

Graduate Assistantships: Climate controls on terrestrial-to-aquatic biogeochemical fluxes in boreal forest watersheds

Graduate assistantships (MSc and PhD) are available for keen and motivated students interested in research and training centered around understanding the impact of climate change on boreal forest landscape biogeochemistry. These positions are available as part of an NSERC-Strategic Partnership Project focused on the Newfoundland and Labrador Boreal Ecosystem Latitudinal Transect (NL-BELT; <https://www.esd.mun.ca/nl-belt/>) and made up of foreign collaborators, provincial and Canadian Forest Service partners as well as Memorial University researchers in Earth Sciences. The project is focused on exploiting the established NL-BELT which consists of four large watersheds located in western Newfoundland and southern Labrador to isolate the potential impact of predicted increases in temperature and precipitation in the coming century while maintaining an ability to apply the results to intact boreal forest ecosystems and their watersheds. Our team has been conducting investigations of atmospheric, forest, soil and stream dynamics along the NL-BELT and combining these field measures with manipulative experiments to develop biogeochemical indicators of forest ecosystem responses to climate change. New students joining the Biogeochemistry of Boreal Ecosystem Research Group (BBERG; http://www.mun.ca/earthsciences/Our_People/Faculty/Ziegler/) will have opportunities to focus on a number of different focus areas within this boreal biome climate change context including:

1. Fate and geochemistry of dissolved organic matter in podzolic mineral soil horizons.
2. Biogeochemistry of organic matter across time and the terrestrial-to-aquatic interface.
3. Nutrient biogeochemistry of the terrestrial-to-aquatic interface.
4. Impacts of hydrology on microbial respiratory responses across the terrestrial-to-aquatic interface.

All applicants should have some background or experience in soil science, biogeochemistry, environmental chemistry, ecosystem ecology or hydrogeochemistry. Applicants should be willing and able to conduct field research at remote study sites for weeks at a time.

The graduate assistantships are available within either the Department of Earth Sciences or the Environmental Sciences Graduate Programs at Memorial University (<http://www.mun.ca/>). Memorial is the largest university in Atlantic Canada. As the province's only university, Memorial plays an integral role in the educational life of Newfoundland and Labrador (<http://www.newfoundlandlabrador.com>). Offering a diverse set of undergraduate and graduate programs for over 18,000 students, Memorial provides a distinctive and stimulating environment for learning in St. John's (<http://www.stjohns.ca/visiting-our-city>), a very safe, friendly city with great historical charm, a vibrant cultural life, and easy access to a wide range of outdoor activities.

Please check the BBERG website (http://www.mun.ca/earthsciences/Our_People/Faculty/Ziegler/) for more information and group member contacts. Direct further inquiries or send applications, including letter of interest and detailed curriculum vitae (including contact information for 3 references), to:

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