

Ellika Faust

Languages: Swedish, English, German

Department of Fish Ecology & Evolution
Eawag,
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Research interests: The use of genomic applications to further our understanding of evolutionary and ecological processes in species and populations, and in turn, apply these to conservation efforts. I have a special interest in the evolutionary aspects of range expansions, edge populations, invasion and hybridization.

Academic and Research Experience

- 2023-Present **Postdoc** *Eawag, Swiss Federal Institute of Aquatic Science & Technology*
- 2022-2023 **Researcher** *University of Gothenburg, Sweden*
- 2018-2022 **Doctor of Philosophy, Specialising in Biology**, *University of Gothenburg, Sweden*
Thesis: [Crossing barriers: Genetic consequences of translocating wild cleaner fish for aquaculture](#) Supervisor: Carl André
- 2017 **Research Assistant** *University of Gothenburg, Sweden*
Bioinformatics, statistical analysis and scientific writing
- 2015-2017 **Master of Science** *University of Gothenburg, Sweden*
Focus: Conservation, Genomics, Evolution and Bioinformatics in marine species.
- 2015 **Research Assistant** *University of Gothenburg, Sweden*
- 2012-2015 **Bachelor of Science** *University of Gothenburg, Sweden*
Focus: Biology, Ecology and Conservation, Aquatic environments, Population genetics.

Teaching Experience ~ 800 hours

- 2017-2021 Conservation and genetics of populations. Master level, University of Gothenburg, Sweden. - *Lecturing, supervising and assisting in statistics, R and population genetics.*
- 2018-2021 Dynamics of natural populations - from individuals to ecosystems. Bachelor level, University of Gothenburg, Sweden. - *Teaching and assisting in statistics, genetic software and statistics.*
- 2019-2021 Cell biology, genetics, thermodynamics and the physiology and adaptation of marine organisms. Bachelor level, University of Gothenburg, Sweden. - *Teaching and assisting in bioinformatics, R and phylogenetics.*
- 2020 Ecology and Evolution. Bachelor level, University of Gothenburg, Sweden. - *Assisting and supervising student projects.*
- 2020 Evolutionary biology. Bachelor level, University of Gothenburg, Sweden. - *Assisting in R*
- 2018 An introduction to bioinformatic tools for population genomic data analysis. PhD level, University of Gothenburg, Sweden. - *Assisting in bioinformatics.*

Other Professional Activities

- 2020-Present Member of the Steering Committee of [CeMEB](#), University of Gothenburg, Sweden.
- 2020-2021 Member of the nomination committee for department head, vice-head and board.
- 2020 Conference organizer, "Evolution in Sweden 2020", in Strömstad, Sweden.
- 2019 Chair on the PhD committee at the Department of Marine Sciences, University of Gothenburg, Sweden.
- 2018, 2019 Co-organisation of the conference for Natural Science PhD students, University of Gothenburg, Sweden
- 2018 Conference volunteer, "Marine Evolution 2018", in Strömstad, Sweden.

Reviewer and Editorial experience

A reviewer at: Molecular Ecology, Heredity, Molecular Ecology Resources, Aquaculture and Environment Interactions

A guest editor at: Evolutionary Applications

Publications

- 2023** Jansson, E., André, C., Quintela, M., Halvorsen, K. T., Besnier, F., Ayllon, F., **Faust, E.**, ... & Glover, K. A. (2023). Genetic study reveals local differentiation persisting in the face of high connectivity and a genomic inversion likely linked with sexual antagonism in a common marine fish. *ICES Journal of Marine Science*, fsad042. <https://doi.org/10.1093/icesjms/fsad042>
- 2023** De Wit, P., **Faust, E.**, Green, L., Jahnke, M., Pereyra, R. T., & Rafajlović, M. (2023). A decade of progress in marine evolutionary biology. *Evolutionary Applications*, 16(2), 193-201. <https://doi.org/10.1111/eva.13523>
- 2023** Jansson, E.*, **Faust, E.***, Bekkevold, D., Quintela, M., Durif, C., Halvorsen, K. T., ... & Glover, K. A. (2023). Global, regional, and cryptic population structure in a high gene-flow transatlantic fish. *Plos one*, 18(3), e0283351. <https://doi.org/10.1371/journal.pone.0283351>
- 2022** Green, L., **Faust, E.**, Hinchcliffe, J., Brijs, J., Holmes, A., Englund Örn, F., Svensson, O., Leder, E., Sandblom, E. & Kvarnemo, C. (2022). Invader at the edge - Genomic origins and physiological differences of round gobies across a steep urban salinity gradient. *Evolutionary Applications*, 00, 1- 17. <https://doi.org/10.1111/eva.13437>
- 2021** Green, L., Apostolou, A., **Faust, E.**, Palmqvist, K., Behrens, J. W., Havenhand, J. N., Leder, E. H., & Kvarnemo, C. (2021). Ancestral Sperm Ecotypes Reveal Multiple Invasions of a Non-Native Fish in Northern Europe. *Cells*, 10(7), 1743. <https://doi.org/10.3390/cells10071743>
- 2021** **Faust, E.***, Jansson, E.*, André, C., Halvorsen, K. T., Dahle, G., Knutsen, H., Quintela, M., & Glover, K. A. (2021). Not that clean: Aquaculture-mediated translocation of cleaner fish has led to hybridization on the northern edge of the species' range. *Evolutionary Applications*, 14(6), 1572-1497. <https://doi.org/10.1111/eva.13220>
- 2021** Bourlat, S. J., **Faust, E.**, Wennhage, H., Wikström, A., Rigby, K., Vigo, M., Kraly, P., Selander, E., & André, C. (2021). Wrasse fishery on the Swedish West Coast: Towards ecosystem-based management. *ICES Journal of Marine Science*, 78(4). <https://doi.org/10.1093/icesjms/fsaa249>
- 2020** Seljestad, G. W., Quintela, M., **Faust, E.**, Halvorsen, K. T., Besnier, F., Jansson, E., Dahle, G., Knutsen, H., André, C., Folkvord, A., & Glover, K. A. (2020). "A cleaner break": Genetic divergence between geographic groups and sympatric phenotypes revealed in ballan wrasse (*Labrus bergylta*). *Ecology and Evolution*, 10(12), 6120-6135. <https://doi.org/10.1002/ece3.6404>
- 2018** **Faust, E.**, Halvorsen, K. T., Andersen, P., Knutsen, H., & André, C. (2018). Cleaner fish escape salmon farms and hybridize with local wrasse populations. *Royal Society Open Science*, 5(3), 171752. <https://doi.org/10.1098/rsos.171752>
- 2017** **Faust, E.**, André, C., Meurling, S., Kochmann, J., Christiansen, H., Jensen, L. F., Charrier, G., Laugen, A. T., & Strand, Å. (2017). Origin and route of establishment of the invasive Pacific oyster *Crassostrea gigas* in Scandinavia. *Marine Ecology Progress Series*, 575, 95-105. <https://doi.org/10.3354/meps12219>

* - Co-first author

Reports

- 2021** Tallaksen Halvorsen, K., Skiftesvik, A. B., Durif, C., **Faust, E.**, Wennhage, H., André, C., ... Mortensen, S. (2021). Towards a sustainable fishery and use of cleaner fish in salmonid aquaculture. <https://doi.org/10.6027/temanord2021-545>

Manuscripts in Progress

Rieder, J., Jahnke, M., André, C., Christiansen, H., De Wit, P., **Faust, E.**, Green, L., Jonsson P.R., Laikre, L., Laugen A.T., Rafajlovic, M., Sandström, A., Tomasini, M. & Volckaert, F.A.M. Seascape genomics: improving marine biodiversity management by combining genetic knowledge with environmental and ecological information. **[In Revision]**

Faust, E., Halvorsen, K.T., Jorde, P.E., Knutsen, H., Mattingsdal, M., Selander, E., Strand, Å., Wennhage, H., André, C. & De Wit, P. High genetic connectivity in an otherwise highly structured marine fish. **[In Prep]**

Funding, Scholarships, Awards & Honours

2021 - Rådman och Fru Ernst Collianders Stiftelse (€6000)

2020 - Rådman och Fru Ernst Collianders Stiftelse (€6000)

2019 - Rådman och Fru Ernst Collianders Stiftelse (€6000)

2018 - Rådman och Fru Ernst Collianders Stiftelse (€6000)

2018 - EuroMarine Young Scientist Fellowship Programme 2018 (€500)

2018 - Adlerbertska forskningsstiftelsen (€2000)

2018 - Helge Ax:son Johnsons stiftelse (€7200)

2018 - Best poster award at the Marine Evolution conference (€500)

2017 - Honourable mentions for Master thesis awarded by the Swedish Society for Marine Sciences

2016 - Best marine Bachelor thesis awarded by the Swedish Society for Marine Sciences (€500)

Talks and Presentations

2022 – Invited Talk: Center for the Sea and Society, University of Gothenburg, Sweden

2021 – Poster: The 6th International Marine Connectivity Conference, Paris, France

2021 – Talk: The 54th Population Genetics Group, Liverpool, England

2020 – Talk: Evolution in Sweden, Tjärnö, Sweden

2019 – Poster: Poster conference for Natural Science PhD students, University of Gothenburg, Sweden

2018 – Talk: II Joint Congress on Evolutionary Biology, Montpellier, France

2018 – Poster: Marine Evolution, Strömstad, Sweden

2018 – Talk: The 51st Population Genetics Group, Bristol, England

2018 – Talk: Evolution in Sweden, Stockholm, Sweden

2018 – Talk: Poster conference for Natural Science PhD students, University of Gothenburg, Sweden

2017 – Talk: 18th CeMEB Assembly, Tjärnö, Sweden

2017 – Talk: Havsforskningsdagarna, Swedish Society for Marine Sciences, Tjärnö, Sweden