

White Spruce

Picea glauca



Identification:

Leaves: needle-like, are concentrated on the upper sides of the branches. In color, they are dark green to blue-green. In a cross-section the needles are diamond-shaped.

Cones: range from 3-5cm in length. Cones grow sessile with the branch, meaning they have little or no stem attaching them to the branch. The cones are cylindrical and slender and are light green in color, until mature, when they become light brown, purplish. The scales are rounded and smooth and open when ripe.

Bark: smooth, light gray when young, darker gray and scaly with age, having a tinge of brown. One quarter, to half an inch thick, composed of broken, irregularly shaped scales. The under bark is a salmon pink in color.

Wood: wood dries easily, is stable after drying, is moderately light in weight and easily worked, has moderate shrinkage and is moderately strong, stiff, tough and hard. It is straight, even grained and soft and finishes with a satin-like surface. The wood is creamy white or straw-coloured, and there is little difference between the colour of the heartwood and sapwood.

Distribution/location: White spruce has a transcontinental range spanning from Newfoundland and Labrador west across Canada along the northern limit of trees to Hudson Bay, Northwest Territories, and Yukon.

Habitat/Climate: White spruce is commonly found in Northern forests. Grows on a variety of different soils and tolerates a range in climatic conditions. It is shade-tolerant. After being suppressed, recovers well with additional light. Commonly found near the arctic tree-line. It does best on well-drained soils.

Growing Characteristics: White Spruce usually grows about 25 meters high, and 60 cm is diameter. The crown is broadly conical, ragged, irregular, densely foliated, but spire-like in northern parts of the range. Branches are generally horizontal, or slightly upward, yet sometimes slope downward near the crown. The root system is shallow, tough, pliable, and wide spread.

Reproduction: White Spruce begins seed production at around age 4, however does not produce in large quantities until around age 30. Seed dispersal is aided by the wind, most falling within 1m, though seeds have been found up to 400m away. Seeds are lost for a number of reasons including, red squirrel predation, insects, and other mammals' meals. Seeds overwinter under snow, and germinate in the spring. Germination is usually between 50-70% of the surviving seed fall.

Uses: Traditionally - saplings were used to make snow shoe frames and bows; the resin was used as glue to fasten skins onto bows, and arrowheads to shafts; decayed wood was used for tanning hides; and bark was used for making baskets, cooking pots, and trays.

Modernly - white spruce are used for shelter-belt planting, meaning they are planted in planned rows to protect other crops or gardens. White Spruce is important commercially for pulpwood and construction lumber. It is also used for specialty items such as sounding boards, paddles and oars, cabinets, boxes, and food containers. Another modern use of the white spruce is for Christmas trees, so next Christmas, be sure to ask your parents, "What kind of tree are we going to get this year?"

Fun Facts:

The bark, branches, buds and seeds from the White Spruce are a meal for deer, rabbits, porcupines, birds, and small rodents.

The white spruce can grow up to 40 meters in height and 1 meter in diameter.

Usually, white spruce live between 150-200 years old, but trees up to 1000 years old have been located north of the Arctic Circle!



Bibliography: *Trees in Canada* by John Laird Farrar page 102/103

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