Ph.D. assistantship: Impacts of climate change on boreal forest soil organic matter chemical composition.

A Ph.D. graduate assistantship is available for a keen and motivated student interested in research and training centered around understanding the impact of climate change on boreal forest soil organic matter reservoirs. This assistantship is available as part of an NSERC Strategic Project research team made up of foreign collaborators, provincial and Canadian Forest Service partners as well as Memorial University researchers in Earth Sciences and Chemistry. The project is focused on exploiting the established Newfoundland and Labrador Boreal Ecosystem Latitudinal Transect (NL-BELT) with four sites located in western Newfoundland and southern Labrador. The project is focused on the potential alterations in microbial transformations of soil organic matter (SOM) and losses of relatively slow turnover pools of SOM that may occur with warming along this boreal forest transect. To isolate the potential impact of warming while maintaining an ability to apply the results to intact boreal forests, our group has been conducting investigations of soils along the NL-BELT and combining these with manipulative warming experiments to develop biogeochemical indicators of soil responses to increasing temperature. It is anticipated that this Ph.D. student will focus on the alteration of the chemical composition of soil pools and their sources with warming and across this boreal forest latitudinal gradient via multiple techniques but with a focus on solid state nuclear magnetic resonance (NMR) spectroscopy. Experience with soil biogeochemistry, organic geochemistry, and/or environmental chemistry particularly at the M.Sc. level will be important. Consideration of students seeking a M.Sc. degree will only be considered in cases where a strong background of experience in environmental chemistry is demonstrated (e.g. successful B.Sc. honors thesis). Applicants should be willing and able to conduct field research at remote study sites for weeks at a time.

This assistantship will be available as early as September 1, 2013 through the Department of Earth Sciences or the Ph.D. program in Environmental Sciences 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 approximately 18,000 students, Memorial provides a distinctive and stimulating environment for learning in St. John's (http://www.stjohns.ca/index.jsp), a very safe, friendly city with great historical charm, a vibrant cultural life, and easy access to a wide range of outdoor activities.

Please direct inquires or send applications, including letter of interest and detailed curriculum vitae (including contact information for 3 references), to:

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Applications will be considered until **July 15, 2013**.