

Ph.D. Opportunity: Chronic Wasting Disease and Threatened Boreal Caribou

University of Saskatchewan, Saskatoon, Saskatchewan

Closing: Please contact me by **September 15, 2023**. M.Sc. required. Candidates should have publications in mainstream peer-reviewed journals and a GPA equivalent of A or 85 or higher over the past two years of coursework.

Apply: Email CV and pdf copies of both undergrad and graduate transcripts. Email to philip.mcloughlin@usask.ca. Please write "CWD and Caribou" as the subject line.

Description: We recently confirmed that, for the first time in Canada, white-tailed deer infected with chronic wasting disease (CWD) have been found to range into Threatened Boreal Caribou range. In collaboration with the Saskatchewan Ministry of Environment, Environment and Climate Change Canada, the University of Calgary, industrial partners, and Indigenous groups, USask is seeking to understand the risks presented to boreal caribou and other ungulates from pathogen-mediated apparent competition with white-tailed deer (CWD, meningeal worm, and other diseases). In particular, we aim to build a comprehensive risk assessment model of the risks to caribou from CWD using existing data on GPS-collared deer and their invasion ecology into the deeper boreal forest of Saskatchewan; a camera-trap array to be established to understand localities of deer-caribou sympatry; and surveillance of CWD (and other diseases) in ungulates in the study area. The Ph.D. is fully funded commencing January 1, 2024, or May 1, 2024. Field work will include coordinating logistics and participating in camera-trap array setups but also wildlife GPS-collaring for lab-related projects (e.g., March 2024 GPS collaring of moose); and working closely with Indigenous partners to sample for CWD and other diseases in deer, moose, elk, and caribou. This Ph.D. will complement the graduate and post-doctoral projects of several students, whom will be working together to promote a multidisciplinary project aimed at conserving wildlife and promoting northern food security.

The project is funded at \$25,000 CAD per year; however, students will be expected to apply for internal and external scholarships, including NSERC PGS-D scholarships (if Canadian). Preference will be given to Canadian students or permanent residents that are eligible for the October, 2023, NSERC PGS scholarship intake. Indigenous students are especially encouraged to apply. Co-supervision with faculty (Emily Jenkins) at the Western College of Veterinary Medicine is possible.

The successful student will have an opportunity to engage with a large lab working on related questions with respect to large-mammal population dynamics. There will also be opportunities to work collaboratively with a diversity of staff from the Ministry of Environment. Students can expect to publish outside of one's own thesis topic as part of whole-lab research questions.

Evidence of familiarity with disease ecology, ungulate population dynamics, generalized linear models, and programming in the R language is an asset.

Interested applicants should contact me as soon as possible by email (philip.mcloughlin@usask.ca), and be prepared to submit a current CV with copies of transcripts. Website: <http://mcloughlinlab.ca/lab/>