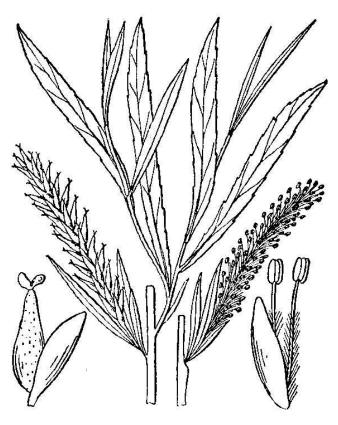
The Narrowleaf, Sandbar, Scouler's, and Bebb Willows of Colorado

... we discovered a Grizzly Bear digging and eating roots in a piece of marshy ground near a large bunch of willows. - Osborne Russell, Journal of a Trapper, 1834.

The Narrowleaf willow (Salix exigua) grows as shrubs, thickets, or rarely small trees, 4 to 20 feet (1 to 6 m) high, widely distributed through the region, growing from the plains up into the lower parts of the mountains, on borders of streams and ditches. This is the most widely distributed willow in North America. The trunk may rarely reach 5 or 6 inches (12 to 15 cm) in diameter, and then the branches are spreading and form a rounded crown. The leaves are 1 to 4 inches (2.5 to 10 cm) long, very narrow, 1/8 to 3/8 inches (3 to 9 mm) wide, with a few teeth or none. Leaves may have many tiny white hairs, or none. The leafstalks are short, 1/8 inch (3 mm) or less. Stems are pale to dark brown. Bark is thin, graybrown, and cracked.

This plant spreads both by seeds and by sending up sprouts from the roots, thereby forming thickets.

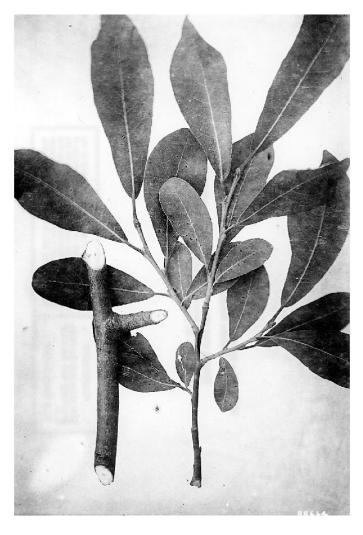




The Sandbar willow (*Salix interior*) is a very similar willow, growing on banks of streams and ditches on the plains, along the eastern foothills, and near the western boundary of Colorado, at elevations from 4500 to 6700 feet (1400 to 2000 m).

Both willows may be called Sandbar willow or Coyote willow. The *interior* willow has relatively smooth leaves. The classic encounter with a Grizzly Bear in the early exploration of the Old West was repeated dozens of times. It began by accidentally surprising Old Bruin - sometimes weighing as much as 1000 pounds - in a willow thicket along a stream in the lowlands of Colorado, Wyoming, Montana, or Idaho. This was followed by an exciting half hour involving flight, gun fire, tree-climbing, and scattered property. Sometimes the bear was vanquished, but more often he or she escaped. Nowadays grizzly bears have been forced to retreat to remote high country and plateaus, such as Yellowstone Park, at higher elevations than they prefer. In early days they were common in the lowlands along streams and in thickets.

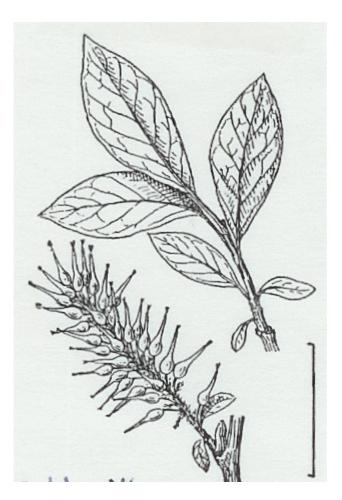
Scouler's Willow



Shrubs or small trees widely scattered in the mountains from 8000 to 10000 feet (2400 to 3000 m) elevation, sometimes as low as 6500 feet (1950 m) or as high as 11000 feet (3300 m). Typically a shrub to 10 feet (3 m) high, and sometimes a tree to 30 feet high (9 m) with a 4 inch (10 cm) trunk, the branches, reddish-brown to almost black, are slender and hang downwards on trees. Leaves are generally oval with a blunt or rounded point, 1 to 3 inches (2.5 to 7.5 cm) long and $\frac{1}{2}$ to 1 inch (12 to 25 mm) wide, widest on the outer half, and a V-shaped base, with a smooth or wavy edge, dark green and shiny above, veined and hairy-whitish beneath; leafstalks are $\frac{1}{2}$ to 1 inch (12 to 25 mm) long. Twigs covered with velvety hairs. The bark is dull gray or dark reddish brown, thin, in broad flat scaly ridges. Grows in both moist and dry settings; this is the only Colorado willow to grow in forests away from streams. Like the Bebb willow this tree may grow a single upright main stem, not branching at the ground, with a crown of foliage, sometimes a narrow crown in forests. Like the Pussy willow, the catkins or blooms appear before the leaves. This tree and its foliage has a general similarity to the Bebb willow which also grows in the mountains. The smooth, hairless, and even shiny upper surface of the leaf of the Scouler willow is one distinction. Salix scouleriana.

Bebb Willow

Shrubs or small trees. Unlike most willows this tree often has a single main trunk or stem and a bushy crown of foliage, more like the typical concept of "tree" shape than most willows possess. It may reach 25 feet (7.5 m) high. The Bebb willow grows on river banks and hillsides, including dry locations, from the foothills to the subapline. It is widespread in the mountains. The leaves are 1 to 3 inches (2.5 to 7.5 cm) long, $\frac{1}{2}$ to $1\frac{1}{2}$ inch (12 to 35 mm) wide, thin, with a pointed or rounded tip and a rounded base, or rarely a Vshaped base. The leafstalks are less than 3/8 inch (10 mm) long. The leaves are dull green with whitish hairs on both sides; the lower surface is very veiny. They may have no teeth or only a few obscure ones. Bark is thin, olive-green or reddish gray, with shallow fissure and plate-like scales. Salix bebbiana.



There are many kinds of willows in Colorado, and distinguishing between them is often difficult. The Bebb and Scouler's willow are the most distinctive, but not common. Many willows gown as shrubs a few feet tall and arre not listed here.

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Top two drawings from: USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 1.

Scouler willow photo from: USDA / A.W. Sampson. Provided by <u>National Agricultural Library</u>. Originally from <u>US Forest</u> <u>Service</u>. United States, OR. 1909