

## MSc / PhD student: Adaptation to Global Change

### **Bernhardt Lab**

[www.bernhardtlab.org](http://www.bernhardtlab.org)

Department of Integrative Biology,  
University of Guelph

### **Details**

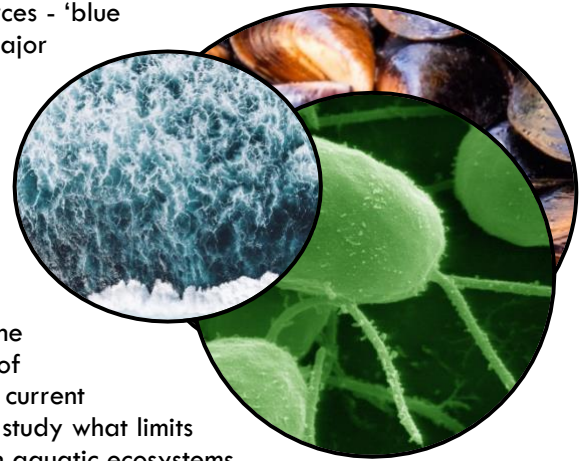
Annual salary: **Minimum stipends of \$30,000 - \$32,000 per year**

Starting date: January, May or September 2024

Closing date: November 30, 2023

The [Bernhardt Lab](http://www.bernhardtlab.org) is looking to recruit **two fully funded graduate students (MSc or PhD)** to join our group. Our work combines 'curiosity-inspired' and 'use-driven' research, with the aim of advancing fundamental knowledge and helping inform conservation planning. The goals of our research are 1) to predict biological responses to environmental change at multiple scales; 2) to identify the mechanisms by which biodiversity influences human health via fisheries and seafood; and 3) to harness ecological science to contribute to conservation and management solutions that benefit people and nature. We use a broad quantitative and empirical toolkit, working across sub-disciplines (physiology, evolutionary ecology, metabolic ecology, environmental data science) and combining theoretical, experimental, and comparative analyses with the aim of generating a more predictive understanding of biospheric change and implications for human well-being. We are recruiting for two projects listed below, but also welcome applicants with other interests.

- 1) **Seafood in a changing world** (MSc or PhD): Foods from aquatic sources - 'blue foods' (i.e., seafood including finfish, shellfish and seaweeds) are a major source of essential nutrients in the human diet and contribute to food security globally, but they are threatened by climate change. Using approaches from organismal physiology and metabolic ecology, we will use lab and field experiments to study the potential for environmental change (e.g. warming waters) to alter the nutritional benefits that we derive from 'blue foods', and what those changes mean for human health and well-being.
- 2) **Thermal adaptation in phytoplankton** (MSc or PhD): A major challenge in ecology is to predict whether populations will persist in the face of a changing climate. Will species adapt to changing patterns of temperature and nutrient supply quickly enough to persist within their current geographic ranges? We will use experimental evolution in the lab to study what limits or facilitates adaptation to changing thermal and resource regimes in aquatic ecosystems.



Applicants who are excited about working with phytoplankton or aquatic invertebrates are especially encouraged to apply, but we welcome applicants who work in a range of systems (i.e., we are beginning to work with fungi and agricultural systems as well!). More information: <https://www.bernhardtlab.org/research>.

**What we offer:** We are a collaborative, supportive, and diverse group that is dedicated to advancing science and conservation alongside justice and equity. We offer opportunities to lead independent research and work collaboratively in teams. We provide opportunities to develop a range of skills including lab and field skills, quantitative and theoretical tools, reproducible research practices, science communication and community engagement. **How to apply:** To apply, [please fill out this form by November 30, 2023](#). I look forward to hearing from you! Questions can be directed to [joey.bernhardt@uoguelph.ca](mailto:joey.bernhardt@uoguelph.ca)