

Recruitment of a PhD student in Sockeye salmon nursery lake paleoecology using eDNA approaches

As a collaborative effort between [Irene Gregory-Eaves](#) (McGill), [David Walsh](#) (Concordia) and [Daniel Selbie](#) (DFO), we are recruiting a PhD student at McGill University to work on sockeye salmon nursery lake paleoecology. Sockeye salmon nursery lakes are of significant ecological, economic and cultural value to the peoples inhabiting the Pacific Rim. Over the past few decades, we have uncovered a great deal about long-term population dynamics of the Sockeye salmon from the analysis of sediment cores. Applying analyses of sedimentary DNA approaches, we have the opportunity to enhance this knowledge base and develop a portrait of how the biodiversity of coupled salmon lake-watershed systems have changed over centuries and test hypotheses about how changes to the base of these food webs could translate into energetic constraints for juvenile sockeye salmon. We have recently shown that eDNA analyses capture much of the seasonal planktonic dynamics in a lake inhabited by an endangered sockeye salmon population ([Gauthier et al. 2021](#)) and here we propose to push these efforts further by generating long-term records. We will target a suite of sockeye salmon lakes and use metabarcoding and/or metagenomic approaches to gain a deeper understanding of the nature and timing of food web changes over the past ~150 years and identify their potential drivers.

Interested students should send their CV and transcript (unofficial is OK at the inquiry stage) to irene.gregory-eaves@mcgill.ca by July 17 2021. McGill University is committed to equity and diversity within its community and values academic rigor and excellence. We welcome and encourage applications from racialized persons/visible minorities, women, Indigenous persons, persons with disabilities, ethnic minorities, and persons of minority sexual orientations and gender identities, as well as from all qualified candidates with the skills and knowledge to engage productively with diverse communities. The student would be offered a guaranteed stipend according to [McGill's Department of Biology](#) criteria, partially subsidized by the [GRIL](#).



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