



### PhD position to study marine fish ecophysiology

We are seeking a highly-motivated South African candidate to join our multidisciplinary South African Linefish Physiology Assessment (SALPA) project team aiming to understand the impacts of exploitation on the physiology of resident coastal fishes as part of a project on the African Coelacanth Ecosystems Program (ACEP). The position is on a full-time basis for three years, starting in 2018 and is funded by an NRF PhD bursary to the value of R120 000 per annum. The student will be registered at the Department of Ichthyology and Fisheries Science, Rhodes University.

Prospective candidates should hold an MSc degree or recently have completed their MSc (before graduation) in a biological discipline and have good written/spoken (English) communication skills. Applicants should preferably have an understanding of the coastal marine environment and knowledge of coastal fishes. The ideal candidate should have proven experience in experimental design and statistical analyses. Skills in fish husbandry, physiology research and clearing and staining would be advantageous. The candidate should be willing to go out to sea on a coastal research vessel, and have a valid driver's licence.

Interested candidates are encouraged to apply by sending a 1) motivation letter outlining their specific interest and/or experience in fish physiology/ecology; 2) CV (including names and contacts of two references); 3) official transcripts of academic records.

The successful candidate will be based in Grahamstown at Rhodes University (RU) and will be jointly supervised by Prof. Warren Potts (RU) and Dr Nicola James (SAIAB). The deadline for submission is the 15<sup>th</sup> March 2018.

#### *Project details:*

Although several studies have found evidence for fisheries-induced evolution on the life history and behavioural traits of fishes, none have found any evidence for the selection of physiological traits. However, recent research by this research team found clear evidence of fisheries selection on the metabolic rate of an exploited South African linefish. As metabolic rate is closely linked to resilience, this finding suggests that exploited populations may be less resilient to the impacts of climate change. To explore this, a team of researchers plan to conduct a multidisciplinary project to better understand the effects of selectivity by passive fisheries on the physiological traits of fishes, how this impacts their resilience to extreme environmental events and how this knowledge can be used to adapt to the impacts of climate change. This will be done by comparing the thermal physiology of lightly and heavily exploited species inside and outside a longstanding Marine Protected Area. In addition, the offspring of fishes from these areas will be subjected to environmental stressors and their physiological (metabolic scope) and morphological responses (growth, skeletal development) will be compared. The outcomes of the project, which will provide us with an understanding of how exploitation influences

the physiology of fishes and their resilience to the impacts of climate change, will not only be of global scientific interest, but will also be very relevant to the development of policy, legislation and ultimately our adaptation strategies to minimise the impact of climate change on society.

If you have queries, please contact Warren Potts ([w.potts@ru.ac.za](mailto:w.potts@ru.ac.za)) or Nicola James ([n.james@saiab.ac.za](mailto:n.james@saiab.ac.za)).