



MSc Project

Microbial diversity in terrestrial and aquatic beaver ecosystems

Beaver ecosystems are habitats created by beavers through damming of rivers, which might contribute to restoring waterways. The microbial communities inhabiting beaver ecosystems are poorly known. In this project, we want to study the diversity and functions of microbial communities in soil, water and sediment impacted by beaver activities and study their role in these newly created ecosystems. To accomplish this goal, we will collect stream sediment and surrounding soil to assess the bacterial and fungal diversity inhabiting these blue-green habitats.



If possible, you will join the research team for field work in diverse sites across Switzerland. You will then conduct the laboratory analyses and learn valuable skills on eDNA-metabarcoding sample processing. This is followed by analysing the sequencing reads and learning big data and statistical analyses. As we are currently studying other groups of organisms and ecosystem functions in these beaver systems, you will be able to analyse the diversity and functions of the microorganism in relation to other groups and link the biodiversity data with environmental data (e.g. land-use type, vegetation cover, etc.) of your interest.

This project is highly collaborative and part of the Blue Green Biodiversity Research Initiative – an Eawag-WSL collaboration focusing on biodiversity at the interface of aquatic and terrestrial ecosystems. The beaver project is in collaboration with the National Beaver Office (Biberfachstelle) and our results will help to update and extend current beaver management and conservation practices and policies in Switzerland and abroad.

If you want to do your master thesis in an interesting, forward-looking field with a great team, do not hesitate to contact us!

Contact / Supervision

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