

INTERNATIONAL CAVE ANIMAL of the Year 2021 *cave beetles*

The International Cave Animal of the Year raises attention for the little-known zoological diversity in subterranean habitats in general and with an international focus, thus contributing to global awareness of cave protection.

It is part of the International Year of Caves and Karst (IYCK) and an initiative of the International Union of Speleology (UIS). The UIS is comprised of 54 member nations which support the International Year of Caves and Karst.

The UIS hosts the International Congress of Speleology which will be held in Savoie-Technolac, Le Bourget du Lac, Savoie, France in July 2021. It will be expanded into the major international event that will celebrate the International Year of Caves and Karst.
<https://uis2021.speleos.fr/>

The IUCN Species Survival Commission Cave Invertebrate Specialist Group supplies information on endangered cave animals.
www.iucn.org

Different cave beetles around the world will be declared as national cave animals of the year for 2021. To learn about them and add your cave beetle to the growing list, and for more information about the International Year of Caves and Karst, visit:

www.iyck2021.org



INTERNATIONAL YEAR OF CAVES AND KARST 2021

„Explore, understand and protect“





"Cave Beetles – First International Cave Animal of the Year

Beetles are the most diverse animals in our planet with approximately 400,000 species described.

They are insects, have six legs, a pair of antennae and two pairs of wings. Their forewings (elytra) are hardened, cover part of the body, and together with their hard exoskeleton offer good protection from predators.

The Slenderneck Beetle *Leptodirus hochenwartii* was the first cave insect described. It was first discovered in September 1831 by a cave guide who picked it up while exploring a part of the Postojna cave system in southwest Slovenia. The blind beetle's discovery was published in 1832 by the entomologist Ferdinand J. Schmidt. It lives in cold and usually large caves in Europe's Western Dinaric Alps.

Aquatic beetles ...

Cave animals can be ecologically classified into three main groups:

Trogloxenes - occasionally cave visitors, use caves typically for shelter during certain times of the year, but must return to the surface for food, to reproduce, or some other important need.

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Troglophiles - can spend their entire lives in caves, but are also on surface habitats and have no specific adaptations to life in caves.

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Troglobionts - the "true" cave animals have adapted their complete life history to the subterranean habitat, they lack of eyes, are depigmented, have elongation of body and appendages, and slower metabolism than their surface relatives. The famous Slenderneck Beetle (*Leptodirus hochenwartii*) belongs to this group.



Help to protect the "hole" world:
**take nothing but pictures,
leave nothing but carefully placed
footprints, kill nothing but time.**

Animals that are adapted to live in caves had to cope not only with darkness. Light varies in the different cave zones: the entrance area close to the surface, the twilight zone and the zone of complete darkness. Temperate climate zones signifies constant low temperatures and a scarce food base in contrast to tropical cave systems with warm temperatures and an abundant food base.

Both have a great influence on the population of caves and groundwater-dependent ecosystems. They harbor a multitude of species which require nearly constant environmental conditions. Even small impacts from people can hurt biodiversity of subterranean habitat, which can be irreversible and have severe consequences. Caves are not only habitat for beetles and other animals but they are the natural pipes for karst groundwater systems. Protecting caves for biodiversity also protects drinking water supplies.

Threats to these unique habitat include pollution that infiltrated from surface, urban discharge, agriculture, farming, direct habitat destruction (mining industry, road construction), climate change and excess cave visitation. Contaminants found in groundwater threat cave living communities and include mostly metals, pesticides, fertilizers, emerging contaminants and volatile organic compounds.

