Speakers: **Marty Kranabetter & Tim Philpott**
BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Presentation: **Manganese limitations as the basis for enhanced forest soil C sequestration**

Date: Friday **Oct 1**, 2021, 3:00-4:00 pm,
Livestreamed via zoom (see details below for how to join)

Abstract
Temperate rainforests along the west coast of British Columbia have some of the highest quantities of soil carbon (C) found in Canada. This elevated soil C is typically explained by the lack of wildfire, the cool - wet soil conditions, and the high biomass of these productive stands. Alternatively, manganese (Mn) has been more recently identified as an important contributor to C turnover because of its role in as an enzymatic co-factor for decomposition. In this seminar we describe our studies of soil Mn and decay enzymes using contrasting forest soils from wet and dry parts of coastal British Columbia. We examine the fungal communities of these soils, the differences in peroxidase activity related to soil weathering (and reductions in Mn), and how soils respond to an amendment of Mn in a laboratory incubation. Our findings are supportive of a key role for Mn in affecting decomposition, and highlight a new perspective concerning drivers of the expansive soil C stocks across temperate rainforests of the Pacific Northwest.

Our speakers

Marty Kranabetter, Ph.D., P. Ag., is a soil scientist with the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development, & graduate from the Belowground Ecosystem Group with Suzanne Simard.

Marty's areas of interest are soil ecology (especially ectomycorrhiza), partial cutting, soil carbon storage, biodiversity conservation, and forest nutrition/productivity. He has published a number of papers on ectomycorrhiza fungal ecology and succession following disturbance. Marty is a member of the provincial soil science group undertaking studies on compaction and site organic matter removal (the Long-term Soil Productivity Study), as well as the Future Forests committee examining vulnerability to climate change.

Tim Philpott, PhD., P.Ag., is a soil microbial ecologist with the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development, & graduate from the Belowground Ecosystem Group with Cindy Prescott and Sue Grayston.

Tim Philpott, PhD., P.Ag., is a soil microbial ecologist with the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development, & graduate from the Belowground Ecosystem Group with Sue Grayston and Cindy Prescott. Based in Williams Lake. Tim's research is broadly focused on soil carbon, disturbance ecology, and fungal ecology in forested landscapes.

How to Join
Livestreaming via zoom is available for this presentation; pre-registration required.
https://ubc.zoom.us/meeting/register/u5MvduurrT4oHNF6SJLdx8V34tYVfePOWLyj
After registering, you will receive a confirmation email containing information about joining the meeting. Folks in Plant Science and other programs are encouraged to attend via zoom. Please note that you only need to register once for the term.

Recording will also be done for this presentation and made available to PRSSS members through their website. Please see https://www.prsss.ca/ for more information. Please note that access to these videos will be password protected.

In-person **McMl 102** if you want to view on the "big screen" – note this presentation is via zoom. Participation in McMl 102 will be limited due to the capacity of the room (n=30) with priority given to folks in the Soil Science program (both LFS and Forestry). IF you are not a regular attendee and wish to come in-person, please email sandra.brown@ubc.ca to save your spot.