The Outside Story

New England American-Asters: The Stars of Late Summer

By Angela Cannon-Crothers

Before the trees put on their colorful autumnal cloaks, the newly rewilded fields at my home turn to gold and purple. New England American-aster (*Symphyotrichum novae-angliae)* begins blooming in August or September and continues to splash the meadows with deep purple color well into October, mixing with the bright yellow of goldenrod flowers.

These purple blooms belong to the *Symphyotrichum* genus, which includes more than 100 species in North America. Once commonly known as asters, members of this genus now go by the botanical moniker of American-asters.

I sometimes find fat bumble bees, numb after a chilly night, slowly warming in the morning light on tightly closed New England American-aster blossoms. Any time insects are prone to freeze, a delicate flower is likely to as well, and it always amazes me to see these purple blooms reopen full and lush during the warmth of an afternoon following a frosted dawn.

The plants have hairy stems and typically grow 2 to 4 feet in height, although they can be as tall as 6 feet. Like all members of the American-aster genus, New England American-aster flower heads comprise two types of flowers: the purple ray flowers (each “petal” is actually an individual flower) around the outside, and the yellow disc flowers in the center. These bloom in clusters of 100 or more.

The flowers open and close daily in response to light and temperature changes, a movement known as nyctinasty, which is initiated by different parts of the light spectrum. Many flowers use nyctinastic movement, including daisies, Rose of Sharon, magnolias, morning glory, and tulips.

“Nyctinastic movements are part of the circadian rhythms of plants, in which plants primarily use different light-sensitive molecules to regulate movements of plant organs,” said Arthur Haines, senior research botanist with the Native Plant Trust. “These light-sensitive molecules are called phytochromes, and they can sense different types of red light to interpret their environment, such as the onset of darkness.”

To create this movement, Haines said, plants rely on specialized cells that take in water, allowing them to open and close leaves, petals, and flowers. Darwin ventured that nyctinasty allows flowers to avoid being damaged by frost. Another theory suggests that closing at night allows flowers to sustain their blossoms longer, thereby increasing the chances of pollination and reproduction.

But closing isn't New England American-asters' only defense against the chill. They also have slightly fuzzy leaves, and short gland hairs on their stems. Trichomes, or hair on plants, can range from coarse to fine, to long and flowing, to so short that the hairs are barely noticeable – and they serve a variety of purposes, including helping to deter herbivore and insect predation, holding moisture, and preventing frost from reaching the leaf or stem.

New England American-asters are a favorite nectar plant for many native bumble bees and other pollinators, including migrating monarch butterflies. These plants also serve as host plants for the larvae of various species of moths and butterflies, such as the pearl crescent.

My favorite thing about New England American-asters is their smell: a slightly citrus, mildly spicy floral aroma. Many herbalists document this plant as being helpful with respiratory ailments as well as having a calming effect on the nervous system. As a teenager, I used to put the fragrant flowers in my homemade potpourri. I have also tried putting the blossoms in oil. But nothing captures their scent – or color – like sunlight does.

These vibrant flowers are among the wildflower mix I planted in a former horse pasture at my home, converted after my beloved Morgan-cross pony passed away during the start of the pandemic. Now, when I see the purple blooms of New England American-asters and catch their scent in the autumn air, I think of my pony of 20 years. I sometimes bend to crush a few blossoms in my hands and breathe in the aroma. It always takes me back to my youth, and to my roots of loving, and learning about, wildflowers.

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