

## **One Year Master Thesis in Molecular Ecology - 60 HP**

**Temporal changes in freshwater bacterial communities within controlled conditions:** towards the understanding of the responses of biological communities to brownification and temperature in northern lakes.

Principal investigators: Dr Eric Capo (post-doc) & Dr Pär Byström (Associate Professor), Freshwater Ecology Group, Department Ecology and Environmental Sciences (EMG), Linnaeus väg 4-6, 907 36 Umeå, Sweden, email: [eric.capo@umu.se](mailto:eric.capo@umu.se) ; [pär.byström@umu.se](mailto:pär.byström@umu.se)

**Description the project:** The Freshwater Ecology Group at the Department of Ecology and Environmental Sciences (Umeå University) is seeking a Master student to join a 1 year project investigating the temporal changes of freshwater bacterial communities within controlled conditions (DOC gradients, temperatures). This project is based on the use of DNA-based techniques to obtain molecular inventories of bacterial communities from large freshwater mesocosms. This work is a part of the large project lead by EMG researchers aiming to study climate change induced regime shifts in northern lakes. (<http://www.emg.umu.se/english/research/research-projects/climate-change-induced-regime-shifts-in-northern-lake-ecosystems/>).

**Job description and duties:** The main tasks of the selected applicant will be the collection of the water (in mesocosms at Umeå), water filtrations, lab work in molecular biology (DNA extraction, PCR amplification and libraries preparation for next generation sequencing), bioinformatics and data analysis. Beside this main project, the selected applicant would also be involved in other projects such as the study of lacustrine biological communities in lake ecosystems applying molecular limnology and paleolimnological approaches.

**Qualifications:** Applicants should have been working in molecular laboratory and handle classical molecular techniques such as DNA extractions and PCR amplifications. Additional desirable qualifications are of course experience in field sampling, water filtration, bioinformatics and data analysis & statistics.

**Appointment and application:** All appointments are for one year from April 2018. To apply, submit a curriculum vitae, cover letter that describes your research interests and experience and that indicates how you satisfy the minimum and desirable qualifications to Dr Eric Capo (email: [eric.capo@umu.se](mailto:eric.capo@umu.se)).