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GARDEN GOOD GUYS – SYRPHID FLIES

By Nanette Londeree, Marin Master Gardener

With the bounty of flowers blooming this time of year, you're likely to spot one of the most helpful little critters in the garden, though you may not recognize her as such. What appears to be a small bee hovering like a tiny helicopter over Queen Anne's Lace, but looks and may even sound like a buzzing bee, is most likely a syrphid fly. Commonly known as flower flies or hover flies, these are really good guys for the garden.



The brightly colored adults range in size from 1/4- to 3/4-inch long, most adorned with black or brown coloring, yellow-banded abdomens and body markings. They may look like a honeybee or bumblebee, a wasp or even a yellow jacket; it's thought that this bee or wasp-like appearance mimics hymenoptera species in order to ward off their main predators, birds. While the resemblance to bees may be striking, if you look closely, you can tell the difference. The syrphid fly has a single pair of wings, while bees are equipped with two pair. Flies have big compound eyes while bees have simple eyes. Bees have long antennae; those of the syrphid fly are stubby. And the flies don't bite or sting!

The Syrphidae family is a large one distributed throughout the world. There are more than 800 species in North America, many being very abundant. They can be found in a wide variety of agricultural, landscape and garden habitats including your very own garden, wherever you may find their favored foods. The adults feast on pollen and nectar; some flowers that are especially attractive to them include wild carrot and mustard, coriander, dill, fennel, sweet alyssum and yarrow. Their movement from flower to flower makes them an important pollinator. They are usually most visible in the later half of the growing season, after aphid infestations have been well established. They don't seem to get credit for helping to reduce the aphid population that their larger, more readily recognized fellow predator, the ladybug do, but they ought to.

It's the little guys, the fly larvae that are the predators, going after aphids, small caterpillars, thrips and other small insects. One syrphid fly larva can consume as many as 400 aphids in their very short lifetime.



Adult females lay their tiny (1/32-inch) whitish to gray oblong eggs singly on their sides usually near aphids, within an aphid colony or other suitable food source. The eggs hatch within two to three days and the legless and blind, maggot shaped larvae emerge. They vary in color and patterning, but most have a yellow longitudinal stripe down their back. You can distinguish them from caterpillar larvae by their tapered head, lack of legs, and opaque skin. They move along plant surfaces, lifting their heads to grope for prey; when they find an aphid, a hook comes out and grabs it, pulls it against its mouth

to suck the juice right out. After three to four weeks of feeding, they've fattened up and progressed through several instars; they drop to the soil where they pupate, go through a complete metamorphosis

and emerge as adults in about two weeks (or remain in the pupal stage over winter.) Generation time depends on temperature, species, and availability of food - there may be three to seven generations produced each year.

With their big appetites for destructive bugs, their active pollination activities and their delightful appearance, do welcome these little good guys to your own garden.

Syrphid flies are regularly found where aphids are present in agricultural, landscape, and garden habitats. Adults of this stingless fly hover around flowers, have black and yellow bands on their abdomen and are often confused with honeybees. Syrphid flies undergo complete metamorphosis with 3 larval instars. Females lay their whitish to gray oblong eggs, each measuring 1 mm (1/32 inch), singly on their sides usually near aphids or within aphid colonies. Larvae are legless and maggot-shaped and vary in color and patterning but most have a yellow longitudinal stripe on the back. They can be distinguished from caterpillar larvae by their tapered head, lack of legs and their opaque skin, through which internal organs can be seen. Larvae vary in length from 1 to 13 mm (1/32- to 1/2-inch) depending upon their developmental stage and species. Pupa are oblong, pear-shaped, and green to dark brown in color. Pupation occurs on plants or on the soil surface.

Adult syrphid flies feed on pollen and nectar, while it is the larval stage that feeds on insects. Larvae of predaceous species feed on aphids and other soft-bodied insects and play an important role in suppressing populations of phytophagous insects. Larvae move along plant surfaces, lifting their heads to grope for prey, seizing them and sucking them dry and discarding the skins. A single syrphid larva can consume hundreds of aphids in a month. Not all syrphid fly larvae are predaceous; some species feed on fungi.

Photos courtesy of UC IPM website.