



POST-DOC OPPORTUNITY IN QUANTITATIVE AVIAN ECOLOGY

We are seeking a quantitative ecologist to participate in a large, collaborative project on avian conservation in managed boreal forests. In partnership with industry and government, the goal of this 3-year research program is to model and forecast how bird species respond to the landscape changes that occur through forestry activities at local, regional, and national extents. The successful candidate will work with a team of avian ecologists, forest scientists, and statisticians to develop predictive statistical models of avian species abundance and distribution in relation to the climatic, biotic and spatial characteristics of forest habitats. These models will be embedded in a spatial simulation engine to forecast the consequences of alternate forest management and conservation plans and identify forest management practices that best support conservation goals. The scope of the project is national.

Qualifications:

- Ph.D. in ecology, natural resource sciences, applied mathematics, statistics, or a related field;
- Exceptional reasoning and analytical skills and the ability to function well both on their own and in teams;
- Experience with statistical modelling;
- High-level programming skills (e.g., R, Python) and a keenness to ensure reproducibility;
- Experience with wildlife-habitat or species distribution modelling, preferably at large scales;
- Able to confidently interact with people of varying backgrounds;
- Experience with Geographic Information Systems and remotely sensed data;
- Experience with spatial simulation modelling an asset;
- Familiarity with the forest management planning and associated software tools an asset.

The direct supervisors will be Erin Bayne (University of Alberta, expertise in avian ecology and impacts of natural resource management) and Steven Cumming (Université Laval, expertise in forest landscape dynamics, avian habitat modelling, and spatial simulation). Additional collaborators on this NSERC-funded project will include Marcel Darveau, Eliot McIntire, Frédéric Raulier, as well as other post-doctoral fellows and graduate students.

The successful candidate will also be part of the Boreal Avian Modelling Project (BAM) team. BAM, based out of the University of Alberta, seeks to understand the ecology and dynamics of avian populations and their habitats in the boreal forest of North America (for more details on BAM see www.borealbirds.ca). This role entails active participation in weekly BAM meetings, review of joint publications, and grant preparation. The successful candidate will also provide technical support to BAM team members, aided by the BAM Biostatistician and simulation model developers.

Location of tenure: The position will be located at the University of Alberta in Edmonton, with one or more stages spent in Quebec City (Université Laval) and/or Victoria (Canadian Forest Service, Pacific Forestry Centre) to work with collaborators. No field work is required.

Start date, duration, & compensation: The 2-year position will ideally start in Jan 2017. The annual salary is \$53,000 plus benefits.

To Apply: Please provide a letter of interest, your CV, and an example of your writing skills in the form of a peer-reviewed manuscript. Your letter should indicate how you meet all 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:

Nicole Barker, BAM Coordinating Scientist, nbarker@ualberta.ca