

MANAGING OR ABANDONING ALPINE GRASSLANDS? – FIRST RESULTS OF A SPIDER SURVEY

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A long-term survey on the effects of land-use change on epigeic arthropod assemblages in alpine habitats has been launched by the Bavarian Association for Bird Protection (LBV) in the German Alps after a change in land ownership in 2000. The extraordinary flower-richness in the grasslands of the region and especially on “Alpe Einödsberg” originated from very specific geological and pedological conditions and from traditional land use trowing and extensive cattle grazing. However, intensive sheep pasturing until 2000 has greatly reduced the floristic diversity of the study site. Restoration efforts since 2002, involving controlled grazing have already resulted in positive effects on the vegetation structure. Parallel to vegetation monitoring, changes in spider and carabid assemblages have been investigated since 2003. Six pitfall traps were installed in each of 20 permanent plots (5 x 5 m), distributed over four different vegetation types in elevations from 1,750 to 1,990 m a.s.l., and analyzed from 2 week-periods soon after snowmelt in June, in summer (July) and before first snowfall in September. Spider fauna in the study area is rich: 126 species have been recorded so far, 19 species are considered as endangered. There is a very strong activity peak in spring, mainly caused by males of four lycosid species (*Alopecosa pulverulenta*, *Pardosa amentata*, *P. oreophila*, *P. riparia*). These species strongly dominate the epigeic active spider assemblage (80%). Linyphiids comprised 10% of the spider fauna, which is unusual low. Highest abundance (of the lycosid species), but also species richness was observed in the highest areas on the mountain ridge. Management of these areas by cattle grazing seems to have a positive effect on the abundance (activity) of the dominant species, but so far did not result in changes in diversity. Some specific alpine species have only been captured in less disturbed plots without cattle grazing.

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