

The Cadotte lab at the University of Toronto-Scarborough is looking for two PhD students to join the lab in September 2018. This is a two-step application process. A statement of interest, CV and names of references should be sent to Prof. Cadotte ([mcadotte@utsc.utoronto.ca](mailto:mcadotte@utsc.utoronto.ca)) by Nov. 15<sup>th</sup> 2017. Selected candidates will then officially apply to the School of Graduate Studies at the University of Toronto in mid-January.

The projects:

The two PhD students will each be given ownership over one of two on-going projects. I strive to foster independence and curiosity, and to allow students to follow their interests in a collaborative lab culture. The two funded projects described below are meant to serve as a launching point for students' interests.

*1-Invasion dynamics and ecosystem function.* We have a long-term project in Canada's newest national park, the Rouge National Urban Park (<https://www.pc.gc.ca/en/pn-np/on/rouge>), located just a few kilometers from our lab. We monitor the population structure and community impacts of the dominant invasive plant, *Vincetoxicum rossicum* or dog-strangling vine, in more than 400 plots, monitored for the past five years. We have had an extensive set of projects examining community impacts, different measures of ecosystem function, plant-soil interactions, and trophic cascades. This research platform is an ideal starting point for any researcher interested in understanding or managing plant invasions. The student working on this project will also be communicating with our important non-academic partners.

*2-Influence of urbanization on plant performance, community dynamics, and ecosystem function or service delivery.* Work in the lab has moved into fundamental questions about human impacts on biodiversity and the resulting consequences for ecosystem services. I am looking for a person with interests in urban ecology to examine how urban systems impact tree or herbaceous plant growth and how this translates into how trees provide ecosystem service. This project will likely use experimental, existing data, and modelling approaches and can focus on aspects like plant growth, soil dynamics, disease, etc, and will focus on the city of Toronto. The student working on this project will also be communicating with our important non-academic partners.

The people:

I am looking for students broadly interested in terrestrial community or ecosystem ecology with broad ecological training and a proven track record of academic success. These people will be expected to contribute to a very collaborative lab located on the eastern campus of the University of Toronto.

Desirable skills/interests include spatial analyses, quantitative modelling, plant-insect interactions, soil biodiversity, functional or phylogenetic diversity, and R programming. Candidates should have strong: conceptual/theoretical understanding of ecological processes; oral and written communication skills; publication record is desirable; and an interest in outreach. The candidates should have completed, or nearly completed, a MSc in ecology or related disciplines. The successful candidate will be expected to

provide leadership in the lab, and interact with graduate and undergraduate students. The Cadotte lab also has a strong commitment to outreach, running programs with local elementary schools, and the candidates are expected to participate.

The place:

The University of Toronto-Scarborough (UTSC) is located on the eastern edge of Toronto, and makes up one of the three campuses of the University of Toronto. The candidates will apply to one of two tri-campus graduate programs depending on interests. First is the Ecology and Evolutionary Biology program, which also includes the Royal Ontario Museum (<http://www.eeb.utoronto.ca/>), is an excellent department with more than 50 faculty members (<http://www.eeb.utoronto.ca/people/G-faculty.htm>). The second is the Environmental Science program (<http://utsc.utoronto.ca/gradpes/>) that provides superb interdisciplinary training opportunities and has a strong focus on applied problems.

The candidate will be housed at UTSC, in the Biological Sciences department (<http://www.utsc.utoronto.ca/biosci/>), which sits on a forested ravine, and is a relatively short commute to the Toronto city centre. UTSC is an exciting place to do research, with a relatively young and active research community, and excellent students. Toronto is Canada's largest city and is extremely culturally diverse, full of parks and green areas, and hosts numerous cultural, culinary, and music events.