

One ‘Bell’ of a Plant

Many of our spring blooming perennials are best referred to as spring ephemerals, since they enter dormancy shortly after they finish blooming and setting seed. For the plant, it is an act of survival, since it rests during the hottest and driest months. To the garden designer, the plants are a challenge since the disappearance of the foliage yields holes in the summertime garden tapestry! Initially, I avoided the challenge this group provided. However, with time, I better understood how they can best enhance the spring garden without becoming a distraction in summer. Among the bevy of garden worthy ephemerals from which the gardener can choose, one of my favorites has long been Virginia Bluebells, or *Mertensia virginica* (pictured below).

Mertensia is in the Boraginacea or Forget-Me-Not family and contains upwards of 62 species, native to western China, northeastern Russia and most of North America. It is believed that this genus originated in Asia between 23-25 million years ago and spread into North America via the Beringian Land Bridge. This bridge connected Russia and Alaska between 13,000 and 15,000 years ago – a period following the retreat of the ice sheets and before the bridge vanished beneath the rising seas. The genus name was originally penned by the German botanist and



physician, Albrecht Wilhelm Roth (1757-1834) in 1797, honoring his friend and fellow botanist Franz Carl Mertens (1764-1831). *Mertensia virginica* was undoubtedly the species he was studying, since it is the ‘type’ species upon which all the other species within the genus are evaluated and potentially ascribed to this genus. Interestingly, Roth originally named the plant *Mertensia pulmonarioides*, since the flowers resembled those of another member of the Forget-Me-Not family – *Pulmonaria* or Lungwort. Unbeknownst to Roth, the Swedish botanist Carl Linnaeus (1707-1778) also saw the similarities with *Pulmonaria* and originally described the plant in 1756 as *Pulmonaria virginica*. The species epithet refers to the colony of Virginia, which during the 1700’s stretched from the Atlantic Ocean to the Mississippi River and north into the Northwest Territory! The mycologist Christian Hendrik Persoon (1761-1836) correctly altered the genus name in 1806 but failed to correctly describe the plant. It was not until 1829 that the German naturalist and botanist, Johann Heinrich Fredrich Link (1767-1851) properly described and finalized the name of the plant!

Naturally growing from North Carolina and Ontario, West to Minnesota and Kansas, rosettes of 4" long, oval, bluish-green leaves appear in late March in central NJ. In early April, stems

adorned at the tip with small flower buds appear, initially nestled in the leaves before they rapidly extend to their mature height of 18-24". The stems are clothed with leaves appearing alternately along the stem. As the stem elongates, the distance between the flower buds also expands, with the terminal 4-6" of the stem ultimately sporting flowers. The flowers (as seen on the right) are pink in bud, maturing to sky blue upon opening into 1" long, trumpet-shaped flowers. The change in color from pink buds to blue



flowers is typical to members of the Boraginacea and it serves as a signal to pollinators that the pollen is available. The color change is due to an increase in pH within the cells of the floral petals and the resulting response of anthocyanin pigments to the change in pH. Interestingly, different plants have different forms of anthocyanin pigments, since in Hydrangeas it is a lower soil pH that causes the flowers to turn blue. This is because a lower pH allows aluminum, which is often toxic to plants, to become soluble and available for plant absorption. In an effort to neutralize the potentially harmful impact of the aluminum, the anthocyanin in Hydrangeas bind with the aluminum molecules, rendering them harmless and changing the flower color to blue!

Although the flower stems of Virginia Bluebells are rather delicate when newly purchased in containers, in the garden, they are impressively strong and proudly display the flowers for close to a month. In June, the foliage rapidly fades to yellow, then light tan before vanishing until the following year. Best grown in light shade, plants will gradually naturalize (as seen at right at Longwood Gardens) in well-drained,



woodland soils and will develop sizable colonies over time. The key to incorporating them into

a garden is to intersperse them with clump forming ferns, sedges, violas and other shade loving perennials. These companion plants will expand and help to conceal the holes left from the declining foliage.

Spring ephemerals like *Mertensia virginica* can certainly provide challenges for the gardener who is just beginning to learn plants and the art of weaving them together. However, it is well worth learning how to weave Virginia Bluebells and their sky blue flowers into the Garden, since it is a true Southern Bell of a plant, even for northern gardens!