



OLLSCOIL NA  
GAILLIMHĒ  
UNIVERSITY  
OF GALWAY



UNIVERSITY of the  
WESTERN CAPE

We are recruiting **two motivated MSc students** to join an interdisciplinary research project investigating the **trophic ecology and habitat complexity** in South African mangrove ecosystems. These projects are part of a broader research initiative investigating the role of mangroves in supporting biodiversity and ecosystem functioning in the context of environmental change.

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### **Project 1: Diet and Feeding Plasticity of Keystone Mangrove Crabs**

**Supervisors:** Dr Lyle Vorsatz (UCT), Dr Maggie Reddy (University of Galway) & Prof. Anusha Rajkaran (UWC)

This project investigates the **dietary breadth and feeding plasticity** of select **mangrove crabs**. Crabs will be collected from mangrove forests in KwaZulu Natal and the Eastern Cape and their digestive tracts analysed to resolve diet composition across sites, sexes, and species. Lab work will include **traditional gut contents analysis, DNA extraction, PCR and preparing samples for sequencing**.

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### **Project 2: The Influence of Mangrove Root Complexity on Epibiont Communities and Ecosystem Productivity**

**Supervisors:** Dr Lyle Vorsatz (UCT), Dr Maggie Reddy (University of Galway) & Prof. Anusha Rajkaran (UWC)

This project examines how the **structural complexity** of forest patches and their accompanying mangrove root systems affects **epibiont biodiversity** and ecosystem functioning. This study will be conducted at mangrove forests in KZN and EC looking at quantifying forest complexity metrics, **3D scanning and photogrammetry** to quantify root architecture, paired with seasonal sampling of encrusting and associated biota. Students will gain skills in forest density estimates, **3D modelling of habitat structural characteristics** and **ecosystem ecology**.

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### **Eligibility & Requirements**

- BSc Honours (or equivalent) in Marine Biology, Ecology, Zoology, or related fields with evidence of excellent academic performance (>65% minimum; preferable >75%)
  - Interest in mangrove ecology, invertebrate biology, phycology, molecular methods or ecosystem modelling
  - Willingness to conduct fieldwork in remote coastal areas
  - Prior experience with molecular techniques is advantageous for project 1
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Successful applicants will register at the University of Cape Town. The project is already funded for running costs via the South African NRF-MCR programme. **Successful applicants will be required to apply for bursaries, with proposals developed in collaboration with the supervisor, unless you are self-funded.** The internal deadline for NRF applications at UCT is 4 July 2025. For more information on the NRF funding call, see [here](#).

Applicants should send a CV (with contact details of two referees), short motivation letter (one page), and academic record to [Lyle.vorsatz@uct.ac.za](mailto:Lyle.vorsatz@uct.ac.za) (subject 'your surname' and 'Project 1 or 2 MSc 2026'). The deadline for this application is **17 June 2025**. Please note that we reserve the right not to make an appointment.