

Ten years monitoring experiment – intraspecies dynamics and climatic change



Annual colonising species are important for understanding evolutionary changes in the course of environmental shifts. As a model species, we selected the genus *Capsella* with two wellknown colonising species: the diploid *Capsella rubella* occurring in Mediterranean climatic regions and the tetraploid in historical times worldwide distributed and ecotypically differentiated Sheperd's Purse *Capsella bursa-pastoris*.

Would you like to participate?

The monitoring of gene pool dynamics of *Capsella* will be studied already in four Botanical Gardens starting 2010:

BOKU Vienna, Austria
University of Osnabrück, Germany
University of Kuopio, Finland
South Siberian Botanical Garden Barnaul, Russia



How to participate?

Your duties will include tending an experimental field, approx. 10 x 10m², over a period of ten years. This field will have to be ploughed once a year in early spring. If *Capsella*-individuals grow during the vegetation period, seeds of 20 individual plants should be harvested and sent to either Vienna or Osnabrueck.

What will be done with the collected material?

The seeds can be stored and the analysis of genotypes performed at each lab participating in this network. The material can be stored in Vienna and Osnabrueck in chambers at minus 20° C to preserve the viability of seeds. We will also establish techniques for genotyping the material individually in order to correlate the individuals within geographic and climatic regions.

Over the course of ten years, at various geographic localities and in diverse climates, we will have the unique opportunity to observe the influence of a changing global climate on within-species dynamic, adaptation strategy and evolutionary mechanisms.