



Project acronym: AASER25

Project title: Arctic Stream Ecosystem Research 25

Project leader: Alexander Milner, University of Birmingham, United Kingdom

Discipline: Earth Sciences & Environment: Ecosystems & Biodiversity

Station(s): Arctic Station (Greenland/Denmark)

Our project will be undertaken at Arctic Research Station in Greenland and Ny-Alesund Research Station Sverdrup during August which is when the original sampling was carried out in the AASER project. The principal idea of the project is to examine long term changes in stream ecosystems due to climate change that exceeds 23 years. Macroinvertebrates and diatom samples will be collected and physicochemical estimates made to quantify change.

We successfully sampled 6 rivers on Disko Island: Røde Elv (x2), Kidloq, Lyngmarkselven, a spring adjacent to the field station and a small glacier-fed river draining Lyngmarksfjeld to the north of the field station. The first five locations were sampled previously in 1997 and so we returned to the same locations to resample them as part of a comparative study across Europe (AASER25 project www.tinyurl.com/aaser25). At each location we collected five replicate samples for macroinvertebrates using a 200micron mesh kick net, five samples of river bed biofilms for the analysis of diatoms using a 3x3cm template and a stiff brush, and then five swabs of riverbed biofilms plus five samples of fine sediments for the analysis of bacteria and fungi. At each location we also measured water temperature, pH and electrical conductivity using a portable Hach HQ40D sensor, we quantified riverbed stability using the Pfankuch Index, and collected water samples for the analysis of turbidity and dissolved nutrients. After leaving Disko Island, we had a one night stay in Kangerlussuaq whilst waiting for our return flights. We therefore visited two additional sites that were sampled in 1997 on the Watson River to the east of the town and collected samples in the same manner.