

## Multifunctional Assessment of Alpine Pastures

**Daniel Kreiner, Lisbeth Zechner**

The National Park Gesäuse in Styria (Austria) with an area of 110 km<sup>2</sup> includes 8 pastures which are still grazed, and 4 pastures which have been abandoned since the 1960es. In 2003 we started with the area-wide assessment of the quality and quantity of pastures and the first zoological and vegetation surveys in the "Sulzkaralm", which, with 180 ha, is the biggest pasture in the National Park. In 2004 we continued with two additional pastures (Haselkar, Scheuchegg) and one occasionally grazed pasture (Hueflinger alm). In 2005 three abandoned pastures are being investigated in cooperation with the BAL Gumpenstein (BOHNER A.) within the frame of an EU-project which analyses the effects of abandonment on biodiversity.



Fig. 1: Alpine Pasture "Sulzkaralm"

Data collection concerning the intensity of grazing is done with a digital evaluation system. The data is collected with PDA and GPS-module in the field and gets implemented in Arc View 3.2 (HÜTTENBRENNER K., EGGER G., BAL GUMPENSTEIN, BERGLER F., SCHWAB M.). Data of special habitats in alpine pastures (i. e. FFH-habitats, forests, wetlands, special structures, karst formations etc.) is gained area-wide. Analysis of vegetation is the basis for the assessment of nature conservation quality. Springs, wetlands, bogs and small ponds belong to the extremely sensitive habitats and are therefore mapped intensively. The main focus is placed on selected animal groups, i.e. Plecoptera, amphibians and reptiles (HASEKE H., NHMW, WEIGAND E.).

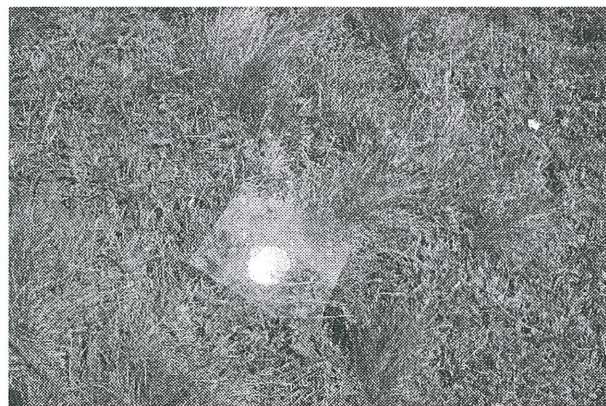


Fig. 2: Insect trap

Information on biodiversity of selected study areas with different pasture types is collected for selected animal groups (bugs, cicadas, spiders, grasshoppers and small mammals).

The suitability of these groups for the assessment of open habitats at this altitude and the survey methods are evaluated within this project. Additionally, a census of breeding birds in the investigation areas completes the information on diversity. The results are the basis for the formulation of management measures (KREINER D., Ökoteam, FRIEB T., DERBUCH G., ZECHNER L.).



Fig. 3: Investigation on grasshoppers and other insects.

Furthermore in 2005 intensive investigations concerning habitat parameters and vegetation have begun (analyses of nutrient quality and soil, indicator values etc.). The study areas are part of a long term investigation system, which should allow the long term assessment of measures in alpine pastures (BOHNER A., KREINER D.).

The investigation of the historical use of pastures brings important knowledge concerning the development of cultivation of alpine areas. The basic economic conditions were reasons for the varying intensity of grazing (HASITSCHKA J.). In the EU-project concerning the abandonment and effects on biodiversity, data of the Gesäuse is also included (KREINER D.).



Fig. 4: Historical picture of the Sulzkaralm.

The data of these studies should bring important basic information on biodiversity of alpine pastures, also in connection with abandonment of pastures. Apart from the basic research the implementation of the results, i.e. changes in intensity of grazing or protection of sensitive habitats, is also important and will be done in cooperation with the farmers. This approach to a manifold and difficult issue could be a model for other regions or protected areas in the Alps. In addition, intensive public relations with presentations, excursions with farmers etc. should inform the farmers and the public about the objectives and aims of the project.

## Contact

Mag. Daniel Kreiner  
[daniel.kreiner@nationalpark.co.at](mailto:daniel.kreiner@nationalpark.co.at)

Dr. Lisbeth Zechner  
[lisbeth.zechner@nationalpark.co.at](mailto:lisbeth.zechner@nationalpark.co.at)

Nationalpark Gesäuse GmbH  
A 8913 Weng im Gesäuse 2  
Austria

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Nationalpark Hohe Tauern - Conference Volume](#)

Jahr/Year: 2005

Band/Volume: [3](#)

Autor(en)/Author(s): Kreiner Daniel, Zechner Lisbeth

Artikel/Article: [Multifunctional Assessment of Alpine Pastures 123-124](#)