

## The role of Hohe Tauern National Park as a Noah's Ark for threatened lichens

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### Keywords

Epiphytic lichens

### Abstract

In the northern borders of the Austrian Alps – including the calcareous Alps - the lichen flora is threatened by the impact of nitrogen compounds and by aerosols (TÜRK & PFLEGER 2007; KIENESBERGER et al. 2007; MADL et al. 2010). In particular the most epiphytic lichens with cyanobacterial photobionts, e. g. diverse species of the genera *Collema*, *Leptogium*, *Lobarina*, *Nephroma*, *Pannaria*, *Peltigera*, *Sticta* and the beard lichens of the genera *Bryoria*, *Ramalina* and *Usnea* are extinct in large areas of the Northern Austrian Alps or heavily threatened.

During the past five years in the sections of Salzburg and Carinthia of the National Park Hohe Tauern 986 lichens species were registered. Under the in Austria and Europe severely threatened or very rare lichens 55 epiphytic, 36 terricolous and 35 saxicolous species were found.

Of special interest are the epiphytic lichens which occur in the natural parts of the forest ecosystems of the northern and southern valleys. There exist the very sensitive species like *Lobariapul monaria*, *Lobarina scrobiculata*, *Sticta sylvatica*, *S. fuliginosa*, *Collema nigrescens*, all epiphytic *Nephroma* species, *Pannaria conoplea*, *Peltigera collina*, *Leptogium saturninum* and *Ramalina thrausta* in a healthy condition with a high vitality. *Dolichousnea longissima* (syn.: *Usnea longissima*) is present only in two sites, whereas it occurred twenty years ago in all northern valleys of the Hohe Tauern. Thus the significance of the National Park Hohe Tauern for the biodiversity of epiphytic lichens and their survival in Austria and Europe is extreme high. Important for the surviving of the cyanobacterial lichens are the presence of old coniferous forests and of old deciduous trees like *Acer pseudoplatanus*, *Fraxinus excelsior* and *Alnus incana*, which should be taken in consideration in the future forest management.

### Literature

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