



## MSc Project Opportunity

**Application deadline: 20 June 2025**

Title: Marine nematodes as long-term bioindicators of pollution across depth gradients in False Bay, South Africa.

The Benthic BRACE project, hosted at the **University of Cape Town**, invites applications for a Master's project focused on the use of marine nematodes as biological indicators of pollution and environmental change across depth gradients in False Bay. This project builds on an existing initiative, with initial samples and environmental data collected during 2021 and 2022.

### Summary:

Marine nematodes are abundant, diverse, and closely associated with their environment but such biodiversity studies are not common in South Africa. In addition, marine nematodes are sensitive to environmental disturbances, making them ideal indicators for monitoring sediment quality and long-term pollution trends. This project aims to investigate how nematode communities vary with depth (5–50 m) and how their structure responds to environmental gradients and sediment-associated pollutants in False Bay, South Africa.

### Student Responsibilities:

- Collect sediment samples using a Van Veen grab across depth gradients in False Bay.
- Extract marine nematodes from sediment and mount them onto permanent slides.
- Identify nematodes to genus level using microscopy and taxonomic keys.
- Analyse environmental parameters including grain size, organic matter content, and metal concentrations.
- Explore spatial and temporal patterns in environmental data and nematode community structure.
- Relate environmental drivers to observed biological responses using multivariate statistics.

### Requirements:

- A minimum of 65% average in a BSc Honours degree in marine biology or closely related discipline (e.g. zoology, conservation biology or environmental sciences).
- Fieldwork and microscope experience.
- Good organizational, analytical skills and writing skills.

### Funding:

The successful **MSc candidate is expected to apply independently for NRF scholarship funding or other relevant postgraduate scholarship funding.**

Applicants should submit:

- A motivation letter outlining your interest in the topic and experience related to the requirements and responsibilities above.
- Academic transcripts
- CV

For more information or to express interest, please contact:  
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