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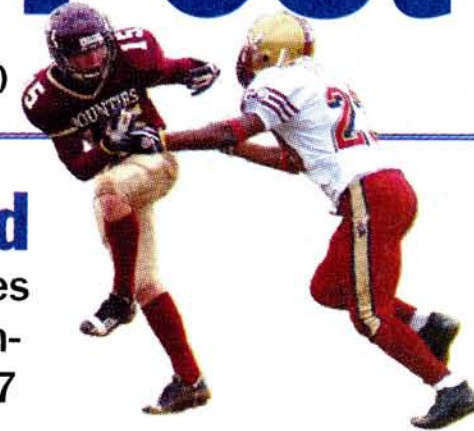


Fantastic Find

A Mount Allison student has discovered the world's oldest known red spruce in New Brunswick PAGE 21

Mounties Trounced

The Mount A Football Mounties are in danger of posting a winless season. PAGE 7



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Community

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Mount A student discovers 445-year-old red spruce

When Ben Phillips, a fourth-year environmental studies and geography major at Mount Allison University, was carrying out a research project on climate change this summer, he stumbled on something amazing along the Fundy coast.

Phillips discovered the oldest red spruce ever recorded, and he found it within New Brunswick's borders.

The 445-year-old red spruce is 40 years older than the next oldest red spruce, which was previously found in New Hampshire.

The spruce that Phillips discovered started growing before 1560, at the same time that some of the first Europeans started to explore North America.

But don't ask Phillips exactly where the tree is; he is keeping it a secret.

"The tree has survived for so long because it is in a special spot where it has been able to grow undisturbed, away from human contact. There are not a lot of ancient trees left in the Maritimes because of all the human activity over the past few centuries, and I'd like to let the tree continue to grow in peace," says Phillips.

Although the tree is interesting from an historical point of view, it is also important for Phillips' research. Phillips is part of a team of students and professors working at the MAD Lab (Mount Allison dendrochronology laboratory) and the tree's age helps them in a number of other projects they are working on.

Using dendrochronology, or tree-ring analysis, scientists can better understand past environmental conditions, ecosystem dynamics, and human activities over the last few hundred years.

"We were hoping that Ben's searching might produce a tree up to 300 years old, which would have been impressive enough, but we never dreamed he'd find a 400-plus-year-old tree," said assistant professor Colin Laroque, who heads up the MAD Lab. "This is a truly spectacular find."

"Previously, to get that far back in time with tree-ring samples, we had to patch together data using old trees from several of the region's oldest buildings. Ben has delivered to us a single, unbroken record of growth conditions in the region, a record that all other data can now be checked against."

Phillips received a grant from the Royal Canadian Geographic Society to look at how climatic changes affect trees in the lowland-fog forest of the Fundy Basin, compared to those growing above the fog zone in the Caledonia Highlands. Phillips is using samples from red spruce trees to establish approximate climatic conditions at both lower and upper elevation locations over the last few hundred years.

"Current instrumental records in this area only go back about 60 years," says Phillips. "There are five other groups doing research on the state of the forest in this area of New



Colin Laroque, assistant professor of geography at Mount Allison University, with his student Ben Phillips, left, examine a 300-plus-year-old tree. Phillips recently discovered a 445-year-old red spruce, believed to be the oldest in the world, here in New Brunswick

Brunswick, and it is very important to them to identify whether or not any long-term cyclical changes in the climate are occurring."

Next year Phillips will look to the

future. He plans to model how different coniferous trees in New Brunswick will grow under the climatic conditions predicted by Canadian Global Climate Models. It

will not be until then that Phillips will know the likely long-term fate for that oldest red spruce tree, patiently growing in a secret location nearby.