

1 x PhD; 1 x MSc Project

Understanding changes and threats to the vegetation of Sub-Antarctic Islands

The Sub-Antarctic Islands are some of the most isolated places on Earth. Nonetheless, they have not been left untouched by human impacts. Two of the largest threats to their biodiversity are climate change and alien invasion.

Two projects (one MSc and one PhD) investigating the effects of these threats on the plants and vegetation of the Prince Edward Islands (Marion and Prince Edward Island) will be available at the University of Pretoria from 2019.

Project 1 will use vegetation and remote sensing data to better understand how a changing climate and invasive species are impacting the vegetation of the Prince Edward Islands. The successful candidate for this post will require a solid background in GIS; experience in remote sensing is recommended. This position is suitable for an MSc or a PhD student.

Project 2 will assess the patterns and ecological drivers of plant distributions at different spatial scales on Marion Island. This work will provide insight into the role of different abiotic and biotic variables, as well as spatial factors, on the distribution of both native and invasive species, and will feed into predictions of how climate change may affect the island into the future. Experience of GIS will be an advantage, but not a necessity. This position is suitable for an MSc or a PhD student.

The successful candidates will be based in the Department of Plant and Soil Sciences at the University of Pretoria, which has a research focus on Sub-Antarctic plant ecology. They will be integrated into a larger group of postgraduate students working in Sub-Antarctic ecology, and will be working in collaboration with Rhodes University and the University of Cape Town. The candidates may be expected to spend some time visiting the labs of collaborators in Grahamstown/Cape Town.

The successful candidates may conduct field work on Marion Island. All project-related costs, including conference attendance, will be covered.

The candidates will work on both field data and existing datasets, and will be expected to run statistical analyses in R, and spatial analyses in R and ArcGIS.

Application requirements:

- A covering letter explaining the candidate's suitability for the post
- A detailed CV
- Copies of academic transcripts
- The email addresses and telephone numbers of at least two references that taught or supervised the applicant.

The applicant will be based at the University of Pretoria and will be expected to start in January 2019.

Please send your application to Michelle Greve (michelle.greve@up.ac.za). Applications close 15 November 2018. For any inquiries, contact Dr Greve at 012-4202487 or at michelle.greve@up.ac.za.

PhD student

Requirements:

- An MSc in ecology, environmental science, botany, zoology, geography or similar
- Excellent writing skills
- Good numerical skills, including competency in Excel
- A strong statistical background
- Ability to work independently

Recommendations

- Experience with working on large datasets
- South African citizenship
- Experience of working in R and GIS
- Publications in peer-reviewed journals

Bursary Value

- R 100 000 p.a. for three years

MSc student

Requirements:

- A BSc (Honours) degree in ecology, environmental science, botany, zoology, geography or similar
- Excellent writing skills
- Good numerical skills, including competency in Excel
- Ability to work independently

Recommendations

- A strong statistical background
- Knowledge of R and GIS techniques
- Experience with working on large datasets
- Willingness to conduct field work will be an advantage, but is not a requirement
- South African citizenship

Bursary Value

- R 70 000 p.a. for two years

Please note that shortlisted candidates may be asked to undergo a competency tests to ensure adherence to requirements. Preference will be given to equity candidates.

