

LIFE IN CAVES

Currently, about 3,000 different species of animals are known from caves in Germany.

Those which enter a cave accidentally are called cave visitors (eutrogloxenes).

Other species are regularly cave-dwelling during certain times of the year - for example bats. These are subtroglaphiles.



"Cave-loving" animals (eutroglophiles) are building stable populations in subterranean habitats, but also above ground.

Of special interest are the so-called "true" cave animals (eutroglobionts), which are exclusively living below ground and which are adapted to this way of live, for example by reduction of the eyes or the loss of pigmentation.

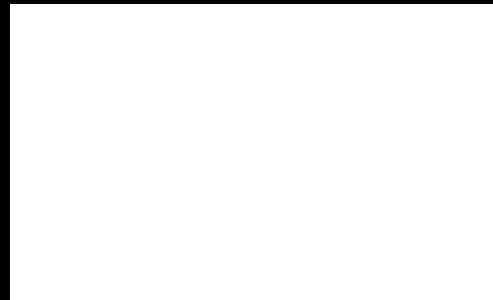


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CAVE ANIMAL OF THE YEAR 2019



Many animals spend
the hot summer in caves
and depend on caves as sheltered refuges.

One of these animals is the
Common Cave Limonii –
Cave Animal of the Year 2019.

CAVE ANIMAL OF THE YEAR 2019

The Common Cave Limoniid *Limonia nubeculosa*

The Common Cave Limoniid was first described in 1804 by the German entomologist Johann Wilhelm Meigen. During the summer half-year, these animals are populating our caves and other subterranean cavities in great numbers. Because of their abundance in caves, but also because their ecological function as a link between surface and subterranean habitats, this Limoniid was chosen to be the Cave Animal of the Year 2019.

The Common Cave Limoniid is 8 to 12 mm in size. It belongs to the family Limoniidae, commonly called "crane flies", but so are members of the Tipulidae and some smaller families as well. The animals are long legged, with dark pattern on their wings, which are folded overlapping when at rest. The otherwise yellowish shanks are carrying three dark rings. The breast (thorax) is yellowish-brown with three dark lines along the back. The first segment of the antennae is yellowish, the second and third brown. The wings show clouds in ash-grey and in the middle of the leading edge a grey half-circle followed by two to three dark brown dots.



Male and female in copulation



Typical aggregation of Cave Limoniids on a cave wall

The Common Cave Limoniid inhabits predominantly damp forests. Their larvae are living in the mud of water bodies, where they prey on microorganisms. From March to October, the Cave Limoniid is regularly found in caves. In our latitude, this sub-troglophil species is the most typical of the animals which retreat into caves over the summer. Their numbers reach a maximum in the months of July and August, when the animals are found in several thousands. The animals prefer areas without draft and niches, here they are regularly sitting on vertical surfaces, sometimes covering the whole wall. Copulations are regularly observed in subterranean habitats, during which the partners are forming a wheel. However, the eggs are deposited outside of the caves at water bodies.

During the summer half-year, the Common Cave Limoniid is an important component of the food chain of a cave. Especially the larger species of cave spiders are feeding on these dipters. Since a few years, increasing numbers of the Common Cave Limoniids infested by a fungus are observed, which kills the animals. Thus, even in winter, a large number of dead animals are found on the cave walls, which are covered by a white fungus mycelium.

The Common Cave Limoniid is distributed area-wide over all of Europa, and is known from all European cave areas. With the designation of the Cave Animal of the Year, the Verband der deutschen Höhlen- und Karstforscher e.V. (German Speleological Society) wants to raise awareness for the subterranean ecosystems and the animals found there, and point out the urgent need for research and conservation in this field.

THE CAVE AS HABITAT

For all living organisms, caves are a very special place. The most characteristic trait is the lack of sunlight.

What seems to be a disadvantage on first sight also has its merits:

- There is no danger of sunburn or desiccation, and no need for camouflage.
- Cave animals have neither to adapt to daily or seasonal cycles, unless their food source shows such cycles.
- Temperatures are constant, with no danger of freezing.

In Central Europe, the main challenge for cave dwellers is the low food supply. Cave animals adapted to these conditions by developing a small body size, slow movements and a low metabolism.

Cave animals are very sensible to environmental changes. Therefore, a strict protection of subterranean habitats is essential.

