

Master Thesis Project

Plant germination in alpine environments

As a part of ongoing research on climate change effects on alpine vegetation (<http://microclim.mountainresearch.at/>), an MSc thesis project is available on the response of plant germination and seedling establishment to gradients of microclimate and vegetation density at the Department of Botany and Biodiversity Research. The underlying hypothesis is that competitive effects of neighbours at lower elevations switch to facilitative ones with increasing microclimatic harshness, and that high-elevation species depend on vegetation gaps at low elevations while low-elevation species need neighbours at high elevations.

This is a two-years experiment. The first round of data collection has already been initialized in 2021. The MSc student is expected to:

- Collect, count and sort seeds of ~50 species for sowing in 2022
- Sow the collected seeds at five experimental sites following a pre-defined scheme
- Collect data on seedlings emerged from sowing in 2021 at the same sites
- Statistical analysis of the latter data
- Writing the thesis, preferably in the form of an English manuscript (15 – 20 pages)

Field work shall be done between 01/08 and 03/09/2022 around Obergurgl, Ötztaler Alpen. The MSc student will be part of a larger research team working there at the same time. The work requires some physical fitness and willingness to spend several weeks in an alpine environment. Basic knowledge of alpine plants and of statistical methods are an asset.

The thesis project is suitable for MSc students in ecology, botany and conservation biology.

Interested? If you are interested please contact Prof. Stefan Dullinger (stefan.dullinger@univie.ac.at).

