

Julie Conrads

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Education

- 2024 – ongoing **PhD Student**, *Aquatic Ecology, Eawag (ETH)*
- My research focuses on the early-stage invasion dynamics of Quagga mussels in Lake Zurich, their genomic pathways both globally and within Switzerland, and the fecundity and fixation timing of the deep-water morph in Lake Constance, using field surveys, field experiments, and genomic approaches. (Supervisor: Dr. Alexandra Anh-Thu Weber)
- 2021 – 2024 **Master of Science**, *University of Zurich/ETH Zurich*
- Master's thesis (60 ECTS, Aquatic Ecology, Eawag): *Conservation genomics of the freshwater mussel Anodonta anatina in Switzerland* (Supervisor: Dr. Alexandra Anh-Thu Weber)
- 2017 – 2021 **Bachelor of Science**, *University of Zurich*
- Major in Geography (120 ECTS)
 - Minor in Biology (60 ECTS)

Work Experience

- May 2024 – Sep 2024 **Scientific Assistant**, *Jokela Lab and Weber Lab, Aquatic Ecology, Eawag*
- Project lead in planning and execution of macroinvertebrate benthic invertebrate survey of Lake Zurich.
 - Sampling quagga mussels across Switzerland.
- Oct 2023 – May 2024 **Student Assistant**, *Jokela Lab, Aquatic Ecology, Eawag*
- Assisting sampling campaigns of invasive species and native freshwater snails.
 - Administrative work for the Dive Unit of Eawag.
 - Assisting in selecting and conserving snails.
 - Digitizing dissection notes.
- Nov 2020 – Feb 2024 **Office Assistant**, *Glambou Retail AG*
- Assistant to HR Team and Office Management.
 - Developed and managed customer service structure.
 - Sales of Glambou jewellery.
- Sept 2020 – May 2021 **Temporary Worker during Covid-19**, *University Hospital Zurich*
- Individual patient care.
 - Accompanying patients and visitors.

Attended Courses and Workshops

- May 2025 **Introduction to population genomics**, *Physalia Course (online)*
- Comprehensive overview of population genomics methods and their applications
 - Hands-on training in analyzing population structure, detecting introgression, and modeling demographic history
 - Practical exercises with genome-wide association studies and landscape genomics

- Experience with empirical datasets and bioinformatics workflows for large-scale sequencing data
- Jan 2023 **3rd Genetic Diversity Monitoring Workshop**, *ETH Zurich*
- Dec 2022 **Speciation genomics**, *Physalia Course (online)*
- Handling NGS data from raw reads to genetic variants
 - Applying basic population genetic statistics
 - Visualizing genetic structure and inferring demographic history
 - Identifying regions under divergent selection or barriers to gene flow

Attended Conferences and Seminars

- Sept 2025 **MoFA-Tagung 2025**, *Biodiversitätszentrum Oberösterreich, Linz*
- Talk: Invasion genetics of the quagga mussel: Global and regional dispersal dynamics using whole-genome sequencing
- Sept 2025 **Eawag Symposium**, *Eawag*
- Poster: "Beneath the Surface: Exploring Benthic Macroinvertebrate Communities in Lake Zurich"
 - Recipient of the Best Poster Award
- Sept 2025 **1st Swiss Lake Day**, *University Lausanne*
- Poster: "Beneath the Surface: Exploring Benthic Macroinvertebrate Communities in Lake Zurich"
- Jun 2025 **Angewandte Naturschutzgenetik für die Praxis**, *University Berne*
- May 2025 **PhD Symposium, Aquatic Ecology**, *Eawag, Dübendorf*
- Presentation: "Beneath the Surface: Exploring Benthic Macroinvertebrate Communities in Lake Zurich"
- Feb 2025 **Biology25**, *EPFL Lausanne*
- Poster: Benthic Macroinvertebrate Community of Lake Zurich and Obersee
- Dec 2024 **SeeWandel-Climate Thematic Working Group "Importance of the Quagga Mussel"**, *Eawag, Dübendorf*
- Mar 2024 **PEAK (Praxisorientierte Eawag-Kurse)**, *Eawag, Dübendorf*
- Quaggamuschel in der Schweiz – Grundlagen und Weiterentwicklung von Präventions- und Monitoringsmassnahmen
- Nov 2024 **22nd Swiss Geoscience Meeting**, *Basel*
- May 2024 **SeeWandel-Climate Thematic Working Group "Importance of the Quagga Mussel"**, *Eawag, Dübendorf*
- May 2024 **Fach Austausch Grossmuscheln**, *Netzwerk Gewässerökologie, Aarau*
- Mar 2023 **PEAK (Praxisorientierte Eawag-Kurse)**, *Eawag, Dübendorf*
- Gebietsfremde Arten in Schweizer Gewässern

Organization of Conferences

- May 2025 **PhD Symposium Organizer**, *Eawag, Dübendorf*
- Organized a symposium with Eawag PhD students and keynote speakers Dr. Jes Hines (Leipzig University), Prof. Levi Yant (University of Nottingham), and Prof. Federico Riva (University of Amsterdam). Managed invitations, logistics, program preparation, and event coordination.

Submitted manuscripts / preprints

Faust E*, Conrads J*, Giulio M, Ciofi C, Natali C, Feulner PGD, Weber A.A-T. *Beyond genetic indicators: how reproductive mode and hybridization challenge freshwater mussel conservation*. *Equal contribution. Molecular Ecology. [Link](#).

Datasets

Faust E*, Conrads J*, Giulio M, Ciofi C, Natali C, Feulner PGD, Weber A.A-T. *Beyond genetic indicators: how reproductive mode and hybridization challenge freshwater mussel conservation*. Version 1.0. Eawag: Swiss Federal Institute of Aquatic Science and Technology. ERIC Open Data package (2025). *Equal contribution. [OpenData Eawag Dataset](#).

Faust E*, Conrads J*, Feulner PGD, Weber A.A-T. *Conservation genomics of Anodonta freshwater mussels in Switzerland*. Version 1.1. Swiss National Biodiversity Data and Information Centres – infospecies.ch. Metadata dataset accessed via GBIF.org (2025). *Equal contribution. [GBIF Dataset](#).

Awards

Sept 2025 **Best Poster at the Eawag Symposium**

- "Beneath the Surface: Exploring Benthic Macroinvertebrate Communities in Lake Zurich", awarded by Eawag

Nov 2024 **Hydrology - Limnology Prize for Best Master Thesis 2024**

- Master-Thesis: "Conservation genomics of the freshwater mussel *Anodonta anatina* in Switzerland", 3000 CHF, awarded by Hydrobiologie-Limnologie-Stiftung für Gewässerforschung

Tutoring and Supervision

Okt 2025 - ongoing **Tutor, Ecology & Evolution: Term Paper and Seminar, ETH Zürich**

- Tutoring in the MSc level course *Ecology and Evolution: Term Paper and Seminar* (Course No. 701-1461-00). Responsibilities include proposing and presenting research topics, guiding students in developing their term papers and providing feedback.

Apr 2025 - ongoing **Co-Supervisor of MSc Student, Jokela Lab, Eawag, Dübendorf**

- Supervising MSc student A. Püntener on research involving Microsporidia in *Dikergammarus villosus*.

Sept - Oct 2025 **Block course project supervision, Eawag, Dübendorf**

- Supervised three MSc students during the ETH block course *Aquatic Ecology* (Course No. 701-2437-01L). Responsibilities included teaching benthic macroinvertebrate identification from Lake Zurich samples, guiding data analysis, and grading project work.

Mar - Apr 2025 **Intern Supervisor, Eawag, Dübendorf**

- Supervised and mentored a high school student intern (Gymnasium Kirchenfeld) for a three-week professional internship; provided guidance in experiment, research tasks, and career orientation.

Nov 2024 **Umweltbiologie Bachelors Seminarkurse, ETH Zurich**

- Guiding third year bachelor's students in preparing and presenting scientific topics and providing feedback.

Outreach activities and media coverage

Aug 2025 **Filmed interview, SRF 1**

- Participated in an interview for SRF 1, *Radio SRF1* [Article and Video](#)

May 2025 **Filmed interview, TeleZ**

- Participated in an interview for TeleZ, *Aktuell, News report at 18:00* [Video](#)

May 2025 **Newsarticle, NZZ**

- Participated in a interview for NZZ, "*Quagga-Alarm im Zürichsee: Ein klebriges Tierchen wird zur Herausforderung für die Trinkwasserversorgung*", communicating current research of Lake Zurich. [Article](#)

Jan 2025 **Article, Swiss Fireball Regatta Monthly Edition**

- Written interview for Swiss Fireball, "*GEKOMMEN UM ZU BLEIBEN DIE QUAGGA-MUSCHEL*." [Article](#)

Nov 2024 **Filmed interview**, *SRF Einstein*

- Participated in a filmed interview for SRF Einstein "*Invasive Quagga-Muscheln: Kollabierende Seen und Millionenschäden*", communicating scientific research to a broad public audience. [Video](#)

Sept 2024 **Media coverage of research findings**, *Quagga mussels in Lake Zurich*

- Extensive media coverage reporting our finding of Quagga mussels in Lake Zürich during a benthic invertebrate survey, including: [TeleZüri](#), [Tagesanzeiger](#), [NZZ](#), [20Minuten](#), [Watson](#)

Skills

Languages German (native), English (C2)
Computer Skills ArcGIS, QGIS, RStudio, HPC bash scripting for genomic analysis
Licences Car: Class B and BE / Boat: Class A (Military)
Diving SSI Divemaster (300 dives), Rescue Diver, First Aid and O2 Provider, Scientific diving

Interests

Scuba diving Diving in warm water.
Travelling Enjoy trying new foods and meeting people.
Trailing with my dog Scent-work and tracking activities

References

- Dr. Alexandra Anh-Thu Weber
Eawag, Swiss Federal Institute of Aquatic Science and Technology
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- Prof. Dr. Jukka Jokela
ETH Zurich and Eawag, Swiss Federal Institute of Aquatic Science and Technology
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