

Marine Programme
Centre for Biodiversity Conservation Building
South African National Biodiversity Institute
Kirstenbosch Gardens
Rhodes Drive
Newlands
7708

9 January 2015

Dear Sir/Madam

I am a young, early-career South African scientist currently working in the Marine Programme at the South African National Biodiversity Institute (SANBI). I completed a Masters degree in Applied Marine Science at the University of Cape Town in February 2013 and have been working at SANBI since April 2013.

I am passionate about deep sea research and have a particular interest in the ecology of benthic habitats and how these are affected by human activities. At present there is very limited expertise in offshore benthic research in southern Africa and there are no deep-sea specialists in the region. This is critical at a time where oil and gas activities are expanding in the offshore environment, the first application for marine fracking has been submitted and a new phosphate mining lease has been granted by the Department of Mineral Resources. It is essential that South Africa builds capacity in deep-sea research so that biodiversity studies can move forward with industrial developments in our offshore environment.

Undertaking one of the deep-sea projects offered through MBARI's Summer Internship Program would provide an excellent opportunity for me to gain skills and expertise in deep-sea research. It would support me by contributing to my understanding of deep-sea ecosystem functioning and knowledge of the tools and methods used for deep sea sampling. This knowledge would not only greatly benefit my personal research but would also be disseminated to other offshore researchers on my return to South Africa. Through working with experts in this field I would also gain skills in critical thinking and hypothesis testing, which could then be applied in future research. I would like to apply for the project with Ken Smith on monitoring changes in a deep-seafloor community using time-lapse photography, and the project with Katherine Dunlop on photogrammetry in the deep sea.

I earned my Bachelor of Science from Rhodes University, Grahamstown, South Africa, in 2010. I majored in Zoology and Botany and was awarded a >70% average. I then studied my Marine Biology Honours at Rhodes University, for which I received a distinction (>75%). I went on to complete my Masters in Applied Marine Science at the University of Cape Town, South Africa, in 2013 and was again awarded a >70% average. Since completing my Masters degree I have worked on building experience in offshore research. I took part in a German-African Training and Oceanographic Research Cruise lead by the University of Bremen, Germany, in December 2013. Through this I gained valuable skills in offshore sampling methods, experimental design and invertebrate taxonomy. I also attended a summer course in Deep Sea Biodiversity, Connectivity and Ecosystem Function at Friday

Harbor Laboratories, Washington, USA, in July/August 2014. This was an intense five week course, coordinated by experts in deep-sea research. The course consisted of seminars, field work, laboratory work and guest lectures and was pivotal in further developing my knowledge and skills in this field. Through my work at the South African National Biodiversity Institute I have gained experience working with the offshore oil and gas sector, and have been involved in the development of a co-operative research project on marine invasive species associated with offshore petroleum infrastructure. In the future I intend on pursuing my PhD in deep-sea ecology and this Summer Internship would help me greatly in gaining valuable skills and experience needed to carry this out.

I am extremely excited about the opportunity to build capacity in deep-sea research in South Africa and would be thrilled to attend this course. Please find my contact information below and do not hesitate to contact me should you require further information.

Kind Regards

A handwritten signature in cursive script, reading 'K McQuaid'.

Kirsty McQuaid

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