

# Altitudinal zonation of ants (Formicidae) in a steep fjord landscape in Sogndal, Western Norway

Sigmund Hågvar

Hågvar, S. 2005. Altitudinal zonation of ants (Formicidae) in a steep fjord landscape in Sogndal, Western Norway. *Norw. J. Entomol.* 52, 3-12.

In a steep fjord landscape in Western Norway, with timber line at about 900 m a.s.l. and scattered trees up to about 925 m, the altitudinal zonation of the ant fauna was studied from sea level to 1030 m a.s.l. Combined with literature data, it was concluded that 18 species lived below 200 m altitude, 12 species at 400 m altitude, 9 species at 600 m altitude, and 7 species at 900 m altitude. Only two species lived above tree line: the world's northernmost ant species *Leptothorax acervorum* which was found up to 1025 m, and the arctic species *Formica gagatoides* which was found at 1000 m elevation. It was a good correlation between the altitudinal and latitudinal distribution of the species within Norway, and temperature is probably an important regulating factor for the ant fauna. Because several species are able to live in the uppermost forest belt, an elevated timber line due to climatic change would imply that also the ant fauna will climb to higher altitudes together with the forest. Since ants are efficient predators, their potential colonisation of higher altitudes may heavily affect today's alpine ground-living fauna.

Key-words: Ants, Formicidae, altitudinal zonation, climatic change.

*Sigmund Hågvar, Department of Ecology and Natural Resource Management, Box 5003, Norwegian University of Life Sciences, NO-1432 Ås, Norway, (e-mail: sigmund.hagvar@umb.no)*