

Irish Examiner

Getting to grips with biodiversity



Getting to grips with biodiversity

Burren National Park. Liam Lysaght.

To approach and conserve biodiversity, you first need to know what is found in your locality. At first biodiversity can appear a difficult subject, but with some guidance and training, observing, and recording biodiversity is easy, and can grow into an enjoyable and life-long interest. The National Biodiversity Data Centre provides many ways for people to get involved in biodiversity, depending on people's interests and knowledge.

What does the term 'biodiversity' mean?

Biodiversity is shorthand for 'Biological diversity' and is an all-encompassing term used to describe the diversity of life on earth.

Status of biodiversity

In 2010, the National Biodiversity Data Centre completed a review of the state of knowledge on biodiversity in Ireland. It found that just over 31,500 species have so far been described for Ireland, but it is estimated, at least another 10,000 species remain to be found and described.

When we think of biodiversity, we often think of birds and mammals, perhaps wildflowers and the more conspicuous insect life. But what we notice is a small proportion of Ireland's biodiversity; majority of species diversity occurs amongst invertebrate, fungi and algae groups. For instance, more than one third of species described for Ireland are insects.

Evidence tells us Ireland's biodiversity is in crisis. Our countryside becoming less varied, and we are



Irish Hare. Kevin Murphy.

losing diversity and complexity of ecosystems. We know depending on the group of organisms studied, between one fifth and one-third of species are threatened with extinction. This is a frightening trend and should concern us all. In recognition of the serious loss of biodiversity, Dáil Éireann declared a Climate and Biodiversity Emergency in May 2019.

Naturally, much of conservation efforts are directed at plants, animals and habitats that are noticeable. These are like the tip of an iceberg floating in the sea; they are just proxies for the larger more complex mass of biodiversity that remain largely hidden.

Why is biodiversity important?

Simply put, biodiversity is earth's life support system. Although we don't often realise it, we are depend-

Compiled by Niamh Phelan and text provided National Biodiversity Data Centre staff.

National Biodiversity Data Centre
Documenting Ireland's Wildlife



Approaches to biodiversity conservation

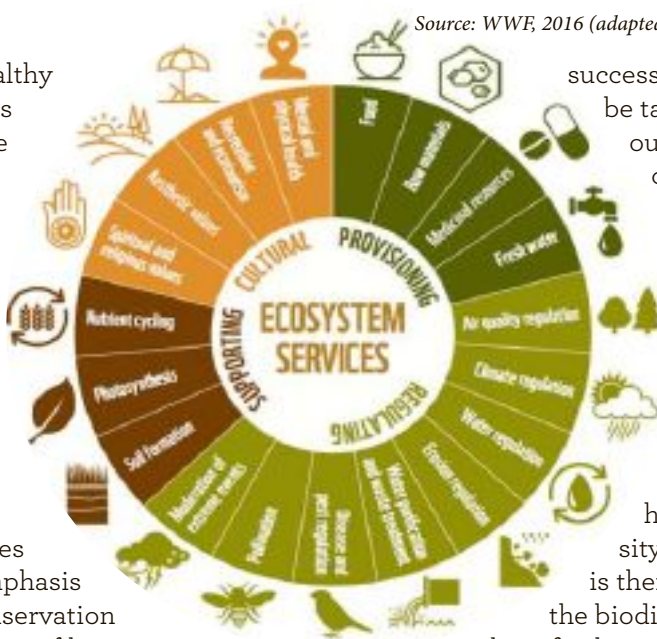
Since the thinking and approach to conservation has evolved. In 1990, with the Rio Declaration establishing the Convention on Biological Diversity, there was an acceptance that conservation would not succeed if the focus was only on protected species and designated sites. Instead, it acknowledged for conservation to be

successful, measures would need to be taken in the wider countryside outside designated sites, and that conservation should not just be the sole concern of the conservation sector and needs to be addressed by different sectors of society.

In more recent years a new emphasis was introduced to conservation policy, introducing ecosystem services to highlight the benefits that humanity derives from biodiversity. The rationale of this approach is there would be more support for the biodiversity conservation if the benefits be quantified in some way. This

underpins the concept of Natural Capital Accounting where values are placed on different services provided by biodiversity.

Some conservationists don't agree with the ecosystem services approach as it introduces commodification. Others argue it is one of many approaches needed to achieve the common objective ensuring there is no further loss of biodiversity in Ireland.





Sustainability in Action: Gas Networks Ireland's multi award winning programme

In a European first, Gas Networks Ireland partnered with environmental group, Leave No Trace Ireland, Coillte and the Burncourt Community Group to help restore Glengarra Wood in Co. Tipperary as part of the international "Hot Spot" programme.

Gas Networks Ireland operates Ireland's €2.7bn, 14,617km national gas network, connecting over 710,000 homes and businesses to a safe secure supply of natural gas. By replacing natural gas with renewable gases, such as biomethane and hydrogen, and complementing intermittent renewable electricity, Gas Networks Ireland is supporting Ireland's journey to a cleaner energy future.

Gas Networks Ireland is committed to protecting biodiversity across its business and in the communities where it operates.

In April, Gas Networks Ireland was named Green Public Sector Organisation of the Year at the 2022 Green Awards. This was the third year in a row the national utility has been recognised for its commitment to sustainability and dedication in maintaining the highest standard of excellence in their operation of the gas network at the awards.

One of only 46 companies in Ireland to hold a Business Working Responsibly Mark, Gas Networks



Ireland was also recognised for "taking coordinated action on climate issues" and achieved a 'B' in the Carbon Disclosure Platform (CDP) global emissions ratings, exceeding the global, European and sector averages to finish in the top quartile of all businesses assessed globally.

In 2021 Gas Networks Ireland advanced its Sustainability Strategy with a focused Biodiversity Action Plan. The plan aims to change how the business interacts with nature and biodiversity through all its functions, including how all new above-ground installations are designed and built and how its offices and sites are maintained.

The overall goal of the plan is to achieve best practice in biodiversity across all of Gas Networks Ireland's operations by 2025 in line with the National Biodiversity Action Plan.

To further safely support and enhance biodiversity, Gas Networks Ireland has also developed new landscaping guidelines specifically for its sites and locations around the country. The guidelines explain

how and where meadows can be grown, guidance on planting native trees, how to maintain hedgerows, as well as how Sustainable Urban Drainage Schemes (SUDS) can enhance biodiversity. These ways of working are being adopted by Gas Networks Ireland's Operations, Design and Planning teams whenever opportunities arise.

To see what impact and improvements all this effort is having Gas Networks Ireland commissioned the development of a biodiversity measurement method, which looks at habitats on Gas Networks Ireland sites and scores them according to their condition and biodiversity value.

Gas Networks Ireland is currently using this tool to audit all of its sites to get a baseline starting point and highlight their potential for increasing biodiversity value. The sites will be measured again over time to track biodiversity improvements.

Gas Networks Ireland is on a continuous journey to reduce emissions as well as to support and promote biodiversity within the communities where it operates. Gas Networks Ireland's fourth annual Sustainability Report, which is in line with the Global Reporting Initiative standard and includes more highlights from 2021, will be published later this quarter.

www.gasnetworks.ie/sustainability



A short wildflower meadow is being developed at this Gas Networks Ireland gas installation in the East of the country.



Gas Networks Ireland's Sustainability Team.



A wild flower meadow beginning to bloom at this gas installation in Cork.



**Gas
Networks
Ireland**



Why record biodiversity?

In order to conserve Ireland's biodiversity, we need to document what biodiversity we have, understand its distribution, track the change over time, and communicate its importance. Addressing knowledge gaps and building the scientific evidence to help biodiversity conservation is central to the work of the National Biodiversity Data Centre.

By recording and submitting records, you're increasing our knowledge on Ireland's biodiversity and building scientific evidence. Local-level information is important to document so it can be used to influence decisions made at the local level that might impact on biodiversity. Anyone who participates in biological recording is referred to as a 'citizen scientist'.

The activities of the National Biodiversity Data Centre support both the Heritage Council and NPWS who have the statutory responsibilities in relation to the natural heritage and nature conservation.

Benefits of becoming a citizen scientist

- Adding to the national dataset on biological data. We also share our data with GBIF, a global biodiversity database of more than 6 billion records.
- Increasing your scientific knowledge.



- Becoming a part of political decision making through your scientific contribution.

Resources to become a citizen scientist

Identification guides

All items can be purchased online at <https://www.biodiversityireland.ie/shop/>



How your input helps national and global conservation



Submit your records and datasets to National Biodiversity Data Centre



Your data will help us to track Ireland's progress towards our goals to conserving biodiversity



We will share your data with the Global Biodiversity Information Facility, a global biodiversity database of more than 6 billion records

Habitats in Ireland



Lough Corrib - Sean Slattery.

Habitats are the basic building blocks of the environment where groups of plants and animals live and function together. These units are determined by background environmental conditions e.g. geology, terrain, climate, nutrient-levels and land management.

Nine broad groups of habitats are recognised for Ireland and its coastline:

Freshwater is a variety of different habitats that are dependent on regular inputs of freshwater. They vary in type depending on whether they are seasonal or permanent, and whether they are natural, modified, or artificial. The pH of water is also an important factor in their classification.

Freshwater habitats are of immense importance to Ireland's biodiversity as traditionally the moist temperate climate create a multitude of water dependent habitats. These habitats include lakes ponds, rivers streams, springs and swamps. Long running and widespread arterial and land drainage activities, allied with water pollution has resulted in the biodiversity value of Ireland's freshwater habitats declining in recent decades.

Grassland & Marsh habitats are those dominated by grasses, sedges and/or rushes. Grassland habitats that are of most value for biodiversity are those not modified by drainage, reseeding or fertilisation. Despite large swathes of the countryside being grassland, Ireland's natural or semi-natural grassland habitat are some of the most threatened. The once

common sight of species-rich grasslands being cut for hay has all but disappeared, and with it an incalculable loss in insect diversity. With it has been an incalculable loss in insect diversity.

Heaths habitats are those with open vegetation dominated by heathers and heaths, with other dwarf shrubs like bilberry, crowberry, cowberry, willow, and western gorse. Purple-moor grass and a diversity of sedges are other species indicative of these habitats. Heaths are often found on high, sloping ground where there is a thin covering of well-drained soil. The dry environment of heaths makes them important habitats for many insect groups unfortunately many have been damaged by afforestation.

Peatlands are some of Ireland's most special habitats that once covered large swathes of the uplands, western coastal areas and midlands. There are two main types of peatlands: bogs and fens. Bogs are largely rain-fed where their moisture is derived from rainfall and where peat deposits create an acidic environment. Fens on the other hand will have additional inputs of groundwater or streams and generally have higher nutrient status. Bogs are further divided into blanket bog which cover our uplands and most of the western coastal areas and raised bog that once formed deep domes of peatlands in the midlands of Ireland. Through drainage and cutting of peat there are few examples of active raised bogs remaining in Ireland. Recently, peatland conservation has become an important priority of Ireland's nature conservation policy.

Habitats in Ireland

Woodland habitats where trees or shrubs provide the main structural diversity, irrespective of whether the trees and shrubs are natural, semi-natural or planted. Ireland was once a well-wooded country with large expanses of wonderfully diverse broadleaved woodland.

Exposed and disturbed ground of all types can be of surprisingly high biodiversity value. The exposed limestone of the Burren and other parts of the west are well known for their biodiversity value. There, thin soils ensure no one species dominates providing space for a wide variety of plants to flourish. The dry environment and high plant diversity supports an associated high insect diversity. Similar conditions are created in disused quarries, scree and other steeply sloping ground, natural cliffs, and areas of sand and gravel. Even disturbed, brown-field sites can provide valuable biodiversity habitats, particularly in urban or sub-urban areas where areas of semi-natural habitat are in short supply.

Cultivated and built land are not often considered as habitats, but depending on their location, they can support some specialised aspects of biodiversity. Cultivated habitats refer to land strongly modified by human activity, whether for housing, retail or crop production. It includes farmland where the primary purpose of land is for crop production, including cereal, root, leaf or energy crops and all horticultural land. If managed favourably for biodiversity, for example retaining winter stubble on arable land, it can be important for biodiversity. Built up areas will have ornamental flower beds and borders, earthen banks, stone walls, buildings and other artificial surfaces, all of which if managed sensitively can support aspects of biodiversity in what are usually biodiversity-poor environments.

Coastland

The narrow strip of land that abuts onto the sea supports a large number of different, specialised habitats that are of huge importance for biodiversity. Often because of the influence of the sea environment can be harsh for species, therefore only the most specialised will survive. Therefore coastal habitats support many species not found elsewhere in Ireland.

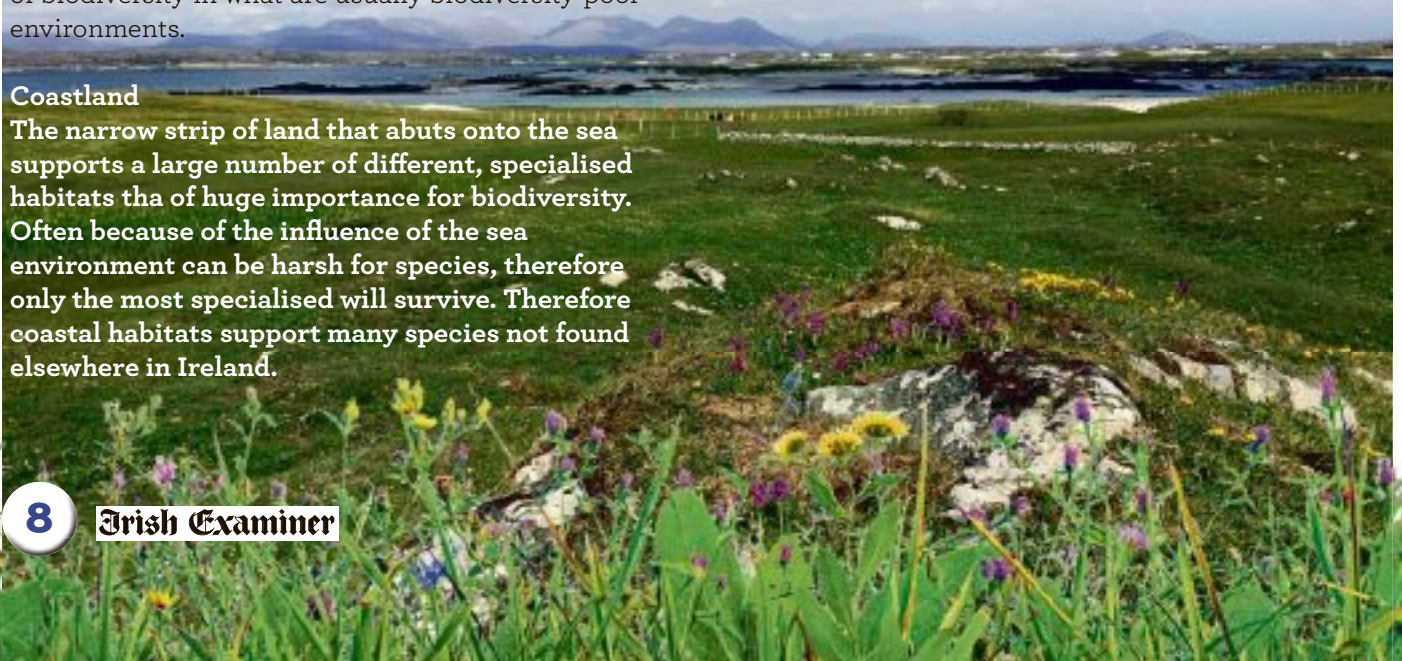


Castlemorris Wood, Co. Kilkenny. Liam Lysaght.

The **marine** ecosystem is complex and of inordinate importance for biodiversity. We often forget that land occupies only one tenth of the Irish territorial area and our legal jurisdiction for marine waters extends to the 200 nautical mile limit in the Atlantic Ocean, encompassing approximately 490,000 km², a huge expanse of marine waters. We have reasonably good knowledge of biodiversity of inshore marine habitats but there are still huge gaps in our knowledge and the functioning of deep-sea environments.

For most people, their biodiversity engagement is in areas close to where they live: gardens, public parks or farmland. How important these areas are for supporting biodiversity will vary according to how much attention is given to management. Some other habitats that support specialist or rare aspects of biodiversity are small in scale or are often located some distance from population centres, meaning people generally need to travel to see them, but always provide a rewarding visit.

The following sections provide some insights on biodiversity to look for in different areas and getting involved in biodiversity recording.





For a healthy future

**Protect and enhance
biodiversity by
growing pollinator
friendly plants**

Organic Bulbs
Bee Meadows
Green Manures
Flower Meadows
Open Pollinated Seeds

Specialists in Organic Farm & Garden Supplies

WWW.FRUITHILLFARM.COM



Gardens and parks

Gardens and parks are vital spaces for wildlife, and for us. Green spaces improve our health and wellbeing, keep our air clean, provide beautiful displays of flowers and food for our tables.

Gardens are essential for wildlife, particularly in towns and cities where gardens and parks form a network of wildlife 'corridors', providing food and shelter amongst the urban jungle of tarmac and concrete. It is important that we protect these areas and enhance their ability to support our wildlife.



Bumblebee on Dandelion. Donna Rainey.

Common species in gardens and parks

Dandelion often regarded as a 'weed', is an excellent food source for pollinators when they emerge from hibernation in spring. When Dandelions go to seed, they are a favorite of birds such as Goldfinch and Greenfinch. Some moths like the Garden Tiger Moth feed on Dandelion leaves too.

Red Admiral can be found in a range of habitats, including gardens. This migrant species travels from continental Europe and can be seen flying from April to November, but most commonly seen in August.

Common Frog is our only species of frog in Ireland and can be found in garden ponds.



Mike Pennington

Less common species in gardens and parks

Ladybirds

You might be familiar with the classic 7-Spot Ladybird but there are other species of ladybird that can be found in gardens, such as the 22-Spot and 14-Spot Ladybirds, and they're not all red!

Most Irish **moth** species come out at night, meaning there's a good chance we miss out on these colourful and charismatic creatures. Moths are far from dull, rather they are 'night-time butterflies', and come in an amazing variety of shapes, sizes and colours.

Native hedgerow plants include Blackthorn, Hawthorn, Whitethorn and Hazel. Their flowers and berries provide food for insects, birds and mammals. If you're planting a hedge in your garden, aim for these species rather than non-native hedge plants like Leylandii, Beech and Cherry Laurel, which provide limited biodiversity support.



Elephant Hawk-Moth.
Oisín Duffy.

Actions to help pollinators in gardens and park

We need pollinators to grow many of the fruits and vegetables that make up a balanced diet and the wildflowers and garden plants that provide us with colour and beauty in our landscape. Most pollination in Ireland is carried out by bees. In Ireland, we have 101 different types of bees: the honeybee, 21 bumblebees, and 79 solitary bees.

Unfortunately, Irish pollinators are in trouble with one third threatened with extinction. The All-Ireland Pollinator Plan is an island-wide attempt to create a landscape where pollinators can survive and thrive. Gardens of any size can make a difference. Here are five simple ways you can help.

1. Protect existing habitats and food sources
 - Flowering hedgerows, and patches of unmanaged areas with naturally occurring wildflowers, provide food for pollinators. Bare soil, long grass, and dry-stone walls provide shelter. Protect these areas if you have them in your garden.
2. Reducing mowing is one of the best things you can do to help pollinators. Common plants you might find in your lawn e.g., Dandelions and Clover, are important food for pollinators. You can transform your whole lawn, or small patches or strips. Some options:
 - Consider cutting some areas of your lawn on a six-week rotation. This will allow flowers like Clover to bloom.
 - Mow once a year in September, allowing more native wildflowers to emerge each year providing food and shelter.
3. Provide wild pollinator nesting habitat
 - Scrape away some grass in flat, sunny spots in your garden to create areas for solitary mining bees to burrow into the soil and create their nests.

- Drill holes in wooden fencing for solitary bee nests. These holes should be 10cm deep and range from 4-8mm in diameter, and ideally be south or east-facing.
- 4. Stop using pesticides
 - Pesticides (insecticides, fungicides, and herbicides) can harm pollinators and plants and habitats they depend on.
- 5. Pollinator-friendly planting
 - Pollinators need flowers that produce lots of nectar (for energy) and pollen (for protein). Go for double-flowered varieties; single-flowered plants provide almost no nectar and pollen.
 - Perennial plants, like Lungwort, Catmint, and Lavender, are generally better sources of pollen and nectar than annuals.
 - Aim for plants that will flower from spring through to autumn.
 - In autumn, plant bulbs such as Snowdrops, Crocuses and Grape Hyacinths to provide food for pollinators in early spring.
 - Plant a flowering tree like Willow, Wild Cherry, or Apple.
 - Pots, window boxes, and hanging baskets are useful if you have limited outdoor space. Many herbs like Thyme, Rosemary, and Mint grow well in pots and can also provide food for you. Other plants that do well in containers include Bidens, Bacopa, Sweet William, and Trailing Lobelia.

More tips <https://pollinators.ie/gardens/>

What's in your garden?

Backyard Biodiversity invites everyone to record 20 species commonly found in gardens. If you're new to recording wildlife, this is a great place to start.

Find out more biodiversityireland.ie/backyard-biodiversity-species/

Flower-Insect Timed Counts (FIT Count) are simple, you watch a flower patch for 10 minutes and count how many insects visit. It is a useful tool to measure change in your garden and the impact of your biodiversity-friendly activities. Find out more <https://biodiversityireland.ie/surveys/fit-counts/>

The **Garden Butterfly Monitoring Scheme** tracks population change in our most common species. Register your garden and make regular 15-minute counts of the butterflies seen in your garden, on at least a weekly basis from 1st April to 30th September. Find out more biodiversityireland.ie/surveys/garden-butterfly-monitoring-scheme

Majority of solitary bees in Ireland nest in the ground. Donna Rainey.





Irish farming landscape

Irish farmland. Ruth Wilson.

The Irish landscape is a farmed one, with agriculture being the backbone of the rural economy and contributing to economic development. What we now realise, is that the future of much of our wildlife is intrinsically linked with agriculture and the decisions we make on how land is managed.

There is now an appreciation that biodiversity plays a fundamental role in underpinning the long-term sustainability of agricultural systems. So, we could say farming is dependent on biodiversity and biodiversity is dependent on farming practices.

Farmland biodiversity

Some of our wildlife needs farming to maintain their populations, farming that works with nature. The future of Ireland's only legally protected insect, the Marsh Fritillary, is entirely dependent on the continuation of seasonal grazing by cattle to maintain good quality semi-natural grasslands.

The link between Corncrake and agriculture is well known; a species that was once common and widespread but whose populations now retain a toehold only in small parts of Mayo and Donegal. The wholesale switch from hay to silage, and the decline of species rich meadows sealed the fate of this grassland bird.

Of direct relevance to agriculture is the plight of bees and hoverflies, for a decline in their populations



Small Heath. Liam Lysaght.

means a decline in pollination services these insects provide to farmers, impacting both on the quality and quantity of produce grown.

It's heartening to see, there are more farmers who are considering the needs of wildlife within their commercial farming operations, showing that wildlife and farming can coexist.

Farmland pollinators

The good news is by adopting simple changes and encouraging nature-friendly farming practices, we can help farmland biodiversity.

The National Biodiversity Data Centre are currently co ordinating the 'Protecting Farmland Pollinators' European Innovation Partnership Project. Through this project farmers are encouraged to provide small

wildlife habitats for pollinators and biodiversity, in terms of food, safety, and shelter, on their farms. The overarching aim of the project is to enable all farms across Ireland to be more pollinator and biodiversity friendly <https://biodiversityireland.ie/farmland/>.

There are five evidence-based actions to help make farmland more pollinator friendly:

1. Maintain native flowering hedgerows
2. Allow flowers to grow around the farm
3. Provide nesting places for wild bees
4. Minimise artificial fertiliser use
5. Reduce pesticide inputs

It's important pollinators get food throughout their whole flight period. Five ways to increase floral resources for pollinators on farms are:

1. Flowering hedgerows (cut hedges on a 3-year rotation). A hedgerow that is cut every year will provide little to no flowers.
2. Plant native pollinator friendly trees.
3. Reduce pesticide inputs.
4. Increase margins around fields and allow flowers to grow naturally.
5. Allow flowers to grow within the field cropping system, such as clover.

If you'd like to help pollinators on your farm, then check out 'Seasonal actions for pollinators', starting with Spring, <https://bit.ly/3CbcNYd>

View all the seasonal actions for pollinators and further information [pollinators.ie/farmland/](https://biodiversityireland.ie/farmland/)

Is grass diversity important?

Did you know there are many species of Irish butterflies that feed on grasses during their caterpillar stage? By relying on one species of grass or a narrow range of grasses, you're limiting the amount butterflies that your farm can support.

Butterflies that feed on grasses as caterpillars

What's on your farm?

Five-Visit Monitoring Scheme

Monitoring butterflies is a useful way of assessing the overall biodiversity on your farm. The Five-Visit Monitoring Scheme can fit into the busy lives of farmers who want to monitor butterflies and involves



Speckled Wood. Fionn Moore.



Ringlet. Liam Lysaght.

doing a set walk 5 times a year. Find out more: <https://biodiversityireland.ie/surveys/five-visit-monitoring-scheme/>

The Farmers' Wildlife Calendar supported by the Department Agriculture, Food and the Marine, aims to track the effects of weather and climate on the timing of seasonal events. In Ireland, it is expected there will be an increase in temperature and rainfall. This will change the timing of insect emergence time, flowering of plants and arrival of our migrants. While recording is largely over for 2022, we encourage everyone to take part next year.

Bumblebee lifecycle



Main food

Hawthorn



Dandelion



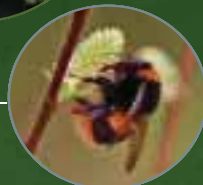
Dead nettle



Hogweed



Look out for



Hedgegrows



Hedgerows, forest edges and woodlands can offer a wide range of beneficial resources for biodiversity in terms of food, safety, and shelter. With concerns for biodiversity loss, the care and management of these habitats is important.

Garden hedgerows can be an excellent natural shelter, a home for wildlife and help shield your garden from wind.

Farmland hedgerows are important and widespread throughout Ireland and can provide rich habitats for wildlife including plants, birds, mammals, and invertebrates. Features such as field margins, earth banks, walls, and drains can enhance their biodiversity value. Hedgerows also benefit farming, they act as property boundaries, provide shelter for livestock, help protect against soil erosion, can offer protection against the spread of livestock disease and provide habitat for beneficial insects.

Our hedgerow network links and connects habitats, such as woodland, making them valuable wildlife corridors. Many species like to follow these linear features as they provide food and shelter. Butterflies, moths, bees, and bats are use hedgerows to navigate around the landscape.

Hedgerow species

A good wildlife hedge has a variety of native species including mature trees, a thick base and supports a range of grasses and wildflowers. Native species include:

Blackthorn a common and widespread hedging species. The flowers appear before the leaves, giving its distinctive appearance. The fruits are dark in colour and called “Sloes”.

Crab Apple can be found in many of our old native hedgerows. It flowers in spring and produces crab apples, providing food for birds and mammals in autumn.

Hawthorn also known as Whitethorn or May Bush is one of our most common and widespread hedging plants. It flowers after the leaves are present. The red fruits are called “Haws”.

Hazel a common and widespread species has male and female flowers which flower in early spring and produce Hazelnuts in autumn.

Holly flowers from May to July and these are followed in late autumn by the familiar bright scarlet berries. Its evergreen, glossy leaves are stiff and leathery with spiny margins. These leaves, together with those of Ivy are the larval foodplant of the Holly Blue Butterfly.

Rowan also known as ‘**Mountain Ash**’ as it has similar leaves to the Ash. It has white flower in clusters in spring for pollinators, and red berries in autumn are a favourite for thrushes.

What’s in your hedge?

Spring Flowers Project is a joint initiative between the BSBI and the National Biodiversity Data Centre, which kicked off in 2017, and comprises an agreement between both parties to target 20 easily identifiable spring flowers for recording providing a special on-



Apple blossom. Sean Slattery.

line recording form for the project.

Springtime is useful for learning new flowering species: There are far fewer species in flower so there is less confusion as spring species are generally punctual flowering. To learn more, please visit <https://biodiversityireland.ie/surveys/spring-flowers-project-2022/>



Irish Hedgehog Survey

Hedgehogs are one of our most loved wild animals, frequently seen in gardens, parks and farms. During the active season, hedgehogs travel between 1-2km every night looking for food and mates and each hedgehog may have several nests where they rest during the day. <https://biodiversityireland.ie/surveys/irish-hedgehog-survey/>



Hedgerows for pollinators

Here are the Plan's recommendations for new and managing existing hedgerows for pollinators:

1. If you can create a new hedge, plant a range of species and ensure good connectivity between hedgerows and other natural and semi-natural habitats.
2. Existing hedgerows should not be overmanaged, cut on a three-year rotation (outside the bird breeding

season). Timing of management activity is important, cutting hedges between November and January is likely to be less disruptive to pollinators.

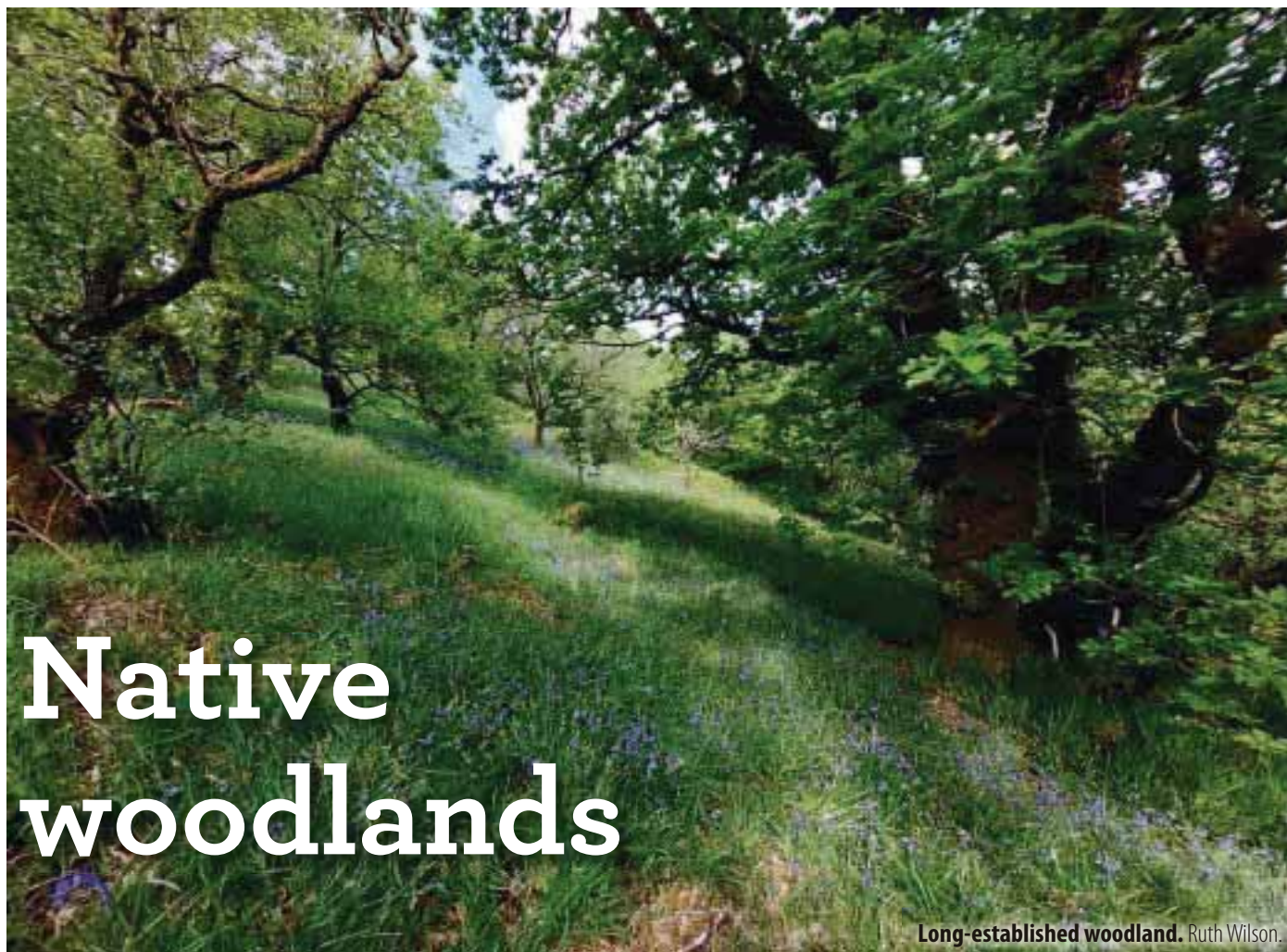
3. The base of a hedgerow can provide important food and shelter for pollinators. Hedgerow margins and verges especially sheltered south-facing ones are good places to increase the amount and diversity of wild plants.
4. Damaged hedge banks should be repaired as part of hedge management activities. In the longer term virtually, all hedgerows need to be periodically rejuvenated through coppicing or laying to remain sustainable. Laying is the preferred option for rejuvenation as laid hedges continue to flower and provide food for pollinators. Most coppiced hedges will not flower for a few years.

Link to the guide <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Hedgerows-2018-WEB.pdf>



Hedge restoration. Ruth Wilson.





Native woodlands

Long-established woodland. Ruth Wilson.

Tree cover was at its height in Ireland before the Bronze Age, about 4,500 years ago. Since then, the history of native woodlands has been one of continuous decline as trees were felled and land cleared for agriculture. Ireland is now one of the least wooded countries in Europe. Despite this, there is still a wide variety of woodlands in Ireland.

Ancient and long-established woodland takes hundreds of years to establish and is an irreplaceable habitat. The immense ecological value of woods lies in their own biodiversity, often rich and unique mix of species, growing together over time – and in their genetic potential as sources of native seed for planting new broadleaf woodland. They also serve as corridors and steppingstones for native species, helping to provide connectivity through the landscape.

We have four principal native woodland types in Ireland: Oak, Ash, Alder and Birch. These are further divided into 22 subtypes. Some of these sub-types represent variations in the soil or hydrological regime while others are a result of past and current management.

Some woodland species

There is a need to establish new native woodlands to join up existing habitat areas and expand the area of natural woodland cover. The benefits of this are many, not least helping to mitigate some impacts of climate change.



Wood Anemone. Oisín Duffy.

Wetlands



For the purposes of biodiversity, wetlands can include any type of habitat that is saturated with freshwater year-round or seasonally. Examples of Irish wetlands include:

Rivers and streams flow from a source in uplands to join other rivers or lakes and ultimately flow to the sea. Upland sections of rivers and streams tend to be narrow and fast flowing with features such as rapids and waterfalls.

Canals are artificial waterways built for drainage management or for transport goods on barges. Nowadays our canal networks tend to be used for leisure and our hundreds of kilometres of canals now form an important wildlife network, home to a rich diversity of species.



Mayfly larvae. Hugh Feely.



Bogs began forming in Ireland between 8,000 – 10,000 years ago and still cover thousands of hectares, although today most of our bogs are in a degraded state due to the impacts of peat extraction, drainage, and forestry. Bogs that do remain intact hold a rich and unique diversity of plant and animal species. Types of bog in Ireland include:

- Upland Blanket Bog
- Lowland Blanket Bog
- Raised Bogs

Wetlands



Raised Bog, Abbeyleix. Liam Lysaght.

Turloughs are seasonal lakes which flood in winter and dry out partially or almost completely in summer. They are a unique habitat and although not biodiversity rich, they do attract some unique species, such as the Scarce Emerald Damselfly.

Lakes are home to a diversity of freshwater plant, invertebrate, fish and bird species. Ireland has over 12,000 lakes, with roughly half of these at 'good' and 'high' ecological status, while the other half are not, mainly due to nutrient enrichment and pollution from agriculture and sewage.

Ponds, including your garden pond, can be a focus for biodiversity but their attractiveness to wildlife depends on how they are created and maintained.

Freshwater Species

Ireland has a rich diversity of freshwater plant and animal species, but most are hidden from sight, beneath the water's surface. We rarely get a glimpse of this underwater world or the creatures that live there. While we may wonder at the dazzling sight of a dragonfly whizzing over our heads, do we ever take time to consider that while the flying adult lives for only a few short weeks, and is the final stage of the animal's life, the nymphs spend up to five years living in wetlands.

For this reason, we often look to freshwater species as indicators of water quality as they must cope with pollutants. While some species can tolerate quite high levels of pollution, others can't. So, by looking at the mix of species living within wetlands, we can assess the water quality. This forms the basis of the Environmental Protection Agency's (EPA) Q-Value system used to monitor water quality of Irish rivers.



Sean Slattery.



Garden pond for biodiversity. Liam Lysaght

Garden Ponds

Aside from looking good and instilling a sense of wellbeing, can attract lots of interesting creatures. Even a small pond can attract birds, mammals, amphibians, and insects, turning your garden into a wildlife haven. Garden ponds can be large or small but whether you want to dig a swimming pool size pond or something more the size of a bucket, here are a few pointers to create a wildlife friendly garden pond:

- Use rainwater (not tap water) to fill your pond as the chemicals added to tap water are not always wildlife friendly.
- If you want a pond full of wildlife, don't stock it with fish! Fish are predators of larval stages of freshwater insects and amphibians.
- Plant your pond with plants that grow from the water, these 'emergent' plants will attract dragonflies, damselflies and a host of other insect species.
- Preferably use gravel, sand or soil to the bottom to create habitat for plants and invertebrates.
- Build different levels to create habitats for species which prefer shallower or deeper water.
- Never use chemicals in or near your pond as they can harm or even kill many aquatic species.
- Plant using native species, our wildlife thrives in the presence of native plant species.

- Don't allow the pond surface to become overgrown. Freshwater species need sunlight to thrive, whether they be plants or animals, an overgrown pond will be dark and less biodiverse.



Pond Skater. Edward Delaney .

Dragonfly Ireland



Common Darter. David Fenwick.

Dragonfly Ireland 2019 – 2024 is an all-Ireland citizen science survey of dragonflies and damselflies, and their habitats, coordinated by the National Biodiversity Data Centre in the Republic of Ireland and by the Centre for Environmental Data and Recording in Northern Ireland. The project is funded by the EPA examining the potential of aquatic species as bio-indicators of climate change and water quality. Participation in the project is available for volunteers at three levels, depending on your availability, experience, and interest level.

Dragonfly Spotter our entry level survey enables you to record casual sightings when out and about near freshwater habitats.

Dragonfly Recorder asks you to record all species at a given site twice per annum and note details on habitat quality. Each site is surveyed once between late May and the end of June, and again between July and early September. This covers the flight period of all the Irish dragonfly and damselfly species. The habitat survey only requires you to tick the features listed you observe at the site and takes two minutes to complete. You can survey as many or as few sites as you like.

Dragonfly Monitor is the third survey level and is essentially the same as the Dragonfly Recorder survey

but with four surveys at each site per annum.

For more information: <https://biodiversityireland.ie/surveys/dragonfly-ireland/>



Common Hawker. Will Woodrow

The Heritage Council has initiated and developed projects, programmes, and grant schemes to support Irish nature conservation and restoration in a bid to respond positively to stated crises in biodiversity loss and climate change. Listed below are a few key programmes to highlight for #NationalBiodiversityWeek2022.



Pollinator Bumble Bee. L Scott.

National Biodiversity Data Centre and All Island Pollinator Plan

Established by The Heritage Council in 2007, The National Biodiversity Data Centre (NBDC) collects and manages data on Ireland's biodiversity. We need to record and document what biodiversity we have, understand how it is distributed across the island of Ireland and its marine waters, and track how it changes over time if we are to conserve Ireland's natural heritage for future generations.

The National Biodiversity Data Centre also coordinates the implementation of the All-Ireland Pollinator Plan, which is about all of us, from farmers to local authorities, to schools, gardeners, and businesses, coming together to take positive steps, to protect our pollinators and the service they provide for us. Together our actions will help restore pollinator populations to healthy levels and build resilience to climate change.

The NBDC programme is jointly funded by the Heritage Council, the National Parks and Wildlife Service, and the Department of Housing, Local Government and Heritage. If you would like to learn more about their work, you can follow the link(s):

www.biodiversityireland.ie ; www.pollinators.ie

GLAS Traditional Farm Buildings Grant Scheme:

Through competition grants are made available to farmers in the Green Low Carbon Agri-Environment Scheme (GLAS) to carry out approved conservation repair works to traditional farm buildings and other related structures for active agricultural use. These structures contribute to the character of the Irish landscape and are of significant heritage value with many acting as habitats to a variety of birds, bats and mammals, including many rare or threatened species such as Barn owls, Pine Marten and a wide range of bat species. Works undertaken therefore must minimise disturbance to the wildlife and often measures are taken to improve the buildings for wildlife.

The Heritage Council manages the GLAS traditional farm buildings grant scheme, in partnership with the Department of Agriculture, Food and the Marine. This scheme is in its 13th year and has had a very positive impact on farm biodiversity across the country

www.heritagecouncil.ie/projects/traditional-farm-buildings-grant-scheme



Daubenton's Bat Roost. L Scott.

Heritage in Schools

Although not exclusively directed at biodiversity, upon request, biodiversity is brought into primary school classrooms nationwide through the Heritage in Schools Programme. Initiated in 2009, the programme provides a panel of specialists to visit schools virtually or in person, to teach children and their teachers about nature and its conservation at community level. The programme school visits are part-funded by the school and the Heritage Council.

www.heritageinschools.ie

 @HeritageHubIRE  @theheritagecouncil  @TheHeritageCouncil

An Chomhairle Oidhreachta
The Heritage Council



Marine biodiversity



Beadlet anemone. Dave Wall.

Marine biodiversity is diversity of life found in our ocean, from our rocky shores to the deepest depths of the ocean. The diversity of marine life is mind blowing, with 230,000 species known to science. But the ocean is vast, covering 71% of the Earth's surface and accounting for 99% of the area of Earth that can be inhabited by life. It is thought that anywhere from one million to ten million marine species exist in our ocean, but the truth is we just don't know how many there are.

Ireland's Marine Habitats

When we stand on the shore looking out to sea, we see a flat grey-blue sea that stretches to the horizon. It is tempting to imagine the ocean as a uniform habitat with water above a sandy seabed. However, nothing could be further from the truth. Hidden beneath sea surface is a rich network of habitats spread among mountain ranges, ocean canyons, rocky reefs and seafloor made up of muds, sands, shells, pebbles and boulders, and host to a vareity of life.

Ireland's marine area covers some 220 million acres and is ten times our land mass. While Ireland itself sits atop the Continental Shelf and is largely surrounded by waters shallower than 200m, to the west lies a



Colonial Sea Squirt. Dave Wall.

vast slope plunging down from 200m to 3 kilometres deep on the floor of the Rockall Trough. The seafloor rises again to 200m on the Rockall Bank some 300km



Shore Crab. Dave Wall.

further west. Depths to the southwest are even greater, reaching 4.5 kilometres deep on the floor of the Porcupine Abyssal Plane. The shelf slope is riven by canyons hundreds of meters deep, which are home to seldom seen species such as beaked whales and deep-water squid.



Common starfish. Dave Wall.

Some marine habitats in Irish waters

Seagrass beds, found in shallow sandy bays around the coastline, typically grow in waters shallower than 5 metres. Of our two seagrass species, common eelgrass is mostly found sub-tidally and dwarf eelgrass grows in the intertidal zone. Seagrass beds support a rich fauna of marine invertebrates and act as a nursery for juvenile fish species. They also help stabilise sediments, prevent erosion, store CO₂ and remove nutrients from water.



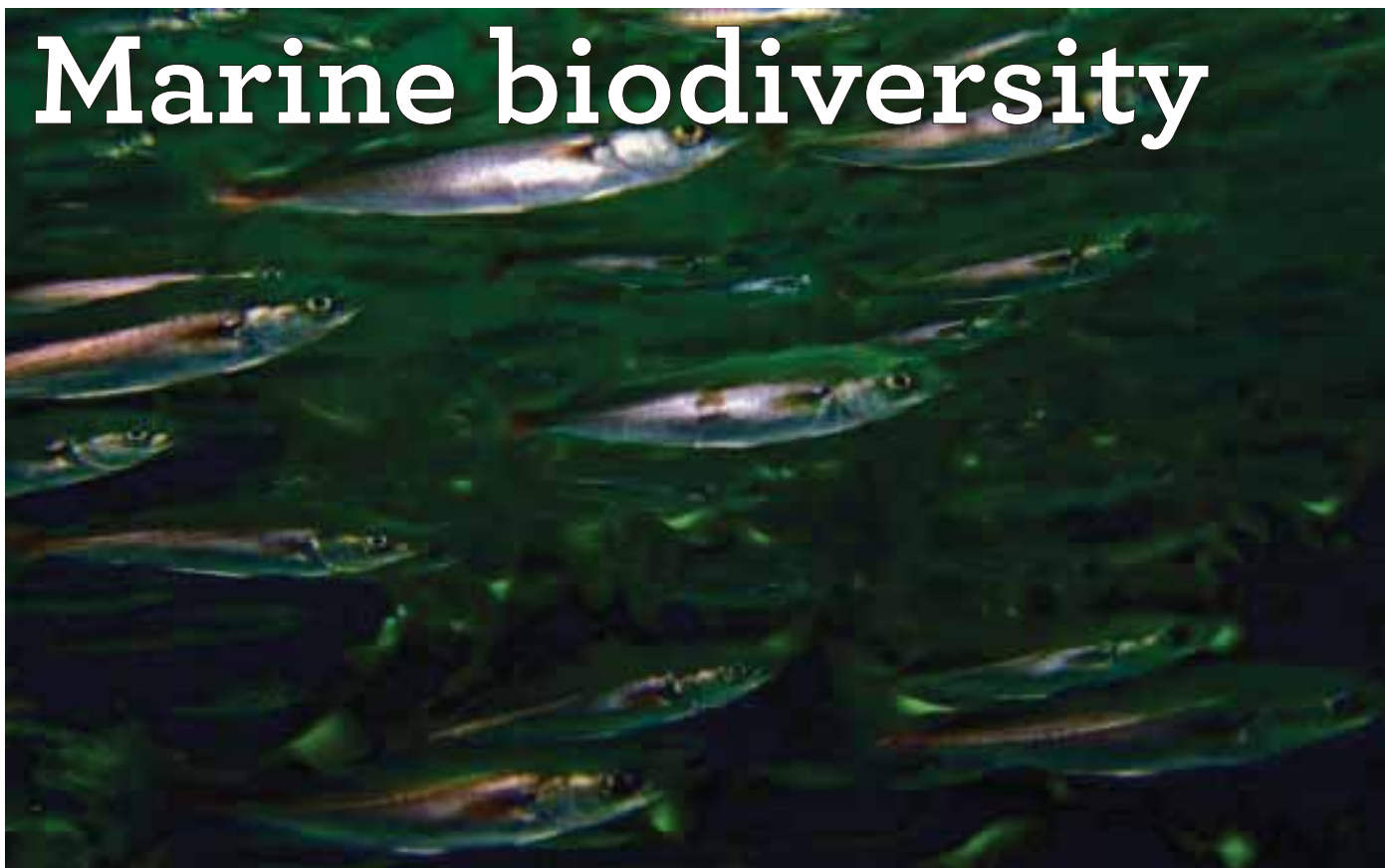
Long-finned Pilot Whale. Dave Wall.

Kelp Parks grow on rocky reefs around our coast in water shallower than 30-50m. There are several kelp species, however the most biodiverse parks consist mainly of Cuvie. They offer a safe home to a myriad of fish and invertebrate species, such as wrasse, cod, pollock, sea urchins and crabs that live on and among the stalks. They also absorb CO₂, nutrients from coastal waters, and reduce the impact of wave action in coastal areas.



Common Lobster. Dave Wall.

Marine biodiversity



Pollock. Dave Wall.

The Irish Continental Shelf out to the shelf edge at 200m is a mixture of rocky reef, boulders, and various sediment types. Each sediment type has its own assemblage of animals and seaweeds (where water is shallow enough). For example, muddy sediments in the Irish Sea typically contain large burrowing invertebrates such as worms, prawns, bivalves, burrowing anemones, starfish, flatfish, cod, dragonets, gurnards, skates and rays.

Our ocean is three dimensional and the water column above the seabed contains abundant life. Pelagic fish species range from small schooling fish such as herring and mackerel to ocean giants such as bluefin tuna and basking sharks. Our pelagic waters are home to 25 species of cetacean, 24 species of seabirds, and some true giants such as blue whales and leatherback turtles. Plant and animal plankton abound, and are food for squid, jellyfish, goose barnacles, violet sea snails, and many more invertebrates.

Though we lack coastal coral reefs, Ireland does have **Cold Water Coral Reefs**. These reefs are found at depths of 200m - 1,600m on the continental shelf slopes. They grow slowly, as little as 1mm per year, and are very sensitive to physical damage. These reefs are

home to a myriad of deep-water invertebrate and fish species.

Along the slopes of the continental shelf to the west of Ireland lies a network of Deepwater Canyons which plunge from the shelf edge to the ocean abyss at 3,000m or more. Nutrient rich waters from the deep ocean are funnelled to the surface as they hit the shelf slopes, making the canyons, and the waters above them, rich in life. They are home to deep-water squid which in turn are food for beaked whales and sperm whales, present year-round.

The **Abyssal Zone** extends from 2,000m to 6,000m water depth. It lies in perpetual cold and darkness. Life in the abyssal zone centres around dead and dying plants and animals falling from surface waters. Much of the seafloor is covered by dead organic matter and home to many marine invertebrates including sea cucumbers, starfish, sea anemones, sponges, polychaete worms, crustaceans and deep-sea octopus. There are also deep-water fish species such as black scabbardfish, round nose grenadier, and deep-water sharks and eels. In Irish waters abyssal habitat is found in the Rockall Trough, Porcupine Seabight and Porcupine Abyssal Plane.

Explore your shore surveys



Common Limpets. Dave Wall.

In 2019, the National Biodiversity Data Centre, with funding from the EPA set up Explore Your Shore! focused on increasing our knowledge of the distribution of our intertidal species and exploring their potential as bio-indicators of water quality and climate change. The project runs four surveys:

Seashore Spotter our entry level survey allows you to submit casual species records. No matter what you are doing at the coast, you can submit a marine species record via our smartphone-friendly online form which allows you submit multiple species from the same location which is perfect for rockpooling. You can submit photos of unidentified sea life and we will identify it for you!

Big Beach Biodiversity Survey asks you to conduct a timed survey, recording bivalve shells, and other flotsam cast up on the tide. You can record both live and dead animals and plants found on the beach. The stranded plants and animals

can provide a useful indication of the diversity of life living beneath the waves just off the shore. Getting involved is easy and can be completed in 30 minutes.

Rocky Shore Safari focuses on recording species on intertidal rocky shores. This involves a walk-over survey from the upper shore to the water's edge, with surveys conducted at low tide. You are free to record any species you find but we also have a Big 30 list of easily identifiable species we ask you to search for. All records and photographs can be uploaded via our smartphone-friendly online form.



Shore Crab. Dave Wall.

Explore Your Shore! is also in partnership with 10 fantastic Marine Biodiversity Citizen Science Projects that are already collecting marine species data in Ireland. There is a survey available for every taste and it has never been easier for you to get involved in Marine Biodiversity recording in Ireland. Visit us at www.exploreyourshore.ie or on Facebook @ExploreYourShore.

Invasive alien species in Ireland

Rhododendron ponticum. Colette O'Flynn.

Invasive alien species have been recognised as one of the most significant threats facing biodiversity and a leading cause of species extinction globally! Trends across Europe indicate that the arrival of non-native species to our shores (and our land) is increasing. Invasives can harm our biodiversity by outcompeting native species for resources, like food, and habitats. Some can overgrow and smother whole communities of native species, transforming how our ecosystems function. Their economic impacts can be substantial with significant costs associated with their eradication and control. In Europe, costs associated with invasives species were estimated to be more than €12 billion per year and €261 million across Ireland and Northern Ireland in 2014.



Asian Hornet. Didier Descouens.

Notorious invader!

One of the most notorious invasive alien species in Ireland is the grey squirrel, a quintessential example of the way in which invasive species can displace and



Grey Squirrel. iStock.

impact on our native wildlife - through the gradual dominance and replacement of native species.

Six pairs of squirrels were introduced to Castle Forbes Co. Longford in 1911 from North America. The species has since spread across the country - it hasn't yet managed to cross the Shannon, so our wild west has largely remained free of the plight of the grey squirrel! What can you do?

Biosecurity and prevention



What can you do?

For invasive species the old adage – an ounce of prevention is worth a pound of cure – always rings true! Preventing the introduction and establishment of invasive alien species is a crucial first step in our response to their posed threat. It is at this point where we have the greatest capacity to protect our native wildlife and ecosystems. Their eradication can be extremely difficult if not impossible and controlling their abundance can be time-consuming and costly. One of the most effective ways of preventing invasive species from being introduced and allowed spread is to practice good biosecurity.

Biosecurity refers to any practices taken to prevent the introduction and spread of organisms (species and pathogens) in the wild. We all play a role in protecting our environment from invasive species. The fundamental principle wherever you go, is to **check, clean** and **dry** your footwear, equipment including bikes, boats, angling equipment or anything else that could carry visible or invisible living organisms from one location to another. We can also practice good biosecurity by being careful in choosing and buying plants and pets for our homes and gardens. We can

ensure no plants or pets escape from our gardens and never dump any plants from your garden or release pets you can no longer care for. Find out more: www.invasives.ie

Report sightings

Our capacity to respond to and manage invasive alien species that arrive and become established in Ireland relies on having information on their presence and distribution. By submitting your sighting, you are contributing data to the National Invasive Species Database which provides a centralized source of up-to-date information on the distribution of invasive species in Ireland.

The sighting data can be used to trigger an on-site rapid response to remove or contain rare occurrence alert invasive species. Your sightings of invasive species help us gain a better understanding of the status, threat posed and the magnitude of actions required to manage invasives at a national, regional or local level.

“For every additional record that is submitted, a clearer picture of the status of that invasive species in Ireland is generated.”

Invasive Species Record Alert System



A person wearing a blue hat and a backpack is walking through a grassy field. In the background, there are rolling hills under a cloudy sky.

Biodiversity Monitoring

Michelle Larkin.

If you have time to do repeat survey visits to an area following a standard methodology, you can join a monitoring scheme. This generates important quantitative data on biodiversity, and when pooled with data generated by other similar surveys, it can begin to quantify the rate of change occurring.

All-Ireland Bumblebee Monitoring Scheme established by the National Biodiversity Data Centre in 2012, is one of the first of its kind globally. It monitors bumblebees monthly, March to October each year, generating detailed information on bumblebee populations and how they are changing. More details: <https://biodiversityireland.ie/surveys/bumblebee-monitoring-scheme/>

Irish Butterfly Monitoring Scheme, Ireland's longest running citizen science insect monitoring scheme established by the National Biodiversity Data Centre in 2008. It tracks the population status of Ireland's widespread butterfly species based on a network of fixed transects walked weekly by recorders from 1st April to 31st September. More details: <https://biodiversityireland.ie/surveys/butterfly-monitoring-scheme/>

Irish National Pollinator Monitoring Scheme is a new monitoring project that aims to detect the status, trends, and distribution of wild pollinators, and their interactions with plants across farmland, semi-natural areas, and urban parks. Wild bees, hoverflies and



Bombus terrestris Queen. John Breen.

butterflies will be monitored monthly from April to August using pan traps, transects and FIT Counts. More details: <https://biodiversityireland.ie/irish-pollinator-monitoring-scheme-ipoms/>

Rare plant monitoring scheme launched by the National Biodiversity Data Centre in 2017. Where someone submits a casual record of a rare or threatened plant, they are asked if they are willing to visit their rare plant population once a year during its flowering period and to count the total number of individuals. More details: <https://biodiversityireland.ie/surveys/rare-plant-monitoring/>

Getting to grips with Agrobiodiversity



The earliest evidence of agricultural activity on the island of Ireland dates as far back as 4,000BC. Since then Ireland's farmers have been getting to grips with the land – the soils, plants, and animals that create opportunities or challenges and how to manage these in our western Atlantic climate – to produce our food. Irish farmers and fishers are recognised globally as sustainable food producers but how good are we at getting to grips with biodiversity on our farms?

The Department of Agriculture, Food and the Marine has long been a pioneer in sustainable food production – supporting our dedicated farmers and fishers to our pioneering and innovative processors. The Food Vision 2030 Strategy, charts a food systems approach, recognising the interconnections between policies for food, health, environment and climate. From this, and our other agri-policies, the Department are increasingly working to build awareness that sustainable food production also means maintenance and enhancement of biodiversity and putting in place the right measures in the right places to support biodiversity.

The Department is currently working with the European Commission to finalise Ireland's Common Agricultural Policy CAP Strategic Plan. Having taken account of Commission recommendations, the EU Green Deal and targets in various strategies such as the Farm to Fork, Ireland has proposed a Strategy that will deliver increased environmental and climate ambition in the next CAP programming period. As part of this process, the Department has proposed an innovative model for delivery of agri-environment climate schemes (AECM). The AECM will move towards a results-based model, building on the experiences of the Results Based Environmental Agri Pilot Programme (REAP) and other results-based programmes. The key element of results-based methodologies is that financial support paid to the farmer, reflects the quality of biodiversity being delivered. In simple terms, the better the outcome, the higher the payment. This results-based model also increases the opportunity for farmer-advisor-

policy maker engagement giving everyone greater opportunities to get to grips with the best approaches for delivery of public goods linked to biodiversity and climate.

Beyond CAP, the Department supports many initiatives, research programmes and schemes designed to support biodiversity and climate ambition, to increase awareness and knowledge on agri-environment challenges and to deliver on our national and international commitments for biodiversity and climate. The pilot Farm Environmental Study (FES) is now open for applications beginning compilation of a national baseline database of farm habitat and biodiversity data.

The pilot National Soil Sampling and Analysis Programme established last Autumn is developing a baseline national dataset at farm level of soil nutrients, pathogens and soil carbon levels. This programme has increased farmer awareness of the value of soil health, the link between soil and water quality and the importance of our below ground biodiversity for long-term sustainable agriculture.

The European Union's Life Programme provides funding for the support of Environment, Nature Conservation and Climate Action projects throughout the EU. The Department is working with several LIFE projects, including LIFE Wild Atlantic Nature, Corncrake LIFE and Waters of LIFE, and also supporting Machair LIFE and Lough Carra LIFE, which are in their early stages. These projects are "ones-to watch" with opportunities for all communities to get involved and contribute to shared knowledge, understanding and implementation of actions for biodiversity and climate in agriculture.

Getting to grips with biodiversity in agriculture will protect our sustainable food systems and ensure the survival of our rich natural history for future generations. In line with this objective, the Department will continue to expand and share the knowledge of, opportunities to implement biodiversity and climate beneficial actions for farmers, the wider community, the birds and the bees.

Sponsored

What businesses can do for biodiversity?

The business of wild bees – the All-Ireland Pollinator Plan (AIPP)

For business the AIPP provides:

- An entry-level into biodiversity for multi-site corporates, SMEs and micro-enterprises aligned with ISO 14001:2015 and the UN 17 Sustainable Development Goals.
- A simple structure comprising nature-positive physical and communications actions to integrate within a Sustainability Strategy/Plan (Biodiversity Pillar/baseline/SMART targets).
- Actions for Pollinators – a national, publicly-visible, data-mapping portal to map pollinator-biodiversity actions. This data shapes evidence-based actions for businesses.

The Irish Government's 2019 Biodiversity Emergency Declaration clarified the urgent focus required to address catastrophic loss of biodiversity and eco-system services on the island. This focus is underpinned by the EU 2030 Biodiversity Strategy, which cites the 'plight of the pollinator' specifically and represented nationally within Ireland's 3rd National Biodiversity Action Plan 2017-2021 (Objective 4).

Implementation of the All-Ireland Pollinator Plan 2021-2025 is being coordinated by the National Biodiversity Data Centre. It is a shared plan of action which builds on the EU targets to halt and reverse pollinator decline by 2030. It is a biodiversity plan of action without political affiliation or agenda other than to; preserve and protect the natural capital for generations; shape guidance based on evidence; and mitigate, where possible the effect of climate change.

Who's Who www.pollinators.ie

Over 100 government and NGOs, over 360 business supporters, 86% of the island's Councils, numerous community/volunteer groups, farmer-suppliers, and all of Ireland's primary schools are consciously engaged in actions for pollinators-biodiversity. The AIPP is aligned with Bord Bia's Origin Green food sustainability programme as pollinator actions supporting business members' biodiversity targets. Origin Green funds the Agri-business officer position.

EASY as 1-2-3

To sign up to the AIPP is free including use of resources.

1. Sign the Framework (signature of a senior manager).
2. Map your site on 'Actions for Pollinators'.
3. Send signed framework to skelly@biodiversityireland.ie. Reporting is annual by 30 September (250 words/mapped actions).

TOP 10 ACTIONS

PHYSICAL ACTIONS:

1. Find out and protect what's good for wild bees on your site(s) – a baseline.
2. Reduce mowing of grass, cutting of hedgerows, and eliminate use of pesticides.
3. Increase planting: of bulbs, shrubs, Heritage fruit trees or native trees.
4. Create 'homes' for wild bees (hedgerows/earth banks/old stone walls).

COMMUNICATION ACTIONS:

5. Include AIPP as a 'Biodiversity Pillar' in your Sustainability Strategy/ESG with SMART targets.
6. Create a Biodiversity Committee, nominate a Biodiversity Champion(s) and/or become the leader in your region in evidence-based pollinator-biodiversity actions.
7. Highlight your actions through 'Actions for Pollinators' (data mapping portal), and activity on site /online / on socials.
8. Create a 'multiplier' effect by leveraging Suppliers to sign up/take actions (SMART target).
9. Invite Employees to 'Pledge Your Garden' (pots/ planters) and celebrate World Bee Day (20 May).
10. Engage with your Community e.g. Tidy Towns (sponsor an Ecological Trail or pollinator map), the social innovation platform www.changex.org, local sports/golf/GAA clubs, faith community and school(s).

Hobby hives

In Ireland the honeybee is not under threat and as a managed pollinator is not considered a biodiversity action under the All-Ireland Pollinator Plan. In certain areas, increased numbers of honeybees may create competition for food for wild bees. Only get hives if

you want to take up a hobby and engage with a local beekeeping association to keep healthy honeybees and do not inadvertently spread disease to wild bees.

Deep fake wildflower seed

Ecology experts warn against the serious implications of sowing purchased, non-native, (bright/multi-coloured) wildflower seed. Whilst beautiful to look at, sowing seed is not considered helpful to the island's landscape with the potential for invasives. Natural regeneration of wildflowers is recommended through a change in mowing/cutting management. Native wildflowers flourish through reduced mowing frequency and removing cuttings to reduce fertility.

Urban business site – physical actions

Carparks are a great place to enhance support for pollinator-biodiversity while maintaining Health & Safety. Think frequency, volume, range and location of flowers between early spring and autumn.

1. Increase carpark planting

Hanging baskets – include high pollen value Bidens and Bacopas.

Perimeter corners – include low growing Rosemary and Broom. Or one species bulk planting (wild bees 'see' swathes of colour) such as Lavender, Catmint or Heather.

Fence lines – include Dwarf Fruit trees, Comfrey and Lavenders, bulbs such as Grape hyacinth, Crocus, Snowdrop. Late flowering plants include Allium or Dahlias.

Raised beds/planters (low-growing)

Bulbs: Crocus, Snowdrop and Grape hyacinth for early spring. Bidens and bacopas have a high pollen yield. Perennials: (yellows and yellow/white) Rudbeckia, and/or (purples/pinks) Wallflower, Calamint, Comfrey, Catmint, Lavender or entire beds of Heather (bulk planting).

2. Reduce mowing - Carpark Natural Wildflower

Areas (strips/patches/large swathes)

3. Eliminate pesticides

4. Signage to let your 'publics' know what you're doing.

Did you know? Daffodils, Tulips, traditional bedding plants - Geraniums, Begonias, Busy Lizzy, Petunias, Polyanthus or Salvia splendens have virtually no pollen

RURAL BUSINESS SITE –PHYSICAL ACTIONS

Add to the relevant urban business site actions with the following rural business site actions.

1. Pledge Your Hedge - Create and maintain healthy pollinator-friendly hedgerows. (See hedgerow section for more)
2. Don't Mow, Let It Grow! Choose a wildflower meadow/strip management that suits you! Cut once per year at the end of September or cut on a 6-week rotation from mid-April until end of September.

Business for Biodiversity Platform

A new hub for biodiversity peer-learning and development is currently in development, funded by the Department of Agriculture, Food and the Marine, and the Department of Housing, Local Government and Heritage. Strategic partners Natural Capital Ireland, Business in the Community Ireland and the National Biodiversity Data Centre, in consultation with business, will provide opportunities for learning, knowledge (science) and policy insights in one virtual location.

Useful links:

<https://pollinators.ie/businesses/>

<https://pollinators.ie/businesses/faqs-for-business/#what-are-the-top-ten-actions-our-business-can-take-to-protect-pollinators>

<https://pollinators.ie/gardens/>

<https://pollinators.ie/gardens/>

About 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. Find out what biodiversity has already been recorded in your local area: maps.biodiversityireland.ie

Help us to build up the knowledge of biodiversity in your local area by submitting sightings to the National Biodiversity Data Centre.

This booklet has been compiled by Niamh Phelan and content provided Dr. Liam Lysaght, Kate Chandler, Oisín Duffy, Dr. Úna FitzPatrick Dr. Saorla Kavanagh, Sarah Kelly, Dr. Michelle Larkin, Martina O'Brien, Colette O'Flynn, Niamh Phelan, Dave Wall and Ruth Wilson (National Biodiversity Data Centre).

Citation: Getting to grips with biodiversity. National Biodiversity Data Centre. Waterford. May 2022.

The National Biodiversity Data Centre is a programme of the Heritage Council and is operated under a service level agreement by Compass Informatics. The National Biodiversity Data Centre is funded by the Heritage Council and Department of Housing, Local Government and Heritage.



We're moving Ireland towards a cleaner energy future

Thanks to natural gas, we already connect over 710,000 Irish homes and businesses to safe, reliable and efficient energy.

The national gas network powers 30% of Ireland's primary energy needs, 40% of the country's heating and almost 50% of our electricity generation.

And now, with the introduction of renewable gas into our network, we're moving Ireland towards a cleaner energy future.

Discover more at gasnetworks.ie/progress

 [#ProgressNaturally](https://twitter.com/ProgressNaturally)

