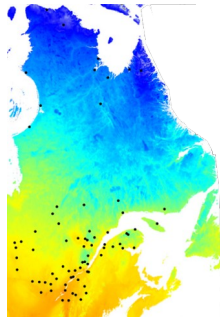


## PHD PROJECT

### Quantifying acoustic biodiversity to predict impacts of climate change



The Quebec biodiversity monitoring network aims to document changes in biodiversity at large spatial scales. Through this program implemented in 2016, close to 300 stations are monitored using various indicators and taxonomic groups in different environments.

**We are seeking a candidate for a PhD. project exploiting the acoustic data collected in uplands (forest, tundra) and wetlands (peatland, marsh).** These data include birds, mammals, anurans, and insects.

**Anticipated starting date :**  
Summer 2024 or Fall 2024

#### **Objectives:**

To develop statistical models evaluating changes in biodiversity at large spatial scales;  
To quantify phenological changes in animal species and communities using acoustic data with identifications based on both human and artificial intelligence.

#### **Qualifications :**

M. Sc. in biology, forestry, ecology, environment or biostatistics.  
Experience in database management, programming, or interest in developing these skills.  
Strong quantitative skills, particularly in the estimation of demographic parameters in R, JAGS, or NIMBLE are considered an asset.

#### **Work environment :**

Research will take place at Université Laval under the supervision of Marc Mazerolle, as well as at Ministry of the Environment offices under the supervision of Anouk Simard. The candidate for the position will join a multidisciplinary team including partners from academia, government, and first nations. Our group values diversity, equality, and inclusion and invites all qualified candidates to submit their application. The position comes with financial support of 22 000\$/year during four years.

#### **To apply :**

Send a cover letter describing your research interests, a CV, and a copy of most-recent academic transcripts to Marc Mazerolle (marc.mazerolle@sbf.ulaval.ca) and Anouk Simard (anouk.simard@mffp.gouv.qc.ca) by indicating « Candidate PhD acoustic – name » as the subject. The position will remain open until a candidate is selected.