POSTDOCTORAL FELLOW IN SILVICULTURE

Title: Evaluation of Silvicultural Treatments to Reach Sustainable Boreal Forest Management in Boreal Forests

Context: Canada is the third largest country in the world in terms of forest area with 347 million ha. Until today, the most used silvicultural treatment has been total cutting, representing 93% of the area harvested in the Canadian boreal forest. The impacts of this method of cutting on the virgin forest in terms of loss of biodiversity, vulnerability of regeneration to natural disturbances and sustainability of forest resources are well known. We are experiencing a critical situation in the boreal forest due to the homogenization and simplification of forest structure, the standardization of stands in terms of species, as well as the general rejuvenation of the forest cover. For these reasons, it is important to develop innovative silvicultural treatments in order to provide alternative forest management strategies that aim to stand diversification, and to increase adaptive capacity and resilience to climate change in Canada’s boreal forest. Ecosystem-based forest management proposes the use of partial cutting to integrate ecological, economic and social objectives into silvicultural planning. Although partial cuts are increasingly being used, they are not adapted to Canadian conditions and remain little studied. For this, a silvicultural assessment of these silvicultural practices, capable of providing tools for applying these treatments in Canada’s forest strategy, is required.

Keywords: biodiversity, sustainable forest management, forest ecology, disturbances, regeneration, silviculture.

Location: The student will be based at the Forest Research Institute (IRF) at the Amos campus of the Université du Québec en Abitibi-Témiscamingue, and will be co-supervised by Miguel Montoro Girona, Yves Bergeron and Alain Leduc. The IRF is dynamic, multicultural and international and provides a quality environment for students to develop their research, with 12 professors and more than 60 graduate students working on very diverse topics such as forest dynamics, silviculture, genetics, biodiversity, ecophysiology and sustainable forest management. IRF students also benefit from professional development resources and opportunities (scholarships, participation in conferences, workshops) offered by the Centre for Forest Research (www.cef-cfr.ca). In addition, the student will be a member of the Research Group in Ecology of MRC Abitibi (GREMA), the cold forest- international research group (https://forets-froides.org/), the Chair in Sustainable Forest Management (http://chaireafd.uqat.ca/) and will actively collaborate with our partners (Minister of Forests, Wildlife and Parks, Resolute Forest Products, University of Quebec in Chicoutimi, and Canadian Forest Service).

Salary: $45,000/year with benefits.

Preferred qualifications:

- **Profile:** We are looking for an ambitious and highly motivated recent PhD graduate with a profile in forest ecology, silviculture, forest management, ecosystem modeling. We considerer:
  - Dendrochronology, GIS-added analyses, work with large relational databases, modeling of biological systems and good skills in computer programming (R) will all be valued during the evaluation process.
  - It is important that the candidate is fluent in English and has an excellent ability to formulate himself/herself both orally and in writing.
  - A background in silviculture (regeneration, growth, biodiversity, mortality) and respective data analyses will be highly valued.
o A record of high-quality scientific publications is required. We put a great emphasis on personal characteristics of the successful applicant, solid work ethic, and in particular - the ability to independently manage a large volume of fieldwork and laboratory tasks, supervision of internships, and meet reporting and publication deadlines.
  o The candidate should be physically fit.
  o A working knowledge of French would be an asset.
- **Education:** PhD degree in ecology, forestry or biology with an interest in silviculture and its application in a context of sustainable forest management in the face of climate change.
- **Requirements:** Driver’s license, ability to work in a multidisciplinary team and to carry out field work in remote locations. Skills in statistical analysis and scientific communication will be taken into account in the selection process. We are looking for a dynamic, autonomous, responsible and motivated person. The applicant has to be systematic and accurate, in combination with a curious and critical approach, be good at cooperation and at the same time able to work independently.
- **EDI’s principles:** Priority will be given to candidates from under-represented groups (Aboriginals, ethnic and visible minorities, LGTBI, women).

**Start date:** June 2021, for one year and is potentially renewable.

**Application:** Send (1) your CV including contact information of three references, (2) a cover letter outlining their academic background and research experience, as well as (3) a academic transcript to Miguel Montoro Girona (miguel.montoro@uqat.ca). Review of applications will start on May 15, 2021 and continue until the position is filled.

**Links:**
- City of Amos: [https://amos.quebec/](https://amos.quebec/)
- Aiguebelle Park [https://www.sepaq.com/pq/aig/](https://www.sepaq.com/pq/aig/)
- MRC-Abitibi: [https://mrcabitibi.qc.ca/](https://mrcabitibi.qc.ca/)
- Abitibi-Témiscamingue Tourism: [https://www.abitibi-temiscamingue-tourism.org/](https://www.abitibi-temiscamingue-tourism.org/)
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We’ll tailor the visit to your needs and interests!
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