MSc/PhD positions

Climate change ecology, soil foodwebs & ecosystems

Concordia University (Montreal) & University of Michigan (Ann Arbor)

Humans are rapidly pushing the earth's biosphere to the brink of collapse. In particular, the loss of top predators disrupts food webs and has far reaching consequences for the functioning of ecosystems and services provided to humans. In soil foodwebs, ants are ubiquitous and abundant top predators also acting as ecosystem engineers and influencing key processes such as decomposition and nutrient cycling, which in turn regulates plant growth and productivity. Global changes are causing population declines and distributional shifts in insects around the world, including ants, but the consequences on soil foodwebs and ecosystem processes is poorly understood.

The selected graduate students will participate in the development and implementation of a field experiment to acquire a mechanistic understanding of forest ecosystem resistance, resilience, and collapse in face of global warming. Specifically, the student will take a lead role in conducting a mesocosm experiment manipulating climate and the density of ecosystem engineers. *The proposed project will combine experimental work in state-of-the-art research facilities along with techniques in global change biology, community ecology and ecosystem ecology to improve our understanding of forest ecosystem resilience.* The student will be based at Concordia University in Montreal, Canada, with field work to be conducted at the University of Michigan Biological Station.

Required Skills & Assets

- creativity
- independence and initiative, self-motivation
- evidence of collaborative research, strong interpersonal skills
- strong written and quantitative skills
- field and lab experience
- ability to do field work internationally
- BSc or MSc in community ecology, ecosystem ecology, microbial ecology

Perks

- join a vibrant group of biodiversity scientists including: Aimée Classen (https://classenlab.com/), Nate Sanders (http://www.natesanders.org/), JP Lessard (http://jeanphilippelessard.com/)
- attend courses, seminars and workshops at the Quebec Center for Biodiversity Sciences (https://qcbs.ca/)
- conduct field work in state-of-the-art field research facilities at University of Michigan Biological Station (https://lsa.umich.edu/umbs)
- engage with ecologists from all over the world at the UMBS
- have the opportunity to develop new projects on related topics
- prepare for the next professional big step by working with a productive team of colleagues and mentors

Interested candidate should send (1) an updated CV, (2) university transcripts and (3) a letter of interest. The letter of interest should state both how the proposed research project topic fits within the research interest and career goals of the candidate, and how the research expertise of Classen, Sanders and Lessard Labs would help reach such goals. The application package, and any inquiry regarding the position, should be sent in a single PDF document to jp.lessard@concordia.ca by December 1st, 2021. Selected candidates will submit their applications to Concordia graduate admission office by February 1st, 2022. Starting date at Concordia would be either May or September 2022.

We aim to work with students from all backgrounds and corners of the world, but women and students from minority groups are especially encouraged to apply.

