

## Mammals

It is perhaps surprising that we have a fair selection of mammals in the parish, since apart from the ubiquitous and highly visible Grey Squirrel and Rabbit, most mammals are hard to see, being either nocturnal or frequenting dense cover or hidden underground. All of our mammals have fascinating and uniquely different ecologies but it is only possible to mention a few highlights of this for each animal in this chapter.

The **Grey Squirrel** would have been quite unknown to Walker, since it was first introduced to this country from North America in 1877, the year after publication of Walker's book, with subsequent introductions up to 1929. In fact Walker lists our native Red Squirrel, now long since vanished from this part of the country, being confined today mainly to a few conifer forests, especially in Scotland. It has been outnumbered and outcompeted by the more aggressive Grey Squirrel which has become a serious pest in lowland Britain, being a familiar sight in our parks and gardens, even in the large cities. Being an incessant nibbler, characteristic feeding signs of Grey Squirrel include stripped bark on trunks of hardwoods, cut tree shoots and buds, split shells or husks of nuts and toothmarks on fungi. Surplus food, especially nuts, are buried in the ground. In the village, Grey Squirrels transport and bury large numbers of walnuts in autumn and are responsible for these tree seedlings springing up in many unwanted places ! There have also been at least two sightings of black squirrels in the village in the last 2-3 years; these being melanistic Grey squirrels, rather than a different species. Small colonies of black squirrels exist in Hertfordshire and one or two other counties.

Grey Squirrels often indicate their presence with a loud scolding cry of 'chuk-chuk-chuk' and can be seen bounding wildly between trees, across roads and gardens and chasing one another frenetically round tree trunks and along even the smallest branches. They can achieve speeds of up to 18 mph, with bounds of 1-2 metres and can even swim. Large untidy dreys are built in tree tops from twigs, lined with grass, dry leaves, moss and any available soft material. Twice a year, in early to mid spring and mid to late summer, six weeks after mating, the female produces young, usually three to a litter. These are born naked, blind and deaf, thus being totally reliant on their mother's milk for several weeks. Being highly adaptable to the lowland environment, with an ability to exploit a wide range of readily available food sources and having few natural predators, are some of the reasons for the Grey Squirrel's marked population spread. It will obviously be with us for a long time to come since the few attempts at its control have not met with success.

Perhaps one of our better-loved mammals is the **Hedgehog**, which is thoroughly at home in our gardens. These provide good shelter and ideal winter homes under compost heaps, behind sheds or under hedges, with a plentiful supply of food in the form of beetles, slugs, worms, caterpillars, earwigs and millipedes. The Hedgehog has been around far longer than we realise - over 15 million years in fact - far longer than the woolly mammoths and sabre-toothed tigers that once shared their terrain. With stoic adaptability and being well protected by their spiny coats, hedgehogs have fared much better than most small mammals in Britain. If you stand quietly in the garden on summer evenings, you can frequently hear the nearby rustle of an approaching hedgehog through the undergrowth. It often passes very close if you keep completely still. One problem that has caused unnecessary mortality in Hedgehogs has been the use of garden insecticides and slug pellets, which accumulate in the body fat of the animal from invertebrate food items. These poisons are then released during winter hibernation when the animal lives off its fat stores to provide energy. Many hedgehogs succumb as a result. About one third of the hedgehog population dies each year, the mortality of the young being very high during their first winter. One way we can assist their continued survival with us is to leave sheltered corners in our gardens undisturbed, to try and avoid using slug killers and other noxious chemicals in our gardens and by perhaps providing a source of water in hot dry summer weather. The old practice of providing a saucer of milk is not recommended as this is not part of the animal's normal diet and may cause intestinal upset.

Part of the enchantment of summer evenings in the village, around twilight when the heat has gone out of the day, is the appearance of one of our flying mammals, the **Pipistrelle** bat. These have undergone marked decline in recent decades and all 15 species of bat in this country are

now protected by law. Normally these animals are only seen in small numbers, often as a lone individual hawking for insects (mainly moths and caddisflies) around our gardens. They use a sophisticated echolocation system for pursuing their flying prey, which is inaudible to the human ear, but can be made audible by means of a hand-held bat detector. Each species of bat has its own electronic 'signature' in terms of the frequency and pitch of the echolocation signal. Analysis of this signal for the Pipistrelle has revealed that there are in fact two species, transmitting echolocation signals at slightly different frequencies ! The Pipistrelle's flight pattern is fast and rather jerky, often flying low over the ground, twisting and turning as it searches for prey. All bats have body temperatures that are not constant but are dependent on their surroundings and whether they have eaten. Roosts are therefore chosen carefully and are changed during the summer, depending on the temperature and whether there are non-flying babies which are carried to a new nursery roost by their mother.

Nearly half of all Pipistrelle colonies roost in houses, especially more modern ones (under 25 years old), usually in the loft space, in hollow walls or behind hanging tiles or loose chimney flashing. It is thus paramount that bat roosts are not disturbed if work is being carried out on a house. Individuals and small groups of Pipistrelles may select hollow trees or occasionally more exposed sites such as branches or under leaves as roosts.

There is a bat roost in the old icehouse in the grounds of Derrymore House in the village, which has been checked periodically under licence by a member of the local bat group. Walker also listed (Brown) Long-eared Bat being present in Dry Drayton; it may still occur here as the species is found elsewhere in Cambridgeshire and it is fairly widely distributed in England. In 'Dry Drayton Remembered' by John Hacker he writes also of a colony of Noctule bats *'in the broken poplar trees by the stream one field back from the road'* at the time of his schooldays.

Of our larger mammals, **Fox**, **Badger** and **Muntjac** all occur in the parish. Foxes are fairly frequently seen, even in broad daylight right in the centre of the village. Their eerie and frightening mating calls can often be heard at night in the winter. Ruth Edwards told me that the Cambridgeshire foxhounds used to meet in the village and indeed there is an old photograph of the hunt, dated 1951, assembling outside the former Three Horseshoes pub in the High Street, in the Cambridgeshire Collection. Regular shoots were also formerly organised to control the fox population although it is now known that the main determinants of fox numbers are availability of food and disease and thus foxes will establish their own natural population size in an area.

There are several **Badger** setts in remote corners of the parish, all on private land, although not all are actively occupied. On one occasion a badger was seen in Pettitts Close in the early hours of the morning and I have had reports of badgers crossing the road at night in Madingley village. Fortunately no casualties have been reported due to road deaths but this is always a concern with the volume and speed of traffic on rural roads everywhere nowadays. A National Badger Survey conducted in the early 1990s estimated that there were approximately 43,000 badger social groups in Britain, but that persecution had significantly reduced numbers in East Anglia, as well as land use changes. Badgers thrive best on the patchwork landscape of small fields, hedgerows, woodlands and copses that typify much of lowland Britain in the south-west, so our large arable prairie-style fields in this part of the country do not ideally suit it. The badger now needs all the help it can get to allow it to survive here.

Another naturalised animal that would have been quite unknown to Walker is the **Muntjac deer**, which is not native to Britain, having been brought from southern China in 1900 by the Duke of Bedford to his estate at Woburn in Bedfordshire. From there they spread out to colonise surrounding counties and now every reasonable-sized wood in the vicinity can be more or less relied on to harbour Muntjac. For cover they also favour bramble thickets where these occur in newly planted woodland or on wasteland. The lack of severe winters in recent years has also contributed to the Muntjac's success. Occasionally they can be seen crossing fields in the parish and from time to time they even venture into village gardens. Only the bucks have antlers, small spikes which are short in relation to the body, which is the size of a largish dog. They also have protruding canine teeth, used for defence and fighting. The does normally breed continuously, being sexually mature at seven months. The first Muntjac to arrive in a new area

is usually a buck, for these travel greater distances than does. Their bark is very distinctive and can often be the clue to an animal's presence before it is seen.

There has also been the occasional record of **Chinese Water Deer** in the village. Again these are naturalised animals, originating from central and north-east China and Korea, which are escapees from the Woburn Park (where they were introduced about 1900) and other collections. They are slightly larger than Muntjacs, but with wide rounded ears and blunter snouts than this species. They have no antlers but the bucks have protruding tusks which are sometimes visible in the field. Although fairly shy and retiring, these deer have now established in an arc from Norfolk through Cambridgeshire, Bedfordshire and Hertfordshire, down to west of London.

The **Rabbit** is only too familiar to us to need much description. It is seen in greatest numbers at night or in the early morning, when numerous adults and young can be seen on the road verges. It was introduced by the Normans who farmed rabbits as a source of meat. Of much greater concern is the **Hare**, which has suffered a dramatic decline in its fortune during the 20th century, with over three-quarters of the population having apparently disappeared. Its status is now described as 'vulnerable'. Introduced about 2000 years ago to Britain, the Hare has become part of our folklore and history, being mentioned in Aesop's Fables and Shakespeare's works. It would be a tragedy therefore if this animal were allowed to decline to the point of extinction. The Hare is very vulnerable to predators and agricultural machinery (many leverets are killed by silage cutting) and it has probably suffered from destruction of cover. Research has also suggested that food stress, caused by consumption of winter-sown cereals, which are too woody and full of indigestible substances such as terpenes and phenols, and which may contribute to poorer breeding success, is another factor. The large open fields in the south of the parish usually turn up one or two Hares still and they can be seen right out in the open, either grazing on winter cereals or sitting tight in their 'forms' on the bare earth. Unfortunately, illegal hare coursing has aggravated the Hare's predicament and is still prevalent in southern Britain, including Cambridgeshire, although there have fortunately been no known incidents in Dry Drayton. Repeated national Hare surveys to assess its current status and research into the reasons for its decline are continuing.

Our small mammals are more difficult to study as they are largely nocturnal and secretive. The use of Longworth live traps is the best means of assessing their presence. This has so far not been undertaken in this area but we have confirmed records of some species and it is likely that several other species are present in the area but are overlooked. Without doubt the **House Mouse** is with us and causing its usual mischief, especially in winter in dried food stores and amongst stored clothing in garages and outhouses. A note in Walker's book states : '*mice very destructive on crocuses, peas, beans, rhubarb March 1877, or perhaps rabbits in the case of the rhubarb, as their runs and hair discovered in manure around said plants*'. Unlike the other small mammals, which are true natives, the House Mouse was probably introduced by man to this country some three millennia ago and has thrived ever since. House Mice are smaller, greyer and smellier than the other mouse species, staying indoors most of the time, although they do move out into the fields during the summer when food is plentiful. They cannot survive the winter outside, not because of the cold, but because of competition with the better-adapted **Wood Mouse**, which we also have in the village. This was referred to as Long-tailed Field Mouse by Walker. It not only resides in woodland, but in gardens, crop-fields and hedgerows, as well as moorland and sand dunes in other parts of the country. The Wood Mouse's fur is brownish-grey on the topside, contrasting with a white underside. It has relatively large eyes and ears, which helps it sense danger when foraging for food at night. Wood Mice will sometimes climb bushes to find fruit. The other two mouse species that we probably have in Dry Drayton, but needing confirmation, are the Yellow-necked Mouse and Harvest Mouse. Certainly the latter is listed by Walker, who also recorded Dormouse, but this is unlikely to be still present, the habitat being unsuitable for it now.

Voles have rounder, blunter faces than mice and there are two land-based species in Britain - **Bank Vole** and **Field (or Short-tailed) Vole**. They live in burrows and move along runways hidden in the long grass. Bank Voles prefer hedgerows, scrub and burrows in gardens and woodland where there is plenty of undergrowth. Field Voles live exclusively in long tussocky grass. There are some differences in coat colour, body size, tail length and dentition that help

tell them apart. It is likely that both voles are long-established in the area, but I have only a definite record for Bank Vole. The **Water Vole** belongs to another genus (*Arvicola*), closely related to the Field Vole, but is a larger size, has a longer tail and more prominent glandular regions on the flanks. It can be distinguished from the Brown Rat by its shorter tail (half to three-quarters head and body length), shorter ears and muzzle. There are definite recent records for Water Vole in the village, in at least two established large ponds. Its presence in an area can be characterised by its droppings, the presence of holes in the bank or under tree roots below or above water level, and closely grazed circles of grass in the vicinity of the holes leading to the underground chambers. Water Voles are very territorial, with latrines marking their boundaries. As is well-known, the Water Vole is another mammal that has suffered a huge decline in its population over the period since about 1975. A reduction in semi-natural grassland and corresponding increase in tilled land are two of the main reasons, although the introduced Mink has caused enormous predation of Water Voles too, the female Mink being small enough to enter Water Voles' burrows and take the young. They commence breeding in April or May through to October and the young have to attain a body weight of around 170 gm to survive winter. Along with many other counties, the Cambridgeshire Wildlife Trust is surveying the county's rivers, streams and ponds for signs of Water Vole in order to establish its distribution.

Of our three native shrew species - Common, Pygmy and Water Shrew - all are likely to be present here, although I have definite records only for **Common Shrew** and a possible sighting of **Water Shrew**. Common Shrews sometimes advertise their presence by the sound of high-pitched squeaking from the undergrowth. Shrews are insect eaters, unlike mice and voles, and have long pointed snouts with rows of fine pointed teeth to grip and crunch their prey, instead of the gnawing and grinding teeth of the rodents. As well as insects, shrews also take spiders, snails and woodlice. They are active day and night, winter and summer, and have to feed every two hours or so, or otherwise die of starvation. This is because the smaller an animal is, the higher is its metabolic rate, and the greater the proportion of its food that has to be burned just to keep warm. This is exemplified by the Pygmy Shrew, Britain's smallest mammal, at only 3 gm, compared with the 7-8 gm of Common Shrew and 20-30 gm of mice. Water Shrews weigh 15 gm and feed on land or in ponds and streams, catching aquatic snails and insects which they bring ashore to eat. Their upper side fur is almost black, in comparison with the greyer-brownish fur of the other two shrews, and their bellies pure white. They have bristles on their feet and under their tails to assist swimming. When they dive, the fur traps a layer of air to keep them warm, and this gives them a beautiful silvery appearance under water due to the trapped air bubbles.

With the possible exception of the Fox, the **Stoat** is the most widely distributed British carnivore, being also the only one to regularly take prey larger than itself. Occasionally seen crossing short open stretches of land or the parish roads, the Stoat can be distinguished from its smaller cousin, the Weasel, by its larger size and black-tipped tail. Stoats are at home in virtually any environment, their population being governed by availability of prey. Male stoats hunt by day and night over large territories - average home ranges being between 10 and 200 hectares (25-500 acres). However, it uses only a small part of its home range at one time, before moving on. Thus it has several dens in which it takes refuge scattered throughout its territory. Rabbits are an important element of the Stoat's diet, but it also takes birds, voles and other small prey. When confronted by captive birds such as chickens or pheasant chicks, Stoats will kill surplus to their needs. This makes the animal unpopular with gamekeepers and poultry farmers, although they do keep in check the Rabbit population and rats too.

**Weasels** are smaller and slimmer than Stoats, but are still fierce and relentless predators of Rabbits, and game birds and their eggs, as well as chickens and small rodents. Scientists have calculated that Weasels consume up to 30% of their body weight daily in prey. Males and females have separate territories, the males marking theirs with scent from musk glands beneath their tails. There are two breeding seasons per year, the young being born six weeks after mating. The mother Weasel continues parental care by teaching her offspring hunting and killing techniques and they remain together for up to three months. On one summer's day I witnessed what appeared to be a family 'chain' of weasels scurrying across Scotland Road in a line of five or six, melting into the verge as quickly as they had suddenly appeared. An observed reminder of the brutality (to us) of weasel behaviour was noted by Evans in Walker's book : *'Weasel noticed March 27th 1877 to have seized one of a litter of four young rabbits out of a*

*hole among the trees by the side of Elsworth Way, and having dispatched the first, to re-enter the hole after the next. The remaining three meantime that were just able to see ran about in the grass terrified, until the weasel emerged and, after hunting about, was seen to 'settle' a second. No doubt the remaining two subsequently fell victims'.*

Rarely appearing above ground, **Moles** are the most solitary mammal, living in a labyrinth of tunnels beneath the soil. They usually ignore one another, or otherwise fight aggressively when they do meet until the weaker one retreats. At the time Britain's land mass separated from mainland Europe about 7000 years ago, the Mole was already living here in the deciduous forests which at that time clothed the land. Now it is an inhabitant of pasture and grasslands, including lawns, where its tunnels and molehills ruin many a carefully manicured golf course or homeowner's proud greensward. They are common at Duck End Farm, for example. Being equipped with powerful shoulders and forearms, which act like spades, Moles shift prodigious quantities of earth, such as 6 kg (13 lb) in 20 minutes. This is equivalent to a 70 kg man moving more than 4 tonnes of earth ! Once excavated, the Mole runs up and down its burrows, which are usually between 100 and 200 metres long, picking up worms, insects and other invertebrates. People sometimes come across the corpses of moles above ground although I have not heard of actual recent examples of this in Dry Drayton. At the time when gamekeepers and farmers actively sought and killed moles, Walker's book notes : '*On the afternoon of April 27th noticed five moles strung up to a willow by the ditch in the Three Corners meadow, and a sixth that had fallen off underneath with loose earth heaped up round it, which led me to the conclusion that the burying beetles were then at work. On turning it over, I discovered a single specimen of Coleoptera Silphar rugosa, Necrophorus humator*'. Nature's undertakers, the burying beetles, are continually at work.

Almost certainly the least favourite local mammal is the **Brown Rat**, which arrived late by comparison with most other mammals, jumping ship from the Baltic some 250 years back. Before its arrival the common rat species in Britain was the Black Rat, also an introduction (from the Mediterranean) sometime in the 11th or 12th century. A carrier of plague and death on a massive scale, the black rat now has a very restricted distribution. The key to the Brown Rat's success here is its great versatility and phenomenal reproductive ability, breeding being more or less continuous in an environment with plenty of food. It is also better adapted to living out of doors in this country than the Black Rat, our climate holding little threat to this native of the great Russian steppes. As both a parasite and a scavenger, the brown rat depends on man for food and shelter. Although towns and cities hold strong populations, it also lives in the open countryside and is found around farm buildings, warehouses and sewers. Rat control is only partially successful, since new animals always move in to take the place of poisoned rats and it is difficult to imagine mankind's existence on this planet without the constant accompaniment of rats.

The only other mammal mentioned in Walker's book was the Polecat ('*very rare, but has been seen, I am told*'). Once widespread throughout Britain up to the 19th century, the polecat was gradually exterminated over most of the country and by 1950 was restricted to an area around Aberystwyth in Wales. It is now slowly expanding its range eastwards from its Welsh strongholds and there has been at least one sighting in recent years in Northamptonshire. It is therefore possible that this handsome mustelid (stoat, weasel and mink family) with the black and creamy-white striped face could once again colonise Cambridgeshire.

With the important exceptions of the Water Vole and Hare, our mammals therefore seem assured of a place in the village and countryside well into the next millennium. It is to be hoped that better understanding of the ecology of the two threatened species will result in a reversal of their fortunes too, as they are an inseparable part of Britain's wildlife.