

## Iris for Aquatic Habitats or Wet Soils

I was busy preparing a class on aquatic plants. One of the plants in the group is our native blue flag iris – *Iris versicolor*. Since nearly a meter of snow fell last night and I have cabin fever, I decided to entertain myself by writing about iris that are useful as aquatic or wet soil plants – although a couple of these are more soil diverse than that. All of these species are ‘beardless’ irises – that is, they don’t have sepals with a ridge of hairs along the midrib.

There are three species of native iris that are hard to distinguish one from the other unless you have them side by side to compare. They are *Iris versicolor*, *Iris setosa* var. *canadensis*, and *Iris virginica*. Interest in their difference has peaked several scientists to take a close look at them. Randolph (1934) discovered that *I. setosa* is a “diploid” species with 38 chromosomes (one set from each parent), *I. virginica* is “tetraploid”, with 70 (two sets from each parent), and *I. versicolor* is hexaploid (3 sets from each parent). He has suggested the possibility that *I. versicolor* is a polyploid hybrid of the two other species (containing more than two complete sets of chromosomes). What does this mean to their characteristics?



### ***Iris versicolor***

*Iris versicolor*, commonly called northern blue flag or marsh iris, is a clump-forming iris that is native to marshes, swamps, wet meadows, ditches and shorelines from the Yukon to Newfoundland and Labrador, and south to Virginia, Ohio, Illinois and Minnesota. It is a marginal plant, so prefers to grow with its feet in shallow water. It has a clump of arching and/or erect sword-shaped leaves. Leaves are usually blue-green in colour, about 50 cm long and 2-3 cm wide. Flowering occurs in late spring, with each stalk producing a total of 3-5 bluish-purple flowers with purple veins. Flowers are about 10 cm across and are held above the foliage. Falls (sepals) have a yellow blotch at the base, below the white zone. Clumps spread by rhizomes. Northern blue flag thrives in wetland habitats, accompanied by rushes and sedges (the "flag" part of the common name comes

from the middle English word *flagge* meaning rush or reed). *Veriscolor* means having various colors. The flower colour varies from pink-mauve to purple to blue.

**Important characteristics** – Flower stem solid, Petals over 2 cm long, Seed capsules 3-angled, Rhizomes stout, 1-4 cm diameter, roots fleshy. Flowers blue-violet, rarely white. Stigmas unlobed; leaf blades prominently veined. Sepals with pubescent greenish yellow patch surrounded by the heavily veined purple and white signal at base of blade. Most iris rhizomes are poisonous, and these are no exception. Wear gloves when handling them.



***Iris setosa***

Bristle-pointed iris

*Iris setosa* occurs from coast to coast in Canada, but it's also found in Europe, Siberia and Asia, as well as other temperate areas. It's a dune or upper beach species. I have found this iris growing among the rocks near Peggy's Cove. Because of its habitat, it is sometimes called beachhead iris or Arctic iris. Beachhead iris flowers in mid to late

summer, bearing one flower per stalk. The flower stalk may be branched, developing two flowers. Flowers are dark blue-violet to red-purple with darker veins. The petal or standard is small, reduced to a narrow, tapered protrusion with a long narrow tip (bristle-tipped). The flowers are held near the top of the foliage, rather than above it. The leaves are 30 -45 cm high, erect, narrow and green, with a purplish tinged base. The leaves arise from large, branching rhizomes in clumps.

**Important characteristics** – Flower stem solid and branched. Petals 1- 2 cm long, Petals reduced, with apical bristle 3–8 mm, Seed capsules 3-angled, Rhizomes stout many branched, 1-4 cm diameter, roots fleshy. Flowers dark blue-violet to red-purple with darker vein, rarely white. Stigmas semi-circular; leaf blades prominently veined. Sepals with small green or greenish yellow patch surrounded by heavily veined signal at the base of blade.

***Iris virginica***

This is the Southern flag iris is found in Ontario and Quebec, but doesn't occur in the Atlantic region in the wild. Collectors have introduced it into their wetland gardens. This iris prefers to stand in shallow water. It is smaller when grown in garden soils, but will do well there if kept moist. The flower colour tends to be paler than the others, ranging from pale blue to purple. The variety var.*shrevei*, (below right) from the Great Lakes area, is fragrant, while the species is not.

The southern flag iris flowers in late spring. Flowers are on a one or two branched stem, with one flower per stem. The plants are up to a meter tall. The weakly arching green leaves are 45-90 cm long and are burgundy colored at the base early in the season.

**Important characteristics** – Flower stem solid and branched. Petals 3- 7 cm long, Seed capsules 3-angled, Rhizomes stout many branched, 1-4 cm diameter, roots fleshy. Flowers pale blue-violet with darker vein, rarely white. Stigmas unlobed; mature leaf blades with several prominent veins. Sepals with greenish yellow patch surrounded by heavily veined signal at the base.



Species	Height	Spread	Sepal length/width	Petal length/width	Bloom	Hardiness
<i>Iris versicolor</i>	35 – 75 cm	35 – 75 cm	4-7cm/1.8-4cm	2-5 cm/.5-2cm	June/July	2b-9
<i>Iris setosa</i>	45 cm	80-100 cm	4-6cm/3-5cm	1-2cm/.3-.4cm	July-August	4 - 8
<i>Iris virginica</i>	60-90 cm	60-90 cm	4-8cm/1.5-4cm	3-7cm/1-3cm	May/June	5-8
<i>Iris siberica</i>	90-120 cm	60-90 cm	4.5-5.5cm/	2-5cm/1.5-4 cm	June	2-7
<i>Iris pseudoacorus</i>	120-150 cm	90-200 cm	5-7.5cm/3-4cm	2-3cm/1-1.5cm	June/July	4b-9

Quick Comparison Table

***Iris siberica***

The Siberian iris is a familiar garden plant with extraordinary versatility. It is native to damp, open woodlands and pastures in Central Europe and Russia. I have seen it planted as a marginal aquatic plant at the edge of a pond, in heavy clay soil, in rain gardens, and in my own very hot and dry front garden where it thrives. It would seem there’s no stopping it, but for all that it is

elegant and well behaved in gardens. This iris is a rhizomatous herbaceous perennial up to 1.2m tall, with narrow grassy foliage and branched stems bearing up to 3 or more flowers, each 6-12cm wide. The sepals and petals are more similar in shape and appearance than the previous species discussed (especially in some of the cultivars), with the sepals flared or curving downward (as in most species). The flower stalk is hollow, not solid as the others are. The style arm is much more prominent on Siberian iris than it is on the others. The leaves do not have prominent veins. They are 15-70 cm long, and under 2 cm wide.



Siberian iris comes in a dazzling array of cultivars. Ruffles and Flourishes, Humors of Whiskey, Here Be Dragons, Butter And Sugar, Banish Misfortune, Ginger Twist, Salamander Crossing... I want them just for their names!

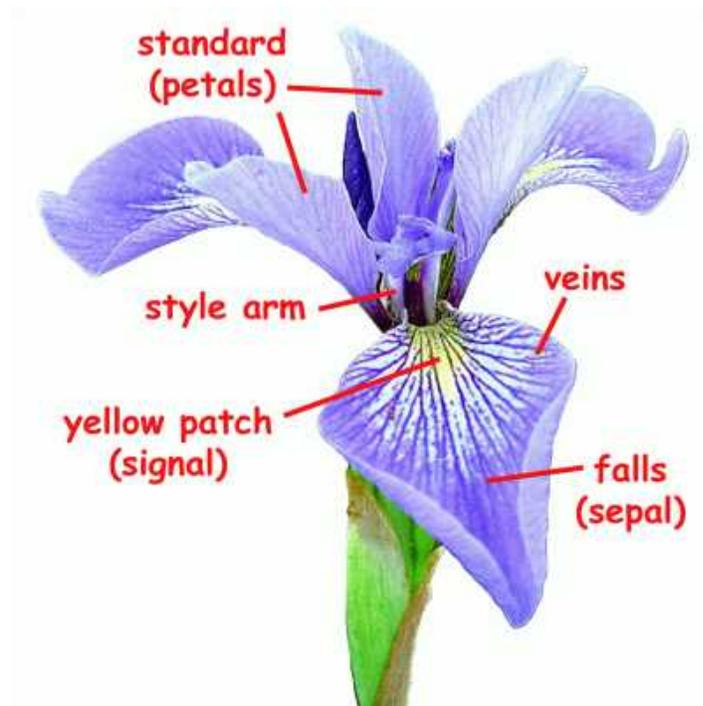
### ***Iris pseudacorus***



The yellow flag iris is the largest plant in the group I've described here. It is the only species with bright yellow flowers. The signal is a darker yellow basal patch with short, brown or purple-brown veins. The style is longer than the petals and is fringed. The flower stalk is branched, and may carry between 4 and 12 flowers. The flower stalk is filled with pith – different from the others. The leaves are 100-150 cm long and 2-3 cm wide. The leaf has a larger central vein, and the secondary veins are strongly protruding. It sometimes has shedding fibres along the leaf margin.

This iris is like the Siberian iris – it will grow anywhere. In its native habitat, it stands in water about 20 cm deep. It has thrived in my dry and sunny garden. I love this plant, and so do my bees. Having said that, it is considered an invasive plant in some US states. The seed pods are large, contain lots of seed, and merrily float downstream, where new plants later appear. I'll take mine when I leave my garden and move to a new one. It's a plant I prefer to keep.

## Parts of the iris flower



If you're keen on iris, consider joining the Canadian Iris Society. Their website can be visited at

<http://www.cdn-iris.ca/>

Picture credits:

Parts of the iris flower - <http://w3.uniroma1.it/chemo/metrics/chemom/mslide4.html> *Iris virginica* var. *shreivi*

*Iris virginica* var. *shreivi* -

<http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=y390>

*Iris versicolor* - [http://commons.wikimedia.org/wiki/File:Iris\\_versicolor\\_1.jpg](http://commons.wikimedia.org/wiki/File:Iris_versicolor_1.jpg)

*Iris setosa* - <http://www.jardinsmichelcorbeil.com/produit/iris-setosa-var-canadensis-iris-a-petales-aigus-setose-blue-flag/>

*Iris pseudacorus* - [http://www.francini-mycologie.fr/BOTANIQUE/Iris\\_pseudacorus.html](http://www.francini-mycologie.fr/BOTANIQUE/Iris_pseudacorus.html)