Tanya Strydom

PhD Student

Département de sciences biologiques, Université de Montréal

tanya.strydom@umontreal.ca | tanyadoesscience.com | 0000-0001-6067-1349 | TanyaS08 | TanyaS_08

Research Interests

computational ecology; functional traits; ecological networks; machine learning; FAIR and open science

Education

Doctor of Philosophy: Biological Sciences — *Montréal, Canada*

Université de Montréal — *2020 - Present*

- Advisor: T. Poisot, PhD
- Thesis: Machine learning in ecology

Master of Science: Ecology and Biodiversity — *Stockholm, Sweden*

Stockholms Universitet — *2018-20*

- Advisor: K. Hylander, PhD
- Thesis: Declines and increases in northern and southern plant populations after changes in the microclimate

Bachelor of Science (Honours): Plant Sciences — *Pretoria, South Africa*

University of Pretoria — *2017*

- Advisor: P.C. le Roux, PhD
- Thesis: Bush encroachment in South Africa's montane grasslands: the impact of Leucosidea sericea on microclimate and vegetation

Bachelor of Science: Ecology — *Pretoria, South Africa*

University of Pretoria — *2014-16*

Research Experience

Plant functional trait responses to elevation and fire

V. Vandvik, PhD and B.J. Enquist, PhD — *2020*

- Attended the 5th Plants Functional Traits Course in Peru co-hosted by the Univesity of Bergen and Arizona University.
- Theory on plant functional traits and their relationships with broader ecological processes.
- Practical elements include: experimental design, data collection and curation, and report writing.

Plant vital rates along microclimate gradients.

K. Hylander, PhD — *2019-20*

- Masters degree research project.
- Focused on the variation of plant population vital rates along microclimate gradients and the role of historic climatic conditions.

Plant-pollinator interactions in different microsites

J. Ehrlén, PhD and A. Tack, PhD — *2019*

- A Masters level course research project.
- Independently worked on hypothesis formulation and experimental design.

Changes in plant functional traits at fine-scales

P.C. le Roux, PhD — *2018*

- Collecting and processing plant functional traits on sub-Antarctic Marion Island.
- Research focused on looking at changes in plant functional traits along microclimate gradients.

The impact of an encroaching species on vegetation and microclimate

P.C. le Roux, PhD — *2017*

- Honours degree research project.
- Research focused on the concepts of biotic interactions, ecosystem engineering and habitat modification.

Technical Skills

Statistical Analysis	generalized and linear mixed-effect models; mulitvariate analysis; Bayesian analysis; primarily using R
Spatial Analysis	spatial analysis in ecology; ArcGIS; Maxent; GBIF
Image Analysis	ImageJ; Adobe Photoshop
Phylogenetic Analysis	extracting and cleaning samples from GenBank; MEGA
Academic Writing	assessed at various levels; peer-reviewed articles; literature reviews; research proposals; reports; popular articles
Oral Communication	masters level course; presented in various settings
Peer Review	as an assistant (PLoS ONE, 2018); second-round reviewer (Plant Ecology, 2019)
Language Skills	English and Afrikaans as a native speaker; conversational in German; basic Swedish and Spanish

Written Work

PEER-REVIEWED

1. Kattge, J, G Boenisch, S Diaz, S Lavorel, C Prentice, P Leadley, C Wirth, and the TRY Consortium (Mar. 2020). The TRY Plant Trait Database - enhanced coverage and open access. *Global Change Biology*.

MANUSCRIPTS

Under Review

1. Chacón-Labella, J, M Boakye, BJ Enquist, W Farfan-Rios, R Gya, AH Halbritter, SL Middleton, J von Oppen, S Pastor-Ploskonka, **T Strydom**, V Vandvik, and SR Geange (2020). From a crisis to an opportunity: Eight insights for doing science in the Covid-19 era and beyond. Submitted to *Ecology and Evolution*.
2. Geange, SR, J von Oppen, **T Strydom**, M Boakye, TLJ Gauthier, R Gya, AH Halbritter, LH Jessup, SL Middleton, J Navarro, ME Pierfederici, J Chacón-Labella, S Cotner, W Farfan-Rios, BS Maitner, ST Michaletz, RJ Telford, BJ Enquist, and V Vandvik (2020). Next-generation field courses: integrating Open Science and online learning. Submitted to *Ecology and Evolution*.
3. Raath-Krüger, MJ, C Schöb, MA McGeoch, **T Strydom**, and PC le Roux (2020). Long-term spatially-replicated data show no cost to a benefactor species in a facilitative plant-plant interaction. Submitted *to Journal of Ecology*.

In Prep

1. **Strydom T** and PC le Roux (*in prep*). Bush encroachment in South Africa's montane grasslands: the impact of *Leucosidea sericea* on microclimate and vegetation.

POPULAR ARTICLES

1. Cotner, S, BJ Enquist, J Chacon, BS Maitner, W Farfan-Rios, S Michaletz, J Garen, TLJ Gauthier, V Vandvik, R Gya, AH Halbritter, K Hošková, ME Pierfederici, NL Quinteros-Casaverde, ES Diaz, LH Jessup, **T Strydom**, and J von Oppen (2020). *International scientists need better support during global emergencies*. `https://www.timeshighereducation.com/blog/international-scientists-need-better-support-during-global-emergencies`.

Internships

UiB Internship

University of Bergen *2020*

- Website development for the Plants Functional Courses website. This included content creation as well as some front end development

3rd year Undergraduate Mentorship Program

University of Pretoria *2016*

- Worked as an assistant within the M. Robertson lab. This included the sorting and identification of pitfall trap samples as well as extracting information from databases

Funding and Awards

Qualified for the UP Postgraduate Masters Research Bursary.

Awarded by: University of Pretoria *2018*

Awarded the 3rd year Undergraduate Mentorship Bursary.

Awarded by: University of Pretoria *2016*