

Forest regeneration after disturbance – 1 MSc position

Start date January to September 2017.

The Leroux Ecosystem Ecology Lab (<http://shawneroux.wix.com/lerouxlab>) and Hermanutz Conservation Ecology of Northern Ecosystem Lab (<http://www.mun.ca/biology/lhermanutz/lhermanutz.php>) in the Department of Biology at Memorial University of Newfoundland (MUN) are recruiting 1 outstanding MSc student to study forest regeneration after disturbance by insects (natural) and moose (non-native and overabundant) herbivory on the island of Newfoundland, Canada.

The student will be co-supervised by Drs. Leroux & Hermanutz and will work in partnership with the Nature Conservancy of Canada to provide recommendations for restoration of their Salmonier Nature Reserve property on the Avalon Peninsula. The project will involve field data collection and the development of models for forest regeneration scenarios following disturbance. Successful candidates should have a good working knowledge of Geographic Information Systems and mathematical modeling or be willing to develop such skills.

Project background: In 2015, the Nature Conservancy of Canada (NCC) acquired their first property along the Salmonier River, a unique forested region on the Avalon Peninsula of the island of Newfoundland. NCC now owns 437 acres of land in the area. These large tracts of land represent a unique opportunity to restore and protect boreal forest on the Avalon Peninsula. However, the impacts of non-native species, particularly moose (*Alces alces*), are limiting the ability of the forest to regenerate after disturbances such as insect outbreaks. In order to effectively manage these lands, NCC is interested in using baseline data, along with possible strategies identified in the literature, to model the outcomes of various forest management practices on these lands. An outcome of this work will be to provide practical recommendations for effective restoration and stewardship of the forest habitat on NCC's Salmonier Nature Reserve.

Memorial University of Newfoundland is in St John's, Newfoundland & Labrador, Canada. It is a beautiful place with icebergs in spring, whales and Atlantic salmon in summer and wonderful culture year-round. See Tourism NL for more details (<http://www.newfoundlandlabrador.com/>).

Applicants should send an updated CV, unofficial transcripts, and a statement of interest to Drs. Leroux: sleroux@mun.ca and Hermanutz: lhermanu@mun.ca as soon as possible. Applications will be considered until the position is filled.

Keywords: forest ecosystem modelling, community ecology, ecosystem ecology, forest succession, herbivory, invasive species, restoration