

# Tanya Strydom

PHD STUDENT

Département de sciences biologiques, Université de Montréal

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## Research Interests

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

## Education

### Doctor of Philosophy: Biological Sciences

UNIVERSITÉ DE MONTRÉAL

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

Montréal, Canada

2020 - Present

### Master of Science: Ecology and Biodiversity

STOCKHOLMS UNIVERSITET

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

Stockholm, Sweden

2018-20

### Bachelor of Science (Honours): Plant Sciences

UNIVERSITY OF PRETORIA

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

Pretoria, South Africa

2017

### Bachelor of Science: Ecology

UNIVERSITY OF PRETORIA

Pretoria, South Africa

2014-16

## Research Experience

### Plant functional trait responses to elevation and fire

V. VANDVIK, PHD AND B.J. ENQUIST, PHD

- Attended the 5th Plants Functional Traits Course in Peru co-hosted by the University 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.

2020

### Plant vital rates along microclimate gradients.

K. HYLANDER, PHD

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

2019-20

### Plant-pollinator interactions in different microsites

J. EHRLÉN, PHD AND A. TACK, PHD

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

2019

### Changes in plant functional traits at fine-scales

P.C. LE ROUX, PHD

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

2018

### The impact of an encroaching species on vegetation and microclimate

P.C. LE ROUX, PHD

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

2017

## Technical Skills

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

## Written Work

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### 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-Labela♣, 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-Labela, 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 *New Phytologist*.

#### 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>.

♣ = should be considered equal lead

## Internships

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### 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

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### 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