

## **Dr. John Clague**

**Department of Earth Sciences, Simon Fraser University**

### **Cordilleran Ice Sheet**

We had our own ice sheet here in western Canada called the Cordilleran Ice Sheet. It was a big ice sheet also, though it was dwarfed by the Laurentide ice sheet to the east. The Cordilleran Ice Sheet extended from the Pacific Ocean on the west to the Rocky Mountains on the east. For a brief period of time, it actually coalesced with the Laurentide ice sheets, so the two ice sheets were in contact with one another. It extended up into central Yukon and down into the continental US, down into Montana, Idaho and Washington. It's kind of interesting that the ice sheet did not cover all of the Yukon. We think of the Yukon as being a very cold, cold climate and people wonder why if it covered southern British Columbia, if it covered Victoria, why didn't it cover Dawson City, for example. And the reason is that it is just too dry up there. You don't get enough moisture to nourish the ice sheet. Parts of the northern Yukon are really an Arctic desert - you just get very little moisture. It's cold enough for an ice sheet but you just don't get enough precipitation to nourish it. You need both cold and you need moisture to create an ice sheet. It's kind of a peculiar set of conditions that you require.

The Cordilleran Ice Sheet is important. It comes into play in terms of debates about populating the new world. It's quite clear that when the ice sheet was at its maximum extent you could not have had people moving from Eurasia and Alaska down into the mid-western U.S. or into South America, so there were windows or periods of time when that opportunity wasn't available to people. But then there were also times when they could freely move down, when the ice sheet either didn't exist or when it was less extensive than it was at its maximum.