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ISBN 978-1-84754-010-2

Catalogue code NE24

Written by The Mammal Society and Mammals Trust UK

Designed by RR Donnelley

Front cover image: The hedgehog should be welcome in every garden.
Dave and Brian Bevan

Mammals in your garden

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Mammals in your garden

Far more people are now gardening with wildlife in mind, and mammal visitors are often seen as a real bonus.

Almost all gardens, including those in the heart of any city, will receive at least occasional visits from some mammals. The closer you live to places where mammals are often found – woodland, a park, a railway line or piece of rough ground – the greater the likelihood of a variety of mammal visitors. But wherever you are, and whatever the size of your garden, with a little work and patience you should be rewarded with sightings of at least some of our native mammals.

Most species of British mammal are nocturnal or crepuscular (active at dusk and dawn) and many visitors, especially the smaller ones, will go unseen. However, they will often leave signs that they have been present, such as the remains of their prey, marks in the ground, hairs or droppings.

In 1998/9, a survey of mammals in the garden was carried out by The Mammal Society and the People's Trust for Endangered Species. This showed that the most common garden visitors that people were aware of were mice, grey

squirrels, hedgehogs, foxes and bats. However, shrews and voles are often present and several other species can also make an appearance. Some gardens, even in urban areas, are visited by badgers and deer; and weasels and stoats – together with the rather less welcome rabbits, moles and rats – may also be seen.

This leaflet will help you find out more about the mammals coming to your garden. It offers some tips about making your garden more appealing for mammals and suggests what you can do to deter undesirable visitors, or at least to control the damage they sometimes cause.



The hedgehog – one of the most common visitors to our gardens. Dave and Brian Bevan

Mammals and the law

Of the mammals likely to visit gardens, badgers, the hazel dormouse and all species of bat have full legal protection. This means they may not be caught, disturbed or killed without a licence and that their roosting and breeding places may not be interfered with. The burrows of water voles are also fully protected, as are the animals themselves when they are inside them. Contact Natural England for more details (see Contacts, page 29).



Slugs are among the many creatures eaten by the common shrew. Dave and Brian Bevan

Is it a mouse?

The small mammals that you are most likely to find in your garden fall into three broad categories: shrews, voles and mice. Shrews are classified as insectivores (together with hedgehogs and moles) while voles and mice are rodents.



The pygmy shrew is only about 6 cm long and weighs less than 4 g. Derek Middleton/Avico Ltd



Bank vole. Dave and Brian Bevan



Short-tailed field vole at entrance hole to nest. Dave and Brian Bevan



The house mouse is quick to track down any food spillages! Dave and Brian Bevan

The tiny animals with long pointed noses often left dead by cats are shrews. These eat invertebrates such as worms, snails, woodlice and spiders. Shrews taste unpleasant to many predators and often remain uneaten – although owls are undeterred!

Both the common shrew and the smaller pygmy shrew like dense vegetation through which they make 'runways'. Their nests are made of woven grass. To stay alive, both species need to keep feeding virtually all the time, with only brief periods of rest.

Mouse-sized mammals with blunt noses and short tails are voles. They tend to be more active in the daytime and prefer long grass and unkempt

areas. Bank voles are far more likely to be seen in your garden, but short-tailed field voles will turn up in rural areas. The reddish-furred bank voles eat herbage and berries but will also take insects. Short-tailed field voles are generally tawny in colour and mostly eat grass.

Water voles are occasional garden visitors in some areas but are rarely found far from canals or streams. Sadly, these voles are now far less common everywhere, the decline in their numbers being mainly due to habitat loss and predation by American mink.

Not all mice found indoors are house mice. In more open suburbs and rural areas, wood mice and yellow-necked

mice may also move into a house, especially in the autumn. All three species eat seeds by preference and thus have a liking for cereals, often spoiling food as a result.

You can catch mice in a humane trap – these are available from many pet shops – but ensure you check it regularly. Release captured animals a couple of kilometres away or they will return. However, mice 'dumped' in the countryside like this will probably die fairly quickly so it may be kinder to use an old-fashioned snap trap. An alternative is an ultrasonic deterrent to keep mice out of the house altogether. However, these devices are rather expensive and their efficiency is not fully proven.



The rare water vole. Paul Keene/Avico Ltd

True mice, either brown (such as wood mice and yellow-necked mice) or grey (the house mouse), have pointed noses, long hairless tails and large ears and eyes.



The yellow-necked mouse closely resembles the wood mouse but is larger. Dave and Brian Bevan



The harvest mouse was first described by the famous eighteenth century naturalist, Gilbert White. Dave and Brian Bevan

More rarely seen is the tiny, red-brown harvest mouse which occasionally turns up in rural gardens. Its tail is its most distinctive feature as it can be used as a fifth limb to hold on to grass or small twigs. As is the case with some monkeys, this prehensile tail enables harvest mice to move rapidly through vegetation. Harvest mice make round nests suspended in clumps of grass at about knee height.

Hazel dormice

A furry tail and golden coat distinguish the tiny hazel dormouse from true mice. More like a small squirrel than a mouse, the dormouse has large ears and prominent eyes. These attractive



Hazel dormice may take advantage of bird baths and feeders. Betty McKay

animals are found mainly in the south, the south-west and the west midlands with isolated populations elsewhere, especially where they have been re-introduced. They may turn up in garden hedges and are sometimes attracted into gardens to feed on nuts and seeds from bird feeders. Dormice have been known to hibernate in pampas grass and even garden sheds!

Lewis Carroll's portrayal of the dormouse in *Alice's Adventures in Wonderland* was fairly apt. Dormice have a long hibernation period, lasting from October to April, and, even in their active season, sleep extremely deeply during the daytime in a state known as torpor. They eat a variety of foods, concentrating on flowers in the spring, invertebrates in the early summer and fruit and nuts later in the year.

Hedgehogs

The hedgehog is our only spiny mammal species, the spines being modified hairs. Gardens with a lot of cover offer them ideal homes and their finger-sized black droppings, containing glistening beetle parts, may often be seen scattered on the lawn. Hedgehogs are very useful animals to have around as they consume large quantities of snails and slugs. They will also take a variety of other foods including insects, fruit, worms and even birds' eggs.

The hours immediately before midnight see most hedgehog activity. They can

be surprisingly noisy when feeding and even more so when courting! The young – generally four or five in a litter – are born in a nest of grass, leaves and moss.

Hedgehogs can move quite quickly, at up to 40 metres a minute (just under two miles per hour) when the need arises, making use of their surprisingly long legs. This is not fast enough, however, to allow them to escape from their major predators, foxes and badgers. Foxes mainly kill young hedgehogs in their nests whereas badgers take adults. This may be upsetting but it is, after all, part of the natural cycle and there is no real reason to interfere with it. You can, however, provide hedgehogs with fox- and badger-proof nesting sites made



Gardeners with weapons: another danger to hedgehogs. Dave and Brian Bevan

with bricks or stout timber and with a long entrance tunnel. For further information, contact the People's Trust for Endangered Species. (See Contacts, page 29).

Hedgehog-friendly gardeners will leave at least some autumn leaves in quiet corners where the animals may forage, shelter or even hibernate. Besides ponds and bonfires (see pages 22 – 23) the main dangers to hedgehogs in gardens come from netting and strimmers. All these hazards can be greatly reduced by taking a few basic precautions. Hedgehogs can easily become trapped in garden netting so peg down edges tightly and remove it when it is no longer needed. When

using strimmers, disturb the target areas with your feet beforehand to ensure that any hedgehogs sheltering in the long grass or shrubby edges wake up and move out of harm's way. This is extremely important as carelessly-used strimmers can inflict hideous, often fatal, wounds on hedgehogs.

Rats

Brown rats have large eyes and ears and long scaly tails. They dig or gnaw holes and leave hard, black, cylindrical droppings. They are often attracted to food that has fallen from bird tables or been thrown on to compost heaps and, since they emerge during the daytime,



Brown rats appreciate any food left overnight on bird tables. Dave and Brian Bevan

they are more likely to be seen in the garden than other rodents. In contrast to the brown rat, the black rat or ship rat is now a rarity, almost exclusively confined to a few ports.

Putting out bird food can attract rats. This problem can be avoided by using specialist, hopper-type, hanging feeders or a bird table that keeps the food out of their reach. If you feed birds on the ground, try to gauge the amount that they will take in a day and restrict your offerings to that quantity.

If you find rats living in your compost heap, keep them out with fine chicken mesh and a strong lid. Remove potential hiding places such as old buckets and flower pots. If rats become a problem, contact the pest control department of your local authority.

Bats

Growing warmth from the sun wakes bats from hibernation in March or April. In many gardens, they can then be seen at dusk – and occasionally even in daytime – right through to October or even later. Their diet consists entirely of insects which they detect by echo-location, usually in flight. The sound waves issued through their mouths or noses help them to navigate, as well as to find food.

Britain has 17 species of bat. Many of these have been recorded in gardens and several species may roost in houses, the most likely being



The three species of pipistrelle in Britain are distinguishable by their calls but only by experts using specialised equipment. Dave and Brian Bevan

pipistrelles and the brown long-eared bat. Bats normally remain hidden during the day and their small, black droppings in your roof space often provide the only evidence of their presence. Mice droppings are hard but those of bats consist of insect skeletons and crumble to dust if rubbed between finger and thumb. All bat species and their roosts are protected by law because they are so vulnerable. British bats are quite harmless to humans and should not be disturbed. If you are doing work on your roof and find bats, contact your nearest Natural England



Ready-made bat boxes may encourage brown long-eared bats to your garden. Frank Greenaway

office for advice (see Contacts, page 29). For more information, refer to the Natural England booklet, *Focus on bats*.

Moles

These interesting creatures spend virtually all their lives underground. Although they rarely live permanently in gardens without large lawns or orchards, they can be found in gardens on the edge of built-up areas where the enriched soil offers visiting moles a plentiful source of earthworms, their main food. This is particularly true of gardens near grassland or woodland, especially in the summer when the young are searching for new territories.

A mole digs its tunnels mainly to create a giant underground trap for invertebrates. The familiar molehills appear when they dig new tunnels to extend their 'trap' or search for moles of the opposite sex. You can kill moles using traps but the use of strychnine is now illegal.

Ultrasonic deterrents do not scare moles away and neither does the noise made by the wind blowing over the top of a bottle sunk into a mole tunnel – a commonly cited homespun deterrent! The live-trapping and removal of moles is also unlikely to be effective as other moles will probably move into the empty tunnels and may even extend them.

It is better to live with the problem and remove molehills as they appear, generally in the autumn and winter



New molehills are often dug by young animals establishing territory. Dave and Brian Bevan

when it is damp and easy to dig. Why not use the soil for potting plants? Leaving moles undisturbed means that they are less likely to dig new tunnels. Moles can actually benefit the garden by eating harmful insect larvae like leatherjackets and helping to drain and aerate heavy soils.



Moles use their hugely powerful front legs like shovels. Dave and Brian Bevan

Stoats and weasels

These predators are probably more frequent visitors to gardens, especially in rural areas, than most people suppose. Often they come in search of prey like voles, moles, rats or mice but they may also take fish or frogs from ponds. They can be active in daytime but are rarely seen, preferring generally to stay in the cover of long grass or thick hedges.

Both stoats and weasels are small, long and lithe. Each species has a gingery-brown coat and a cream or white belly. The larger stoat, which takes many rabbits – especially young ones – has a very distinctive black tail tip. Both species climb well and stoats sometimes scale creeping plants like ivy to raid birds' nests in the roof spaces of houses. They may then take



This is a characteristic stance of the weasel, probably enabling it to put its acute sense of smell to best use. Dave and Brian Bevan

up residence and even breed there, leaving behind long, curly droppings full of their victims' fur or feathers.



Stoats are generally longer than weasels and may be twice their weight. Derek Middleton/Avico Ltd



The red squirrel is now a great rarity in England. Paul Keene/Avico Ltd

Squirrels

In most of England, the only squirrel you are likely to see will be the grey squirrel, introduced from North America in the nineteenth century. These animals are extremely agile, using their long fluffy tails to assist balance. Some are tinged with ginger, leading people to confuse them with our native red squirrels, which are rich chestnut in colour and, in winter, have distinctive red tufts of fur on the tops of their ears. Grey squirrels also spend much of their time on the ground, whereas the native reds generally remain in trees. Red squirrels in England are now largely confined to a few northern areas and, in the south, to the Isle of Wight and a couple of islands in Poole Harbour. Both species

build nests (dreys) which resemble large, domed birds' nests but with the leaves still on the twigs.

Squirrels may enter houses by climbing creepers or adjacent trees, gaining access to lofts where tiles or bricks are missing. Lofts provide warm, safe places to give birth, but – once installed – squirrels can do considerable damage, chewing wiring, wood and even pipes. Live trapping them is not an option. It is unlawful to release a grey squirrel into the wild and any animal captured has, therefore, to be humanely killed. Excluding them altogether is preferable.

Squirrels tend to be active in mid-morning and mid-afternoon so this is the time to block all their entry points



The agility of grey squirrels means they can get virtually anywhere. Dave and Brian Bevan

with balls of chicken wire. Wait until all the squirrels have gone out and stuff wire balls tightly into the holes. Ensure that all the squirrels have left and that there are no nests containing young in the roof-space. You will not want to shut their mother out and trap them inside to starve. If there are young, wait until they are old enough to go out with their mother before sealing the entrances. Grey squirrels have two litters a year, which means they will have dependent young for much of the spring and summer.

Grey squirrels eat a wide range of food, including bulbs, insects, fungi, fruit and

birds' eggs. Their liking for seeds has led them to become adept at raiding bird tables, even overcoming physical obstacles. Why not provide your squirrels with their own feeding station and make it a real puzzle so they have to work out how to reach it? This way you can keep them off your bird feeders while admiring their ingenuity.

There are now several genuinely squirrel-proof bird feeders on the market. Alternatively you can mix squirrel deterrents with bird food. One is made with peppers which repel squirrels but not birds.

Badgers and foxes

Badgers are unmistakable, with their white faces and broad black stripes running through their ears and eyes and down to their noses. Although each hair is black and white, their body fur appears grey or even brown. They have short powerful legs and large, five-clawed feet.

Evidence of the presence of badgers includes small pits called 'snuffle holes' produced when they dig for earthworms and other invertebrates. Occasionally, they may dig a small sett under your shed. Badgers are less active in winter but, unlike some mammals, do not hibernate. Cubs are usually born in late January or February but stay underground for about two months.



Fox on hen house in search of an easy meal. Dave and Brian Bevan



Badgers are present in every English county and are found in the parks of outer London. Hugh Clark/Avico Ltd

Foxes are now a common sight in many gardens, perhaps more so in urban areas. They are highly intelligent and extraordinarily adaptable animals, eating whatever is available, animal or vegetable. Whereas badgers are very rarely seen before dusk, foxes are bold enough to turn up at any time, although they are generally nocturnal. Cubs are born in March and remain in the den (called an 'earth') for almost a month before emerging for exercise and play.

Both badgers and foxes come to gardens in search of prey items such as earthworms (the badger's main food), beetles and crane fly larvae. Their droppings are distinctive. Fox 'scats' often have a 'tail' at one end and are



Badgers can rapidly create havoc with a rubbish bin! Dave and Brian Bevan

left in prominent places, while badger droppings are rather loose and left in shallow holes known as dung pits.

Mammal droppings may contain the eggs of intestinal parasites. Those of fox cubs especially can contain the eggs of the roundworm *Toxocara canis*. In theory, these eggs can be passed to children. There is not a single known instance of this happening but droppings should nevertheless always be removed from play areas.

If you want to discourage foxes and badgers from visiting your garden, avoid using fertilisers containing animal remains, such as fish, blood or bonemeal. Both species have an acute sense of smell and will come in search of the source. For the same reason, put

heavy lids on your dustbins and compost bins and block any large access points to the garden. Remove items leaning against fences and fill in gaps underneath them. Some of the commercially available animal repellents may work well and a radio tuned to a voice station may also be an effective deterrent. An extreme measure would be an electric fence. These fences need to have two strands set 7.5 cm and 20 cm above the ground. You can get a fence – and a 12 v battery to power it – from agricultural suppliers, who will also advise you how to erect it. *Unearthing the urban fox* has more details (see Further information, page 29). Where badgers are causing damage to land or property, the Department for

Environment, Food and Rural Affairs (Defra) can issue licences for measures that will exclude them from their setts and prevent them from returning. Contact Natural England for details (see Contacts, page 29).

Deer

Deer are frequent garden visitors in certain parts of the country, tempted in to eat tasty flowers and shrubs. Of the six species now found wild in the UK, the most likely to be seen in gardens are the roe deer and the muntjac.

The roe deer is one of our two native deer species, the other being the much larger red deer. Roe deer are a bright, foxy red in summer and dull grey in winter. Males have short, gnarled, spiky antlers. You might also see their



Roe buck at rest. Dave and Brian Bevan



Young roe deer. Paul Keene/Avico Ltd



The introduced muntjac is now common in much of southern England. Dave and Brian Bevan

distinctive droppings, which often look like little fat wine bottles with a dimple at one end and a point at the other. Their footprints, called slots, resemble those of sheep but are more pointed.

The muntjac is our smallest deer, standing no higher than 42 cm at the shoulder – about the height of a labrador. Chestnut in summer and darker brown in winter, it has two distinctive black lines running down its forehead. Males have two short, single-spiked antlers and very short tusks protruding below the upper lip. Muntjac escaped from the Duke of Bedford's estate at Woburn more than 100 years ago and have since spread to much of southern England and the Midlands. They are now turning up in suburban and even urban areas.

Making gardens more attractive to mammals

For many years, it was fashionable to have orderly, manicured gardens with deadwood, cuttings and fallen leaves



Weasels like to hunt in long grass. Dave and Brian Bevan

promptly cleared away – the very opposite of what mammals need! However, with the gardening public's interest in wildlife developing so rapidly, more people now have a greater understanding of its needs and are more tolerant of a degree of untidiness. Ideally, you should allow at least one area of your garden to go just a little wild, cutting shrubs and trees back less frequently.

If you have a large lawn, you could consider letting one part of it grow long, only mowing it every couple of years. This may encourage field voles into your garden to live in the mat of dead stems at the bottom of the grass clumps. Undisturbed areas will give cover to shy, elusive mammals and will also offer nest building materials – in the form of twigs and leaves – and quiet corners in which to build them. These refuge areas will provide small mammals with a base from which they can venture into neighbouring gardens and other areas to forage, the animals returning to your garden to rest, hibernate and even breed.

Coming and going

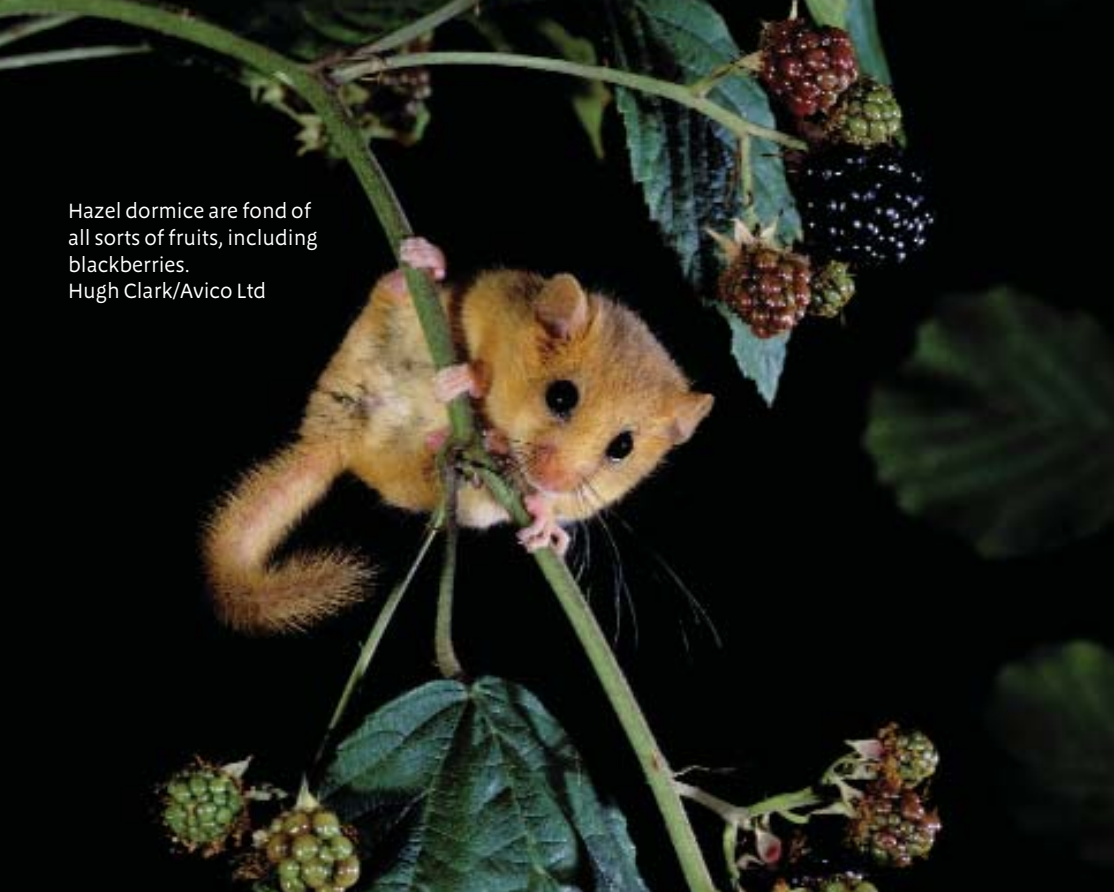
Most mammals have fairly large territories so an individual garden might only be part of a larger habitat. Boundaries around gardens will not be a serious impediment to most mammals, which can usually get over, under or through them. Deer can jump fences and even hedgehogs can climb walls. However, if you are trying to

encourage mammals into the garden, make access as easy as possible. Ensure there are gaps at, or below, ground level in any fences or hedges. These don't have to be large and you can camouflage them with plants and shrubs. A badger needs a gap about 20 cm deep and 30 cm wide in order to squeeze under a fence, and many other species will use the same route. Walls are more difficult but a log pile in a corner, or a trellis, can help mammals climb over them; even a gap under a garden gate may be enough. If it's your wall (or, if not, if your neighbour is understanding!) try knocking out a couple of bricks near ground level to make it easier for small mammals – and also amphibians – to come and go.

Plant foods for mammals

Many of the trees, plants and shrubs we grow in our gardens will provide food for mammals throughout the year. However, most of the best ones to plant are native species (even if they are domesticated varieties) as British mammals may not have a taste for some alien flowers or fruits. Hazel, crab-apple, hawthorn, privet, guelder rose, wayfaring tree and spindle are all small to medium-size shrubs or trees useful to small mammals. Bramble is excellent, too, though it needs to be kept under control as it spreads rapidly. Ivy is valuable for its cover, autumn flowers and winter berries. All these species will also benefit birds, as well as insects such as moths and

Hazel dormice are fond of all sorts of fruits, including blackberries.
Hugh Clark/Avico Ltd



Garden fruits like apples and rose hips provide food for several species of small mammal, including the wood mouse.
Paul Keene/Avico Ltd



Dave and Brian Bevan



butterflies. In spring, many mammal species feast on buds and fruit blossoms while in autumn, they gorge themselves on ripe berries and fruit before the hardships of winter. For very small mammals, even brief food shortages in periods of cold weather can be fatal. You should aim to have garden fruiting at different times to help ensure that food is constantly available. In addition, flowering plants such as honeysuckle – and especially night-scented blooms such as stocks, evening primrose and nicotiana (tobacco plant) – will attract insects, so providing food for bats.

Artificial feeding

Feeding can be a good way to attract mammals to your garden regularly, although it is not without its problems. Artificial feeding will also create many opportunities for you to see visiting mammals. Cooked foods and sugary things should almost always be avoided although wood mice have a taste for chocolate drops! Some of the simplest foods are best. Peanuts and raisins scattered in the grass will keep foxes and badgers busy for long periods as they sniff them out, and badgers are equally fond of windfall apples. Badgers are more likely to come to gardens during prolonged periods of dry weather, when earthworms are harder to find. Supplementary feeding may be particularly appreciated at this time, especially by those animals with cubs to support.

It has to be said that badgers and gardens do not always mix well. Once lured into a garden by the offer of raisins, they may start looking around for other food. They have no respect for strawberry beds nor for raspberry patches! They may also tear up your well tended lawn in search of cockchafer beetles in late summer or early autumn. What's more, if they smell something tasty in your rubbish bin they can easily knock it over and scatter the contents about. But for all this they are wonderful to watch and, if fed routinely, can become quite trusting. They will, though, remain cautious at all times. However, take care. If there's a sett on the other side of a busy road from you, then making efforts to attract badgers to your garden is eventually almost certain to prove fatal for some of the animals.

Special foods for hedgehogs are now available although they are happy with



This badger was lured into a garden by peanut butter smeared on the fence!
Dave and Brian Bevan



This bird feeder is no challenge for a grey squirrel. Dave and Brian Bevan

pet food. Put a dish of food under a milk crate or something similar to keep the local cats away. Milk, however, is probably best avoided as it may make hedgehogs sick.

Water

All mammals need to drink and one of the best ways of encouraging mammals into your garden is to create a pond. These are simple to construct and enormously beneficial for all wildlife. A pond should not be sited under trees, as falling leaves will clog it up in autumn. Instead, locate it next to cover such as a low shrubbery or a rockery. Alternatively, provide cover nearby after you've made the



Hedgehogs are good swimmers and can easily get out of ponds if the edges are shallow. Dave and Brian Bevan



Reflecting weasel! Dave and Brian Bevan

pond. This protection will enable mammals to reach your pond without having to cross wide open expanses of mown lawn, where they are most vulnerable to predators such as cats.

Ensure that your pond has at least one shallow end from which mammals like hedgehogs can easily get in and out. Hedgehogs swim well but may get trapped – and drown – in steep-sided ponds. If your garden already has a pond with steep sides you can create an escape route with a plank of wood. Make a ramp by resting one end on the bank and putting the other into the water. Add a few aquatic plants and plant some wetland species on the pond margins – native species in both cases. However, try to resist introducing fish, which will eat tadpoles and other pond animals. For detailed information on wildlife ponds, refer to the Natural England publications *Ponds and boggy areas: havens for wildlife* and *Amphibians in your garden* (see Contacts, page 29).

Garden chemicals

Chemicals can help control unwanted plant growth and garden pests. However, almost all poisons will kill far more than their target species and may remain toxic in the soil for long periods. Hedgehogs eat large numbers of invertebrates every night, including slugs that may have fed on slug pellets. It is believed that the poisons from these pellets may accumulate in hedgehogs and harm them. In the same



Hedgehogs may be adversely affected by slug pellets. Dave and Brian Bevan

way, slug pellets may also be linked to the falling numbers of song thrushes. Controlling weeds and pests is more difficult without chemicals, but alternative methods do exist and are available from garden centres. By choosing these alternatives, you are acknowledging that wildlife is important in your garden.

Shelter

Many mammals make homes for themselves underground or in trees. Remember that hedgehogs in particular are often attracted to the warmth and safety of unlit bonfires and compost heaps so it is essential to check both before disturbing them or setting a bonfire alight. A log pile in a quiet spot, with lots of gaps and holes, offers hedgehogs and other mammals an alternative safe place to shelter. If the pile is at least 1 m high, about the same across and around 1.5 m long, hedgehogs may even choose to hibernate beneath it. A sheet of



The domestic cat is the most dangerous garden predator of all. Dave and Brian Bevan

corrugated iron or a large board placed on the ground in an undisturbed corner will often attract small mammals to nest underneath, safe from most predators. It can be easily covered with vegetation to avoid creating an unsightly feature: its effectiveness will be unaffected by whatever is placed over it.

Predators and prey – cats

There are about eight million cats in Britain. Their inclination to hunt – and their skill in doing so – varies hugely from one individual to another but there is no doubting their cumulative impact. A survey by The Mammal Society in 1997 concluded that cats kill no fewer than 250 million creatures in

Britain every year! Among mammal species, mice, voles, shrews and rabbits are the most frequent victims. However, grey squirrels, bats and – surprisingly – weasels and even stoats are sometimes taken, as well as declining species like water voles and dormice. Whatever its overall effect on the populations of particular species, keeping a cat is rarely compatible with encouraging small mammals into a garden.

If you own a cat you should take responsibility for your pet and not let it roam freely. Most small mammals are killed at night and most birds early in the morning so providing your cat with its main meal late in the afternoon – so that it gets used to coming home

before dusk – is a good ploy, and it can then be kept indoors until well after dawn. This restriction may also help your cat itself as it will then be less likely to get run over or into fights with other cats. Bells and ultrasonic devices fitted to the collar may also help, although their effectiveness seems to decline over time as cats learn to cope with these devices. If you are not the cat owner, then try one of the ultrasonic cat deterrents on the market

to deter the animals from high-risk areas in your garden. They are expensive, though, and will only cover a fairly small area.

Mammals through the seasons

Mammals come to your garden throughout the year. Although many British mammals are far less active in winter, only hazel dormice, bats and hedgehogs can be said to hibernate. However, bats may wake in very warm



The brown long-eared is one of the most widely distributed species of bat in Britain. Frank Greenaway



spells and with increasingly mild winters, hedgehogs are now seen foraging later and later in the year. No hibernating animal should be disturbed – the process consumes the reserves of energy it needs to see it through the cold weather.

Problems and concerns

Even very tolerant gardeners may encounter difficulties with some

mammal species. There is not always a simple answer but you can alleviate some problems. Some concerns spring from a desire to protect vulnerable animals from predation. While this is understandable, it has to be recognised that the mammals in your garden – cats aside! – are wild and that interfering with the natural cycle in which some kill while others are killed is generally not helpful.



Wood mice are amongst several garden mammals with a taste for bulbs. Dave and Brian Bevan

Rabbits will eat almost any garden plant. Stephen Oliver

Damage to plants by rabbits and deer

Deer are very hard animals to exclude – and rabbits even more so. The only certain method is secure perimeter fencing and this comes with a high price tag! Enclosing especially vulnerable garden areas such as vegetable plots may be more realistic,



Guards for fruit trees are one way of protecting them from rabbits. Dave and Brian Bevan

with chicken mesh available at a reasonable price. Otherwise a compromise solution, like cultivating plants less attractive to rabbits and deer, may be the only option. The drawback is that rabbits will eat almost any plant, and if hungry will take all but the most strong-smelling or spiny material.

Gathering information

Most garden mammals live their – often very brief – lives out of our sight and hearing. Some high pitched squeaks from the undergrowth may suggest the presence of a shrew but such small animals are rarely seen alive out in the open. Much the same can be said of mice and voles. Relatively few people are capable of identifying mammal species and far less is known about small garden mammals than is the case with other wildlife such as birds or even the larger invertebrates. Without adequate knowledge, successful conservation of our wildlife is made far more difficult, so it's vital that we gather as much information as possible. Both The Mammal Society and Mammals Trust UK regularly run surveys asking people all over the UK to send in records of mammals they see in gardens and elsewhere. You don't have to be an expert to do this and there are simple and inexpensive guides to help you. See Further information, opposite.

Contacts

Natural England

1 East Parade
Sheffield, S1 2ET
Enquiry Service: 0845 600 3078
enquiries@naturalengland.org.uk
www.naturalengland.org.uk

The Mammal Society

2B Inworth Street
London, SW11 3EP
Tel: 0207 350 2200 enquiries
www.abdn.ac.uk/mammal/

Mammals Trust UK

15 Cloisters House
8 Battersea Park Road
London, SW8 4BG
Tel: 0207 498 5262 enquiries
www.mtuk.org

The Bat Conservation Trust

2 Cloisters House
8 Battersea Park Road
London, SW8 4BG
Tel: 0207 627 2629
Bat Helpline: 0845 1300 228
www.bats.org.uk

The Wildlife Trusts

The Kiln
Waterside
Mather Road
Newark, NG24 1WT
Tel: 01636 677711
www.wildlifetrusts.org

People's Trust for Endangered Species

15 Cloisters House
8 Battersea Park Road
London, SW8 4BG
Tel: 020 7498 4533
www.ptes.org.uk

Further information

This is one of a range of wildlife gardening booklets published by Natural England. For more details, contact the Natural England Enquiry Service on 0845 600 3078 or e-mail enquiries@naturalengland.org.uk



Pygmy shrew on moss.
Dave and Brian Bevan

Natural England also produces *Gardening with wildlife in mind*, an illustrated wildlife reference. Originally on CD but now also available online, *Gardening with wildlife in mind* has detailed information on 800 plants and animal species often found in our gardens, and shows how they are ecologically linked. See www.plantpress.com

Other titles

Baker, P. & Harris, S. *Urban foxes*. Whittet. 1986.

Bullion, S. *A key to British land mammals*. The Mammal Society/FSC. 1998.

Bullion, S. *A guide to British mammal tracks and signs*. The Mammal Society/FSC. 2001.

Clark, M. *Badgers*. Whittet. 1988.

Jones, K. & Walsh, A. *A guide to the identification of British bats*. The Mammal Society/FSC. 2001.

Morris, P. *Dormice*. Whittet. 2004.

Morris, P. *Hedgehogs*. Whittet. 1983.

Morris, P. & Sargent, G. *How to find and identify mammals*. The Mammal Society. 2003.

Richardson, P. *Bats*. Whittet. 2001.

Strachan, R. *Mammal detective*. Whittet. 2002.

Williams, T. & Wilson, A. *Unearthing the urban fox*. The Fox Project. 2000.

All of the above are available from The Mammal Society, which also sells a range of books on individual mammal species. Further information, including free fact sheets on individual mammal species, is also available on the websites of The Mammal Society and Mammals Trust UK, see Contacts, page 29.

Bank vole coming out of hole in tree.
Dave and Brian Bevan

