## Beneficial Insects for a Healthy Garden

By Rachel Oppedahl

Ah, spring. Tulips, redbuds, lilacs, roses and—oh, no—bugs! Yes, spring explodes not only with flowers, but also with those pesky insects that eat rosebuds from the inside out, chew tender new leaves back to the stem, and find a hundred ways to maim and kill our beloved plants. These "bad" insects are the reason gardeners have—regrettably—used an arsenal of nasty pesticides for more than 50 years.

But there's a better way to deal with bad bugs, both for you and your garden: learn how to recognize and draw the good ones, known as "beneficial insects" or "natural enemies." Beneficials prey on many of the pests that are all too familiar to gardeners: aphids, mites, leafhoppers, leaf miners, thrips and more. So if you garden with good bugs in mind, you can create a balance that helps prevent or keep insect pests in check.

The best way to start is to familiarize yourself with the most common beneficial insects found in our area. A short list includes: ladybugs, green lacewings, syrphid (or hover) flies, damsel bugs, predaceous ground beetles, assassin bugs, predatory wasps and most spiders. The University of California Cooperative Extension (UCCE) Integrated Pest Management website has two great visual resources for identifying beneficial insects: their "Natural Enemies Gallery" at <a href="https://www.ipm.ucanr.edu/PMG/NE/index.html">www.ipm.ucanr.edu/PMG/NE/index.html</a> and a "Meet the Beneficials" downloadable flyer/poster at <a href="https://www.ipm.ucanr.edu/IPMProject/ADS/poster-naturalenemies.html">www.ipm.ucanr.edu/IPMProject/ADS/poster-naturalenemies.html</a>.

One of the most important things you'll learn from the Natural Enemies Gallery is how to recognize beneficial insects not only in their adult form, but also in other life stages such as larval and nymph. Many insects, including the beneficials, go through a partial or complete metamorphosis from egg to adult (think caterpillar to butterfly). The convergent lady beetle (the most commonly recognized ladybug) in its larval stage looks nothing like its adult form. By being able to recognize beneficials in all of their life phases, you can avoid inadvertently harming them.

The next step is to draw more good bugs to your garden. The best way to do that is to create a diverse landscape that is predominately native (and/or Mediterranean), and by avoiding pesticides. Such a landscape and sustainable practices will provide what the good bugs need (like all wildlife): food, water, shelter, places to start their young and an environment free of toxins.

Native buckwheats are a favorite of local beneficials, as are coffee berry, California lilac, coyote brush, elderberry, manzanita, salvias, penstemons and many herbs. For more extensive lists of plants favored by the good bugs, visit the California Native Plant Society's website at <a href="http://arboretum.ucdavis.edu/gardening.aspx">www.cnps.org</a>, as well as the UC Davis Arboretum website at <a href="http://arboretum.ucdavis.edu/gardening.aspx">http://arboretum.ucdavis.edu/gardening.aspx</a>.

While perusing the UCCE Natural Enemies Gallery recently, I discovered a beneficial that might be the answer to my perennial spider-mite woes: the spider mite destroyer lady beetle (honest, that's its official name). I intend to do more research on this promising destroyer, and plan

future plantings to effectively create a big "Welcome" sign for them. Consider the possibilities (per the UC IPM write-up on the destroyer): "Adults and larvae each consume about one-half dozen mites a day. At warm temperatures the spider mite destroyer can complete one generation from egg to adult in about three weeks. Females typically live one to three months, during which they lay about 100 to 200 eggs." Sounds like the destroyer could be my new best friend!

Rachel Oppedahl is a University of California Cooperative Extension Master Gardener of Tuolumne County who loves to work with nature, rather than against it, in her garden.