

Positions available – Changing seasonality of vegetation and birds in the Greater Cape Floristic Region

We seek several **students**, a **postdoc** and a **research technician** to join our newly funded “Seasonality in the Cape” project exploring the impacts of changes in rainfall seasonality on vegetation and birds in the global biodiversity hotspot of the Greater Cape Floristic Region (GCFR). Changes in seasonality of rainfall might have profound impacts for this highly diverse and endemic vegetation in the only winter-rainfall dominated region of sub-Saharan Africa.

Our project will combine large-scale outdoor experiments with remote-sensing and citizen science data across the GCFR to tackle this issue. Opportunity exists for the development of key skills in: field experimental approaches, collecting and analysing physiological, demographic and community data, ecological remote sensing and data analysis. All student positions start 1 July 2018 and the post-doc and technician position 1 June 2018.

We seek students/staff to fill the following positions:

1) Seasonality and C₄ grass establishment in winter rainfall areas (PhD)

This project will explore the potential of C₄ grasses to invade the shrubby biomes in the GCFR under altered seasonality. Taking primarily a field experimental approach, grass recruitment and success will be explored under altered precipitation seasonality in different biomes. This project would suit a student eager to develop skills in field-based experimental plant ecophysiology and remote sensing.

Supervised by: Vernon Visser, Adam West, Res Altwegg

Bursary: R120,000 p.a. for 3 years.

2) Drought physiology and remote sensing of biodiversity (PhD)

This project will examine the components of fynbos biodiversity that are most sensitive to seasonal drought. Using a combination of remote sensing and ecophysiological ground-truthing, this project will link plant-level measurements on the ground with UAV (“drone”) and satellite observations of plant performance. This project would suit a student eager to develop skills in UAV and satellite-based remote sensing and analysis coupled with field-based plant ecophysiological monitoring.

Supervised by: Adam West, Jasper Slingsby, Res Altwegg

Bursary: R120,000 p.a. for 3 years.

3) Birds' responses to seasonality (PhD)

This project will examine the seasonal dynamics of bird distributions across South Africa using the Southern African Bird Atlas data. Our country is rich in bird species that respond to seasonal availability of resources by moving around. Some species migrate between lower and higher altitudes, some are nomadic and some leave the country altogether for times of the year. How is climate change affecting these strategies? This project is largely desktop based and focuses on analysing existing data with state-of-the art statistical models. However, some fieldwork component could be envisaged.

Supervised by: David Maphisa, Res Altwegg

Bursary: R120,000 p.a. for 3 years.

4) Ecological remote sensing of seasonality in the GCFR (Post-doc)

We seek a post-doc interested in working at the interface of ecological observation and remote sensing. In this three-year position, the incumbent would explore the importance of seasonality on ecological function in the GCFR from a remote sensing perspective, while working closely with the other students in the project. The ideal applicant would have a PhD in ecology with experience in remote sensing.

Fellowship: R220,000 p.a. for 3 years.

Supervised by: Res Altwegg, Vernon Visser, Adam West

5) Research Technician

We seek an MSc graduate to join our team as a research technician to assist with the setup, development and data collection of the projects listed above. This three-year position will involve considerable field time in experimental setup, data capture as well as laboratory work in sample analysis, data archiving and technical support for equipment.

Salary: R350,000 p.a. for 3 years.

This project is part of a larger group of Annual Cycle and Seasonality (ACyS) projects funded by the Alliance for Collaboration on Earth Systems Science (ACCESS) through the NRF. As such, students on this project will become part of an extended network, with further opportunities for training and development across disciplines in the Earth System Science.

To apply, please send us:

- an application letter explaining your motivation to join our team (please clearly specify with position(s) you are applying for),
- your CV, including a list of publications and/or conference presentations,
- academic transcripts,
- a copy of your post-graduate theses (M.Sc. & Ph.D., where relevant), and
- names (and contact details) of two academic references who have taught, supervised or worked alongside you.

Please send your application to Sue Kuyper (Sue.Kuyper@uct.ac.za) by **10 May 2018**.

For more information, please contact Vernon Visser (vervis@gmail.com), Res Altwegg (res.altwegg@uct.ac.za), Adam West (adam.west@uct.ac.za) or Jasper Slingsby (jasper@saeon.ac.za).

The University of Cape Town reserves the right to: disqualify ineligible, incomplete, inappropriate and/or late applications, and to change the conditions of award or to make no awards at all. Allocation of the student bursaries is subject to approval from the NRF, in line with their equity targets.