

Eawag, the Swiss Federal Institute of Aquatic Science and Technology, is an internationally networked aquatic research institute within the ETH Domain (Swiss Federal Institutes of Technology). Eawag conducts research, education and expert consulting to achieve the dual goals of meeting direct human needs for water and maintaining the function and integrity of aquatic ecosystems.

Eawag's Departments of Fish Ecology & Evolution and Aquatic Ecology have an opening for a

Postdoc in Conservation Genomics of Aquatic Ecosystems

The position, based in the groups of Philine Feulner and Alexandra Anh-Thu Weber, is funded for 2 years within the project "Establishing a framework for conservation genomics of freshwater biodiversity". The project, funded by Eawag, also includes a collaboration with Jakob Brodersen (Eawag, River Fish Ecology) and Damien Bouffard (Eawag, Aquatic Physics).

Both the Fish Genomics group of Philine Feulner and the Adaptation & Conservation Genomics group of Alexandra Anh-Thu Weber focus on research questions regarding: i) the genetic basis of adaptation and speciation, ii) the influences of selection, drift, mutation, and recombination on genome evolution, and iii) the development and implementation of genomic tools for conservation purposes.

Background: Freshwater biodiversity is threatened by physical alterations of aquatic habitats for anthropogenic use, pollution, and exploitation of species. Conservation genomics is an innovative approach allowing to: i) monitor biodiversity and genetic diversity at an unprecedented resolution; ii) identify highly endangered populations, and iii) protect and possibly rescue endangered populations. However, established methods and programs are currently limited but are important to implement adequate monitoring and conservation strategies.

The project focuses on establishing a framework for conservation genomics of freshwater biodiversity using two case studies: the European grayling *Thymallus thymallus* and the freshwater mussel *Anodonta anatina*. The project aims at developing a conservation genomics framework that goes beyond monitoring and will link genomic diversity with physical water parameters, anthropogenic landscape use, and restoration efforts. This project aims to establish the feasibility and principles of genomic monitoring for Swiss aquatic habitats, and to provide solutions for an innovative development of biodiversity monitoring and conservation.

The candidate is expected to: i) generate and analyze next generation whole-genome population data, ii) develop reproducible bioinformatics pipelines for conservation genomics, and iii) interpret and publish the results through peer-reviewed articles and translational material dedicated to practitioners and stakeholders. There will be opportunities to gain field experience in Switzerland, to develop their own research interests, and to assist in the supervision of Bachelors and Master students.

Ideally, **the candidate** has a profound interest in Bioinformatics, Evolutionary Genomics and Conservation Biology, and has recently earned a PhD in a relevant field of evolutionary biology or bioinformatics. We particularly value interest to interact with practitioners and stakeholders in Switzerland. Excellent communication skills in English and ability to work in a team are essential.

The position is situated in the [Department of Fish Ecology & Evolution](#). The Department is part of Eawag's [Center for Ecology, Evolution & Biogeochemistry \(CEEB\)](#), which is located on the shore of Lake Lucerne and is a strong nucleus of Eawag research groups aimed at integrating evolutionary biology, community ecology, and ecosystem science. The postdoc will interact with a diverse range of researchers studying community ecology, evolutionary biology, ecological genetics, ecosystem science, and applied environmental science. The Fish Genomics group is also affiliated to the Institute of Ecology and Evolution of the [University of Bern](#), and the successful candidate will have a unique opportunity to take advantage of both these excellent academic environments. More information about ongoing projects in both groups can be found at www.eawag.ch/en/department/fishec/main-focus/fish-genomics/ and www.eawag.ch/en/aboutus/portrait/organisation/staff/profile/alexandra-anhthu-weber/show.

Eawag is a modern employer and offers an excellent working environment where staff can contribute their strengths, experience and ways of thinking. We promote gender equity and are committed to staff diversity and inclusion. The compatibility of career and family is of central importance to us. For more information about Eawag and our work conditions please consult www.eawag.ch and www.eawag.ch/en/aboutus/working/employment. We strongly encourage applications from researchers identifying as a member of a historically marginalized group.

Applications should include a cover letter with a concise statement about your previous education and research experience, your vision for the future, and in particular your motivation to work on this project (1 page maximum), a curriculum vitae including a publication list, copies of your academic qualifications, and names and contact information of 2-3 academic references (please do not include letters with the application).

Any questions about the position can be directed to [Philine Feulner](#) and/or [Alexandra Anh-Thu Weber](#)

Screening of applicants will begin immediately, and the closing date is 31 August 2022. The position can start as early as September 2022 or upon mutual agreement.

We look forward to receiving your application. Please send it through this webpage, any other way of applying will not be considered. A click on the link below will take you directly to the application form.

<https://apply.refline.ch/673277/0956/pub/1/index.html>