

M.Sc. opportunity in Chromium and Arsenic Bioaccumulation in Boreal Fish Species of Ontario at the Cooperative Freshwater Ecology Unit (CFEU), Laurentian University, Sudbury, Ontario

Research topic: A statistical study of the environmental and life history factors associated with elevated concentrations of Cr and As in a variety of boreal fish species from northern Ontario, including river and lakes within the massive “Ring of Fire” mineral exploration region. Recently the Ontario Ministry of Environment, Conservation and Parks (OMOECF), issued new consumption guidelines that identify several locations where muscle tissues of both sport and subsistence fish species exceed guidelines for total concentrations of Cr and As in addition to the expected exceedances for Hg. No information exists of what species or form the metals (some toxic, some not) actually existed in these fish and what possible associations to environmental factors (e.g. water chemistry, geology) or life history traits (growth, age, sex, etc.) exist. This project will explore these questions with a large data set assembled by OMOECF, Laurentian University and Western University.

Ideal candidate: Applicants should have a strong academic background in aquatic ecology and biostatistics and good scientific writing skills. Interest in analytical chemistry also an asset. Competitive NSERC level stipends, guaranteed GTA (with >75% average) and access to several local scholarships are available.

Positions will be supervised by Dr. John Gunn (CRC in Stressed Aquatic Ecosystems) at CFEU (<https://www3.laurentian.ca/livingwithlakes/about/staff/john-gunn/>), which is located within the award winning Living With Lakes Centre (<https://www3.laurentian.ca/livingwithlakes/>), on the edge of Ramsey Lake in City of Greater Sudbury (<https://www.greatersudbury.ca/>). Co-supervision or advisory committee roles with PDFs and other collaborators on the project, including Dr. Brian Branfireun (<https://www.uwo.ca/biology/directory/faculty/branfireun.html>) and Dr. Satyendra Bhavsar (OMOECF) are also possible. Please email a letter of interest, your CV, a copy of your academic transcripts (unofficial copies are acceptable) and the names of three references to jgunn@laurentian.ca. The M.Sc. position can begin as early as Jan. 2019.