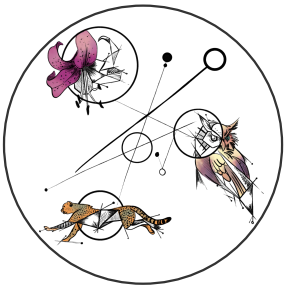

Tanya **Strydom**

PhD Candidate

Département de sciences biologiques, Université de Montréal - Campus MIL, 1375 Ave.Thérèse-Lavoie-Roux, Montréal, QC H2V 0B3, Canada

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Research Interests

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

Education

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

Université de Montréal — *2020 - Present*

- Advisor: T. Poisot, PhD
- Thesis: Decoding Ecological Networks (in terms of the information from within)

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*

Fellowships and Internships

BIOS^2 Fellow

Computational Biodiversity Science and Services (BIOS^2) training program — *2021 - present*

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

International Collaboration and Working Groups

Canadian metaweb construction working group

PIs: T. Poisot (Université de Montréal) and L.J. Pollock, (McGill University) — *2021*

- Leader of one of the sub-projects focused on using machine learning for prediction

Network prediction synthesis working group

PIs: T. Poisot (Université de Montréal) and L.J. Pollock, (McGill University) — *2020*

- Co-lead author of resulting publication

Plant Functional Trait Course 5 in Peru

PIs: V. Vandvik (University of Bergen) and B.J. Enquist, (University of Arizona) — *2020*

- Plant functional responses to fire

Publications

* Indicates co-lead author

Publications

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

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

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

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

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

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

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). Predicting metawebs: Transfer of graph embeddings can help alleviate spatial data deficiencies. *Preprint*. https://doi.org/10.32942/osf.io/vyzgr

Strydom, T., & Poisot, T. (2022). SpatialBoundaries.jl: Edge detection using spatial wombling. *Preprint*. https://doi.org/10.32942/osf.io/sjxd8

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. (2021). On estimating the shape and dynamics of phenotypic distributions in ecology and evolution. *Preprint*. https://doi.org/10.22541/au.162196147.76797968/v1

Presentations

Invited talks

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

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

Reconstructing food webs using transfer learning *CSEE-SCEE Annual Meeting*
Tanya Strydom, Salomé Bouskila and Timothée Poisot *Aug., 2021*

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*

Science Communication & Engagement

Communication

Cartoonist
Fortnightly cartoonist for Ecology for the Masses blog *2020 - present*

Popular Articles

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*.

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*.

Academic Service

Societry for Open, Reliable, and Transparent Ecology and Evolutionary Biology

Member *2021 - Present*

Québec Centre for Biodiversity Sciences

Student Member *2020 - Present*

Reviewed Journals

Plant Ecology, PLoS ONE

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*