

Research Day | March 15, 2017

Title: The Ice-age on Vancouver Island: the importance of the small and inconspicuous

Presenter: Richard J. Hebda and Kristen Miskelly

Abstract:

The Ice-age (Pleistocene Epoch) brought forward our Earth as we know it and spawned humanity. We know little of its history on Vancouver Island. Living endemic plants reveal that near its end a small ice-free area occurred on Brooks Peninsula, Vancouver Island, but showy vertebrate fossils strongly suggest a much larger unglaciated zone. In this much-enlarged region, microscopic pollen grains, wood and their enclosing sediments reveal a biologically rich tundra and parkland landscape of grasses and herbs with patches of spruce, true fir and pine. The setting and age of the sediments suggests very limited ice extent. Before this late Ice-Age time, glacial episodes came and went; how many and when we do not know, but they reshaped our region and resulted in the biological diversity we have today. Subalpine forest grew at sea-level 70,000-80,000 years ago preceded by warm Douglas-fir forests. Highly-weathered, near-surface silts north of Sooke reveal a unique assemblage of herbs suggesting arid and warm? climate hundreds of thousands of years or more ago. Crumbly boulder and gravel beds in Sooke represented a warm landscape from the earliest time of the Ice-age. Collaborative studies of the magnetic orientation of Pleistocene and earlier deposits is underway. Much remains to be discovered and understood about this "lost world" of our Ice-age. Though big showy pieces may garner our attention, it will be the microscopic fossils and the physical and chemical characteristics of the enclosing geologic layers that will lead to truly important discoveries and understanding.



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