

Phemelo M. Rutlokoane

BIODIVERSITY & CONSERVATION BIOLOGY

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"If you do what you've always done, you'll get what you've always gotten" - Tony Robbins

Summary

A B.Sc. graduate in Biodiversity and Conservation Biology at the University of the Western Cape, currently studying B.Sc. (Hons) in biodiversity and Conservation Biology – to be completed in December 2025. My research project is on monitoring *Leucadendron argenteum* populations in Table Mountain National Park using NASA's hyperspectral imaging and LiDAR sensors in collaboration with the South African Environmental Observation Network (SAEON). I am skilled in using modern technology and software to solve biodiversity and conservation problems. My experience comes from field research, geographic information systems (GIS), and open-source scientific scripting languages such as R and Python. I have proven teamwork and leadership skills through volunteering programmes and tutoring. I am a motivated person who can adapt to any environment, I am willing to learn new skills and gain experience to better myself. I am fluent in English, Sesotho, Zulu, Xhosa, Setswana, and Sepedi.

Education

University of the Western Cape

Cape Town, South Africa

B.Sc. IN BIODIVERSITY AND CONSERVATION BIOLOGY

2021 – 2024

- Relevant coursework: Ecology, GIS, Plant and animal ecophysiology, Biodiversity information management, Quantitative ecology, Biostatistics

University of the Western Cape

Cape Town, South Africa

B.Sc. (HONS) IN BIODIVERSITY AND CONSERVATION BIOLOGY

2025 (expected)

- Research project: Monitoring *Leucadendron argenteum* populations across Table Mountain National Park using the BioSCape's hyperspectral imaging and LiDAR data

Employment History

University of the Western Cape

Bellville, Cape Town

2025

TUTOR, BIODIVERSITY AND CONSERVATION BIOLOGY DEPARTMENT

- Tutor for undergraduate classes (15–25 students)

University of the Western Cape

Bellville, Cape Town

2025

RESEARCH VOLUNTEER, BIODIVERSITY AND CONSERVATION BIOLOGY DEPARTMENT

- Assessed carbon sinks to measure habitat health and restoration progress

Cape Flats Nature Reserve

Bellville, Cape Town

2022–2024

VOLUNTEER

- Alien clearing and litter removal
- Biodiversity surveys
- Habitat preparation for controlled burning
- Plant maintenance in the nursery

Knowledge & Experience

Microsoft Office Experienced in Word, Excel, PowerPoint, Teams

Software Experience with open-source scientific scripting languages, specifically R and Python

Statistics Biostatistics and quantitative ecology in environmental and biological sciences

Data Analysis Analysis of a wide array of data including big data on desktop

Remote Sensing Processing satellite data from Level 2 and above

GIS Advanced use of QGIS

Scientific Writing Experience in drafting research papers and data driven analyses (Word, Quarto Markdown, and LaTeX)

Languages English, Sesotho, Zulu, Xhosa, Setswana, Sepedi

References

Dawn Faroe

TUTORIAL SUPERVISOR

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University of the Western Cape

Dr Patrick O'Farrell

LECTURER, BIODIVERSITY AND CONSERVATION BIOLOGY

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University of the Western Cape

Prof. Anusha Rajkaran

LECTURER, BIODIVERSITY AND CONSERVATION BIOLOGY

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University of the Western Cape

Laurenda Van Breda

VOLUNTEER CO-ORDINATOR

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Cape Flats Nature Reserve