



Ancient Trees Tell a Story



In 1991, British Columbia's Capital Regional District needed to expand the regional landfill. In preparing to do so, they drained Heal Lake, a natural lake holding a botanical goldmine of ancient history of south Vancouver Island. The lake's bottom sediment, many metres thick, contained thousands of years' worth of mud, branches, cones and superbly preserved logs.

The logs recovered from the lake contain one of the world's longest tree-ring records, spanning more than 4200 years and recording the region's climate.

Natural Resources Canada's (NRCan's) Pacific Forestry Centre along with Richard Hebda, Curator at the Royal BC Museum, rescued these logs from a wood chipper in 1992. NRCan researchers worked collaboratively with the museum in measuring tree-rings from 300 of the 700 trees rescued from the lake. They compared the ring sequences and compiled more that 4200 years of climate history.

By measuring each ring's width, researchers were able to identify critical events in a region's history, such as fire, insect attack, drought and rapid climate changes.

One of the many revelations from the data is evidence of a sudden and persistent drop in the growth rate (change from wide to very narrow rings) about 3850 years ago, which is consistent with a shift in climate in the northern hemisphere from one state to another and the development of the modern climatic regime.

More recently, this wood is being used for scientific purposes and to promote the discoveries that have been made. During the Vancouver 2010 Olympic and Paralympic Winter Games, samples of this wood will be on display in NRCan's bookstore at 625 Robson Street, Vancouver.

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