

## Good Bugs

Predators and parasitoids keep the number of plant-eating insects in check. Predator insects attack and feed upon their prey, while parasitoid insects lay their eggs in or on a prey. When the young hatch, they eat their host.

The job that predator and parasitoid insects do—every day—is amazing. As a matter of fact, many of our serious pest problems have developed because something threw this natural system out of balance, such as pesticide use that wiped out the beneficial insects, or the introduction of pest insects to an area that lacks the natural enemies to keep them in check.

To encourage the presence of beneficial insects in your garden, create a safe environment for them by limiting the use of pesticides. Next, plant a diversity of plants, including pollen—and nectar—producing plants. Also, let some of your vegetables and herbs go to flower because the very small flowers on carrots, parsley, cilantro, and dill, for instance, are just what many tiny beneficial insects need to thrive. The most important thing is to identify these welcome visitors before you decide to squash them.

### Aphid Midge



Not long ago, I was pleased to see several tiny, bright orange aphid midge larvae amongst a mess of shriveled-up aphids on my sweet peas. The colorful aphid midge larva is a maggot that attacks more than 60 species of aphids found on vegetables, flowers, trees, and shrubs. The larva paralyzes the aphid then sucks out its body juices. (Disgusting, but very effective). I didn't see the diminutive adult midge that these little larvae will transform into because it usually flies at night. The adult is a delicate, long-legged fly that resembles a small mosquito, and it feeds on honeydew from aphids and nectar.

### Green Lacewings



Green Lacewings are beautiful, slender-bodied, fragile insects, about  $\frac{1}{2}$  to  $\frac{3}{4}$ " long, with transparent wings and golden eyes. The adults feed on flower nectar and aphid honeydew. Green lacewing larvae, known as aphid lions, are not nearly as attractive as their parents. They are alligator-shaped, up to  $\frac{3}{8}$ -inch-long, mottled cream and brown in color, and have hairy legs and a row of small bristles down each side of their bodies. Aphid lions are voracious predators of aphids, mites, thrips, whiteflies, small caterpillars, Colorado potato beetle larvae, and the eggs of several pest insects. All in all, this is one particularly good bug.

## Ground Beetles



Ground beetles are predators in both their adult and larval stages. The adults are about an inch long, usually black, often with a metallic iridescence. Their larvae are long, narrow, and segmented. Ground beetles prey on many bad bugs, including gypsy moth caterpillars, snails, root maggots, cutworms, and imported cabbage worms. Ground beetles will be long-lived residents of your garden if you supply them with a compost area or an undisturbed perennial planting in which they can live peacefully.

## Lady Beetles



There are several species of lady beetles (also known as lady-bird beetle or ladybugs). Most adult lady beetles are shiny red or reddish-orange, and they have varied markings. They may also be other colors—but remember: they are never green. (If you see something in your garden that looks like a green lady beetle, you might want to skip ahead in this article and read the entry on the dread cucumber beetle). The larva of a lady beetle is about  $\frac{1}{4}$  to  $\frac{1}{2}$ " long and has a bristly, gray or black, alligator-shaped body with orange, yellow, white, or pink spots. Both lady beetle parents and their offspring love to chow down on aphids, as well as mealybugs, scale, mites, psyllids (which are small insects that look somewhat like aphids and cause stunted plant growth), and insect eggs.

## Minute Pirate Bug



The adult minute pirate bug is about  $\frac{1}{8}$ " long, with an oval, black body, and black and white wings. When it is young, its immature stage, or nymph, is yellow-orange or brown. Both adults and nymphs are predators of thrips, spider mites, small caterpillars, leafhopper nymphs, whiteflies, aphids, and insect eggs.

## Predatory Mites



Contrary to common belief, mites are not actually insects. They are arachnids and therefore relatives of spiders. Predatory mites are very tiny, about the same size or a little larger than the spider mites they prey on, but the predatory mites have longer legs and can move faster. (They can move backward, too, which spider mites cannot do). Predatory mites are teardrop-shaped and may be straw-colored, reddish-orange, or brown. In addition to spider mites, these predators prey on thrips, other small insects, and insect eggs.

### Syrphid Flies



Also called hover flies or flower flies, Syrphid fly adults are easy to recognize because they look like a cross between a bee and a fly, and many of them have yellow and black stripes on their bodies. The larva of the Syrphid fly looks a little bit like a caterpillar, although it's really a maggot. The larva doesn't seem to have a head, just a pointed end and a blunt end. (In case you're wondering, the pointed end is the head). The larvae are about ¼- ½" long and vary in color from opaque to bright green.

These friendly little bugs should be welcome additions to any garden: The adults love to drink nectar from flowers, and the larvae love to lunch on aphids.

### Parasitoid Wasps



There's no need to fear these friendly little bugs—the very tiny parasitoid wasps don't sting people and numerous species of *Aphidius* are terrific at controlling pests, including aphids, caterpillars, and white flies. These good bugs accomplish their work this way: Parasitic wasps lay each of their eggs right inside an aphid. You probably won't see the wasp as you're going about your garden duties, but if you look closely at

a group of aphids, you'll likely see that some are immobile and puffy tan or brown aphids that look larger than the rest. These aphid "mummies" have been parasitized. (When the young wasps hatch out of the aphids, it's like a grotesque scene straight from the movie *Alien*. However, most gardeners who've been plagued by aphids won't feel too bad for the victim).