

Willows for Winter

It's February! Although the garden is still emerged in winters grasp, February brings growing signs that spring is not far away. Evergreens are certainly one stalwart sign of life, yet there are many additional plants providing colorful stems or are starting to awaken with the gradually lengthening days! One plant whose buds are showing signs of life is the Willow, botanically known as *Salix*. Often considered for only wet sites, there are several species that make the perfect festive addition for their wonderful tactile interest (*Salix chaenomeloides* pictured below in February) or colorful stems throughout the entire winter!

Salix is a member of the Salicaceae or Willow Family and consists of over 350 species along with numerous naturally occurring hybrids. The genus covers a broad geographic range, with species native to North and South America, Mexico, the West Indies, Europe, Africa and Malaysia. Equally as broad ranging are the forms, which can vary from tall trees to arctic species merely a few inches tall! The genus of *Salix* was officially described by the Swedish botanist Carl Linnaeus (1707-1778) in 1753 and is from the Latin *Salices* or *Salix* for Willow Tree. The Latin name may have originated from the Celtic words *Sal*, meaning near and *Lis* for water – all told a most appropriate name considering how Willows appreciate moist soils! However, the name *Salix* also has other connotations. Dating back to the times of the Greek physician Hypocrites (460-370 BC), it was known that chewing the bark of White Willow (*Salix alba*) or sipping a tea made from the leaves would help reduce swelling and fevers. In 1829, the French pharmacist Pierre-Joseph Leroux extracted a compound from Queen of the Prairie (*Filipendula ulmaria*) that had similar beneficial properties and called it Salicin in recognition of the Willow, which may come as no surprise to know that it too contains this compound. Finally, in 1897, Felix Hoffman of the Bayer Company in Germany created an artificial form named Salicylic-acid – the active ingredient in aspirin! Every time you take an Aspirin for aches and pains, think of how this beneficial drug all began with Willows!



Despite the many species of Willow, the Pussy Willow is probably the most familiar to gardeners. Willows are dioecious, with certain plants having only male flowers while others only female. The soft and silky floral structures we so adore are called aments, or more commonly catkins. This name is derived from the old Dutch word Katteken for kitten! It is easy to understand how the common name of Pussy Willow came about, which is often glorified in folk tales. As written in an article by the Arnold Arboretum (March 2024), an old Polish legend describes how kittens were chasing butterflies by a stream when they mis-stepped and fell into the stream. Hearing the anguished cries of the grieving mother cat, the Willows bordering the stream dipped their stems into the water and pulled the kittens to safety. Every year since, the fur-like catkins appear where the kittens originally clung to the stem!

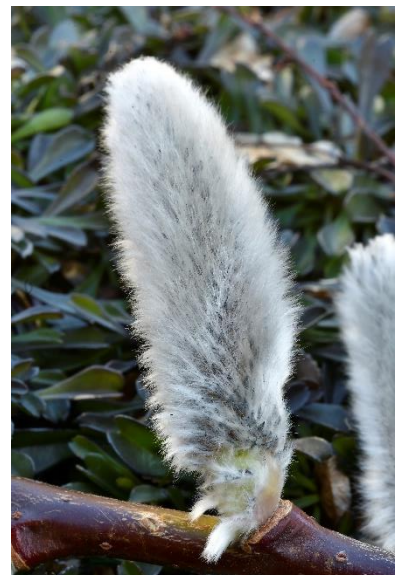
Catkins, consist of a central stem around which the male or female flowers are tightly packed, much like corn on a cob. They also lack the typical whorls of petals and sepals. Each individual flower is subtended and protected by a leafy floral bract, from which the much beloved hairs project. These hairs are botanically known as trichomes. The male flowered plants typically come into bloom first and are showier than their female counterparts. The overall structure is initially covered by a



bud-scale that protects the flowers from the cold of deep winter as seen above left in December for *Salix chaenomeloides*. With the warmer temperatures of mid to late February, the bud-scale is shed (as seen above right in mid-February), whereupon the catkin enlarges to upwards of 2½” long. The growth of the silky trichomes accompanies the shedding of the bud-scales and they serve to protect the developing flowers beneath from late winter’s chill. As the flowers mature, the showier male flowers reveal red to yellow anthers protruding through the trichomes with most species pollinated via early awakening pollinators although, some are also wind pollinated.

Not surprisingly, there are several species and hybrids sold in the trade as Pussy Willow. The showiest selections with the largest catkins are native to Europe and Asia, although for those seeking natives, *Salix discolor* is found throughout the northern regions of the US into Canada. Commonly known as Glaucous Willow owing to the silvery and waxy undersides of the 3-5” long leaves, it becomes a large shrub reaching heights of 15-20’ by widths up to 12’. It was described in 1803 by the American Minister and Botanist Gotthilf Heinrich Ernest Muhlenberg (1753-1815). The species epithet means ‘of two colors’, since the female catkins have a green tone while males are yellow. The silky gray male catkins reach 1-1½” long and although attractive, they are not as impactful as the introduced selections. However, this species does serve as an important source of sugary nectar for early rising native bees and as a host plant for several species of butterflies and moths.

Perhaps having the largest catkins (as seen at right), the Japanese Pussy Willow or *Salix chaenomeloides* displays especially large, silvery white male catkins up to 3” long! The species was named in 1938 by the Japanese botanist Arika Kimura (1900-1996) who specialized in the Salicaceae. The species name describes the foliage and how similar it is to Flowering Quince or *Chaenomales*. The plants are also large and without pruning, this



species can reach heights of over 30'. More recently, it is thought this is actually not a true species, but rather a naturally occurring hybrid between *Salix gracilistyla* commonly named the Rosegold Willow and *Salix caprea*, the Goat Willow.

The Goat Willow is native from Europe to western and central Asia. Without pruning, it grows to 25-30' tall and 15' wide and once again produces attractive male catkins, growing to 2" long. The species was described by Linnaeus in 1753 and is from the Latin for female goat. The species and common name most likely stem from a sketch of the plant being eaten by a goat! This illustration appeared in a book of herbals written in 1546 by the German botanist, physician and minister Hieronymus Bock (1498-1554). As one might expect, the plants do not seem to be preferred over any other in a goat's diet!

By comparison, *Salix gracilistyla* was named in 1867 by the Dutch botanist Friedrich Anton Wilhelm Miquel (1811-1871) and by some is considered the most attractive of the Pussy Willows. Native to China, Korea and Japan, the species epithet means slender style and references the long and slender style of female flowers. The style is the slender stem that connects the pollen receptive stigma to the ovary.



Compared to *Salix chaenomeloides*, the Rosegold Willow is far more diminutive in overall size and develops into an arching shrub of a mere 10-12' in height and width. The common name of Rosegold Willow stems from the anthers initially rosy-red appearance (as seen above and in the closing image) before turning to orange and ultimately golden yellow. Even before the rosy-red anthers emerge through the furry trichomes, they provide the catkins with an attractive pink glow. It was introduced into the trade by Messrs. Barbier and Co. of Orleans France in 1895.



Two rarely seen male selections of Rosegold Willow are recognized for their distinctly red catkins. The selection named 'Mt Aso' honors one of the largest volcanos in Japan, located on the island of Kyushu. The flowers resemble the red-hot lava seen flowing from the volcano and was selected by Dr. Tsuneshige Rokujo, a medical doctor at Tokyo University and an avid plant collector. Following the flowers, the foliage continues to provide beauty through their attractive bluish blush, allowing plants to enhance the summer garden. To confuse matters, there is another cultivar in the trade named 'Mt. Asama', honoring the volcano Mt. Asama on Honshū, the main island of Japan. Supposedly it was selected for the cut flower trade by a florist in Japan. Both are beautiful plants and there is speculation that they could in fact one in the same.

Yet another interesting form of this species for the garden is *Salix gracilistyla* var. *melanostachys*, which is also sold under the cultivar name of 'Melanostachys' (as seen at right). It was introduced into Europe from Japan and from there into the US around 1950. The botanical name is derived from the Greek *Melano* for very dark and *Stachys* meaning spike, and describes the nearly black catkins. It too is a male flowered form, yet by comparison to the straight species, the dark, reddish purple floral bracts lack the traditional silky trichomes. The young anthers within are a deep molten lava red and as they emerge, they transition to bright yellow as the pollen is shed. As with the pink flowered forms, plants mature to around 10' tall and wide without pruning.



Although these willows do not produce a perianth (petals and sepals) to beckon forth pollinators, the flowers are both fragrant and produce copious amounts of nectar that serves to attract pollinating bees and flies. Certainly, no need for a showy perianth during a season with very little competition! Following bloom, all these species and selections benefit from a harsh pruning every one to two years. Termed coppicing or stooling, the plants should be cut back to the approximate height of a stool leg or 8-12" tall. This encourages long slender shoots to develop (as seen at left) that not only provides a more appealing form, but allows the plant to display the catkins to their very best advantage. This pruning also helps to keep their size in check since once they have grown too large, their appeal is often lost. It is important to start this

pruning when the plants are young to reduce any large stem wounds and potential decay.

Another great Willow for winter interest is the Coral Bark Willow or *Salix alba* var. *vitellina* 'Britzensis'. Known for its fiery orange-red stems, I initially read about this selection in English gardening books long before I had the opportunity to see them in Arboreta and I am still amazed it has not become a winter garden staple! The species epithet of *alba* refers to the glaucous white coloration of the leaf undersides and was described by Carl Linnaeus in 1753. As one might suspect, its common name is White Willow and it can reach arborescent heights near 80'! The variety *vitellina* is noted for bright yellow branches on the new growth and it was originally named *Salix vitellina* by





Linnaeus in 1753. Vitelline describes how it resembles the yolk of an egg, again pertaining to the yellow stem color. It was not until 1812 that the English physician and botanist Jonathan S. Stokes (1755-1831) described it as a variety of White Willow. I should note that this variety is very attractive in its own right for brightening the winter landscape. The plant is seen above right at the JC Ralston Arboretum in mid-September and the stems are already showing their yolk-yellow constitution! A few stems have already been pruned and it is easy to see this plant receives an annual stooling.

The cultivar 'Britzensis' recognizes the town of Britz Germany where this selection initially appeared. It was a seedling at the famed Späth Nursery and was introduced into commerce in 1878. The spectacular orange-red stem coloration is most

pronounced during the first three years' growth and as the stems grow older, they gradually turn to a dull grey. Once again, the plants need to be stooled to rejuvenate the stems, a practice best performed every year for residential gardens due to the vigorous growth rate. The plants will rebound with 5-8' of new growth the following summer, so you need not worry about a sizable hole in your garden for long! The image above and at right is the same plant, which was annually coppiced to 12" tall and remained in scale for the backdrop of a mixed border. The blue arrow points to the plant following pruning. At Willowood Arboretum in NJ, we cut back plants that had not been



pruned for an extended period. The plants responded with 10' of new growth, showcasing how pruning them annually also serves to keep the plants more compact and dwarfed. During the summer, the stems appear as a dull red and do not exhibit their rich colors until cooler temperatures return.

One other red stemmed selection that is great for winter garden interest, as well as for additions to floral centerpieces is *Salix* x 'Swizzlestick'. Although the parentage remains a bit of a mystery, it is thought that *Salix alba* is part of the lineage. The reddish orange stems twist upwards in a corkscrew fashion, appearing as if they are in perpetual motion!

All the selections mentioned are hardy in zones 4-8, although *Salix gracilistyla* var. *melanostachys* is more tender and listed as



only winter hardy to zone 5. If your garden features large containers, these plants make wonderful additions to containers for winter interest. Although the botanical name recognizes Willow's love of water, they are very adaptable and will grow with vigor in soils of average moisture. The one criterion for best growth and visual appeal is full sun! For *Salix alba* var. *vitellina* 'Britzensis', the effect of the stems is even more intoxicating if provided with an evergreen backdrop or lit by the low afternoon sun of winter!

Yes, it is February! A month that will always have its cold and snowy days, but plants such as these many forms of Willow provide both color and a tactile lure that brings the gardener back out into the garden. They are also great to be viewed from inside the house or adding a touch of fun and amusement to floral arrangements. Whatever the use, there is no doubt that Willows are for Winter!



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