

Ph.D. Position: Ecology and biogeochemistry of littoral zones in eastern Quebec lakes

Start date : January 2027

Description du projet

Morgan Botrel's laboratory at UQAR is seeking a PhD student to lead a research project on the ecology and biogeochemistry of lake littoral zones in eastern Quebec. The doctoral research will focus on submerged aquatic vegetation (SAV). In collaboration with a master's student, the candidate will lead three summers of fieldwork and will compile historical data on SAV in lakes across southern Quebec. Fieldwork will involve SAV surveys in lakes of the Bas-Saint-Laurent and Gaspésie regions. An additional summer of sampling on Anticosti Island is planned, contingent on funding.

The candidate will have the freedom to design their doctoral project according to their interests, while remaining aligned with the research priorities of Prof. Botrel and making use of SAV survey data. Submerged aquatic vegetation (SAV), located in lake littoral zones, plays a fundamental role in lake ecology. SAV are foundation species that regulate ecosystem processes and shape community composition. Lakes in eastern Quebec remain understudied and differ from those in the rest of the province due to their hard waters, resulting from carbonate bedrock. The surveys aim to characterize SAV communities, with a particular focus on charophytes, macroalgae typical of hardwater systems. Several research projects may be linked to these surveys, including studies on invertebrate diversity, biogeochemical cycling (carbon, nitrogen, phosphorus), and seasonal dynamics (phenology). The development of a SAV database will be carried out in partnership with the Quebec Ministry of the Environment and various regional stakeholders. Interested candidates are encouraged to consult Prof. Botrel's website and publication list for more information (<https://morganbotrel.weebly.com/>).

Desired profile

- Master's degree in ecology, biology, geography, or a related field
- Interest in limnology, ecosystem ecology, biogeochemistry, community ecology, and/or conservation
- Valid driver's license
- Independence, scientific rigor, critical thinking, and ability to collaborate
- Strong written and oral communication skills
- Fieldwork experience
- Experience in database management, statistical analysis (R programming), and geographic information systems (e.g., ArcGIS, QGIS)
- Strong organizational skills and experience in project management
- Comfortable working on the water and boating license considered an asset

Conditions

- The student must enroll in a PhD program in environmental sciences or biology.
- The PhD will take place in Rimouski, Quebec, a French-speaking environment. UQAR has a French language policy (<https://www.uqar.ca/app/uploads/2024/06/20C2.pdf?v=1738254553>). Applicants who do not speak French but are proficient in English may be admitted on the condition that they take mandatory French courses.
- International students must meet the admission requirements (<https://www.uqar.ca/programmes-formationen-et-admission/admission/etudiant-es-etrangers/admission-pour-etudiants-internationaux/#cout-et-financement>).
- Minimum funding of \$22,000 per year for four years. The student will be encouraged to apply for external funding sources for additional financial support.
- Access to specialized infrastructure and a network of collaborators from government, academia, and non-profit organizations.
- Inclusive research environment committed to equity and collaborative work.

Application

Interested candidates should submit the following:

- **CV;**
- A **letter of interest** (max. 2 pages) outlining research interests;
- Relevant and up-to-date **academic transcripts;**
- **Contact information for two referees**

Applications should be sent by **October 1st**, or until the position is filled, to: morgan_botrel@uqar.ca.