A picture containing outdoor, tree, person, grass

Description automatically generatedMartin Andersson-Li, PhD

08

**Fall**

Aquatic consultant

[**Linkedin**](https://www.linkedin.com/in/martin-andersson-li-44a14b155/). **Tel:** 070-7820309. **Email:** martin.andsson.li@gmail.com **General description**I obtained my PhD in limnology in 2017 and have since participated in several additional research projects focusing on freshwater. Outside of academia, I have mainly worked as a water investigator, both in the public sector and within private companies. In these positions, I have worked on both limnic and marine investigations based on current needs, covering areas such as hydropower, offshore wind power, and many others (see detailed description on page two). Within these investigations, I have held various roles, including project leader, coordinator, field manager, and analyst. Generally, I have gradually transitioned from roles with an analytical focus to later working more in project management and coordination.  
  
In addition to my aquatic expertise, I have a keen interest in programming, which first developed during my PhD studies. I have periodically worked full-time with programming, almost always with a focus on automation. For the past year, I have also been leading a development team specializing in automation. This involves more complex assignments with a larger scale of code, a greater emphasis on communication between clients and developers, and broader considerations for how automation can be most effectively implemented within the company.

**Employment History:**2022-2023: Aquatic consultant and development coordinator, Calluna.  
2020-2023: Aquatic consultant, AquaBiota (part-time position in 2022-2023).   
2019-2020: GIS Analyst/developer, County Administrative Board of Östergötland.  
2018-2019: Freshwater Ecologist, County Administrative Board of Östergötland.  
2013-2017: Doctoral Position in Microbial Carbon Cycling in Lakes, Uppsala University.

**Education:**  
2013-2017: Doctoral Position in Microbial Carbon Cycling in Lakes, Uppsala University.  
2010-2012: M. Sc in Limnology, Uppsala University.  
2007-2010: B. Sc in Ecology, Gotland University College (College of Gotland).  
  
[**Github-page**](https://github.com/MartinTropse)  
Development projects for companies are generally stored in private GitHub repositories, but upon request, I am happy to showcase code from these projects.  
  
**Programming Languages and Software Proficiency:**Python, R, JavaScript, ArcGIS, QGIS, SNAP, Excel, Photoshop, GPT-4  
 **Driver's License, Certificates, and Licenses:**B driver's license, A1-A3 drone pilot license   
  
**Language Skills:**   
Swedish - fluent, English - fluent, Mandarin - basic

**Aquatic investigations**Aquatic projects that I have been involved with frequently include offshore wind power, eutrophication investigations and eDNA-surveys. Besides these areas I have worked on a wide range of aquatic projects. Below follows a few selected reference assignments, and a compilation of other limnic and marine investigations I have been involved in.

**[Life-DNAquatics](https://github.com/MartinTropse/Projekt/blob/master/LifeAquatics_NV.pdf)** (2019-2023): An international Life project with the aim of standardizing the methodology for eDNA investigations in Swedish environmental monitoring. The project included several work packages, including a comprehensive assessment of the movement of eDNA particles from fish and mussels within the catchment area of Moälven.   
**Role in the project:** Project leader from 2021 until the project's completion, previously responsible for bioinformatics analysis and field work. Project management primarily involved coordinating meetings, overseeing finances, reporting to the Swedish EPA, and working on interim and final reports.  
[**Ecologically Sustainable Offshore Wind Power in the Baltic Sea report**](https://github.com/MartinTropse/Projekt/blob/master/MarinMedVind_UnderlagF%C3%B6rStorskaligMarinvindkraft.pdf) (2020-2022)   
A research program funded by the Swedish Energy Agency and the Swedish EPA to investigate the possibilities for large-scale ecologically sustainable offshore wind power in the Baltic Sea. The project considered ecological aspects and industry interests, and conducted a legal review of the possibilities for establishing large-scale wind power.   
**Role in the project:** Investigating industry interests through discussions and modeling. Future wind farm areas were estimated using MaxEnt models, based on known factors of interest from areas that had been planned for wind power development.  
  
[**Exploration of the Seabed South of Slite (EIA – Continental Shelf Law application)**](https://github.com/MartinTropse/Projekt/blob/master/MKB_KLS_Slite_%20inkl_bilagor.pdf) (2022) Environmental Impact Assessment (EIA) for the Continental Shelf Law application ahead of the geotechnical investigations planned off the coast of Slite in the summer of 2023.   
**Role in the project:** Writing the sections that Calluna was responsible for within the EIA, which included bathymetry, hydrography, macrophytes, benthic fauna, marine mammals, underwater noise, and associated graphs and maps.  
  
[**Compilation of Limnic Assignments**](https://github.com/MartinTropse/Projekt/blob/master/Limnic_ProjectCompilation.pdf)  
**[Compilation of Marine Assignments](https://github.com/MartinTropse/Projekt/blob/master/Marine_ProjectsCompilation_Swe.pdf)  
  
  
Current research projects:**ECWA-NOR: (2019-2023). Tracking of fecal contamination in watercourses in Jämtland County through genetic analysis of E. coli bacteria. Specifically, intergenic regions (IGRs) are analyzed for mutations (known as SNPs), which are then used in logistic regression models to classify the bacterial host origin.   
  
The method for classifying water samples is novel and is based on a model that I developed within the project and that we aim to publish this year. Additionally, two more articles are planned to describe the implementation of the methodology in the landscape and to provide a closer examination of the genetics of E. coli from sewage treatment plants. The project is a collaboration between Mid Sweden University and University of Alberta, which originally developed the methodology for watercourses in the Rocky Mountains in 2015. Doctoral student Daniel Yu and Associate Professor Sharon Maes are currently responsible for the main tasks of the project.