

Solomon's Seal – 'Knee Deep' in Garden Worth Forms

As a gardener, I am always searching for interesting, low growing plants to incorporate into designs. A garden will have more depth and visual interest if the lower levels, typically home to herbaceous plants, do not all mature to the same height. Rather, it is best if there is a variety, ranging from of ground hugging forms to those near knee height.

As one might suspect, it is the ground hugging forms that are the most challenging to find, especially plants that do not spread uncontrollably. For years, I have seen Dwarf Solomon's Seal, botanically known as *Polygonatum humile* (picture at right) for sale at specialty garden centers and did not appreciate its garden worthiness until finally seeing it in a woodland garden!



Polygonatum is a member of the Asparagaceae or Asparagus Family with approximately 63 species located in the northern hemisphere, mostly in Asia. The genus name was crafted in 1754 by the English Botanist and Head Gardener for the Chelsea Physic Garden, Philip Miller (1691-1771). It is from the Greek, merging *Poly* for many and *Gonu* for knees. The name is a



reference to the zig-zag shape of the creeping rhizome which produces an angular, knee-like joint between the yearly expansions. The species epithet along with the initial attempt at describing the plant is credited to the Russian Botanist and plant collector Carl Johann Maximovich (1827-1891) who most likely collected this plant in Asia. However, it was his botanical colleague at the Saint Petersburg Botanical Gardens, Friedrich Ernst Ludwig von Fischer (1782-1854) who properly described the plant and was posthumously ascribed as the author in 1859. *Humile* is Latin for low and it certainly describes the 6-8" tall stature of this plant, especially when compared to the other, far taller species within this genus. The common name of Solomon's Seal is believed to have originated from the shape of the leaf scar on the rhizome as it resembles the two overlapping triangles that constitute the Seal of King Solomon.

Dwarf Solomon Seal is actually native to a broad area of Asia. It is found in forests and grassy slopes in NE China, Japan, Korea and E. Siberia. Despite its shorter stature, the ovate to lance shaped leaves are nearly the same size as its larger cousins, reaching 3" long. The foliage is an attractive glossy green and features deep parallel venation with leaf bases that clasp the stem. The upper leaves are curiously cup shaped, while the lower leaves assume a flatter appearance. The off-white flowers (as seen above) are also disproportionately large for the size of the plant, measuring close to $\frac{3}{4}$ " in length by $\frac{1}{4}$ " in diameter. They hang from short pedicels or floral stalks that originate in the leaf axils. The flowers are composed of 6 tepals that is customary for the genus; the 3 outer leafy sepals and the 3 inner petals appear identical and together comprise the flower. While in the bud stage, the tepals are fused into a tube with a small green dot at the base. As the flower opens, only the very base of the tepals reflex back, yielding a bell-shaped flower. The remainder of the flower remains fused into a tube with the green color spreading over the outer surface of the reflexed base.

As one would surmise from its native provenance, this species is perfectly hardy, able to endure winters from zones 4-8. In fact, I have seen it happily growing in elevated troughs at the Morris Arboretum that undoubtedly freezes solid during colder winters. The pencil thick rhizomes gradually spread and allow the plant to create a dense



matt of low growing foliage. Plants are best grown in a shaded or lightly shaded site, although they will tolerate sun for a few hours, especially in the morning or late afternoon. The bold and course foliage looks great paired with the clump forming *Carex appalachica* as pictured above,



creating a very natural appearing woodland composition. As with other members of the genus, Dwarf Solomon's Seal is very drought tolerant and the only damage I have seen is from slugs! Plants often start to develop yellow fall color in mid-September and have vanished by late October.

Growing taller, *Polygonatum odoratum* is another wonderful species with an enormous

native region, extending from Europe east to China, Korea and Japan! The species epithet acknowledges the sweet fragrance of the flowers, which also influenced the common name of Fragrant Solomon's Seal. Interestingly, the plant was originally named *Convallaria odorata* by Phillip Miller in 1768, 14 years after he published the name *Polygonatum*! *Convallaria* is the genus for Lily of the Valley and there is certainly similarity in the appearance of the flowers. In fact, for a number of years there was great confusion as to which genus was correct. It was not until 1906 that the English botanist George Claridge Druce (1850-1932) finally assigned the species to the proper genus.

Fragrant Solomon Seal is much taller than the preceding species, typically growing in a slight yet attractively arching form to 2-3' tall (as the variegated form displays above). The base of the stem has a slight zig-zag pattern, repeating that of the rhizome. The deeply veined foliage appears alternately along the stem and while the stem is elongating in spring the foliage appears much like the wings of a butterfly poised on top of the stem. Leaves grow to 4" long by 1½-2" wide. The flowers are identical to their cousin in form and size but are a somewhat cleaner white, with the reflexed tip of the tepals once again light green. Also similar to their cousin, they prefer woodland conditions, with humus rich soils and protection from the sun during the heat of the day.



The straight species is rarely seen in gardens, with the variegated selection, *Polygonatum odoratum* var. *pluriflorum* 'Variegatum' (pictured above at left and right), being the most common version in commerce. The light green leaves are irregularly margined with a clean white border that in mass, looks truly outstanding. To further the drama, the stems are an attractive deep red in color throughout the spring season. Unusual for many plants, the variegation remains attractive and effective throughout the summer into fall. Come the colder nights of late autumn, the foliage turns to a buttery yellow from late October into November (pictured above). 'Ruby Slippers' is a green foliated form that also has exceptionally attractive deep red stems. Unlike the variegated form, it often goes dormant by mid-September



and does not offer any fall color. These are both outstanding selections where a ‘knee deep’ groundcover is desired.

Of course, North America is not to be denied its own species of Solomon’s Seal. *Polygonatum biflorum* is native to the eastern 2/3’s of the US and Canada and is a familiar sight throughout woodlands of NJ. Hardy from zones 3-8, it too was originally misnamed as *Convallaria biflora* by the American botanist Thomas



Walter (1749-1789) in 1788. It was properly named in 1817 by Stephen Elliot (1771-1830), whose vocation was an interesting combination of American legislator, banker and



botanist. The species epithet, meaning two flowers is a bit misleading, as the flowers appear in pendulous clusters ranging from 2 to as many as 10 with the petioles of the flowers once again originating from the leaf axils of the arching stems as pictured above. Come fall, the flowers are replaced with attractive, ¼” diameter deep blue fruits, beloved by birds and other wildlife.

Polygonatum biflorum typically grow from 1-3’ tall, although there is a variety or species, depending upon the botanical source, found in North America that grows far beyond knee high and can reach upwards of 7’ tall (pictured at left in fall color with fruits). They are

typically tetraploid in nature rather than diploid and are usually referenced as *Polygonatum biflorum* var. *commutatum*, although they also appear as *Polygonatum commutatum* and *Polygonatum giganteum* in commerce. One thing is for certain, plant nomenclature remains a science in study and transition!

Regardless of which species you select, you will certainly not be disappointed in how the various species accent and enhance the garden. The gracefully arching stems of the taller species nicely compliment ferns, Hosta and other denizens of the shade, while the Dwarf Solomon’s Seal remains mostly unrecognized for how it can create depth and dimension in a garden. You might

say that *Polygonatum* is ‘knee deep’ in its diversity of both garden worthy forms and applications for resolving those pesky design challenges!



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