

“ THE BAT ORIENTS ITSELF USING ECHOLOCATION. WHAT HAVE HUMANS ADOPTED THIS TALENT FOR? ”

- A: Laser technology
- B: Radar technology
- C: Plastics production
- D: Aircraft manufacture



Please use the grey stamp!



“ During hibernation, the **BAT** decreases its body temperature to as low as 0°C. ”

Please use the white stamp!



Humans use  
echolocation in  
**RADAR TECHNOLOGY!**



“ The principle behind radar technology is that radio pulses are emitted and then intercepted again. Radio pulses are short, shock-like signals. If the signal comes up against an obstacle, it is thrown back just like an echo and intercepted once again by the radio antenna. If the obstacle is nearby, the echo reverberates quickly. If it is far away, it takes longer for the echo to be heard. The radio signals are emitted in all directions so the whole of the surrounding area can be investigated. ”

# FLYING GOBLINS

## SILENTLY THROUGH THE NIGHT

During the day, bats hang motionless upside down from ceilings or in crevices and caves. When daylight disappears, bats come out to play. They go searching for food, which consists in the main of insects. During the hunt, they rely mainly on their echolocation. They emit ultrasonic waves and can determine the exact position of their prey using the reverberating echo. To perfect this system, many bats have flaps of skin on their noses or other facial structures, which allow the ultrasound to be emitted more effectively.

Grooves and furrows have also developed in the course of evolution in the ears, which in some species of bat are very large indeed. A so-called ear cap improves the echolocation even more. When night-time comes to an end, bats retreat once more to their hiding places and hang upside down from their ceilings, in order to wait for the next twilight. 20 different types of bat are flapping about in and around the Hollabrunn Forest.



Nevertheless, bats are really fantastic animals! Together with flying foxes, also known as fruit bats, we are the only mammals who can fly. Our German name "Fledermaus" means "Flattermaus" (flitter mouse). With our flying membranes we glide silently through the night and try to capture as many insects as possible. During the day we sleep in well-concealed places. You can get to know four types of bat on the swing boards!

During the day, bats hang motionless upside down from ceilings and wait for the dark of the night.



Bats glide silently through the night sky. The quick flapping of their wings makes them easy to recognise.



# FLYING GOBLINS

## SILENTLY THROUGH THE NIGHT

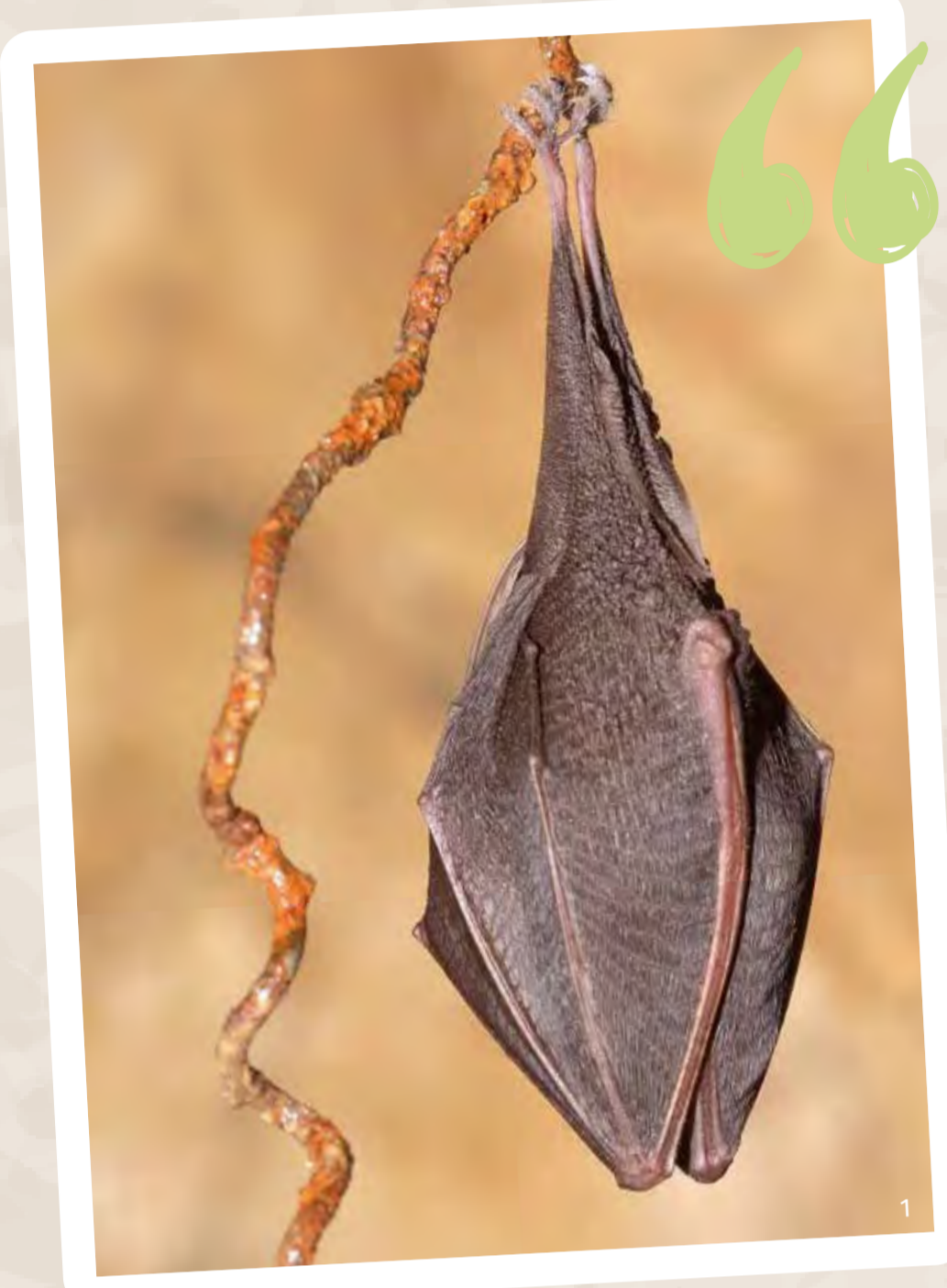
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Given its size, you could easily fit the **SOPRANO PIPISTRELLE** – or "Mückenfledermaus" which means "mosquito bat" in German – into a matchbox. It weighs no more than a piece of chocolate. Having said that, it did not get its name because of its size. It was in fact its main source of food, mosquitoes, that gave it its name. These tiny bats like having company. A nursery roost with around 1300 animals has already been discovered.

The **GREATER MOUSE-EARED BAT** mainly eats geobiontic (soil-dwelling) beetles and arachnids. Therefore, this bat relies more on its ears and nose than on echolocation. It flies over the ground at a low altitude and listens to the rustling of passing prey. If it has located them roughly, its strong sense of smell does the rest and the success of the hunt is nailed.

As their name suggests, **DAUBENTON'S BATS**, sometimes referred to as water bats, reside close to water. They also colonise sparse forests, but only on the condition that there is a pond or river somewhere nearby. When searching for food, these small fluttering animals can easily fly for several kilometres. Water bats are sociable little mammals that like to live in large colonies.

The **BARBASTELLE** – or "Mopsfledermaus" which means "pug bat" in German – owes its name to its short, squat snout, which is reminiscent of a pug dog's nose. Its ears that have converged in the middle of its head are another special feature of its almost entirely black face. Small butterflies and other insects with soft bodies are barbastelle bats' food of choice. They cannot crack hard chitinous carapaces with their weak jaws.

