

# Calum John Young

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## EDUCATION

Nov 2024 – Present	PhD Marine Ecology, University of Glasgow
Jul 2023 — Oct 2023	Professional Data Analysis, CodeClan, Scotland
Aug 2018 — Jan 2021	MSc Marine Biology, Stockholm University
Aug 2013 — May 2017	BSc (Hons) Marine and Freshwater Biology, University of Glasgow
Aug 2012 — May 2013	HNC Biological Science, Dundee College
Aug 2006 — May 2011	Bell Baxter High School, Cupar

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## EXPERIENCE

### **PhD Student, Investigating Seaweed Biofouling Using Molecular eDNA Tools, University of Glasgow, (November 2024 – Present)**

Actively contributing to the early stages of a project investigating biofouling species dynamics within seaweed farming systems. This role involves developing and optimizing advanced molecular tools and methodologies, including metabarcoding, qPCR, and ddPCR, to analyze biofouling community dynamics. Responsibilities also include conducting field sampling, collaborating with stakeholders, and supporting project management tasks.

### **Fisheries Onboard Observer, Society for the protection of Turtles (SPOT), Cyprus (Aug 2024 – Oct 2024)**

Project volunteer focused on fisheries observation, bycatch mitigation and monitoring and sea turtle stranding response. Conducted necropsies and data collection for dietary analysis and population dynamics. Supported development of monitoring protocols and database management for future conservation projects within the region.

### **Hospitality Industry, Shucks, Glasgow (Jan 2023 — August 2024)**

Employed within the fine-dining hospitality sector as a FOH host and bar supervisor, the roles provided excellent experience with public interactions, time-management, finances, stock assessment and leadership skills.

### **Trainee Data Analyst, CodeClan, Glasgow (Jul 2023 — Oct 2023)**

Successfully completed an intensive Professional Data Analysis training course covering a wide range of programming languages, methods and statistical techniques certified with a SQA Professional Development Award Level 8

R / R Shiny / RStudio • Python • Git / GitHub • PostgreSQL • Tableau • Data cleaning / wrangling • Predictive model building • Data visualizations • Hypothesis / Statistical testing • Machine learning / modelling

#### Projects:

Development of a Public Health Scotland interactive dashboard exploring NHS data metrics and temporal changes in bed occupancies, waiting times and deprivation metrics across regional NHS Boards.

Investigation of shipping emissions of carbon dioxide within European waters which explored temporal trends, country / vessel type comparisons, and influence of global events on emission levels.

### **Hatchery Technician, Orkney Shellfish Hatchery (Aug 2022 — Dec 2022)**

Temporary graduate position within a state-of-the-art aquaculture hatchery producing European flat oysters and clawed lobsters for population restoration. I was responsible for microalgae feed production

using industrial photobioreactors and bag systems. Within the laboratory, my duties included species identification, disease screening, culturing probiotics and water quality checks. In addition to overseeing broodstock and larvae populations, maintaining recirculating aquaculture system and conducting field analysis on stocks located offshore. The role required strict adherence to SOPs/GLP and provided extensive training handling hazardous materials (COSHH).

**Research Assistant, Wild Oysters Project, Firth of Clyde (Jan 2022 — Aug 2022)**

As a volunteer, I assisted a national project collaboration which aims to regenerate populations of native oysters around UK coastlines. I performed regular health checks, biodiversity assessments, and removed invasive species afflicting the test groups.

**MSc Marine Biology, Stockholm University, Stockholm (Aug 2018 — Feb 2021)**

My main area of study focused on humanity's influence on marine ecology, such as ecotoxicology and the evolutionary effects of climate change. Throughout my assessments I was consistently graded within the top five percent of my class and would regularly assist my peers as tutor, proof-reader, and group leader. In addition to developing advanced capabilities using R and GIS software, I gained extensive field experience with advanced sampling/survey techniques.

Modules completed: Ecotoxicology, Marine population and ecosystem dynamics, Ecological and evolutionary response to climate change, Baltic Sea Ecosystem: Applications, Modelling and Management.

Master thesis successfully utilised metabarcoding sequencing to detect seasonal change in phytoplankton communities within Galápagos mangroves and additionally identified novel invasive and harmful algal species.

**Field Researcher, Charles Darwin Foundation, Galápagos Islands (Oct 2019 — Dec 2019)**

I independently devised, planned, and conducted a sampling expedition for my final thesis project which successfully utilised eDNA metabarcoding sequencing to detect novel invasive species as well as examining seasonality phytoplankton communities. The study advanced my capabilities as a field scientist, molecular technician and project manager and gave extensive firsthand research experience working within a highly inhospitable and isolated environment with strict legal protections.

**BSc (Hons) Freshwater and Marine Biology, University of Glasgow, (Aug 2013 — May 2017)**

My undergraduate degree acted as the foundation for my scientific understanding of aquatic ecosystems and ignited my desire to seek out a career focused on the environment. I was particularly interested in topics focused on deep-sea species physiology, human induced contemporary evolution, and molecular techniques. This led to my final honours project which examined the genetic response of salmon afflicted with parasitic sea lice.

Modules completed: Physiological Ecology of Marine Animals, Ecological Speciation, Freshwater Ecology, Advanced Studies (Statistics), Evolution – Pattern and Process.

**Researcher, Instituto de Nutrición y Tecnología de los Alimentos, Santiago, Chile, (Jul 2016 — Aug 2016)**

Laboratory investigator responsible for sampling experiment investigating parasitism within farmed salmon in partnership with Newton Fund and Medical Research Council. Focus was on mucosal health and microbiota response. Duties included project and laboratory management, fish husbandry, specimen dissection, large-scale experimental upkeep.

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**REFERENCES**

Francisco Jardim de Almada Nascimento: Associate Professor at DEEP, Stockholm University - francisco.nascimento@su.se

Martin Llewellyn: Professor of Molecular Ecology at University of Glasgow Life Sciences Dept. - Martin.Llewellyn@glasgow.ac.uk