

Lesser horseshoe bat

Rhinolophus hipposideros



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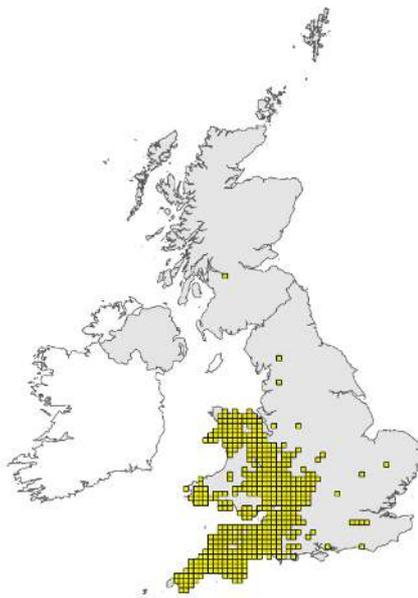
The lesser horseshoe bat is one of two species of horseshoe bat in the UK. It is a small bat, about the same size as a pipistrelle and weighing little over 5 grams. At rest it hangs by its feet from ceilings or walls. It is only the horseshoe bats that do this and in adapting to hang by their feet, unlike other bat species, they have lost the ability to crawl well. This means that horseshoe bats need to fly into their roosts, which is very limiting, especially in modern buildings. Lesser horseshoe bats are very loyal to their roosts and use them for generation after generation. The word horseshoe refers to the shape of their nose leaf which focuses their echolocation calls into a very directional beam. This, along with a very high frequency echolocation call, makes it difficult for their prey to be aware of their approach.

Lifecycle

Mating takes place during the autumn and winter with the female storing the sperm until conditions are right to allow fertilisation in the spring. Maternity colonies form in the spring and in June/July the single pup is born. Lactation lasts about five weeks and by that time the young are able to fly and search for insect food. Lesser horseshoe bats can live into their twenties.

Habitat

Lesser horseshoe bats feed on a variety of insects with dung flies and crane flies amongst the most important components of their diet. Other prey includes small moths, caddis flies, lacewings, small beetles, parasitic wasps, a wide range of other fly species and spiders. Lesser horseshoe bats feed amongst woodland vegetation. They are very manoeuvrable and can take advantage of the cluttered woodland interior. They also feed over pasture and along sheltered hedgerows



Lesser horseshoe bat distribution in England and Wales

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

and treelines. This species of bat (along with all other bat species) is sensitive to lighting so will avoid potential foraging areas if they are lit. Lighting can also impact their ability to move around the landscape following hedgerows or other linear features. The bat's core area for foraging will normally be within 2km of its roost. It is also a species that will forage during winter at which time its core foraging range is reduced to 1.2km from the hibernation site. Summer roosts (and in particular maternity roosts) are usually in larger rural houses and stable blocks, most often in the roof space but sometimes in warm spaces such as boiler rooms. In the winter they seek cool, stable and humid hibernation sites in places such as mines, caves and ice-houses.

Distribution

This species is found largely in south west England and Wales. Its range has contracted in the last century, but with climate change alongside sensitive land management, it could spread back to its original distribution which would include as far north as Yorkshire.

GB status and rarity

Classed as IUCN least concern for England. It is listed under Annexes II and IV of the Habitats Directive. This species suffered large losses in the last century. In the last 20 years there has been an increasing population trend, although it remains one of our rarest bats.

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

As they leave the roost, lesser horseshoe bats can be surveyed by sight, accompanied with a bat detector. They can also be surveyed in the field by picking up their echolocation calls which are distinctive. This is best achieved using a static bat detector.

Reasons for decline

Lesser horseshoe bats have suffered from a reduction in prey availability due to agricultural intensification. This includes the use of endectocides in grazing animals which significantly reduces dung fauna. Fragmentation of the landscape, due to development and new infrastructure and the associated lighting, can sever their commuting routes and make foraging areas unavailable. Noise and disturbance at roosts can negatively impact their use, with maternity roosts and hibernation sites being particularly vulnerable. Losses of native woodland and woodland management that reduced deadwood, understorey and wet woodlands would all have impacted this species. In the past, maternity roosts are likely to have been lost due to the conversion of large old houses and stable blocks into modern accommodation. In addition, the use of highly toxic timber treatment chemicals proved deadly even a long period after application. These chemicals are no longer in use and the legislation introduced in 1981 gives protection to roosts and access to them. This is likely to be a significant factor in the stabilisation of the population of this species in England.

Habitat management for the lesser horseshoe bat

This species thrives in a patchwork landscape of grazed small pasture and woodland with hedgerows providing connectivity.

General - Minimise insecticide use in all habitats.

Pasture - Cattle provide the best dung for most dung fauna, but sheep and horse dung is useful too. Avoid the use of anti-parasitic treatment for cattle or sheep which persist in the dung and prevent the development of normal dung fauna. More information available on the Farm Wildlife website

<https://farmwildlife.info/>

Woodland - Maintain existing mature ancient semi-natural woodland and ensure that some areas of the woodland have a dense understorey.

Hedgerows - Maintain a network of tall, bushy hedgerows. These are important for foraging and to connect the roost with foraging habitats.