

Two MSc opportunities

Morphology and DNA barcoding of marine zooplankton caught off South Africa – developing an integrative approach



Two MSc opportunities are available for students in this research programme, based at the Oceanographic Research Institute in Durban, and at University of the Western Cape in Cape Town, respectively.

The two MSc projects are complementary and fit into an existing research programme to develop metabarcoding technology, which will enable rapid analysis of bulk zooplankton samples collected at sea. The abundance and species composition of zooplankton communities typically respond rapidly to changes in their environment, making them good indicators of the health of marine ecosystems. Both MSc projects will focus on the identification of key zooplankton taxa using a combination of traditional microscopy and DNA barcoding, with the aim of establishing DNA barcoding reference libraries.

Applicants must have a BSc (Hons) in a relevant field, such as marine biology, ecology, genetics or taxonomy, and must be willing to learn new skills relating to the processing of zooplankton samples in the lab and molecular techniques used in DNA barcoding. Applicants must have a strong academic record and be willing to work independently or as part of a larger team.



1) MSc opportunity at the Oceanographic Research Institute (ORI), a division of the South African Association for Marine Biological Research (SAAMBR)

An MSc student is required to undertake integrated morphological and molecular identification of zooplankton, to establish DNA barcode reference libraries. The student will join a strong multidisciplinary team of researchers at ORI, in Durban. The ORI facilities include laboratories, scientific equipment and consumables to undertake the project, under supervision. Field work may include trips on a research ship to collect samples at sea. The student will be expected to adhere to the conditions of a student contract, specifying working hours, duties, expected outputs over a 2-year period, and funding for living expenses.

If you are interested in applying please submit (1) a cover letter, detailing your relevant experience and research interests, as well as your interest in this project, (2) your latest academic transcript, (3) CV with the names of two references, (4) a copy of your ID and (5) a copy of your honours dissertation to Dr Sohana Singh (ssingh@ori.org.za) and Prof. Johan Groeneveld (jgroeneveld@ori.org.za). Applicants living in or near Durban will be preferred.

Should you have not been contacted within a month of submitting your application, please consider your application unsuccessful.



2) MSc opportunity at the University of the Western Cape

An MSc student is required to undertake an integrative morphological-molecular taxonomic study of marine copepods. The project will entail microscopic identification of copepod species, provision of tissue for DNA barcoding, and the development of a DNA barcode reference library. The project is funded through the NRF Marine and Coastal Research Grants programme.

Applicants must have a BSc (Hons) with a background in aquatic botany or zoology. A basic understanding of genetics will be an advantage. The applicant will demonstrate competency in planning and conducting fieldwork and will learn to identify copepods in the laboratory. The applicant must have a strong academic record and be willing to work as a part of a larger team.

The MSc is open to South African citizens from previously disadvantaged groups. The student will be based at the University of the Western Cape. If you are interested in applying please submit (1) a cover letter, detailing your relevant experience and research interests, (2) your latest academic transcript, (3) CV with the names of two references, (4) a copy of your ID and (5) a copy of your honours dissertation to Dr. Riaan Cedras (rcedras@uwc.ac.za).

The project will start in early 2020.

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