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Information About Salix Matsudana

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Abstract. *This article provides information about Salix matsudana, popularly known as willow, and also explains its structure, habitat and medicinal benefits.*

Key words and phrases: *Salix matsudana, cylindrical, ovoid erosion, aeration, landscape, phenolic glycosides, salicin, aspirin.*

Popularly known as Salix matsudana or crooked willow, the tree belongs to the family of exotic plants. Salix matsudana is a deciduous tree 40-50 feet high; young shoots are initially small, thin, yellow, later turn brown-gray and become shiny. Leaves linear-lanceolate, narrowly pointed, tapering to the stem, thinly and regularly toothed (leaves entire except those at the base of the bud), 2 to 4 inches. long, 1⁄3 to 3⁄5 in. wide, bright green above, glaucous beneath. Female flowers in cylindrical spike about 1 inch long, several small entire petals at base, main stem downy. Ovary ovoid or pubescent two-thirds as long, 1⁄8 in. long, tipped with a dark stigma.

Salix matsudana is native to northeastern China and is named after the Japanese botanist Sadahisa Matsuda. The color of the stem of willow cultivars varies from green to golden to orange-gold. Corkscrew willow is a fast-growing, small, deciduous tree that reaches 25-30 feet tall with a 15-foot spread in USDA hardiness zones 4-8.

Salix matsudana is generally resistant to pests and diseases. The tree can attract gypsy moths and aphids, but treatments or sprays are generally not recommended, except for severe infestations. However, the bark is delicate and easily damaged by mechanical impact.

The tree often grows in wet areas or forest remnants, along water banks, along lakes, in drainage channels, and in wet areas. It is a plant that forms dense stands in rivers and drains and is important in protecting water bodies from erosion.

Salix matsudana is one of the recommended species for riparian restoration in western countries due to its easy propagation from cuttings and rapid growth and tolerance to soil erosion.

These morphological adaptations increase aeration to alleviate oxygen depletion caused by flooding. Despite similar morphological and physiological adaptations, Salix matsudana was significantly reduced during flooding. The reason is that there are several types of solix matsuda, which differ from each other in their resistance to floods. Salix subfragilis L. is more flood tolerant than Salix gracilistyla Miq., due to its high root ratio under flooding. The variety "Pendula" has a delicate

structure reminiscent of a water garden. There are other varieties with different canopy shapes and leaf variations.

In general, Salix matsudana has several physiological and morphological characteristics that allow it to withstand various water effects. These features include the control of photosynthesis and related gene expression under oxygen-deficient conditions, and the formation of additional roots, lenticels and aerenchyma tissues, and elongated shoot segments.

The tree can make a beautiful addition to a residential or commercial landscape, but does not have the longevity needed for a permanent street tree. The tree has the same undesirable characteristics as other willows, including weak wood and insect problems. Weak branches can make the tree prone to breaking as it grows. In addition, it is very prone to decay of the trunk and branches, which begins with mechanical damage. As the tree grows, superficial roots can be a problem.

Due to its water tolerance, Salix matsudana is native to arid parts of China (Inner Mongolia, Kansu, Shaanxi, Shanxi, etc.) and widely cultivated in the north, where it grows very well and does not need water supply except for summer rains (FN Meyer). In ancient times, its wood was used for many purposes, including the packaging boxes that shipped china to Europe, and it was also used to build one-of-a-kind boats, which were used to float cotton crops across rivers. among other things, its wood was used to make the packing cases that sent porcelain to Europe, and it was also used to build the one-time boats that were used to float the cotton crop across the rivers.

The bark, twigs, leaves, leaf buds and flower buds of all Salix species contain phenolic glycosides, particularly salicin and salicortin (which are broken down to produce salicin when the plant material is damaged). The amount of these compounds can vary greatly between species and even within geographic races of the same species.

Salicin has several valuable medicinal properties. In particular, it is an effective anti-inflammatory and pain reliever, as well as a valuable antipyretic.

Modern medicine has used salicin as a way to produce the common pain reliever aspirin, and several species of Salix were commercially harvested for salicin until a completely synthetic way of producing the drug was discovered.

Many species of Salix have a history of traditional use. All parts of the plant can be used, but the bark is more commonly used. Their analgesic and anti-inflammatory properties make them useful in treating severe conditions such as headaches, neuralgia, and joint pain, while they are also widely used in folk medicine to reduce fever.

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