

3) *Arboretum Review*

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ARBORETUM REVIEW NO. 28—1976  
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## Poplars and Willows

The genus *Populus* contains many species; they are known by several common names—aspens, cottonwood, poplar, balm of gilead, etc. Most are trees and can be planted for many purposes. Most of the species and cultivars are fast-growing. Typically, they are dioecious (male and female flowers on separate plants. Female trees produce "cotton" which contains the seeds). To some people, cottons floating in the air is a nuisance.

The genus *Salix* includes the willows. The over 300 species range from low, prostrate shrubs to tall trees. Relatively few are in cultivation. Typically, they are dioecious. The female catkins produce airborne seeds, like those of the genus *Populus*.

***Populus alba* (White Poplar).** With its silver or white foliage, this is a most attractive tree; however, its use should be limited because it sends up suckers throughout the yard. This is the only poplar with lobed leaves. Since the lobing resembles that of the maple, it is incorrectly called a silver maple. The roots are shallow and highly competitive. A variety *nivea* has leaves that are more silvery than are those of the species.

***Populus alba* 'Pyramidalis.'** This is the Bolleana Poplar that has often been planted to replace the less hardy Lombardy. Its narrow, upright form makes it a popular screening tree. Unfortunately, it is relatively short-lived and is subject to the canker disease affecting most poplars. It also sends up suckers, especially when a live tree is cut down. This cultivar has grown well in the arboretum. Trees planted in 1967 are now 35 feet tall.

***Populus balsamifera* (Balsam Poplar).** The specific names, *candicans* and *tacamahaca*, are also used for this species. This tree is native in northern parts of our area. It is characterized by

long, pointed, resinous buds and its distinct odor. It grows to be a large, spreading tree. The trees in the arboretum are doing well.

***Populus deltoides* (Eastern Cottonwood).** This native tree is scattered throughout the arboretum's native woods. It grows to be very large, reaching its greatest size in moist sites. The "cotton" is objectionable when female trees are planted close to homes or offices. This fast-growing tree is often used in shelterbelts. The fall color is golden yellow. 'Siouxland' is a selection that has resistance to the cottonwood rust disease. It is being planted in the Dakotas and, to a limited extent, in western Minnesota. In our trials, it has done well. Trees planted in 1967 are now 40 feet tall.

***Populus x gileadensis* (Balm of Gilead).** This hybrid has an uncertain origin. Our trees were propagated from a tree growing on the St. Paul campus of the University of Minnesota. Planted in 1973, it is too soon to evaluate the trees' performance in the arboretum.

***Populus manshurica* (Manchurian Poplar).** Our tree was obtained from Skinner's nursery in Dropmore, Manitoba. The trees are now making satisfactory growth and stand about 18 feet tall. The Manchurian Poplar has a distinct odor similar to that of the Balsam Poplar.

***Populus maximowiczii* (Japanese Poplar).** This species, native to Japan and northeastern Asia, is the most promising ornamental tree of all the species of *Populus*. Our oldest trees, planted in 1959, are now 40 feet tall and about 8 inches in diameter. Trees planted in 1967 are about 30 feet. The bark is light green and quite smooth. The tree is one of the first to leaf out in the spring. Our trees have been quite disease-free.

***Populus maximowiczii* (Japanese Poplar)** is a clean tree with interesting greenish-white bark.



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**Populus nigra 'Italica' (Lombardy Poplar).** This narrow, upright poplar has been widely planted for screening. The trees are subject to canker and drought injury. They are also subject to winter dieback. The trees in the arboretum have shown the usual problems.

**Populus nigra thevestina (Theve's Poplar).** This variety is similar to the Lombardy Poplar, but is not quite so narrow. Trees in our collection have shown some winter dieback. Trees planted in 1967 are now 30 feet tall.

**Populus sargentii (Plains Cottonwood).** This western species is quite similar to the Eastern Cottonwood. The leaves are broader than they are wide, and the branches are a lighter yellow. Mature trees are smaller. The trees at the arboretum are growing well.

**Populus simoni (Simon Poplar).** The trees at the arboretum were planted in low, wet soil and did not live long. Probably the site, rather than a lack of hardiness, caused them to die. This species is dense and upright and is sometimes planted for a screen.

**Populus simoni 'Fastigiata.'** This is a narrowly pyramidal selection of Simon Poplar. The trees at the arboretum were planted in 1973 and are just getting started.

**Populus sungarica.** This species, native to Manchuria, was planted in 1974. It is too soon to evaluate its performance.

**Populus tremula (European Aspen).** This small, round-headed tree is similar to our native Quaking Aspen and has the same suckering habit. The trees appear to be fully hardy.

**Populus tremula 'Erecta.'** This narrow, columnar tree may prove to be a valuable substitute for the Bolleana and Lombardy poplars. It is much smaller. A tree planted in 1966 is now 30 feet tall and only 4 feet wide.

**Populus tremuloides (Quaking Aspen).** This native aspen has roundish leaves with flattened petioles that cause the leaves to quiver in the slightest breeze. The bark is smooth on young stems and is light green to grayish white. Suckers sometimes form from the roots, producing a colony of trees. It's a fine tree for natural plantings. Trees planted in 1966 are now 25 feet tall.

**Populus trichocarpa (Black Cottonwood).** The plants at the arboretum are an upright selection forming pyramidal trees, at least when young. The arboretum trees, planted in 1967, are now about 20 feet tall and 7 feet wide. This species is characterized by its narrow leaves and black buds.

**Populus spp.** Several hybrids and cultivars of uncertain origin are being tested. These include hybrids of *P. alba* x *P. grandidentata* discovered by A.G. Johnson along Minnesota Highway 7; *P. grandidentata* x *P. tremuloides*, growing naturally in the arboretum; 'Robusta,' selected from seedlings produced by crossing *P. angulata* x *P. nigra plantierensis*; 'Vernirubens,' obtained from the National Arboretum; 'Brown twig,' obtained from Skinner's Nursery, Dropmore, Manitoba; and Brooks 6 from the Brooks Experimental Station in Alberta. None are exceptional. The 'Robusta' grows rapidly under cultivation, but has little merit as a specimen.

**Salix acutifolia (Sharpleaf Willow).** Plants started in 1960 grew 25 feet tall in 6 years. These were removed because of construction. New plantings have been made.

**Salix acutifolia 'Pendulifera.'** These were obtained from the National Arboretum in 1966. The trees are about 12 feet tall, with a spread of 20 feet. The plants appear to be fully hardy and have a good green color.

**Salix alba 'Calva.'** This is an upright form of white willow. Our plants were obtained from the Morton Arboretum. Trees planted in 1967 are now 35 feet tall and 15 feet wide.

**Salix alba 'Chermesina.'** This cultivar of the white willow was selected for the bright red color of the new growth which is most brilliant in late winter. In Canada, this cultivar is used as

a cutback shrub. The plant is cut back to the ground each spring, and a cluster of stems grows up to the ground each spring. A cluster grows to a height of about 6 feet. These new stems have a brilliant red color. The growth at the arboretum plantings—made in a low, wet area—was disappointing. The trees were removed to build a pond. This cultivar should be tried again on a better drained site.

**Salix alba 'Metmondiana.'** This cultivar was obtained from the National Arboretum. It grows more as a shrub than as a tree. Plants started in 1966 are now 15 feet tall and have a spread of 20 feet.

**Salix alba 'Tristis' (Golden Weeping Willow).** This cultivar is sold under several names. The 'Niobe' willow, introduced by Dr. N. E. Hansen from South Dakota, is apparently this cultivar. The large tree is the hardiest of the weeping willows. Trees planted in 1966 are now about 27 feet tall and 27 feet wide. This willow does especially well near water. The drooping branches can be a problem in a small yard. Extremely brittle wood often results in a litter of branches after a wind storm.

**Salix amygdaloides (Peach-leaved Willow).** This tree is native in the arboretum. The branching habit is upright. The twigs are reddish brown to orange. The long, narrow leaves resemble peach leaves.

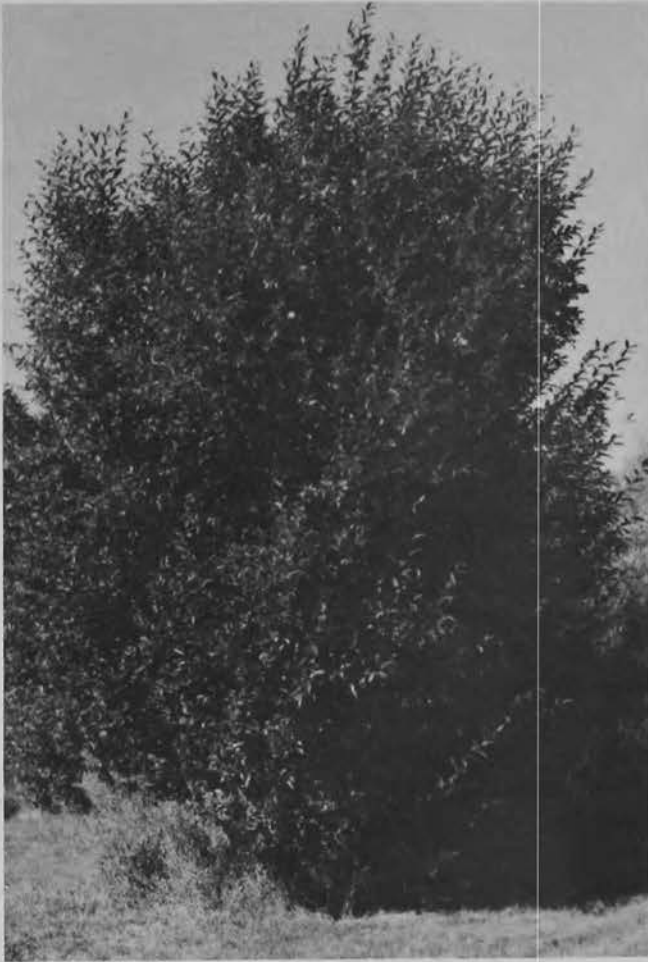
**Salix arctica (Arctic Willow).** The arboretum plants, obtained from Skinner's Nursery, Dropmore, Manitoba, do not fit the description given in Rehder's book. They may be *Salix purpurea* 'Gracilis.' The plants are growing in the formal hedge area and make an attractive clipped hedge. Left unpruned, the plant would grow about 5 feet tall.

**Salix babylonica (Babylon Weeping Willow).** Our plants, obtained from the Arnold Arboretum, have been surprisingly hardy. Plants started from cuttings in 1966 are now 15 feet tall and 18 feet wide. They show no signs of winter injury. This is surprising since the arboretum is 3 plant zones farther north than is recommended for this species. The cultivars 'Crispa' and 'Ramshorn' have not been hardy.

**Salix alba 'Tristis' (Golden Weeping Willow) is one of the most popular of the weeping trees. Plant it near water, however.**







***Salix pentandra* (Laurelleaf Willow)** is a small tree useful for windbreaks and screen plantings.

***Salix x blanda* (Wisconsin Weeping Willow).** This hybrid of *S. babylonica* and *S. fragilis* has been quite hardy and is doing well. Trees started from cuttings received from the Arnold Arboretum are now 15 feet tall and 15 feet wide.

***Salix caprea* (Goat Willow).** This large shrub is often planted for its bright yellow catkins appearing in early spring. The arboretum plants are about 8 feet tall after 8 years.

***Salix discolor* (Pussy Willow).** This species is often grown for its pussy willows. It is a large native shrub growing 20 feet tall. Arboretum plants started in 1967 are now 15 feet tall and 10 feet wide.

***Salix exigua* (Coyote Willow).** This southwestern species, with yellowish-green, silky leaves, has not proven hardy at the arboretum, although our plants were obtained from Morden, Manitoba.

***Salix fargesii* (Farges Willow).** This native of western China is doing well at the arboretum. Winter injury ranges from none to slight. Plantings made in 1966 are now 25 feet tall, with a spread of 20 feet. Our plants have a weeping habit.

***Salix gilgeana* (Gilg Willow).** Our plants, obtained from the Morton Arboretum and planted in 1966, are now 12 feet tall and 15 feet wide. This is considerably larger than this species is supposed to grow. Winter injury has varied from none to severe.

***Salix glaucophylla glaucophylla* (Firm Blueleaf Willow).** This variety has a firmer and thicker leaf than does the species. Our one plant was overcrowded and was removed after repropagation. Winter injury was slight to none.

***Salix hippophaifolia.*** No common name is given for this species we obtained from the Morton Arboretum. Plants started in 1967 are now 25 feet tall and 20 feet wide. The plants are fully hardy.

***Salix humilis* (Prairie Willow).** This medium-height shrub is native to the prairie states. Plants at the arboretum are about 6 feet tall and about as wide. Our plants were obtained from the Plant Introduction Gardens of Ames, Iowa, as PI 303584.

***Salix interior* (Sandbar Willow).** Our plants were obtained from the Morton Arboretum. The plant suckers freely and now forms a thicket about 15 feet tall, and covers a circle 30 or more feet in diameter. The leaves are slender and rather small. This species is also native in the arboretum.

***Salix irrorata* (Bluestem Willow).** This shrub is native to the southwestern United States. It is characterized by a silvery white bloom on the young stems and black bud scales. This is a fine species for cutting in early spring which the catkins open. Unfortunately, it is not fully hardy; some dieback may occur following a severe winter. It seldom gets more than 8 feet tall.

***Salix koreensis* (Korean Willow).** This small-to medium-sized tree was obtained from the Morton Arboretum and was planted in 1966. Plants at the arboretum are now about 25 feet tall and appear to be fully hardy.

***Salix matsudana* 'Tortuosa' (Corkscrew Willow).** Several attempts have failed to grow this cultivar of the Hankow willow from North China and Manchuria. Winter injury has varied from none to severe. Usually after a few years, the considerable dead wood requires excessive pruning. The twisted stems are useful to flower arrangers.

***Salix matsudana* 'Umbraculifera.'** Results with this Umbrella Willow have been similar to those with the Corkscrew Willow.

***Salix x meyeriana* (Meyer Willow).** This hybrid willow, resulting from a cross between *S. pentandra* x *S. fragilis*, has been hardy. It grew 20 feet tall before it was removed to build a pond.

***Salix miyabeana* (Miyabe Willow).** This native of Japan grows to be a handsome small tree. The arboretum plants are low-headed, but this could be corrected by proper nursery pruning. Trees planted in 1966 are now 25 feet tall.

***Salix oxica.*** This native of Turkestan is either a very large shrub or a small tree. Plants started in 1967 are now 25 feet tall. The plants have been quite hardy.

***Salix pentandra* (Laurelleaf Willow).** This is one of the more attractive willows, having glossy green leaves. It can be grown either as a medium-sized tree or as a large shrub. Arboretum plants started in 1967 are now 25 feet tall.

**Salix purpurea 'Pendula.'** Plants at the arboretum, obtained from a commercial nursery, have shown no tendency to weep. Possibly, they are the species purpurea. Our plants grew about 6 feet tall before they were removed to build a pond. Plants have been repropagated.

**Salix repens (Creeping Willow).** This willow grows along the ground, with upright branches about 3 feet high. Our plants were accidentally destroyed. The plants appeared to be fully hardy.

**Salix rorida.** No common name is known for this willow from Siberia. The fine-textured foliage is shiny, dark green. Plantings made in 1966 are now about 20 feet tall and 20 feet wide.

**Salix sachalinensis 'Sekka.'** This willow has irregularly flattened stems and is often grown as a novelty. Plants have not been sufficiently hardy for our climate.

**Salix x seringeana.** This hybrid willow, *S. elaeagnos* x *S. caprea*, is a large shrub that has been fully hardy. The 1966 plantings are now 20 feet tall and have a spread of 20 feet.

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