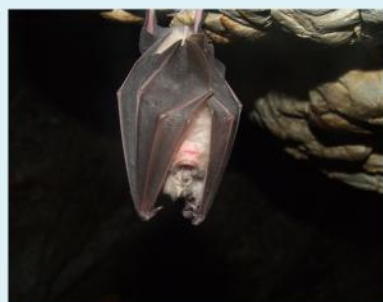




The Mammal Year

Seasonal Spotter Sheets, Diets, Feeding Signs & Behaviour

By Susanna Ramsey & Derek Crawley



Explore your local area, through the  of the mammals which live there!



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Introduction



Most UK mammals are extremely hard to spot. Many are nocturnal or only active at dawn and dusk. They live in the thick undergrowth, in long grasses, bramble bushes, underground or up in the trees. Many are very small, very fast and very shy. They are well-camouflaged and make little, audible noise. Most avoid being exposed on open ground and always have a nearby bush or hole, to escape into.

It is very difficult therefore, to go '**Mammal Spotting**'. If you happen to see a badger, vole or harvest mouse, you will be incredibly lucky! Rabbits and squirrels are the easiest to find. You might spot a bat in your garden, at dusk.

One way to learn more about mammals is to explore your local area through their eyes. See blackberries, acorns and caterpillars as a food source. Which mammals will nibble the grass or fungi or reach up for the fresh leaves? Some can climb and balance, others cannot.

In spring, if you find a feather on the ground, that could be lining for a nest. Look at the prickly hawthorn trees and blackberry bushes to see the protection they offer. If you are too cold or too hot or getting wet, where would you shelter if you were a mouse or shrew?



Introduction



The **Mammal Vision Spotter Sheets** help you uncover more about the life of your local mammals. To find out what they look like, see the **Photos of Common Mammals**, which also reveal their diet.

Mammal Behaviour Through the Seasons, reminds you what the mammals are doing throughout year, even if you cannot see them!

By examining a nibbled hazelnut or acorn, mammalogists can tell which mammal has eaten it. The same is true of berries, rose hips and grass. Look at the **Mammal Feeding Signs** to uncover their secrets!

Explore the links for **Further Learning**. The mammals covered here are those most likely to be in an urban park or wildlife garden. There is no mention of bats, otters, polecats, pine martens, water voles, beavers, wild boar, seals or dolphins, to name just a few!

Finally remember that this booklet focuses on mammals and their food sources. The green places near to you, are equally important in providing food, water, shelter and protection for a huge variety of other animals: birds, amphibians, reptiles and invertebrates.



Mammal Vision: Plants to Spot in Spring, March to May



New leaves on trees and bushes.
Eaten by squirrels, mice, voles,
rabbits and deer.

new leaves



Eaten by squirrels, mice, voles,
rabbits and deer.

blossom



Eaten by squirrels, rats and mice.

catkins



Pollen eaten by squirrels, voles and
mice, as well as bees and butterflies,
who may be predated by mice.

bluebells



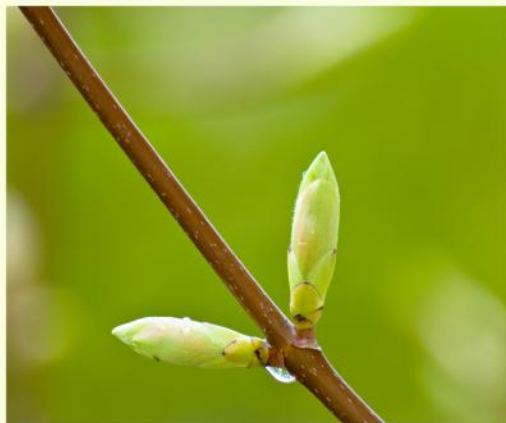
Pollen eaten by squirrels and mice.
Insects feeding on the pollen may be
eaten by mice.

wild rose



Eaten by deer, rabbits, rats, mice,
voles and squirrels.

plant shoot



Eaten by deer, rabbits, squirrels,
rats, mice and voles.

leaf buds



Eaten by deer, rabbits, squirrels,
mice and voles.

brambles



Gathered by mice and voles to line
their nests. Birds collect moss too.
Birds may be predated by foxes.

moss

Mammal Vision: Animals & Field Signs to Spot in Spring, March to May



If on or near the ground, caterpillars may be eaten by badgers, foxes, hedgehogs, squirrels, moles, rats, mice and shrews.



Eaten by badgers, foxes, hedgehogs, squirrels, moles, rats, mice and shrews



Eaten by badgers, foxes, hedgehogs, squirrels and rats.**

caterpillar

earthworm

bird's egg



Look for, but do not touch, different animal droppings. *



Look for animal tracks. Count the toes and claws.**



Look for rabbit holes on open grass or under trees.

hedgehog poo

badger print

rabbit hole



Look for tiny vole tunnels, at the base of long grasses. **



Female rabbits scratch off soft belly fur to line their nest chambers. **



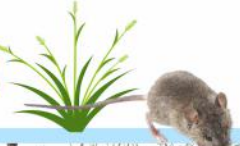
Mammals collect feathers and fur to line their nests.

vole hole

rabbit hair

feather

Mammal Vision: Plants to Spot in Summer, June to August



Eaten by deer, rabbits and voles .

grass



Eaten by rabbits, squirrels, mice and voles. Insects collecting pollen and nectar may be eaten by mice.

buttercup



Eaten by deer, rabbits, squirrels, voles and mice.

grass seeds



Eaten by deer, foxes, badgers, rats, hedgehogs, squirrels, voles and mice.

blackberries



Eaten by deer, foxes, badgers, rats, hedgehogs, squirrels, voles and mice.

fallen fruit



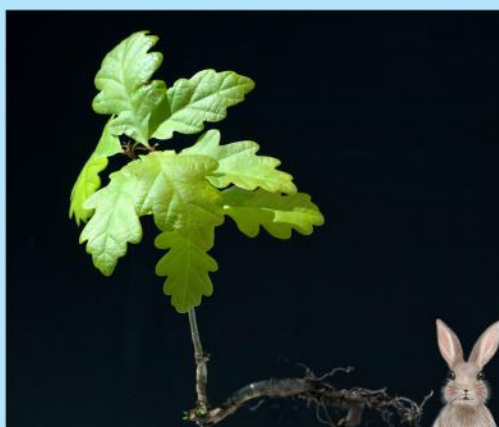
Eaten by squirrels, voles, rats and mice.

hazelnuts



Eaten by deer, rabbits and voles. Important too, for insects laying eggs. They may be eaten by mice.

stinging nettles



Eaten by deer, rabbits, mice and voles.

seedlings



Eaten by badgers, rabbits, rats, mice and voles.

roots & root veg

Mammal Vision: Animals & Field Signs to Spot in Summer, June to August



Eaten by badgers, foxes, squirrels, rats and mice. **

grasshopper



Eaten by squirrels and, for ground-nesting birds, by badgers, foxes, hedgehogs, rats and mice.

baby birds



Plants in a stream, nibbled by deer. **

bitten plants



Look for, but do not touch, different animal droppings. **

rabbit poo



Look for animal tracks in mud or sand. Count the toes. Rodents have 4 toes on front feet and 5 on the back. **

squirrel prints



Look for tiny entrance holes at the base of trees, used by mice or voles. **

mouse hole



Eaten by shrews and mice. May be on nettles or brambles.

ladybird larva



On the underside of leaves. Eaten by shrews and hedgehogs.

insect eggs



Signs of voles feeding in the area. *

nibbled grass

Mammal Vision: Plants & Fungi to Spot in Autumn, September to November



Eaten by deer, squirrels, rats, mice and voles.

acorns



Eaten by rabbits, mice and voles.

flower seeds



Poisonous to most mammals but eaten by deer.

horse chestnuts



Eaten by squirrels, rats, mice and voles.

fungus



Eaten by squirrels, rats, mice and voles.

rose hips



Eaten by deer, squirrels, rats, mice and voles.

beech mast



Eaten by deer, rabbits, squirrels, rats, mice and voles.

hawthorn berries



Eaten by deer, squirrels, rats, mice and voles.

sweet chestnuts



Eaten by rabbits, mice and voles.

grass seeds

Mammal Vision: Animals & Field Signs to Spot in Autumn, September to November



Spiders are eaten by badgers, foxes, rats, mice and shrews .



Can you see any squirrels burying nuts in the ground, for a winter store?



Worm poo! Hedgehogs eat loads of worms and beetles, to fatten up for their hibernation.**

spider web

squirrels

worm casts



Look for, but do not touch, tiny squirrel droppings, under large trees! **



Look on tree trunks for the trails left by beetle larvae. Beetles eaten by hedgehogs, squirrels, foxes, rats, mice and shrews. **



Many insects die in autumn. Beetles are eaten by hedgehogs, squirrels, foxes, rats, mice and shrews. **

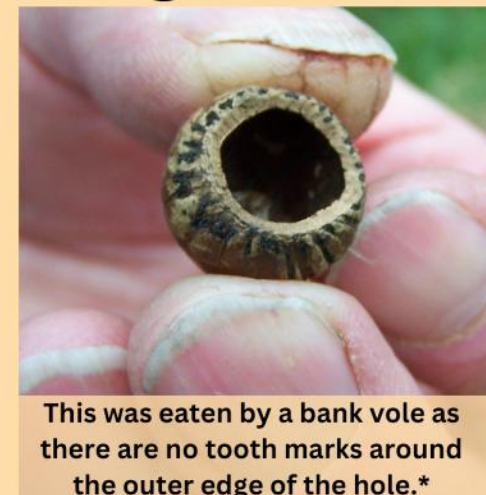
squirrel poo

beetle galleries

dead beetles



The nests are high up in hedgerows or field edges, in brambles and grass.*



This was eaten by a bank vole as there are no tooth marks around the outer edge of the hole.*



Male deer fight each other, using their antlers, to mate with the females.

harvest mouse nest

nibbled hazelnut

deer rut

Mammal Vision: Plants to Spot in Winter, December to February



Grows high up on the trees as a parasite. White berries are mainly eaten by birds not mammals.

mistletoe



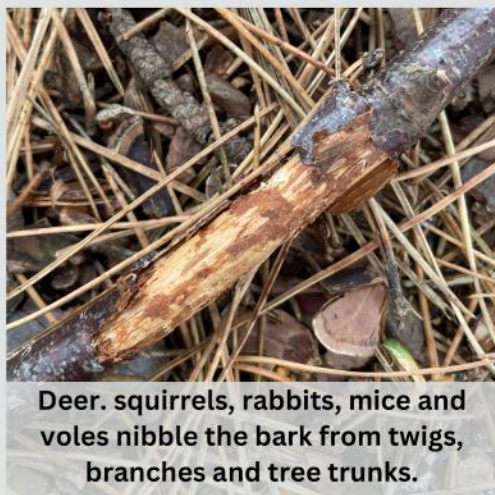
Poisonous, so do not touch! Fruit is eaten by squirrels and hazel dormice but not the poisonous seeds. Dense foliage provides good cover.

yew tree



Squirrels, rabbits, mice and voles nibble pine cones, to eat the seeds inside.

nibbled cone



Deer, squirrels, rabbits, mice and voles nibble the bark from twigs, branches and tree trunks.

nibbled twig



Evergreen leaves on ivy provide good cover for small mammals. Some mammals eat the black berries.

ivy berries



Evergreen trees provide a warm place for small mammals and squirrels to shelter from the cold.

evergreen



Look for primroses, crocuses, snowdrops and daffodils. Pollen eaten by squirrels, mice and insects.

primrose



Can you find any berries left on the trees or bushes?

frozen berries



No leaves or tree seeds to eat. No protection against the cold.

bare trees

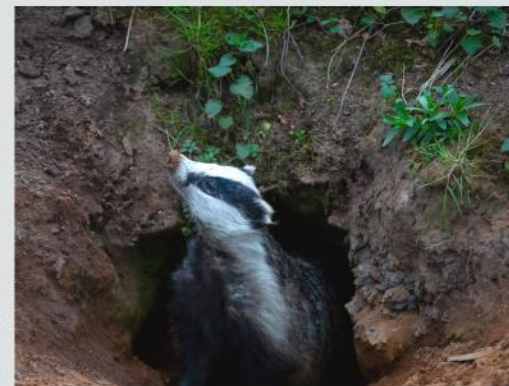
Mammal Vision: Animals & Field Signs to Spot in Winter, December to February



Made of twigs, usually against the main trunk. A squirrel's nest is easier to see with no leaves on the tree.**



Hedgehogs, rats, mice and voles might be sheltering from the cold in, or under, a hedge.*



Larger than a rabbit hole. Often several entrance holes close together, in a wood or on a slope.

squirrel dreys

hedge

badger sett



Look for, but do not touch, different animal droppings Badger poo is usually in a small, shallow pit.*



Look up in the trees. Is there a squirrel poking its nose out? Squirrels chase around the trees in winter, pairing up to mate in spring.



Animal tracks are easier to spot on frosty paths or in snow. Count the toes.*

badger poo

squirrel hole

fox prints



Can you find any nuts and acorns which have been eaten by squirrels or mice?.**



Badgers, moles, mice and shrews do not hibernate, so search the leaf litter for worms, woodlice, millipedes and centipedes. A vital, winter food source.



Broken feathers on the ground, left when a fox has killed a pigeon.

nibbled sweet chestnuts

woodlice

feather pile



Diet of Common Mammals



Wood mouse



Brown rat



Harvest mouse



Common shrew



Field vole



Bank vole



Grey squirrel



Rabbit



Pipistrelle bat



Badger



Hedgehog



Fox



herbivore



insectivore



omnivore

Mammals

Feeding Signs



Plants or Grass

- Look for plants which have been nibbled by voles, rabbits or deer
- Piles of grass cuttings, bitten off with a slant. These are signs of field voles in the area.



Hazelnuts



- Squirrels prise the nut apart through a hole in the top. They leave jagged fragments or half nut shells.



- Wood mice leave toothmarks on the outside surface of the nut and across the edge of the hole.



- Bank voles leave no marks on the shell surface. Their toothmarks are across the inside, cut edge of the hole



- Hazel dormice leave scratchy gnaw marks on the outer edge of the hole with a smooth, scooped out inner ring. The hole is almost circular.



Mammals Feeding Signs



Acorns

- Squirrels break open the acorn by biting a hole across the top. Then they split the acorn in half lengthways.
- Mice and voles hoard acorns in boxes, old birds' nests in hedges or, especially bank voles, under debris on the ground
- Foxes and deer also feed up on acorns
- Squirrels often use a tree stump as a feeding station



Pine Cones

- Squirrels leave ragged, stripped spindles of pine cones. Usually they start stripping out the seeds from the bottom of the cone. Can you find the seeds inside a cone?
- Bank voles and yellow-necked mice are very shy and carry pine cones away to feed on them
- Wood mice leave a very smooth central shaft, with no ragged ends. They often leave the scales at the top of the cone or may just chew off the scales on one side.



Dead Birds

- Foxes eat birds if they can catch them! They tear off the feathers, often breaking them apart or ripping out chunks. Rats might clear up the carcass.
- If a bird has been killed by a sparrowhawk, the feathers are not ripped and the breastbone is left intact, cleaned of meat.



Mammals

Feeding Signs



Rose hips and Berries

- Wood mice eat the seeds of blackberries but leave the juicy flesh!
- Voles eat the flesh but not the pips. They often carry away a rose hip and leave behind the outer skin and piles of seeds.
- Deer, foxes, rats and hedgehogs would eat the whole berries and rose hips



Fungi

- Look for bite marks from squirrels, voles and mice on fungi. Do not touch, as they may be poisonous!
- Squirrels are bigger animals and leave a rough, chiselled hole in the fungus. They may leave stores of fungi in trees, at the base of the branches.
- Mice and voles leave shallow, stripy scratches on the rounded cap of the fungus



Snail Shells

- Field voles, rats, shrews and yellow-necked mice eat snails
- If the coil on the shell is neatly nibbled away, it may have been eaten by one of these small mammals
- You may find a pile of snail shells, like this, under a log or in a disused bird's nest
- Thrushes take hold of the snails in their beak and smash the whole shell, against the hard ground



Mammals Through the Seasons



What are our Mammals Doing?



Spring March - May



Days get longer and warmer. Leaves, blossom, catkins and wild flowers start to appear. Tree shoots come up through the leaf litter. Spring showers of rain.

- Mammals mark out and defend their territory or set up a new one
- Mammals find a mate, if they are not already in a pair
- Build nests underground, in grasses or up in the trees
- Give birth to their young; protect and feed them
- Hedgehogs, bats and hazel dormice wake from hibernation
- Most mammals, e.g. foxes and deer, grow thin, summer coats
- Male deer drop their antlers and grow new ones, covered in a soft, velvet skin



Summer June - August



Long, hot sunny days. Mammals need to find shade. Grass gets longer. Berries, acorns, nuts and conkers grow on the trees. Plenty of caterpillars and insects to eat on the wild flowers. Ground may dry up and water is hard to find.

- Rabbits, rats, mice, voles and shrews and some other mammals continue having litters with many young to care for
- Deer have their young
- Bats have a single pup each, in maternity roosts
- Young rabbits, badger and fox cubs come out at dusk
- Some mammals search out birds' eggs and young, to eat
- Harvest mice climb around in tall grasses & bramble bushes
- Voles and shrews scamper along runways in the long grass

Mammals Through the Seasons

What are our Mammals Doing?



Autumn

September - November



Days shorten and temperatures drop, with frosts and mists and more rain. Leaves change colour and fall. Berries ripen. Fungi appear on trees, fallen logs and in the grass.

- Hedgehogs and hazel dormice fatten up for hibernation, which usually starts in October. Check for hedgehogs before lighting your bonfire, on November 5th! 
- Bats hibernate from end of October. Might come out briefly.
- Squirrels, bank voles, hazel dormice and other mice bury, or hide under logs, stores of nuts for the winter
- Deer rut: scrape bark on trees to mark territory, wallow in mud and break off branches and bracken to wear on their antlers, so they appear more threatening



Winter

December - February



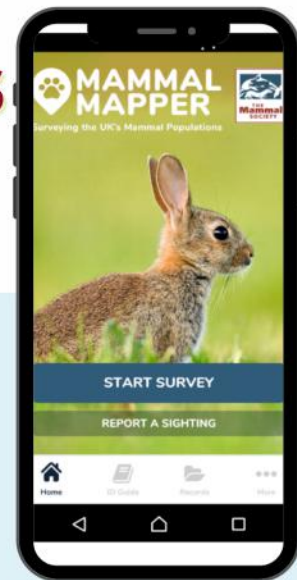
It is difficult for small mammals to keep warm and find enough food. Short days and long, cold nights. Leaves and berries freeze.

- Badgers, squirrels and foxes have grown thicker, winter coats
- Most mountain hares and some stoats have grown white coats
- Hedgehogs, hazel dormice, bats are hibernating
- Badgers, rabbits, shrews and mice stay in their nests for longer periods without food. Some may go into a torpor.
- Squirrels huddle up together in nests, to keep warm
- Yellow-necked and wood mice come into buildings
- Many shrews die from cold and lack of food
- Squirrels chase around the tree trunks, males chase after the females





Report Your Sightings



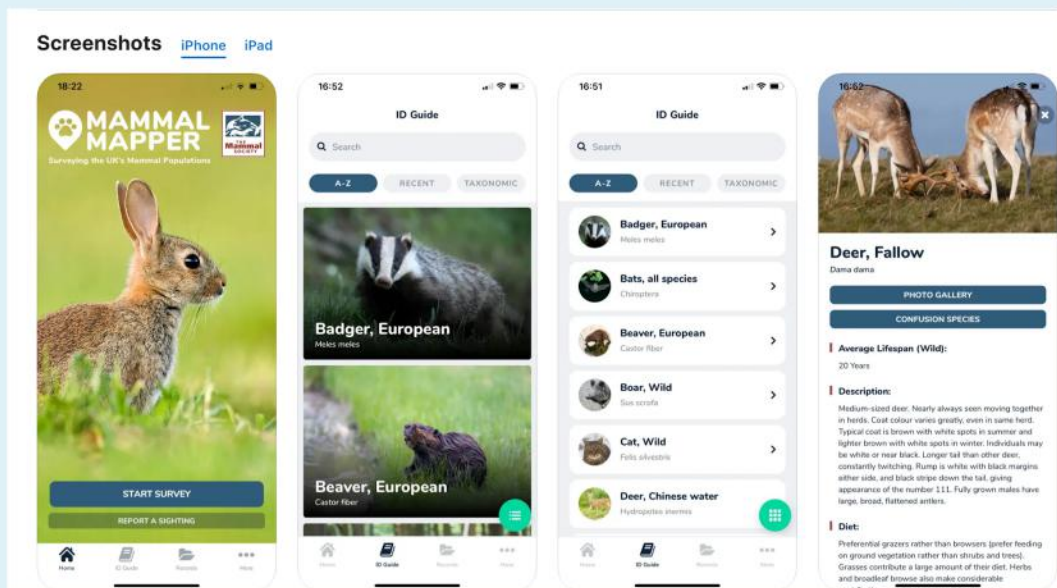
If you have spotted a mammal or their field signs, why not record and report your sightings?

The Mammal Mapper App is an App designed to enable you to record signs and sightings of UK mammals. It is FREE to download to your smart phone from the App store or Google Play.

Use the App out on a walk or when you get home. You will build up a library of mammals you have spotted and you will contribute to mammal research and conservation.

The App is very easy to use. It guides you, step by step, on what you need to do.

[Click here](#) to read more about it on The Mammal Society website.





Further Research



Click on this link to The Mammal Society website to find out more about UK mammals



Mountain hare

The Mammal Society: Full Species Hub

The British Isles are home to around 90 species of mammal in the land, sea and air. Click on the hare photo to access the Hub and discover more about these mammals.

Click on this link to discover more resources and activities on the Mammal Youth Hub




Harvest mouse

The Mammal Society: Mammal Youth Hub



If you are a mini mammalogist or a teacher inspiring your class about the wonderful world of mammals, take a look at the resources on the Mammal Youth Hub! Click on the harvest mouse photo.

Click on these links for Mammal Tracks & Poo



Mammal Feet, Toes & Tracks

By Susanna Ramsey & Derek Crawley

Mammal Poo

By Susanna Ramsey & Derek Crawley

