

M.Sc. & Ph.D. Graduate Positions – Climate change, wildlife, and their habitat near the arctic-boreal ecotone

Supervisor: Dr. Glen Brown, Ontario Ministry of Natural Resources and Forestry and Canadian Centre for Remote Sensing



Our lab (<https://brownecologylab.weebly.com/>) investigates the mechanisms driving change in the subarctic, involving interactions among climate, habitat, and wildlife communities. Wildlife adapted to the cold northern climate may be particularly vulnerable at the edge of range near the arctic-boreal ecotone. We study a range of species, including shorebirds, waterfowl, predators (eg. arctic fox), and small mammals. Students will gain experience in field-based research, use of diverse technologies, including remote sensing and

drones, and quantitative methods.

Available projects include:

- food web interactions involving terrestrial vertebrates and how wildlife habitat is affected by changes in permafrost.
- water bird behavior and breeding success in relation to climate, habitat and predation risk. E.g. dunlin, whimbrel, Hudsonian Godwit, and Canada geese.
- arctic fox ecology and competition with red fox
- density dependent habitat selection in a changing environment

Students will have the opportunity to directly support wildlife conservation and management and gain experience on a collaborative project with a government agency (Ontario Ministry of Natural Resources and Forestry) and partners (York University, Canadian Centre for Remote Sensing). Field work will be based at the Burntpoint Research Station in Polar Bear Provincial Park, Ontario.

Graduate Program Start dates: Students will be enrolled in the Environmental & Life Sciences Graduate Program at Trent University which takes in new students in January, May and September each year. This posting will remain open until all positions are filled.

Salary: A minimum stipend consistent with Trent University policies for PhD and MSc will be provided (includes a Teaching Assistantship).

Qualifications: Candidates should have a solid background in ecology and an aptitude for statistical and spatial analysis (including geographic information systems and imagery processing), as well as the ability to conduct laborious field work in remote areas for extended periods of time. A willingness to become licensed in firearm use is also required due to the presence of polar bears.

Prospective students should send a letter of interest, a CV, unofficial transcripts, and the names of two references to Dr. Glen Brown (glen.brown@ontario.ca).

