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National
Biodiversity
Data Centre
Documenting Ireland's Wildlife



Biodiversity

IRELAND

ISSUE 26 | SUMMER 2024



Towards a Red List of Irish Ants

Mapping this often overlooked group

All-Ireland Pollinator Plan

New resources on biodiversity-friendly action

Biodiversity Recording

Recent highlights from bird, bat and
whale recording

Message from the Chief Executive Officer



It is now almost a year and a half since the future of the National Biodiversity Data Centre was secured following its establishment as a Company Limited by Guarantee. This was a huge development in the evolution of the National Biodiversity Data Centre; a recognition by Government that the Centre was providing a range of valuable services that needed to be secured and strengthened in order to assist the State in meeting many of its obligations around the conservation of biological diversity.

The continued delivery of the Centre's work programmes since the company's incorporation gave the outward appearance of business as usual. This was an important consideration to retain the confidence of the Centre's many partners and its recording community. Nevertheless, a great deal of work has been going on in the background, which now puts the Centre in a very strong position for future growth.

Within the first year, the Board and staff have worked on developing its Strategic Plan for the next five years. This sets out the Centre's vision, mission, and identifies the values that will underpin the new company's work. Six values are identified, namely: 1. Evidence; 2. Innovation; 3. Collaboration; 4. equality, diversity and inclusion; 5. professional integrity; and 6. sustainability.

Those who have engaged with the Centre over the years will recognise these values as already being core to how we have conducted our business. Details of the objectives and goals we have identified are outlined later in this newsletter.

Having a clear framework for guiding the work of the Centre over the next few years will be central to its success. The national data and information needs are great, yet the Centre needs to focus on its remit and what is feasible to achieve over a five-year period. The Strategic Plan provides that framework.

The Centre has also agreed a new organisational structure, best suited to allow it to deliver on the work that it will do. Three senior managers have been appointed – Dr Úna FitzPatrick, Richard Tilson and Jon Hawkins – to lead up the three pillars of the company's work, namely its scientific, governance and finance, and ICT pillars respectively. The remainder of the staff will be structured around operational units dealing with different thematic work programmes. Thanks to funding received under the Shared Island Initiative, the first of these units, delivering a programme of work around Invasive Alien Species, is in the process of being established. Currently, the Centre is experiencing an expansion phase with the staff complement growing from 12, at the beginning of 2024, to 21 by mid-summer. This augurs well for the Centre.

Additionally, the Fourth National Biodiversity Action Plan, which was published earlier this year, has identified the Centre as leading on the delivery of a number of key strategic actions. The recent work done on developing the governance and management structures of the new company means the National Biodiversity Data Centre is now well placed to deliver on these and other future programmes of work.

Biodiversity Ireland 26 Summer 2024

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Board of Directors

The National Biodiversity Data Centre has been established as a Company Limited by Guarantee, with oversight provided by the Heritage Council. The Board of Directors of the National Biodiversity Data Centre CLG is:

John McCarthy, Chairperson

Prof. Yvonne Buckley

Colette Byrne

Ciara Carberry

Dr Micheál Lehane

Dr Colm Lordan

Dr James Moran

Máire Ní Bhraonáin

Geraldine Tallon



2023 was a good year for Meadow Brown

The Garden Butterfly Monitoring Scheme is now in its fifth year. It asks participants to count the number of the different butterfly species visiting their gardens over a 15-minute period. These counts provide very valuable insights into how important gardens are for butterflies, but it also provides additional information on the population trends of butterflies in the wider countryside.

In 2023, 1,062 butterfly counts were submitted from 58 gardens. This is a 70% increase on the number of counts completed in the previous year.

Garden Butterfly Monitoring Scheme

20 or more counts were submitted for a third of the participating gardens, with 149 counts submitted for a single garden. The ten most recorded species accounted for 90% of all butterflies seen. As was the case in previous years, small tortoiseshell accounted for a quarter of all butterflies seen. A comparison of the counts across the four years suggests that 2023 was a good year for

red admiral and meadow brown, but that fewer speckled wood, large white and small white visited gardens in 2023. The counts suggest that 2023 was a particularly good year for meadow brown as very large numbers were counted. Full details of the scheme can be read in the 2023 Annual Report <https://bioirl.ie/bms>

We are always looking to increase the number of participating gardens. If you would like to participate, please send an email to butterflies@biodiversityireland.ie expressing an interest and we will help you to get started.



New training course on pollinator-friendly farming

The National Biodiversity Data Centre are delighted to release a new online training module on 'pollinator-friendly farming', for farmers, farm advisors and agricultural students.

The course is part of the All-Ireland Pollinator Plan, which aims to make farmland more pollinator-friendly by helping farmers to understand what wild pollinators occur on their farms, and what evidence-based actions can be taken to make the agricultural landscape more pollinator friendly.

The short course takes only about 30 minutes to complete and is a handy source of information about wild bees, hoverflies and moths. We hope the course will give an insight into the wonderful world of pollinating insects and why pollinators are so important on the farm.

Just go to our 'Biodiversity Learning Platform' to try the course:

<https://bioirl.ie/learn/pollinator-farming>

The National Biodiversity Data Centre and the All-Ireland Pollinator Plan hope this course will provide inspiration to farmers to make their farms more pollinator and biodiversity friendly.

We would like to thank the Department of Agriculture, Food and the Marine for their funding support.



A snapshot from the course, on pollinator-friendly native hedgerows plants.

Pilot National Moth Monitoring Scheme for Farmers

In addition to managing an extensive biodiversity infrastructure and mobilising biodiversity data, the National Biodiversity Data Centre manages a number of thematic work programmes to improve knowledge on aspects of biodiversity and to promote evidence-based actions. One of these thematic work programmes is management of the All-Ireland Pollinator Plan. The Pollinator Plan called for long-term monitoring mechanisms to be put in place in Ireland so that progress in halting wild pollinator decline can be tracked. In response to this, the National Biodiversity Data Centre established the Irish Pollinator Monitoring Scheme which is generating detailed information on the status and distribution of pollinator populations. The scheme, funded jointly by the Department of Agriculture, Food and the Marine (DAFM) and the National Parks and Wildlife Service,

monitors five pollinator groups across a range of semi-natural habitats, farmland, and urban parks, generating detailed information on the status and distribution of pollinator populations. Data generated demonstrates that this is a robust and cost-effective way to track changes in Ireland's pollinators.

Since 2022, the National Biodiversity Data Centre have been collaborating with the Department of Agriculture, Food, and the Marine on a pilot project to test moth monitoring methodologies with Irish farmers. These projects, funded by DAFM, successfully monitored moths on farms using a farmer-led citizen science approach. Thanks to funding provided by DAFM, the National Biodiversity Data Centre is now establishing a pilot project to roll out this scheme nationally in 2024, with a view to tracking how moth populations are changing on farmland.

New Dataset Alert!

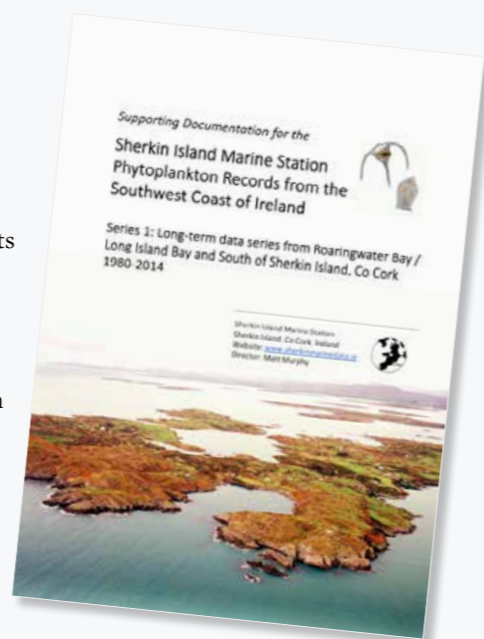
Sherkin Island Marine Station Phytoplankton Records from the Southwest Coast of Ireland Series 1 has been published to Biodiversity Maps

Sherkin Island Marine Station was founded in 1975 by Matt Murphy and his late wife, Eileen and was run by Matt and his family until 2015, when project work ceased. Now Matt is retired and, with the help of his family, including his daughter Susan Murphy Wickens, is working towards an archive of data collected. The first dataset 'Sherkin Island Marine Station Phytoplankton Records from the Southwest Coast of Ireland. Series 1: Long-term data series from Roaringwater Bay/Long Island Bay and South of Sherkin Island, Co Cork 1980-2014' from the Marine Station was published on Biodiversity Maps.

The dataset includes 148,701 records across 343 species from the long-term monitoring of phytoplankton at 12 coastal water positions (stations) in south-west Ireland: eight within Roaringwater Bay/Long Island Bay, and four from 1.5 km to 17.5 km offshore in open waters south of Sherkin Island, Co. Cork. Stations were visited from April to October each year, within a period from 1980-2014.

Water samples were taken at set depths for each station and phytoplankton counts were recorded. The dataset includes standardised phytoplankton counts together with recorded location, date, water depth, water temperature, salinity, conductivity, Secchi disc estimate, tide height at time of sampling, sea conditions and weather conditions. Standard air temperature records from the manual weather station at Sherkin Island Marine Station covering the same time period, together with records from the automated weather station from 2004, offer comparisons with the marine records for climate-related studies (available from Met Éireann: The Irish Meteorological Service (online) c. 2023 [accessed 2023 July 17].

To view this dataset, see <https://maps.biodiversityireland.ie/Dataset/372>



Updated key to Irish chitons launched



A recent addition to the Explore Your Shore! website is an updated key to the Irish Chitons. Chitons are a very ancient groups of molluscs, with a fossil record dating back 400 millions years (that's 150 million years before the dinosaurs!).

Chitons are an under-recorded group due to their largely nocturnal habits, small size, low profile and preference for hanging out beneath rocks and boulders. This key was developed by Julia Sigwart and Katarzyna Voncina of the Senckenberg Research Institute and Natural History Museum in Frankfurt, Germany. The key was originally developed as a Heritage Council funded project at UCD, but it has now been updated with the latest taxonomy and offers a guide to the identification of the 11 species of chiton found around our shores. You can explore the key at www.ExploreYourShore.ie/irish-chitons/



Grey Chiton, *Lepidochitona cinerea* © Jamie O'Neill

Mapping Ireland's seagrass beds

Seagrass is recognised as an important species, and seagrass beds an important habitat – for biodiversity and carbon sequestration in European waters. Marine Biodiversity Citizen Science plays an important role in mapping Ireland's seagrass beds and may further be developed to monitor their health. As bio-indicators, monitoring seagrass can help monitor water quality and ecosystem health of the bays and estuaries where they grow.

However, European seagrass beds are under threat from multiple pressures, and in the past 150 years, about one-third of the area of European seagrasses has

about one-third of the area of European seagrasses has been lost due to disease and human impacts.

been lost due to disease and human impacts. Recently the National Biodiversity Data Centre contributed to a new scientific paper looking at One hundred priority questions for advancing seagrass conservation in Europe. The final list of questions covers areas across nine themes: Biodiversity and Ecology; Ecosystem services; Blue carbon; Fishery support; Drivers, Threats, Resilience and Response; Monitoring and Assessment; Conservation and Restoration; Governance, Policy and Management; and Communication. These questions, if answered, will fill current knowledge gaps, and help place European seagrass onto a positive trajectory of recovery. The paper is available to download at www.exploreyourshore.ie/resources/



Seagrass bed at Ballinskelligs, Co. Kerry. © Dave Wall

National Biodiversity Data Centre publishes its first

Strategic Plan 2024-2028



The National Biodiversity Data Centre has published its first five-year Strategic Plan for the period 2024 to 2028. It was launched by Malcolm Noonan, Minister for State for Nature, Heritage and Electoral Reform, at an event at the Heritage Council in Kilkenny on February 2nd.

The Strategic Plan was developed by the Board and the staff during 2023, framed by the company's role as set out in its constitution. It included an extensive consultation exercise that sought the input from our key partners. The Strategic Plan aims not only to frame the work priorities for the Centre over the next five years, but it also sets out how the Centre intends to conduct its business.

The Strategic Plan sets out a clear rationale for why its work is needed:

- *Biodiversity is the variety of life on earth and encompasses the diversity that occurs at the genetic, species and ecosystem levels.*
- *Human activity influences biodiversity, ecosystem function and the quality of ecosystem services that biodiversity supports. Climate change and biodiversity loss are global crises posing an existential threat to humanity.*
- *In Ireland, the evidence shows that the complexity of our ecosystems is declining, and many species found in our country are endangered or under threat of extinction. Of the 3,466 species assessed under the Red List conservation assessment process, almost 24% are considered under threat of extinction.*
- *The understanding, conservation and restoration of Ireland's biodiversity are key concerns for all sectors of society.*



It presents an overview of what is biodiversity

Biodiversity, or biological diversity, is the term given to the variety of life on earth. It's an all-encompassing term to describe the genetic diversity that makes each individual life form unique; the diversity of different organisms that occur throughout the world; and the rich diversity of ecosystems or landscapes that occur across the globe. Biodiversity policy also recognises the profound impact that human activities have had, and continue to have, on the world's ecosystems.

Ireland's biodiversity is determined by its geography, its location and its series of small islands, situated in a more extensive marine environment on the edge of the Atlantic, and influenced by a mild temperate oceanic climate. Much is yet to be learned about Ireland's marine biodiversity but what occurs within Ireland's territorial waters is part of a wider Atlantic system. The biodiversity that occurs in our terrestrial and freshwater environments is determined by factors such as the size of the island, the length of time the island has been isolated, its distance from a larger landmass and the range of climatic and geological conditions. Some species are endemic or near endemic to Ireland, some habitats have identifiably Irish characteristics, and the way in which these organisms and habitats interact ensures that Ireland's biodiversity is distinctive and unique.



The Strategic Plan 2024-2028 was launched by Malcolm Noonan, Minister for State for Nature, Heritage and Electoral Reform, at an event at the Heritage Council in Kilkenny on February 2nd.

The Strategy sets out a vision of an Ireland where biodiversity is understood, appreciated and valued, and decisions that impact on biodiversity are informed by evidence and knowledge.

The mission of the National Biodiversity Data Centre is to work to ensure that the unique and intrinsic value of biodiversity to society and human wellbeing is recognised. We will make data and information on Ireland's biodiversity more easily accessible to better understand and inform its protection and restoration.

We will work in partnership to support initiatives to increase people's understanding of, and engagement with, biodiversity, and the ways in which it can be maintained and enhanced.

The National Biodiversity Data Centre has identified six strategic objectives to frame its work priorities over the coming five years.

The Strategic Plan 2024-2028 can be downloaded from <https://bioirl.ie/strategic-plan>

Strategic Objectives

- 1 IMPROVE KNOWLEDGE ON IRELAND'S BIODIVERSITY**
Serve as the national centre for acquiring, collating, managing, validating and making available data on Ireland's biodiversity, and track how biodiversity is changing over time.
- 2 ASSIST BETTER EVIDENCE-BASED ACTIONS FOR BIODIVERSITY CONSERVATION AND RESTORATION**
Promote the use of genetic, species and habitat data and biodiversity informatics in partnership with other organisations, to better inform best practice, policy and decision-making through innovative data analysis, interpretation and reporting.
- 3 PROMOTE THE USE OF BIODIVERSITY DATA FOR SCIENCE AND DECISION-MAKING**
Support biodiversity data and informatics needs at the national, EU and international levels, particularly for research, policy development and decision-making.

- 4 STRENGTHEN THE CITIZEN SCIENCE AND RESEARCH NETWORK**
Build capacity within the citizen science network to foster enjoyment, engagement with and appreciation of local biodiversity, promote life-long learning, and improve the quantity and quality of citizen science generated data on Ireland's biodiversity.
- 5 COMMUNICATE BIODIVERSITY**
Communicate the value of Ireland's biological diversity and support evidence-based conservation and land-use actions across Irish society.
- 6 BUILD AN INNOVATIVE, AGILE AND ACCOUNTABLE NATIONAL BIODIVERSITY DATA CENTRE**
to enable it to respond to emerging public policy needs and to strengthen the state's ability to address the biodiversity crisis.

National Biodiversity Data Centre to create a new Invasive Species Unit

A new special Invasive Species Unit is currently being established within the National Biodiversity Data Centre to manage a greatly expanded work programme on invasive species. Invasive Alien Species are considered the second greatest threat to biodiversity after habitat loss, and given the amount of global transport and trade, allied with the impacts of climate change, this threat will only continue.

Through the work of Colette O'Flynn, our Invasive Species Officer, the National Biodiversity Data Centre has provided significant support to NPWS on the management of data and information needs to assist implementation in Ireland of the EU Invasive Species Regulations. Currently the Centre manages the National Invasive Species Database and the invasives.ie website, it coordinates an early alert and rapid response system for newly arrived species, and it manages the Actions on Invasives online information management system.

It has also recently published an Identification guide to Ireland's Regulated Invasive Alien Plant Species.

The invasive species work programme is to expand greatly in 2024, thank to funding received through the Shared Island Invasive Species and Biosecurity initiative, and from the Department of Housing, Local Government & Heritage under the Marine Strategy Framework Directive. When the staff have been recruited, the Centre will begin delivery of additional work programmes on:

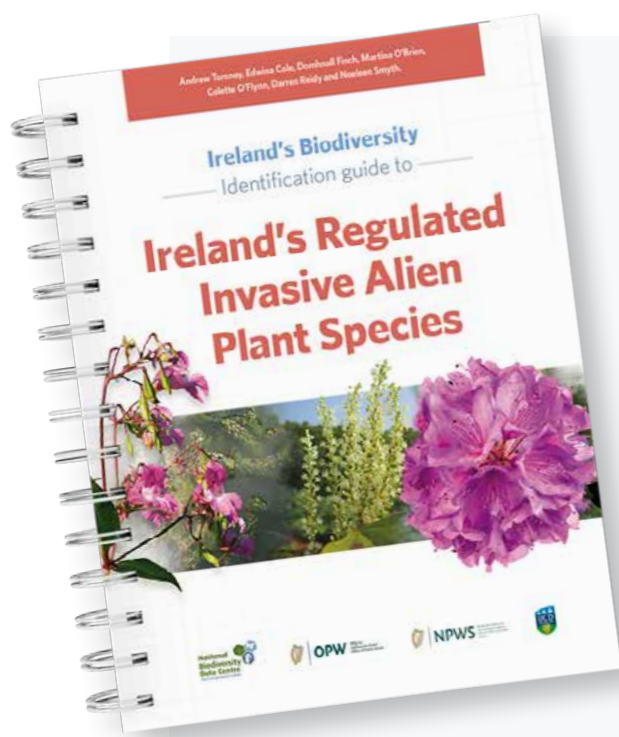
- Expanding the Invasive Species Engagement Programme and providing better coordination of Invasive Species Mitigation Measures,
- Developing a strategic All-Island Risk Assessment and Trend Analysis,
- Coordinating a Biosecurity Awareness Plan,
- Developing a Shared Island Invasive Species Contingency Plan,
- Developing a Citizen Science Invasive Species Programme

The National Biodiversity Data Centre is very excited to be building its capacity to better meet some of the coordination and information needs around Invasive Alien Species. It will be working closely with NPWS, Department of Housing, Local Government & Heritage, and Northern Ireland Environment Agency on the delivery of this programme of work.

New guide to Ireland's Regulated Invasive Alien Plant Species

An identification guide to Ireland's Regulated Invasive Alien Plant Species has recently been published by the National Biodiversity Data Centre. It is a field-friendly 185-page ring-bound guide.

A number of legal instruments regulate invasive alien species on the island of Ireland and these are species which are required to be controlled to prevent further spread. This guide presents a species account for each of those regulated plant species, with photos, identification features, seasonal variation, regulation and impact level listing, mechanisms of reproduction, dispersal and spread – plus much more. For some species there is also a separate table for the key differences between similar or confusion species. This guide is suitable for use in Ireland and Northern Ireland. To purchase, see <https://bioirl.ie/invasivesguide>



ON THE HORIZON:

Detecting emerging plant health risks

Plant health faces a growing number of new pest threats globally, driven by increased trade and complex trade patterns. Rapid e-commerce growth and increased travel have also raised biosecurity risks. Climate change is affecting pests in several ways, including expanding pest geographic ranges.

Plant health in Ireland is also vulnerable to these same challenges, and the country has noted a trend of an increasing number of new species recorded in recent decades compared to earlier periods. Ireland's geographic location, climate and isolation as an island provide some natural protection from pests. This has also afforded opportunities for monitoring and regulating pests that are unlikely to arrive through natural means but via trade, particularly those pests in countries with similar climates and host plants, and with which Ireland trades. For example, the Department of Agriculture Food and the Marine (DAFM) has utilised this opportunity to regulate 23 Protected Zone Pests (plant pests which have not established in Ireland, but which are already established in certain EU member states). To continue to safeguard the high plant status of Ireland, the DAFM Plant Health Biosecurity Strategy 2020-2025 identified risk anticipation via horizon scanning and Pest Risk Analysis (PRA) as an essential component of maintaining Ireland's plant health and biosecurity.

Since 2020, the Pest Risk Analysis Unit (PRAU) has been undertaking structured horizon scanning to identify emerging plant health risks as early as possible. There are a number of components to our horizon scanning. Firstly, we monitor the latest media and scientific articles around potential pests of relevance to Ireland. On a monthly basis, we analyse EU databases that provide information on new pest outbreaks and on recent pest interceptions occurring in trade. Subsequently, we analyse trade data for Ireland to identify if similar pathways are occurring into Ireland, enabling more targeted inspections by our plant health inspectors. Citizen science records are monitored, and reports are sent to PRAU via the National Biodiversity Data Centre so that we are alerted promptly.

New identified pest threats are communicated to risk managers and may undergo pest risk analysis, and/or a pest factsheet may be generated: see <https://www.gov.ie/en/publication/7b101-pest-risk-analysis-unit-plant-pest-risk-register-factsheets/>. Further actions may involve regulation, surveying, research, or wider communication campaigns to ensure effective preparation for these emerging threats.

While the primary objective of the PRAU's horizon scanning is to identify Ireland-specific threats, a member of the PRAU contributes their expertise at a European level by participating in the European Food Safety Authority (EFSA) Working Group on Horizon Scanning. Horizon scanning conducted by EFSA utilises automated text mining through the MEDISYS (Medical Information System) monitoring platform, providing a monthly summary of plant health risks. Currently, over 23,000 sources in 79 languages from 204 countries, covering all world regions, are scanned, resulting in approximately 400 articles automatically retrieved daily. These articles undergo filtering by dedicated scientific staff and are then submitted for validation to the working group of experts, who select the final articles for inclusion in a monthly newsletter. All newsletters are published online, and EFSA's Horizon Scanning Dashboard (<https://www.efsa.europa.eu/en/powerbi/plant-health-horizon-scanning-dashboard>) presents the newsletters' findings in an interactive format.



Conor Francis McGee

AGRICULTURAL INSPECTOR, PEST RISK ANALYSIS UNIT,
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Andy Bourke

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One of the primary human-mediated drivers of escalating threats to plant health is increasing volumes of trade.

A Red List of Ireland's Ants

The National Biodiversity Data Centre recently initiated a project focusing on our often overlooked ant species in Ireland.



Lasius flavus ©AJ Cann



Tetramorium caespitum ©Aleksandrs Balodis



Myrmica sabuleti
©Philipp Hoenle

Phase 1 - Creation of an Ants of Ireland Dataset

The first stage of the project was to validate ant records submitted through the Citizen Science Portal prior to 2022, which added 238 records, covering 14 species. Validation is currently ongoing for the ant records submitted in the latter stages of 2023 and the intention is that this will continue for future years. A wealth of ant records exist in published literature. Papers containing relevant wasp records were sourced and the records were reformatted and synthesised for addition to the dataset. This phase provided the foundations upon which more targeted work could be carried out, allowing a baseline of Irish ant distributions to be established. These data are now freely available through Biodiversity Maps as a resource for all to access. The dataset can be viewed here: <https://maps.biodiversityireland.ie/Dataset/367>. Until now, there was no active validation process for ants in Ireland. There was also a noticeable

dearth of both information and records, especially when compared to neighbouring countries. With significant changes of land use since many older records were made, and an ever-changing climate, it was imperative that existing records were compiled and new information gathered to gain insights into population trends and to provide more accurate ecological information and distributional data. Validation of ant records has commenced and is currently ongoing, enabling new records to be continuously added and to bring added value to the dataset.

One of the National Biodiversity Data Centre's primary aims is to provide high-quality data on Irish biodiversity for use by the public. Prior to this project, easily accessible ecological information and distributional data on Irish ant species was lacking. This project has produced, for the first time, a consolidated, accessible dataset that includes all known records of ants in Ireland, as well as individual species profiles, a validation process for ants in Ireland, and new data from surveying at almost 50 sites across the country.

Phase 2 - Building capacity for additional ant recording

The work completed in phase 1 showed that while there are a small number of dedicated recorders with the taxonomic skills required to identify many of Ireland's ants, monitoring efforts could certainly be improved through education and promotion. This was carried out in several ways:

- Providing Species Profiles for all 20 ant species, which include at least one photograph plus information on identification, habitat, nesting biology, prey, distribution and similar species. These profiles make an excellent starting point for those wishing to familiarise themselves with Irish ants. The profiles may be viewed here, by typing 'Ant' into the Keyword search bar and 'Hymenoptera' into the Taxon Group search bar: <https://species.biodiversityireland.ie/>
- A specific recording form has now been created on the Citizen Science Portal.
- Two ant workshops have been held to date in counties Wexford and Offaly.
- An identification guide and online course have been created.
- The project has been promoted at various stages on social media, with the aim of broadening the recorder network.

Phase 3 - Survey Work

To supplement the work completed in phases one and two, field surveys were carried out across 49 sites. These sites were chosen based on geographical coverage; habitat type and quality; and species-rich presence in existing literature. A total of 13 species were recorded across the survey period, which represents 65% of species recorded in Ireland, and included several notable records. The most widely-recorded species was the red ant, *Myrmica ruginodis*, which was recorded at 36 of the survey sites. This was followed by the black ant, *Formica lemmani*, which was recorded at 33 sites and the red ant, *Myrmica rubra*, which was found at 27.

Recommendations

This is the first time that comprehensive distributional information on Ireland's ants has been produced. A clear system is now in place for the collection, validation and addition of new ant records. A methodology for targeted surveying has also been developed, which has proven to be successful. With this in mind, it would be beneficial for this work to be continued, particularly the targeted surveying. Such work is capable of generating a large amount of high quality records and as can be seen in figure 1, many areas of Ireland have yet to be surveyed. Potential exists not only to establish the size and extent of existing populations, but also to discover new populations and even discover species new to Ireland. The value of this project will be increased as more records are made. Over time, it is hoped to build the evidence base so that the threat status of Irish ants may be assessed and a Red List be produced. This project has provided the foundations which will enable this to be undertaken in the future.



Figure 1: A map of Ireland showing the locations of the survey sites.

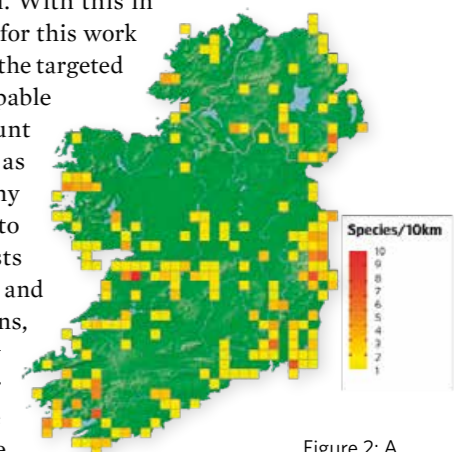


Figure 2: A map displaying the species abundance and spatial coverage of ant records across Ireland



Owen Beckett
PROJECT MANAGER
Wasp Red List Project
National Biodiversity Data Centre

This project is funded by the National Parks and Wildlife Service

An tSeirbhís Páircenna Náisiúnta agus Fiadhóla
National Parks and Wildlife Service

Join the buzz to save the bees

Across the island of Ireland, bees and other pollinators are in decline - mainly because we have drastically reduced the habitats that provide them with food and shelter.

This is a huge problem not only for pollinators, but the animals that feed on the plants they pollinate, including humans. Of the 100 crops that provide 90% of the world's food, 71 are pollinated by bees.

The solution to this problem is simple: we need to create a landscape that supports them. This requires a collective effort. All of us – local authorities, businesses, farmers, gardeners – have a role to play in taking the right actions to help save these important insects.

To help address this problem, the All-Ireland Pollinator Plan was established in 2015. Implemented by the National Biodiversity Data Centre, the Pollinator Plan is a framework bringing together different sectors across the island of Ireland to create a landscape where pollinators can survive and thrive. It provides a roadmap for creating a pollinator-friendly environment through evidence-based actions which are supported by over 100 governmental and non-governmental organisations.

The first version of the Pollinator Plan ran from 2015-2020, with 81 actions spanning different sectors. The second version began in 2021 and will run until 2025. It contains 186 actions to be delivered by partner organisations, building on the huge success of the first Pollinator Plan.

While the general trend across Ireland shows that bees are in decline, local populations are increasing where actions are taken to help them. This is hugely encouraging – it's proof that if enough people get involved, we can turn the tide for pollinating insects.

Of the 100 crops that provide 90% of the world's food, 71 are pollinated by bees.

Evidence-based actions

The All-Ireland Pollinator Plan has a huge range of resources on helping pollinators, including posters, signage, and how-to guides with advice on how to create wildflower meadows, manage hedgerows, and choose pollinator-friendly plants for your garden. Some new resources can be found on these pages. All are available to download for free from pollinators.ie/resources



Don't Mow, Let it Grow

Native Irish wildflowers, such as Dandelions, Clover, and Bird's-Foot-Trefoil, provide the best source of pollen and nectar for pollinators. By mowing less and removing grass clippings when you do mow, you give these flowers a chance to appear naturally without spending money on wildflower seed mixes, which can often do more harm than good to native biodiversity.

Support is growing for pollinator-friendly mowing. Initiatives like 'No Mow May' are winning new converts every year, as more people discover the benefit of putting away their lawnmowers for a month – saving time, fuel, and money, and helping bees, birds, and other insects.

But it's not just about May. Mowing less often between April to August is one of the best actions you can take for hungry pollinators.



Follow this QR code to find out how to create a short-flowering meadow, and what plant and insect species you might attract across the year.



Find out more about the All-Ireland Pollinator Plan and download free resources on actions for pollinators at pollinators.ie



Celebrating Hedgerows

Hedgerows are an integral part of Ireland's landscape. They hold immense value for both humans and biodiversity, providing food (such as blossom and berries), creating crucial wildlife corridors, storing carbon, and helping mitigate fertilizer run-off.

Many native hedgerow plants, such as Blackthorn and Willow, flower early in the year when pollinators emerge from hibernation.

Planting a diverse native hedgerow and managing it for biodiversity is one of the best actions you can take to help pollinators. In May, the National Biodiversity Data Centre runs an annual Festival of Farmland Biodiversity – celebrating hedgerows and other farmland habitats. Our new resource – on the next page – was released for the 2024 Festival to highlight hedgerow features through the seasons.





SPRING

The hedgerow bursts into life. Nectar and pollen rich plants flower in succession, feeding pollinators as they emerge from hibernation.

WINTER

Deadwood provides nesting and breeding sites for insects. Fruits and berries are a vital source of food for birds and mammals.

AUTUMN

Ivy flowers in autumn, providing a critical supply of nectar for insects before they hibernate. Mammals find safe places to spend the winter.

SUMMER

As the weather warms, birds use trees as song posts. Caterpillars of moths and butterflies feed on the hedgerow plants. Bats feed on the abundant insects.

A Hedgerow Through the Seasons

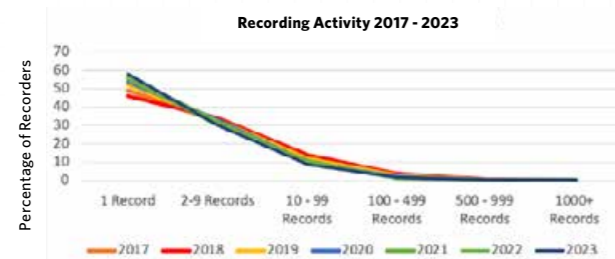
Hedgerows are precious habitats made up of native trees, shrubs, and flowers. They form a network of wildlife corridors across our landscape, providing food and shelter for insects, birds, and mammals.



Ireland's Recording activity in 2023

We had another great year of recording activity with 163,502 records submitted through Ireland's Citizen Science Portal in 2023.

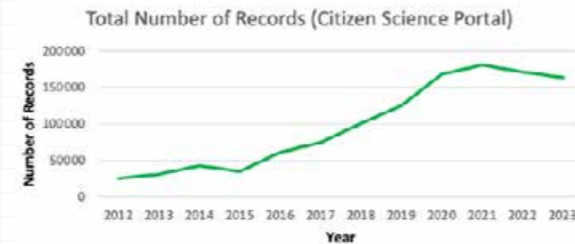
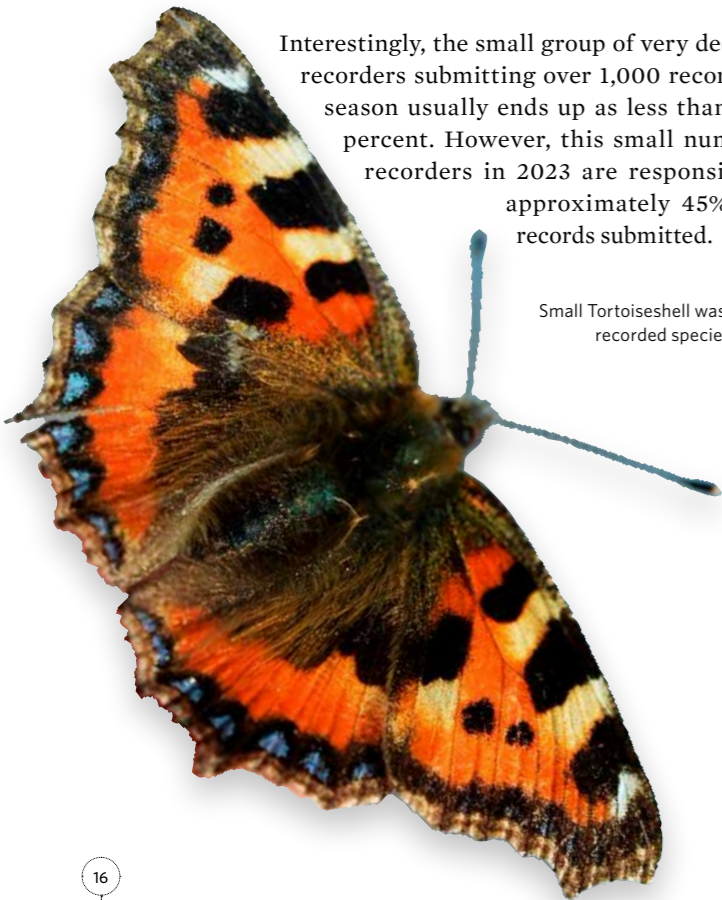
Records were received from 8,033 individual recorders across all 32 counties. An interesting trend with data submitted through the Citizen Science Portal is that more than half of recorders only submit one record during a calendar year. In contrast to this, we had 38 recorders who submitted over 1,000 records, nine of which submitted over 2,000 records.



Recording Activity from 2017-2023, showing the percentage of recorders and the number of recorders submitted.

Interestingly, the small group of very dedicated recorders submitting over 1,000 records in a season usually ends up as less than half a percent. However, this small number of recorders in 2023 are responsible for approximately 45% of all records submitted.

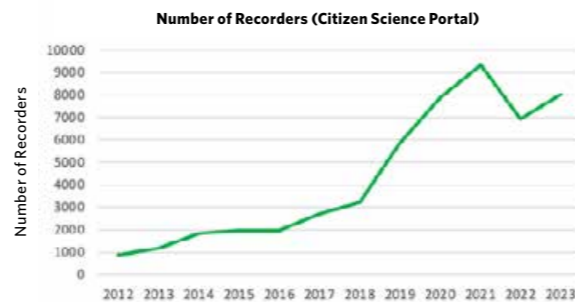
Small Tortoiseshell was the most recorded species in 2023.



Total number of records submitted through Ireland's Citizen Science Portal 2012-2023.

Overall, the number of records submitted through Ireland's Citizen Science Portal is down on previous years and we appear to be entering into a plateau after a few bumper years of recording, which were noticed during and after the Covid-19 pandemic.

Recorder numbers have risen in 2023 compared to 2022 and are the second highest recorder numbers we have, only behind 2021 which had 9000+ recorders.



Total number of individual recorders who submitted records through Ireland's Citizen Science Portal 2012-2023.

Perhaps unsurprisingly the most commonly recorded taxonomic groups remains unchanged for another year. Flowering plants were the most heavily recorded taxonomic group in 2023, with over 38,000 records submitted and made up 23% of all records. Birds were second, with over 36,000 records and Moths were the third most recorded group, with over 31,000 records. Butterflies and Terrestrial Mammals make up the fourth and fifth most recorded groups, with over 14,000 and 7,000 records respectively. More than three-quarters of all records submitted through Ireland's Citizen Science Portal in 2023 belong to one of the above taxonomic groups.

An interesting note is that even though the Flowering Plants group was the most heavily recorded in 2023, no species from that group found their way into the Top 10 most recorded species, which are listed in the table opposite.



The National Biodiversity Data Centre runs training workshops for recorders, such as the tree workshop above, in 2023.



Lesser Celandine was the most recorded plant species last year (and flowering plants were the most heavily recorded group).

Common Name	Species Name	No. Records
Small Tortoiseshell	<i>Aglais urticae</i>	1828
Red Admiral	<i>Vanessa atalanta</i>	1731
Hedgehog	<i>Erinaceus europaeus</i>	1633
Speckled Wood	<i>Pararge aegeria</i>	1506
Buzzard	<i>Buteo buteo</i>	1293
Peacock	<i>Inachis io</i>	1288
Robin	<i>Erithacus rubecula</i>	1058
Otter	<i>Lutra lutra</i>	1047
Meadow Brown	<i>Maniola jurtina</i>	1034
7-Spot Ladybird	<i>Coccinella septempunctata</i>	908

Top 10 most recorded species in 2023.

Butterfly species make up half of the most recorded species in 2023. Some of these butterfly species are common visitors to garden habitats. If you'd like to find out more about our Garden Butterfly Monitoring Scheme, see: <https://bioirl.ie/bms>.

Species such as Hedgehog and Otter are both currently being recorded as part of national surveys by partner organisations. More details on those projects can be found here: Irish Hedgehog Survey (<https://bioirl.ie/ih.s>) and National Otter Survey (<https://bioirl.ie/nos>).

7-Spot Ladybird is also our most heavily recorded Ladybird species, accounting for more than half of all Ladybird records in our Ladybirds of Ireland dataset. To find out more about this species or any of our Ladybird species, please check out our Ladybird Atlas 2025 project: <https://bioirl.ie/ladybird-atlas-25>

Remember, Ireland's Citizen Science Portal is available to be used by anyone. If you see a species of note and are sure of its identification, please submit the details to <https://records.biodiversityireland.ie/> so that the observation can be added to our national biodiversity database. This will allow us to continue to build the knowledge base on what species we have in Ireland and help us to better understand how they are distributed.

A massive thank you to all recorders who submitted data in 2023. A huge amount of time, effort and expertise goes into collecting this data, and we are greatly appreciative that these records are submitted through Ireland's Citizen Science Portal.



Oisín Duffy
SURVEYS AND RECORDS OFFICER
National Biodiversity Data Centre

7-Spot Ladybird was the 10th most recorded species and is the most heavily recorded species within the Ladybirds of Ireland dataset, the relevance here being the Ladybird Atlas 2025 project. Images © Oisín Duffy



An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra
National Parks and Wildlife Service

Bryophyte Survey 2023



Ptychostomum cernuum
(*Bryum uliginosum*)
© Neil Lockhart

In Europe, the moss family Bryaceae includes some 69 species, in five segregate genera. Several of them are among the most common and most widely distributed mosses in the region. Perhaps the most well known and most widespread is the Silver-moss *Bryum argenteum*, easily recognised by its diminutive whitish, silvery shoots, and by its habitat preference for cracks in the pavement and in crevices of old cars.

Other species in the Bryaceae family are much rarer, however, and several are threatened and of conservation concern. Ireland holds nearly 40 Bryaceae species, 12 of which are red-listed as either Critically Endangered, Endangered or Vulnerable, and at risk of extinction at a national level. Changes in land use over much of north-western Europe have led to the extinction of Cernuous Thread-moss *Ptychostomum cernuum* (*Bryum uliginosum*) in several European countries, and both Blunt Bryum *Ptychostomum calophyllum* and Baltic Bryum *Bryum marratii* have now been lost from most of their former localities in southern Britain and on the near-continent. The Irish populations fared better through the late twentieth century and beyond, so the review by Lockhart, Hodgetts & Holyoak (2012) was able to report that the country had become the last major stronghold in north-western Europe of those species. Six Bryaceae species are now afforded legal protection in Ireland under the Flora (Protection) Order, 2022.

Over ten years have passed since the wide-ranging baseline surveys that underpinned the Irish red list. In 2023, a new survey of the Bryaceae was carried out, with all known sites revisited for nine of the most threatened species.

Provisional results of the survey are not encouraging. *P. cernuum* is still present at two of its three sites, but the overall population in Ireland has declined by about 80%. *P. calophyllum* survives at only one of its four sites, but the population there has declined considerably due to competing vegetation. Warne's Thread-moss *P. warneum* has been lost from all four of its old sites, but a few stems of it were found at a new site. *Bryum marratii* was not re-found at 9 of its 14 sites and the overall population appears to have declined by about 70%. Welsh Thread-moss *Bryum gemmiparum* previously had three known Irish populations and all have now gone. The modern eutrophication of Lough Carra and Lough Mask make it unlikely that it persists on their shores.

Ptychostomum warneum © Neil Lockhart

The causes of these losses and declines are numerous and varied: recurrent problems apparently having arisen from widespread eutrophication or nitrification leading to increased shade from taller or denser competing vegetation; eutrophication of lakes; cessation or intensification of grazing in different sites; decrease in supply of mobile wind-blown sand at coastal sites. It is of course possible that other, previously undiscovered populations of these species may turn up at other locations, particularly as several of the Bryaceae species are pioneer species of open habitats and may come and go over time. Nevertheless, it will be necessary to continue to monitor the surviving populations and carry out further survey work at other potentially new sites.

Lockhart, N., Hodgetts, N. and Holyoak, D. (2012). *Rare and Threatened Bryophytes of Ireland*. National Museums Northern Ireland.



David Holyoak —
CONSULTANT ECOLOGIST AND
BRYOLOGIST



Neil Lockhart
—
WILDLIFE INSPECTOR AND BRYOLOGIST
National Parks and Wildlife Service



The data and mapping portal Biodiversity Maps maps.biodiversityireland.ie provides access to data on Ireland's biodiversity. As of mid-May there were 6,499,033 records of 18,027 species across 171 datasets on Biodiversity Maps.

Recently added datasets or updated datasets include:

Sawflies of Ireland
248 records

Irish Marine Turtles
142 records

Bee flies of Ireland (New dataset)
93 records

Robberflies of Ireland (new dataset)
99 records

Longhorn beetles
26 records

Ladybirds of Ireland
156 records

Dragonfly Ireland Database 2019-24
60 records

Bees of Ireland
53 records

iNaturalist Marine Species Records for Ireland
2,726 records

While we are only five months into 2024, it is proving to be another great year of recording, with 48,000 records already submitted through Ireland's Citizen Science Portal (records.biodiversityireland.ie) from 2,855 individual recorders, across all 32 counties. Perhaps unsurprisingly, but the most commonly recorded species so far this year is Robin, with 700 records already submitted.



Dewick's Plusia © Eric Dempsey



Ortholepis betulae © Christian Osthoff



Herpetogramma licarsisalis © Michael O'Donnell



Scoparia ancipitella © Stephen Cotter

Moths

2023 was a significant year for MothsIreland. We reached the milestone of 1.5 million records and we held the second conference on moths in Ireland – only 17 years after the first! To reach that number of records for one group of invertebrates is simply astonishing and highlights the popularity and attraction of moth recording. It represents the second largest dataset in the Biodiversity Data Centre database, only being surpassed by higher plants.

The conference was held in Abbeyleix in Co. Laois, in June, and was attended by 76 recorders, from complete beginners to some of the most knowledgeable in the country. The feedback was very positive and it would be hoped that it won't be another 17 years before the next one.

Seven more species, two macromoths and five micromoths, were recorded for the first time in 2023. The year started off quietly with the first new species not being recorded until June. This was *Ortholepis betulae*, recorded on Abbeyleix Bog during the conference by both Christian Osthoff and Angus Tyner. Four of them were recorded, which indicates that it is established in the area.

Next up was *Scoparia ancipitella* in Killarney, in July, by Stephen Cotter. The *Scoparia/Eudonia* are difficult to identify, but this is the second one to be added to the Irish list recently, following *Eudonia murana* in 2022. This was followed by a migrant Golden Twin-spot *Chrysodeixis chalcites* in Tramore, in September, by Tony Bryant.

A number of species of micromoth can only be identified in the larval stage when they are found on the larval foodplant.

Two of these were added to the Irish list in 2023, the first being *Coleophora violacea*, when a larval case was found on Hazel by Jamie O'Neill in the Burren in September. The second species was *Phyllonorycter schreberella*, when a leaf mine was found on Wych Elm by Dave Allen in Belfast in October. Searching for the larval stages is a much under-utilised method for recording moths in Ireland, and there are undoubtedly many more species to be added to the Irish list using this method.

Two more migrant species were recorded, both on October 7th, during a period of good migrant activity. A Dewick's Plusia, *Macdunnoughia confusa*, was trapped by Eric Dempsey in Newcastle, Co. Wicklow, with no one more surprised than Eric, who couldn't believe that he had recorded a first Irish having only taken up moth recording in the last couple of years.

The other species of migrant was Grass Webworm, *Herpetogramma licarsisalis*. This was trapped separately by Christian Osthoff on Toe Head, Co. Cork, and Michael O'Donnell on Cape Clear Island.

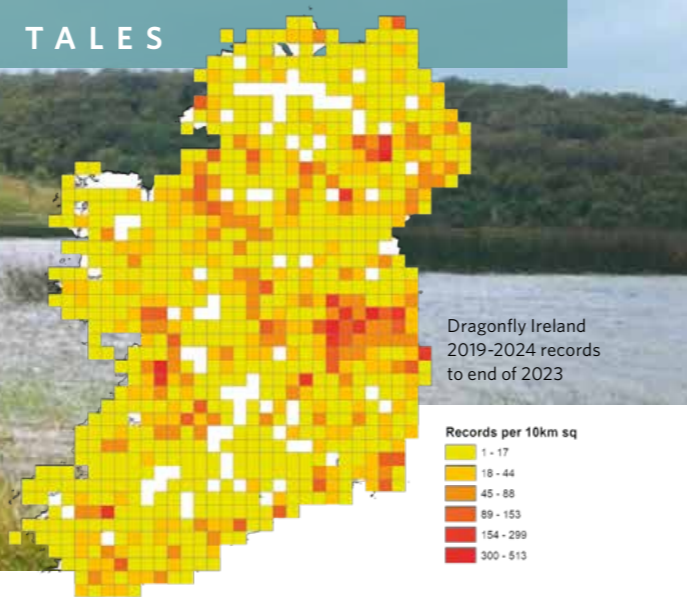
Licence: I would remind recorders that a licence is needed from the National Parks and Wildlife Service to operate a light trap in the Republic of Ireland. You can apply directly to the NPWS (wildlifelicence@npws.gov.ie) for a licence or you can be added to the MothsIreland Group Licence by contacting info@mothsireland.com. Thanks to Ken Bond and Stephen Cotter for confirming the more difficult to identify species.



Michael O'Donnell
—
MOTHSIRELAND
www.mothsireland.com

Dragonfly Recorder
Survey Site Photo,
2023

Dragonfly Ireland 2019-2024



Some 4,467 validated dragonfly and damselfly records from 2023 were recently uploaded to Biodiversity Maps, marking the penultimate year of the Dragonfly Ireland 2019-2024 survey. When combined with data from our colleagues at the Centre for Environmental Data and Recording (CEDaR) in Northern Ireland, we have received records from 85% of the 1,000 or so 10km grid squares that cover the Island of Ireland. 26 species were recorded in 2023, bringing to 29 the total number of dragonfly and damselfly species recorded for the survey to date. In our survey data set, ‘Top of the Pops’ is Common Darter, with 2,181 records, and the wooden spoon goes to Southern Hawker – with just one record (not surprising really as it has only once previously been recorded here!).



Getting up close and personal with a blue-tailed damselfly at the Glenveagh Dragonfly Ireland workshop in 2023

The number of recorders submitting dragonfly and damselfly records has remained fairly constant, at about 500 per annum, although we saw a Covid lockdown induced peak of 650 in 2020. A huge thank you to all who have and continue to submit records for this survey.

As this is the final year of the survey, we are asking everyone to make a special effort to visit their local river, stream, lake, pond or other wetland, preferably twice (once in early summer and again in late summer) to record as many species as possible. We are also looking to fill in blanks in our map, so please visit our website: <https://bioirl.ie/dfi> for more information on how to help with that.

We are happy to say that funding for another year of site surveys has been granted to the National Biodiversity Data Centre from the National Parks and Wildlife Service and CEDaR.

This funding allows us to hire ecologists to survey sites that are remote or difficult to access, and from which we would otherwise receive few records. This year, we will be focusing on two more priority habitats, blanket bog and wet heath, both to build data for these habitat types and to help fill some of the gaps in our distribution maps.

We have four Introduction to Dragonflies and Damselflies workshops planned around the country for 2024. Details and booking information are available online at <https://bioirl.ie/workshops/>

- Saturday 8th June - Askeaton, Co. Limerick. Workshop Leader: Geoff Hunt. Supported by Limerick County Council Biodiversity Office and Coillte.
- Saturday 15th June - Lecarrow, Co. Roscommon. Workshop Leader: Michael Bell. Supported by Roscommon County Council Heritage Office.
- Saturday 22nd June - Castlecomer, Co. Kilkenny. Workshop Leader: Geoff Hunt. Supported by Kilkenny County Council Biodiversity Office.
- Saturday 29th June - Dunshaughlin, Co. Meath. Workshop Leader: Michael Bell. Supported by Meath County Council Biodiversity Office.

We are at the stage now of getting data ready for final analysis and preparation of maps for an updated Atlas of Dragonfly and Damselfly distribution of Ireland. We still have time to incorporate additional data sets for the final analysis, so if you know of any additional sources of dragonfly and damselfly distribution data, collected between 2019 and 2024, that could be included in the analysis, please let us know at dragonflyireland@biodiversityireland.ie

We were delighted to be able to contribute a further 340 images of wetland sites to the Map of Irish Wetlands recently, in many cases representing the first photos of these sites to be submitted to this database, and helping to enhance it as a resource for freshwater research and management.

Finally, we have our fingers (and toes) crossed for a good deal of sunny weather this summer and we wish you all the best for this dragonfly and damselfly recording season.



Dave Wall
CITIZEN SCIENCE OFFICER
National Biodiversity Data Centre

Butterflies

Waiting for Spring

On April 1st, on a sun-baked hill east of Qala village in Gozo, I enjoyed Swallowtails, Red Admirals, Painted Ladies, Clouded Yellows, Long-tailed Blues and Wall Browns. The airborne Swallowtail is exceptionally eye-catching, brimming with silk and steel as it manoeuvres intense hilltop gusts. The temperature exceeded 31 Celsius that afternoon, the highest ever recorded in Malta for April.

No shivering or peering at a murky sky for a hint of direct sunlight – a staple for early spring butterflies in Ireland. Our butterflies did not get much encouragement from the March and early April weather. Wet spring weather inhibits butterflies. March was wet, so its above-average temperatures were unavailing. April 2024 shows no signs of being suitable, but three weeks lie ahead.

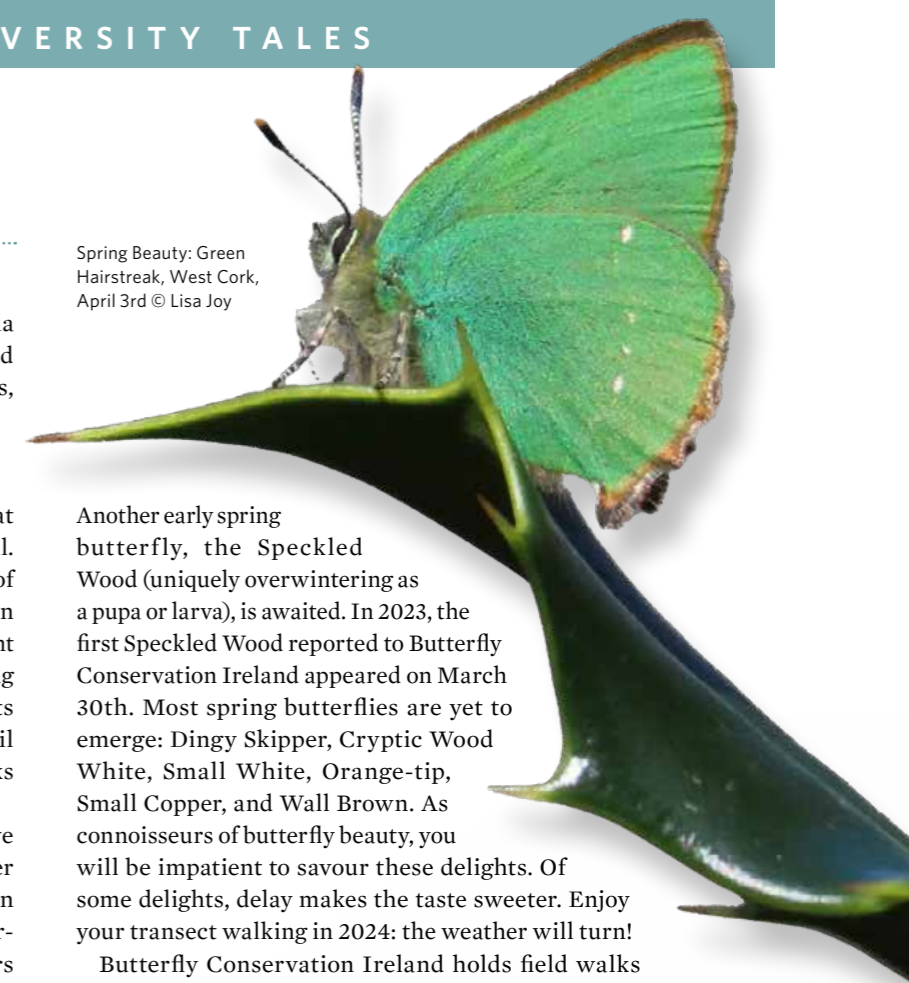
I noted some positives this year. In his impressive book on British and Irish butterfly life cycles, Peter Eeles states that the Speckled Wood caterpillar can overwinter only in the third instar (instars are intermoult stages in the caterpillar), with other instars dying with the onset of extreme cold. However, fourth instar caterpillars I reared outdoors survived extreme low temperatures during January 2024. Our Speckled Woods are tailor-made for the Irish winter.

Regarding winter survival strategies, our resident butterflies occupy two categories: the species that overwinter as adult butterflies and those that pass the colder months in juvenile stages (egg, caterpillar, chrysalis). Four hibernate as adults: Brimstone, Small Tortoiseshell, Peacock and Comma, and these have been seen this spring. They emerge over time and return to rest when spring weather reverts to winter. These are long-lived adults and can play a longer game.

For the rest of our residents, *carpe diem* applies. Spring butterflies are adept at exploiting brief good weather to transact their life's work. On April 3rd, Lisa Joy saw her first butterflies of the year on the Sheep's Head Peninsula in West Cork: a Holly Blue and three Green Hairstreaks. Green-veined Whites were reported on March 31st (Lullymore, Kildare) and April 5th (Marlay Park, Dublin). A Large White was seen on March 31st (Sutton, Dublin). The increasing day length, added to milder temperatures, tempted these out of their pupae. These emerge over several weeks, spreading the risk, so that some appear at the right time.

The Peacock flies from July to September and after hibernation, March to May. © Jesmond Harding

Spring Beauty: Green Hairstreak, West Cork, April 3rd © Lisa Joy



Another early spring butterfly, the Speckled Wood (uniquely overwintering as a pupa or larva), is awaited. In 2023, the first Speckled Wood reported to Butterfly Conservation Ireland appeared on March 30th. Most spring butterflies are yet to emerge: Dingy Skipper, Cryptic Wood White, Small White, Orange-tip, Small Copper, and Wall Brown. As connoisseurs of butterfly beauty, you will be impatient to savour these delights. Of some delights, delay makes the taste sweeter. Enjoy your transect walking in 2024: the weather will turn!

Butterfly Conservation Ireland holds field walks which are usually available to all. We welcome new members and encourage butterfly conservation and recording. For more see:

<https://butterflyconservation.ie/wp/>



Jesmond Harding
FOUNDER MEMBER AND
CONSERVATION OFFICER
Butterfly Conservation Ireland





Myotis Daubentonii, R454834, Clare. © Dairmuid Halligan

Bats

Bat Conservation Ireland Celebrates its 20th Birthday!

Bat Conservation Ireland turns 20! Join us for a suite of anniversary events and celebrations that will include online talks, quizzes, an autumn swarming event, and a very special event in October – keep an eye on our membership newsletters and social media pages for details.

We are also delighted to announce that our free online training, Course 1 – Introduction to Bats and Using Detectors, is now available to all at training.batconservationireland.org! Once you register on the training platform, you can complete the two modules of this introductory course in your own time. In it, you will learn about Irish bats and how to use a tuneable detector to identify the most common species.

In late 2023, we welcomed a new member of staff to our ranks. Karen Healy is now Project Coordinator with Bat Conservation Ireland. Karen is currently reviewing our Education Strategy, coordinating the Brown Long-eared Roost Monitoring Scheme, and liaising with bat groups. She has already trained in a new panel of over 30 educators who will be able to deliver bat talks and walks during the summer months. If your organisation would like to request a bat talk or walk in your locality please contact us here: www.batconservationireland.org/get-involved/request-bat-walk-talk-event, and we will do our best to facilitate you.

2024 is the second year of a pilot Woodland Bat Monitoring scheme. David Clarke, our Bat Ecologist, has been working on rolling out this scheme in the same counties surveyed in 2023 (Meath, Kildare, Cavan and Wicklow). We will also be incorporating new woodland sites, in counties Longford, Monaghan, Sligo and across Northern Ireland, in the coming months. This survey targets two species that we do not currently monitor – whiskered and Natterer's bats. If you are based in these areas and are interested in finding out more about the survey please contact: davidc@batconservationireland.org.

Events Calendar 2024



July 2024 Have a Natter(er) Webinar with special guest speakers	August 2024 17th - 23rd Heritage Week 24th - 25th International Bat Night	September 2024 Autumn Swarming Event
October 2024 Bat Appreciation Month JOIN US FOR A VERY SPECIAL EVENT AT AN AMAZING LOCATION!	November 2024 Have a Natter(er) Webinar with special guest speakers	December 2024 Big Bat Quiz of the Year

The bat maps on BiodiversityIreland.ie were last updated prior to the publication of the Atlas of Mammals in Ireland (2016). At the end of 2023, we forwarded our National Bat Database to the National Biodiversity Data Centre. This database includes over 100,000 bat records from many sources, including monitoring schemes, consultancy surveys and verified bat records that were submitted to the Data Centre by members of the public. The updated bat maps for Ireland have now been uploaded to maps.biodiversityireland.ie.

In other upcoming projects, Bat Conservation Ireland is sponsoring two Tidy Towns Special Awards to the value of €1,500 each – one for a playground sculpture and another for an Art Mural. The closing date is June 5th 2024. See www.tidytowns.ie/competition/2024-special-award-entry-forms. In addition, we are currently starting a new project on Gardening for Bats and will be creating lots of new materials and resources for all you keen gardeners out there!

In January 2024, Bat Conservation Ireland was sorry to lose a very valued member of staff, Dr Tina Aughney. Tina worked for Bat Conservation Ireland from 2005, when she set up Ireland's first large scale volunteer-led bat monitoring scheme, the All-Ireland Daubenton's Waterways Survey. Tina also coordinated the Brown Long-eared Bat Roost Monitoring Scheme. Tina was instrumental in developing Bat Conservation Ireland into a well-regarded eNGO, both nationally and internationally, and ensuring that monitoring and other projects were carried out to a very high standard. We wish her every success in her future endeavours.



Dr Niamh Roche
 BAT CONSERVATION IRELAND
niamhr@batconservationireland.org

Birds

The weekend of April 13-14th saw more sunshine than rain, so maybe spring has arrived at last? In the preceding week or so, early migrant warblers such as Blackcap, Chiffchaff and Willow have been vocally proclaiming their territorial rights, but now House Martins and Swallows have appeared on the scene, too. But what of the winter just passed? Probably, the wettest ever; plenty of named storms but not that cold. My I-WeBS (Irish Wetland Bird Survey) sites are relatively upland lakes and reservoirs and my monthly counts of dabbling ducks and swans have been disappointingly low, perhaps due to extremely high water levels in the reservoirs reducing access to nearshore emergent vegetation, and waders have been non-existent. Goosander numbers roosting on the Glendalough lakes were somewhat down on recent years, with counts exceeding 10 between October and January and over 20 in December only.

The BirdWatch Ireland Ringing Group completed a third winter of 'Constant Effort' winter ringing (8 mist-netting sessions) at the East Coast Nature Reserve in Newcastle. In November, Blue and Great Tits dominated, but for December through to the end of February, it was finches galore: a lot of Goldfinches were ringed with good numbers of Chaffinch, Siskin and Greenfinch. The latter seem to be recovering somewhat from the *Trichomonosis* 'epidemic' (a protozoan parasite), although they are still rather infrequent in most gardens according to lists submitted to the Irish Garden Bird Survey.

December 2023 also saw the publication of the latest Irish-British Seabird Census, 'Seabirds Count'. The survey, conducted between 2015 and 2021, preceded the HPAI (bird flu) crisis of the last two summers. Still, seabirds of the British Isles are not in a good place, although Ireland bucks the trend for most species, with stable or increasing populations and relatively few declines (e.g. Kittiwakes; see Burnell *et al.* 2023).

And now for something completely different! What do the Peregrine Falcons nesting on the Poolbeg chimneys in Dublin eat? Recently we received notification from ESB, that the Peregrine platform high up on one of them was to be temporarily removed this winter. We were told there was a lot of 'stuff' on them and this included bird remains and rings. We asked for it to be saved and in course three aluminium buckets of soil, guano, bones and a colourful array of rings was delivered to BirdWatch offices. Sifting through all this kept my colleagues, Brian Burke, Helen Boland and I busy through several extended lunch-breaks and all the effort was rewarded with 18 standard metal bird rings: 17 British Trust for Ornithology (includes Irish ringed birds) and one Swedish ring, but none of the tern colour rings we were expecting given the proximity of the towers to the Dublin Port tern colony. The colourful component to the material all proved to be from racing pigeon rings, of which 163 were extracted!



Tern nesting structure and Poolbeg chimneys. © H Boland

The more interesting rings (from a biodiversity point of view) comprised 13 Irish terns (ringed between 2002 and 2013) with all but one Common Terns: 10 from Dublin Port, a single from Rockabill and one from Dalkey. The last was a Dalkey Arctic Tern. Two more recently ringed Welsh Birds were a Common Tern ringed on Anglesey in 2018 and a Knot ringed at Bangor in 2020. The Swedish bird was an adult Dunlin from the Ottenby Bird Observatory in the Baltic, ringed in July 2020. All terns had been ringed as chicks and we presume most had been predated by the Peregrines soon after fledging. The lack of colour rings is puzzling since we have been fitting most tern chicks with them since 2015 and we thought that the prevalence of HPAI in the Port colony in summer 2023 would have made them even more vulnerable to Peregrine depredation. Intriguingly, the single Knot had been colour ringed, but only the metal ring was in the material.

The racing pigeon rings ranged back to 1998, and in common with the terns they get ringed as youngsters, so we don't know exactly at what age they were when killed by the Peregrines. Most belonged to the Irish Homing Union (85%), with 136 from the 'South' (Republic) plus 3 from the 'North'. 'GB' rings (23, from the Royal Racing Pigeon Association) were presumably mostly ringed in Northern Ireland but our sample included one from the North of England Homing Union which may indicate an Irish Sea crossing race. Intriguing 'stuff' in many ways!

Reference: Burnell, D., Perkins, A.J., Newton, S.F., Bolton, M., Tierney, T.D. & Dunn, T.E. 2023. *Seabirds Count- A census of breeding seabirds in Britain and Ireland (2015-2021)*. Lynx Edicions, Barcelona.



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 SENIOR CONSERVATION OFFICER
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Cetaceans

Sightings

From October 1st to March 31st 2024, the Sighting Scheme validated a total of 806 cetacean and basking shark sighting records. Included in these are the results of 193 land-based 'effort' watches, of which 147 (76%) produced sightings. These data comprised an impressive tally of eight species of cetacea and basking sharks. The most frequently recorded species are ranked as follows: harbour porpoise 32%; common dolphin 28%; bottlenose dolphin 12%; minke whale 5%; fin whale 5%; basking shark 3%; humpback whale 2%. Some 99 sightings (14%) could not be validated to species level and were allocated to a non-species category.

Among sighting highlights were:

- c.40 harbour porpoises, Howth Head, Co. Dublin, December 26th, by David O' Connor.
- 100+ common dolphins, from Passage East, December 19th, by Paddy Roche. They remained feeding in the Waterford Estuary and River Suir for almost three months (November-February).
- 130+ bottlenose dolphins, Carrickarede, Co. Antrim, October 21st, by Richard Lafferty.
- c.12 fin whales, Helvic Head, Co. Waterford, December 2nd, by A. Malcolm and A. Trimble
- 1st humpback off Glencolumcille, Co. Donegal, February 14th, by Micheal Byrne.
- A great start to the basking shark season with a record number of 22 sightings, with all reports coming from the islands of Co. Galway and Mayo.

Strandings

During the same six-month period, the Irish Whale and Dolphin Group's Stranding Scheme validated a total of 268 records of stranded cetaceans, basking sharks and sea turtles on the island of Ireland.

This represented a 39% increase compared to last year (n=193). These figures include 13 species: basking shark (n=1), loggerhead turtle (n=1), leatherback turtle (n=2), bottlenose dolphin (n=5), common dolphin (n=172), striped dolphin (n=8), harbour porpoise (n=30), long finned pilot whale (n=5), minke whale (n=2), sperm whale (n=1), fin whale (n=2), northern bottlenose whale (n=2), and Cuvier's beaked whale (n=2).

There were a total of 33 known live stranding events, 24 of which involved common dolphins, two striped dolphins, one bottlenose dolphin, one harbour porpoise, two long-finned pilot whales, one loggerhead turtle, and one unknown cetacean species.



11-metre long Sperm whale stranded at Glencolumcille, Co. Donegal, March 24th. They can reach up to 15 metres!
© Marcus Hogan

The number of common dolphin and harbour porpoise strandings has been on the rise since 2011. Harbour porpoise records have risen from an average of 28.6 per year between 2000 and 2010, to an average of 44.4 per year between 2011 and 2022. The year 2023 was a peak year for harbour porpoise strandings, with 70 animals recorded. Strandings for this species occurred primarily along the east and southeast coasts in 2023.

From 2017 to 2019, the IWDG delivered a post-mortem scheme on behalf of the National Parks and Wildlife Service (NPWS) and the Marine Institute, in partnership with the Cork Regional Vet Lab and the Atlantic Technological University in Galway. The scheme targeted common and striped dolphins, as well as harbour porpoises. Causes of death were established for 16 of the 19 harbour porpoises examined, with the number one cause being infectious disease (n=9). The second most common cause was bycatch (n=4). If we are to ever understand why these animals are stranding in increasing numbers, the only solution is to have a long-term post mortem scheme established in Ireland covering all cetacean species.

If we are to ever understand why these animals are stranding in increasing numbers, the only solution is to have a long-term post mortem scheme established in Ireland covering all cetacean species.

It is interesting to note that the IWDG have identified significant declines in harbour porpoise densities in all three Special Areas of Conservation (SAC) designated to protect this species (Roaringwater Bay and Islands, Blasket Islands and Rockabill to Dalkey Islands). Results from boat-based surveys carried out on behalf of the NPWS suggest that this may not be the result of population declines, but rather changes occurring in their distribution – changes which are likely driven by shifts in the distribution of their preferred prey. Changes in fish distributions, especially those which seek cooler waters, have been shown to be occurring throughout the North Atlantic driven by climate change.

Please report all whale, dolphin and porpoise strandings, alive or dead, to the IWDG. The IWDG, with support from NPWS and the National Biodiversity Data Centre, maintain the official database of stranded cetaceans and sea turtles in Ireland. This is one of the longest running stranding schemes in Europe, which allows us to monitor potentially unusual trends.



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Explore Your Shore!

We received 6,868 records for Explore Your Shore! in 2023, making it our best year yet at the National Biodiversity Data Centre for Marine Biodiversity Citizen Science recording. We are also fast approaching our 20,000th validated record being uploaded to Biodiversity Maps! A huge thank you to all who are giving marine species recording a go and to those who have been recording marine species for quite a while and continue to submit records and expand their impressive knowledge of Irish marine species identification. To date, we have recorded over 700 species, with almost all records backed up with photographic images.

For those of you who regularly visit our website at www.ExploreYourShore.ie, you will have noticed a new look to the site, with improved navigation and additional resources. We hope you like it, and please do let us know if there is something more you would like to see on the site. We will continue to update and add to the site in the coming months.

In December, we were delighted to announce that the Sea Collective has been designated as the 'Explore Your Shore! hub' for Donegal. If you run a marine education or activity business around the Irish coast and are interested in becoming an Explore Your Shore! hub, please contact us at dwall@biodiversityireland.ie

In 2023, we received three more records of Blue Crab (*Callinectes sapidus*) from the North Dublin coast. Native to the east coast of America, this alien invasive species is a highly aggressive predator, with few natural enemies in Irish waters, and represents a threat to our native marine species. It has had a major impact on fisheries and aquaculture in areas of the Mediterranean where it has become established.

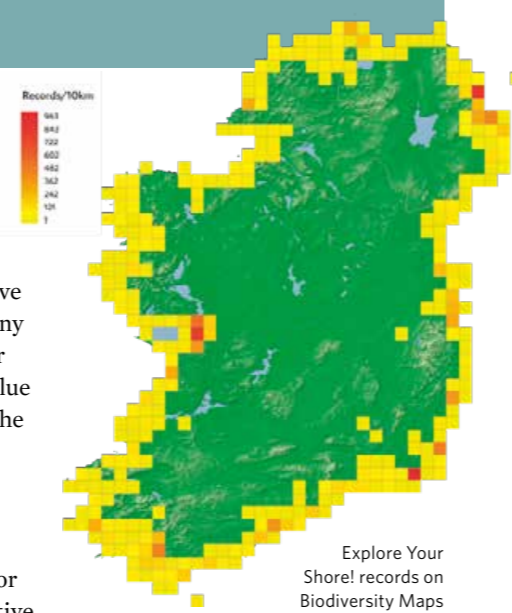
We would like to receive records of any blue crab, or suspected blue crab, from the Irish Sea coastline in 2024, so please keep an eye out for this distinctive species and report if found dead or alive at www.ExploreYourShore.ie

To Celebrate World Ocean Day 2024, we will again be running our Round-Ireland Coastal Bioblitz from 8-10th June. We are asking as many individuals, groups, and organisations as possible to survey their local rocky shore, rockpool, or beach for marine species. Surveys should last for one hour (or more if you like!!) and be timed for the hour or two leading up to low tide. For details of how to get involved, click on the link on ExploreYourShore.ie

In 2023, we ran 18 workshops, training sessions and talks around Ireland, which were attended by 499 participants. We have a similar programme planned for 2024. Details of all upcoming events will be available on our events page at www.ExploreYourShore.ie/events/.

Finally, we encourage you to get out on the shore this year and, if you haven't done any marine species recording, make a start. We have identification resources available online in the Publications Section of biodiversityireland.ie. You can get our three marine swatches from our online shop at <https://bioirl.ie/shop>. There are more identification resources and information on the resources page of ExploreYourShore.ie

Whatever you are doing on our coast or out at sea, there is a Marine Biodiversity Citizen Science project for you to get involved in. We have 12 partner surveys on our website, which allow you to record everything from a ragworm to a blue whale! Our latest partner survey, run by the Irish Elasmobranch Group, focuses on the Critically Endangered Angel Shark. Or you can try our Explore Your Shore! surveys that focus on biodiversity of beaches, rocky shores, and rockpools. You don't need to be an expert to give it a go, just carry a camera or smartphone and take photos of each species you want to record. We hope to see you out on the coast this summer!



Explore Your Shore! records on Biodiversity Maps



Dave Wall
CITIZEN SCIENCE OFFICER
National Biodiversity Data Centre



Ranunculus tripartitus, West Cork, April 2024. Photo by Claire Heardman.

Vascular Plants

The winter months might not be the best time for recording plants (many having died back or at least missing key ID features) but there are still interesting things to see!

Every year, across Ireland and Britain, BSBI's 'New Year Plant Hunt' takes place. This citizen science project simply involves going for a walk during the New Year period, recording everything seen in flower. You don't have to be an expert or even know a daisy from a dandelion: BSBI provides resources to help identify the commonest plants, and there's a helpdesk for more difficult queries! (Sign up for the 2025 hunt at <https://bsbi.org/new-year-plant-hunt> - it's not too soon!)

The 2024 New Year Plant (30th Dec-2nd Jan) was the most successful ever, with over 3000 people taking part. In Ireland, 170 plant lists were submitted, and 228 species recorded in flower (averaging 12 species per list).

Around half the species recorded were summer bloomers, flowering later than expected, likely because of mild autumn and winter weather, with few frosts. A quarter were spring flowers, like Primrose and Celandine, blooming a bit early. 20% were species that you'd expect to see in midwinter: year-round flowerers like Daisy and Groundsel, or winter-flowering species like Winter Heliotrope and Snowdrop. In Ireland, around a quarter of species recorded were non-native, either garden escapes or invasives like Rhododendron. The 'Raheen Ramblers' of Co Limerick recorded Ireland's longest list - an impressive 54 species!

The 'quiet season' is a great time to hunt for under-recorded or overlooked species. This year brought a flurry of records for Cherry-plum (*Prunus cerasifera*),



New Year Plant Hunt at Strandhill, 31st Dec 2024. Photo by Bridget Keehan



Erophila verna recorded during New Year Plant Hunt at Strandhill, 31st Dec 2024. Photo by Bridget Keehan



Flower of *Prunus cerasifera*, showing green twigs, Galway City, 15th February 2024. Photo by Oliver Lynch Milner

an introduced species occasionally found in hedges, and distinguished by its early blossoms (February onwards), green twigs, and turned-back ('reflexed') sepals. In autumn, it has edible, red/yellow fruit midway between a cherry and a plum.

Another very early-flowering species is Whitlow-grass (*Erophila verna*), a tiny plant in the cabbage family with a basal rosette of leaves, delicate white flowers and oval seed pods reminiscent of a tiny Honesty (*Lunaria annua*). Once used to heal whitlows (a nasty nail infection), this plant is widespread on dry, open ground and banks. But there are two other, rarer, species of Whitlow-grass, Glabrous Whitlow-grass (*Erophila glabrescens*) and Hairy Whitlow-grass (*E. majuscula*), that BSBI recorders have found in some new sites this year. These inhabit similar places to *E. verna*, but have subtle differences (in hairiness, division of the petals, and leaf colour), and may also be under-recorded, since they are so small and difficult to distinguish.

A very rare aquatic species, Three-lobed Crowfoot (*Ranunculus tripartitus*), was re-found this April through BSBI's NPWS-funded Aquatic Plant Project: This white-flowered, shamrock-leaved member of the buttercup family has been long known from only one Irish site, in West Cork. The recorders (Paul Green, Clare Heardman, Claire Deasy and Mike Wyse-Jackson) report that it was difficult to spot, surrounded by hundreds of plants of the commoner, but similar-looking, Round-leaved Crowfoot (*R. omiophyllus*). Aquatic plants can be hidden from view and very difficult to access - so who knows, perhaps there are more sites for this rare species just waiting to be found!



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Blue Crab (*Callinectes sapidus*) © Declan MacGabhann, SFPA

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.



Owen Beckett,
National Insect Database Officer. Owen has responsibility for developing national insect digital databases and building capacity for greater recording of insects in Ireland, to improve our knowledge of Ireland's insect fauna.



Kate Chandler,
Pollinator Plan Communities and Engagement Officer, 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, 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.



Jon Hawkins,
Head of Digital Services. Jon is part of the senior management team and has responsibility for the co-ordination of the Centre's overall digital technologies development and the ICT infrastructure needed to meet the company's data management needs.



Dr Michelle Judge,
Data Manager and GBIF Node Manager, has responsibility for maintaining the National Biodiversity Database and publishing biodiversity data through Biodiversity Maps. In addition, she looks after the National Biodiversity Indicators and the data analysis for the Irish Butterfly Monitoring Scheme.



Sarah Kelly,
Agri-business Officer, 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.



Dr Michelle Larkin
Is responsible for managing the National Pollinator Monitoring Scheme. This pilot project aims to develop a robust national monitoring framework that will collect data on the distribution, conservation status and trends of insect pollinators across Ireland. This project is funded by the NPWS, and the Department of Agriculture, Food and the Marine.



Dr Liam Lysaght,
Chief Executive Officer 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).



Kate Moore,
Invasive Species Engagement Officer
Kate has responsibility for development and delivery of the invasive alien species engagement programme. This involves engaging with our key partners and different sectors to coordinate actions taken to mitigate the impact of invasive alien species in Ireland. Her post is funded by National Parks and Wildlife Service.



Colette O'Flynn,
Invasive Species Officer, is responsible for the Invasive Species work programmes of the Data Centre. She 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.



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,
Citizen Science Officer, is responsible for the Explore Your Shore! and Dragonfly Ireland 2019-2024 citizen science projects. He also takes the lead on developing the Data Centre's work programme on citizen science and all marine biodiversity activities.



Ruth Wilson
Farmland Pollinator Officer, 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.