SCREENING FOR WHITE PINE BLISTER RUST IN WHITEBARK PINE: BRITISH COLUMBIA, CANADA

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Whitebark pine, *Pinus albicaulis*, is a high-altitude 5-needle pine native to Western North America. It is a keystone ecological species, essential to ecosystem functioning in many subalpine and treeline forests. In 2012, this species was identified as Endangered by the Canadian Species at Risk Act, due in large part to mortality by White Pine Blister Rust (*Cronartium ribicola*). This Old World disease was introduced into North America at the beginning of the 20th century; there is very little genetic resistance to it in endemic 5-needle pine populations. The British Columbia government has started a screening program to identify genetic resistance in Whitebark pine, with the objective of inter-situ gene conservation and in-situ species recovery. The process starts by identifying surviving trees in high-mortality areas. The progeny of these parent trees are artificially inoculated with blister rust basidiospores in a climate-controlled room, then scored over the next 2–4 years. We have now made our first rust-resistant parent selections, which have been grafted for deployment in clone banks or seed orchards. 2018 will be our 7th year of parent tree seed collections in this ongoing, long-term project.

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