

Good Bug, Bad Bug

By Susan Camp

The flowers in the garden have figured out that summer officially is here. Now that the first spring flush of bulbs and irises has died back, the daylilies, gladioli, hostas, astilbe, and Joe Pye weed are blooming, as are the hydrangeas, butterfly bushes, catmint, Russian sage, and milkweed. We planted for bees, butterflies, and hummingbirds and we are enjoying their visits to the garden. Along with the good critters, we are noticing whiteflies, leaf miners, aphids, and mealybugs.

We want the birds and insect pollinators to visit, so we don't want to spray harmful chemicals that would poison them. This means we have to expect and condone a certain amount of plant damage caused by the bad guys. A frequently asked question is "Which beneficial insects can we attract to the garden?" In fact, some beneficial insects probably live in your garden right now, munching away on aphids, mealybugs, whiteflies, thrips, and other problem-causing insects.

Beneficial insects are divided into four basic types: predators or predacious insects, parasitoids, pollinators, and decomposers/recyclers. Pollinators are the bees, flies, butterflies, and moths we work so hard to attract. Decomposers/recyclers include earthworms and the larvae of many insects, as well as bacteria, nematodes, and fungi. They already thrive under the fallen leaves and in the soil.

Predatory insects kill and eat undesirable insects that damage plants. Some are predacious as adults, some only in the larval stage, and some at all stages of development. Ladybugs or ladybird beetles are voracious predators, feeding primarily on aphids. Lacewing and syrphid fly larvae eat mealybugs, aphids, thrips, scale insects, and mites. Adult syrphid flies, also called hoverflies, resemble yellow jackets and feed on pollen and nectar, serving as pollinators. They do not sting. Assassin bugs, which eat Japanese beetles, and praying mantids will feed on good and bad insects alike. Adult dragonflies consume mosquitoes, gnats, no see'ums (midges), and sometimes, butterflies. Dragonfly larvae feed on water insects. Other good garden predators include spiders, lizards, toads, frogs, and birds.

Several other beneficial insects are profiled in Virginia Cooperative Extension (VCE) Publication 426-615 "The Virginia Gardener Guide to Pest Management for Water Quality". NCSU Cooperative Extension publication "Beneficial Insects"; Cornell University Insect Diagnostic Laboratory publication "Beneficial Insects— Nature's Pest Control"; and Galveston County, TX Master Gardeners' article "Beneficials in the Garden" provide information on predatory insects, as well as parasitoids, the fourth type of beneficial insect.

Parasitoids are not true parasites. Rather than weakening its host, a parasitoid will actually kill it. The adult female parasitoid lays her eggs in the host, where they hatch. The larvae feed on the live host, which remains alive long enough for the larvae to pupate and survive outside the host.

Braconid and tiny trichogramma wasps are parasitoids that lay their eggs on a variety of caterpillar hosts, including cutworms, corn borers, cabbage worms, and army worms.

How can we increase the populations of predacious and parasitoid insects in our gardens? Buying them or ordering them online are options. The problem is that the lovely mass of colorful ladybugs is just as likely to fly to your neighbor's garden and eat his insect pests. It probably is better to save your money to buy plants that will attract beneficial insects. Crape myrtles attract as many as 13 beneficial insects, according to the NCSU article. Herbs like dill, basil, cilantro, and parsley attract good bugs, as do mint and Queen Anne's lace.

As I look out the window at the range of color in our front garden, I am happy to note the constant motion of the various pollinators. A few eaten leaves are certainly worth the price if it means we don't have to spray noxious chemicals that will kill the good bugs as well as the bad ones.

June 30, 2016