

Solomon's Seal
Polygonatum biflorum
A Rhode Island Native Plant

Family Liliaceae
by Deborah van Dam

It would be hard to find a more elegant native plant than Solomon's Seal. Its tall, arching fronds are full of grace and refinement created by the swaying leaves that hover horizontally in the breeze no matter what their orientation on the stem. In mid-spring small white bells with green edges dangle like pairs of delicate earrings beneath the leaves.

Solomon's Seal takes its name from its rootstock or rhizomes, which are thick, white and fleshy. They are heavily jointed and marked by large rounded scars left by the death and separation from the rhizome of stalks from previous years. *Polygonatum* means *many* and *knee* in Greek. According to Jewish and Arabic legend, King Solomon had a ring with a five or six pointed star (this is a matter of disagreement) that he used to sign his decrees. The rhizome scars were thought to resemble that star-shaped seal. Pieces of the rhizome were used as a poultice for wounds in ancient times (i.e., to "seal" them). In the southern parts of this country they were used by practitioners of voodoo to ward off evil. American Indians and colonists used the starchy rhizomes as a food.



According to some authorities there are several native American species of *Polygonatum*. The species name *Polygonatum biflorum* (Smooth Solomon's Seal) refers to the fact that the flowers are borne in pairs. *Polygonatum pubescens* is very similar, except that it has little hairs on the undersides of the leaf veins. *Polygonatum canaliculatum* (Great Solomon's Seal) is spectacularly tall (up to seven feet) and has multiple flowers. Distinguishing among these species is rather difficult, as they overlap and intergrade among themselves. Also, Solomon's Seal is subject to polyploidy (multiplication of chromosome sets), which causes some plants to grow taller and more vigorously than others. The current tendency seems to be to include all three species under *Polygonatum biflorum*.

A charming Japanese species that grows happily here is *Polygonatum odoratum Variegatum*. It is shorter than *Polygonatum biflorum*, reaching a height of only 18-24 inches, so it is suitable for confined spaces. Its leaves have creamy white edges. When the bulbous stems poke up from the ground in the spring, they look like little rocket ships with pink noses, a band of white, and one of green below. Truly eye-catching – people tend to say "Wow, what's that?"

Polygonatum biflorum is native to the greater part of the United States. It is a perennial that prefers woodland (shade to part shade) and moderately moist conditions. Its leaves are alternate, broadly lance-shaped, sessile, and conspicuously parallel-veined. In this area it grows abundantly to a height of three to four feet. The rhizomes spread outward at a rate of six to eight inches per year. In the fall it bears dark blue berries, and the leaves turn yellow. It can be used

as a tall ground cover or placed in clumps among other plants that enjoy shady conditions, such as ferns, dicentra, tiarella, arisaema and aquilegia. It combines well with shade-loving shrubs such as clethra, viburnums and winterberry.

Propagation

Propagation from seed is tedious, since the process involves two separate periods of stratification and rewarming. It takes two years for the cotyledons to emerge and another year after that for the plants to be ready to be planted in the garden.

Propagation from division is much faster. Dig the rhizomes in the fall and break off the leading two to four inches along with their roots. These can be potted or simply replanted as is.

Propagation by cuttings also uses the rhizomes. They should be cut with a disinfected knife or shears into one to three inch sections, placed horizontally in a flat of rooting mix and covered with half an inch of rooting mix. Place them in a cold frame for the winter. Keep them moist but not wet. In the spring new roots and shoots will appear. When the danger of frost has passed, plant them out in a protected nursery area until they are well established in the fall. They should then be put into the garden at least a month before the first frost.

References:

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