

Over the Garden Fence

Garden Insects

By Brian David (Mariposa Master Gardener)

This year I am welcoming wasps and inviting insects to invade our garden. I am experiencing a paradigm shift (a fundamental change of underlying assumptions). It started when I heard, "Not all insects are bad. In fact, of the 92,000 species that have been identified in the United States, about 87,000 (95%) are either good or neutral" (California Master Gardener Handbook).

Beneficial insects help balance the five-percent of insects that can destroy garden plants and commercial crops. The study and application of beneficial insects (who are called natural enemies or predators) are facets of integrated pest management, or IPM.

We can encourage natural controls (IPM) in our gardens by being hospitable to beneficial insects. The beneficial insects listed below are typical in California and were found over a two-year period in native shrubs planted along Sacramento Valley farms.

Minute pirate bugs (feed on thrips)

Syrphid flies, called Hover or Flower flies (eat aphids and other soft bodied insects)

Assassin bugs (attack most insects)

Tachinid flies (ingest caterpillars, loopers, beetles, cutworms, sawflies, and more)

Big Eyed bugs (eat mites, and various insect eggs)

Lacewings, also called Aphid lions (are aphid diners)

Parasitic wasps (devour aphids, caterpillars, sawflies, beetles, leafhoppers, and flies)

Other beneficials you may notice in or around your garden are; dragon and damsel flies, soldier and ground beetles, lady bugs/lady beetles and spiders (virtually every spider *Araneide* is a predator enjoying a vast array of insects). Please visit the IPM website link for photos of beneficial insects. http://ipm.ucanr.edu/IPMPROJECT/ADS/poster_naturalenemies.html

Some beneficial insects play dual roles, like earwigs which are beneficial when eating aphids in apple orchards, but pests when gnawing plant shoots and seedlings. Praying mantis feed indiscriminately on a variety of insects, and at times one another. Some of their prey includes beneficial insects.

Having some insect pests in the garden is good; they ensure a food supply for the beneficial insects. Most beneficials are omnivores, eating plants and other insects. To remain in or near our gardens beneficial insects need shelter, water, pollen and nectar, along with access to insect pests.

Gardeners can create beneficial friendly environments. Mulching provides space and shade for protection and rest. Pebble perches in shallow fresh water will provide essential hydration. Adjacent permanent shrubs give beneficials a safe place to over-winter.

Native California plants are the best environments for beneficial insects. Native perennial grasses and shrubs increase the beneficial populations, even when plants are 100 - 250 feet away from crops or gardens. One sampling from a hedge in Central California showed beneficials outnumbering pests by 78 to 22. Western redbud, California coffee-berry (Mound San Bruno), and ceanothus are great shrub choices.

Plants with small flowers, like manzanitas, provide beneficials excellent pollen and nectar sources. Caraway, dill, and fennel; daisies, cone flowers, yarrow, catnip, hyssop and lemon balm will each enhance your garden and feed beneficials. An herb garden is an excellent way to bring fresh scents, colors and textures to a garden while attracting beneficial insects. Rosemary and thyme are proven hardy herbs.

This spring focus on flowers and encourage beneficials, from some of the one million different species of insects, to enjoy your garden with you.

California Master Gardener Handbook, Second Edition, Dennis R. Pittenger, UCANR 2015

The Organic Gardener's Handbook of Natural Insect and Disease Control, Barbara W. Ellis and Fern M. Bradley, Rodale Press Inc. 1992

(Online: <http://californiaagriculture.ucanr.org/landingpage.cfm?article=ca.v065n03p197&fulltext=yes>
DOI: 10.3733/ca.v065n04p1970)

Using Transplants in Vegetable Production, Wayne L. Schrader, UCANR pub. 8013. <http://anrcatalog.ucdavis.edu>

For further gardening information and event announcements, please refer to the Mariposa Master Gardener website (<http://cemariposa.ucanr.edu>) and Facebook page (Mariposa Master Gardeners). The UC Master Gardener Helpline is available to assist residents with questions about home gardening.

The Helpline is open two days per week, Walk-in clients are welcome.

Tuesdays, 9:00 AM — 12:00 PM

Thursdays, 2:00 PM — 5:00 PM.

Call, 209-966-7078, to speak with a volunteer, or leave a message.

Email: mgmariposa@ucdavis.edu