

PhD course within the Faculty of Science postgraduate education programme

Tropical marine ecosystems of East Africa

Three weeks in Jan. – Feb. 2016

This postgraduate course is jointly hosted by the Department of *Biological and Environmental Sciences* and Department of *Marine Sciences*, both University of Gothenburg, and gives an overview of tropical marine ecology through lectures, group work and practical field experience at Ilha da Inhaca, Moçambique. During the field course the participants will investigate several aquatic systems such as mangal, coral reefs, seagrass beds, mud- and sandflats and beaches. Through field investigations, group projects and discussions knowledge about taxonomy and ecology of vertebrates, invertebrates and plants, as well as human interactions and conservation issues specific to these systems in East Africa will be taught.

Location and dates Preparation by reading referred literature during Sep-Nov 2015. The course take place at the marine station on Ilha da Inhaca outside the capital city of Maputo in southern Moçambique. It starts with a mix of introductory seminars of tropical marine habitats followed by intense field work in the various marine habitat on the Inhaca island (*the course runs for three weeks during Jan/Feb 2016, exact dates will be set in end of May 2015*).

Credit points The course is recommended to give 7,5 credit points.

The aim of the course is to give Swedish and other postgraduate students an opportunity to broaden their ecological understanding and experience as scientist by studying a tropical system in a developing country. The course will provide students with basic understanding of the dominant shallow marine ecosystems in tropical environments, and with practical experience using different research tools and methods to study these systems. It hopes to increase the interest and possibilities for young scientist to work with marine research, conservation or management in East African countries. The course is also open for relevant students from the East-African countries. The interaction between this international group of students build unique networks that may lead to future collaborations and a closer link between research in Sweden and East Africa.

Target group. The course is for postgraduate students from different disciplines in, *i.e.* Biology, Environmental Sciences and Social Sciences. The teaching language will be English. Participants: maximum 15.

Course organisers. Dr Matz Berggren Dep of Marine Sciences, GU and Assoc professor Susanne Eriksson, Dep Biological and Environmental Sciences, GU.

Teaching staff

Dep Marine Sciences, GU: Dr Matz Berggren

Dep Biological and Environmental Sciences, GU: Assoc prof Susanne Eriksson

Dep Ecology, Environment and Plant Sciences, Stockholm University: Dr Martin Gullström,

Mondlande University, Maputo, Moçambique: Dr Adriano Macia, Dr Salomão Bandeira

Natural History Museum, Maputo, Moçambique: Dr Almeida Guissamulo

Course programme

- Literature overview and lectures of the biodiversity, ecology and conservation issues of tropical marine ecosystem.
- Basic taxonomic/systematic overview of the common marine invertebrates, fish, mammals and plant species in the area. Knowledge of how to use species keys to determine families, genera and species.
- Field survey (walking or snorkelling) of the dominant marine habitats of Inhaca Island (mangal, coral reefs, seagrass, rock outcrop, mud- and sandflats, and beaches).
- Understanding of cryptic life strategies, narrow niches.
Relating differences in various environments regarding physical stress, structural complexity, predation and grazing and its effects on species abundance and diversity. Human influence on marine biodiversity in the tropical environment and conservation issues will be discussed during the course.
- Field study assessing bioturbation in different environments (sand, seagrass, mudflats and the mangal).
Interaction between the organisms and the habitat illustrated by oxygen measurements in field in combination with sampling to determine abundance of organisms, diversity and depth of the bioturbation.
- Field study of changes in community structure and abundance of mangrove species and mobile macroinvertebrates along a transect from dry to constant wet environment in a sheltered and exposed mangal system.
- Independent group projects investigating different ecological questions in the field.

Course fee:

Student from the University of Gothenburg **10000 SEK**

Student from another university in Sweden **18.000 SEK**

Student from another university in Europe **1.900 EUR**

Student from an East African university **1.100 USD** (+ own travel to Maputo)

Student from Moçambique **700 USD** (+ own travel to Maputo)

The cost includes airfare between Gothenburg and Maputo, transport to and on Inhaca as food and lodging at the marine station on Ilha da Inhaca, Moçambique. It does not include visa and vaccination. Students are encouraged to apply for stipends to cover their costs.

Applicants must show proof of their vaccination records before receiving approval to participate in the field part of course in Moçambique. Students will be lodged in very basic housing on Inhaca with electricity and shared bathrooms with only cold water. Students will be expected to work diligently on their projects, which will include hiking and may include working in the rain. Participants will receive a list of things to bring incl. gear for snorkelling. There is however, no SCUBA diving allowed during the course.

Application (a declaration of interest to participate in the course described above) should be received no later than **June 30th 2015** at:

Dr Matz Berggren,

Department of Biological and Environmental Sciences, University of Gothenburg,

Kristineberg 566

451 78 Fiskebäckskil

Sweden

or by email to matz.berggren@gu.se

Application should include:

- CV (maximum 1 page)
- A letter of recommendation from the supervisor
- A short description of the students motive for taking the course

NB! If there are not enough applicants the course will be cancelled – due to the high costs and low participation. If the course can be held each of the applicants will be asked again, at 1 September 2015, if they still want/can participate!