

## Rodent identification

Key features of UK target rodents

Black rat



Brown rat



House mouse



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### Key features of UK target rodents

	<b>Brown rat</b>	<b>Black rat</b>	<b>House mouse</b>
Senses	Acute smell, touch and hearing	Acute smell, taste, touch and hearing	Acute sight, smell and hearing: Large eyes
Habitat preference	Associated with water (but live in range of habitats). Move along edges of structures, rather than out in the open	Associated with forests and vegetated areas (but live in range of habitats): tracks and runs on the ground are common despite arboreal preferences	Full range of habitats (commonly associated with humans)
Swimming ability	Excellent swimmers up to 4 km	Known to swim up to 750m	Excellent swimmers up to 500 m
Climbing ability	Agile (but less so than black rats) Can jump up to 1m	Incredibly and often unbelievably agile (and skilful) - can jump up to 1m	Agile and can jump up to 0.5m
Activity	Predominately nocturnal - may be seen in day	Predominately nocturnal -but can be seen in day	Predominately nocturnal - but often seen in day, esp. in summer
Behaviour	Neophobic (wary of new things)	Neophobic (but less so than brown rats)	Not neophobic (investigate new things)
Breeding habitat	Extensive burrow nesters	Nest in trees or under vegetation	Burrow and cavity nesters (wood piles, banks, buildings)
Nesting materials	Grass, newspaper, cardboard, leaves, feathers	Usually vegetation (twigs, leaves) or feathers, but can use paper/card	Vegetation, feathers, human materials (e.g. newspaper)
Life span	12 to 24 months	12 to 18 months	12 to 18 months
Home range	0.1 to 3 ha depending on food availability/ habitat quality	0.1 to 1 ha depending on food availability/ habitat quality	0.5 to 2.5 ha
Feeding	Often cache food in burrows. Omnivorous, opportunistic. Eat 30g/day	Often cache food. Eat 15g/day	Omnivorous, opportunistic. Do not need a water source.
Breeding cycle	Can breed all year round	Can breed all year round	Can breed all year round
Gestation	24 days	20-22 days	19-21 days
Weaning & Sexual maturity	28 days 2-3 months	21-28 days 3 months	20-23 days 6-8 weeks
Number of young	3-10 (usually 6-8)	3-10 (usually 5-6)	2-12 (usually 6-8)
Other	Small groups live in colonies: young males evicted as they mature or when the colony becomes overcrowded	Do not live in colonies (unless in urban areas): prefer to disperse throughout the available area	Can be found in environments with no water (obtain water requirements from food)

### Sightings & corpses

‘Black’ rats can look very similar to ‘brown’ rats: most black rats are not black. Although black rats are not common in the UK, they are associated with ships (another common name for them is the

ship rat) and are likely to be present in a number of UK port towns. As such, there is an ongoing biosecurity risk from black rats as well as brown rats and you should be familiar with identifying them.

The feet (colour and size) of house mice can be used in combination with ear size to distinguish them from juvenile rats: juvenile rats will have larger feet and ears than an adult house mouse.

If identification is in doubt, preserve *at least* the head for later detailed examination (either triple-bagged and frozen or in 75% ethanol). If you keep the whole specimen, open the gut cavity.

#### Identifying features of the key target species

	Brown rat <i>Rattus norvegicus</i>	Black rat <i>Rattus rattus</i>	House mouse <i>Mus musculus</i>
Tail	Heavy short tail: no longer than head-body Pale underside	Long scaly tail $\leq$ 250mm: no shorter than head-body Uniform colour	Long tail, 50-100mm: similar to head-body length Uniform colour
Ears	Small ears: do not cover eyes 14-22mm Obvious hairs extend beyond edge of ear	Large ears: cover eyes when pulled down 19-26mm Fine hairs do not extend beyond edge of ear	Large, round ears  12-15mm
Hind feet	Pale 30-42mm long	Dark, hairy 28-38mm long	Small, thin, grey 15-19mm long
Body & head-body length	Long, stout body Up to 275mm	Long, slender body Up to 230mm	Slender body 70-100mm
Average weight	450g (can be up to 600g)	Up to 350g	10-25g
Colouration	Brown back with long, dark guard hairs Pale grey belly	<b>Three colour morphs</b> <i>rattus</i> : black back, dark grey belly <i>alexandrinus</i> : brown back, pale grey belly <i>frugivorous</i> : brown back, white or cream belly	Dull brownish grey back Grey, brown or white belly
Nipples	12	10-12, usually 10	10-12