A Vine with an Explosion of Color

One dimension we often neglect when working with annuals is the vertical dimension or the use of annual vines. Vines are great for softening architecture or clambering up vertical structures in a garden, allowing their flowers to play off of the surrounding melody of plants. Unfortunately, most woody vines only bloom for a couple of weeks, compared to annual vines that bloom heavily for several months. Plus, annual vines can easily be relocated or used in different configurations from one year to the next. One very colorful yet, sadly overlooked annual vine is the Firecracker or Spanish Flag Vine, botanically known as *Ipomea lobata* (as pictured at right).

Ipomea is a member of the Convolvulaceae or Morning Glory Family and, with over 600 species native to tropical and subtropical regions it is also the largest member of the family. *Ipomea lobata* is principally native to SW Mexico, although it has been introduced into South America. The genus name was initially penned in 1753 by the Swedish botanist Carl Linnaeus (1707-1778). The name comes from the Greek *Ips* or *Ipós* meaning worm and *Hómoios* to resemble, describing how the twinning plants resemble the movements or appearance of a worm. Of course, with over 600 species there are bound to be a few species that fail to be recognized as a member of this genus, and such was the fate of Firecracker Vine! In 1824 Vicente de Cervantes (1755-1829) initially described this twining plant and named it *Mina lobata*. Born in Spain and initially a pharmacist, Cervantes moved to Mexico around 1787 where he became a professor of botany and the Director of the Botanic Gardens in Mexico City. The genus name of *Mina* honors a leader in Mexico's War for Independence, Don Francisco Xavier Mina while the species is from the Latin meaning 'with lobes', describing the three prominent and pointed lobes of the foliage (as pictured below). The name remained unchanged until 1909 when it was renamed *Quamoclit lobata* by the American botanist Homer Doliver House (1878-1949). House actually did not craft the name of *quamoclit*. Rather, it was Linnaeus who created the name when he described the bright red flowered Cypress Vine, *Ipomea quamoclit* in 1753. House merely adopted this species name as a genus! The origins of *quamoclit* are rather vague, but it is possibly from the Greek for Kidney Bean, referring to the bent shape of the cotyledons. This classification was not long lived for only 10 years later, in 1919

the Swiss botanist Albert Thellung (1881-1928) finally concluded the rightful name for this plant was *Ipomea lobata*.

Confused? Confusion often occurs with changing botanical names, especially in this case since all three of the botanical names are currently used in the retail trade. Perhaps *Mina* and *Quamoclit* remain popular since the flower of this species does not resemble the typical trumpet shape of most morning glories. Not to worry though – one picture of the vine in full bloom will provide more than enough 'craving' to offset any confusion over the name! Flowers appear on a 6" long, one-sided raceme that is forked at the base, giving the impression there are two racemes (as seen at left)! A raceme features a stem along which the flowers arise equidistantly with the lowest flowers on the stem maturing first. As the raceme lengthens, small bright red flowers continue to appear at the top of the raceme, which transition to golden yellow and finally mature to white at the racemes' base. All told, each individual raceme presents 12-15 flowers. The brilliant red and yellow flowers loosely resemble the colors of the Spanish flag, inspiring the common name. At maturity, the slightly curved tubular flowers reach 1" long with the 5 anthers and 1 rounded stigma protruding an additional inch from the mouth of the flower (as seen on the right). When the flowers drop after pollination, the long female style initially remains, as seen in the image above. The flower racemes appear from late June to frost and are much admired by hummingbirds, butterflies and numerous other pollinators.

The twining stems are rapid growers, growing clockwise to 18-20' tall in one season. The dark green foliage is arranged alternately along the stems and faces outward with the central lobe pointing downward. The foliage offers an attractive bold texture with each leaf measuring 2-6" long and wide. It also provides a nice backdrop for the flower display. The flower racemes project outward from the stems and gently arch upwards, ensuring a very showy display.

Oddly, despite its colorful display and two centuries of time since it was first described, Firecracker Vine has not seen the explosion in popularity as one might expect. It began to appear in European gardens around 1841 yet failed to prosper. Most likely it was unable to set adequate

seed in the cooler climates. The plant made a brief reemergence onto the horticultural scene when a German Seedhouse brought it to the United States in 1887. Yet, it mysteriously became quiescent and did not to reemerge for another hundred years. Over the past 15+ years the plant has finally gained some well-deserved attention at public gardens and hopefully home gardens alike!

Another climbing Morning Glory with a far more delicate appearance and sporting bright red trumpet-shaped flowers is the Cardinal Vine, *Ipomea* x *sloteri*. As denoted by the 'x', the species is a cross, involving the previously mentioned *Ipomea quamoclit* or Cypress Vine and *Ipomea coccinea*, the Scarlet Morning Glory. Both parent vines sport trumpet shaped red flowers. *Ipomea coccinea* features heart-shaped or cordate leaves while *Ipomea quamoclit* features rather slender and somewhat fragile stems sporting attractive compound foliage, each with16-24 slender leaflets per leaf (as seen at right). Both vines are native to South American and Mexico, although *I. coccinea* may be native to SE North America as well.

The species name of *Ipomea* x *sloteri* honors Logan Sloter of Columbus Ohio. After 11 years of unsuccessful attempts to cross the two species and produce fertile offspring, he finally succeeded in 1908! The original cross produced close to 500 viable seeds which in turn produced seedlings remarkably close to the parent or original cross. The seeds were obtained by the Henry A. Dreer Nursery of Philadelphia and starting in 1911, the plant entered the trade as Cardinal Climber! The plants are tetraploid, with 4 sets of chromosomes rather than the typical two sets found in most living plants! This results in a vigorous growing vine with somewhat more thickly textured foliage than the parent vines. The 3" long by 2" wide foliage shares qualities of both parents in that it is heart-shaped and nicely dissected (as seen at left), although less so than *I. quamoclit*. The five overlapping petals form a red trumpet shaped flower that is 1" in diameter and 1½-2" long. Similar to *I. coccinea*, the flower petals are truncate or squared off (as seen below left), versus the flowers of *I. quamoclit* that feature 5 pointed or acute petals (as seen above). In the center lie 5 anthers with red filaments and one globular shaped stigma with a yellow style.

All of these climbers are attractive and each adds its distinctive touch to the garden. Personally, I find *Ipomea lobata* to be the most impactful in a garden design since the flowers are larger and more prominently displayed than its cousins. It is fun worked up into a small tree with an open crown or up tripods or poles placed in a garden featuring hot colors. However, it can also be too bold for some gardens.

The more delicately dissected foliage of *Ipomea quamoclit* and *Ipomea* x *sloteri* combined with the smaller flowers could be just what a more 'quiet' garden needs. At Wave Hill I have seen *I. quamoclit* subtly worked up into a Juniper (pictured at left) giving the appearance the Juniper is in bloom! At Frelinghuysen Arboretum a living fence was made from 10' whips of Japanese Pussy Willow (*Salix chaenomeloides*) that were merely stuck into the ground in a cross-hatch or Belgian Fence style in March. Most of the Willow stems rooted and leafed out, making a perfect support for *I. x sloteri* (pictured below). The whole structure will undoubtedly come down in a year or so but, it simply shows how – with a little thought – the number of applications for these vines is nearly endless!

All the climbing members of *Ipomea* thrive best in full sun in moist yet well-drained soils. I have noticed that plants do not flourish as well in very heavy soils, nor do they like the intense heat when grown on a wall drenched in hot afternoon sun. In this case, the vines still grow well, but abundant flowering is delayed until cooler weather arrives. Seeds should be started indoors 4-6 weeks prior to the last frost-free date or directly sown in the soil come late May or early June. The plants resent root disturbance, so if they are started indoors or bought as a vine, it is important to handle the plant gently while planting.

Ipomea is a well-known genus among gardeners, with the trailing dark purple or chartreuse foliaged forms of *Ipomea batatas* or Sweet Potato a popular addition to containers. Unfortunately, adding an element of height with these climbing species is a notion many gardeners have yet to consider. Marking 200 years since Cervantes initially described the plant, the

time has finally come for more gardens to feature a vertical explosion of color with Firecracker Vines!

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