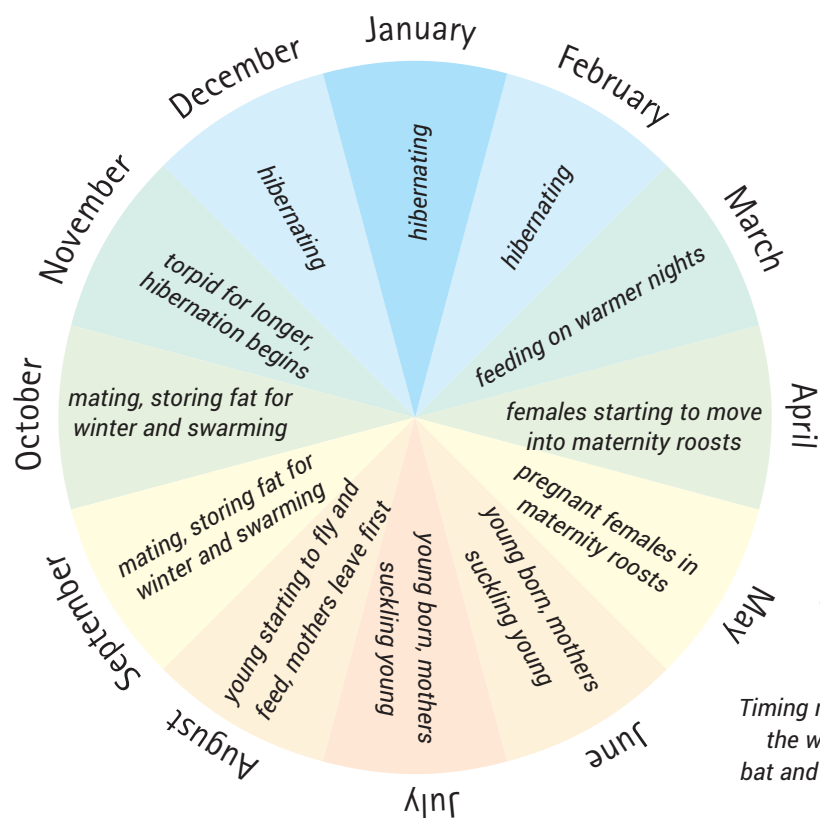


A bat's way of life in Britain changes drastically according to the season, because of its need for a good supply of insect food to enable it to fly. (See the factsheet on Flight).



This is a very general calendar of what bats are doing in the UK through the year.

Timing may vary according to the weather, the species of bat and where the bats live in the British Isles.

Young are born in the summer when insects are most plentiful. Females need a warm safe place to have their babies, preferably near to good feeding sites. Large groups of mother bats may move into their maternity roost in spring, but even amongst hundreds of others, each mother will recognise her own baby by its voice and smell.

Unlike most mammals, bats do not make a nest. Instead, the mother herself provides warmth and protection. As soon as the baby is born it crawls through her fur, seeking the nipple under her armpit, so the mother's wing is folded round the baby as it feeds. The baby hangs on tightly and depends on mother's milk until it can fly and catch its own food. It can hang up from birth as its strong feet and thumbs are nearly as big as its mother's!



© J.J. Kaczanow

Can you see the newly born pups in this maternity roost of soprano pipistrelle bats?

When the young can fly and catch their own insect food all the bats leave the maternity roost. Female bats often return to the same summer roost year after year, so it is important these places are protected.

Baby bat facts

- Most bats only have one baby in a year, and not every year
- Bats are very caring mothers. Once they have left the nursery roost, they still probably teach them some adult skills, showing them other roost sites and good places to feed.
- Babies of UK bats are born without fur and eyes still closed
- Fingers and wings of new-born bats are not fully developed
- A baby bat walks and climbs well before it can fly
- Young bats start to groom themselves when they are very small
- Bats start to fly and catch food from about 3-4 weeks old
- They will be weaned about 45-65 days after birth
- Males appear not to help at all in rearing the babies
- Bats in maternity roosts should never be disturbed



© Shirley Thompson

This tiny new-born pipistrelle has no fur yet. Its mother stayed with it and suckled it when it fell from its roost.



Unless we are unwell, our body temperature remains fairly stable at 37 degrees celsius. Bats on the other hand can change their temperature, not just in winter but at other times of the year too, when insect food is in short supply.



The two bat families living in the UK, the Horseshoes and the Vespers, are the only two out of 18 bat families in the world known to be true hibernators, though some others do sometimes go into torpor. Daily torpor and seasonal hibernation, controlled lowering of the body temperature, are key to the survival of bats in temperate regions of the world. They allow their body temperature to fall to or near the temperature of their surroundings and their breathing rate, heart rate, metabolic rate and oxygen consumption are reduced so little energy is used, and the food they have stored as fat is only used up gradually.

Hibernating Natterer's bats.

Although they may look as if they were dead, they are using only the energy needed to stay alive until food is available again. They may sometimes wake to drink or urinate, or to move to a different place as temperatures change. Safe hibernation sites are vital to bats.

So what is the temperature of a bat?

Different species prefer different temperatures to hibernate, and may move frequently during the winter, matching their temperature to the site. In winter this will usually be between 2° and 12°C.

It may reduce to 15° to match the temperature of its tree roost in summer or to 2° in a hibernation site in a cave.



Greater and lesser horseshoe bats hibernating.

Safe hibernation sites are important to bats. They need to be cool, humid, stable and undisturbed. Many are also used in autumn for swarming, bat meeting places for mating and possibly exchanging information.

These sites need to be kept safe, but knowing which places are used and which are most important to bats is often difficult. Whilst horseshoe bats hang up in caves, and can be seen more readily, most of those using underground sites, including Natterer's, whiskered, Daubenton's, Brandt's and brown long-eared bats, tuck themselves deep into tiny cracks and crevices and are very hard to find.

Small groups of specially licenced bat workers make regular visits to known hibernation sites each winter, and are always on the lookout for other suitable places to explore.



A grille has been installed at the entrance to this cave to prevent disturbance to the horseshoe bats that hibernate here.

Not all bats hibernate

In warmer countries there is a range of food available throughout the year, so bats are active in all seasons. Most feed on insects, like the tiny bumble bee bat shown on the right. This is the smallest bat in the world, and lives in Thailand.



Many bats depend on other foods, especially plants. The White Honduran bat, seen here roosting under a banana leaf in Costa Rica, eats fruit.

As you get closer to the equator the number of different bat species increases.