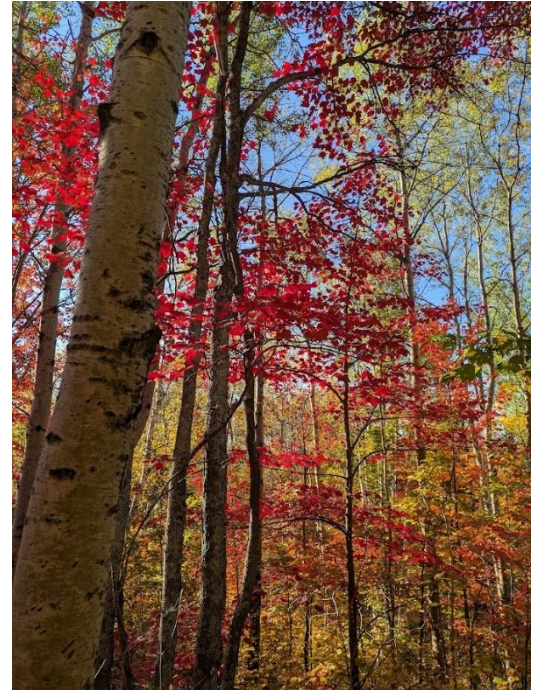




MSc POSITION: GROWTH–REPRODUCTION TRADE-OFFS IN NORTHERN HARDWOOD SPECIES

FOREST RESEARCH INSTITUTE – UQAT

Project description: how do trees allocate resources between growth and reproduction under environmental constraints? This project focuses on the ecophysiological mechanisms underlying resource allocation strategies in yellow birch and red maple at their northern range limits. *It aims to understand how functional traits of adult trees—such as growth, canopy structure, and carbon storage—influence seed production and quality.* By combining field measurements and ecophysiological analyses, the project will explore trade-offs between reproduction and productivity, and how these vary under northern environmental conditions. This project contributes to a mechanistic understanding of forest species strategies in a changing climate, while offering advanced training in ecological research and quantitative analysis. It is also grounded in real-world forest contexts, with opportunities for interaction with scientific and institutional partners. *This is a two-year research-based MSc with thesis, supported by a scholarship of at least \$21,000 CAD per year, which may be increased depending on the candidate’s profile and eligibility.*



Start date: *Fall 2026 or Winter 2027, depending on candidate availability*

Research environment, supervision and values: The MSc will take place within a forest ecology research group in a dynamic and collaborative environment. The student will be supervised by Valentina Buttò (Professor, IRF-UQAT), with a committee including F. Girard (Professor, Université de Montréal), G. de la Fontaine (Professor, Université du Québec à Rimouski), and M.H. Brice (Professor, Université de Montréal), providing complementary expertise in ecophysiology, forest dynamics, and silviculture. Supervision emphasizes regular, structured, and supportive mentoring, fostering autonomy, critical thinking, and the ability to complete a research project through to publication. We are committed to an inclusive, respectful, and collaborative research environment and value diversity, equity, inclusion, and accessibility (DEIA).

Profile and training: We are seeking a candidate interested in mechanistic approaches to ecology, with a background in ecology, biology, forestry, or a related field. The ideal candidate is curious, rigorous, and comfortable with quantitative approaches, with an interest in functional traits, ecophysiology, and data analysis. During the MSc, the student will develop strong research autonomy and contribute to all stages of the project. The work will lead to a thesis and offers the opportunity to contribute to a scientific publication. By the end of the program, the student will have gained solid training in functional ecology and data analysis.

Application materials: Please submit a CV, a cover letter, transcripts (unofficial copies accepted), and the contact information of two referees to: valentina.butto@uqat.ca



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