

Barbastelle

Barbastellus barbastellus



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The barbastelle is one of the UK's rarest bats.

It is a medium-sized bat, distinctive by its pug-shaped nose. The ears are broad and joined across its head. It has long, silky fur that is blackish-brown in colour with white tips.

They are specialist moth feeders. Upon emergence they often feed within the woodland in which their roost tree is located until light levels fall. At this stage they fly beyond the woodland to forage in more open habitats.

Lifecycle

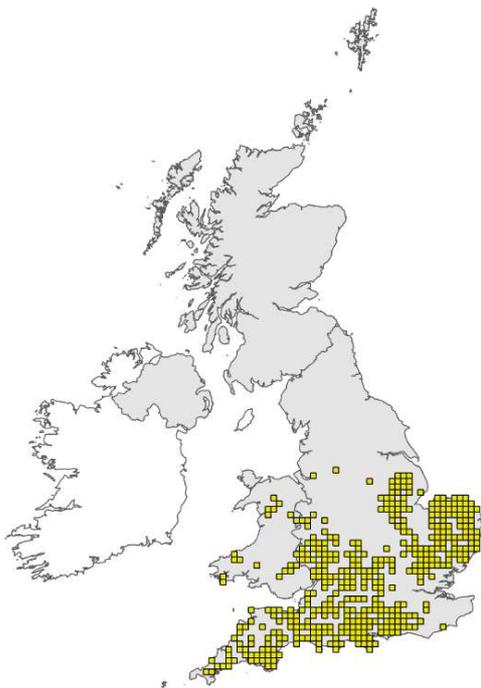
Mating takes place in the autumn. Maternity roosts, where the young are born, are relatively small, in most cases in the UK with less than 20 females. The young are born around July when a single pup is produced. Juvenile bats can fly and forage for themselves by six weeks old. They can live into their early twenties although the average life span is less.

Habitat

Barbastelle tend to forage over a wide area. They are fast agile flyers and specialist foragers in a range of habitats. They consume mainly small moths, but also flies and beetles.

They predominantly roost in trees and are associated with woodland that has a high proportion of standing dead wood or trees that are damaged or over-mature providing the cracks and crevices they prefer to use as roosts. Often this can be under loose bark. They will occasionally use buildings where wooden parts of the structure replicate these roost requirements.

Barbastelle forage within woodland interiors initially



Barbastelle distribution in England and Wales

(Map taken from 4th Report under Article 17 on implementation of the Habitats Directive in the UK, JNCC 2019)

upon emerging from their roost. Once light levels fall they travel beyond the woodland, following features in the landscape such as vegetated waterways or hedgerows to reach foraging grounds. They will forage in riparian vegetation, unimproved grassland, marsh and wetland habitats and coastal grassland. Habitat features such as field margins are also important where they support high moth numbers. In poor weather they will forage longer in woodland interiors. They travel on average around 7km to forage but ideally suitable foraging would be closer to the roosts.

Distribution

Barbastelle are found across the southern half of England and Wales. We do not have records for the past range of this species, but it is likely that the widespread loss of deciduous woodland will have reduced the extent of its range.

GB status and rarity

IUCN listed as vulnerable for England. It is listed under Annexes II and IV of the Habitats Directive. This is a difficult species to monitor and whilst its numbers are low in Britain, we do not know what historical population numbers were. It is likely that reductions in deciduous woodland cover have reduced the population.

Protection under the law

All bats in Britain and their roosts are protected by international and domestic legislation. It is illegal to take, injure or kill a bat or disturb it in its roost. It is illegal to damage or destroy a roost even if the bats are not occupying it at the time.

Survey method

Barbastelle can be surveyed in the field by picking up their echolocation calls which are quite distinctive. This is best achieved using a static detector. Placing these along woodland rides or on linear features achieves best results.

Reasons for decline

This is a hard to monitor and only relatively recently researched species, which means we have no absolute evidence for the reasons for decline. However, it is likely that the loss of deciduous woodland and woodland management that removed dead, dying or damaged trees would be a factor. Loss of linear commuting routes such as removal of hedgerows or fragmentation of commuting routes due to light pollution would also have an impact. Reduction in prey species due to pesticide use and water quality issues would also be likely factors.

Habitat management for barbastelle

The conservation of barbastelle requires consideration of both the woodland surrounding tree roosts and the wider landscape.

Woodland - Within the roost area, woodland management should seek to encourage characteristics of ancient or semi-natural broadleaved woodland with high numbers of mature and over-mature trees. It should also retain standing deadwood, dense understorey and areas of minimum intervention especially in proximity to roost trees, streams or other water bodies.

Beyond the woodland, general advice - management should focus on promoting moth-rich foraging habitats within a range of 7km but the nearer the roost woodland the better. This will support the bat's ability to access those habitats as quickly as possible. *Wildflower-rich meadows* and other unimproved grassland should be maintained or restored.

Arable margins – These can enhance the productivity of moths.

Hedgerows – Maintain a network of tall, bushy hedgerows. These are important for feeding and for providing cover as the bats head out from their roost woodland.

Other types of habitats - Increase the availability and quality of wetland habitats, including ponds, streams, marshes and reedbeds. Increase riparian habitat alongside rivers and streams with native shrubs and broadleaved trees. These will be commuting corridors and foraging grounds.