

WHITE SPRUCE – *Picea glauca*

You won't find a better symbol of our untamed northern forest than the silhouette of spruce spires against a bright blue sky. White spruce trees were among the first plant colonizers after the last glacial age and have dominated our landscape ever since.

Why are spruce so at home in our chilly northern climate? Needles! By hanging onto these cold-hardy food factories all year they get a headstart on spring. The instant things warm up, spruce can begin photosynthesis thanks to their ever-present needles loaded with chlorophyll. Needles also help trap solar energy and dampen the chilling effects of wind. These adaptations to exploit the meager energy trickling down to them help spruce trees assert their dominance in the boreal forest.



HUMAN USES

Traditional

- Needles and young twigs make a zesty tea high in vitamin C
- Spruce gum chewed like regular gum
- Inner bark and young shoots an emergency food source
- Outer bark used to build canoes when birch not available
- Spruce boughs used for tipi or tent flooring
- Peeled and split roots used as cord for canoe seams, baskets, fish nets
- Spruce beer made from growing tips prevented scurvy in early Europeans

Commercial

- Light, tough, straight-grained wood easily worked into specialty items like guitar sound boards, paddles, fine cabinets
- Common choice for pulpwood and lumber

WILDLIFE USES

- Seeds a primary food of red squirrels
- Chickadees, nuthatches and crossbills extract seeds from cones
- Snowshoe hare, mice and voles feed on seedlings
- Spruce grouse depend heavily on needles



FIELD NOTES

- Prefers sites with well-drained, mineral soils
- Thin bark and shallow roots offer little fire protection
- Shade-tolerant seedlings can take over deciduous stands

FROM A DISTANCE

- In open grows conical, spire-like crown
- In dense stands branches are self-pruning
- Long straight trunk up to 10 m or more

UP CLOSE

Needles

- Short, stiff, 4-sided needles point in every direction
- Waxy white layer on lower side give species its name

Cones

- Cylindrical seed cones hang from upper branches
- Longer than black spruce cones with more even cone scales
- Male pollen cones pale red

Bark

- Thin, scaly, light grey or brown
- Young twigs smooth and shiny, not hairy like black spruce

