

# Jack L McElhinney

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USA



## PROFILE:

Jack McElhinney is a marine biologist with extensive international research experience across Australian, Antarctic, Arctic, European, and American waters. He has participated in numerous large-scale research surveys and expedition cruises, developing expertise in fish, shark, and cetacean identification and handling; deployment of ecological monitoring equipment; and the curation and analysis of large ecological databases. His background as an aquarist further refined his animal husbandry and observational skills.

Jack's doctoral research in Prof. Jessica Meeuwig's Marine Futures Lab (University of Western Australia) investigates the physiological mechanisms linking climate change, oxygen stress, and fish body size. His research interests span respiratory biology, physiology, evolution, and ecology, with an emphasis on integrating physiology-based vulnerability assessments into conservation frameworks.

In addition to his scientific work, Jack is an experienced science communicator and confident public speaker, with extensive audience-facing roles aboard expedition vessels. He holds dual citizenship (Australia and the United Kingdom) and is currently based in Phoenix, Arizona.

## RELEVANT SKILLS AND EXPERIENCE

- **Expedition fieldwork:** 12 months at sea with Viking Expeditions conducting ecological data collection in the Arctic, Antarctica, and Great Lakes, including deployment of stereo-BRUVS, eDNA sampling, and oceanographic monitoring.
- **Polar safety:** Trained polar bear guard with experience in Arctic field safety, wildlife awareness, and expedition operations.
- **Survey expertise:** Conducted marine ecology surveys Europe, Australia, and polar regions; extensive experience in fish, shark, and cetacean identification and handling.
- **Data management:** Managed and analyzed large ecological datasets of marine animal observations, physiological traits, and environmental variables using R and Microsoft Office.
- **Research skills:** Experienced in qualitative and quantitative data processing, experimental design, and field sample collection.
- **Teaching and outreach:** Team leader for the ConocoPhillips Science Experience (UWA), lead demonstrator for *Frontiers in Biology*, and demonstrator across undergraduate biology modules (Years 1–3, University of Liverpool).
- **Public engagement:** Finalist in the 2021 UWA Three-Minute Thesis competition; co-founder and director of *SnapStudies* outreach program; contributing author for the University of Liverpool's *Insider Imprint* journal.
- **Animal care:** Advisor on marine animal husbandry and welfare in a public aquarium setting.
- **Technical skills:** Proficient in R Studio, Microsoft Office, and audio/video production software.
- **Certifications & licences:** STCW (firefighting, survival techniques, safety/social responsibility, first aid, security awareness), RYA Powerboat Level 2 + ICC, UK & AUS manual driver's licences.

## EDUCATION:

### University of Western Australia (UWA)

Aug 2018 – Jan 2025

Ph.D. Marine Science/Animal Biology (Part-Time)

Thesis title: The Effect of Chronic Oxygen Stress and Warming Oceans on Fish. Lead author for three scientific publications (*in prep*).

- Collected ecological and physiological data using BRUVS and tissue sampling.
- Designed research and conducted statistical analyses, managed large ecological datasets.
- Authored scientific manuscripts; conducted shark and teleost sampling for blood/tissue analysis and morphology measurements.

### University of Liverpool

Sep 2016 – Dec 2017

MSc Advanced Biological Sciences (Distinction)

MSc Project: *The Causes and Consequences of differing Haemoglobin buffering values of Vertebrates.*

### Manchester Metropolitan University

Sep 2012 - Jun 2015

BSc Hons Environmental Science (2:1)

Hons Project: Possible Species Associations between Microchiropteran Communities within the UK.

## RELEVANT EMPLOYMENT:

### Viking Expeditions (*Antarctica, Patagonia, the Great lakes, and the Arctic*)

Feb 2024 – Dec 2025

*Field Scientist:*

- Conducted ecological monitoring using BRUVS, CTD, ROVs, drones, and eDNA sampling in polar regions.
- Delivered public presentations of scientific findings and general lectures to expedition guests.
- Coordinated field operations and data collection in remote and logistically complex environments.

### University of Western Australia

Mar 2023 – Jul 2023

*Lead Demonstrator:*

- Delivered solo instruction in first-year undergraduate biology to two cohorts (~25 students each).
- Taught life sciences, lab safety, experimental design, and statistical analysis.

### Ocean Reefs Marine Aquariums (Part-Time)

Feb 2022 – Sep 2023

*Aquarist:*

- Maintained 225 marine tanks (>1,000 animals) including sharks (~2 m) and invertebrates (<2 cm).
- Conducted daily husbandry, species-specific care, feeding, and medical treatment.

### University of Liverpool

Sep 2016 – Sep 2017

*Demonstrator and Marker:*

- Taught and assessed undergraduate modules in Current Biology, Biodiversity, Statistics, Bioinformatics, and Evolutionary Biology.

### AIMM Portugal- Marine Environment Research Association

Jul 2016 – Aug 2016

*Research Intern:*

- Monitored cetacean and seabird behaviour off the coast of Albufeira, Portugal.

### Agenda Life Sciences - University of Cambridge

May 2016 - Sep 2016

*Animal Care Technician*

- Provided animal husbandry for small mammals in a biomedical research setting.

### SnapStudies - Riverside Innovation Centre - University of Chester

June 2013 - April 2016

*Director & Co-Founder:*

- Developed online educational resources for GCSE and A-Level students.
- Winner, Most Innovative Business Award — Riverside Innovation Centre (Santander Bank).

*References available upon request*