



MSc Project

Common yet unexplored: Deciphering hidden diversity of a cryptic amphipod species across Switzerland.

We are looking for an enthusiastic MSc student who will be working on the cryptic diversity within the *Gammarus fossarum* species complex. The project involves fieldwork, predominantly in western Switzerland, molecular barcoding of specimens in the laboratory as well as genetic analyses. The project is part of a larger research program (based at Eawag, Dübendorf) and funded by BAFU.

Amphipods are a diverse and ecologically highly relevant group of freshwater invertebrates. In a large study program (Amphipod.CH), we have already recorded about 40 different species of amphipods in Switzerland over the last few years. Thereby, we also discovered that the most common amphipod species in Switzerland – namely *G. fossarum* – is represented by at least three lineages that can only be told apart using molecular methods. Our understanding of the true diversity and distribution of these important organisms is still limited.

In this MSc project, you would build on extensive and existing distribution data of amphipods in Switzerland. While there are already a few hundred molecular barcodes available, some areas (e.g. western Switzerland) require additional sampling. You would perform the fieldwork and the consecutive lab work to generate barcodes to resolve species status. You will generate the first fully resolved map of Switzerland showing the distribution of *G. fossarum* lineages. You will then link their occurrence to environmental/biogeographic variables. The data will eventually be integrated into public databases (CSCF).



Requirements: Interest in ecology and faunistics of aquatic invertebrates, German/French and English language skills, interest to work on a stakeholder relevant project (BAFU funded), valid driver's licence and driving practice. The MSc project can start any time. We are looking forward to meeting you!

Contact/Supervision:



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