

Dr. Paul Wilson (Trent) and Dr. Micheline Manseau (ECCC, Trent) through EcoGenomics (ecogenomicscanada.ca), a long-term national scale program, are recruiting PhDs and Post-doctoral Fellows (PDFs) focusing on genomic applications to caribou conservation. This national-scale collaborative research program on caribou conservation genomics is supported by whole-genome sequences of caribou representing diverse subspecies, ecotypes and populations, with additional genomes being planned for sequencing, and development of targeted caribou-specific loci for Population Genomic surveys of a long-term (20-year) database of samples (40,000 across Canada). The national network supporting these positions include partnerships with Environment & Climate Change Canada; Canadian Wildlife Service; Parks Canada; the Ontario Ministry of Northern Development, Mines, Natural Resources & Forestry, Ontario Ministry of the Environment, Conservation and Parks and other provincial (e.g. Alberta, British Columbia, Manitoba, Saskatchewan) and territorial jurisdictions (Northwest Territories, Yukon, Nunavut); wildlife management boards and Indigenous communities (e.g. the Sahtu Wildlife Management Board); and industry such as MB Hydro. Positions may be based out of Peterborough, Ontario at Trent University or Ottawa at the National Wildlife Research Centre, Environment & Climate Change Canada.

The following positions/projects are available:

PDF studying Demographic Parameters in caribou ranges across Canada using applications such as spatial capture-recapture (sCR); density estimation; population modelling; and network analyses. Position requires strong quantitative skills, and experience in software development will be considered an asset.

PDF in establishing metrics for large-scale and long-term Genomic Monitoring of caribou through the implementation of sequencing technologies, e.g. high/low coverage genomes and amplicon sequencing, and development of analytical pipelines. Position requires strong bioinformatic skills, and knowledge of molecular genomic protocols will be considered an asset.

PhDs supporting the above projects will be considered in addition to projects related to caribou ecotype dynamics in Ontario's Ring-of-Fire region; assessment of genomic erosion in isolated caribou populations (natural and captive) and at the southern range margins of boreal caribou; and an assessment of rapidly evolving genomic elements in adaptive genes of caribou subspecies and ecotypes across Canada.

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