

# hazel dormouse

Extremely elusive and increasingly rare, the hazel dormouse is unlike other rodents, being long-lived and highly specialised in its ability to hibernate.



**COMMON NAMES** Common dormouse, hazel dormouse, French names muscardin, croquenoix and rat-d'or; sleep-meece (Suffolk).

**SCIENTIFIC NAME** *Muscardinus avellanarius*

**DESCRIPTION** Bright golden colour with thick furry tail and big black eyes. Head-body length: 6–9cm, tail length: 5.5–8cm. Weight: 15–30g, lifespan: Up to 5 years. Adults weigh about 20g in the summer, but can fatten up to 35g just before hibernation.

**HABITAT** Deciduous woodland and thick, overgrown hedgerows. Thought to prefer mixed hazel coppice woodland which provides a varied diet throughout the year. However dormice are also found in other scrub and hedgerow habitats, and even conifer plantations.

**DIET** Flowers, particularly the pollen, are important. Bramble provides both pollen in the spring and berries in the autumn. Fruits, hazelnuts, beechmast and sweet chestnuts, as well as aphids and other small insects. Hazel, honeysuckle, bramble and oak are probably the most important food sources.

**HABITS** Dormice are nocturnal, alternating bursts of activity with periods of rest. Breeding males live alone, whilst females and non-breeding males are often found nesting together outside the breeding season. Sometimes the same male and female will live together in successive years. Dormice are mainly arboreal in the summer, rarely crossing open ground.

**BREEDING** 3–7 blind and naked young are born usually in July or August. The babies remain with their mother in her nest for up to about 6 weeks, longer than most small rodents. They must weigh 12–15g before hibernating for the first time; otherwise their chances of surviving the winter are slim. Dormice usually have one litter a year but, if the summer is fine and long, they may have two.

**DISTRIBUTION** Hazel dormice used to be more widespread in the UK but they are now rare and vulnerable to extinction in this country. They are found mainly in the southern counties of England and Wales, from Cornwall to Kent northwards to Herefordshire and Northamptonshire. There are scattered populations in the midlands and northern English counties thanks to the dormouse release programme, and small natural populations remain in Cumbria and Wales. They do not occur in Scotland.

**PREDATORS & NATURAL THREATS** Occasionally owls, weasels and cats but they have few natural predators. Their biggest threat is starvation during the cold winter months.



Hazel dormice have a long association with hazel coppice in England. In times past when woodsmen cut coppice in autumn, hibernating dormice might roll out of their winter nests and they would often be kept as pets.

## why dormice are rare

Over the last 100 years dormice have become extinct across half their range in England. The continuing loss of ancient woodland, the splitting of big woods into smaller ones and unsympathetic woodland management have all contributed to this major decline. Dormice, being arboreal, are reluctant to cross open ground so if the woodlands in which they live become isolated and too small to provide sufficient habitat for the animals' needs, they cannot survive and the species becomes locally extinct.

Dormice have very specific feeding requirements. They do not live in large numbers at any one site and are not able to easily move to new sites. They are also very sensitive to changes in their habitat and the climate, so they are an excellent indicator of the health of woodlands and hedgerows. A decline in dormice is a warning sign - we can use this species as an indicator to measure the success of landscape conservation measures.



## hibernation & torpor

Dormice, uniquely amongst our smaller mammals, hibernate over winter in closed woven nests just under the surface of the ground, often at the base of tree stumps or under log piles. Dormice need a stable humidity and minimise their moisture loss by nesting underground. If they hibernated somewhere drier they would need to wake up often and drink to avoid becoming dehydrated. Waking up uses valuable fat reserves and makes them vulnerable to predation. In woodlands where pannage is carried out they are at risk of being preyed on by foraging pigs. In other woodlands they are also susceptible to badgers chancing upon them. Dormice usually go into hibernation when the first frosts arrive in October or November and are not normally active again until April or May. Hibernating dormice let their body temperature drop to that of their surroundings (the optimum temperature is between 1 and 4 °C where the least amount of energy is consumed) and their heart and breathing rate drop by about 90%.

Dormice are also capable of reducing their body temperature and heart rate during the day. This process is known as torpor and is used by dormice during periods of bad weather, particularly in early summer when food is more scarce and being awake uses up a lot of energy. They cool their body down substantially, in the morning, and can remain in this state for about eight hours. It takes them several minutes to wake up in the evening before they go about their usual foraging activities.

## identifying nibbled nuts

Identifying which animal has chewed a hazel nut is one of the easiest ways to determine if hazel dormice are present in an area. Dormice open these nuts whilst they are still green and on the tree, the shells only turn brown once they are discarded and fall to the ground. Other animals also like hazel nuts if you look closely you can tell which animal has been nibbling it. Birds and squirrels usually split the shells completely in half or smash them to pieces but small rodents (mice, voles and dormice) gnaw a neat round hole and leave characteristic toothmarks around the edge.



The dormouse carves an almost smooth inner rim and the toothmarks are at an angle to the hole on the nut surface.



The wood mouse leaves parallel toothmarks on the inner rim and rough marks on the surface.



The bank vole leaves neat parallel grooves on the inner rim, but no toothmarks on the nut surface.

## managing woods for dormice

Dormice are animals of the shrub and scrub layer and as they rarely cross open ground these layers need to have good arboreal connectivity and be continuous where possible. A variety of plants also needs to be present within these layers to provide the dormice with a continuous supply of food during the spring and summer. Hawthorn flowers are an important food source in spring when the dormice awake. Over summer, there is a close association with honeysuckle both for food and nest building material; even sycamore can provide an important source of aphids. Bramble and hazel are used in the autumn to build up fat reserves for hibernation.

Dormice have been found in conifer plantations and gorse stands but they are generally associated with coppiced woodlands, hedgerows and scrub. To maintain a self-sustaining population of dormice a wood needs to be well managed, with a variety of aged coppice coupes, and be a minimum of 20 hectares. It is also important to have a dense and varied shrub layer. Standards should be reduced to a density of 10 – 15 per hectare to prevent overshadowing. Deer and rabbit browsing can seriously impact coppice and scrub regeneration and coupes may need to be fenced.

The two major factors that have led to the general decline of dormice in England are the cessation of any woodland management in many of our woods and their increased isolation. Dormice will use hedgerows either as a habitat in its own right, if they are wide enough, or as a corridor between separate woods. Hedges should be species rich and not be over-managed. Cutting on a three-year cycle – one side, top, other side – will allow time for shrubs to flower and fruit.

The presence of dormice is an excellent indicator of a well-managed woodland and potentially a well-managed landscape. While that may be possible to achieve there are factors affecting dormouse survival over which we can have no influence. Dormice can cope with hot summers, they can cope with cold winters, but they are unable to cope with variation. A wet summer will reduce their ability to feed (their fur is not waterproof) and a warm winter may bring them out of hibernation (with no available food to sustain them). Given these difficulties it is important that we do what we can to help this most endearing of our small mammals.

For more information about dormice, carrying out a nut hunt or to download a copy of the *Dormouse Conservation Handbook* please visit our website [www.ptes.org](http://www.ptes.org)