



Tanya Strydom

Postdoctoral Researcher

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💡 Research Profile



💼 Professional Experience

Postdoctoral Researcher

UNIVERSITY OF SHEFFIELD

Sheffield, UK

2024 - Present

🎓 Education

Doctor of Philosophy in Biological Sciences

UNIVERSITÉ DE MONTRÉAL

Montréal, Canada

2020-24

Master of Science in Ecology and Biodiversity

STOCKHOLMS UNIVERSITET

Stockholm, Sweden

2018-20

Bachelor of Science (Honours) in Plant Sciences

UNIVERSITY OF PRETORIA

Pretoria, South Africa

2017

Bachelor of Science in Ecology

UNIVERSITY OF PRETORIA

Pretoria, South Africa

2014-16

💰 Funding and Awards

Robert May Prize

AWARDED BY: BRITISH ECOLOGICAL SOCIETY

2022

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

PUBLICATIONS

* Indicates co-lead author

1. Banville, F., **Strydom, T.**, Blyth, P. S. A., Brimacombe, C., Catchen, M., Dansereau, G., Gravel, D., Higino, G., Malpas, T., Mayall, H., Norman, K., & Poisot, T. (2025). Deciphering probabilistic species interaction networks. *Ecology Letters*, 28(6). <https://doi.org/10.1111/ele.70161>
2. Higino, G. T., Anujan, K., Boakye, M., Degano, M. E., Forero-Muñoz, N.-R., & **Strydom, T.** (2025). Designing a collective prototype of future (sub)tropical science. *FACETS*, 10. <https://doi.org/https://doi.org/10.1139/facets-2024-0113>
3. Johnson, T. F., Simmons, B. I., Millard, J., **Strydom, T.**, Danet, A. H., Sweeny, A. R., & Evans, L. C. (2024). Pressure to publish introduces LLM risks. *Methods in Ecology and Evolution*, 15(10). <https://doi.org/10.1111/2041-210X.14397>
4. Christiansen, D. M., **Strydom, T.**, Greiser, C., McClory, R., Ehrlén, J., & Hylander, K. (2023). Effects of past and present microclimates on northern and southern plant species in a managed forest landscape. *Journal of Vegetation Science*. <https://doi.org/10.1111/jvs.13197>
5. Maitner, B. S., Halbritter, A. H., Telford, R. J., **Strydom, T.**, Chacón-Labella, J., Henderson, A. N., Lamanna, C., Sloat, L. L., Kerkhoff, A. J., Messier, J., Rasmussen, N. L., Pomati, F., Merz, E., Vandvik, V., & Enquist, B. J. (2023). Bootstrapping outperforms community-weighted approaches for estimating the shapes of phenotypic distributions. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.14160>
6. **Strydom, T.**, Bouskila, S., Banville, F., Barros, C., Caron, D., Farrell, M. J., Fortin, M.-J., Hemming, V., Mercier, B., Pollock, L. J., Runghen, R., Dalla Riva, G. V., & Poisot, T. (2023). Graph embedding and transfer learning can help predict potential species interaction networks despite data limitations. *Methods in Ecology and Evolution*, 14(12). <https://doi.org/10.1111/2041-210X.14228>
7. **Strydom, T.**, & Poisot, T. (2023). SpatialBoundaries.jl: Edge detection using spatial wombling. *Ecography*. <https://doi.org/10.1111/ecog.06609>
8. Raath-Krüger, M. J., Schöb, C., McGeoch, M. A., Burger, D. A., **Strydom, T.**, & le Roux, P. C. (2022). Long-term spatially-replicated data show no cost to a benefactor species in a facilitative plant-plant interaction. *Oikos*. <https://doi.org/10.1111/oik.09617>
9. **Strydom*, T.**, Bouskila*, S., Banville, F., Barros, C., Caron, D., Farrell, M. J., Fortin, M.-J., Hemming, V., Mercier, B., Pollock, L. J., Runghen, R., Dalla Riva, G. V., & Poisot, T. (2022). Food web reconstruction through phylogenetic transfer of low-rank network representation. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.13835>
10. Chacón-Labella, J., Boakye, M., Enquist, B. J., Farfan-Rios, W., Gya, R., Halbritter, A. H., Middleton, S. L., von Oppen, J., Pastor-Ploskonka, S., **Strydom, T.**, Vandvik, V., & Geange, S. R. (2021). From a crisis to an opportunity: Eight insights for doing science in the COVID-19 era and beyond. *Ecology and Evolution: Academic Practice in Ecology and Evolution*, 11(8), 3588–3596. <https://doi.org/10.1002/ece3.7026>
11. Geange*, S. R., von Oppen*, J., **Strydom***, T., Boakye, M., Gauthier, T.-L. J., Gya, R., Halbritter, A. H., Jessup, L. H., Middleton, S. L., Navarro, J., Pierfederici, M. E., Chacón-Labella, J., Cotner, S., Farfan-Rios, W., Maitner, B. S., Michaletz, S. T., Telford, R. J., Enquist, B. J., & Vandvik, V. (2021). Next-generation field courses: Integrating Open Science and online learning. *Ecology and Evolution: Academic Practice in Ecology and Evolution*, 11(8), 3577–3587. <https://doi.org/10.1002/ece3.7009>
12. **Strydom, T.**, Dalla Riva, G. V., & Poisot, T. (2021). SVD entropy reveals the high complexity of ecological networks. *Frontiers in Ecology and Evolution*, 9. <https://doi.org/10.3389/fevo.2021.623141>
13. **Strydom*, T.**, Catchen*, M. D., Banville, F., Caron, D., Dansereau, G., Desjardins-Proulx, P., Forero-Muñoz, N. R., Higino, G., Mercier, B., Gonzalez, A., Gravel, D., Pollock, L. J., & Poisot, T. (2021). A roadmap toward predicting species interaction networks (across space and time). *Philosophical Transactions of the Royal Society B*, 376(20210063). <https://doi.org/10.1098/rstb.2021.0063>

IN PREP

1. Karapunar, B., **Strydom, T.**, Beckermann, A. P., Ridgewell, A., Little, C., Pimiento, C., Dunne, J. A., Hull, P., Wignall, P., & Dunhill, A. (n.d.). *No global collapse of marine food webs across the permian-triassic mass extinction*.
2. **Strydom, T.**, Akomolafe, G., & le Roux, P. (n.d.). Bush encroachment in South Africa's montane grasslands: The impact of Leucosidea sericea on microclimate and vegetation. *Submitted to Journal of Vegetation Science*.
3. **Strydom, T.**, Dunhill, A., Dunne, J. A., Poisot, T., & Beckerman, A. P. (n.d.). *Scaling from metawebs to realised webs*:

- A hierarchical approach to network ecology.*
- 4. **Strydom, T.**, Karapunar, B., Beckerman, A. P., & Dunhill, A. (n.d.). *Reconstructing deep-time food webs: Model assumptions drive paleoecological inference*.
 - 5. Trepel, J., Buitenwerf, R., Ferraro, K., Roux, E. le, Lundgren, E., Maitner, B. S., **Strydom, T.**, Svenning, J.-C., & Kerr, M. (2025). Herbivory is not harm: Re-evaluating introduced herbivores in conservation. *Submitted to Conservation Biology*.

ARCHIVED DATASETS

- 1. Halbritter, A. H., Vandvik, V., Cotner, S., Farfan-Rios, W., Maitner, B. S., Michaletz, S. T., Menor, I. O., Telford, R. J., Ccahuana, A., Cruz, R., Bravo, J. S., Andrade, P. E. S., Bustamante, L. L. V., Castorena, M., Chacon-Labella, J., Christiansen, C. T., Duran, S. M., Egelkraut, D. D., Gya, R., ... Enquist, B. J. (2024). Plant trait and vegetation data along a 1314 m elevation gradient with fire history in Puna grasslands, Perú. *Scientific Data*, 11(225). <https://doi.org/10.1038/s41597-024-02980-3>
- 2. Kattge, J., Boenisch, G., Diaz, S., Lavorel, S., Prentice, C., Leadley, P., Wirth, C., & the TRY Consortium. (2020). TRY plant trait database—enhanced coverage and open access. *Global Change Biology*, 26(1), 119–188. <https://doi.org/10.1111/gcb.14904>

Working Groups

Black Holes and Revelations: Identifying Priority Sampling Locations for Local Food Webs in Canada

PIs: F. BANVILLE, M. CATCHEN, G. DANSEREAU, AND **T. STRYDOM**

2022

Merging Statistical Theory and Analyses at the Interface of Microbial and ‘Macrobial’ Ecology

PIs: M. LIEBOLD, P. PERES-NETO, AND E. THEBAULT

2022

Canadian metaweb construction working group

PIs: T. POISOT AND L.J. POLLOCK

2021

Network prediction synthesis working group

PIs: T. POISOT AND L.J. POLLOCK

2020

Plant Functional Trait Course 5 in Peru

PIs: V. VANDVIK AND B.J. ENQUIST

2020

Presentations

WORKSHOPS AND ORGANISED SESSIONS

Space Oddity: Thinking About Ecological Networks Across Space

[ESA/CSEE Meeting](#)

FRANCIS BANVILLE, GABRIEL DANSEREAU, **TANYA STRYDOM**

Aug., 2022

Designing a collective prototype of future tropical and subtropical science

[ATBC Annual Meeting](#)

GRACIELLE HIGINO, MICKEY BOAKYE, NORMA FORERO, **TANYA STRYDOM**

Jul., 2021

INVITED TALKS AND SEMINARS

The Risks and Rewards of Large Language Models in (Open) Scientific Research

[SORTEE](#)

TANYA STRYDOM

Oct., 2025

What’s [complexity] got to do with it?

[NetSci 2023](#)

TANYA STRYDOM

Jul., 2023

Making something out of nothing at all: Transfer learning for network prediction

[ML4MS mini-conference](#)

TANYA STRYDOM

Apr., 2022

Taking FAIR and open science to the field: The evolution of the PFTC field course

[Living Norway Colloquium](#)

TANYA STRYDOM ALONGSIDE AUD H. HALBRITTER, 109 PFTC PARTICIPANTS

Oct., 2020

TALKS

It's okay to be different: Understanding how and why network construction matters

TANYA STRYDOM

4th CPEG Symposium

July, 2025

Exploring the complexity of ecological networks using SVD entropy

TANYA STRYDOM, GIULIO V. DALLA RIVA AND TIMOTHÉE POISOT

11th Annual QCBS Symposium

Dec., 2020

SHORT PRESENTATIONS AND POSTERS

The Nuances of Food Webs: An Overview of Definitions, Scales, and Mechanisms

TANYA STRYDOM, JENNIFER DUNNE, TIMOTHÉE POISOT AND ANDREW P. BECKERMAN

BES Annual Meeting

Dec., 2024

Food web reconstruction using transfer learning

TANYA STRYDOM, SALOMÉ BOUSKILA AND TIMOTHÉE POISOT

12th Annual QCBS Symposium

Dec., 2021

Reconstructing food webs using transfer learning

TANYA STRYDOM, SALOMÉ BOUSKILA AND TIMOTHÉE POISOT

CSEE-SCEE Annual Meeting

Aug., 2021

Teaching

INVITED LECTURES

Species Interaction Networks: A Macro-level Overview

COMMUNITY ECOLOGY

University of South Florida

Mar., 2025

Community Engagement

SCIENTIFIC OUTREACH

Cartoonist

FORTNIGHTLY CARTOONIST FOR ECOLOGY FOR THE MASSES BLOG

2020 - 2022

Skype a Scientist

Q&A SESSIONS WITH SCHOOL GROUPS

2024 - Present

Letters to a PreScientist

PEN PAL PROGRAMME WITH HIGH SCHOOL STUDENTS

2025

POPULAR ARTICLES

1. von Oppen, J., Gya, R., Geange, S., **Strydom, T.**, Middleton, S., & Maitner, B. S. (2021). Next generation field courses: Enhancing ECR development through open science and online learning. In *Ecology for the Masses*.
2. Cotner, S., Enquist, B. J., Chacon, J., Maitner, B. S., Farfan-Rios, W., Michaletz, S., Garen, J., Gauthier, T.-L. J., Vandvik, V., Gya, R., Halbritter, A. H., Hošková, K., Pierfederici, M. E., Quinteros-Casaverde, N. L., Diaz, E. S., Jessup, L. H., **Strydom, T.**, & von Oppen, J. (2020). International scientists need better support during global emergencies. In *Times Higher Education*.