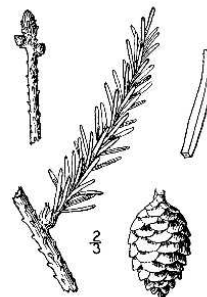


# Maine Tree Species Fact Sheet

**Common Names:** Black Spruce (Bog Spruce, Eastern Spruce, Swamp Spruce, Shortleaf Black Spruce)

**Botanical Name:** *Picea mariana*

**Tree Type:** Coniferous



## **Physical Description:**

**Growth Habit:** Black spruce is a small to medium sized tree. The roots are shallow and wide spreading. The branches are short, pendulous, and have a tendency to curve up at the ends. The bark is grayish brown and the surface is broken into thin scales 1/4" to 1/2" thick. The twigs have many hairs, some of which are tipped with glands. The cones are 1/2-1 inch long, ovoid, and purplish but turning brown at maturity. They usually stay on the trees for many years. The cone scales are stiff, have toothed margins, and dark brown seeds. The needles are 4-sided, dull blue-green in color, 1/4" to 1 1/2" long, blunt-pointed, flexible, and soft to the touch. Average maximum age of this species is about 200 years.

**Height:** Black spruce grows to be 30-40 feet tall with a trunk diameter of 6 - 18 inches. This species is hardy to Zone 2.

**Shape:** Black spruce forms an open, irregular crown and has a limited spread.

## **Fruit/Seed Description/Dispersal Methods:**

Black spruce is monoecious. The male flowers are produced on the outer branches of the crown below the zone of female flowers. They are ovate, approximately 1/2 inch long and dark red to purplish in color. The female flowers, produced in the upper crown, are usually erect, cylindrical and are green or purplish and are approximately 1 inch long. Black spruce flowers in late May/early June. Female conelets develop rapidly and contain mature seeds about 3 months after pollination. A few cones may be produced after the tree reaches 10 years of age, but maximum production is between 100 and 200 years of age. Black spruce seeds mature 3 months after pollination in late August or early September. Some are produced almost every year, but heavy seed years occur at 2 to 6 year intervals. Seeds are dispersed throughout the year, but dispersal is highest in the spring and seeds are not commonly dispersed over long distances.

## **Range within Maine:**

Black spruce occurs in every county in Maine except Sagadahoc. It grows on cool upland soils but is more commonly found along streams, on the borders of swamps and sphagnum bogs. It has a tolerance to both shade (however, growth is fastest in full sunlight) and nutrient-poor soils. It is commonly found on poorly drained acidic peatlands.

## **Distinguishing Features:**

The lower branches often touch the ground and form new trees by the natural layering method. The inner bark is olive green when freshly exposed.

## **Interesting Facts:**

The wood of the black spruce is soft and light but strong. It is used for pulp, framing, construction lumber, planking and Christmas trees. Special uses of the tree leaves include distillation for perfume and as a main ingredient for spruce beer.

## **Relationship to Wildlife:**

Black spruce provides good cover for moose and it is a food source for spruce grouse, snowshoe hare, red squirrels, mice, voles, shrews, chipmunks and birds. Various birds also nest in the tree.

## **Landscape Use:**

Black spruce is very well adapted to growing over bedrock because of its shallow root system. It is susceptible to damage from flooding and disruptions from normal groundwater movements. It is easily killed by fire because of its thin bark and shallow roots.

## **Common Problems or Pests of the Tree in Maine:**

Eastern dwarf mistletoe is the most serious disease that affects black spruce, resulting in reduced vigor, witches broom, deformed trees, and death. This species is also susceptible to needle rusts and fungi; snow blight; spruce budworm; wood borers; and European, yellowheaded and greenheaded sawflies.

## **References:**

*Forest Trees of Maine, Twelfth Edition.* Maine Forest Service/Department of Conservation. 1995.

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