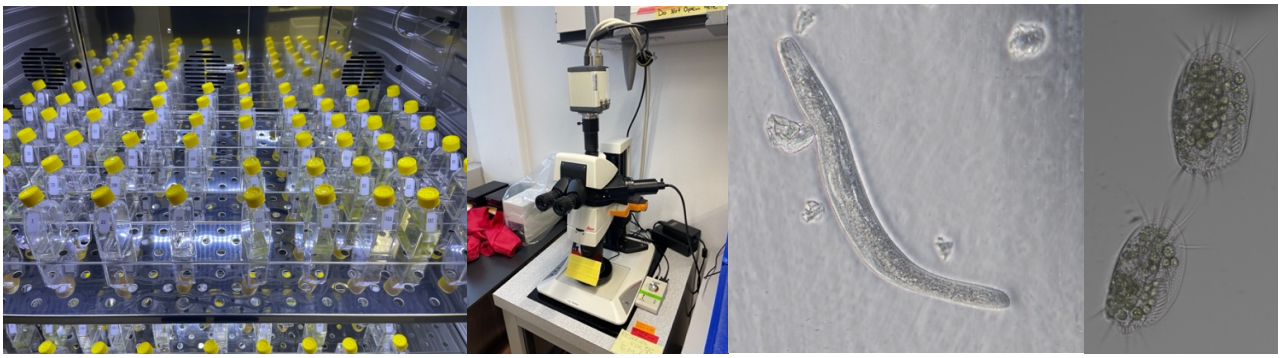
**MSc Project: Investigating interactions between ecosystems through the flow of non-living material.**

We seek a passionate MSc student to research how the flow of non-living material impacts ecosystems. The project includes laboratory experiments using protist microcosms and is a part of the MetaPerspect project at the Altermatt Lab at Eawag in Dübendorf.

A fundamental goal of ecology is to comprehend the factors that influence the diversity, productivity, and stability of natural ecosystems. Recent evidence suggests that the movement of organisms and non-living material (such as nutrients and detritus) play a crucial role in shaping these properties. The **meta-ecosystem** concept provides a comprehensive and unified approach for studying the impact of these spatial flows. Despite significant progress in meta-ecosystem ecology in recent years, there is still much to be understood about how **realistic features of natural landscapes** shape meta-ecosystems. The MetaPerspect project, based at the Altermatt Lab, aims to investigate how factors such as resource availability, perturbations, and landscape spatial layout affect diversity, productivity, and stability of meta-ecosystems.



In this MSc project, you will perform a laboratory-based meta-ecosystem experiment using protist microcosms. During the experiment you will create complex communities including detritivorous protist such as *Paramecia*, the predator protist *Blepharisma*, and the alga *Euglena*. You will build upon previous meta-ecosystem experiments that have used protist communities as a study system and contribute to the overall objective of the MetaPerspect project. You will create multiple replicate microcosms, frequently monitor them by filming videos that will be afterwards analyzed using R and machine learning. The data will be analyzed using statistical methods and turned into beautiful plots.

**Requirements:** The ideal candidate for this MSc project should have an interest in community and ecosystem ecology, and experience in laboratory work, statistical analysis, and proficiency in the English language. The project can begin at any time.

**Contact/Supervision:**
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We look forward to meeting you! More info: www.altermattlab.ch