



Project acronym: BactArctic

Project title: 1. Bacteria in high-arctic watersheds: community coalescence from snow-packs to headwater streams and beyond

Project leader: Riku Paavola, University of Oulu, Finland

Discipline: Earth Sciences & Environment: Ecosystems & Biodiversity

Station(s): Zackenberg Research Station (Greenland/Denmark)

The project aims to investigate bacterial communities in glacier-fed and snow-fed streams in Greenland, around Zackenberg station. Various aspects of bacterial community ecology will be studied with the main focus being on coalescence. The proposed research is strongly linked to existing research work done near Oulanka research station in NE Finland. A secondary aim of the project is to establish a starting point for biological monitoring of streams in the vicinity of Zackenberg station, taking advantage of the successful monitoring scheme at Oulanka research station. The proposed timing for the field work is late July 2022 - a time that should allow sufficient maturing of the bacterial communities during the short arctic growing season. We aim to sample 25-30 sites at different network positions across the lower watershed. Sampling at each site consists of collecting a biofilm sample, water sample and quantification of the in-stream habitat structure. As we are planning to work partly in the same areas during field work, we aim to maximize collaboration and synergy with Hannu Marttila's group (project PeatHydro), should both projects be accepted.