



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Sandbar Willow *Salix exigua* Nutt. ssp. *interior* (Rowlee) Cronq.

State Status: **Threatened**

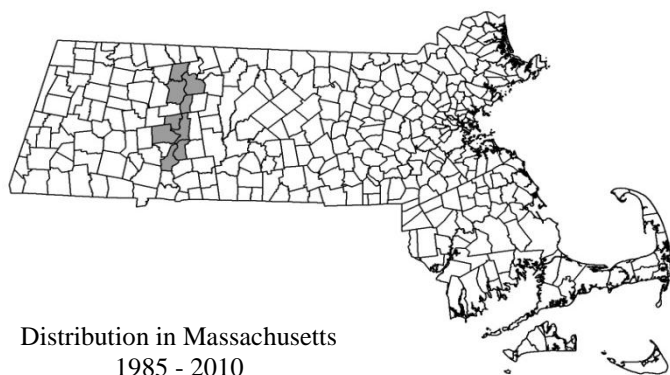
Federal Status: **None**

DESCRIPTION: Sandbar Willow is a multi-stemmed shrub, 1.5 to 3 m (5-10 feet) tall (up to 5 m elsewhere in its range) that forms thickets connected by underground stolons (horizontally growing shoots from which roots and more shoots grow). The slender, reddish-brown branchlets are silky-hairy when young, becoming smooth. Bark of the older stems is brown to grayish. The linear leaves are 5 to 14 cm (2-6 in) long and 5 to 12 mm wide on very short petioles, pointed or tapering to a point at both ends. Like the twigs, the leaves are silky-hairy when young, becoming smooth. They are silvery green on both sides but paler beneath, with small, pointed, well-spaced teeth along the margin. The flowers are produced in catkins that appear in April to May. The fruits on the female shrubs are conspicuous clusters of small capsules that, as in most other willows, remain on the tree for only a short time.

AIDS TO IDENTIFICATION: Sandbar Willow grows in thickets where most of our other willows tend to grow in clumps. Leaves are very narrow, often ~10 times as long as wide. The teeth on Sandbar Willow leaf margins



Typical dense thicket of Sandbar Willow on a sandy river island and a close-up of the long leaves. Photos: B.A. Sorrie, NHESP.



Distribution in Massachusetts
1985 - 2010
Based on records in the
Natural Heritage Database

are larger and wider-set than on most other toothed willows. Stipules are minute or absent on Sandbar Willow. Catkins are produced with the leaves rather than before.

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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SIMILAR SPECIES: Saplings of Black Willow (*Salix nigra*), which is usually a medium to large tree, are often found with Sandbar Willow. The leaves of both are linear, but the Black Willow has leafy stipules encircling the twig at the base of the leaves; the Sandbar Willow has no stipules. The teeth of Black Willow leaves are sharper and more closely spaced than those of Sandbar Willow. The leaf edges of the non-native Purple Osier Willow (*Salix purpurea*) are not serrated, the leaf width is greater, and stipules are present. Also, Purple Osier Willow does not form thickets.

HABITAT IN MASSACHUSETTS: Sandbar Willow is found on islands, sandbars, and beaches in the flood zone of the Connecticut River. It grows on sandy, gravelly, or rocky substrates where it is subjected to annual inundation by the river. Because of the force of spring flooding, plants are usually low and sprawling, rarely more than 2 m (6 ft) tall. The branches are very pliable, and therefore resistant to being snapped by the floodwater. Commonly co-occurring species include Black Willow, Switchgrass (*Panicum virgatum*), Big Bluestem (*Andropogon gerardii*), and umbrella-sedges (*Cyperus* spp.).

PHENOLOGY IN MASSACHUSETTS: Flowers appear with or just after the leaves in mid- to late spring, with a peak flowering period in May; however, flowers may also grow at the tips of current shoots throughout the growing season. Seeds are generally released during a 1- to 2-month period from mid-May to mid-July; however, seed release may continue through October.

RANGE: Sandbar Willow is widely distributed in North America from eastern Quebec to Alaska, south to Virginia and Louisiana and west as far as the Rockies. It is common throughout most of its range, except on the east coast, where it is listed as rare in several states.

POPULATION STATUS IN MASSACHUSETTS: Sandbar Willow is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. It is currently known from Franklin, Hampshire, and Hampden Counties; and is known from Middlesex County where it is considered to have been introduced.

MANAGEMENT RECOMMENDATIONS: The primary threat to Sandbar Willow is a scarcity of suitable habitat. Sandbar Willow occupies a very precarious position in a dynamic habitat. If the flooding increases, the plant may be washed out. If the flooding decreases, trees such as Black Willow, Eastern Cottonwood (*Populus deltoides*), and Silver Maple (*Acer saccharinum*) may outcompete the Sandbar Willow. Deer browse and recreational use of sites are other major threats. Sites should be monitored for invasions of exotic plants and over-abundance of native plants due to reduced flood frequency; if exotic or native plants are crowding and out-competing this species, a plan should be developed, in consultation with the Massachusetts Natural Heritage & Endangered Species Program, to remove the competitors. Known habitat locations should be protected from dramatic changes in light or moisture conditions. Sandbars on major rivers can suffer impacts from boaters, anglers, and swimmers. Rare plant locations that receive heavy recreational use should be carefully monitored for plant damage or soil disturbance. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

REFERENCE:

USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>, 26 October 2010). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Updated 2015

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