

## Salix spp.

### Willows

### Salicaceae

### (Willow/Poplar Family)

#### Introduction

Willows are one of the most familiar and widespread groups of shrubs in the state of Washington. Although most grow along creeks or rivers certain species are found high upon mountain slopes where they form a shrubby mat only a few inches high.

All willows like sunlight and seek open places. Their bark is exceptionally bitter. In spring and early summer each leaf stem has two shiny, false leaves growing at the base. Most willow leaves are long and graceful with smooth or slightly toothed edges. Winter buds have a single, hood-like scale. "Pussy willows" and white, fluffy catkins are very noticeable in the spring.

With thirty or more willows in Washington only a trained botanist can cope with their identification. This is because many species flower before the leaves appear. Male and female flowers appear on different plants. Leaf and twig characteristics often vary greatly with age, and hybridization is common.

Most of the more recognizable willows will be addressed here.

#### Description

Prostrate or creeping shrubs to tall trees, with usually narrow leaves which have short stems, and large to minute, persistent or deciduous stipules, if present. Individual plants are male or female. Flowers in the spring develop before leaves (precocious), with them (coetaneous), or after them (serotinous). A perianth does not exist. The individual female flower has a single 1-celled ovary, sessile or borne on a short pedicel, subtended by a single small scale; in the axil of the pedicel is a small "ventral gland," and in some species there is a second gland dorsal to the pedicel, called a "dorsal gland." Catkins are sessile to pedunculate, erect or spreading; bracts of the catkins entire or rarely shallowly dentate at apex. Stamens 1-8, usually 2. Styles elongate, entire or bifid. Stigmas short to long, entire to divided. Pollination can occur by wind, but often insects as bees collect and move the pollen from flower to flower. The ripened ovary forms a capsule which splits down two sides from the apex, freeing large numbers of small seeds, wind-borne by a mass of silky-down.

### Selected species

#### Tree

**Size: To 45' in height**

#### **Peachleaf Willow (*S. amygdaloides*)**

Lvs 2-4", lance-shaped, >3x longer than wide, finely serrulate, gradually tapering to a very fine tip, pale beneath. Streambanks, widespread eastern Washington.

#### **Pacific Willow (*S. lasiandra*)**

Lvs length/width ratio at 5-6/1, glands/processes at base of petiole. Along streams, lowlands to moderate elevations Widespread Washington

#### Alpine

**To 6" high, shrubby, mat-like**

#### Willows

#### **Cascade Willow (*S. cascadenis*)**

Lvs 1/4-3/4", glossy green. High Cascades, Mt. Rainier

#### **Snow/Dwarf Willow (*S. nivalis*)**

Lvs 1/8-1/2", silvery beneath. Olympics, High Cascades, Mt. Rainier

#### Shrubs

to

#### Small

#### Trees

Leaves wide, roundish

#### **Scouler Willow (*S. scouleriana*)**

Lvs 2-4", 1/3 as wide, rounded or broad tip. Smooth on both sides Sagebrush to Yellow Pine Zones, Olympics

**Sitka Willow (*S. sitchensis*)**

Lvs 2-4", 1/3 as wide, rounded tip. Velvety w/fine hairs beneath. Watercourses to middle elevations. Eastern & Western Washington.

**Hooker Willow (*S. hookeriana*)**

Lvs 2-6", 1/2 as wide, dull-pointed. Woolly hairs beneath. Wet or dry land. Coastal forests.

**Bebb Willow (*S. bebbiana*)**

Lvs to 2", 1/2 as wide, round-pointed. Wet places. Sagebrush and Bunchgrass Zones

"Sand

Bar"

Willows

To 15' high, slender limbs, narrow leaves

**Silverleaf Willow (*S. argophylla*)**

Lvs 2-3", silvery w/white hairs. Banks of Snake River & tributaries. Sagebrush & Bunchgrass Zones

**Coyote Willow (*S. exigua*)**

Lvs 2-4", 1/8-1/4" wide Silvery green. Banks of Snake River & tributaries. Sagebrush & Bunchgrass Zones

**Miscellaneous Willows**

**Barclay Willow (*S. barclayi*)**

Variable lvs, 2-4", ovalish, sharp-pointed, hairy above, bloom beneath. Subalpine, Mt. Rainier, Olympics

**Arroyo Willow (*S. lasiolepis*)**

Young lvs silky, old lvs hairy beneath. Stream banks at low elevations of SE Washington

For a more definitive vegetation key of willows in Washington State view my [Willow Key](#) (PDF format, 194K).

**Use**

Particularly Hooker's willow (but others too), the bark was peeled in May or June, removed the outer part, split the inner tissue into thin strands, and twisted into long ropes. This rope was used to make fishing lines and various types of nets, including gill-nets, reef-nets, purse-nets, bagnets, and duck-nets. The bark was used to 'shingle' baskets. Also made were slings and harpoon lines. Others used the branches of young Hooker willow as poles for fish weirs because they were said to take root wherever they were 'planted' in the river.

Sitka willow bark was used to make a grey dye for mountain goat wool. The shredded bark was used for diapers.

Willows are the source of the natural precursor to aspirin, salicylic acid, found in the leaves and bark.

[Hitchcock & Cronquist, 1990; Pojar & McKinnon, 1994; Turner, 1995]