



Project acronym: MISSE

Project title: Microclimate Impacts on Sub-arctic Soil Ecology

Project leader: Heather Rumble, University of Portsmouth, UK

Discipline: Earth Sciences & Environment: Ecosystems & Biodiversity

Station(s): Kevo Subarctic Research Station (Finland)

The project explored the impact of elevation, aspect and dominant vegetation cover on soil microarthropod population dynamics, by sampling for soil organisms along a dense network of meteorological stations around the Kevo Research Station.

During the field season in question we met the first 4 objectives of the study. Objectives 1, 3 and 4 were undertaken via remote access. Objective 5 has yet to be achieved for the reasons outlined in the achievements and difficulties section.

1. Update and maintain the network of temperature sensors in the Kevo Valley. This will allow us to build regional climate models to explain soil microarthropod dynamics in sites of different aspects and elevation. It is also important for maintaining this network, which has been used in research for the last decade and will continue to be used in future research.
2. Identify suitable sample sites from the existing meteorological network, covering a range of aspects and elevations. This was achieved by designing a broad cover sample framework covering the whole valley, complemented by a detailed regional sampling regime covering only the Jesnalvarri meteorological network.
3. Undertake a broad ecological survey of the chosen sample sites, in order to understand the dominant vegetation cover. This will provide one of the correlates for explaining microarthropod dynamics in the valley.
4. Undertake soil microarthropod sampling at each of the chosen sample sites.
5. Analyse the data and produce outputs.