



St Luc, CH



Fontainebleau, France



Roberts Creek, Canada

Podzolization and land use change

Context:

Podzols are visually striking soils in which elements such as carbon, aluminium and iron are translocated from the surface to the subsoil. These soils are predominantly formed under forest or heath vegetation. In Switzerland, large tracts of forests or heathlands have historically been converted to pasture. Preliminary data indicates that this vegetation change has impacted the podzolization process, with important consequences for soil C sequestration and nutrient dynamics.

Goals:

In this project, you will compare podzols under native and modified vegetation to ascertain the biogeochemical consequences of land use change. You will synthesize existing data and participate in or lead a scientific publication on the effect of vegetative cover change on reactive mineral phases, carbon, nitrogen and phosphorus dynamics.

Knowledge and skill required:

Interest for soil geochemistry.

Enthusiasm for lab work.

Basic quantitative skills and willingness to engage in statistical analyses.

Some proficiency with English (reading and writing).

Collaboration: E Verrecchia, D Sebag, A Unc (Boreal Ecosystem Research Initiative)

Keywords: Pedogenesis, illuviation, Fe and Al phases, organic matter, nitrogen enrichment.

Working place: Géopolis

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