

## Singing the Silvery Blues for the Winter Garden

January is a tough month for gardeners. The days are short, unpleasantly cold and occasionally fraught with ice and snow. The garden is quiet and relies mostly on evergreens for consistent color throughout the month. Admittedly, finding good evergreen groundcovers and perennials is more of a challenge, especially if a color other than green is desired! Fortunately, there are several great selections such as *Euphorbia myrsinites* or Donkey Tail Spurge, whose silvery blue foliage adds cool color and interesting structure to the winter garden (as seen below in December).

*Euphorbia* is a huge genus with around 2,100 species native to primarily the Americas, Mexico, Eurasia, Africa and Australia. A member of its own family, the Euphorbiaceae, the species are very diverse in appearance, ranging from small trees to cactus-like succulents and to even leafy ornamentals such as Poinsettia (*Euphorbia pulcherrima*). Donkey Tail Spurge is native from the Balearic Islands off the coast of Spain, east to Italy, the



Caucasus and Iran. The root of the name *Euphorbia* dates back 2,000 years to the Roman Empire. As written by the naturalist and soldier Gaius Plinius Secundus (AD 23/24–79), who is better known as Pliny the Elder, the genus name was coined by King Juba II (48 BC – AD 23). He served under Emperor Augustus as the client King of Mauretania (present day western Algeria and northern Morocco). His wife was Cleopatra Selene II, the daughter of Antony and Cleopatra! He was very well studied and had strong interests in natural history. His physician was Euphorbus, who treated the ailing King with a plant possessing strong medicinal properties, which was probably the species currently known as *Euphorbia resinifera*. Once healed and as a way of thanking his physician, the King named the plant Euphorbus in his honor. Centuries later, the Swedish botanist Carl Linnaeus (1707-1778) once again honored the physician by formally naming the genus *Euphorbia* in 1753!

*Euphorbia resinifera* was not the only species used medicinally. *Euphorbia myrsinites* and many other members of this genus have served in medicinal roles and their common name of Spurge comes from their use as a purgative. These plants have also been long popular for their anti-inflammatory properties. The species name of *myrsinites* was first penned by the Greek pharmacologist Pedanius Dioscorides (40-90 AD) in his 5-volume medicinal treatise



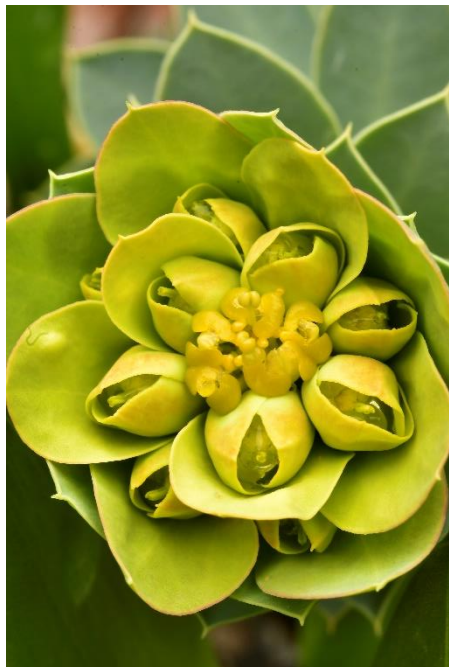
*De Materia Medica* (Of Medical Matter), in recognition of its similarity to Myrsine or Myrtle, another well regarded medicinal. Despite its many therapeutic and beneficial properties, the sticky white sap common to all members of *Euphorbia* is also known for causing skin and eye irritation and care should be taken when handling broken stems or leaves. Of course, this sap does have the beneficial quality of rendering the plant unpalatable to deer!

Donkey Tail Spurge is also a very attractive ornamental plant, reaching heights of 6-12" by widths of up to 2'. Plants consist of numerous 10-20" long stems that initially grow vertically from the central crown, with the foliage densely arranged in a whorl around the stem, as seen in the image above right. Gradually, the weight of the foliage causes the lengthening stem to fall to the ground, whereupon it continues to lengthen before the terminal 6-8" of the stem once again curves upward, re-establishing its upright habit. Plants grown in full sun will have the best form while those grown in light shade will have fewer and more floppy stems.

The silvery blue leaves are fleshy with a waxy or glaucous coating and look pleasing in combination with their light green, photosynthetic stems. This waxy coating causes water to coalesce into beads following storms, an interesting yet often overlooked attribute. As mentioned, the 1-2" long leaves appear radially around the stems, with each round to obovate leaf coming to a sharp point at the tip.



Although difficult to see through the upright stems, the leaves along the prostrate portion of the stem usually fall by the wayside as pictured above, and when viewed individually, the leafless lower stem combined with the dense tuft of foliage at the tip gives an appearance similar to a Donkey's Tail!



Starting in late March through May, plants will yield clusters of 'flowers' among the unfurling golden foliage at the tips of the stems. The 'flowers' are actually structures called cyathia (cyathium for singular) and with slight variations, it is typical to all members of the genus. Each cyathium bears two rounded, golden yellow bracts that loosely resembles the foliage. The barely open bracts can be seen at left among the whorl of unfolding yellow leaves, with an involucre at center (see below). Ultimately, a cluster of 10-12 cyathia appear per stem. Emerging from in-between the two golden bracts is a cup-like structure called an involucre, which has 4 oblong nectar glands arranged around the rim of the cup. With a touch of overactive imagination, the glands appear to resemble light green sausages tied at either end with yellow string (as seen at left



and in the image below right). One tiny female flower emerges first from within the center of the involucre while the equally small, 6-12 male flowers appear second, each with a single stamen bearing 2 anthers. Interestingly, these female and male flowers lack both petals and sepals, relying on the two showy bracts and the nectar glands for attracting pollinators. The nectar glands and the round ovary of the female flower, tipped by a tripartite style are easily seen on the right.



By late May the flowering is complete and the bracts fade to a glaucous silver, appearing much like the foliage. At this point, the ovary and developing seeds have matured into a spherical capsule located atop a thick stem (as seen below), appearing much like a miniature water tower! The nectar glands also remain and transition from green to a bright orange, providing a nice ornamental touch, also as seen below! When ripe, the seed capsules burst open and, through a process called explosive dehiscence, the seeds are propelled to a distance upwards of 14' from the plant. This action accounts for how the seedlings are often found far from the original plant, often in locations unwanted. Fortunately, these seedlings are not numerous and can easily be transplanted back to where they were first intended to grow!



Following seed dispersal, the stems will die back to be either replaced by new stems or the entire plant will simply die. Following unusually cold winters, the stems can also die back to the crown and should be removed. In general, the plants are relatively short lived and it behooves the gardener to transplant the errant seedlings back to the original location in

order to sustain the plantings. In the wild, the plants are native to sun drenched and well-drained rocky and grassy terrain in zones 4-9. In western North America where growing conditions are ideal, the plants have become invasive and sale of plants is prohibited in Colorado and Oregon. In points east of the Mississippi including New Jersey, the plants are far less prolific and make great candidates for a gravel garden or a dry, south facing slope. They mix well with dwarf Stonecrops, such as *Sedum album* 'Coral Carpet' or *Sedum sieboldii*, as well as with Prickly Pears (*Opuntia humifusa*). The glaucous foliage works great with selections of blue flowered spring bulbs, such as *Chionodoxa* (*Scilla*) *luciliae* or, for a hotter composition consider *Tulipa linifolia* or *Tulipa* 'Little Princess' (as seen below in late April).

Winter is certainly the time for embracing our evergreens, even if they are not always green! With water conservation becoming an increasingly important aspect of garden design, especially for dry and sloping terrain, our palette of plants is certainly more limited. Having grown Donkey Tail Spurge for a number of years, I have come to truly appreciate its drought tolerance, flowers and attractive foliage that only leads me to sing those silvery blues of praise for this winter stalwart!



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