

Scouler's Willow

Salix scouleriana Barratt ex Hook.

This facilitative riparian, dioecious species is the only truly native upland *Salix* (2). Characteristic to Scouler's willow, stripped young bark has a skunky odor. It's ability to rapidly colonize disturbed sites makes it useful in reclamation projects. Scouler's willow has light weight, shock absorbing stems that are ideal for prosthetic devices (7). Willow bark has aspirin like properties used by Native Americans to cure many common illnesses. Local references of *S. scouleriana* are Pussy willow or fire willow (2, 3). Many willow species, especially Scouler's willow, are self infertile and freely hybridize with other willow species.

Plant Characteristics



VEGETATIVE CHARACTERISTICS

Form and Stature: A robust, multistemmed, deciduous shrub or small tree is 2-12 m (6.6-39 ft) tall reaching 20 m (65 ft) in some cases (3, 4, 5). Young branches, often forming right angles, are dark brown to yellowish brown frequently velvety and 1-2 dm (3.9-7.9 in) thick. Branches turn grey and fissured with age (2, 3, 5).

Leaves: Generally leaves appear reverse egg shaped with tapering bases, smooth to weakly toothed margins and reddish-strigulose beneath. Vigorous shoots may produce larger leaves and more coarsely toothed margins. The season's first leaves are glabrous above

and densely pubescent beneath. Late season leaves are densely pubescent during expansion and become mostly glabrous at maturity, the midrib retains pubescence. Stipules are small and deciduous, less than 2 mm (0.07 in) long. (2, 4, 5)

Inflorescence: Single scaled catkin buds develop in mid winter with silky hairs emerging in late winter (3). Aments are exposed before the leaves (2, 5). Both ament sexes have dark brown to black bracts (5). Pistillate catkins have densely silky pistils encasing numerous highly viable non dormant seeds (1). These female aments are 1.5-6 cm (0.59-2.36 in) long, bore on 3-10 mm (0.11-0.39 in) branchlets (2). Male aments are 1-3 cm (0.39-1.18 in) long and sessile (2).

Roots: Scouler's willow has a deep extensive non-rhizomatous rooting system

GENERAL HABITAT CONSIDERATIONS

Soil Types and Conditions: It is adapted to coarse, medium to fine textured and moderate to well drained soils on gentle to moderate transitional slopes. Rarely found on wet or saline soils. (1, 7)

Moisture/temperature requirements: Inhabits lowland to mid montane seepage areas, clearings, wetlands and forest edges (3, 4, 5). Found up to 3,048 m (10,000ft) and is fairly shade tolerant. At low to moderate elevations on moister soils, this species can reach tree status. Higher elevations encourage the species to become shrubbier. Favorable in locations with 24-160 cm (9.5-63 in) of precipitation. (1)



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Management Considerations

UTILIZATION

Forage and Palatability: A critical winter and spring browse especially in Ponderosa pine communities (1, 7)

Wildlife Use: Palatable to wildlife, especially in winter to early spring (7). In Ponderosa pine forests, preferred by deer, elk, moose and bighorn sheep (1). Moose will consume the largest shoots available (6). Upland birds and game ducks browse on all parts of Scouler's willow (1). Provides great cover for many avian species such as woodpeckers and upland birds. Honey bees use this willow for brood rearing, food and assist in willow pollination.

PLANTING

Growth Season and Seedling Establishment: Scouler's willow blooms in early spring (7). In Alaska, catkins appear at the end of March and can begin releasing seeds by early June (3); leaves start developing from mid May to early June.

Propagation: Reproduces by resprouting and seed production (7). Willows are sexually active by the age of 10 years (1). Light is required for rapid seed germination within the first 12-24 hours after seed release. Seed may be stored up to 4 to 6 weeks if kept moist at 32 to 41 degrees Fahrenheit (0-5 C). Many willow species, especially Scouler's willow, are self infertile and freely hybridizes with other willow species. Cuttings must be collected, between November and March, and planted the same day. Roots will appear within 10 days of planting, so quick placement is important. Willows store carbohydrates in the early stages of active growth, suggesting pre-rooted cuttings have more reserves than non-rooted cuttings. Cuttings of Scouler's willow show a 40-80% rooting success.

DISTURBANCE

Response to Competition: A formidable resource competitor with Ponderosa pine seedlings (1).

Response to Grazing: Browsing stimulates denser growth but continuous browsing over several years depletes resources. Mechanical damage causes vegetative resource allocation opting the willow for a more juvenile growth form (6). Tannin levels are reduced based on timing of mechanical brushing, increasing nutritional value and palatability. (1,6)

Response to Fire: The subterranean root crowns resprout rather than surface resprouting. This phenomenon increases willow spread. (7) Scouler willow communities respond well to fall and spring burning. Fall burning is subject to removal of the following winter's browse.

Response to Drought: Scouler's willow has average drought tolerance.

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Sources:

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