



## RHODES UNIVERSITY

DEPARTMENT OF BOTANY • incorporating the Selmar Schonland Herbarium (GRA) • P.O. Box 94,  
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### ADVERT FOR MSc. IN BOTANY.

The followings Masters project will be offered in the Botany Department at Rhodes University. All interested applicants should forward their C.V. and academic transcript to Dr Anusha Rajkaran: [A.Rajkaran@ru.ac.za](mailto:A.Rajkaran@ru.ac.za)

Duration of project: January 2012 - December 2013

Title of project: Mangrove and salt marsh dynamics at Nahoon Estuary, Eastern Cape: a planted mangrove forest.

#### Background information:

The mangroves at Nahoon Estuary, near East London, were reported to be planted by a scientist in the 1970's. Since then the mangrove population size and cover has increased. It is unknown how fast this plant habitat has colonised the intertidal area as well as the changes they have facilitated in the sediment and nutrient dynamics within the same area. Intertidal salt marsh is restricted to permanently open estuaries (POEs) and, due to the low number of POEs in the country, is considered to be a rare habitat. Therefore it is important to determine if the mangroves will outcompete the salt marsh and exclude them from the intertidal area. One of the most important ecosystem functions of mangrove and other intertidal plant habitats is that it's an important fish and invertebrate nursery area; at Nahoon Estuary this function is valued at R 1-5 million per year. Climate change is expected to change the distribution of mangroves in South Africa. Human driven changes in the distribution and cover in SA has already been documented at Nahoon Estuary, Mhlathuze Estuary as well as other smaller estuaries. At Nahoon the mangrove forest has increased substantially over time after just a few individuals were planted. The aim of this study is to determine the level of competitive interactions between salt marsh and mangrove forests as well as the physical changes that have occurred due to the presence of the mangroves. These interactions are becoming more important as sea level rises and these two communities begin to overlap and compete for similar habitats.

#### The objectives of this study are to:

- To measure interactions between mangrove and salt marsh communities at Nahoon Estuary, and
- Determine differences in between mangrove and salt marsh areas and in the sediment characteristics and the porewater nutrient pool at Nahoon Estuary.

**Bursary information:** A student bursary of R40,000 has been secured for the successful applicant from Rhodes University and will be renewable in the second year of study.

**Applicant requirements:** This is a field based; estuarine study therefore the applicant must be hardworking and able to cope with generally muddy, and all weather conditions. A driver's license is an added advantage.

I look forward to hearing from you. Please don't hesitate to contact me if you have any questions.

Dr. Anusha Rajkaran  
Dept. Botany,  
Rhodes University

