

PhD position “Unravelling the history of nitrogen cycling within the central Great Barrier Reef”

Position: The Centre for Coastal Biogeochemistry at Southern Cross University is offering a PhD project in the field of coral reef nutrient cycling. This project will use a new coral skeleton geochemical analysis technique to establish if, when, and how nitrogen (N) cycling has been altered along the central inshore region of the Great Barrier Reef (GBR) lagoon.

Background: Anthropogenic N release to coastal waters is thought to be impacting the health of the coastal GBR. However records of N cycling are limited to the last few decades and as such the full history of anthropogenic N impact on coastal reefs remains unclear. Quantifying the history, location and underlying causes of N cycle changes in the central coastal GBR is fundamental for the future management of this iconic reef system.

Role: The successful applicant will be working as part of a broader team that includes researchers from the Australian Institute of Marine Science, Princeton University, and the Australian National University. The project involves geochemical analysis of coral cores maintained in the AIMS archive, and experimental work to understand the mechanisms controlling skeletal nitrogen isotope variability. There will also be a short exchange with the Department of Geosciences at Princeton University.

Pre-requisites: Applicants will need to have a 1st Class Honours or Master degree in a related field such as biogeochemistry, or environmental chemistry. Previous experience with wet chemistry, mass spectrometry, and/or stable isotope techniques will be viewed favourably, but are not essential.

Stipend and application procedure: The three year PhD scholarship will provide a tax free stipend of \$25,861. Interested applicants should send their CV, and a short letter highlighting their research background and interest in this area, to Dr Dirk Erlen – dirk.erler@scu.edu.au. Short-listed applicants will be notified within 2 weeks of the closing date. The application closing date is midnight **Friday 10th Feb 2017**. Starting date will be by May 2017 (earlier preferable).

Research environment: The projects will be undertaken in the Centre for Coastal Biogeochemistry (www.scu.edu.au/coastal-biogeochemistry) at Southern Cross University, Lismore NSW. SCU received the highest rank of 5.0, well above world average, in geochemistry in the most recent assessment of research excellence by the Australian government. The centre boasts world class laboratory and analytical facilities that will complement this project. The student will also work closely with biogeochemical and coral reef experts from several esteemed research groups.