

The Elasmobranch Genetics Group in the Genetics Department of Stellenbosch University in collaboration with the Norwegian Institute of Bioeconomy Research (NIBIO), Department of Forestry, Fisheries and the Environment (DFFE) and the Wildlife Conservation Society (WCS) is looking for a 2-year postdoctoral fellow to work under the main project

" EDGE of tomorrow: integrating Ecological Data with Genomic and Evolutionary assessments for elasmobranch conservation management"

funded by the NRF Marine and Coastal Research call.

Host: Aletta Bester-van der Merwe (Stellenbosch University)

We offer a two-year contract (2026-2027), at a value of 320 000 ZAR/year.

Summary:

Globally, sharks and rays face severe extinction risks due to overfishing and climate change, worsened by their low reproductive rates. In South Africa and the Southwest Indian Ocean, coastal communities depend on fisheries, creating a trade-off between conservation and livelihoods. This study integrates local ecological knowledge (LEK) with genetic and genomic data to better understand and manage threatened elasmobranchs. Building on previous research, it aims to develop an EDGE framework that combines LEK, species delineation, genotype–environment interactions, and species distribution modelling to inform effective, holistic conservation strategies for these vulnerable species

Work tasks:

The postdoc will conduct both laboratory and computational work involving genomic and ecological assessment of key elasmobranch species. The more specific aims are 1) to identify local adaptation patterns and assess genomic vulnerability using a seascape genomics approach 2) to apply species distribution modelling techniques to predict current and future habitat suitability and determine associated environmental factors and 2) piloting innovative, cost-effective approaches to overcome data deficiencies and strengthen fisheries governance with a focus on resource-poor countries

Minimum requirements:

Aletta E. Bester van der Merwe
Associate Professor

Molecular Breeding & Biodiversity Group

Department of Genetics • Stellenbosch University • Private Bag X1 • Matieland, 7602 • South Africa

• Tel: +27 (0) 832338990 • e-mail: aeb@sun.ac.za

PhD in genetics, molecular biology, bioinformatics or related disciplines obtained in the last 5 years.

First-author or co-author of at least five peer-reviewed manuscripts published in the field.

Ability to work in a multi-disciplinary, international team.

Excellent time and project management skills.

Previous experience with genomics data analyses.

Experience with genome assembly and/or species distribution modelling.

Additional requirements:

Knowledge of marine ecosystems and species.

Proficiency in wet lab analyses related to molecular markers and DNA sequencing.

Experience in working with R and other programming software

Excellent ability to communicate and write in English.

The research group:

The Elasmobranch Genetics Research Group at Stellenbosch University collaborates with governmental and conservation organizations to apply genomic and ecological tools for improved fisheries management and conservation. The group supports marine conservation in Africa through research, education, community engagement, and services, offering training in genetics, genomics, bioinformatics, and biodiversity monitoring. The Department of Genetics provides full laboratory facilities and access to multiple DNA sequencing and other analytical platforms.

To apply:

Please send a motivation letter, comprehensive CV and the contact of two references to: aeb@sun.ac.za by 4 December 2025

Ideally, candidates should be able to start latest February 2026.

The position will remain open until a suitable candidate is found.

Aletta E. Bester van der Merwe
Associate Professor

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