

PhD studentship: University of Saskatchewan

Quantifying the cost of migration across a life history gradient in birds

Description: A PhD studentship is available with Dr. Mitch Weegman in the Department of Biology at the University of Saskatchewan (<https://www.ducks.ca/our-work/science/saskatchewan-endowed-chair/>). The student will use state-of-the-art tracking devices deployed on thousands of ducks, geese and shorebirds in Europe and North America to test long-standing hypotheses about the cost of bird migration.

Our project goals are to quantify the extent to which features of migration, including reverse migration and long-distance movements, explain variation in subsequent survival and reproductive success in ducks, geese and shorebirds. We anticipate the PhD student will use millions of GPS and acceleration (behavioural) fixes collected during 2017-2025 to describe the full annual cycle, including migratory movements and staging ecology, and estimate survival and reproductive success. We also anticipate hypotheses tests of environmental drivers of migration metrics, such as land use and climate change. We anticipate novel opportunities for scenario-playing on costs of migration in future years, to better guide conservation planning at continental and cross-continental scales.

This project is an international partnership among Aarhus University (Denmark), Canadian Wildlife Service, Ducks Unlimited Inc., Institute for Wetlands and Waterbird Research (Germany), Louisiana Department of Wildlife and Fisheries, Max Planck Institute of Animal Behavior (Germany), New York State Department of Environmental Conservation, New Jersey Division of Fish and Wildlife, Pennsylvania Game Commission, State University of New York-Brockport, Texas A&M University-Kingsville, US Fish and Wildlife Service, US Geological Survey, and University of Saskatchewan.

Prerequisites: Ideal candidates will have an undergraduate degree in ecology, statistics or a closely related field, and interpersonal skills to lead discussions among collaborators. Preference will be given to those with a strong quantitative background (e.g., experience with Program R, Bayesian methods) and knowledge of migratory bird ecology and management. Students must have a valid driver's license. The successful applicant will be expected to publish manuscripts in peer-reviewed journals and present papers at scientific meetings.

Salary and benefits: \$35,000 Canadian per year (tax-free) plus compensation for tuition and fees

Start date: 1 Sept 2025 or 1 Jan 2026

Last date to apply: 31 Jan 2025

To be considered for this position, please send the following (preferably as a single PDF) to Dr. Mitch Weegman (mitch.weegman@usask.ca):

(1) Letter of interest summarizing your experience, (2) Curriculum vitae or resume, (3) University transcripts (unofficial are OK), (4) Contact information for three references.