

PHD OPPORTUNITIES: INFORMING MANAGEMENT APPROACHES FOR BOREAL CARIBOU POPULATIONS AND THEIR HABITAT

Project description: Boreal woodland caribou (*Rangifer tarandus*) are an iconic species of wildlife in Canada and are of critical cultural and economic significance. Caribou are also a threatened species that are sensitive to numerous anthropogenic stressors, including habitat loss from mining and forestry activities, climate change, and altered fire regimes. As such, conservation of caribou in Canada is a top conservation concern. Caribou are especially vulnerable to habitat loss as they specialize on lichen in mature forests, which do not support significant numbers of other ungulate species or predators. We are looking to hire two PhD students to study the effect of anthropogenic disturbance on woodland caribou in northern Ontario and investigate the effectiveness of potential mitigation and restoration practices to improve the outlook for caribou populations in northwestern Ontario and across the province. Both positions are fully funded for three years.



Successful applicants will work in a team and with various rights holders (Indigenous communities) and stakeholders, including governmental and non-governmental environmental organizations, local communities and representatives from the mining and forestry sectors. One project will primarily focus on the impact of mining on caribou habitat, and one will focus on the impact of forestry on caribou habitat. The overall goal of these projects is to develop the science, information, and tools that can support the creation of management plans to both protect and restore boreal woodland caribou habitat across Northern Ontario. This will also include an evaluation of the performance of past management actions and recommendations for future plans. Students will have some latitude to pursue questions and research angles that interest them within this overall mandate, with potential avenues of investigation including changes to habitat selection patterns, altered movement and migration patterns, changes in behaviour in response to disturbance, and interactions with predators and other prey/ungulate species (e.g., disturbance-mediated apparent competition).

Students will work in a collaborative atmosphere which will include opportunities to collaborate with other caribou researchers across Ontario and Canada, i.e., Dr. Quinn Webber – University of Guelph; Dr. Eric Vander Wal – Memorial University; Dr. Philip McLoughlin – University of Saskatchewan, members of the Ontario Ministry of Natural Resources, as well as international researchers.

Desired qualifications: Candidates for this position will hold an MSc in biology, forestry, geography, zoology, wildlife biology or other related disciplines. (1) A passion for nature, wildlife and ecological theory and research; (2) quantitative skills in statistical analysis, GIS and spatial analysis, and experience with program R; (3) experience in analyzing wildlife data (4) experience designing studies to ask fundamental and applied questions in wildlife habitat management; (5) experience publishing in academic journals; and (6) dedication to teamwork and collegiality. Due to funding constraints, these positions are only open to Canadian citizens and permanent residents.

Remuneration:

-\$21,000/year base salary, guaranteed for 3 years, plus (subject to availability) eligibility for graduate assistantships valued at \$11,457.79/year for up to four years

-Funds to purchase a computer, along with a workspace at the Faculty of Natural Resources management

-Funding to attend the North American Caribou Workshop in Yellowknife in summer of 2025

-Eligible students will be expected to apply for NSERC doctoral funding, which can expand both the amount and duration of base funding

Anticipated start date: September 2024 or January 2025

Location: Nested at the interface between the northern boreal and temperate forest, Lakehead University is a fitting location to study caribou. Indeed, no university in Ontario is located closer to caribou populations, like some of interest to this research. Lakehead is a comprehensive university with a reputation for innovative programs and cutting-edge research. Lakehead has approximately 10,000 students and 2,160 faculty and staff. With an emphasis on collaborative learning, independent critical thinking, and a multidisciplinary teaching approach, Lakehead offers a variety of degree and diploma programs at the undergraduate, graduate, and doctoral levels through its nine faculties. The Faculty of Natural Resources Management at Lakehead focusses on the interface between conservation and resource management. Thunder Bay is also home to a vibrant arts and culture scene and areas around Thunder Bay provide extensive opportunities for outdoor recreation.

Students will be co-advised by Dr. Michel Laforge and either Dr. Ashley Thomson or Dr. Brian McLaren. For more information, please e-mail Dr. Michel Laforge at milaforge@lakeheadu.ca. To apply, please send a cover letter, CV, and 2-3 references (preferably as a single PDF file) to Mike Laforge at milaforge@lakeheadu.ca. Review of applicants will begin August 12th, 2024.