

Ph.D. project in plant biology (or master's projects)

Ecological restoration: propagation and reintroduction of plant species in fens



Ph.D.:

Scholarship of \$ 21,000/year

M.Sc.:

Scholarship of \$ 17,300/year

Possibility of an additional department or faculty scholarship

Under the supervision of

Line Rochefort (Université Laval)

Starting in September 2014 or January 2015

For many years, the Peatland Ecology Research Group (PERG) is working with the peat industry to develop methods for peatland restoration after peat extraction. However, the restoration technique for fens requires adaptations, due to surface runoff and because the vegetation assemblages specific to fens do not spread easily. Usually, we need to plant and seed native species to restore the desired plant communities in these environments.

The study can be divided into master's projects or constitute a Ph.D. project because it covers many aspects of the spreading of plant species in fens. The **first part** of the project is to determine the ideal propagation conditions for the production of vascular species. The objective is to improve propagation protocols in greenhouse (storage and seed stratification, amendment of the substrate, seeding method) to achieve better results for the growth of vascular plant species to be used in fen restoration projects. A **second part** of the study concerns the propagation conditions for the production of aquatic and rare plants species in greenhouse. In fact, we know little about the cultivation and reintroduction of these species in peatlands. Propagation protocols should be developed for a range of rare grasses (e.g. *Carex livida*, *Carex prairea*, *Eriophorum chamissonis*) and aquatic plants (e.g. *Utricularia cornuta*, *Menyanthes trifoliata*, *Nymphaea leibergii*). A **third part** of the study is to develop methods of brown mosses farming for peatland restoration, as donor sites for these types of plants are rare in southern Canada. Thus, it must be determined whether the brown moss farming is possible in peatland basins and what are the ideal conditions for the spreading of these mosses.

The student will join the team of the Peatland Ecology Research Group (PERG; www.gret-perg.ulaval.ca) led by Line Rochefort. The proposed Ph.D. or M.Sc. project is part of the NSERC Industrial Research Chair in Peatland Management. Our laboratories have a dozen of graduate students (M.Sc., Ph.D., postdoctoral fellows) and benefit from the support of several research professionals and postdoctoral fellows. The offer is open until **September 2014** or **January 2015** or until a candidate has been chosen. To apply, send to Line Rochefort: 1) a letter showing your interest, 2) your CV, 3) your most recent transcript of bachelor and/or master studies, 4) the names and contact information of three references.

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