



# Forest Ecology Research Group

## **POST-DOC OPPORTUNITY IN FOREST ECOSYSTEM RESPONSES TO CLIMATE WARMING IN THE YUKON TERRITORY**

Northwestern Canada is one of the most rapidly warming regions on Earth. The scale and rapidity of recently observed changes indicate that this region is particularly sensitive to climate warming. Warming-induced intensification of the wildfire regime, thawing of permafrost landscapes, and drought are transforming ecosystems (e.g., conversion of forests to wetlands or other non-forested land covers; conifer to deciduous forest cover), with direct consequences for the availability and configuration of wildlife habitat. These changes directly affect the health and wellbeing of northern ecosystems and communities. As a consequence, government decision makers and Indigenous communities urgently require science-based tools to understand and forecast the rate and trajectory of ecosystem responses to the disturbances and stresses induced by climate warming.

We are seeking an ecologist to lead the expansion into the Yukon Territory, Canada, of a large, long-term collaborative project on measuring and forecasting warming induced vegetation changes in northwestern Canada. In partnership with the Government of the Yukon, our goal is to better understand the impacts of fire and other stressors as drivers of changes in forest tree-species composition and understory vegetation communities, most notably caribou lichen. The successful candidate will work with an interdisciplinary team of academic and government researchers to establish a network of long-term monitoring sites across a chronosequence of historical burn sites, and to analyse data collected from these plots and other sources. This work will directly support the development of ecological forecasting tools to project changes in the abundance and distribution of lichen and other forage taxa under future scenarios of warming, wildfire, and forest compositional changes. There will also be opportunities to contribute to the improvement of forest dynamics models to capture important changes in tree species composition now underway.

### **Qualifications:**

- Ph.D. in ecology, natural resource sciences, or a related field;
- Evidence of publishing in peer reviewed literature;
- Experience with geospatial data analysis and remotely sensed data;
- High-level programming skills (e.g., R or Python);
- Experience with statistical modelling;
- Able to confidently interact with people of varying backgrounds;
- Experience with spatial simulation modelling an asset;
- Experience with climate change projections an asset.

The direct supervisor will be Jenn Baltzer (Wilfrid Laurier University) with a team of collaborators including Caitlin Willier (Yukon Government), Steve Cumming (Université Laval), Jill Johnstone (Yukon University), other postdoctoral fellows and graduate students within the Forest Ecology Research Group ([www.forestecology.ca](http://www.forestecology.ca)) and the Canadian Forest Service (<https://predictiveecology.org/index.html>).



# Forest Ecology Research Group

**Location of tenure:** The postdoctoral fellow will be located at Wilfrid Laurier University, Waterloo, Ontario. There will be opportunities for one or more extended visits to the other labs in the project to work with collaborators. The applicant must be able to lead a team of researchers in summer to establish the field sampling program.

**Start date, duration, & compensation:** The 3-year position will start as soon as possible, with fieldwork commencing in summer 2023. The annual salary is \$60,000 (including a top-up in lieu of benefits). Additional funding is available for travel, publications, and conferences.

Our research program values diversity and inclusivity, recognizing that a diversity of experiences and perspectives is vital to advancing innovation, critical thinking and complex problem solving. Our research program is committed to developing and maintaining a culture that is positive, collegial, and respectful of all members, and in which wellness and healthy work-life balance are valued.

**To Apply:** Please provide a letter of interest, your CV, and an example of your writing skills in the form of a published, peer-reviewed manuscript. Your letter should indicate how you meet each of the criteria, and state when you are able to start. We will accept applications until a suitable candidate is found.

Send application packages to  
Jennifer Baltzer [jbaltzer@wlu.ca](mailto:jbaltzer@wlu.ca)