Migratory bird movements and fitness in urban areas

Proposed research:

Urban green spaces and forests have the potential to serve an important role in supporting biodiversity in the landscape, particularly to vagile species such as birds. These are novel ecosystems composed of a complex mix of native and non-native species, with tree planting often driven by factors such as aesthetic and cultural preferences, nursery availability, and ability to withstand urban stressors, rather than biodiversity conservation. Most research on birds within urban ecosystems has focused on the breeding season, creating a seasonal bias. An emerging and exciting topic within urban ornithology is identifying how birds use or move through urban areas during the migratory or non-breeding periods. Very little is known of fine-scale bird movement and fitness in urban areas during the migratory period, especially within the context of synergies and tradeoffs between urban green spaces for biodiversity conservation and ecosystem services (e.g., human recreation, carbon storage, etc.). Migratory birds also face many threats during this time, particularly window-collisions and predation by cats, both which may include species-specific vulnerabilities driven by their ecology and movements.

Your role:

We are looking for an MSc or PhD (*preferred*) student to join the dynamic group of researchers from McGill University and Environment and Climate Change Canada. The student will lead a study to explore migratory bird movements and fitness during the migration period in and around green spaces of Montreal, Quebec. The results of this work have the potential to inform municipal and federal programs for urban greening and urban biodiversity conservation. The student will have the opportunity to learn to co-develop scientific research, conduct urban fieldwork, and improve conservation policy and practice. The potential start date is September 2025 or January 2026 and the student will be co-supervised by Dr. Kyle Elliott (McGill University) and Dr. Barbara Frei (Environment and Climate Change Canada). The candidate will be based in the Elliott lab in the Department of Natural Resource Science at McGill University (Macdonald Campus) in Montreal, Quebec, Canada. Students will receive a $25,000/year stipend (2 years for MSc, 4 years for PhD), with the possibility of TAships and other scholarships. Additional funds for field and research travel expenses will be provided.

Selection Criteria:

Essential Skills and Qualifications

1. An MSc or undergraduate degree in ecology, conservation science, environmental science, geography, or related field. Relevant work-related experience will also be considered.

2. Strong research, leadership, and communication skills.

3. Inter-personal skills.

4. Enthusiasm and kindness.

5. A desire to make the world a better place for people and nature.

Desirable Skills

1. Experience identifying birds.

2. Coding skills in Program R. (Expertise with spatial statistics and movement analysis a big plus!)

3. Scientific communication and/or working with the public

Application details – The position is open to Canadians and permanent residents of Canada only. Applicants should send the following to Dr. Frei (barbara.frei@ec.gc.ca) by **February 28th, 2025** (applications will be reviewed *as soon as received* so a decision may occur before the due date): 1) a cover letter that explains how your research and experience aligns with the skills and research activities listed above; 2) Curriculum Vitae; 3) Contact details for three references; and 4) University transcripts (unofficial are fine). **Please use the subject line Urban Bird application.**

We are committed to equity and inclusion, recognizing that diversity within our research teams enhances academic and scholarly excellence. We welcome candidates who are racialized/visible minority persons, women, Indigenous Persons, persons with disabilities, ethnic minorities, and persons of minority sexual orientations and gender identities, to self-identify in their application. Such information will be treated in the strictest confidence and used only to enhance equity and inclusion in our research team.