Spruces

Genus Characteristics

Leaves: Spruce needles are stiff and sharp. They leave a raised peg-shaped leaf scar when they are shed. Needles and twigs can be fragrant when crushed. They are spirally arranged, creating a bottlebrush appearance on twigs. Presence of stomatal bands, needle length, taste, and shape can help determine species ID.

Picea sitchensis

Picea breweriana

Fruit: Spruces are conifers and bear cones. Spruce cones have papery bracts that protect seeds. Bracts may be smooth or toothed, depending on species. Cones hang down and mature through summer (some species may mature over two seasons). Size of cone and color and margins of bracts can help determine species.

Picea sitchensis

Picea abies

Bark: Spruce bark is thin and plated, like overlapping puzzle pieces. Color varies across species from red-brown to grey. Bark can be resinous.

Picea glauca

Picea abies

Form: Spruces are large conifers and can mature to 100 ft tall. They tend to be narrow, with conical crowns. Some can have very pendulous branches, which is a key to species identification.

Picea abies

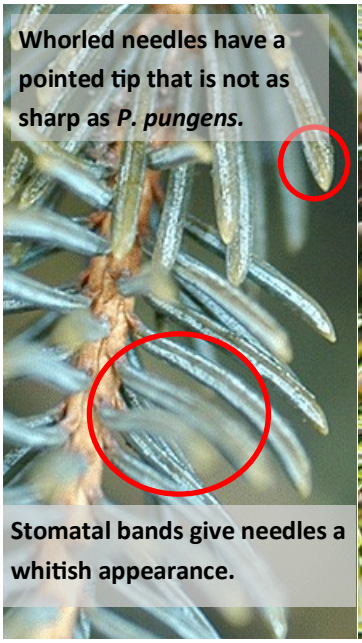
Picea sitchensis

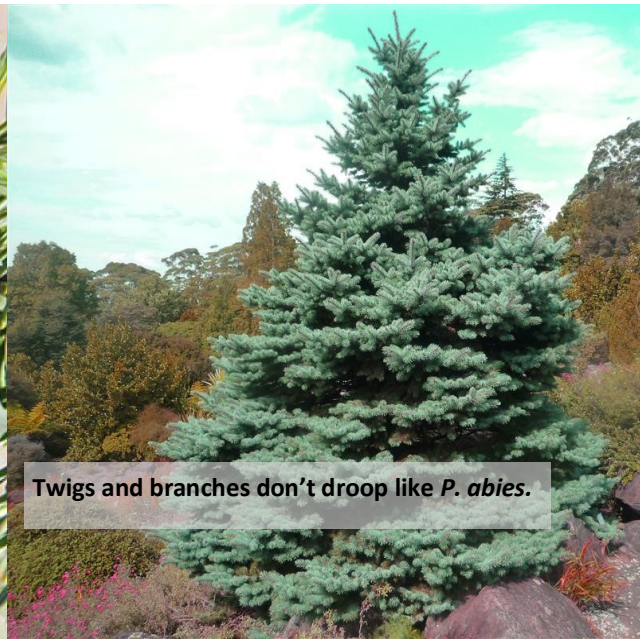
Picea pungens

Spruces

Picea abies—Norway spruce

Picea glauca—White spruce

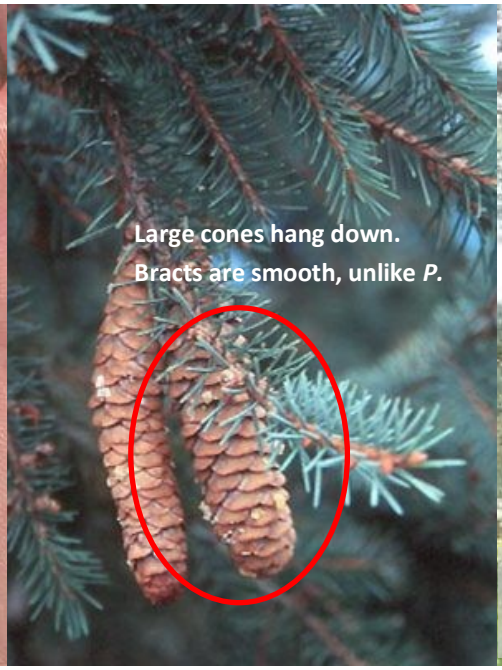




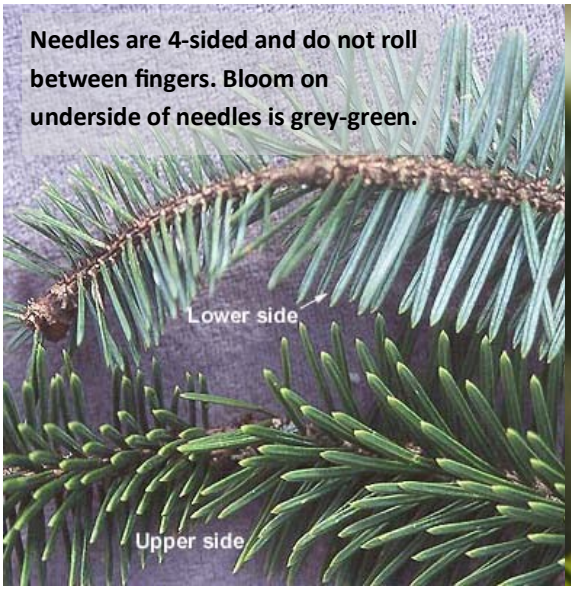
Picea pungens—Blue spruce

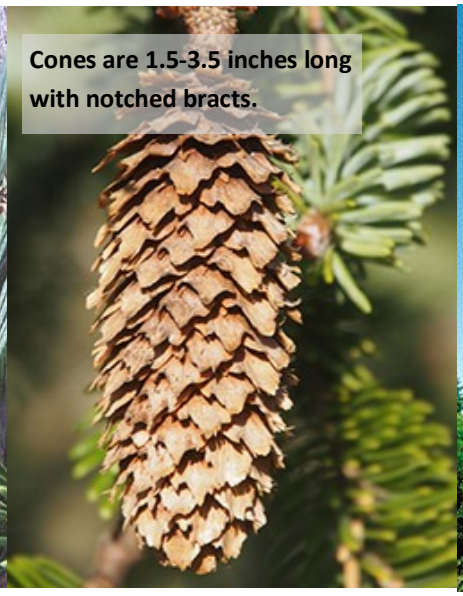
P. pungens and *P. glauca* look very similar. *P. pungens* is more common and has larger cones than *P. glauca.* Some cultivars of *P. pungens* are more blue than others. Needles of *P. pungens* can be rolled between fingers and taste foul.

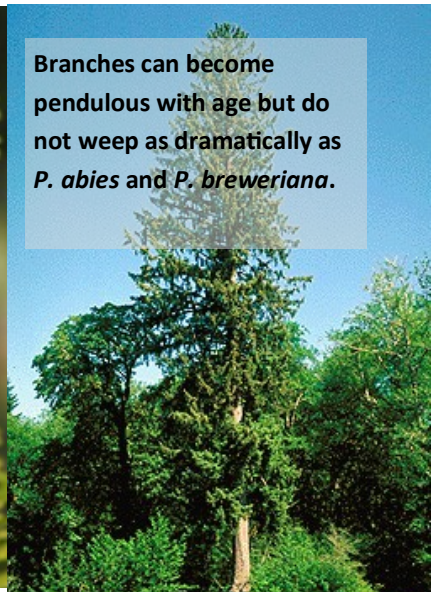
Picea breweriana—Brewer's spruce



Picea sitchensis—Sitka spruce







Spruce trees can be difficult to identify. Many species look very similar and there is a lot of variability between trees. There are also many cultivars in the nursery trade. This guide highlights species we know are in parks; however, we may see species not in this guide. Cones are not always present and needle coloration can be highly variable. If you are unsure, take a sample! If Urban Forestry staff is stumped, we'll send it to the experts at Hoyt Arboretum.