



## 2 Graduate Student Positions (Ph.D.)



### *Anadromous salmonids in the north: migratory behaviour, species transitions & climate change.*

As part of the NSERC / CFI supported Ocean Tracking Network 2 Ph.D. positions (funded for 4 years) are available under the co-supervision of Dr. Ian Fleming of Memorial University's Department of Ocean Sciences and Dr. Michael Power of the University of Waterloo's Department of Biology.

Anadromy is integral to the life history of the salmonid community in many northern regions, yet little is known about what shapes the patterns of anadromy and the exploitation of the ocean environment by these fishes, particularly in light of the dynamic oceanography of the regions and changes that are occurring with the climate. The research aims to quantify the migratory behaviour, and spatial and temporal patterns of estuarine and marine habitat use of co-existing Atlantic salmon and Arctic charr populations as affected by niche segregation and life history in a changing climate. The Ph.D. students will work collaboratively, with one focused on Atlantic salmon and based in the Evolutionary Ecology Laboratory of Dr. Fleming (<http://www.mun.ca/osc/ifleming/index.php>) at Memorial University and the other focused on Arctic charr and based in the Fisheries Ecology Laboratory of Dr. Power (<https://uwaterloo.ca/biology/people-profiles/michael-power>) at the University of Waterloo. They will also work closely with government and First Nations partners, and be part of a Canada-wide network of researchers within the Ocean Tracking Network (<http://oceantrackingnetwork.org/>) that has strong international ties. There is flexibility and scope within the projects for the successful candidates to develop and address additional questions.

Students should be prepared to share their enthusiasm for research and associated skills openly within and among the research groups, and by doing so, contribute to a dynamic research environment. While they will be based in the respective laboratories at Memorial University and the University of Waterloo, students should be prepared to travel temporarily between laboratories and to Labrador and Ungava Bay for research.

The ideal start date is on or before April 2014. Major scholarship holders will receive generous top-ups to their awards.

Qualifications: The ideal candidates will possess an MSc; have research interests and training in the areas of fish ecology and biotelemetry; be capable of designing and undertaking both field and laboratory research; and have reasonable facility with the analysis of large data sets.

Prospective candidates should email a cover letter, CV, unofficial transcripts and contact information for three people who can serve as references. Review of applicants will begin 3 February 2014 and continue until the positions are filled.

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