

Evaluation of N-urea fertilization to accelerate western redcedar growth, enhance soil carbon stocks and decrease greenhouse gas emissions on Haida Gwaii.

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Friday March 4th, 3:00 pm (in-person or via zoom, see details on how to join below).



Abstract: Nitrogen (N) fertilization shows promise in increasing carbon (C) fixation and sequestration in temperate forests by accelerating above-ground stem growth and increasing the proportion of litter converted into humus form. Western redcedar is a major component of natural forests on Haida Gwaii, BC, but its regeneration is difficult due to intensive grazing by the island's hyperabundant deer population. The documented response of western redcedar (Cw) to N fertilization may offer economic opportunities on Haida Gwaii to alleviate mature Cw timber shortfall, increase C stocks and secure old-growth Cw for future Haida cultural use. However, N additions can also lead to a potential rise in GHG emissions (CO₂, CH₄, N₂O). An experimental paired-tree fertilization trial is being conducted on 14-19 year-old, free to grow, Cw plantations on Graham Island, Haida Gwaii, to evaluate if the benefits of additional C storage outweigh a potential rise in GHG emissions. This seminar will report on pre-fertilization carbon pools (tree measurements and soil C) as well as closed static chamber GHG efflux measurements taken over 56 days (spring 2021) following N-urea fertilization.

Bio: Christophe first became interested in forest ecology while working with Parks Canada in the southern Gulf islands in the summer of 2018. Mid-way through his Diploma in Ecological Restoration at the University of Victoria, Christophe's interest in silviculture brought him to Kitimat and Haida Gwaii BC, where he worked on fuel reduction and riparian habitat restoration projects. His desire to better comprehend the effects of forest management on above and below ground carbon stocks led him to pursue his master's in forestry at UBC under the supervision of Dr. Sue Grayston.

How to Join

In-person McMI 154 Please note that participation will be limited due to the capacity of the room. Email sandra.brown@ubc.ca to save your spot.

Livestreaming via zoom is available for this presentation; pre-registration required.

<https://ubc.zoom.us/meeting/register/u5MvduurrT4oHNF6SjLdx8V34tYVfePOWLyi>

After registering, you will receive a confirmation email containing information about joining the meeting.