Former Tofield resident receives research grant

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Dr. Colin Laroque and Tofield native Geoff Kershaw of the Mount Allison Dendro-chronology (MAD) Lab in Sackville, N.B. have received funding from the prestigious Association of American Geographers (AAG) to pursue research relating to the Alberta Oil Sands. The study, "A Dendrochronological Assessment of Ecosystem and Human Health Impacts Downwind of the Alberta Oil Sands," is unique, as the team will be using dendrochronology — tree ring analyses — to help measure pollutants in areas downwind of the tar sands — a process not commonly used in this type of research.

Laroque, a professor in Mount Allison's department of geography and the environment, says, "There has been a lot of research around the environmental effects of the Alberta Oil Sands. Most studies have looked at soil and lake water samples to measure pollutants though, making it hard to determine how long the substances have actually been there. By using dendrochronology, looking at tree rings and measuring the age of the tree, we will be able to provide a timeline of when the pollutants first appeared in the area. Analyzing the tree rings also allows us to see changes in the climate patterns and adaptations over the trees' lifetime."

The team will begin their field research in Saskatchewan this spring and will travel west by canoe to Fort McMurray, AB, collecting samples from jack pine, black spruce, and aspen trees along the way.

Kershaw, a native of Alberta, says, "We expect to have our field work finished in two weeks. Following this, we will review the samples both in the MAD Lab at Mount Allison and also at the Canada Light Source, Canada's national synchrontron research facility at the University of Saskatchewan. These two facilities will help give us a better picture of the level of pollutants, when they began to appear in the environment, as well as the effects that they, and climate change, have had on the trees."

The project stemmed from a conversation Laroque had in an Aboriginal community in northern Saskatchewan during a separate research endeavour. Elders had found that their environment has changed over the years, certain kinds of plant

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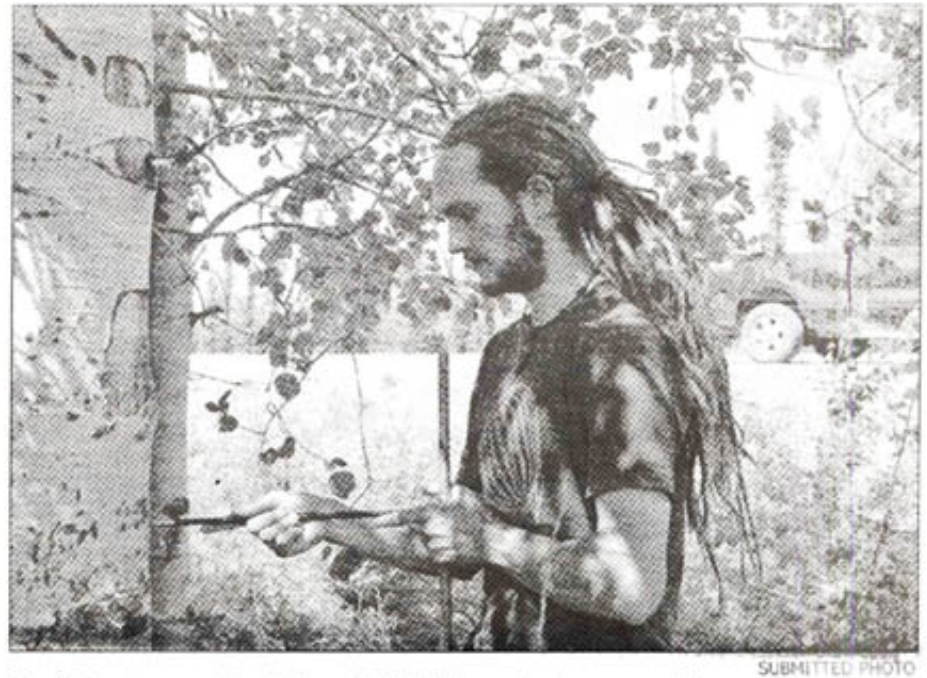

SUBMITTED PHOTO

Geoff Kershaw, originally from Tofield, is part of a research team that uses tree ring analyses to measure the level of pollutants.