

GREATER HORSESHOE BATS

RHINOLOPHUS FERRUMEQUINUM

DEVON
GREATER
HORSESHOE
BAT PROJECT

THE BAT

Size: the greater horseshoe bat is one of the UK's largest bats with a wingspan of up to 40cm.

Weight: average of about 25 grams (or about the weight of two £2 coins)

Long lived species: greater horseshoe bats have been known to live up to 30 years.

Special feature: horseshoe bats have a complex horseshoe shaped nose leaf which distinguishes them from other UK bats.

Population: it is estimated that greater horseshoe bats have declined by over 90% in the last 100 years.



Photo: Thinkstock

Where do they live?

Greater horseshoe bats live in different 'roost' sites throughout the year:

In the summer, the breeding females congregate in 'maternity roosts'. These roost sites are usually old barns with slate roofs which remain dark, undisturbed and warm throughout the summer. The largest maternity roost in Devon houses over 1000 females in the summer months.

During the winter they hibernate or spend time in 'torpor' in caves, old cellars and cold, damp places which are dark and undisturbed. Being in torpor allows bats to reduce their metabolic rate and need for food during cooler spells but still enables them to go out foraging on warmer nights when insects may still be found.

Greater horseshoe bats also use a variety of other roost sites for feeding and mating, including old buildings, porches and mine adits.

Unlike other bats that squeeze into tight nooks and crannies in buildings, trees and caves, horseshoe bats need to hang freely and therefore need a large space for roosting. They are one of the only bats in Britain that truly hang upside down.

All the roost sites need to be well connected to the rest of the landscape by hedges, tree lines, woodlands or other features.



Known UK maternity roost locations



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Habitat needs

Bats use echolocation to navigate their way around the night-time countryside and to locate their prey. They use their special horseshoe shaped nose-leaf to produce focused high-pitched calls and associated echoes to determine their surroundings. Their calls are easily lost in the open which means that they are reliant on features in the landscape in order to find their way around. Hedgerows, woodland edges, trees, valleys, rivers and other useful landscape features may all be used.

Although they have been known to fly over 20 km in a night, they tend to favour areas close to their roost sites, meaning the better the habitat in the few kilometres surrounding their roosts the better their chances of raising young and surviving winter.

What do they eat?

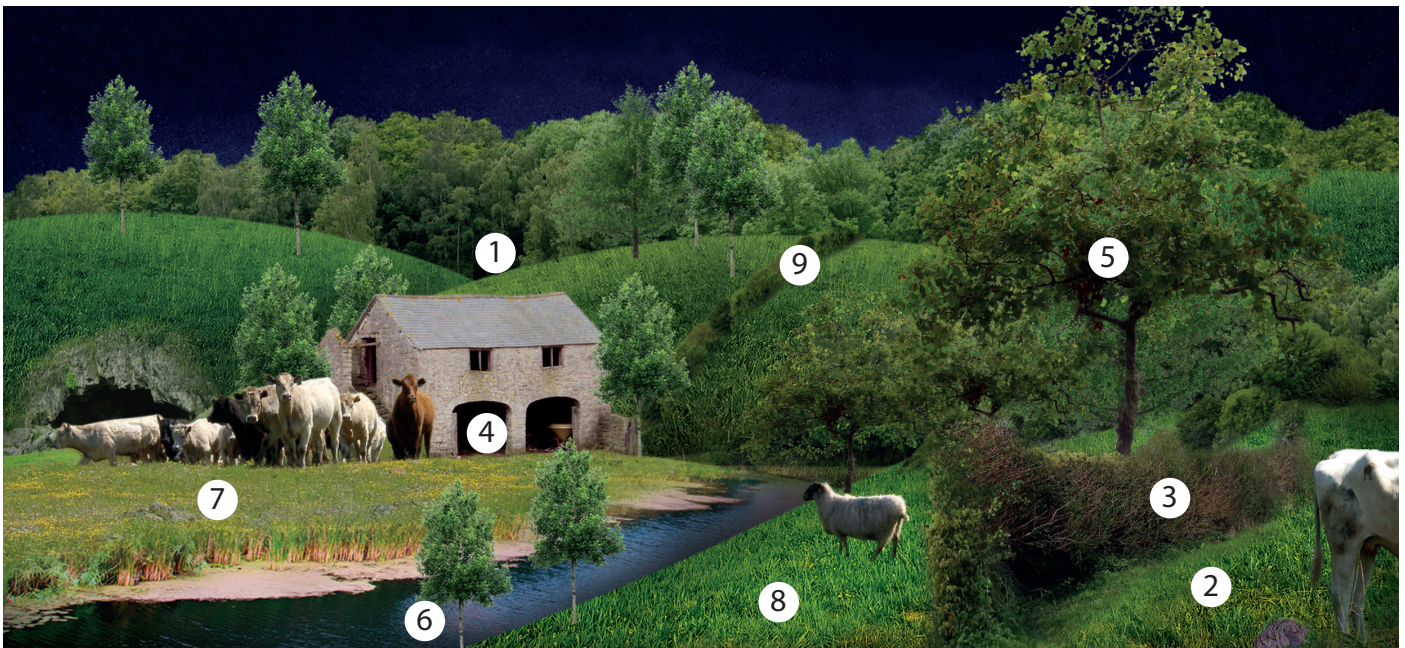
Like all bats in the UK horseshoe bats are insectivorous.

Greater horseshoe bats, being a larger bat tend to eat larger insects like moths and cockchafers.

Dung beetles make up a large part of their diet, particularly in the late summer when the young pups (baby bats) start flying. A large variety of insects are eaten throughout the year including craneflies, moths, parasitic wasps and other beetles. Look out for piles of wings and wing cases in roosts where they have been feeding.



Photos: Thinkstock



1: Greater horseshoe bats like landscapes which contain a large patchwork of woodland (approximately 40% woodland is considered optimal). Although they don't tend to like dense woodland they love hunting for insects along the edges and through the ride systems in woodlands.

2: Cattle grazed pastures are important for these bats, especially for the young bats in late summer. Cow pats can host high numbers of important dung beetles which the bats swoop down on and eat as they fly.

3: Tall, thick, bushy hedges are great for bats. They help them to find their way through the landscape much like a road network. Insects tend to congregate in sheltered areas of hedges and leaving grass margins uncut further increases insect abundance.

4: Horseshoe bats need old barns, porches, and dark, sheltered undisturbed structures where they can roost over night, for mating, feeding and raising their young. Old barns with slate roofs are particularly important. These structures need to be well connected by hedges or trees with the surrounding landscapes for bats to access them.

5: Orchards provide a great habitat for hunting bats. Traditional orchards with well spaced old trees provide lots of structure for bats to navigate through as well as hosting a wide range of insects, especially when the grass underneath is grazed by cattle, horses or even sheep.

6: Streams and rivers also provide important routes for bats through valley systems. Waterways are especially important when surrounded by trees and backing onto meadows and pasture. Insects, like caddisflies, (which are regularly eaten by greater horseshoe bats) head to clean waterways to breed and so make a great feeding ground too.

7: Wildflower-rich meadows are a great habitat for many insects including moths, cockchafers and craneflies which are all favoured by horseshoe bats.

8: Cattle are generally seen as the best grazing animal for greater horseshoe bats. Sheep grazing and horse grazing are also beneficial, providing dung beetles and other insects associated with their dung and grassland pastures.

9: Wooded areas within a network of hedges provide added structure and benefit to greater horseshoes and other bats.



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