Positions

See here https://www.altermattlab.ch/positions/ for currently open positions and Bsc/MSc projects in my group. In addition, I encourage direct applications for projects that have an independent financing, such as Ambizione or Marie-Curie fellowships. For an overview of possible independent Postdoc funding, see here: UZH Postdoc funding.

If you have a project idea and a financing plan, please contact me, sending me your CV, two addresses of academic references as well as a 1–2 page summary of your project plan.

Open PhD and Postdoc positions:

PhD position in Ecology (4 years): "Distribution, diversity and indicator status of groundwater amphipods in Swiss drinking water wells (AmphiWell)"

Amphipods are among the most common invertebrates in streams, rivers and lakes. They play a key role in the functioning of these ecosystems and are regularly used for monitoring and bioindication. While the diversity and distribution of the epigean (above ground) amphipods is well documented, there is a significant and largely unknown diversity of amphipods in hypogean (below ground) habitats. The project AmphiWell will establish scientific baseline data about the diversity and distribution of amphipods in Swiss groundwaters. Using a citizen science approach, the PhD project will focus on identifying the diversity of amphipods in groundwater and its contribution to the ecological infrastructure of Switzerland. The project is in close collaboration with respective stakeholders (water providers). The PhD-student will be enrolled at University of Zürich (Department of Evolutionary Biology and Environmental Studies), which will be the degree granting institution. Prof. Dr. Florian Altermatt is the formal supervisor. More info and application details (deadline: 15 April 2020)

There is also an associated Postdoc position in the same project. More info here.

Postdoc position (3+1 years): "eDNA metabarcoding to assess distribution, diversity and indicator status of groundwater amphipods in Swiss drinking water wells (AmphiWell)"

The project AmphiWell will establish scientific baseline data about the diversity and distribution of amphipods (especially genus Niphargus) in Swiss groundwaters. Amphipods are among the most common invertebrates in epigean (above ground) freshwater habitats. As such, they play a key role in the functioning of these ecosystems and are regularly used for monitoring and bioindication. The diversity of amphipods in hypogean (below ground) habitats is still largely unknown. The Postdoc project will establish eDNA metabarcoding methods to monitor groundwater from a biological perspective. The tools will be developed in close collaboration with respective stakeholders, such that they can be directly used and implemented by water providers. More info. Apply here (deadline: 15 April 2020)

The project is aligned with a parallel PhD project that focuses on biogeography and species diversity of amphipods in groundwater.

Postdoc position (2 years): “Assessing effects of agricultural land use intensity and land-use drivers on diversity of aquatic invertebrates using eDNA metabarcoding”

Biodiversity in freshwater systems is declining at local to global scale with land-use change, invasive species, climate change and pollution being the major drivers. Several of these factors can also act synergistically and can create feedbacks. In a large collaborative project (Ecoimpact, see https://www.eawag.ch/en/research/water-for-ecosystem/pollutants/ecoimpact/ecoimpact-1/), effects of water quality and land-use on macroinvertebrate communities has been measured in 24 Swiss streams. Extensive data on macroinvertebrate communities (kicknet data), eDNA samples and water quality were taken and are available (see Burdon et al. 2019; Mansfeldt et al. 2020). In this project, you will compare eDNA-based diversity with classically sampled macroinvertebrate communities and analyse if and how eDNA metabarcoding based data can capture effects of different land-use drivers, especially different agricultural practices. More info. Apply here (deadline: 15 April 2020)

PhD position in Ecology: “Assessing biodiversity in the Yunnan River Network using environmental DNA”

The Altermatt lab at Eawag and University of Zurich and the Pellissier lab at ETHZ and WSL have a vacancy for a PhD position. The goal of the project is to apply environmental DNA (eDNA) metabarcoding to uncover the biodiversity of fish in the Yunnan River Network in China. The goal is to get a high spatial and temporal coverage of biodiversity patterns across river systems in Yunnan river networks. The project is part of a large ETHZ initiative on Biodiversity, Earth, Climate Coupling in Yunnan (Western China) (BECCY), including ecologists, geologists, mathematicians, and involving Swiss and Chinese partner institutions. Applications will be reviewed until position is filled. More info and apply here (next application evaluation: 10 April 2020)

PhD-position in Applied Stream Ecology

The project aims at elucidating the effects of degradation of riparian vegetation on biodiversity and ecosystem processes in stream food-webs. It is based on replicate field experiments in Switzerland (sites north and south of the Alps) and in the Atlantic Forest, south-east Brazil. The PhD-student will mainly be based at SUPSI on the Mendrisio campus and be supervised by the head of the Stream Ecology Group, Dr. Andreas Bruder. He/she is expected to spend a substantial amount of time in Brazil for field work. The PhD-student will be enrolled at University of Zürich (Department of Evolutionary Biology and Environmental Studies), which will be the degree granting institution. Prof. Dr. Florian Altermatt is the formal supervisor. More info and application details (new deadline March 31 2020).

There is also a associated Postdoc position in the same project. More Info.

Available BSc or MSc projects:

Does the community matter? Species responses to environmental change in a community context. Details MSc project: Project description

Measuring aquatic biodiversity in the river Rhine using environmental DNA (eDNA). Details MSc project: Project description

Habitat matching under environmental stress: how population performance, niche construction and dispersal affect habitat- matching predictions. Details MSc project: Project description

Hidden in the dark: Ecology and faunistics of groundwater amphipods in Switzerland using a citizen science approach. Details MSc Project: Project description

Resilience of meta-ecosystems: how openness and diversity buffer for ecosystem functioning under perturbation. Details MSc project: Project description

Transport and decay of environmental DNA (eDNA) in rivers: Develop laboratory and field experiments to directly release and capture artificial eDNA molecules and compare their detection and quantification to model predictions. Details MSc project: Project description

Species responses to environmental stress: how eutrophication alters size and biomass distributions. Details BSc project: Project description