



Vale **LIVING WITH LAKES CENTRE**
CENTRE POUR LA VITALITÉ DES LACS Vale

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GRADUATE RESEARCH IN FISH REPRODUCTIVE BIOLOGY
Cooperative Freshwater Ecology Unit, Laurentian University

Life history theory predicts that reproductive effort should increase with age in iteroparous organisms, as the chances for future reproduction diminish. Adults may increase their reproductive effort through the quantity and/or quality of offspring produced.

Most large-bodied fish species of north temperate lakes are iteroparous, and spawning stocks are composed of a mixture of age and size classes. How reproductive effort and success vary among these different age and size classes may have implications for understanding recruitment variability, and ultimately, for managing fisheries with size-selective harvesting. In many fish stocks, it is well known that older females produce more eggs, but do they necessarily produce higher quality eggs?

We have been examining relationships between the development and survival of embryos and the age, size and condition of females in various wild spawning stocks. We have also been exploring how the relationship between embryonic survival and maternal traits may be modified by variation in incubation conditions. This work is now being undertaken with Great Lakes lake whitefish.

I am seeking a motivated student to conduct research on this project at the MSc level. Applicants should have strong quantitative, organizational, and writing skills. Knowledge in life history strategies, fish ecology and reproductive physiology, and experience with fish handling, fish culture, database management and statistical analyses are all definite assets.

The student will be based at the Cooperative Freshwater Ecology Unit (CFEU), housed in the Vale Living with Lakes Centre (<http://www.livingwithlakes.ca>) at Laurentian University, and will work with researchers from academia and the Ontario Ministry of Natural Resources and Forestry (MNRF).

Salary will be at the current NSERC rate and starting date is negotiable.

Please forward a CV, a statement of research interests and qualifications, copies of transcripts, and names of three references to: **Tom Johnston**, Cooperative Freshwater

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