I am looking for a creative and enthusiastic researcher who is interested in studying the spatial disturbance ecology of forest insect outbreaks through the lens of landscape genetics. The position is based in the Graduate Department of Forestry at the University of Toronto (St. George Campus) and is for two years starting in 2020. Salary will be commensurate with experience. Funds will also be available to facilitate participation in meetings and conferences.

Project: The goal of this project is to use landscape genetics and genomics, as well as information on phenology and dispersal, to better understand the role of long-distance dispersal on insect outbreak spread, synchrony, and forest health consequences. The work is specifically focused on the spruce budworm, a cyclic irruptive forest pest native to North America. Please refer to this paper for a starting point for the project:


Duties: The postdoc will work with an existing large scale spatial-temporal genetic (SNP) data-set and contribute to the development of additional genomic resources. The postdoc will be expected to: undertake landscape genetic and genomic analyses of the existing data; assemble, synthesize, and analyze large-scale citizen science collected population data; and develop integrated models of spatial-temporal connectivity using these data. The post doc will also be expected to contribute to the functioning of the lab, identify new research opportunities, publish results in peer-reviewed journals, and to participate in scientific conferences.

Requirements: Applicants must have already completed their PhD by the start date (which is somewhat flexible) and should also have a strong record of scholarly publication and scientific presentations. In terms of technical qualifications, I am looking for someone with experience in population genetics, landscape genetics/genomics, bioinformatics (SNP calling), and statistical modelling. Competencies in scientific programming (e.g., R, Python), data wrangling, and effective communication are also required. Experience and interest in demo-genetic simulation modelling would be an asset.

Work environment: The Graduate Department of Forestry is a tight knit community of forestry-oriented researchers and students with strong connections to the other departments across the U of T. The department’s interdisciplinary nature facilitates strong relationships with industry, multiple levels of government, and environmental non-profits. The University of Toronto is a world-class academic institution based in is one of the most multicultural cities in the world. Lake Ontario, conservation areas, and parks, such as Algonquin Provincial Park, and the urban Rouge National Park provide near-by and accessible wilderness outdoor activities.

More information about the lab can be found here: www.jameslab.ca
How to apply: Applicants should send a cover letter, CV, and the names and contact information of three references as a single .pdf document to Patrick James (patrick.james@utoronto.ca). The posting will remain open until the position is filled.

--
Patrick M. A. James, Ph.D.
Associate Professor
Graduate Department of Forestry
University of Toronto
33 Willcocks St. Toronto, ON.
M5S 3E8 CANADA