

Mammals

The Badger, *Meles meles*, Broc

The badger is found in all parts of Ireland. Its black and white striped head make it quite unlike any other native Irish mammal. Although the badger appears to be quite stout and has only short legs, it is a mustelid and is related to the agile stoat and pine marten. Indeed the powerful legs of the badger not only enable the animal dig but also render it capable of fast and agile movement when required!

Although it prefers woodland, the badger is very adaptable and can build its sett wherever the soil is dry enough. Setts are underground chambers connected by tunnels and usually have several entrances. Badgers live in family groups and setts may be generations old. Female badgers collect dried plant material such as bracken and grasses and use this to line the sett and keep the young, called cubs, warm. Badgers breed once a year and usually only one female in each sett will have cubs. These are born in groups of up to 5 in January or February. They are blind and quite helpless when born and remain underground in the sett until April or May.

Badgers are active at night, coming out at dusk to hunt for earthworms, beetles, slugs and other food such as berries and fruit. They have very well developed sense of smell and are likely to smell both food and danger before they see it. Badgers do not hibernate but are less active during cold-spells, when they can drop their body temperatures to conserve energy. Although the badger is protected by European and Irish law, some animals are injured, and setts damaged, by illegal badger baiting. The increase in tree cover in Ireland in the future will probably help this species to increase in numbers.

Badgers are quite widespread in the countryside, and many are seen dead on the roadside. This is because when they hear the vibrations of oncoming cars, their reaction is to stand still and so as many as 50,000 are killed on roads in the United Kingdom every year. Generally badgers are very shy and you will be lucky to see one out and about. You are very likely to see setts however – look out for the mounds of earth with entrances of approximately one foot (30 cms) wide in dry soils near field edges, woodland edges and beside hedgerows. Also look out for badger latrines. These are small scrapings in the soil, usually about the size of a human hand. They are often made close to the boundary of a particular sett's territory and badgers from that sett leave their scats (droppings) in these latrines to alert other badgers of their presence.

Hedgehog *Erinaceus europaeus* Grainneóg

The 6-7000 spines on its short dumpy body make the hedgehog an easy animal to identify. It is widespread in Ireland today, but whether it survived as a native after the last ice-age, or was introduced in medieval times is unclear. Hedgehogs like deciduous trees and can be found in broadleaved woodlands, hedges, and wherever trees and grass meet. Hedgehogs live individually, have several sleeping nests, and may travel as far as 3km in a single night's forage for food! They are most active at dusk and through the night although younger animals are sometimes active by day. As an insectivore the hedgehog's diet is mainly composed of beetles, slugs and earthworms, but fruit and

berries are also taken when available. Hedgehogs put on a special layer of fat and build an extra-cosy sleeping nest for their hibernation. They sleep from October/November to March/April, depending on the weather. They waken every few weeks to urinate. During hibernation they can lower their body temperature to just above 4 ° Celsius to conserve energy.

Hedgehogs lose a lot of heat through their spines so on cool evenings they are attracted to the heat on tarmac roads. Unfortunately this results in many hedgehogs being killed by passing cars.

Otter *Lutra lutra* Madra Uisce

Ireland supports one of the healthiest populations of this secretive animal, which is almost extinct in several European countries. The otter is related to the badger and is the biggest of the native Irish land mammals, excluding the deer.

It is an aquatic creature, living in rivers, streams, estuaries and coastal areas. Otters eat fish and sometimes crabs and frogs. If you are very lucky you may see an otter hunting in the lakes and streams of the valley, bringing larger catches out onto the lake shore before eating. Early morning is the best time to see them as they are much less active by day than by night. Careful investigation may allow you to find evidence of local otters as they leave 'spraints' behind them to indicate their presence to other otters. These spraints are shiny and black and have a sweet musty smell. They are usually deposited on some prominent feature such as a drainpipe, boulder or fallen log.

Otters are well designed for their aquatic lifestyle. Their body is long and streamlined and covered in waterproof fur. Their tails are strong enough to use as rudders and otters are powerful swimmers. Their eyes and nostrils are located high on their heads so that they can lie almost submerged in the water but still breathe and watch for prey. In addition they have transparent flaps below their eyelids that allow them to swim underwater with open eyes.

The otter's breeding den is called a 'holt' and is burrowed out of waterside vegetation, but often only accessible from the waterside. Otters are solitary animals and females give birth to 2-3 cubs each year. These may stay with their mother for up to a year as they learn to swim and hunt. Otters are threatened from water pollution that reduces the availability of food, and also from 'improvement' of rivers that removes bank-side vegetation and damages holt sites.

The Red Squirrel *Sciurus vulgaris* Iora rua

The red squirrel is a favorite with many, having reddish-brown fur with a white chest and, in winter, long, red ear-tufts. Squirrels are woodland animals, making their nests, called dreys, of untidy bundles of twigs lined with grass and leaves, in a fork close to the main trunk of a tree. Their agile bodies, long tails for balance and sharp clawed hands and feet are well suited to their arboreal lifestyle and they rarely come down to the ground. They are active by day and spend most of their time high in the canopy, gathering acorns, beech mast & berries, which they then hoard in secret places for retrieval later on in the season. As they carry acorns and nuts in their mouth to their secret hiding place, glands

in the squirrel's mouth secretes a special scent onto the food that will help to locate it later! Fungi and some seeds are also taken from the forest floor. Because they do not store body fat they spend more than three quarters of their time gathering and eating food. Squirrels are active all year round, and eat young buds and may peel bark from young trees in winter & spring if their hoards of berries and seed run low.

Red squirrels are generally solitary animals but mate twice each year. The young are born in litters of 3-6 in February/March and again in mid summer. When born, young squirrels are naked, blind and toothless and it takes about 10 weeks for them to become independent of their mother. Mortality is high in the first year – winter starvation and predation by some birds of prey affects up to 80%. Squirrels that survive this first year may then live for up to 7 years.

The red squirrel was reintroduced to Ireland from Britain, after it became extinct owing to woodland clearance in the late 18th century. Today, the red squirrel faces competition from its American cousin, the Grey Squirrel, which was introduced to Ireland in the early 1900s. The grey squirrel is bigger and more aggressive than the red and competes for food more successfully than the timid red. Grey squirrels are spreading in Ireland from the north southwards. Areas such as south Kerry and Cork are as yet free of grey squirrels and so the red squirrel populations here are very important as they have the best chance of survival. They are particularly happy in mixed woodlands that contain some small seeded conifers (such as pines) mixed with the native deciduous trees. Look out for them in the autumn when they are particularly busy gathering hoards for the winter ahead.

Wood mouse *Apodemus sylvaticus* Luch fhéir

The wood mouse is one of Ireland's most common mammals. It has been present in Ireland for at least the last 8,000 years. It has large eyes and ears and a long tail. The fur is yellow-brown on its upper surface and a whitish-grey on the underside. The body length from nose to tail is about 16 – 19cm in males and 15 – 18cm in females.

Despite its name, the wood mouse is found in hedgerows, long-grass pastures, arable crops, blanket bog, heather, coastal grasslands, sand dunes and gardens as well as woodlands, and is also known as the field mouse. It may be found up to altitudes of about 1,000m on mountains.

The wood mouse is essentially a seed-eater, but in reality it is an opportunistic omnivore. Its diet largely depends on what is available and includes invertebrates with plant material such as acorns, seeds, grain, blackberries, elderberries, other fruits, fungi, bulbs, buds and grass flowers. Wood mice are mainly nocturnal animals and their large eyes and ears are adapted for this night time activity. They are very agile and can climb very well, using their long tail for balance. The tail is also used to help escape from predators such as cats and birds of prey. If caught by the tail, part can break off allowing the mouse to get away.



Woodmice make extensive burrows leading to nests deep under the soil. Burrows may be up to 3 metres long and nests have been found as much as 1.5 metres below the soil surface. The nests are

used for shelter, food storage and to raise young. Breeding occurs between March and October and a mature female may give birth to as many as 4 litters in a year if food supply and conditions are good. Each litter consists of 3-8 blind and naked young. These are suckled for 2-3 weeks and the mother will move her litter from one nest to another if she feels threatened.

Wood mice spend a lot of time grooming. They often sit up on their hunches wiping their face and ears with their front feet and passing their tails through their mouths. If disturbed they can leap away very quickly, covering up to 80cm in a single leap!

Bank Vole *Clethrionomys glareolus* Vól bruaigh

The bank vole is Ireland's only vole species and is one of the latest additions to the land mammals. It was first discovered in the 1960s, in north Kerry. It was certainly introduced and is now found throughout about half of the country. The bank vole is a small rodent. It is about the same weight as a mouse but is a more compact animal. The coat is reddish brown above with a dirty white underside. The total length of the body from snout to tip of tail is about 15cm, of which 5cm is tail.

Bank voles are usually found in habitats where there is dense undergrowth. They inhabit woodlands with a thick shrub layer and may be found in young coniferous woods, areas of scrub or rank grassland and hedgerows. They are active by day and night and scurry about, traveling up to 50 metres from their nests to feed and mark their territory. A network of burrows is constructed either just below the soil surface or, if there is enough long vegetation, among the grasses and tall herbs. Bank voles remain active through the winter months and construct a winter nest of densely woven grasses and plant stems to keep them warm and dry.

The bank vole is largely vegetarian and a wide variety of food is eaten. Berries, bulbs, fruits, seeds and fungi are eaten as available and voles have no problems climbing into trees and shrubs to avail of food there. They will eat a small amount of earthworms and insects when necessary. In winter, they sometimes strip the bark from young trees if other food is unavailable.

Bank voles are preyed upon by kestrels and owls and may also be taken by stoats and foxes.

Bank voles breed mainly between March and October although the season may extend in mild winters. Gestation is only 18 days and litters of 3-7 young are produced. Although these are blind and naked at birth, they grow quickly and leave the nest after about three weeks and are themselves capable of breeding after only 9 weeks. Despite this high rate of reproduction mortality is high and may be up to 50% in the first four months.

The Fox *Vulpes vulpes* An Sionnach

The red fox is the only wild member of the dog family that is native in Ireland. They are dog-like in appearance and coat colour may vary from reddish brown to grey and black. Foxes are found all over Ireland in a range of habitats. They are extremely adaptable and are found in both urban and rural situations. Foxes are very social animals and are largely monogamous, and live in family groups. Vixens have a litter of 4-5 cubs each year. Each family occupies a territory which they mark out with their strong smelling musty scent.

Foxes live in underground dens, called 'earths', and eat a wide variety of things, from mice, rabbits, carrion and invertebrates to fruit and berries. Foxes have acute hearing and can hear insects and mice moving in grass. They are active by day and night. Thousands of Irish foxes were trapped for their pelt in the 1980s, so populations in some areas have dropped significantly. However, foxes are wily and adaptable animals and so populations seem to be holding their own. Even cities and suburban areas have small fox populations that scavenge around rubbish bins and compost heaps for food!

As with most of our wild mammals foxes are quite elusive and often the only glimpse you'll get is of the 'brush' or tail of an animal as he disappears into the hedge. However, fox scent is musty and lingers for hours or even days after the animal has left the area. Fox droppings are known by their cigar shape that is pointed neatly at one end. At least 28 different types of fox call have been recorded, from a rasping bark to the shrill cry of the mating season.

The Hare *Lepus timidus hibernicus* Giorra

The Irish hare has survived in Ireland since the ice-age, more than 10,000 years ago. It is a sub-species of the mountain hare which is present across Northern Europe. Hares are related to rabbits which were introduced to Ireland by the Normans in the 13th century. The hare can be distinguished from the rabbit by the black ear tips and the tail which is entirely cream or buff coloured. Of course hares are usually about twice the size of rabbits and tend to have a more gamboling gait than a bunny hop!

Grasses and herbs are the preferred diet, but young shoots of heathers and scrub are also taken when necessary. Hares have evolved a special strategy called caecotrophy, which allows them to make the most of their food. After partially digesting their diet of herbs hare secret nutrient rich pellets which they then ingest again! So the hare (and rabbit) droppings that are commonly seen in the countryside are actually the remains of twice eaten food!

Hares are mainly nocturnal, but are most active at dawn and dusk in spring and summer. Although they can breed throughout the year, most breeding behaviour is observed in Spring. 'Boxing' hares are often observed and this usually represents females fighting off unwanted male attention. Hares rest in loose nests burrowed out of long grass, called forms. Two or three young, called leverets, are born to breeding females (does) up to 3 times per year. When born, leverets are fully furred and can see. They are usually able to move about within a few hours. The doe usually separates her litter, hiding each one individually in a form, so that if a predator strikes at least some of the litter will survive. These are fed once a day, usually at dusk, until they are weaned after about three weeks.



Foxes are the main predators of hares, and leverets are occasionally taken by stoats, birds of prey and crows. Hares are hunted as a game species and some are trapped for use in hare coursing.

The hare is a common symbol in folklore from many cultures across the globe. The Easter bunny is actually a hare, and there is also a well established connection between the moon and the hare. The Irish word for hare, Giorra, comes from the words *gear fhia*, meaning short deer, because of the appearance of the hare when running fast, particularly in the summer when its coat is russet.

The pygmy shrew *Sorex minutus* Dallóg fhraoigh

The pygmy shrew is Ireland's only wild shrew species and is also our smallest mammal and that with the shortest lifespan. It is found throughout the country in habitats that range from open grassland and moorland to conifer and broadleaved forest. It is a tiny animal, weighing only 5-6 grams at breeding, when it is best fed and fittest. It is readily distinguished from mice and voles by its very long snout, which is almost constantly twitching. The eyes are tiny, and eyesight very poor which gives rise to the Irish name 'blind mouse of the heather'. The shrew is an insectivore and uses its pointed nose, keen

sense of smell and long whiskers to detect and catch its prey of beetles, woodlice, insect larvae and other invertebrates. Shrews need to feed very regularly to maintain enough energy to survive and so are active day and night throughout the year. As solitary animals, each one defends a territory that may range between 200m² & 1500 m². People with good hearing at high frequencies (usually children and women) may hear shrews hissing and calling at high pitch in the hedge or long grass. Breeding occurs between April and October and usually two or three broods are raised. The young weigh only a quarter of a gram at birth and are totally naked and helpless. They are weaned and independent after about three weeks. Adult shrews die in Autumn and early Winter and only the new juveniles survive. Thus the maximum lifespan tends to be about 13 months. In fact though, about half of all shrews die as juveniles because they are preyed upon by foxes and cats (who usually don't actually eat them) and by barn owls, who depend on shrews for up to half of their diet in some places. In places where farming is very intensive and the use of pesticides has reduced insect numbers, pygmy shrews may be rare. It is illegal to catch shrews from the wild without a special license.

The Stoat *Mustela erminea*

Stoats are mustelids, related to the badger and pine marten. They have short legs and a long, narrow body with a coat of sandy-brown fur and a yellowish-white underside. They have a bushy black-tipped tail, which easily distinguishes them from the smaller weasel. Incidentally, in Ireland, the stoat is often known as the weasel, but in fact the weasel (*Mustela nivalis*) is a completely separate species that occurs throughout Europe, but not in Ireland or Iceland! In northern places where the winter is more severe, the stoat's fur becomes pure white during winter months to camouflage the animal against lying snow. Not surprisingly, in mild Irish winters this is a rare occurrence.

Although they can sometimes be seen by day, stoats are active mainly by night. Stoats are very skilled predators, and feed on small mammals such as mice, often chasing into their burrows. They will also eat berries and other fruit and sometimes raid nests for bird chicks. They are both fast and strong and can catch and kill an adult rabbit which can be several times the weight of the stoat.

Mating occurs in the early summer, but development of the embryos is delayed so that the young, called kittens are not born until the following spring. Litters vary in size from 3-9 kittens, depending on how much food has been available to the mother. The kittens are naked and blind when born and develop over 3-4 months before they leave the nest.

Stoats are preyed upon by cats, birds of prey and occasionally foxes.