irish Butterfly Monitoring Scheme and the Five-visit Monitoring Scheme.

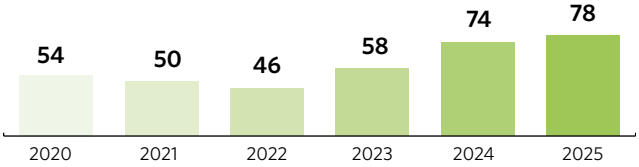
The scheme involves participants counting the number of each species of butterfly seen over exactly a 15-minute period. Participants can complete as many counts as they wish, however, completing at least one each week from 1st April to end of September is recommended. The counts are submitted to the National Biodiversity Data Centre through an online submission form, and progress with the scheme can be tracked on the Garden Butterfly Monitoring Scheme website *https://biodiversityireland.ie/surveys/garden-butterfly-monitoring-scheme/.*

Participation and activity in 2025

Counts were received from 78 different gardens in 2025, up from 54 in the first year of the scheme. The participating gardens are reasonably well distributed across most of the country, except for the north west, with no participating garden from Co. Donegal.

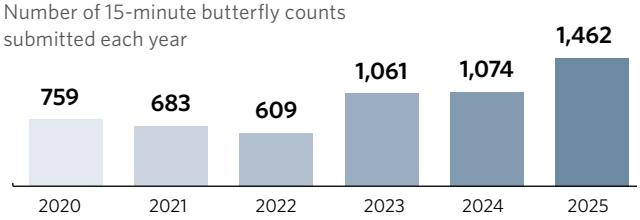


Location of the gardens participating in the scheme in 2025



Number of gardens participating in the scheme each year

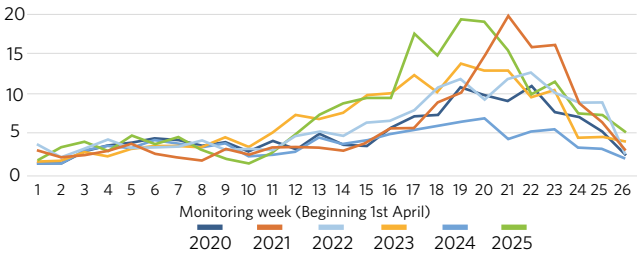
1,462 counts were submitted during the year, an increase of 36% in the number submitted in 2024. The number of counts has been growing steadily since 2022.



Initial results

Initial results from the scheme confirm that 2025 was a good year for butterflies. The average number of butterflies counted in gardens has bounced back from the very low numbers seen last year. Numbers were similar to 2021, another good year for butterflies, but the build up in butterfly numbers was earlier and lasted longer last year.

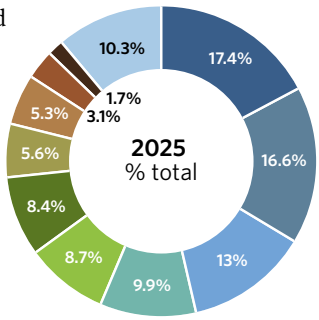
Butterflies in gardens 2020-2025



The average number of butterflies counted per count completed over the six years of the scheme.

Red Admiral, Small Tortoiseshell and Large White together accounted for 47% of all butterflies counted in gardens in 2025. Few Small Tortoiseshell were counted early in the season, but the species had a very successful second generation, with large numbers appearing in gardens in autumn. It would appear that Small Tortoiseshell has recovered well from the very poor season of 2024. Peacock numbers appear to have remained low in 2025, as it accounted for just over 3% of the butterflies counted in gardens in 2025. The ten most frequently seen butterfly species accounted for almost 90% of the butterflies counted in 2025.

A detailed report on the findings of the scheme will be published early in 2026.



Red Admiral	2,196
Small Tortoiseshell	2,103
Large White	1,641
Speckled Wood	1,249
Small White	1,097
Green-veined White	1,063
Ringlet	703
Meadow Brown	676
Peacock	392
Holly Blue	212
Other species	1,301

Dr Liam Lysaght
CHIEF EXECUTIVE OFFICER
National Biodiversity Data Centre

Turloughs – our ephemeral lakes

Turloughs are temporary lakes that flood during higher rainfall in winter, and drain in spring, revealing diverse grasslands in summer, often used as pasture.

Unlike permanent lakes, they don't drain via rivers. Instead, water seeps out underground through swallowholes in the limestone bedrock. A turlough fills when incoming water exceeds what can empty through these hidden channels. These features only occur in karst limestone landscapes, where the bedrock underneath has been eroded by water to form cracks, caves, caverns, and underground rivers. Most turloughs are found in counties Galway, Clare, Roscommon, and Mayo, where high rainfall of the west meets this karstic terrain.

Typically, a turlough stays flooded for three to five months over winter. However, their cycles are variable, as they can empty and refill at different times of year. After prolonged heavy rainfall, a turlough may rise above its usual level, sometimes causing flooding to nearby roads, farmland and houses.

Turloughs are protected under the EU Habitats Directive and are further recognised as a Priority Habitat, reflecting their exceptional conservation importance. In Ireland, 45 Special Areas of Conservation (SACs) have been designated for turloughs, containing at least 71 individual sites. These include the largest and most biodiverse examples, such as Rahasane Turlough near Craughwell, Co. Galway; Coole Park near Gort, Co. Galway; and the turloughs around Mullaghmore Mountain in the Burren National Park, Co. Clare. A Geological Survey Ireland database suggests that there may be over 850 turloughs across the country, far more than those currently within designated SACs.

Turloughs play a vital role in supporting biodiversity in Ireland. Their basins host a mosaic of habitats – woodland, grassland, fen, scrub, and limestone pavement. The ecology is shaped by the flooding regime, soil type (till, peat, marl, clay, earths), grazing intensity and other agricultural management. This variation creates niches for many rare plants, including Purging buckthorn, *Rhamnus cathartica*; Alder buckthorn, *Frangula alnus*; Northern bedstraw, *Galium boreale;* Mudwort, *Limosella aquatica*; Adder's-tongue fern, *Ophioglossum vulgatum*; Shrubby cinquefoil, *Potentilla fruticosa*; Water germander, *Teucrium scordium*; and Fen violet, *Viola stagnina*.

Many larger turloughs are also of international importance for birds. Rahasane Turlough, for example, is both an SAC and a Special Protection Area (SPA) under the EU Birds Directive. It provides a winter refuge for migratory birds, such as Greenland White-fronted Goose, Whooper Swan, Wigeon, Golden Plover, and Black-tailed Godwit. In summer, turloughs are also critical breeding grounds for threatened waders such as Lapwing, Redshank, Snipe, and Dunlin, all of which are red-listed in Ireland.

Turloughs also contain numerous specialist invertebrates due to the mosaic of habitats. Most turloughs have permanent wet areas and ponds that are important to aquatic invertebrates, such as moss-edge water beetles. Bare ground and muds are important for rare ground beetles, and fringing habitats, such as woodland, scrub, limestone pavement, and semi-natural grasslands, are important for terrestrial invertebrates. Because of their ephemeral nature, land-use management of turloughs is typically low intensity. Grazing is usually limited to the summer months when the basins are dry, while seasonal flooding prevents practices such as reseeding, fertiliser application or pesticide use. Most turloughs are divided by stone walls or fencing to allow stock rotation and access to water, and many remain in commonage.

> ***"there may be over 850 turloughs across the country, far more than those currently within designated SACs".***

Tulla/Pouleenacoona Turlough, Burren Complex SAC.

Despite this, turloughs face a number of pressures. Drainage has altered the hydrology of many sites, threatening their ecological integrity. Unsuitable grazing regimes can also damage sensitive habitats, while declining water quality from surrounding land use poses additional risks.

Looking ahead, climate change presents a growing challenge. Evidence suggests that many turloughs are becoming wetter and holding water for longer periods due to increased rainfall. A case study in south Galway turloughs predicted that climate change will make groundwater flooding events more frequent, alter the depth and duration of flooding, and shift the seasonal timing of flood and dry phases.

No two turloughs are exactly alike – their hydrology, ecology, and management all shape how they look and function. In fact, it can sometimes be difficult to know if you're standing in a turlough at all. Here are some tell-tale signs:

- Black moss (*Cinclidotus fontinaloides*) – forms a dark coating on rocks, walls, fences, and shrubs, usually marking the highest regular flood level.
- Marl deposits – highly calcified water can precipitate onto vegetation and soil, leaving a distinctive white, chalky crust.
- Raised roads – causeways several metres above surrounding fields often signal regular winter flooding.
- Swallowholes and springs – in summer, you may see water flowing through gaps in rock or small clusters of boulders.
- Submerged walls and fences – in winter, farm boundaries may disappear beneath the water, revealing grazing land that will re-emerge in summer.
- Vegetation strandlines – as floodwaters recede in spring, lines of plant debris are left behind at different heights.
- No fixed shoreline – unlike permanent lakes, turloughs lack a well-defined edge; fluctuating water levels prevent the usual erosion marks.

Castle Lough, Co. Clare, Burren Complex SAC, a rich and diverse turlough.

Kiltacky Turlough, Inis Mór, Co. Galway, an important site for breeding lapwing.

Peterswell (Blackrock) turlough, Co. Galway.

Turloughs are almost unique to the Irish landscape and hold some of our most threatened biodiversity. They are important priority habitats of international significance, therfore protecting them is vital to our flora and fauna.

In summer, turloughs are critical breeding grounds for threatened waders such as Lapwing. © Shutterstock. All other images © Hannah Mulcahy

Hannah Mulcahy

TURLOUGH ECOLOGIST

Scientific Advice and Research Unit (SARD), NPWS

Minke Whale (*Balaenoptera acutorostrata*) © David Craig

The appeal of biodiversity recording

Ireland's Citizen Science Portal provides an online facility to capture details of sightings of biodiversity. Almost 1.5 million observations, of more than 14,000 species, have been submitted through the portal since it was launched in 2012. It allows recorders to map, view and query their own records, while also contributing to the national biodiversity database.

In 2024, some 152,711 records were submitted. Records were received from 8,301 individual recorders, across all 32 counties. However, from these recorders, there were a small band of 40 who submitted over 1,000 records. From this group, there is an even smaller cohort who submitted over 1,000 species. Yes, not just 1,000 records, but over 1,000 different taxa! We asked three of our most active recorders to tell us about their experiences and what motivates their interest in biodiversity:

David Craig

submitted over 5,000 records in 2024 – the most of any recorder in the network.

I've always had a bit of an interest in nature and the world around me, living as a child surrounded by green fields and the sea, but I didn't really think about recording what I'd seen, apart from trying to photograph the local birds and keeping a fishing diary.

I've noticed many changes in nature, but because nothing was recorded, I could say where, but couldn't say with any accuracy, when. Sure, there were huge flocks of Whooper Swan and Lapwing, but I can't remember when they arrived and when they left. I also remember seeing my first Little Egret on the banks of the River Bandon, in Kinsale, and wondering what it was. Again, without records, I couldn't say when it was.

With the onset of COVID19 restrictions and having to work from home, I struck it lucky. There was a newly planted deciduous wood (approximately 15 years old), which I hadn't visited, close to my house, and I was asked through my job to help participate in a pollinator study run in association with the National Biodiversity Data Centre. Being the end of March, and with an unusually good spell of weather, I initially thought it was all going to be recording bees, wasps and butterflies. Very quickly I began to see the diversity within such a small area, which was just allowed to develop naturally, and thought 'I could get into this'. I started noticing quite a few insects I didn't recognise, on plants I wasn't familiar with, so getting a digital camera and photographing absolutely everything meant I could attempt to identify 'new' organisms at a later date.

I noticed that a lot of this new flora and fauna were under-recorded or had no recorded sightings on any of the biodiversity sites, and I saw this as an opportunity to show what was out there and not just to leave it up to others. With the world then getting back to normal, I was able to contrast and compare sites that I was able to visit, helping me to improve my personal knowledge, and add detailed records to places I had been.

A few years ago, if I had been asked which taxonomic group I was most interested in, without any hesitation I would have said anything to do with the marine environment, particularly marine fish. Now I seem to be drawn to hoverflies! It's a group of insects that I knew nothing about until I started recording, and I still get excited about finding them every year.

The highlights of my time recording change from year to year, but probably the close encounter with a Minke Whale stands out, even though I'd seen them before from quite a distance away. Similarly, a Rosy Woodlouse, just because I'd never seen one before and there were very few previous records.

Rachel McKenna

Champion recorder who also assists with work on sawfly species.

Recording flora and fauna has become an integral part of my weekly activities and began in 2018. Amanda Pedlow, Heritage Officer in Offaly, first lured me into recording with the bribe of a free identification swatch in return for 25 records. The initial fear around finding 25 species was soon replaced by the query: 'a free swatch for each 25?' Recording has evoked a personal awakening and appreciation of the astounding beauty and complexity of nature around us, in our gardens, hedgerows, woodlands, and bogs. It evolved over a five-year period, from a general awareness to a thirst for more information, greatly helped by so many patient experts and a selection of wonderful books. The result was not only lots of records but the publication of my book in 2024, *Step into Nature*.

This five-year period has also put me in contact with the most wonderful Facebook groups, such as MothsIreland, British and Irish Sawflies, and Insects and Invertebrates of Ireland, which are operated by dedicated voluntary experts. Recording has introduced me to a whole new and enriching community.

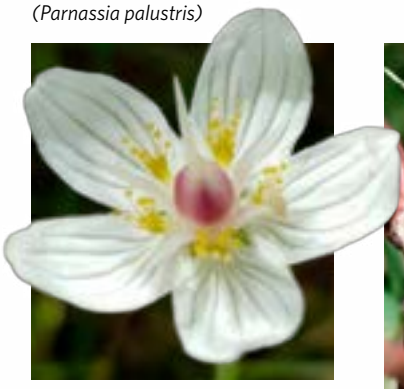
Worldwide, we are witnessing catastrophic biodiversity loss, so it is all the more vital for each individual to help in a small but meaningful way. Where at all possible, we must make efforts to increase biodiversity – in our gardens, workplace, schools and communities. Simple examples are included in my book, such as planting larval foodplants, such as the lovely garden plant Dame's Violet. Within two years of planting the seeds, we had the tiny moth *Plutella porrectella*, whose caterpillars feed on the leaves – the first recorded in Offaly!

Then, before you know it, you are seeking out specific wildflowers or insects, and dragging reluctant family members on walks to bogs, woodlands or lakesides. I started with garden butterflies and bumblebees, and attended workshops. Soon I was out searching for orchids or fungi; looking into hedgerows for shieldbugs, mirid bugs, beetles, ladybirds or hoverflies; peering into bog pools for caddisflies; lakes for dragonflies; and the underside of leaves for sawflies or leafmines. It is thankfully, a never-ending adventure.

Selecting a favourite is surprisingly simple: it is whatever wonderful wildflower is in season, such as Grass-of-Parnassus, with its sculptural, waxen leaves; Blue Fleabane, with exquisite flowers and dense, fluffy seedheads; or the diminutive Autumn Lady's-tresses, a rare and wonderful find. Or perhaps a beautiful Puss Moth resting beside the moth trap, matched only by the astounding larvae. It could also be a Common Green Grasshopper, bright pink due to erythrism, a genetic mutation. Perhaps selecting one favourite is not that easy!

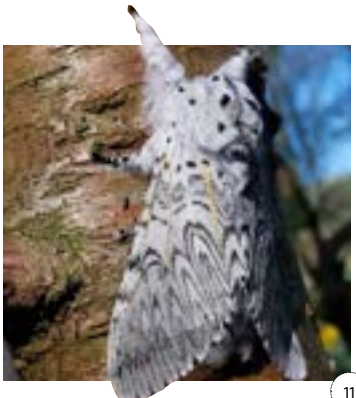
Each day can provide the opportunity to listen to the voice of nature, to reconnect us, instilling us with a sense of fulfilment. Every discovery is a small triumph, and such encounters have extraordinary, perhaps compulsive, potency (and the 'Recorder League' adds a slightly competitive edge to the process!). By simply slowing down, listening and observing, we can discover miniature wonders of nature – or those that are so heartachingly beautiful that the memory stays with you long after the seasons change. Throughout the process of recording and writing my book, I have come to realise that a walk in nature, of whatever duration, allows time for the soul to breathe.

Grass-of-Parnassus (*Parnassia palustris*)



Common Green Grasshopper (*Omocestus viridulus*)

"a walk in nature, of whatever duration, allows time for the soul to breathe



Puss Moth (*Cerura vinula*) adult and larva (left). All © Rachel McKenna

Spotted Longhorn Beetle (*Rutpela maculata*)

Louise Garcia

is a very active recorder and is a validator for a number of beetle species.

I began early training for biodiversity recording aged nine, with my Nature Study teacher, appropriately named Miss Nightingale. Each week we noted our observations of the last week's weather and listed wildflowers, birds and animals we had seen. We also chose species from field guides and drew and wrote notes about them, continuously expanding our knowledge of our local flora and fauna. Enthused by this, I got my first two Observer's books, on butterflies and wildflowers, for Christmas that year, and for my 10th birthday, a nature explorer's satchel to equip me for limitless adventure. The I-Spy books also fed my passion for observing, identifying and recording wildlife, even if it was just a tick in a checkbox and a date.

Fast-forward half a century and as well as a satchel of equipment and a much-expanded natural history library to refer to back home, I now have the time, transport and freedom to really embark on adventures of discovery in the natural world. When I occasionally get lost in tall reeds or stuck in a swamp, I feel the early promise of that nature explorer's kit has finally been fulfilled!

Want to start recording? See *records.biodiversityireland.ie*

Even better, it is now so easy to take photos and share them with the wider scientific community through the National Biodiversity Data Centre's online portal or phone app. It is an amazing golden age for biodiversity recording, with online keys, photo libraries and AI apps, plus supportive recorder networks on Facebook, making it possible for anyone to contribute to knowledge of Ireland's natural heritage.

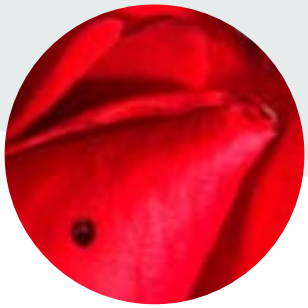
Warm spring weather sees me looking forward to seeing old friends again, in the form of the different moth, butterfly and bee species that pop up in the light trap and vegetable garden, and the damsel and dragonflies along the river. With my main interest in insects, I'm always desperate to take advantage of warm sunny weather to visit my established recording sites and to try new ones. There's delight in seeing old favourites again, and grand plans to explore new habitats with better techniques in the hunt for long-sought-after entomological gems. Last year's highlights included a male Rhinoceros Beetle, a bevy of Spotted Longhorn Beetles, and a first sighting of Green Hairstreak Butterfly. The more years spent poring over the books, wishing I could see something, the greater the thrill in finally encountering the live species.

Once you're hooked by biological recording, every walk becomes a treasure hunt, followed by a detective story when you try to name something new. As well as the benefits of fresh air and exercise, recording gives every walk and season a great sense of purpose. It's also enormous fun, as I try to convey to youngsters when running biodiversity events. Nothing beats the buzz of capturing a photo of a new and fabulous species, tracking down its identity and finally seeing it get its due recognition with a new dot added to Biodiversity Maps.

Green Hairstreak (*Callophrys rubi*)

Rhinoceros Beetle (*Sinodendron cylindricum*) All © Louise Garcia

Forecasting the risk of plant pest introductions on trade pathways outside of the EU



Thaumatotibia leucotreta (False Coddling Moth) in rose flower. Entrance hole (top) and larvae (above).

The Department of Agriculture, Food and the Marine (DAFM), as the National Plant Protection Office (NPPO), is responsible for ensuring the safe trade of plants and plant products into and out of Ireland. When a registered professional operator seeks to import plants or plant products into Ireland from outside the EU, they must notify the import 24 hours in advance on DAFM's import notification system and the EU TRACES system. (TRACES is the EU online system for tracking imports from non-EU countries). The Department conducts various checks on consignments on entry. These include documentary, identity and physical checks to ensure consignments are free from regulated plant pests. When regulated plant pests are found on commodities entering any EU country, the consignment is rejected and both the third country of origin and the European Commission are notified. These notifications are known as 'interceptions' and published monthly.

The Pest Risk Analysis Unit (PRAU) reviewed the published plant pest findings from 2020-2024 and compiled a database of the reported interceptions. Another database was compiled of the monthly imports into Ireland that were registered on TRACES from third countries over the last three years (2022-2024). The two databases were used to identify seasonal trends in reported plant pest interceptions and forecast the typical 'high-risk' pathways for Ireland on a monthly basis. As of 2025 the PRAU has now been producing forecasts of typical 'high-risk' trade pathways based on historical interceptions and typical trade flows into Ireland from third countries.

The forecasts are produced in advance of each month and contain a summary of the reported interceptions by country, product type, host and pest (Figure 1). Each of the top 10 hosts with reported pests are given a deeper analysis and compared to the known trade pathways open into Ireland in that month over the last three years. The 10 reported pests for each month are also explored. The pests are summarised for their typical symptoms on host commodities (text and images), how to inspect/sample, and threat to Irish biosecurity.

The PRAU produces the forecast and disseminates it to the stakeholder divisions within DAFM. A trade risk management group meets monthly to review and discuss the findings of each forecast, and decide if any changes or additions are required to current risk management procedures. The forecast is an additional data-driven tool and resource for inspectors for mitigating the chances of pest introduction on plant trade.

Conor Francis McGee

AGRICULTURAL INSPECTOR, PEST RISK ANALYSIS UNIT,
Department of Agriculture, Food and Marine

Andy Bourke

ASSISTANT AGRICULTURAL INSPECTOR, PEST RISK ANALYSIS UNIT,
Department of Agriculture, Food and Marine

Figure 1: Forecast summary of EU-Third Country interceptions by country (top left), commodity (top right), Host (bottom left), pest (bottom left).

Country	2020	2021	2022	2023	2024	Total
Argentina	78	2	0	0	2	82
South Africa	1	12	8	16	13	50
United States	3	23	10	3	2	41
Brazil		6	10	4	18	38
Israel	6	3	8	5	15	37

Hosts	2020	2021	2022	2023	2024	Total
Citrus limon	80	3	3	4	10	100
Mangifera indica	7	14	20	6	12	59
Solanum lycopersicum	3	3	7	8	28	49
Capsicum annuum	9	3	11	2	9	34
Rosa	10	9	0	4	7	30

Commodity Type	2020	2021	2022	2023	2024	Total
Other living plants: fruit and vegetables	115	70	79	40	98	402
Intended for planting: seeds	10	9	11	10	40	80
Plant products: logs	0	12	6	3	1	22

Pests	2020	2021	2022	2023	2024	Total
Phyllosticta citricarpa	63	8	8	14	21	114
Tomato brown rugose fruit virus	9	5	10	10	35	69
Bemisia tabaci	12	11	9	5	8	45
Thaumatotibia leucotreta	10	14	2	6	13	45
Bactrocera	6	6	10	3	5	30
Xanthomonas citri pv. citri	12	3	3	2	5	30
Tephritidae	9	10	3	3	4	29

Woodland margin in Co. Wicklow. Areas like these are important for our native social wasps. © Owen Beckett

A NEW COURSE ON

Ireland's social wasps

The National Biodiversity Data Centre is delighted to announce the launch of a new online course on Ireland's social wasps. Although feared by some, social wasps play a key role in our ecosystems, not only being efficient predators but also effective pollinators. Like many of our insects, they are facing threats, including habitat loss, reduction in prey, and colonisation by invasive species like the Asian Hornet. It is important to know where our social wasp species are found and how they are faring, so that we can make informed decisions on their conservation.

In this new online course, you can find out how to identify Ireland's social wasps, as well as learn about where they are found, their life cycle, and how to record your sightings. The course is free and can be accessed on the National Biodiversity Data Centre's e-Learning platform: ***learn.biodiversityireland.ie***

Common Wasp (*Vespula vulgaris*) © Owen Beckett

Norwegian Wasp (*Dolichovespula norwegica*) © Owen Beckett

German Wasp (*Vespula germanica*) © Owen Beckett

Red Wasp (*Vespula rufa*) © Owen Beckett

Cuckoo Wasp (*Vespula austriaca*) © Magne Flåten

Saxon Wasp (*Dolichovespula saxonica*) © Adrian Tync

Tree Wasp (*Dolichovespula sylvestris*) © Owen Beckett

Asian Hornet (*Vespa velutina*) © Charles G. Sharp

Biodiversity Maps

The data and mapping portal Biodiversity Maps (maps.biodiversityireland.ie) provides access to data on Ireland's biodiversity. As of October 1st, there were 6,986,158 records of 18,335 different species in 200 datasets. Recently updated datasets include:

The Heritage Council's Traditional Farm Building Scheme Fauna Records from 2016 to 2023 (new dataset)
1,219 new records

Online Atlas of Vascular Plants
7,708 new records

Explore Your Shore!
1,992 new records

Ladybirds of Ireland
365 new records

False Blister Beetles (Oedemeridae) of Ireland
19 new records

Botflies (Oestridae) of Ireland
7 new records

Heteroptera of Ireland
1,657 new records

Handsome Fungus Beetles (Endomychidae) of Ireland
39 new records

Tortoise Beetles (Cassidinae) of Ireland
137

Heleomyzidae Of Ireland (new dataset)
171 new records

All-Ireland Marsh Fritillary Database
238 new records

2025 has been a particularly good year for biological recording, with numbers up across each month (except February) when compared with 2024. 148,477 records have been submitted, by 8,291 recorders across all 32 counties.

Fox, Red Admiral and 7-Spot Ladybird have been the three most commonly recorded species throughout this year.

Records for Red Admiral in 2025 are particularly of note as there are already 1,000 more records submitted for the species than in 2024.

Explore Your Shore!

At the time of writing, Explore Your Shore! has collected 28,790 verified records of 814 different marine species, from 2,406 coastal sites all around Ireland. These records were contributed by 2,368 citizen scientists and we are continuing to validate new records from 2025.

It has been a very busy summer. In April, the Explore Your Shore! Hubs met in Galway Atlantaquaria (who are our Galway Hub!). At the meeting, the Sea Collective (Donegal Hub) and our Sea Synergy (Kerry Hub) were joined by the Clean Coasts Biodiversity Officer for networking and event planning. We also hit the shore for some surveys on both days of the meeting. Together, we planned and delivered 18 Explore Your Shore! shore-based training sessions across eight coastal counties, attended by over 190 participants.

Many of the sessions were conducted in partnership with Clean Coasts as part of the Clean Coasts Observer Programme, which helps local groups to develop their knowledge of coastal biodiversity and get involved in Marine Biodiversity Citizen Science through Explore Your Shore! Our thanks to all of our hubs, our Clean Coasts partners, local partner groups, and all those who participated in the training days. To strengthen our partnership with Clean Coasts, we hosted a Train-the-Trainer day in Galway in October. This session equipped Clean Coasts staff to deliver their own Explore Your Shore! training workshops in the future.

In April, we received a record of the giant 'Seven-armed' Octopus (*Haliphron atlanticus*) from Mairéad Hennessy from Mullaghmore Beach in Sligo. 'Seven-armed' Octopus actually has eight arms, but the diminutive male hides one arm in a sac beneath its eye! This is the world's largest octopus species, with females growing up to four metres in length and 75kg in weight. The Mullaghmore specimen was much smaller than this, but still around 3ft long.

Explore Your Shore! training with the Cape Clear Biodiversity Group

Seven-armed Octopus (*Haliphron atlanticus*) recorded at Mullaghmore Beach, Sligo, in April by Mairéad Hennessy.

What makes the record even more interesting is that this is now the third record of this species from the same stretch of the Sligo coast. *Haliphron atlanticus* is a favoured prey of Sperm Whales, which are present year round in deep waters to the west of Donegal Bay. We don't know why Sligo is a hotspot for *Haliphron atlanticus* strandings, but we will keep an eye on this stretch of coastline for further mysteries from the deep. Our thanks to Prof. Louise Allcock of the University of Galway for confirming the identification of the stranding.

Also in April, we received a record of Red-mouthed Goby (*Gobius cruentatus*) from Inish Barna in Galway. The record was submitted by diver Maja Stankovski, and accompanied by a beautiful photograph. This is the most northerly record of this species in Ireland (and possibly in Europe, though an undated record exists from the Baltic). It is better known as a Mediterranean species, but has extended its range north to the Atlantic coasts of Spain, France and the Netherlands. Previous Irish records had been confined to west Cork, Kerry and the Celtic Sea. One to keep an eye open for if diving or snorkelling on the west coast in the near future.

Finally, thanks to all who took part in our Seashore Splashes! for Biodiversity Week and Heritage Week. The Heritage Week event, from August 16th to 24th, attracted 430 records, with Wexford the clear winner by a country mile. The Biodiversity Week event, from May 16th to 25th, received 608 records, with Cork the victor on that occasion.

Red-mouthed Goby (*Gobius cruentatus*) recorded at Inish Barna, Galway, by Maja Stankovski in April.

Survey Focus:
Big Beach Biodiversity Survey

What is it? Record marine species found cast up on Irish beaches – the remains of species cast up by the tide can be a really useful indicator of what is living beneath the adjacent waves.
Why should I get involved? Your records will help us to map the distribution of marine species around the Irish coastline, and to find out what species occur at different times of year.

What is the goal of the project? To monitor changes in the distribution and occurrence of marine species linked to climate change and water quality.

Who can take part? Anyone visiting an Irish beach, whether you visit once or walk your beach on a regular basis.

What are the benefits? Learn how to recognise and record Irish coastal and intertidal species. Join a growing team of citizen scientists helping to monitor Ireland's coastal biodiversity. Use our Facebook page for help with identification and for updates on Explore Your Shore!, and contribute to our knowledge of Ireland's marine biodiversity.

What happens to your records? All records submitted are checked by an expert to see that the species has been correctly identified and that the position information is correct. Then it is uploaded to the Explore Your Shore! Dataset on Biodiversity Maps as Open Access data which anyone can download. Validated records are also shared to the Global Biodiversity Information Facility (GBIF) and the European Ocean Biodiversity Information System (EURObis).

Find out more at: exploreyourshore.ie/surveys/the-big-beach-biodiversity-survey

If YOU want to take part in Explore Your Shore!, a great way to start is by completing our FREE online training course, which will show you how to survey and record marine species, and how to identify common intertidal seaweeds, fish and invertebrates. Full details are available at *exploreyourshore.ie*

Dave Wall
CITIZEN SCIENCE OFFICER
National Biodiversity Data Centre

Butterflies

Dingy Skipper second brood female, Lullybeg. Inset below left: Red Admiral.

Summer 2025: butterfly rebound

Summer (June to August) 2025 was the warmest on record in Ireland. The weather was warmer than usual, but near-average rainfall means there was no drought. Butterfly populations thrived during 2025; the dullness of February was succeeded by the sunshine of March and most of April and May, followed by the warm, sunny, but well-watered, summer.

Resident butterflies, hit by bad weather in 2023 and 2024, rebuilt numbers. The Small Tortoiseshell, assisted by its ability to produce up to three generations a year, benefited from warmth and moisture to support rapid larval development on nutritious nettles. Reductions in parasitoids, driven by falling butterfly host populations during 2023 and 2024, might also have supported butterfly rebounds in 2025.

The warmth of spring produced early emergences. Marsh Fritillaries were seen in numbers on May 8th. The first Dingy Skippers were reported on April 12th, in Sheskinmore, Co. Donegal. Small Blue was reported there on May 2nd. More typical flight start dates for this trio are late May, late April and late May, respectively.

Remarkably, the Dingy Skipper produced a second generation in separate localities for the first time. In August, it was reported from Lullymore and Lullybeg, in Kildare; Dawros Head and Sheskinmore, Donegal; and in Co. Kilkenny. A Small Blue was reported on August 24th in Sheskinmore. It is almost certain that this was a second brood butterfly, a unique report for Ireland.

Cryptic Wood White usually flies from the end of April to the end of June, with stragglers found up to the third week in July. Bewilderingly, several Cryptic Wood Whites were seen in Northern Ireland in late July, and two in Inishowen Head, Co. Donegal, on July 30th and August 9th. This species has been proven to be single-brooded in Ireland, aside from a single individual in Co. Meath on September 2nd, 2020.

Apart from its long-standing single-brooded habit in Ireland, why bewildering? In Ireland, the tendency to produce a second generation is reduced further north. If there were a second brood, one would expect records in Cork, Kerry, Wexford, Waterford, Kilkenny, and Carlow. Only one late-July Cryptic Wood White was found outside Ulster, in Kildare.

Ireland's butterfly boom was augmented from foreign climes. There was a boom in Red Admiral and Large White populations; these may have been due to drought in Europe. Their need for lush vegetation for breeding was met here. Indeed, I have never observed such large Red Admirals as I have in August and September 2025.

Before we crack open the champagne, metaphorical or actual, one statistic should sober us. Abundance trends for our 15 commonest butterflies show a decline of -57% during 2008-2024 (Judge and Lysaght, 2025). For every 100 of these butterflies we saw in 2008, we now see 43. The 'great thinning', described by Michael McCarthy in *The Moth Snowstorm: Nature and Joy*, continues. One good summer will not rebuild biodiversity. Deeper societal change will.

> ***For every 100 of these butterflies we saw in 2008, we now see 43.***

Jesmond Harding

FOUNDER MEMBER AND CONSERVATION OFFICER
Butterfly Conservation Ireland

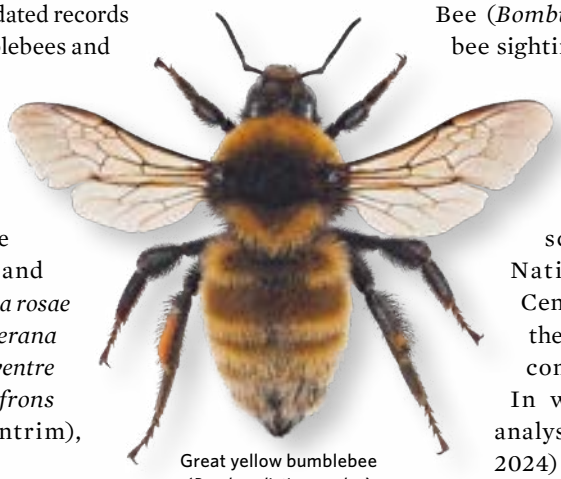
Jesmond's book, *The Irish Butterfly Book*, is available in book shops and by email: jesmondmharding@gmail.com

Above: Small Copper appeared in much greater abundance in 2025. All images © Jesmond Harding

Bees

2024 was a difficult year for insects due to the weather. Thankfully, the weather has been much kinder in 2025, and some appear to have recovered well, particularly butterflies and wasps. Anecdotally, our wild bees don't seem to have bounced back to the same extent, but it is difficult to assess without structured monitoring data. Up until the end of September, we have received 3,743 casual bee records, with those submitted in Q3 currently being validated. This is below average.

Across 2024, we received validated records of 83 wild bee species (17 bumblebees and 66 solitary bee species). We express our huge thanks to all those volunteers who are contributing this valuable data. It is especially positive that we have continued to receive records of some very rare and threatened bee species: *Andrena rosae* (Co. Carlow), *Andrena trimmerana* (Co. Carlow), *Lasioglossum lativentre* (Co. Carlow), *Nomada obtusifrons* (Counties Cork, Down, Antrim), *Sphecodes gibbus* (Co. Carlow).



Great yellow bumblebee (*Bombus distinguendus*)

There are some bees where we get occasional sightings, but it is difficult to determine whether they arrive on their own steam or through importation of garden products, etc. 2024 saw two of these recorded: the Violet Carpenter Bee (*Xylocopa violacea*) was found in Co. Laois and the Blue Mason Bee (*Osmia caerulescens*) in Dublin.

An updated checklist of Irish bees was published in 2024. It lists 103 species that have valid records. The most recent addition to the checklist was *Andrena ruficrus*, which was recorded for the first time in 2024 from Co. Derry.

Some of our more recent bee arrivals continue to slowly expand. The Tree Bumblebee (*Bombus hypnorum*) was first recorded in Dublin in September 2017 and was then reported from Belfast in 2019. 2025 has seen it continue to spread, and it has now been recorded from 24 counties. The Wool Carder Bee (*Anthidium manicatum*), which was first spotted in Co. Wexford in 2015, is now widespread across the southeast, but appears slow to move northwards. The most northerly record is still from Dublin (2023).

The Hairy-footed Flower Bee (*Anthophora plumipes*) was first spotted in Ireland in 2022, when it was found in Harold's Cross in Dublin. It was found again in small numbers in Harold's Cross, Rathgar and Terenure in spring 2025, but doesn't seem to have expanded its range yet. The Ivy Bee (*Colletes hederae*) was first recorded at the Raven Nature Reserve in Wexford in 2021. It's a solitary bee with an autumn flight period, to match the flowering of its favourite plant, ivy. As of the end of 2024, it has reached as far north as Brittas Bay in Co. Wicklow and as far west as St Mullin's in Co. Carlow. It will be interesting to see if it expands its range again this year.

Across 2025, we've continued to receive small numbers of sightings of our rarest bumblebees - Great Yellow Bumblebee (*Bombus distinguendus*), Red Shanked Carder Bee (*Bombus ruderarius*), Shrill Carder Bee (*Bombus sylvarum*). While casual bee sightings are very important, it is abundance data that are giving greatest cause for concern. The All-Ireland Bumblebee Monitoring Scheme is a citizen science scheme, managed by the National Biodiversity Data Centre, that assesses trends in the abundance of our eight most common bumblebee species. In worrying news, the latest analyses from the scheme (2012-2024) show that five of the eight species are in decline. The Large Carder Bee (*Bombus muscorum*) remains in serious decline nationally. The Common Carder Bee (*Bombus pascuorum*) is in moderate decline. Unfortunately, the most recent data suggests that the White-tailed Bumblebee (*Bombus lucorum*), the Early Bumblebee (*Bombus pratorum*), and the Red-tailed Bumblebee (*Bombus lapidarius*) are also now in moderate decline.

Our wild bees desperately need more food and more safe places to nest in the landscape. We know from the All-Ireland Pollinator Plan that things can be turned around, but we need to do more, and we need to act urgently. Article 10 in the new EU Nature Restoration Regulation calls on Member States to reverse the decline of pollinators by 2030. Having this policy in place can only be positive for our wild bees and other pollinating insects, but to have any chance of success the next version of the All-Ireland Pollinator Plan for 2026-2030 needs to be more ambitious.

Dr Úna FitzPatrick
—
CHIEF SCIENTIFIC OFFICER,
National Biodiversity Data Centre

Moths

Rusty Dot Pearl, *Udea ferrugalis* © Ulla Harris

Firstly I must thank Michael O'Donnell for all his efforts on behalf of Moths Ireland. You will be familiar with him from his regular article in *Biodiversity Ireland*, for which I have now picked up the baton. But behind the scenes, his efforts in managing and maintaining the moth database have been monumental. I hate to think where we would be without his efforts.

As an introduction, my personal experience with macro-moths runs back to 1988. From 2013, I have been immersed in the murky world of leaf-mining *micro-lepidoptera*. I still largely avoid adult micro-moth identification, but only because I like to put all my personal efforts into sharp focus. My mothing highlight was, without doubt, leading the team that rediscovered the White Prominent, *Leucodonta bicoloria*, in Co. Kerry in 2008.

At the time of writing, there have been seven new species recorded in Ireland. They represent a real mixed bag! Only two of these are macro-moths. Clive Mellon trapped Ireland's first Sycamore, *Acronicta aceris*, at his now infamous flagged patio in Finaghy, Belfast. This was a species not really on anyone's radar, but the other macro-moth was even more out of left field. A pristine Pine Arches, *Panthea coenobita*, was found by Gregg Murtagh, sitting inside the cellophane of an orchid in a Letterkenny shop! This species has never made it to Great Britain, so was a real shock. We classify these obviously imported species as *adventives* and they still become part of the Irish List.

Stephen Cotter trapped a single *Agnoea subochreella* in Killarney in May. Diligent work by Christian Osthoff led to the discovery of a new leaf miner in the Wicklow hills, *Phyllonorycter junoniella* on Cowberry, *Vaccinium vitis-idaea*. This highlights the value in targeting specific host plants. I personally discovered the minute leaf mines of *Roeslerstammia erxlebella* on lime, less than a mile from home on the edge of Belfast. Two weeks later, an adult arrived in my garden trap!

Roeslerstammia erxlebella - leaf mine on Lime © Dave Allen

Roeslerstammia erxlebella © Dave Allen

My other discovery of the year was that of the long expected Fig Leaf Skeletoniser, *Choreutis nemorana*. This adventive first arrived in Britain in 2014, and has since spread rapidly across the country. The example I found was a fresh import from Holland in a local Belfast garden centre. It will not be the last.

Finally, the sharp eyed Karl Woods noticed a subtly marked ermine moth in Cork, which was confirmed by Steve Nash as Orpine Ermine, *Yponomeuta sedella*. This species is thought to occur as an immigrant in parts of Britain, although there are also established breeding populations. In some ways, its arrival heralded a run of immigrant moths probably on an unprecedented scale. During this influx, perhaps one of the most obvious species occurring right across Ireland was the Rusty Dot Pearl, *Udea ferrugalis*. Once all the records are in, it is likely there will be a number of new county records of this species.

During late August and early September, we started to get an unprecedented number of reports of Death's Head Hawk-moth, *Acherontia atropos*, caterpillars. These impressive, huge larvae are especially fond of potatoes and related species. They are invariably discovered by the general public. So far, records have come in from the south and east coasts and as far north as Newry, Co. Down. They will pupate and emerge as adults later this year, so those with bee hives should keep an eye out, as the adults are very fond of fresh honey.

Sycamore, *Acronicta aceris* © Clive Mellon

Dave Allen

MOTHSIRELAND

www.mothsireland.com

Awlwort, *Subularia aquatica*, Lough Duff. © Gerry Lane

Ivy leaved Bellflower, *Wahlenbergia hederacea*. © Bridget Keehan

Vascular Plants

The spring of 2025 was wonderful: sunny, calm and dry. It was followed by a warmer-than-usual summer, with many species flowering earlier than usual. Autumn seemed to arrive quickly, with a superabundance of berries and fruit.

Our intrepid team of BSBI recorders have led a wide variety of field events, and recorded some exciting species. This year's Targeted Aquatic Plants Project, funded by the National Parks and Wildlife Service, has focussed on re-finding certain rare species at known sites, whilst also providing training for those wishing to learn more about identifying aquatic plants. One of this year's 'target' species was Awlwort (*Subularia aquatica*), an aquatic member of the Cabbage family (Brassicaceae) that's extremely rare in Ireland, occurring only in Connemara and Kerry. Named for its narrow, cylindrical, pointed leaves, it grows from a small corm submerged in shallow water. Its tiny flowers open only above the water surface; submerged flowers stay closed and self-pollinate. An outing to Co. Kerry in June, led by Paul Green, found Awlwort at Lough Duff, near Dingle, after a gap of over 50 years! It was also found at Cummeenduff, southwest of Killarney, for the first time since 2002. Here, there was also lots of the very scarce Ivy-leaved Bellflower (*Wahlenbergia hederacea*), a tiny relative of harebell, which favours wet streamsides and flushed, boggy ground.

This summer, the Botanical Society of Britain & Ireland launched an 'Irish Upland Plants Project', which entails hunting for 48 target species (some fairly common and widespread; others much rarer and localised) at upland sites where they have not been seen since 2000. Participants are encouraged to also record other species they find, leading to even more new records and re-finds! New sites have been found and historic sites rediscovered for species like Fir Clubmoss (*Huperzia selago*), Wilson's Filmy-fern (*Hymenophyllum wilsonii*), Moonwort (*Botrychium lunaria*), Stag's-horn Clubmoss (*Lycopodium clavatum*) and Dwarf Willow (*Salix herbacea*). If you're a botanist with some experience and would like to take part, visit ***https://bsbi.org/ireland/irish-upland-plants-project.***

Finally, marching westwards? In Galway, Ciarán Bruton spotted a small daisy-like weed, Gallant Soldier (*Galinsoga parviflora*), growing with some Canary Palms in B&Q.

Shaggy soldier, *Galinsoga quadriradiata*, Hampshire. © Tristan Norton

A South American species brought to Kew Gardens in 1796, its odd common name is a mishearing of 'Galinsoga', the name of the Spanish botanist who first discovered it. It soon escaped from Kew, yet only recently arrived in Ireland; until now, all Irish records were from the east, mostly around Belfast. Its hairy Central American relative, 'Shaggy Soldier' (*Galinsoga quadriradiata*), was also first noted in Galway city this summer, by Chris Peppiatt, recorder for NE Galway. Although in the UK, it has spread much more rapidly than *G. parviflora* (being spread with ornamental plants). It's only thinly scattered in Ireland, and didn't arrive until 1980. Quite frequent in Dublin, other records appear quite ad hoc, so like *G. parviflora*, it seems more likely to have arrived with imported plants (or even via birdseed) than spread by 'natural' means.

Neither of these diminutive (but interesting!) plants present any threat to our native flora, but this is a cautionary tale of how easily alien plants can be spread. Furthermore, with our changing climate, species not currently very hardy here may more easily gain a foothold in future.

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Birds

It is that time of year when we start searching drawers for gloves, woolly hats and thicker jumpers. This September, we have seen quite an abrupt change from a pretty good summer to a much cooler and wetter autumn. The change in seasons is matched by a change in the activities of birders and ornithologists. For the former clan, the focus is on autumn migration and vagrancy, with 'annual pilgrimages' to the famous hotspots of Cape Clear, Bridges of Ross, Mizen Head, Brownstown Head, and so on. Their time is often split between sea-watching for southbound seabirds and searching for trans-Atlantic vagrants ('Yanks') or scarce visitors from the far east ('Sibes').

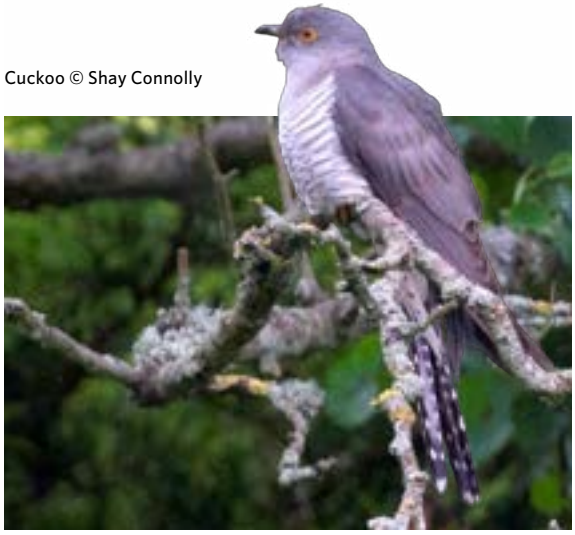
Already, autumn 2025 has been marked by one of the largest influxes ever recorded of Curlew Sandpipers and Little Stints, Siberian breeding waders. With my personal 'patch' inland in the Roundwood area (10-15km from the sea), I have not recorded either species, though I have seen singles of Common, Green and Wood Sandpiper at the Vartry Reservoirs.

For the ornithologists, more involved in systematic monitoring, we switch from various surveys and projects on breeding birds (Countryside Bird Survey, Seabird Monitoring Programme, etc.) to winter waterbird monitoring (I-WeBS). So yesterday saw me up at 6am and off to the Glendalough Lakes to do my September 'duck count', the main focus being to locate the roosting flock of Goosanders before they disperse to nearby rivers to forage. The constant peril is the layer of mist that often sits over both lakes at this time of year, but fortunately my views were relatively unimpeded. A flock of 16 Goosanders were fairly close to my vantage point at the east end of the upper lake and, while counting them, a group of six flew overhead, presumably from the lower lake to the far (west) end of the upper lake. Twenty-two is not a bad count for this time of year!

Autumn also sees the resumption of our Constant Effort Winter Ringing Project at the East Coast Nature Reserve, Newcastle, starting in early November, and the ever-popular Garden Bird Survey, starting December 1st. See the BirdWatch Ireland website if you wish to participate in the latter.

Wood Sandpiper © Dick Coombes

Cuckoo © Shay Connolly



The breeding season just past was rather weird – the best word I can think of! For seabirds, we were still on high alert for birds showing symptoms of Bird Flu (HPAI), and very early on, this disease did manifest itself in the Black-headed Gulls at Lady's Island Lake, with some dying birds testing positive. However, most gulls and terns nesting at this 'super-colony' must have some resistance and, overall, the season was reasonably good. Although numbers of Common and Arctic Terns are still well below levels pre- the 2022 and 2023 HPAI outbreaks, a similar situation played out on Rockabill. The last three years have shown us that Little Terns seem to be resistant to the disease. However, some other factor was in play at Kilcoole, normally our largest and most reliable colony for over 30 years, with over 200 pairs recently. The terns really did not settle and appeared to disperse to other sites to the south: Buckroney, in Wicklow, and Cahore, in Wexford. North of the Liffey was a different story, and the Portrane colony supported about 45 pairs, and Baltray colony well over 100 pairs, where a record number of young fledged.

With regard to 'terrestrial' birds, I had my poorest year ever for migrant species such as Cuckoo and Common Whitethroat, whereas Willow Warblers and Blackcaps were abundant. It was a jittery start for Swallows and House Martins, but all appeared next-to-normal by midsummer, though the martins seemed to have a better breeding season overall.

Looking somewhat further ahead, preparation for the next comprehensive atlas of breeding and wintering birds of Britain and Ireland is well advanced, and BirdWatch Ireland has received some grant aid from the National Parks and Wildlife Service to employ a project coordinator. The Atlas will likely span four years and will be an exciting 'fieldwork with a purpose' challenge for anyone with at least basic identification skills. The methods are likely to be similar to the 2007-2011 Atlas, for ease of trend analysis, so there should be options for submitting both 'casual' type records as well as systematic 'Timed Tetrad Visits'.

Dr Steve Newton

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Bats

Bat and people as seen by thermal imaging at a BCI workshop in Cong in September.

Biodiversity Week in May 2025 was extremely busy, with batty events held in many counties, led by bat groups and members of our Bat Panel. We also manned a stand at Dublin Zoo's 'Native Species Weekend'. No sooner had we finished with Biodiversity Week than we launched into 'Bloom in the Park'. This was our first time manning a tent at this extremely busy gardening and food festival. We delivered a talk about 'Gardening for Bats' at the Sustainability Stage; participated in environmental discussions; and we ran a batty event for little ones at the 'Budding Bloomers' stage. Lots of fun was had by all!

In 2025, the All-Ireland Waterways Daubenton's Bat Survey underwent a massive overhaul to allow volunteers to register for the scheme and claim survey sites online. We hope this new portal will cut down on much of the paperwork, save a few trees, and reduce the amount of administration involved every year. The online system seemed to work well overall, with most teams using the portal this year.

We continued to work closely with numerous local authorities, the National Trust in Northern Ireland, the Northern Ireland Environment Agency, and other organisations, to map new Woodland Bat Monitoring sites and train in volunteers to survey woodlands for bats. This scheme is now in its third year. Other monitoring schemes – the Car-based Bat Monitoring, Brown Long-eared Roost Monitoring, and Lesser Horseshoe Bat Roost Monitoring – also proceeded during the summer months, with the help of hundreds of volunteers and National Parks and Wildlife Service staff. Thanks so much to all who helped us out this summer!

We continued our 'Gardening for Bats' project with funding from the Heritage Council: we ran four workshops across the country – in Seeds Savers, the Organic Centre, GIY, and Sonáirte.

One of the Bat Conservation Ireland presentations at the Bloom Sustainability Stage.

These included a presentation, a walk around the lovely gardens in daylight, a chance to pot up locally sourced native cuttings to take home, and we finished each event with a short bat walk. We are currently also piloting some 'Gardening for Bats' materials in three garden centres this autumn: Bud Garden Centre, Clare; Future Forests, Cork; and Mount Venus, Dublin. We have provided 'I'm Bat Friendly' reusable pot labels; postcards to disseminate to customers; and posters to each garden centre. After this pilot stage, we will gauge interest in bat-friendly gardening and consider scaling up to more garden centres next year. Also, anyone interested in gardening for bats can now register their own bat-friendly gardens on our website: *gardeningforbats.com.*

In 2025, we ran some in-person professional training courses. The first was a bat handling and trapping workshop in Virginia, with the help of Tina Aughney. This workshop was aimed at experienced bat workers. The second course in Cong was a beginners/intermediate bat surveying workshop. Amazingly, we recorded all nine Irish species within three hours – Cong truly is a fantastic spot for bat watching!


Natterer's Bat © Tina Aughney

As part of the current Lesser Horseshoe Bat Species Action Plan, we engaged a researcher from Exeter University, Penelope Fialas, to carry out modelling of the species' roosting resource in winter and summer. The aim was to see if there are areas that may support the species, but where there are no roosts known at present. The maps from this project can be requested from *niamhr@batconservationireland.org*. This work was funded by the National Parks and Wildlife Service.

Coming up this winter, we will be running our 'Have a Natterer' online series of talks – kicking off on November 18th with a talk by Tina Aughney on 'Bats and Street Lights'. Check out our website events page for details on how to register. We manned a stand at the 9th International Artificial Light at Night Conference in Westport at the end of October. We are also organising the 11th Irish Bat Conference, which will take place in Riddel Hall, Belfast, on March 21st and 22nd 2026. Make sure to keep an eye on our events page: *batconservationireland.org/events* for updates.

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Cetaceans, turtles and basking sharks

SIGHTINGS

After the highs of 2024, which broke all previous Basking Shark records, with 357 validated sightings, it was always going to be a difficult year to beat, and so it transpired, with 186 sightings so far in 2025. While acknowledging that the calendar year still has some way to go, when it comes to *Cetorhinus maximus*, their season by now is as good as run and, in the coming weeks, any additional sightings will have little impact on the year's figures. But even with a 48% reduction on last year, it was still what we'd consider a good shark year, ranking fourth over the past 20 years. Our good fortune in relation to Basking Sharks may well be at the expense of other former UK shark hotspots, such as the Isle of Man, the Hebrides and Cornwall, which are all reporting record declines. Clearly our coastal waters are providing suitable feeding and perhaps breeding conditions for this ocean grazer.

A quick glance at Irish Whale and Dolphin Group (IWDG) sightings data shows that our cetacean sightings are down 21% on the year to date. Some of this decline may in part be explained by the temporary demise of our Reporting App, which for technical reasons has had to be retired. But the website, as our primary reporting tool, is working just fine, so there is clearly something else going on that can't be easily explained by weather, as it wasn't that poor a summer.

A deeper delve into our three main whale species records shows Humpback sightings are down 20%, and while Fin Whales are holding their own, sightings of our most regularly recorded whale, the Minke, are down 16%. These declines are hard to pin on climate change given that adjacent UK waters are similarly impacted, and have never recorded so many large whales. We are also noticing a very real shift in their distribution, as their preferred southwest feeding areas have switched to the northwest. So far this year, the waters between Sligo and Donegal have, for the third consecutive year, enjoyed a record number of Fin and Humpback Whale sightings. Almost half (48%) of Fin Whale and 42% of Humpback records come from Donegal Bay this year. This season alone, three of the four Humpbacks added to the Irish Humpback Whale Catalogue have come from Donegal Bay.

One can always make a case that, given the vast migrations species like Humpbacks undertake, a few additional days' swimming up the Irish west coast is no big deal for a highly mobile marine mammal. The key point, however, is that the northwest is an area where historically the IWDG received very few, if any, large whale sightings. And many of these Humpbacks are individuals we have recorded in previous years, and in some cases for decades, in the southwest. So not only are we seeing fewer whales, but when we do, they are in completely new areas. This is unusual behaviour for animals that typically demonstrate strong site fidelity to feeding areas.

But this change isn't all bad news, as it is providing opportunities for people around our coast to observe species that would once have been considered rare. One sighting springs to mind, of 80-100 Common Dolphins off Greystones, Co. Wicklow, on September 24th. This species was rarely seen inshore along the east coast, but a little like Donegal Bay's large whales, the data suggests they are on the move.

Humpback whale #HBIRL47 under Ben Bulben, Donegal Bay, on August 13th. © Tom Ormond

STRANDINGS

During the six-month period, April 1st to September 25th 2025, the IWDG Stranding Scheme validated a total of 160 cetacean, Basking Shark and sea turtle records. This represents an increase of 13% compared to this time period last year (n=142). These figures include 15 species: Basking Shark (n=6), Bottlenose Dolphin (n=4), Common Dolphin (n=75), Striped Dolphin (n=4), Risso's Dolphin (n=3), Harbour Porpoise (n=23), Long-finned Pilot Whale (n=5), Minke Whale (n=7), Fin Whale (n=1), Sperm Whale (n=1), Sowerby's Beaked Whale (n=2), True's Beaked Whale (n=2), Cuvier's Beaked Whale (n=1), Loggerhead Turtle and 'probable Loggerhead' (n=2,n=4) and Leatherback Turtle (n=1).

During this period, there were 26 live-stranding events reported, 15 of which involved Common Dolphins; one unknown dolphin species; two Harbour Porpoise; one Minke Whale; one mother and calf pair of True's Beaked Whales; one group of two Sowerby's Beaked Whales; one Long-finned Pilot Whale; one Striped Dolphin; and three probable Loggerhead Turtles. This represents an increase of 52% compared to the same period in 2024 (n=17).

An Unusual Mortality Event (UME) of Beaked Whales deserves comment. Between April 29th and September 10th, the IWDG received reports of five Beaked Whale strandings, comprising seven animals. The first was a freshly dead True's Beaked Whale reported from Co. Cork. A postmortem examination was carried out under the IWDG's Deep Diving and Rare Species Investigation Programme (DDRIP) and the cause of death was confirmed to be live-stranding.

The remaining strandings took place between July 27th and September 10th 2025. A mother and calf pair of True's Beaked Whales live-stranded and died in Co. Mayo, and a postmortem was carried out on the mother by vets from Dublin Zoo. The calf managed to refloat itself and swim off, but not surprisingly was found dead several days later, across the bay. Shortly after, two Sowerby's Beaked Whales live-stranded in Co. Waterford, one of which was euthanised and both had postmortems. A third Sowerby's was found nearby shortly after, believed to have been part of the group of two that had live-stranded two days prior. Finally, one Cuvier's Beaked Whale was reported dead from Co. Mayo in September.

Upon sharing data with neighbouring countries, it was evident that this string of Beaked Whale strandings was part of a wider UME, as similar events were also being reported from Sweden, Germany, France, Iceland, Denmark, Norway, England and Scotland - the majority of which occurred during July and August.

True's Beaked Whale, Ardnahinch, Co. Cork, April 29th. © Frances Gallagher

Please report all cetacean sightings and strandings (alive or dead) to the IWDG. IWDG, with support from the National Parks and Wildlife Service, maintain the official database of stranded cetaceans and sea turtles in Ireland. This is one of the longest running stranding recording schemes in Europe, which allows us monitor and highlight any unusual events or trends among species.

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New Zealand Pigmyweed, *Crassula helmsii* © C. Hurley

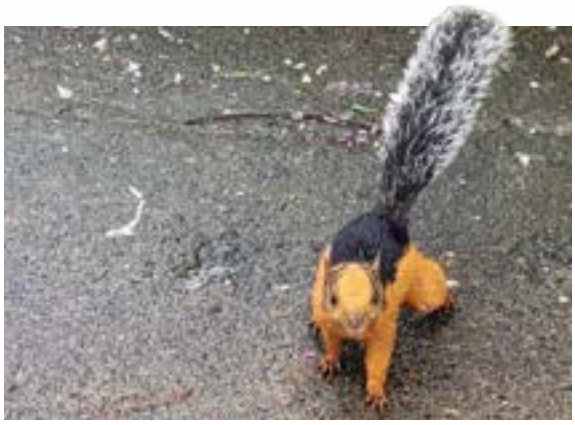
Invasive Species

Invasive species observation data is anything but dull. Throughout the summer and into September, there has been remarkable activity in spotting and reporting of invasive alien species in Ireland. Frequently reported species include familiar names, such as Japanese Knotweed, Giant Hogweed, Himalayan Balsam, and Cherry Laurel, highlighting their widespread presence.

With the arrival of lovely summer weather and many people tending to their gardens, there were several sightings of invasive garden species, including the New Zealand Flatworm, which poses a threat to earthworms, vital allies for gardeners. Additionally, reports of Harlequin Ladybirds continue, illustrating their expanding presence each year. The warm weather also prompted observations of non-native freshwater turtles, often seen basking in the sun. Reports of invasive aquatic plants, such as Curly Waterweed, Nuttall's Waterweed, New Zealand Pigmyweed, and Parrot's-feather, have come in as well. Due to the significant impact these plants have on local ecosystems, they have been banned from trade across Europe.

Record submissions have been documented for various species for which we were on alert – including the Short-tailed Field Vole. This small mammal was first verified as present here in 2020 and is now recorded across four counties. Its presence adds to the roster of small mammals introduced in recent decades, such as the Greater White-toothed Shrew, Bank Vole and Hazel Dormouse, many of which are reported due to cat captures. Additionally, a sighting of Roe Deer in Co. Wicklow raises concerns regarding the further introduction of non-native species into Ireland. A Variegated Squirrel, likely an escaped or released pet, was also observed and later reported deceased, presumably due to a road incident. These occurrences reflect a good level of awareness and initiative to report unusual wildlife observed in the open environment.

In August, a confirmed sighting of an Asian Hornet marked its first occurrence since a solitary individual was spotted in 2021. This generated significant media attention and a surge of suspected sightings. Over 1,000 sighting reports were submitted in the ensuing weeks. So far, 36 sightings have been verified, and two nests have been removed in the areas of Cobh and Cork city.



Variegated Squirrel spotted in Dublin © Mick Murphy

It is crucial to provide a photograph of the species, if possible, as this greatly aids in verification, given the large number of records from across the country. Only sighting records that can be confirmed will be published.

Recently, 25 species have been added to the list of Invasive Alien Species of Union Concern, increasing the total to 114 species regulated across the European Union. Among the added species are eight that have been documented in Ireland, including Australian Swamp Stonecrop, North American Mink, *Obama nungara*, Sika Deer, Yabby, and three species of *Reynoutria* Knotweed. EU Member States will now be required to eradicate these newly listed species upon their arrival or implement management measures if they are already established and widespread. The obligations regarding the management of mink will be postponed for two years.

We appreciate all contributors for their vigilance in monitoring and reporting invasive species.

For more information visit: ***https://invasives.ie***

Colette O'Flynn
INVASIVE SPECIES OFFICER
National Biodiversity Data Centre

Staff of the National Biodiversity Data Centre

The National Biodiversity Data Centre works to make biodiversity data and information more freely available in order to better understand and assist the protection of Ireland's biodiversity.

An tIonad Náisiúnta Sonraí Bithéagsúlachta
National Biodiversity Data Centre
ag Doiciméadú Fiadhúlra na hÉireann | Documenting Ireland's Wildlife

Owen Beckett

National Insect Database Officer

Owen has responsibility for developing national insect digital databases and assisting the building of capacity for more active recording of insects in Ireland.

Paul Brett

Invasive Species Pathways Action Plan Officer

Paul is a new member of the Invasive Species Unit. He is responsible for providing the evidence base necessary to develop the Invasive Species Action Plan.

Tim Butter

Farmer Moth Monitoring Scheme Officer

Tim is establishing a national scheme, delivered by farmers, to monitor moths on farmland. This will complement the existing monitoring of Ireland's pollinating insects. This post is funded by the Department of Agriculture, Food and the Marine.

Chantel Carr

Shared Island Biosecurity & Citizen Science Officer

Chantel's role is to deliver biosecurity awareness campaigns and develop partnerships with organisations, collaborating with Northern Ireland, to help build effective biosecurity and citizen science projects across our Shared Island.

Kate Chandler

Pollinator Plan Communities and Engagement Officer

Kate has responsibility for engagement with local communities to support and coordinate community actions for pollinators. This post is funded by the National Parks and Wildlife Service.

Oisín Duffy

Surveys and Records Officer

Oisín has responsibility for the management of Ireland's Citizen Science Portal and the data validation processes with partners. He provides active support to the recording network to improve the quality and quantity of data submitted.

Dr Úna FitzPatrick

Chief Scientific Officer

Úna is part of the senior management team, having responsibility for oversight and delivery of the scientific content of the Centre's work programme and advises on biodiversity science and evidence-based actions.

Dr Ann Haigh

Invasive Species Risk Analysis and Contingency Officer

Ann is responsible for the Shared Island risk analysis and contingency planning work programme. She also works to identify and recommend necessary mitigations to prevent new incursions of high-risk species. This post is funded through the Shared Island Biosecurity and Invasive Species initiative.

Jon Hawkins

Head of Digital Services

Jon is part of the senior management team and has responsibility for the coordination of the Centre's overall digital technologies development and the ICT infrastructure needs.

Rachel Hayden

Training and Engagement Officer

Rachel has responsibility for developing an extensive training programme to build capacity across the biodiversity sector, and to improve external engagement activities.

Ritchie Hindley

ICT Systems Administrator

Ritchie has responsibility for development and management of the ICT systems that underpin the business needs of the Centre.

Dr Michelle Judge

Data Manager and GBIF Node Manager

Michelle has responsibility for maintaining the National Biodiversity Database and publishing biodiversity data through Biodiversity Maps. She manages the data analysis for the insect monitoring schemes and serves as GBIF Node Manager for Ireland.

Sarah Kelly

Agri-business Officer

Sarah is working on supporting Origin Green Companies to deliver biodiversity measures to support implementation of the All-Ireland Pollinator Plan. This post is supported by Bord Bia.

John Kelly

Invasive Species Programme Manager

John has overall responsibility for management of the Centre's Invasive Species work programme, including the Shared Island Biosecurity and Invasive Species Initiative and the Marine and Coastal Non-indigenous Invasive Species projects.

Irene Kilbride

Office and Corporate Support Officer

Irene has responsibility for managing all aspects of the office operations, serves as front of house for enquires from the public, and provides corporate supports to the Chair and Board of the Centre.

Dr Michelle Larkin

National Pollinator Monitoring Officer

Michelle is responsible for the National Pollinator Monitoring Scheme. This delivers the national framework for monitoring Ireland's pollinators in support of European and Irish policy. The post is funded jointly by NPWS and Department of Agriculture, Food and the Marine.

Dr Liam Lysaght

Chief Executive Officer

Liam works with the Board to set the strategic direction of the Data Centre and has overall responsibility for management of operations and delivery of its work programme. He is an active recorder with a particular interest in butterflies, birds and mammals. He also serves as Chair of the Global Biodiversity Information Facility (GBIF).

Patrick McQuinn

Pollinator Monitoring Research Assistant

Patrick provides ongoing support to the project manager during the monitoring season, assists with collation and validation of the pollinator monitoring data and conducts laboratory work for the Scheme. The post is funded by the Department of Agriculture, Food and the Marine.

Kate Moore

Invasive Species Engagement Officer

Kate has responsibility for development and delivery of the invasive alien species engagement and communication programme. This post is funded by NPWS.

Colette O'Flynn

Invasive Species Officer

Colette manages the National Invasive Species Database, provides coordination of invasive species data and information, and contributes advice and policy support at the national and European level.

Victoria Poppleton

Marine Invasive Species Officer

Victoria is responsible for the Marine and Coastal Non-indigenous Invasive Species project. She is developing a strategic management plan for Ireland and a Surveillance and Monitoring programme for marine and coastal areas. The post is funded by the Marine Strategy Framework Directive Unit of the Department of Housing, Local Government and Heritage.

Aaron Skehan

Local Authority Data Liaison Officer

Aaron is our newest recruit to the Centre. He is responsible for improving the flow of biodiversity data between the Centre and local authorities, so data are more freely available for decision-making.

Richard Tilson

Chief Operating Officer

Richard is part of the senior management team. He works closely with the Board and the CEO in the development and implementation of business strategies and procedures, and ensures adequate design and delivery of all corporate services, including finance, HR, ICT and operations.

Dave Wall

Marine Biodiversity Programme Manager

Dave is responsible for developing and implementing the Centre's strategy and work programme around coastal and marine biodiversity. He is also working on publishing the forthcoming *Dragonfly Ireland 2019-2024 Atlas.*

Ruth Wilson

Farmland Pollinator Officer

Ruth is responsible for implementing actions in the All-Ireland Pollinator Plan that relate to making farmland more pollinator friendly. The post is supported by the Department of Agriculture, Food and the Marine.

An Chomhairle Oidhreachta
The Heritage Council

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