

Title

Genetic structure and occurrence of genetic variants amongst neighbouring populations of mountain hares (*Lepus timidus*) in the Swiss Alps

Brief description

The mountain hare (*Lepus timidus*) is a genuine Arctic species in its Alpine range, where it lives as glacial relict populations at high elevations in the Alps. Thus, it is considered to be particularly vulnerable to climate change by habitat loss and increasing habitat fragmentation. Non-invasive genetic samples (faeces) have been sampled at various locations within and around the Swiss National Park (SNP) to study potential relationships and connectivity among populations. Samples have largely been genotyped with nuclear microsatellites and a sex-specific marker. In this Master's thesis, the aim is to analyze these data with population genetic tools, i.e. to look into genetic variation in neighbouring populations to derive the degree of connectivity among populations. As a reference, samples have been collected from the Stockhorn area (canton of Berne) and Norway to study the isolation of populations in a regional and latitudinal contrast and to help better understand the distribution of genetic variation amongst mountain hare populations.

Requirements

You study biology or environmental science and have acquired good knowledge in conservation genetics and population genetic data analysis. Experience in R statistical environment and basic knowledge in GIS-techniques are required. You are used to work carefully and in a structured way, and you have a good team spirit.

Offers

You will work in a team of geneticists and wildlife biologists, which will provide support in conceptual and analytical aspects of the MSc thesis. Felix Gugerli will supervise the thesis in cooperation with Kurt Bollmann and Maik Rehnus. Working place will be at the Swiss Federal Research Institute WSL in Birmensdorf/ZH.

Contact:

Felix Gugerli, Kurt Bollmann, Eidgenössische Forschungsanstalt WSL, FE Biodiversität und Naturschutzbiologie, Zürcherstrasse 111, 8903 Birmensdorf, felix.gugerli@wsl.ch, kurt.bollmann@wsl.ch

Time

from summer 2021 on