



MASTERS PROJECT IN FOREST ECOLOGY

Title: Evaluating prescribed fire as a restoration strategy for white and red pine forests

Context and problematic: Historically, white and red pine forests were common throughout the southern boreal, temperate, and Great Lakes and St. Lawrence forest regions. However, the cover and extent of their range has declined significantly due to changes in fire regime, unsustainable forest management practices, and increased mortality caused by the introduction of pathogens. To reverse this decline and preserve / restore these ecologically and economically important ecosystems, a research program aimed at developing an ecosystem-based management strategy for mixed and pure stands of white pine (*Pinus strobus* L.) and red pine (*Pinus resinosa* Ait.) at the northern limit of their distribution has been proposed.

The natural adaptive capacity of these species to low-intensity surface fires has led to the integration of prescribed burning as a technique to favor white and red pine establishment and persistence across parts of their range, and represents the focus of this master's project as part of the current research program. The objective is to define the parameters that would make it possible to maximize the regeneration and growth of these species using prescribed burning, both in the context of conservation and forest production, while identifying the operational, ecological, and economic limits of this strategy.

Admissibility requirements: An undergraduate degree (or equivalent) in forestry, biology, or other related discipline is required. Knowledge in geomatics and the Canadian Forest Fire Danger Rating System is considered an asset.

Start date : January 2021.

Location : The student will be based at the Forest Research Institute (l'institut de recherche sur les forêts), UQAT, Rouyn-Noranda. Fieldwork will be conducted at various sites spread across the range of white pine and red pine, with a focus on burnt stands (natural fires and prescribed burns) and unburnt (natural or harvested) stands; for example: Petawawa and Temagami in Ontario, as well as Parc Opémican and Parc de la Mauricie in Quebec.

Funding : Scholarship of 17 500 \$/year for two years.

Supervision : Yves Bergeron (UQAT) and Jonathan Boucher (RNCAN-SCF).

To apply : Please send the following information by email to the attention of jonathan.boucher@canada.ca :

- 1) a cover letter describing your research interests and your experience related to the position;
- 2) your curriculum vitae;
- 3) your most recent transcripts;
- 4) the contact details of 2 references.



UQAT: HIGHER LEARNING ON A HUMAN SCALE

Study in the heart of Quebec's great outdoors

Set in a region where wilderness, lakes, and forest stimulate creativity and foster talent, UQAT is different by nature.

Renowned professors with time for you

The professors at UQAT are recognized experts in their fields who epitomize quality teaching. And with a ratio of one professor or lecturer to every twelve students, UQAT offers a personalized educational environment where you will fit right in. Knowing you can always count on your professors to be available—now that's a real advantage.

A world of high-calibre research

Research activities at UQAT are producing remarkable results in a range of scientific fields. According to the

2018 independent firm RESEARCH Infosource Inc., UQAT is first in Canada for per-faculty research intensity in the undergraduate category (full-service universities, excluding universities with medical schools).

With \$12 million in research per year and state-of-the-art laboratories, UQAT is an exceptional environment for graduate students. Many of our students have achieved excellence in their chosen fields and many of our professors have been recognized for the quality of their research and their innovative spirit. [Find out more](#)

2018 independent firm RESEARCH Infosource Inc., UQAT is first in Canada for per-faculty research intensity in the undergraduate category (full-service universities, excluding universities with medical schools).

With \$12 million in research per year and state-of-the-art laboratories, UQAT is an exceptional environment for graduate students. Many of our students have achieved excellence in their chosen fields and many of our professors have been recognized for the quality of their research and their innovative spirit. [Find out more](#)

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](#)

