

Hughie Jones - January 2023

Shore Pine/Lodgepole Pine (*Pinus contorta*)



There are three or four varieties of the conifer shore pine (*Pinus contorta*) and together they range over North America from Baja California to Alaska. Despite huge variability in stature, all of the varieties of *Pinus contorta* have 5 cm/2 in long paired needles that are often stiff and twisted. Their small cones are angled at the base so that they point toward the tree's trunk.

Pinus contorta has the ability to flourish in areas that are too wet, too acidic, too nutrient poor, too elevated, too fire-prone or too rocky. Habitats that other trees couldn't survive in. 13,000 years ago when the glaciers began to retreat in British Columbia, *Pinus contorta* was one of the first species to colonize the barren land.

Pinus contorta var. *contorta* or shore pine is a small tree found along the coast from southern Alaska to northern California. If you are on the bog hike in Pacific Rim National Park, you will see a dwarf version of this tree with stems that twist and often grow sideways. These trees can be 300 years old and often less than 2 m/6 ft in height. This is thanks to their growing conditions - the low nutrient and acidic conditions of a bog. It is hard to believe that the gnarly, wind-swept shore pine belongs to the same species as the tall, straight and slender Lodgepole pine (*Pinus contorta* var. *latifolia*) that grows inland.

Lodgepole pine grows throughout most of the interior from mid elevation to subalpine sites. One of the first trees to invade after a wildfire, its cones are protected by a seal of pitch that requires fire or heat to release the seeds. But there is a bird called the crossbill that doesn't need to wait for fire to get at the seeds. The crossbill has a specially adapted bill that can crack open the lodgepole pine cone. The number of chicks the crossbill has depends on the number of lodgepole seeds that are available.

For inland First Nations, lodgepole pine was key for their survival - as important as the 'tree of life' (the western red cedar) was for the Northwest Coast peoples. Interior First Nations in British Columbia used the wood from lodgepole pine for a variety of purposes, including poles for lodges, homes, or buildings. In the spring, they stripped off long ribbons or 'noodles' of the sweet succulent inner bark (cambium layer). It was eaten fresh in the spring and had a delicious orange-like flavour.

But it was more than just delicious. Megan Dilbone's thesis (supervised by Dr. Nancy Turner) is on the cambium of lodgepole pine. She found its tissues were high in protein and sugar as well as micronutrients, giving overall immunity and electrolyte balance. And it wasn't just First Nations that depended on this sweet treat. Porcupine, mountain beaver and particularly bears coming out of hibernation feasted on it.

The Nlaka'pamax of British Columbia ate the very sweet young shoots of the lodgepole pine branches when at the bud stage and 'The Stoney' (Assiniboin) of Alberta the soft white centre of the cone. The pitch was a base for many medicines. It was boiled, mixed with animal fat, and used as a poultice for rheumatic pain and all kinds of aches and soreness in muscles and joints. Pitch was also chewed to relieve sore throats. The Secwepemc used lodgepole pine bark in a remedy for coughs and tuberculosis.

Lodgepole pine was there for the inland First Nations. First to show up after glaciation and fire, used for shelter, food, and medicine - as well as feeding the birds and animals.



The pictures of shore pine were taken in VanDusen. The two tree ones are in bed 56W and the contorted branch pictures from a shore pine in bed 24C. The three trees were planted in 1973.

Plants of Southern Interior - Parish/Coupe/Lloyd

<https://botanyphoto.botanicalgarden.ubc.ca/2017/03/pinus-contorta-contorta/>

<https://www.centralcoastbiodiversity.org/shore-pine-bull-pinus-contorta-var-contorta.html>

<http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Pinus%20contorta>