



Keystone Plants - Very Special Relationships

The value of “keystone plants” has, for some time now, been recognized by wildlife authorities. The name hints at their importance, but what are these key plants and what is it that makes them worthy of all this attention?

Keystone plants are native trees, shrubs, flowering perennials and grasses that are indigenous to a particular geographic region or ecoregion. Just as the keystone of an archway holds all the other stones in place to secure the structure’s integrity, healthy native plant communities are critical to the food web and necessary for many wildlife species to complete their life cycle.

There are two types of keystone plants - those plants needed to feed butterfly and moth caterpillars and plants that provide for specialist bees whose young require specific flower pollen. These plants, whether supporting caterpillars or specialist bees, are often referred to as “host plants”.

Here in the Northeast, we have an abundance of plants native to our region. While all natives are important for providing natural sources of food, shelter and nesting sites, “keystone” plants have specialized relationships with animal pollinators who are discerning about their food choices. Some plants provide for both caterpillars and bees and are particularly beneficial. **When planting to support pollinators, birds and other wildlife, researchers recommend adding keystone plants in your landscape.**

Entomologist Dr. Doug Tallamy and his research team at the University of Delaware have ranked 20 shrubs and trees for their ability in providing for butterfly and moth caterpillars. Topping the list for supporting caterpillars are our native oaks that host 534 caterpillar species including Hairstreak butterflies. Willows and cherries come in at a close second, hosting over 450 species, including caterpillars of such butterflies as the Mourning Cloak, Viceroy and Eastern Tiger Swallowtail. Moth populations far outnumber butterflies and for good reason. Many wildlife species and especially birds, feed on both adult moths and their caterpillars. Baby birds are fed caterpillars almost exclusively because they are easily digestible and nutritious. It takes thousands of caterpillars to raise just one clutch of baby birds, keeping mom and dad very, very busy.

Work by Pollinator Conservationist Jarrod Fowler has focused on pollen specialist bees and the key plants that support them. Topping the list of plants with high value are native sunflower, goldenrod and black-eyed Susan. Specialist bees that emerge in early spring are seeking dogwood, maple, willows and woodland flowers. When collecting pollen, bees are incidentally cross-pollinating flowers which ensures the plants survival. While specialist bee populations are small, all bee species include specialists who only seek out certain plants for pollen. They develop over time from egg to adult and their emergence coincides with a plant’s bloom. And even though most bees are not as choosy about their native flower pollen choices, these “generalists” will also visit and benefit from the pollen of these keystone plants.

Of course, there are many plants that do double duty in providing food for both caterpillars and pollen specialist bees. These include list toppers asters, sunflowers, and goldenrod which will be among the many plants available at our POP’s **Native Plant Sale on Saturday, September 7th** at the C.H. Booth Library, 25 Main Street, Newtown from **9-12pm** Rain or Shine. These and many more trees, shrubs and perennials will enhance any garden landscape and make it come alive with activity. We encourage readers to go to our website for a complete list of amazing Keystone plants.