

The Herb Society of America's Notable Native™ Herbal Tree 2018

Willow

Salix L. species



Family: Salicaceae

Latin Name: *Salix* L. species

Common Name: Willow, sallow, osier

Growth: Trees and shrubs

Hardiness: Zones 2-9, by species

Light: Full sun to partial sun

Soil: Moist to wet soils

Water: Moist to standing water tolerated in many species

Uses: Medicinal, crafts, household, industrial, pollinator, larval food source

Propagation: Seed, cuttings

Salix scouleriana, Scouler's willow.
Native to western North America.
Photo: The Xerces Society for
Invertebrate Conservation.

History

There are ~400 species of willow which are distributed primarily in the Northern hemisphere. A subset of 107 species and subspecies are native to the United States and Canada. They are joined by 18 non-native species and hybrids that have naturalized into North American landscapes. Members of this genus are found in the earliest known flowering plant fossil records, dating to the Cretaceous period. There is evidence they co-evolved with native bees and are still pollinated by bees today.

The etymology of the genus traces back as far as Old English, Old German, and Middle Irish, all relating to the words *salix* and *sallow* generally meaning dusky, dark or grayish, greenish yellow. The Latin word *Salix* is derived from the earlier Celtic word *sallis* - 'sal' near and 'lis' water referring to the plant's tendency to grow in damp soil or near waterways.

Description

Willow species range from deciduous dwarf shrubs to medium trees. The habitats vary from prostrate shrubs to upright shrubs and trees to weeping trees. The stems of willows are alternate in arrangement and can vary in color. Many cultivars have been selected for

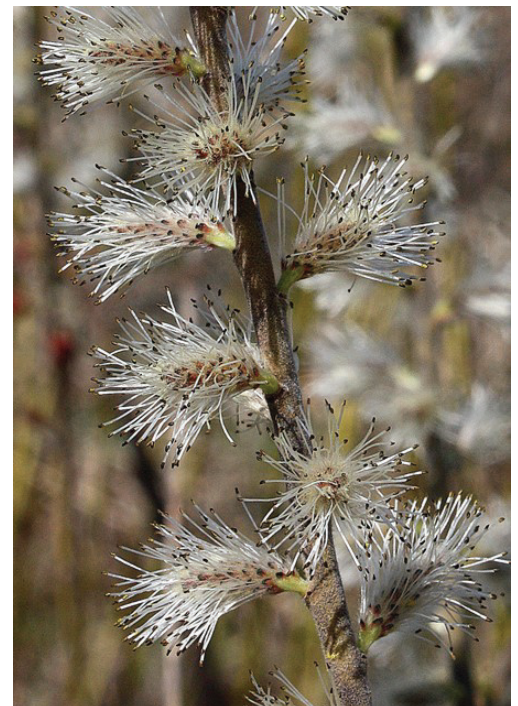
stems that are yellow to red to black. This color is best expressed in young stems. Leaves of willows are alternate, but in some species they can be sub-opposite to opposite. Leaf shape varies from rounded to gracefully linear in colors that range from deep green to silvery green. Fall color depends on the species from a clear yellow to non-existent. Willows are dioecious with male and female catkins (aments) developing in early to mid-spring in leaf axils on separate plants. The predominately upright catkins consist of tiny, multiple flowers which are visited and pollinated by many early season bees, flower flies, and wasps. The fruits are two-sided capsules that open to reveal seeds that are attached to silky fibers. The fibers are important for seed dispersal.

The wood is pliable and somewhat soft and watery sap is abundant. Roots are dense, fibrous and stoloniferous in many species.

Culture & Habitat

Willows are usually found growing near water and some species can stand inundation. Most species native to the lower 48 states of the US are medium to large multi-stemmed shrubs or upright trees. Arctic species or those that occur in higher elevations are often dwarf or creeping shrubs, some only a few inches tall. Their fibrous roots hold the soil tightly making them very useful for erosion control along

rivers, lakes and streams. Large thickets may form as suckers are numerous in many species. Willows often appear as a pioneer species following natural or manmade disturbance. In cultivation, they benefit from



Salix humilis, prairie willow. Eastern half of U.S.
By R.W. Smith, Lenawee, MI. Courtesy
Lady Bird Johnson Wildflower Center,
www.wildflower.org/gallery.

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Plants for ornamental purposes are best propagated by cuttings so that desirable traits are maintained. Male plants produce more colorful catkins and are more desirable for ornamental purposes.

Many willows benefit from pruning. Severe pruning such as coppicing and pollarding produce long straight shoots useful for basket making, trellises, wattles and other structures.

Uses

Medicinal: Willow bark and leaves have been used since ancient times as a fever reducer and pain reliever. Hippocrates wrote of the usefulness of willow in the fifth century BC. Native Americans utilized willow for its medicinal properties as febrifuge, pain reliever, antidiarrheal, dermatological aid, hemostat, food, and many other uses.

The chemical salicin present in willow bark is similar to aspirin (acetylsalicylic acid) which was developed in the 1800s using salicin from willow. Willow bark is currently used by some as an herbal alternative to aspirin.

Basketry/Fiber: Straight shoots of willow can be woven to make baskets, fish weirs, wattle, fences, trellises, and other garden ornaments. Both European and North American species are desirable. Willow fiber is also used to make paper and cordage.

Charcoal: Used to make artist charcoal and by Native Americans for black paint.

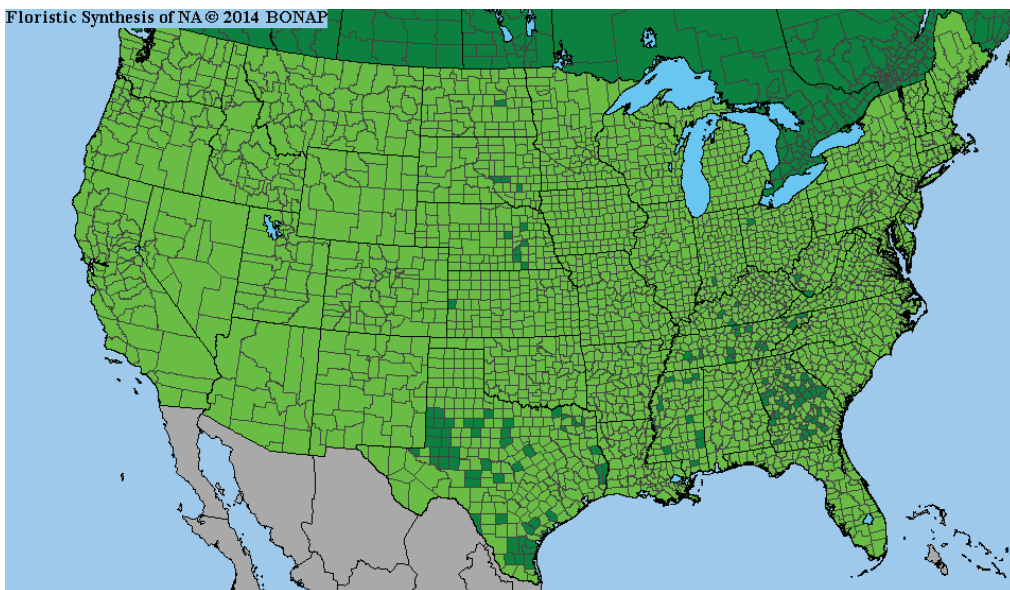
Larval Food Source: Used by, among others, Mourning Cloak, *Nymphalis antiopa* L., a North American butterfly as a larval food source. Caterpillars can strip the plant's foliage when feeding. However, willows can withstand defoliation, rarely resulting in long term injury to the plant.

Conservation: Erosion control, windbreaks, biomass, bioremediation.

Propagation

With very few exceptions, most willows will root easily from cuttings. Six-inch pieces with at least three leaf nodules from one- to two-year-old stems should be used as cuttings. The cuttings will root in 15-18 days. The best time to root cuttings is in fall or early spring. Willows root easily because they contain the natural growth hormones indolebutyric acid and salicylic acid. In fact, a homemade rooting hormone can be made by soaking willow cuttings in water for

Floristic Synthesis of NA © 2014 BONAP



Presence of *Salix* species in North America. Dark green=present; light green= not rare.

several days. The resulting solution is known as "willow water" and can be used as a rooting hormone for other cuttings.

Willow seeds germinate easily. However, only fresh seeds will be reliably viable. Seeds should be sown in a moist medium and kept moist until germination has occurred.

Plant and Seed Sources

—Dunbar Gardens
www.dunbargardens.com Mount Vernon, Washington. Sells a variety of willow cuttings to ship from January to May depending on planting area. Cuttings are sorted by color specifically for basket making.

—Vermont Willow Nursery
www.willowsvermont.com Fairfield, Vermont. Willow varieties offered for numerous uses: living structures and furniture; hedges, showiest colored stems for cutting and winter gardens; showiest catkins; curly stems for cutting; erosion control; biofuel willows; and more.

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Salix amygdaloides, orange stem on peachleaf willow. Kathy Schlosser.

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