

Project: Identifying the causes for the decline of the endangered Bank Cormorant in Southern Africa



We invite applications for the above full-time MSc or PhD study opportunity at the University of Cape Town, under a joint collaboration between the Animal Demography Unit and the Percy FitzPatrick Institute, two world-renowned centres in ornithological research with a strong emphasis on postgraduate studies.

Worldwide, the populations of several seabird species have undergone large decreases in the last 50 to 100 years, linked in many cases to losses of their prey base either through large-scale environmental changes or the impacts of man. The Bank Cormorant *Phalacrocorax neglectus* is endemic to the Benguela Upwelling Ecosystem of South Africa and Namibia and its population has decreased by 66% in the last 40 years. The species was listed as endangered in 2004 and its world population is estimated today at 3,000 pairs, 500 of which occur in South Africa. A simple regression suggests an extinction of the species by 2030 at its present rate of decrease. The aim of this PhD project is to identify the reasons for the decline of the Bank Cormorant and ultimately, to propose means for mitigating its present trend.

The candidate will explore the different existing hypotheses, in particular the hypothesis of the loss of prey base. Abundance of Rock Lobster *Jasus lalandii*, a prey identified as an important component of Bank Cormorant diet, is suspected to drive part of the population dynamics in South Africa. The candidate will investigate this through a modelling approach (using bird counts on the one hand and biomass estimates of lobster on the other), in combination to dietary studies. Alternative food hypotheses, like interference with Cape Fur Seals *Arctocephalus pusillus*, will be addressed via a food web analysis. The candidate will also collaborate with a MSc student exploring the hypothesis that global change and heat-stress are aggravating factors of the decline. Eventually, the candidate will assist in setting up and running a new field research project on the Bank Cormorant, which will include behavioural studies and a ringing program.

The candidate will be based at the University of Cape Town, under the aegis of the Animal Demography Unit and the Percy FitzPatrick Institute, both of which have ongoing research programs on the conservation research of seabirds in the Benguela, and she/he will have the opportunity to assist in some of these. These programs include, amongst others, research on the African Penguin *Spheniscus demersus*, the Cape Gannet *Sula capensis* and the Cape Cormorant *Phalacrocorax capensis*. Field work will be conducted in seabird colonies in the Western Cape of South Africa, with some work possibly also in Namibia.

The successful applicant must be South-African or permanent resident, have an Hons or MSc degree in Zoology/Ecology (or equivalent), relevant ornithological field experience and/or a background in oceanography, the ability to work in tight collaboration with other researchers and students and be available to join the Programme before 31 March 2012.

Funding is secured for an annual R80,000 (MSc) or R100,000 (PhD) bursary for two (MSc) or three (PhD) years and for project running costs.

To apply, please send a CV (including your academic record & names and contact details of three referees) and a short motivation for why you wish to undertake this research to Dr Timothée Cook. For more information on the project, please contact him at timothee.cook@gmail.com.

Closing date: 1 March 2012

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