

# TERRESTRIAL MAMMALS

**Badgers** can be described as nocturnal omnivores spending most of their time underground in their large setts. They generally emerge at dusk and will remain active above ground until dawn, in summer time they occasionally become active before dark. They eat a wide variety of food so they do not generally have to travel large distances while foraging and on average will not wander more than 5km from the sett. Badgers as a species do little harm to cereal crops and other animals in Ireland, they are effective pest controllers as they reduce rodent numbers and destroy wasp nests. They may cause TB outbreaks in cattle herds, although they carry the tuberculosis virus cases of cross species infection is less common since the 1990's. They have no natural predator in Ireland with man still causing the highest number of badger kills. Badgers will breed annually with the mating season usually beginning in February and running until May.



**The bank vole** is a small rodent resembling a mouse but with a stouter body, a slightly rounder head with smaller ears and eyes and a shorter, hairy tail. The dorsal surface is reddish-brown, with a greyish undercoat and the flanks are grey with a reddish-brown sheen. The underparts are whitish-grey sometimes tinged with dull yellow. The ears are larger than those of most voles. The [International Union for Conservation of Nature](#) has rated the bank vole as being of "[Least Concern](#)" in its [Red List of Threatened Species](#). When it lives on road verges, the bank vole can suffer from [lead toxicity](#) and near farmland it may be affected by [pesticides](#), [molluscicides](#) and [rodenticides](#).

**Brown hare:** Brown hares are predominantly nocturnal but can be moderately active by day. During the summer months feeding can continue until late morning and early evening. The brown hare's diet consists of mainly herb grasses and agricultural crops particularly the early growth stages of cereals and root crops.

Brown hares are generally solitary animals but breed throughout the year with a peak in pregnancies in mid summer. Courtship behaviour can involve boxing matches which usually involve non-breeding females fending off the mating intentions of males during the spring or can occur between males who are attempting to gain social dominance. Brown hares are regularly shot and poisoned for being agricultural pests due to their habit of digging for root crops when winter snow and frost make grass grazing difficult. Agricultural hazards are numerous including the dangers posed by farm machinery and biocides, agrochemicals can have both a direct and in direct effect on brown hares, some farm chemicals can kill hares or reduce the diversity of their food supply by herbicide use





**Brown long - eared bats** are a nocturnal species generally emerging within an hour of sunset, they usually make a series of short flights within the roost before emerging to hunt for up to one hour with intermittent flights throughout the night. Mixed-sex groups will start to form by the end of summer with the mating season beginning in September and often continuing throughout the winter period. By this time males are coming into breeding condition and often lose a lot of weight due to the development of their reproductive organs which need to be maintained with a high body temperature. The brown long-eared bat's preference for establishing summer roost sites in mature tree hollows can leave colonies vulnerable to

tree removal. The chemical treatment of timber frames in attics can poison entire colonies and leave the area lethal to bats for several years after the process. The increased use of pesticides in recent decades in agriculture has reduced the number of insects on which this bat species is totally reliant. Brown long-eared bats are also susceptible to toxic accumulation of pesticides in the environment which build up over time. The brown long-eared bat's hunting style of flying close to ground level while in search of its insect prey exposes them to increased predation by both domestic and feral cats whose numbers are on the increase in Ireland. This bat species is now legally protected under Irish, European and international legislation.

**Brown rats** are omnivorous and will eat almost anything although they prefer starchy and protein rich foods, such as seeds and cereals. Their diet includes scavenged meat, fish, weeds, vegetables, nuts and fruits or any scraps which can be found within human settlements. If the weather is mild and there is an abundant food supply the brown rat can breed throughout the year otherwise births will take place between March and November. Scent information is important during this time to establish the breeding condition of individuals. Males will become more aggressive during the mating season with the use of ultrasound when fighting other males and during copulation.



**Common pipistrelle** emerge from the roost to hunt thirty minutes to one hour after sunset, their preferred prey are less active at this time but so too are predatory birds

The mating season for common pipistrelles starts in September and runs to November although mating can occur in any season. During the breeding season males become more aggressive and territorial and will establish mating sites within the roost which females will visit. As some females of breeding age do not mate every year any losses of young bats can have a detrimental effect on common pipistrelle numbers locally. The main threats to the species comes from the practice of chemical treatments of timber frames in attics which can poison an entire colony and make the area unsuitable for bats for up to twenty years. As summer roosts are established in mature tree trunks their destruction can occur with the removal of old or dangerous trees. The common pipistrelle bat species is protected under Irish, European and international law.

**Fallow Deer** are mainly grazers with a large part of their diet consisting of grasses and herbage. Seasonal variations to their diets show an increase in the consumption of acorns, beechnuts and berries in the autumn turning to tree bark, heather and holly in the winter months. They also eat planted cereal crops and can dig out root crops. Feeding times will vary depending on the location of the herd. The rutting season begins in October and runs to November. Males at this time gather and become more vocal emitting a low moaning sound which varies to a cough like belche which sounds like a groan. They will compete for display areas by digging holes in the ground in which they urinate and spread scent markings on vegetation. Fights between males are more common than those between sika or red deer males with confrontations usually occurring between bucks of similar size and stature. Large local populations of fallow deer can cause damage to commercial forestry especially on younger plantations where they eat leader shoots and strip bark off tree trunks to gain access to the inner more nutritious material. Their preference for root and cereal crops can cause damage to cultivated areas as does their trampling of young delicate plants. The recent practice of importing the closely related Mesopotamian fallow deer species to deer farms to improve the genetic variation of the herds may have a negative effect on wild populations if escapes occur as cross breeding may result in smaller animals with less colour variation and less well developed antlers. The fallow deer species is protected under the Wildlife Act although they are listed as a quarry species and can be hunted under license at certain times of the year. This will continue to be the main method of population control in Ireland.



**Feral goats** can be described as selective feeders preferring to browse rather than graze as other ruminants tend to do. They will eat a wide variety of food depending on the time of year. In summer their diet will mainly consist of grasses, sedges, rushes and bilberries. In winter they will switch to heather, gorse and shrubs. They will also strip bark from the trunks of oak, willow, spruce and pine tree species. In coastal areas they will eat seaweed. The rutting season for feral goats is long, starting in August and running until December with a peak of mating activity occurring in October and November. During the rut male goats become more aggressive and territorial. At this time the billies will develop a strong musty odour which is produced

by glands located behind the horns, near the tail and between the toes. This is added to by spraying urine on themselves to further increase the strength of the scent. Bellies will indulge in ritualized threats towards other males which include staring matches, beard shaking and horn lowering. If found in high enough concentrations locally feral goats can cause damage to commercial forestry by bark stripping, eating tree leaves and young leader shoots. In farming areas they can knock over stonewalls and ruin new grasslands set aside for sheep. They can be of benefit in some areas as a conservational grazing tool which stops the development of birch, hazel and willow species in rich grassland habitats. Feral goats are not a legally protected species and can be culled in most areas generally by farmers. This is the main method of population control but it should be carried out in an organized way nationally so as over culling does not occur. Feral goat herds found within national parks are actively conserved and managed.



**Hedgehogs** are nocturnal omnivorous feeders consuming a wide variety of insects such as beetles, caterpillars, slugs, earwigs and earthworms, they will also eat fallen fruits and fungi at sundown to dusk, they do not hunt for prey but rather find it by foraging using their senses of smell and hearing. As they hibernate each December until March they must increase their body weight significantly in the summer and autumn months requiring them to consume up to 70 grams of food each night. Hedgehogs begin breeding at one year of age in spring after their first hibernation period which can run until October, Males and females are involved in noisy mating which may be triggered by scent information. Females usually have two litters of four to five young per litter. Hedgehogs can be very beneficial to gardeners and to a lesser extent farmers as they feed on a number of plant pests including snails and slugs which reduces the need to spray pesticides. Changing land uses in the Irish countryside has reduced hedgerows and other suitable habitats for hedgehogs which have resulted in a reduction in their numbers in some areas. The hedgehog has been given basic legal protection under the Wildlife Act and Berne convention.

**Irish stoats** are skilled hunters who are not fussy in what they eat. They generally prey on rodents, birds, rabbits and insects. Male stoats will stalk and kill prey much larger than itself while the females concentrate on smaller mammals like shrews, mice and rats. The main breeding season for the Irish stoat begins in May and ends in July. An unusual adaptation for small mammals sees a long delay period between mating and the time when gestation begins, this is done to ensure that the young are born the following year in early summer so as to avail of better conditions and food supply. Irish stoats produce one litter per year with each litter containing between five and twelve young known as kits. The Irish stoat is now a legally protected animal but was once considered a vermin species. The decline of the fur trade worldwide has also helped to protect stoat populations both in Ireland and elsewhere as their pelts were highly sought for clothes making. Some Irish stoat populations have diets that are composed of 50 % rabbit so they are linked to the success of their prey species As they are now a legally protected species fencing is the most common defence used to deter hungry stoats.



**Pygmy shrews** are un fussy opportunistic hunters who primarily feed on insects which inhabit leaf litter such as beetles, spiders, woodlice, insect larvae and bugs. Pygmy shrews are usually very territorial in nature but this becomes more relaxed during the mating season when males will travel through other shrew's home ranges in search of breeding females. This shrew species breed from April to October with a peak in mating activity occurring in the month June. Due to their small size and large numbers the pygmy shrew is a favourite prey species for a number of other animals and birds in Ireland including foxes, pine martens, stoats and predatory birds like owls, hawks and eagles therefore they are an important link in Irish ecosystems. Due to their small size they are extremely sensitive to any adverse changes in the environment for example an increased use of pesticides and herbicides in some rural habitats may directly kill pygmy shrews or reduce the supply of insects on which they are totally dependent.





**Pine Marten** are largely carnivorous eating a variety of smaller mammals, birds and insects whilst supplementing their diet with fruits and berries in the autumn period. Their preferred prey items are hunted at ground level and include wood mice, young rabbits and hares, rats, voles and squirrels, they will also eat birds, frogs, beetles and earthworms when available and prefer honey, berries and mushrooms in the winter months. Pine martens breed once a year with the mating season running from July to early September when their food sources are abundant. Mating can be frantic and noisy as they will emit shrill cat like yowls during copulation. Females may mate with several males while she is in heat if the area has a high

population density. They were in decline throughout the 19th century in Europe due to heavy deforestation of their habitats and due to the practice of trapping for their fur pelts. For a time pine martens were considered vermin and their numbers were further reduced by landowners and gamekeepers who saw them as a threat to game birds and their eggs.

**Red foxes** are non-specialized carnivores eating a diverse range of food types depending on the season and location of their habitat. They are largely solitary nocturnal hunters spending most of the day hidden in sheltered lie up nests, they will be emerge at dusk and remain active for most of the night. They are highly opportunistic feeders who use a variety of hunting techniques. In Ireland the red fox mating season starts in January and ends by the middle of March. Foxes are largely monogamous and can live in small groups comprising of one adult male, one dominant vixen and several younger non breeding females. During the mating season foxes become more vocal with courtship rituals involving body postures, scent spraying and fighting among males common Red foxes are not considered endangered in Ireland or in the rest of Europe. They benefit cultivated areas as they reduce the numbers of crop damaging rabbit and rodent species. They have long since been considered as pests as they prey on some local populations of domesticated poultry and on ground nesting game birds during the nesting season. Irish red foxes are only afforded the most basic legal protection under the Wildlife Act.

