

Nasturtiums – Great for the Garden and Table

Why do some plants have flowers that simply beg for further investigation, while others we can grow for years, perhaps even eat, and never really stop to appreciate the plant for its beauty? I have grown Nasturtiums, botanically known as *Tropaeolum majus* since youth and have even enjoyed snacking on the orange, red and occasionally yellow flowers. However, I never took the time to understand the complexity of the flower, nor appreciated the culinary and associated health benefits provided.

Nasturtiums are the only member of the family Tropaeolaceae with approximately 80 species native to Central and South America. The plant was first discovered and brought back to Spain

by the Spanish physician and botanist Nicolás Bautista Monardes (1493-1588). However, it was not until 1753 that the Swedish botanist Carl Linnaeus (1707-1778) first published the genus name as well as this particular species name. The genus name of *Tropaeolum* comes from the word Tropaeum and was inspired by the circular or peltate foliage, as seen at right; with the petiole attached near the center of the leaf, the foliage loosely resembles a warrior's shield. This



military likeness inspired Linnaeus to recall how the Roman army would erect a pole called a Tropaeum following triumph in battle, upon which they hung the armor, shields and weapons of the defeated enemy. His imagination was enhanced further by the red and orange flowers, which he visualized as blood stained helmets. Not a very happy image, nor the first that comes to my mind, although the flowers do bear a faint resemblance to helmets! The species epithet of *majus* means larger, a reference to the foliage which can reach 5" in diameter. The roots of the common name are also interesting. It references the similarity of the spicy taste found in the flowers and foliage to that of Watercress, which coincidentally has the botanical name of *Nasturtium officinale*. Evidently, the spicy flavor causes one's nose to move and twist since the roots of the name come from the Latin *Nos* for nose and *Tortum* for twisted!

The primary reason the plant is grown is for the 1-2" diameter 'helmet shaped' flowers, as seen



above right. Flower color is most often red and orange, although yellow, cream and bicolor forms are also seen frequently. The flowers appear from June to frost with individual flowers remaining attractive for 5-7 days. Although the flower colors are rich and saturated, I suspect that most people – much like myself – have not closely studied the flower and reveled in its intricate complexity. The flowers consist of 5 petals with the lips of the upper two rolling back slightly while the lower 3 extend down and slightly outwards. The lower 3 petals are termed as ‘clawed’, referring to the ½” long stems that connects the petals to the floral base, called a receptacle. The arrangement of the flower petals is bilaterally symmetrical or zygomorphic, meaning if a line is run through the center of the floral face from the top to bottom, the two halves will be identical. This type of flower structure is adapted to the flight of pollinators, allowing the lower 3 petals to serve as a landing pad for beetles or bees! Behind and somewhat



supportive of each petal is a leafy bract called a sepal that initially formed the outer protective covering of the flower bud. The lowest 2 sepals are cupped and originally hold the 8 anthers, which gradually rise upwards once the pollen is ready to be shed. The uppermost sepal is modified with a 1-1½” long spur or calcar (as pictured at left) that projects out the rear of the flower and serves as the nectary or vessel that holds the nectar. Nectar is a sugar rich liquid that serves to attract pollinators. The nectar of Nasturtium is exceptionally sweet and contains high concentrations of sucrose,

rather than glucose or fructose as is found in most nectar. All the petals also have numerous raised ridges that run towards the center of the flower that serve as nectar guides for pollinators. Some flowers also have colorful spots near the base of the petal to guide pollinators as seen in the yellow flower below. Although most pollinators will enjoy dining on the pollen, transferring some to the stigma through their sloppy dining habits, only visitors with a long tongue or proboscis will be able to reach down the long spur for the nectar. With Nasturtiums’ exceptionally sweet nectar as a lure, they are a favorite for Hummingbirds to visit. The lower three petals are also fringed at their base (readily seen in the image below), possibly serving as a visual cue to pollinators or to help to dislodge pollen from a hummingbirds head as it moves from flower to flower. If hummingbirds fail to visit, the nectar will continue to accumulate in the tube and as it gets near the top, even bees will be able to enjoy the sweet fluid.

Although I never studied the flower at length, I was always intrigued by the bold color of the flowers and I enjoyed eating them as well! They initially have a sweet taste from the nectar that is followed by a peppery finish from the beneficial mustard oil glycosides. Mustard oil is found in many cruciferous plants like broccoli, mustards and horseradish and recent studies have shown it has potential anti-diabetic properties. The flowers are also very high in vitamin C, with 3.5 oz. having about 200% of your daily dosage and 30% of needed iron. Interestingly, the rest of the

plant can be eaten as well, with the leaves used fresh in salads or lightly sautéed. The foliage has a stronger peppery taste than the flowers with the seed pods even hotter yet! The plant also has high amounts of Lutein, a carotenoid that helps with the processes of photosynthesis and is known to naturally accumulate in the retina of the eye. It has been shown to slow age related macular degeneration!

Grow the plants in full sun for best results, although they are tolerant of light shade if a somewhat leggier plant with fewer flowers is acceptable. They are adaptable to poor soils although they prefer a soil that does not dry excessively. The plants are trailing and work well next to the edge of containers or window boxes, where they are free to drape over the sides. There are a number of new selections available on the market with more compact habits or variegated foliage that can be easily seeded out in spring for a summer-long bounty of flowers.

For the many years that I have walked by this plant or eaten the flowers, I never once studied the complexity of the form of the flower nor knew the many health virtues that this plant can provide. In fact, I was unaware that all above ground parts of the plant were edible! Grow Nasturtiums where the flowers can be appreciated in detail and make it a habit to add them to chicken and fish dishes and salads. Nasturtiums are an ornamental plant that is great for the Garden as well as for the Table!



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