Lodgepole pines in British Columbia may be wiped out by 2080

By Gordon Hamilton, Vancouver Sun

Climate change is expected to drive lodgepole pine, the backbone of the central Interior forest industry, from most of its range in B.C. by 2080, says a study by researchers at the University of B.C. and Oregon State University.

The study, to be published in the journal Climate Change, measures how trees respond physiologically to changes in their environment, resulting in precise forecasts for researchers Nicolas Coops at UBC and Richard Waring at OSU. Although lodgepole pine will be mostly gone by 2080, as early as 2020, its habitat will begin shrinking. It is expected to move northward into the Yukon.

The researchers used NASA satellite maps to trace changes in tree physiology, using sophisticated techniques that, for example, can measure the impact of drought by changes in the reflectivity of a tree's needles as seen from space. It is the first time such precise modeling has been undertaken to measure tree response to climate change.

The satellite images show climate-change induced drought is already affecting lodgepole pine. Coops said drought stresses the tree, making them more susceptible to disease and pests like the pine beetle.

The researchers say that lodgepole pine will be gone from almost all of the Pacific Northwest and wiped out in 83 per cent of its range in B.C. by 2080. That's within the lifetime

of seedlings now being planted in the wake of the mountain pine beetle epidemic.

“Even though lodgepole pine is a hardy species, it’s very susceptible to climate change, so it is going to be pushed out of the space where it grows very well,” Coops, a professor at the UBC Faculty of Forestry, said in an interview.

Read the whole story