PhD studentship/postdoctoral fellowship: University of Saskatchewan

Comparing measures of waterfowl reproductive success for conservation planning

Description: A PhD studentship or postdoctoral fellowship 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/), co-supervised by Dr. Matt Dyson (Institute for Wetland and Waterfowl Research, Ducks Unlimited Canada), in collaboration with Dr. Jim Devries (Institute for Wetland and Waterfowl Research, Ducks Unlimited Canada).

We are hoping to compare measures of waterfowl reproductive success at the local and population scales to determine representativeness of data sets relative to other parameters commonly estimated to manage North American waterfowl populations. We anticipate the PhD student/postdoctoral fellow will expand Devries et al. (2023, Wildlife Monographs) to provide spatial and temporal estimates of nest success for all dabbling ducks across the Canadian prairies, leveraging nesting data collected over two decades by Ducks Unlimited Canada (>25,000 nests) for local measures of reproductive success. The PhD student/postdoc will use breeding population survey, banding and harvest data collected over the same time period for population-level measures of reproductive success. We anticipate the PhD student/postdoc will compare these measures to learn the extent to which they generally track each other, and test hypotheses about similarities and differences in estimates in space and time. Using this information, we will conduct scenario-playing to determine potential sources of bias in hopes of contextualizing and linking scales for more robust inferences. We will use this information to inform current habitat delivery decision support tools to identify opportunities for conservation that deliver the greatest benefit to duck populations. There will be opportunities to explore related research questions and collaborate on several projects in movement and population ecology in the Weegman lab.

Prerequisites: Ideal candidates will have a master's 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), knowledge of migratory bird ecology and management, and spatial programming skills (e.g., in Program R or ArcGIS). The successful applicant will be expected to publish manuscripts in peer-reviewed journals and present papers at scientific meetings.

Salary and benefits: For the PhD student: $35,000 Canadian per year (tax-free) plus compensation for tuition and fees; for the postdoc: $65,000 Canadian per year plus benefits

Start date: 1 Jan 2025 or 1 Sept 2025

Last date to apply: 6 Sept 2024

To be considered for this position, please send the following (preferably as a single PDF) to Drs. Mitch Weegman (mitch.weegman@usask.ca) and Matt Dyson (m_dyson@ducks.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.