

WHITE SPRUCE

SCIENTIFIC NAME: *PICEA GLAUCA*



SPECIES OVERVIEW

White spruce is a coniferous species that is prevalent across Alberta. This species of tree flourishes in well-drained soils in various natural subregions, such as the Foothills, Boreal, and Parkland Natural Subregions. White spruce is a slow-growing species that thrives in the protection of an existing shady canopy. Along with firs and pines, white spruce belongs to the Pinaceae family and is visually recognized for its symmetrical conical crown, scaly dark gray bark, and pointed green needles. With a lifespan of up to 250 years, white spruce can reach heights of approximately 40 meters.

This species of conifer offers a multitude of services for Alberta's wildlife, as its winter foliage provides essential shelter for deer and nesting grounds for numerous species of bird. The light brown cones also provide forage for red squirrels, small rodents (i.e., deer mice), and some species of birds (i.e., chickadees). White spruce not only provides shelter and sustenance for its wildlife inhabitants, but it is also one of the most valued commercial species. White spruce accounts for 30% of Alberta's total growing stock and its wood is primarily used for lumber and pulpwood.



CULTURAL VALUE

White spruce holds profound cultural significance throughout Alberta, specifically for many Indigenous and Métis communities which have long revered white spruce for its medicinal properties. This species of tree is a rich source of vitamin C, and early accounts share that the Haudenosaunee (Iroquois) brewed needles and bark of conifers into teas to aid early settlers in their battle against scurvy.

Along with the needles and bark, the resin of white spruce has also been traditionally used by First Nations people who would chew the resin at the first signs of illness to treat coughs and colds. Historically, the gum (or the sap) was also known to be used to treat scrapes and wounds by directly applying the gum to the skin. In the 19th century, settlers commercialized this spruce gum into a chewing gum.

Beyond its medicinal uses, white spruce serves various traditional purposes amongst the First Nation and Métis communities. The flexible branches and wood of white spruce are utilized in constructing shelters and crafting tools, such as snow shovels and chisel handles. In some Métis Nations, spruce gum is still used as a rosin by fiddlers to be applied to their bow string. The roots of white spruce are used for basket weaving and once the newly woven materials have dried out the basket maintains its strong structure. Additionally, white spruce boughs have also been used in ritual ceremonies for protection and purification.

White spruce, stands not only as a foundational component of Alberta's ecosystems, but also as a cultural cornerstone, serving as a testament to its enduring significance and multifaceted contributions to both nature and heritage.



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