



Post-doctoral Fellowship 2020 – Afromontane Research Unit

Putting Southern African Mountains on the Global Map:

Establishing *Global Observation Research Initiative in Alpine Environments (GLORIA)* & *Mountain Invasive Research Network (MIREN)* long-term monitoring sites in the Maloti-Drakensberg

Southern Africa lags substantially behind global mountain data initiatives, with the result that southern African mountains are poorly represented on global platforms. As a consequence, global policy – and recommended practice to regional policy makers – often ranges from inadequate to inappropriate for our regional mountain context.

The Afromontane Research Unit (ARU), University of the Free State (UFS): QwaQwa Campus, is an active and growing mountain research hub situated at the foot of the Maloti–Drakensberg in the eastern Free State Province, South Africa. The vision of the ARU is to become ‘*A Continental Leader in African Mountain Research*’. The ARU seeks to assist in addressing this southern African mountain data gap, and contributing to a better balanced global narrative that adequately represents southern African mountains.

The ARU is offering a Post-Doctoral Fellowship focusing on the pioneering and implementation of **Global Observation Research Initiative in Alpine Environments (GLORIA)** and **Mountain Invasion Research Network (MIREN)** protocols in the Maloti–Drakensberg (South Africa & Lesotho). This will involve becoming familiar with these protocols, liaison with the programme co-ordinators of GLORIA and MIREN and local partners, determination of suitable sites, consideration of contextualising the protocols appropriately to mitigate local challenges, permit processes, and drafting of funding proposals for their complete installation and future monitoring. The Fellow will be responsible for driving the first protocol surveys, analyses and publication of results.

In addition to the above, the Fellow will also have the opportunity to be exposed to and contribute to the wide range of mountain-related activities being driven by the ARU.

FELLOWSHIP DETAILS

- One year with the option of renewing for a second year, depending on performance (ideally, applicants should consider a work plan that covers two full years, given the ambitious nature of this project).
- The Fellowship is valued at ZAR220,000.00 for one year (12 months) with R30,000.00 for running costs.
- Commencement: 1st February 2020 or soonest thereafter.

ELIGIBILITY CRITERIA

- Candidates should have preferably completed their Doctoral studies within the past 5 years, or can show proof of pending graduation in 2019.
- Applications from South African and international candidates are welcomed.
- Candidates may not hold full-time salaried employment during the tenure of the award.
- The following intellectual/experience background will be preferred:
 - a. Project Management, with a strong sense of adventure, pioneering, trouble-shooting and creative thinking.
 - b. An aptitude for plant collecting and identification.
 - c. A passion for mountain biodiversity.
 - d. Able to manage & manipulate large datasets.
 - e. Willing to undertake research work in remote mountainous regions in often adverse conditions.
- It is strongly preferred that the Fellow has a valid drivers’ license.

APPLICATION REQUIREMENTS

- Motivation Letter.
- Full Curriculum Vitae (CV) (including a list of academic outputs to date).
- Full transcripts of academic record.
- Copy of degree certificates.
- Copy of South African identity document or Passport (international candidates).
- Signed letters of recommendation from three academic references.

The appointment will reflect the UFS's equity and diversity imperatives, including those for gender, racial/cultural and intellectual diversity. A Fellowship is currently available for this position, and will be awarded on a competitive basis, taking into account the applicants' academic achievements and research potential.

Application Deadline: 25th November 2019

Contact Person:

Dr Ralph Clark

Director: Afromontane Research Unit

University of the Free State, QwaQwa Campus

Private Bag X13, Phuthaditjhaba, 9866, South Africa

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The Afromontane Research Unit, the South African Environmental Observation Network & the University of Pretoria are proud to advertise a

Masters Scholarship

in

THE IMPACTS ON MONTANE BIODIVERSITY OF *LEUCOSIDEA SERICEA* ENCROACHMENT IN THE MALOTI-DRAKENSBERG

Background:

The Afromontane Research Unit (ARU; QwaQwa Campus, University of the Free State) – in partnership with South African Environmental Observation Network (SAEON) and the University of Pretoria – seeks a motivated Masters candidate to join a Research Team to examine the impacts on montane biodiversity of the indigenous shrub *Leucosidea sericea* (Ouhout) in the Maloti-Drakensberg. The Masters forms part of a larger, multi-institutional project on improving our understanding of how a set of global change drivers (climate, land use change and atmospheric CO₂) impact the ability of ecosystems to supply freshwater and sustain biodiversity. The project is supported by the NRF.

Scholarship description:

Much of the natural cover of the land surface of the world has been transformed or modified by multiple drivers of change, such as increasing populations, climate variability and macro-economic activities. These alterations impact upon the hydrological system at spatial scales, ranging from local to global. Change occurs through a complex system of feedbacks, interactions and non-linearities between the vegetation, geology, soil, and physical topography and disturbance regimes. A loss of vegetation cover is typically the primary concern for environmental management, particularly where this leads to deforestation or desertification. However, increases in the cover of certain vegetation types can have negative impacts on biodiversity and ecosystem functioning, particularly the provision of freshwater. Such impacts are most likely where woody vegetation (trees and shrubs) replace grasslands.

A three year, NRF-funded project will make use of existing long-term research sites to measure differences in key hydrological processes in neighbouring catchments that differ in woody vegetation cover. This will also require sampling key vegetation variables, including species composition and richness. The site-specific vegetation and hydrological data acquired will be used to parameterize catchment-scale hydrology models, to simulate river flows at local and national scales. **For two of the three years, the Masters candidate will focus on determining the impacts on montane biodiversity of *Leucosidea sericea* encroachment at sites in Golden Gate Highlands National Park, Witsieshoek and Cathedral Peak.** The data and results will feed into two PhD positions (hosted by SAEON) focusing on understanding the impacts of woody encroachment on hydrological processes, such as interception and evapotranspiration using field-based monitoring and possibly remote sensing.

Eligibility:

1. Preference will be given to previously disadvantaged individuals and to South African citizens (as per NRF criteria).
2. An Honours degree in a relevant background discipline (e.g. Plant Ecology, Plant Science/Botany Environmental Science, Geography, or motivated other).
3. Field-work experience in severe, rugged and/or isolated environments will be a strong advantage; being prepared and willing to undertake fieldwork in remote and mountainous areas is a pre-requisite.
4. Driven, disciplined, able to work as a member of a Team, and be able to set and meet own deadlines;
5. Preferably have botanical field collecting and plant identification experience, even if limited.
6. A proficiency in English, both verbal and written, is required.
7. A valid driver's license is preferable.

Scholarship package:

1. The successful candidate will be registered and based at the QwaQwa Campus of the UFS, with co-supervision by SAEON (Grassland, Forest & Wetland Node) and the University of Pretoria.
2. R90,000 per year, for two years. The candidate will be expected to cover all living expenses out of this stipend.
3. The candidate will be expected to find private accommodation, and make own arrangements for medical insurance and study permits if they are an international student.
4. All project running costs will be covered through the project budget.

How to Apply:

Applications should be submitted to **Dr Ralph Clark** (ClarkVR@ufs.ac.za) by **25th November 2019**, with the following:

1. A one-page Letter of Motivation (which includes why you are interested in this project, relevant experience, and any areas of particular interest).
2. Full CV.
3. Two Letters of Reference.
4. Academic Transcripts.
5. Copy of ID or Passport (latter if a foreign applicant).

Short-listed candidates will be interviewed by telephone/Skype. Applicants who do not hear any response to their application by **14th December 2019** can assume that they have not been successful. The UFS reserves the right to re-advertise for this post if a suitable candidate is not found.

For further enquires please contact Dr Clark at ClarkVR@ufs.ac.za.

Kind regards,

Dr V. Ralph Clark
Director: Afromontane Research Unit
On behalf of SAEON & the University of Pretoria

