



MSc Candidate Position in Aquatic Biogeochemistry

Investigating the impacts of spruce budworm defoliation on lake-water quality

We are looking for a motivated and curious MSc student to join our research team in the [Paleoenvironmental Research and Aquatic Biogeochemistry Lab](#) at the Université du Québec en Abitibi-Témiscamingue (UQAT). This exciting research project explores how large-scale forest defoliation caused by spruce budworm outbreaks affects the water quality of boreal lakes.

Project Overview

Spruce budworm (*Choristoneura fumiferana*) outbreaks are one of the most important natural disturbances in Canada's boreal forest, causing extensive tree defoliation and mortality. These terrestrial changes can have cascading effects on nearby lakes by influencing runoff, nutrient inputs, and organic matter transport.

This MSc project will analyze a comprehensive dataset from a spatial survey of heavily defoliated watersheds from the Côte Nord region of Quebec. Key research questions include how SBW outbreaks influence carbon and nutrient concentrations, dissolved organic matter quality, and greenhouse gas emissions. While the project is primarily data-based, there will also be opportunities to visit study sites, allowing the student to connect field context to analytical results and gain valuable ecological insights.

You will work with a high-quality dataset alongside historical defoliation records, in close collaborations with partners at the Canadian Forest Service and Natural Resources Canada. Supervision will be provided by Professors Carsten Meyer-Jacob (UQAT) and Roxane Maranger (Université de Montréal), in a dynamic, interdisciplinary research environment focused on forest-lake interactions under climate change.

Position Details

Start Date: January 2026 or May 2026

Duration: 2 years (full-time MSc)

Financial Support: Scholarship of \$21,000 CAD/year for 2

years **Location:** UQAT, Rouyn-Noranda campus, or Université de Montréal, Montréal (Quebec, Canada)

Graduate Program: Maîtrise en écologie et aménagement des écosystèmes forestiers – [Click here to learn more about the program.](#)

Who should apply?

We welcome applications from students with:

- A BSc or equivalent in Biology, Earth and Environmental Sciences, or related fields
- Experience or strong interest in data analysis and interpretation
- Good written and spoken communication skills in English
- Ability to work both independently and as part of a team
- A strong motivation to explore and address environmental challenges in a changing environment
- Background in limnology, aquatic ecology or biogeochemistry (an asset)



How to apply: For inquiries or to apply, please send an email with the subject line “MSc Project: SBW Defoliation Limnology” to Professors Carsten Meyer-Jacob (carsten.meyer-jacob@uqat.ca) and Roxane Maranger (r.maranger@umontreal.ca). Applications should include a statement of interest, a CV, a copy of transcripts (unofficial transcripts are acceptable), and contact information of three references. Applications will be reviewed until the position is filled.



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STUDENT FOR A DAY

One visit is enough to know that UQAT is a first-class institution. The Student for a Day program is the best way to learn more about UQAT, visit the campus that interests you, and meet professors and students.

We'll tailor the visit to your needs and interests!

[Find out more](#)

