

# Endemics in the Gesäuse region

## The „local heroes“ of our biodiversity



Photo: S. Aurenhammer/ÖKOTEAM

The Styrian alpine leaf beetle is mainly found in Styria and has a distribution focus in the Gesäuse, the Eisenerz Alps, and in the Gleinalpe and Koralpe mountains. In the Gesäuse region it can be found on Alpendost (*Adenostyles alliariae*) plant leaves and in green alder bushes on the Koderalm.

### Austria's Endemics Hotspot

	Austria	Styria	Gesäuse
Plants	3,400	2,500	1,940
Of which endemic	151	83	ca. 30
Animals	45,870		4,730
Of which endemic	581	279	ca. 195

The numbers are taken from the book "Endemiten Österreichs" Rabitsch & Essl 2009. It comprehensively summarises the variety of endemics in Austria. In this reference book, the Gesäuse region was identified as **Austria's endemic hotspot** with over 100 named species. Today we know that more than 225 endemic species occur in the Gesäuse region. These were published in Komposch & Kreiner (2018).

*"However small and inconspicuous endemic animal species may be, in the Gesäuse National Park they were given the nature conservation importance that they deserve as jewels of the Alps."*

C. Komposch  
(Schriften des Nationalparks  
Gesäuse, 2012, Bd. 9.  
Erste Dekade)

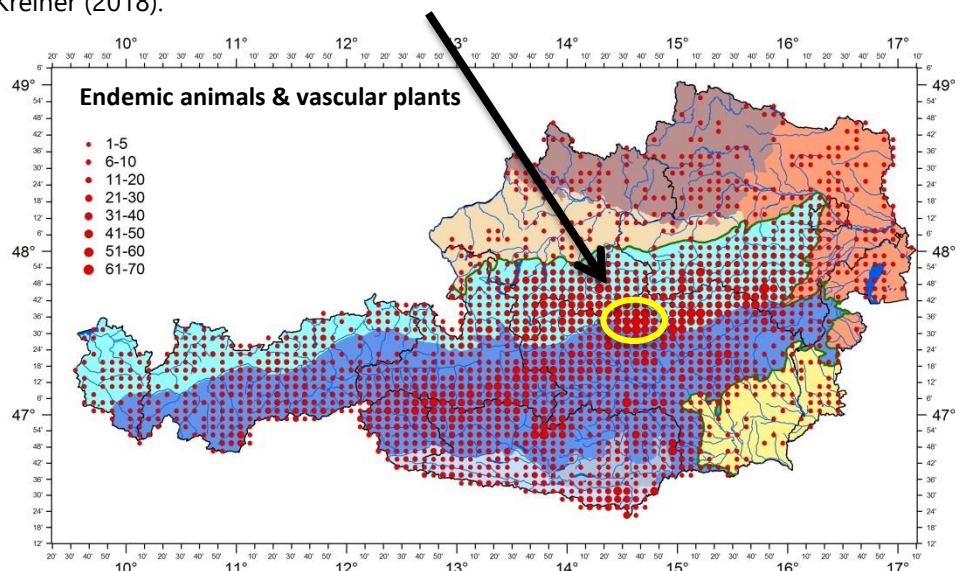
### What is an endemic?

Endemics are very-localised species. The word derives from the Greek "éndemos" and means "native". Due to their small-scale distribution, these animals and plants are often particularly endangered.

### Endemic plants

Most of our endemic plants occur in the **north-eastern Kalkalpen** (Limestone Alps). These include the alpine carnation, the north-eastern alpine poppy, the Austrian bellflower and the Ennstal lady's mantle. The species with the smallest distribution area and its central occurrence in the Gesäuse region is the **pretty feathered pink**, a rare form of pink carnation.

No endemic species have been identified among the algae, mosses, lichens and fungi.



Map from RABITSCH & ESSL 2009 (Number of endemic species in a grid (35 km<sup>2</sup>))

## Animal endemics

We find the largest number of endemic animals among less mobile snails. The **Zylinder Felsenschnecke** (*Cylindrus obtusus*; translates as „cylindrical rock snail“) is one of the Gesäuse region's flagship species. Some species in the Gesäuse region are new to science, including a local endemic: **Astrid's stonefly**. Among spiders, the **northern-giant-eye harvestman**, stands out. And among beetles, the **Styrian northeastern alpine blind beetle** was re-discovered in a cave.



## How did they get here?

### Ice Age

During the Ice Age, arctic temperatures prevailed in Europe. Between 18,000 and 20,000 years ago, the glaciers stopped at the eastern edge of the Alps in the Gesäuse region. The adjacent area served as a **refuge area** for many species, surviving on the edge of the Ennstal Glacier's ice sheet.

In the various refuge areas, a species that was separated by the ice sheet was finally able to develop in different directions .



In the case of less-mobile species, there is a higher density of endemic species in the area around the refuge areas.

Seen from a European perspective, as well as mountains, the **Mediterranean region** is particularly rich in endemics. Endemic hotspots not too far away are Eastern and Central Anatolia (Turkey) and the Caucasus. In addition to mountains, islands in particular are considered endemic centres worldwide.

## Are endemics safe?

As a national park, Gesäuse seems to be a safe haven for endemics. But this isn't the case. Most of our endemic species are adapted to cold conditions and only occur at higher altitudes or in special locations (caves, ravine forest). Due to increasing global warming, their future here is at risk in the coming decades. In addition to a high risk of extinction, individual species might be able to survive in special locations. In the long term, it could also lead to the emergence of new species. The speed at which global warming is currently progressing, however, is likely to be too fast for evolutionary developments and a corresponding migration of species. Current research projects in the national park should help us to better understand the future of the endemics.



## Mehr Infos?

Profiles on individual endemic species in the Gesäuse appear regularly in the free magazine "**Im Gseis**" under the heading "Worldwide unique".

<https://nationalpark-gesaeuse.at/en/national-park-enclosures/natural-phenomena/>