# The Beauty of Bloodroot

The garden truly awakens during the month of April. The once bare earth suddenly comes alive with a multitude of flowers from bulbs and spring ephemerals. Spring ephemerals are plants that flower before the shade trees leaf out, allowing them to bask in the spring sunshine before entering summer dormancy, avoiding competition for both water and light from their arboreal neighbors. *Sanguinaria canadensis* or Bloodroot is a beautiful wildflower that many consider to be a spring ephemeral, although the foliage will often linger long into autumn.

*Sanguinaria canadensis* is the only species found within this genus and it is a member of the Papaveraceae or Poppy Family. It is native to Eastern North America, ranging from Nova Scotia south to Florida. *Sanguinaria* is from the Latin *sanguis* meaning blood, referring to the blood red sap in the rhizome. The species epithet is homage to its northern habitat range. The name was crafted by Carl Linnaeus (1707-1778) in 1753 when he published his book Species Plantarum.

From mid to late April, the white flower buds emerge from the rhizome and stretch upwards to 6-8" in height. Upon opening, the buds reveal 2" diameter flowers with 8-12 white petals that encircle a boss of golden yellow anthers (pictured below). The appearance of the flower is quickly followed by a single leaf, which is initially diminutive in form and found clasping the stem (see image at left). Over the ensuing days of bloom, the leaf enlarges, but retains its form and has been likened to hands clasped in prayer! The flowers are sweetly scented and attract numerous native bees as pollinators. The flowers close at sunset and reopen at dawn, a process found in more advanced plants called nyctinasty. Plants developed this daily rhythm in order to protect the flowers from frosts and a potential nightcap by hungry herbivores! Flowers bloom for upwards of 4-5 days, with the petals falling shortly after pollination. *Sanguinaria canadensis* forma *multiplex* 'Plena' is a double flowered form. The anthers in this selection have become petaloid, creating a very attractive and 'full' flower that blooms for several days longer than the seedling forms. Following bloom, the leaf expands into a bold and very appealing 5-8" wide palmate leaf

with 5-9 lobes around the margin (as seen on the right). During summers with consistent moisture, the foliage will linger well into autumn and often display

attractive yellow fall color, as seen in the image at left. Otherwise, especially during drought, the onset of dormancy is typically in August and September.

The seeds are black or deep orange-red upon ripening in early June and feature another development of advanced plants – a sugary appendage called an elaiosome. Elaiosome is from the Greek *Élaion* or oil and *Sóma* for body. Rich in lipids and proteins, the elasiosome coevolved with the behavior of ants. Ants carry the seed back to their nests where the larva dine on the energy rich attachment. Once devoured, the ants deposit the seed in an area reserved for waste. Buried amongst the fertile mix of ant frass and the decaying ant bodies, the buried seed germinates and rapidly grows. Although being buried in this concoction may not sound very appealing to us, to a seed it is nirvana!

The name of Bloodroot, as well as the reference to blood in *Sanguinaria*, is from the blood red sap of the rhizome. Rhizomes are horizontal or creeping stems. The rhizomes of Bloodroot are located just below the soils' surface, where they rapidly expand and branch to create large colonies, as pictured on the right. The red sap contains a toxic alkaloid named sanguinarine. Contact of this sap with the skin should be avoided,

since the toxin will kill skin cells and result in unattractive skin deformation and lesions.  Native American Indians extracted the red fluids from the rhizomes for dying the various materials used to make baskets and in the pigments for paint.

Bloodroot is a great garden plant for both its attractive spring flowers and coarse foliage. Although the flowers are relatively short lived, the coarse foliage remains effective throughout much of the summer and provides an effective companion for later blooming woodland plants. To its detriment, Bloodroot is difficult to grow in containers, although the plants transplant easily and naturalize readily from seed.  Still uncommon in most Gardens, more gardeners need to learn about the reserved Beauty of Bloodroot!