



Times & Transcript

137 YEARS
MONCTON, N.B.

WEDNESDAY/7 A.M.
OCTOBER 19, 2005

canadaeast.com
Eastern Canada's Information Source

Times & Transcript

NEW BRUNSWICK

WEDNESDAY, OCTOBER 19, 2005

A3



PHOTO CONTRIBUTED

This past summer, Mount Allison student Ben Phillips, left, and professor Colin Laroque collected data on a red spruce tree stand on the Fundy Coastline. Ben found a tree that is 445 years old.

N.B. home to world's oldest red spruce

■ Fundy coast home to 445-year-old tree discovered by Mount Allison student

BY ALOMA JARDINE
TIMES & TRANSCRIPT STAFF

Before Champlain ever set foot in the New World, when Elizabeth I was the new Queen of England, a small seed drifted to the forest floor along the Fundy Coast and took root.

The little tree was already a stately red spruce by the time the Pilgrims landed at Plymouth Rock and had more than 300 years of wisdom to share when the province became part of a new country called Canada.

Overshadowed by the other trees, it grew slowly, a puny specimen next to its taller brothers, but stronger, as wind carried them off in turn, but it remained.

When Mount Allison geography and environmental studies student Ben Phillips stumbled across it this summer while working on a project, he didn't realize what he'd found.

"It was actually a fair amount smaller than the other trees in the area. I probably pulled (samples from) six or seven other trees that were over 300 years old and some were over double the size, but this particular tree was in heavy competition. It was growing in the shade all its life," he says. "It got out-competed in the short term, but in the long-term... this one ended up living for 445 years."

Phillips' tree, which started growing in 1560, is the oldest red spruce in the world.

The previous record was set by a 405-year-old tree in New Hampshire. Red spruce are only thought to have a life span of about 400 years.

Phillips spent the summer hunting down the oldest red spruce trees he could find for a project he's working on comparing the Fundy Basin fog forest with trees in the Caledonia Highlands.

Examining the tree rings provides invaluable information on the climate in the area year by year.

Colin Laroque, a geography professor who heads the Mount Allison Dendrochronology Laboratory or MAD Lab, says Phillips' tree allows them to study the environment 150

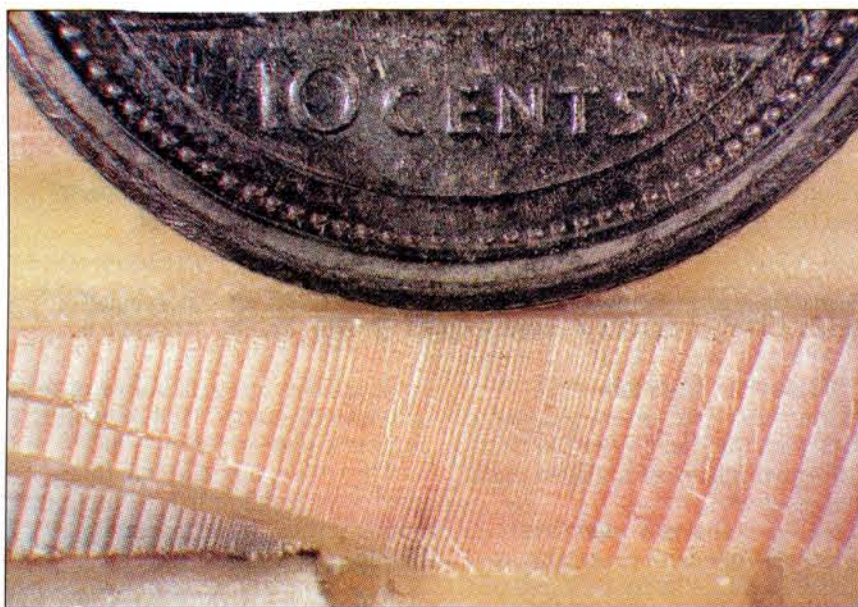


PHOTO CONTRIBUTED

This tiny core sample from a red spruce found on the Fundy coastline this past summer shows how close the growth rings are when compared to a dime set next to it.

to 250 years further back.

"It is huge for our lab. Normally we find a 100 or 200-year-old tree and that is spectacular. This tree suddenly doubles the length of time I can go back," he says. "There are four or five other projects using his data right away because it is so important a find."

Laroque says dendrochronology, the study of tree rings, can also be used to date old buildings. By matching growth patterns in the wood with certain periods of time, researchers can determine when the tree was cut down.

The tree in question grew so little every year that its rings are incredibly close together, so close that Phillips originally estimated it was only about 350 years old.

When he got it back to the lab the lines were too close for the computer system to read, so he had to use a microscope zoomed in as much as possible.

"It took me several tries to get it right," he says. "I had to sand it several times and had to go up to very fine 600 grit sandpaper. Then after 600 I grabbed a piece of loose leaf and began to buff it with the loose leaf, which is about 800 or 1,000 grit. I had to get it that shiny to see the rings. Usually you can sand it with 200 or 300 grit and see it very clearly."

That the tree has survived so long seems nearly miraculous.

Besides dealing with wind, weather, and critters, the province's wood supply has always been in high demand, whether for shipbuilding or pulp and paper. Most of the old-growth forest is long gone.

Laroque says several factors combined probably saved the tree.

"It is in a pretty dense, dark kind of gorge which is pretty inaccessible," he says, making it hard for loggers to get to it. "And it looks like an ordinary joe, run of the mill tree. If you were building a ship, there are lots of others around it that look better."

The tree's location also has kept it protected from the worst of the wind, and the fog has kept the bugs away.

Because the tree grew so slowly, it is not really all that big, only about 28 cm (11 inches) in diameter, but Laroque says it is still very healthy.

"It looks like it will keep becoming the oldest one for a while," he says. "We want to leave it where it is."

Phillips and Laroque won't say exactly where the tree is, preferring to continue to shield it from the outside world.

"If a lot of people become interested in it and start to hike to it, there is a chance the roots will get trampled down. I wouldn't want to jeopardize its existence because of something I did," Phillips says.