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## Small Procellariiformes as indicators of ecosystem changes and plastic pollution

### 1 x PhD and 1 x MSc

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Through the South African National Antarctic Programme (SANAP; <http://www.sanap.ac.za>), the Marine Apex Predator Research Unit (MAPRU; Coastal and Marine Research Institute at Nelson Mandela University) in collaboration with the FitzPatrick Institute of Ornithology (University of Cape Town), is offering **two full-time study opportunities (1 PhD [2019-2021] and 1 MSc [2019-2020]) starting in early 2019.**

The two opportunities fall within the project 'Small Procellariiformes as indicators of ecosystem changes and plastic pollution' led by Dr Maëlle Connan (Nelson Mandela University) and Prof. Peter Ryan (FitzPatrick Institute, University of Cape Town). **This project intends to use small burrowing nesting seabirds breeding on the Prince Edward islands, the Tristan da Cunha archipelago and possibly Antarctica as indicators of the health and status of the Southern Ocean ecosystem.** One aspect of the project focuses on the trophic ecology of these species that will be determined using direct (identification of prey remains) and indirect (stable isotopes, lipids) approaches. The second aspect uses the birds as biological samplers to investigate the extent of plastic pollution in the Southern Ocean. Micro and macro-plastic pollution loads will be estimated mostly from seabird stomach contents and pellets. The combination of contemporary data with historical works will inform on the impact of global change on marine ecosystems as well as temporal trends in pollution loads.

Both candidates will be expected to work on both aspects of the project (trophic ecology and pollution loads). The PhD candidate will be expected to work at the community level while the MSc candidate will work at the species level. There is some flexibility and the two projects can be tailored to fit the interests of the suitable candidates.

The two projects will be co-supervised by Prof P. Ryan and Dr M. Connan. The candidates will be based at Nelson Mandela University with potential trips to the University of Cape Town. Overwintering personnel are currently collecting samples on Marion and Gough islands. Fieldwork cannot be guaranteed but the successful candidates may conduct part of the fieldwork on one of the islands.

#### FUNDING:

The successful applicants will be awarded an MSc bursary (R70 000 per year) or a PhD bursary (R100 000 per year) and may apply for an additional Nelson Mandela University Research Bursary.

All other project related costs have also been secured.

**APPLICATIONS:**

- A covering letter explaining the candidate suitability and interest for the project;
- A comprehensive CV, including contact details (emails and telephone numbers) of at least three referees;
- Certified copies of academic records and ID;
- A pdf copy of the BSc Honours (MSc project) or MSc thesis (PhD project).

Note: South African applicants will receive priority. Preference will be given to previously disadvantaged individuals who are particularly encouraged to apply.

If you have not been contacted by 31 January, please assume that your application was unsuccessful.

**Queries or applications should be directed to Prof. Peter Ryan  
([pryan31@gmail.com](mailto:pryan31@gmail.com)) and Dr Maëlle Connan ([maelle.connan@gmail.com](mailto:maelle.connan@gmail.com))**

***Closing date: 25 January 2019***

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