

**Communities
Biodiversity
Project**

**SMALL
MAMMALS &
BIODIVERSITY**

Why is biodiversity important?

Ecosystems

'The community of living organisms and abiotic (non-living) environmental factors interacting with each other'

A high diversity of species is crucial for maintaining these healthy ecosystems and keeping them resilient to change.

Healthy ecosystems provide many important services- such as pollination, seed dispersal & pest control.

Food chains

A food chain demonstrates the interactions and transfers of energy between different organisms; these chains can vary in complexity, often looking more like webs than simple chains.

Within these webs, species become dependent on each other to the point where a decline in the population of one species, may have a similar effect on another species within the web.



Two Key Takeaways:

1.

2.

Biodiversity Decline

Biodiversity is declining in the UK- in fact, the UK is the most nature depleted country in Europe.

There are multiple different reasons for this biodiversity decline, however the 4 driving factors are:

1. Habitat Loss

- **This occurs mainly through land use change, either to make space for residential areas or infrastructure**

2. Road Traffic Collisions

- **The number of cars on the roads has increased dramatically as well as the number of main roads in rural areas**

3. Pesticide Usage

- **Pesticides used by farmers to control pests to their crops can move up food chains, increasing in concentration to where it can kill the apex predators at the top, often these are birds of prey**

4. Climate Change

- **The effects of climate change, such as increased temperatures and unpredictable weather patterns is causing many species to fall out of sync with each other, such as flowers and their pollinator species**

Two Key Takeaways:

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How can we help?

We need to make more habitats for these species, either through restoring previously damaged habitats or creating brand new spaces. You can make a difference even in your own back garden.

Bird Boxes:

If you want to put up a bird box it must be in an area where there is a clear flight path and it is facing between North and East to get strong sunlight & avoid the worst of the wind and rain. It must also be high enough up the tree or wall to keep the box out of reach of potential predators, such as domestic cats



Bug Hotels:

These bug hotels should be kept dry, facing South into the sun, with no debris blocking the entrance. Once the stems have emptied of inhabitants (the mud coverings on the end are gone) they can be replaced with fresh material. Attracting more insects into your garden also helps to attract more animals which will feed on them, such as birds and bats.



Bat Boxes

Bat boxes should be placed where the bats will frequently feed, which is close to hedges and treelines, away from artificial light sources and about 4m up off the ground. It should face South East or West to keep it out of the strongest winds but in sunlight.



What should I do if I find a fledgling bird?

Often if you do find a fledgling chick the parents are not very far away, and it has not been abandoned. Only replace the chick into the nest if you can tell exactly which one it has fallen from, and if the chick is in a healthy condition. Sometimes if the chick is unwell the parent will deliberately remove it from the nest.



What should I do if I find a grounded or injured bat?

There are two main rules to remember if you find a bat:

1. Never handle a bat without gloves
2. Never release a bat during the daytime

Bats can appear in places where you did not expect, and it is not uncommon to have a perfectly healthy bat which has somehow become trapped in your home. If this does happen, try to contain the bat in one room and open the window/door to let it out in its own time. If it is during the day, trap the bat in a ventilated container, keep it in a dark room with some water and release it at dusk.

If you find an exhausted or grounded bat you can put it in a container with holes in, with some water and finely chopped cat or dog food. However, if you think the bat is injured it should be taken to the vets for an assessment prior to release.



Hedgehogs

Hedgehog populations in the UK have been experiencing huge declines over the last 50 years- however, urban populations of hedgehogs are declining at a much slower rate. This is partly because of the work a lot of people have been doing in their back gardens:

- If you would like to feed hedgehogs, chopped up cat or dog food is perfect. It is a common myth that hedgehogs can be fed milk & bread- they are actually lactose intolerant, and the bread is nutritionally deficient. Also make sure to leave out some water in a shallow dish
- Leave piles of sticks or vegetation in your garden to create natural shelter for the hedgehogs, and the invertebrates that they feed on. You can also build a hedgehog house to provide space for them to feed and reproduce
- Creating very small holes/gaps at the bottom of fences and walls allows hedgehogs to travel between gardens, expanding their territory and letting them access more food- this is known as creating a 'Hedgehog Highway'



Two Key Takeaways:

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Predators & Prey in Northern Ireland

Garden Birds:

Multiple different species of bird are common sites in gardens and parks, including:

- Blue, Great & Coal tits
- House Sparrow
- Robin
- Wrens
- Blackbirds
- Magpies

These birds are important for seed dispersal & pest control, so if you would like to attract more to your garden or outdoor space you can put up a bird feeder & some birdboxes (see above). Make sure you put the bird feeder up high and out of reach of domestic cats.



Field Mice:

The field mouse is a very small & secretive rodent, which you can find in a range of habitats such as woodland, dry stone walls and hedgerows. This tiny mouse is very important for woodland regeneration, as the stores of seeds they create in their burrows sometimes are forgotten about, allowing the seeds to germinate and grow into future trees.



Irish Stoat:

The Irish stoat is a sub-species of the European stoat; these can be found in both rural habitats such as grassland and urban habitats, like landfill and recycling centres. Despite their small size, the Irish stoat is a ferocious predator which will commonly take prey up to 5 times its size, such as rabbits. They will also feed on birds and rob bird nests for the eggs.



Birds of Prey:

Peregrine Falcon

The largest breeding falcon in Northern Ireland, the Peregrine can be observed in upland, mountainous areas but are also becoming an increasingly common site nesting in urban areas, such as tall, city blocks. They have been seen nesting on the Samson and Goliath cranes at Belfast docks & Cave Hill. The Peregrine Falcon is well known for being the fastest animal on the planet, reaching speeds of up to 200mph during its 'stoop' to catch prey.



Barn Owl

The Barn owl is one of the most recognisable species of owl, with its characteristic heart-shaped face and mottled grey & brown plumage. They are commonly seen around farmland, hunting during the day as well as at night for small mammals in fields.

Barn owls are a species of great concern in NI, as there are only 30 breeding pairs left- the main reason for this dramatic decline is loss of hunting habitat, road traffic collisions and poisoning.

If you would like to know more about the birds of prey in Northern Ireland, you can check out the Northern Ireland Raptor Study Group webpage.



Two Key Takeaways

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Small Mammals in Northern Ireland

Bats

Northern Ireland has 8 species of bats- the most widespread being the common pipistrelle, which is also the smallest, only weighing 10g. Bats roost during the day in buildings and caves and emerge at night to feed on flying insects such as moths. They hunt their prey using echolocation- this method involves sending out a pulse of high frequency clicks which will then rebound off prey. The returning 'echo' can then be processed by the bat to allow it to determine the size, orientation and speed of prey.

Bats are important for pest control- as they can consume up to 3,500 insects in a single night. They are also important for pollination in some tropical countries, such as the banana & mango plants.



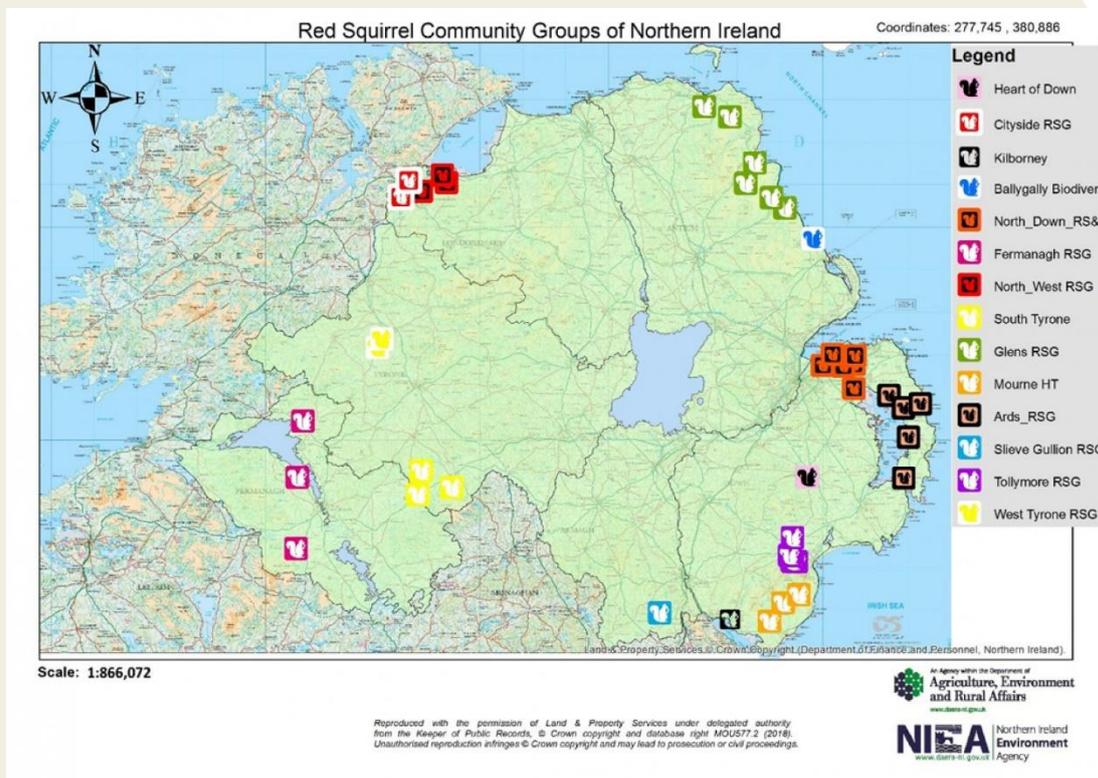
Red Squirrel

The red squirrel is one of the most recognisable small mammals in the UK, but also one of the most at risk native species, as it has now been driven back into tiny pockets or 'strongholds'. The driving factor behind this decline is the introduction of the grey squirrel in the Victorian era. The grey squirrel carries the squirrel pox virus which is fatal to red squirrels, as well as being much better competitors for food and shelter.

Northern Ireland has multiple red squirrel strongholds, looked after by voluntary monitoring organisations.

- The Glens Red Squirrel Group
- Tollymore Red Squirrel Group
- Fermanagh Red Squirrel Group
- Slieve Gullion and Cooley Red Squirrel Group
- The Cityside Red Squirrel Group - Derry/Londonderry
- The North West Red Squirrel Group
- Ards Red Squirrel Group
- West Tyrone Red Squirrel Group
- Sliabh Beagh & Clogher Valley
- Ballygally Biodiversity Group
- North Down Red Squirrel and Pine Marten Group
- The Heart of Down Red Squirrel Group
- The Mourne Heritage Trust (MHT)
- Rostrevor Red Squirrel Group





This is a map of red squirrel community groups, located at red squirrel hotspots, where you might be able to see them.

Irish Hare

The Irish Hare is arguably Ireland's oldest mammal- fossil evidence suggests they were roaming lowlands and heathland 30,000 year ago. Unfortunately, they are also greatly under threat in Northern Ireland- according to the Hare Preservation Trust, between 2004 and 2010 the population of Irish hares here dropped by 50%.

Two main factors driving this decline are habitat loss and hare coursing. Agricultural practises, such as cutting grass for hay or silage, reduces the cover & food for hares. In addition to this there can be horrendous accidents with machinery and nests of hare offspring, as hares will have their young in flat scrapes above ground- often in the path of mowers. Hare coursing is the chasing of hares by sighthounds- it is illegal in Northern Ireland, but legal in the Republic. As a result, there are still incidents of illegal hare coursing, further reducing the population of Irish hares.



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Marine Mammals & Sea Birds

Seals

There are two species of seal native to Northern Ireland: Common seals & Grey seals, and both can be spotted bobbing around in the water just off the coast or hauled out on the beach.

Seal pups are born in Autumn and Winter normally, and stay on the beach with their mother for the next month, feeding on high fat-content milk. After 4 weeks the pup should have doubled in weight, and learned how to hunt, ready for the mother to leave it to fend for itself.

Sometimes pups have not put enough weight on, been abandoned by the mother due to disturbance or developed an infection- these pups need to be taken in by rescue services.

Strangford Lough has the largest breeding colony of seals, and is also home to the Exploris Seal Sanctuary to rehabilitate underweight, injured, or sick seal pups ready to be released. The best time & place to see seals in NI is in the Autumn & Winter along the Strangford Lough coast, such as in Portaferry.

A healthy seal should be plump & barrel shaped, with wide, clear eyes surrounded with wet patches and be breathing easily (no wheezing or coughing). If the pup looks underweight or injured, you should keep a good distance from it, do not try to pick it up and call the

Greys vs Common Seals: How to tell the difference?

Common seals:

- Faces are more 'cat' shaped, smaller and with a short snout. They are also smaller than Grey seals, and have V shaped nostrils which almost touch at the bottom.

Grey seals:

- Faces are more 'dog' shaped, with a longer snout and a larger body than common seals. The nostrils are two slits which are quite separate from each other.



Harbour Porpoise

The harbour porpoise is Northern Ireland's most commonly seen and smallest cetacean; as the name would suggest these animals stay close to the shoreline, so if you are ever down at the coast keep your eyes peeled for the triangular dorsal fin breaking the waves.



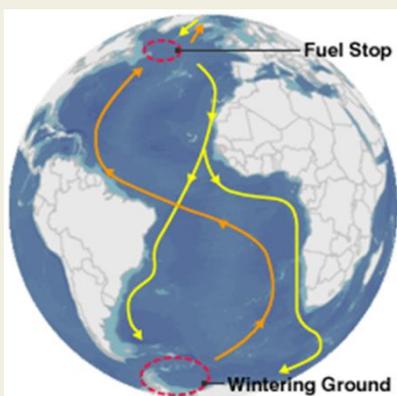
Gulls

Gulls have a bad reputation for being a nuisance at the beach while you are trying to eat your chips, however they are very important indicators of coastal health. As top predators, a change in their populations can indicate a change in species abundance or diversity further down the food web. Their droppings are also an important source of nitrogen for vegetation close to the coastline.

Arctic Tern

The Arctic Tern is an amazing long-distance migrant- annually they will cover 35,000km, travelling between the north & south pole. Their migration occurs between the Arctic summer and the Antarctic summer, which means they see the most daylight of any animal on Earth. They visit the Northern Irish coast in the summer months- such as Strangford Lough & Belfast Harbour, to feed on sand eels and reproduce. After raising 2-3 chicks, the tern will leave to fly across Europe and down the African coast.

They rely heavily on this fuel stop for reproductive success; in 2004 the sand eel population crashed as a result of climate change, and this dramatically impacted the breeding of Arctic Terns in some areas. For example, in the Shetland Islands, where approximately 20,000 pairs will breed, not a single chick survived to adulthood due to the lack in food available.



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