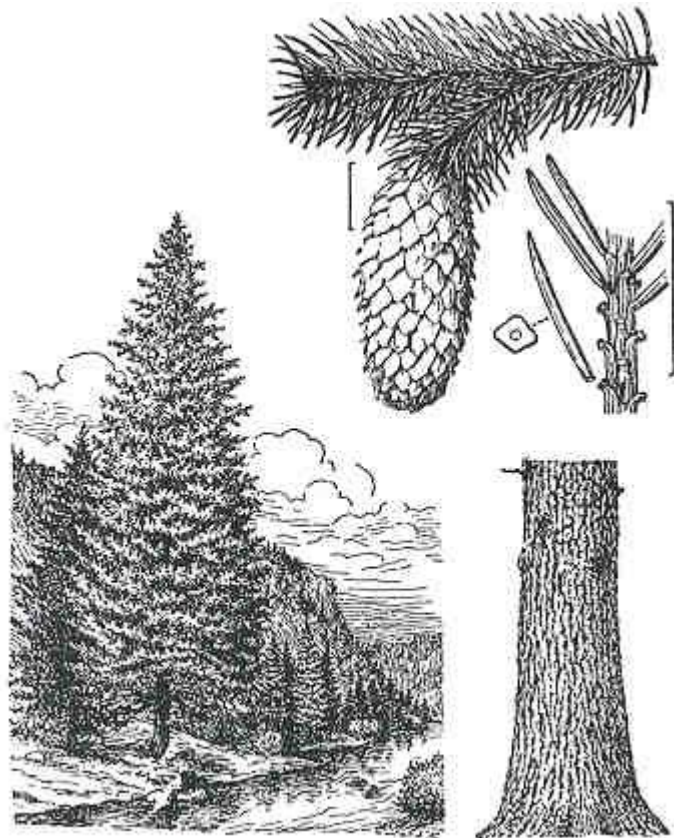


Blue Spruce



The Colorado blue spruce (*Picea pungens*).

The Blue spruce is renowned for its blue-green color and even tapering shape. The pale cast is due to a fine white powder on the surface of young blue-green needles.

In Colorado Blue spruce is found between 6000 and 9500 feet (1800 to 2900 m) elevation, on moist slopes and along streams, often as single individuals. Usually it is found near or among forests of Douglas fir, Subalpine fir, and Engelmann spruce, and ponderosa pine. It is never abundant and usually grows below the Engelmann spruce - Subalpine fir forest. It clearly favors moist locations, but is also drought resistant, and can survive extremes of temperature. Blue spruce is widespread along the Roaring fork and the higher parts of the Crystal River valley near Aspen, Colorado.

It typically grows to 40 to 60 feet (12 to 18 m) in height and one to two (30 to 60 cm) feet in trunk diameter. One of the largest known Blue spruce grows in Colorado; it was 126 feet (38.4 m) high and 15 feet 8 inches (4.77 m) around the trunk when measured in 1964. The Blue spruce is the state tree of Colorado, selected by vote of the state's school children on April 15, 1892.

The scientific name is “*Picea pungens* Engelmann.” *Picea* is the genus name for spruces, from the Latin *piceis* for pitch. *Pungens* means sharp and refers to the stiff, sharp needles.

It is possible that Blue spruce can make a hybrid with Engelmann spruce. Certainly one encounters trees which seem intermediate between the two. True Engelmann spruce also may show a suggestion

Blue Spruce

of the blue color cast, so do not use overall tree color as a guide to identification.

There are over a dozen named horticultural varieties, differing from the wild tree in needles, coloration and form. Ornamental trees planted in towns are often horticultural varieties, differing in detail from wild specimens, and they should not be used as a guide to the native tree. The pale blue color is most highly developed on horticultural varieties seen in cities. Native trees of the forest can tend more to the darker color of Engelmann spruce.

Identifying features of Blue Spruce

Needles

Needle is the appropriate term for the leaves of the Blue spruce. They are stiff and sharp. The needles are so stiff and sharp it can be painful to grasp a twig of needles firmly. Like all spruce needles they are single and square in cross-section (four-sided); you can roll them between thumb and forefinger, unlike flat fir needles. Length is 1 to 1 1/2 inch long (2.5 to 3.8 cm); usually more than 1 inch (2.5 cm).

The needles usually stick out evenly from all sides of the twig, nearly at right angles, and are nearly straight. Each needle stands on a small woody peg which separates it from the twig. The bare twigs are rough after the needles have fallen.

A temporary white coating in lines along each of the four sides of the needles, especially on each new year's new growth, gives the needles a white bloom, and the entire tree may have a whitish-blue-green appearance. The powder can easily be rubbed off with your fingers.

The white coating of the needles gradually disappears with time, and the older foliage appears darker, even dark green. Some trees never develop the white coating to any degree and so appear dark green or blue-green.

The pale or "silvery color" is most striking in midsummer when the new growth is at its peak development.

Cones

Mature cones are 2 to 6 inches long (5 to 15 cm); commonly 2 1/2 to 3 1/2 inches long (6.3 to 9 cm). Note that this is twice the length of cones of the Engelmann spruce. Clustering in the top third or so of the tree, hanging down from the twig, they are purple to yellow when immature. After reaching maturity in the autumn of the year they blossom, they fall from the tree over the next few months. Scales of the cone are pale brown, thin, stiff but flexible, and have a ragged outer margin.

Bark

Bark thin, pale gray, scaly and smooth on young trunks. Bark on old trunks becomes divided into vertical, scaly, pale gray to dark gray ridges, which distinguishes this tree from large Engelmann spruce with its orange-brown bark color. On older trees light brown or orange-brown spots and tinges may appear under the gray surface scales, but usually the bark is entirely gray. Use needles and cones for identification when possible.