

Tanya **Strydom**

POSTDOCTORAL RESEARCHER

Ecology and Evolutionary Biology, School of Biosciences, University of Sheffield

● she/they | ■ t.strydom@sheffield.ac.uk | 🌴 tanyadoesscience.com | 🖸 TanyaSO8 |

1 0000-0001-6067-1349 | **2** TanyaS08

Research Interests

computational ecology; functional traits; ecological networks; species interactions; FAIR and open science



Lorena Abad

RESEARCHING THE ENVIRONMENT THROUGH GEOSPATIAL TECHNOLOGIES

Schillerstraße 30, 5020 Salzburg, Austria → +43 662 8044 7582 | ■lorena.abad@plus.ac.at

☑ loreabad6 | 🛅 lorena-abad | 💆 loreabad6 | 📵 0000-0003-0554-734X | 📓 Lorena_Abad2





Professional Experience

 ${\bf PhD\ Candidate\ -\ Researcher\ -\ Department\ of\ Geoinformatics\ -\ Z_GIS}$

Salzburg, AT

10, 2022 - Present

Professional Experience

Postdoctoral Researcher

UNIVERSITY OF SALZBURG

Sheffield, UK

2024 - Present

University of Sheffield

• Mentor: A.P. Beckerman, PhD

• Part of the Community And Structural Collapse During Mass Extinctions (CASCaDE) research team

Education_____

Doctor of Philosophy in Biological Sciences

Montréal, Canada

2020-24

Université de Montréal

• Advisor: T. Poisot, PhD

· Thesis: Tools 'O the Times: Understanding the common properties of species interaction networks across space

Master of Science in 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) in Plant Sciences

Pretoria, South Africa

University of Pretoria

2017

2014-16

- 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 in Ecology

Pretoria, South Africa

University of Pretoria

Q 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



* Indicates co-lead author

PUBLICATIONS

- 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. 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
- 3. 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
- 4. **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*. https://doi.org/10.1111/2041-210X.14228
- 5. **Strydom, T.**, & Poisot, T. (2023). SpatialBoundaries.jl: Edge detection using spatial wombling. *Ecography*. https://doi.org/10.1111/ecog.06609
- 6. 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
- 7. **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
- 8. 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
- 9. 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
- 10. **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
- 11. **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
- 12. 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

PREPRINTS

- 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. (2024). Deciphering probabilistic species interaction networks. *Preprint*. https://doi.org/10.32942/X28G8Z
- 2. Higino, G. T., Anujan, K., Boakye, M., Degano, M. E., Forero-Muñoz, N.-R., & **Strydom, T.** (2023). Designing a collective prototype of future (sub)tropical science. *Preprint*. https://doi.org/10.32942/X2VC86



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

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

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



WORKSHOPS AND ORGANISED SESSIONS

Space Oddity: Thinking About Ecological Networks Across Space ESA/CSEE Meeting

Francis Banville, Gabriel Dansereau, Tanya Strydom

ATBC Annual Meeting

Designing a collective prototype of future tropical and subtropical science

GRACIELLE HIGINO, MICKEY BOAKYE, NORMA FORERO, TANYA STRYDOM

Jul., 2023

Apr., 2022

Aug., 2022

INVITED TALKS

TANYA STRYDOM

TANYA STRYDOM

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

Making something out of nothing at all: Transfer learning for network prediction ML4MS mini-conference

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

Exploring the complexity of ecological networks using SVD entropy

11th Annual QCBS Symposium

TANYA STRYDOM, GIULIO V. DALLA RIVA AND TIMOTHÉE POISOT

Dec., 2020

SHORT PRESENTATIONS AND POSTERS

Reconstructing food webs using transfer learning CSEE-SCEE Annual Meeting

TANYA STRYDOM, SALOMÉ BOUSKILA AND TIMOTHÉE POISOT

12th Annual QCBS Symposium

Food web reconstruction using transfer learning TANYA STRYDOM, SALOMÉ BOUSKILA AND TIMOTHÉE POISOT

Dec., 2021

Aug., 2021

Community Engagement _____

SCIENCE COMMUNICATION

Cartoonist

FORTNIGHTLY CARTOONIST FOR ECOLOGY FOR THE MASSES BLOG 2020 - 2022

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*.