

# A guide to beneficial insects

## (The good guys)



**YOUR GARDEN IS THE BEDROOM,** obstetrics ward, nursery school, cafeteria, dueling ground, and dying place for hundreds of kinds of six- and eight-legged creatures. Starting in April and May—after a relatively quiet fall, winter, and early spring—the tempo of insect and spider activity begins to pick up significantly, and the garden becomes a zoo of tiny creatures, noticeable by any person who takes the time and slight effort needed to behold it.

Why should you care about your small-creatured zoo? Because these organisms are going to be residents and guests of your garden for as long as it has trees, shrubs, and other plants that provide them with the food and shelter they need. Even if you're a gardener with no special interest in bugs, getting to know them will help you better understand the whole world of tiny life in your garden. Once you know that, you'll learn how to control the plant damagers among them more effectively.

### Beneficial critters help keep your garden healthy, if you let them

Applying insect-killing materials is not the only answer; often chemicals bring new troubles because they upset the natural system of checks and balances in the insect world. With thousands of creatures of several hundred kinds rubbing shoulders in one garden, it's a microbazaar, with each citizen bustling through life obeying some tough natural laws and a tight schedule.

Most of the insects listed at right just live their complicated lives, keeping each other in check and not hurting your plants at all. Many feed on insect pests, and they get help from other garden critters.

Lizards, for example, do their share of pest control. The Western fence lizard eats a range of insects, including flies, aphids, and ants. Seldom seen but widely present is the snakelike Southern alligator lizard, which prefers moist shade on the edges of the garden and dines on slugs, sowbugs, earwigs, and other ground-dwelling pests.

Birds help, too. Mockingbirds—world champion songsters—often catch grasshoppers in midair. Towhees scratch in dead leaves for sowbugs, earwigs, and other insects. Bushtits are tiny, fearless,

avian acrobats that search out aphids under leaves. House finches eat mostly fruit and nectar, but they also relish aphids and other honeydew-secreting insects. Robins love earthworms but during nesting season these birds also consume large quantities of caterpillars, beetles, grasshoppers, and earwigs. Adult butterflies may not eat other bugs, but they pollinate plants while bringing beauty and motion to the garden.

Get to know your garden's harmless "good guys." Get to know the plant damagers, too. Learn about their natural predators; your garden will be healthier for it.

### Business-minders

These two insects are mostly harmless curiosities.

**Daddy longlegs** Their oval-shaped bodies swing down among their eight legs while they walk with knees held high. The fragile legs detach easily, probably as an escape ploy against attackers. The aggressor ends up holding a leg or two, which continue to twitch while the owner runs away.

**Spittlebugs** The young suck plant juices and blow bubbles to make the coating of foam that hides them from lynx spiders, parasitic wasps, and other predators. The adults fly and rove about freely.

### Beneficials

**Assassin bugs** earn their name from the way they attack and stab their victims, injecting them with liquids that quickly dissolve their insides, then sucking them dry. Their prey includes bees, wasps, butterflies, day-flying moths, caterpillars, grasshoppers, and spiders.

**Honeybees** These insects feed their young on pollen and nectar. Although they don't control pests, they pollinate plants as they visit flowers.

**Hover flies (syrphid flies)** These harmless insects resemble honeybees so much that most animals (including people) mistake them for bees and leave them alone. (One visible difference is that hover flies have only one set of transparent wings.) The adult flits among flowers feeding on nectar and pollen. The 1/8-inch-long, green or brown larvae prey on insects, especially aphids, by extending hooklike fangs from the mouth. A single larva can eat an aphid a minute all day long.

**Insidious flower bugs** are fast-moving, shiny black, pinhead-size bugs with yellowish wing covers. They dive into roses in pursuit of thrips.

**Lacewings** Adult and larval lacewings eat aphids, mites, scale insect nymphs, mealybugs, and also the eggs of all these crea-

tures. California green lacewing adults are slender and green with transparent wings; they lay their whitish eggs on rose leaves or thorns, each at the end of a thread. The smaller Pacific brown lacewing lays eggs on the undersides of leaves.

**Ladybird beetles** Both the familiar adults and their larvae eat aphids, mealybugs, and scale insects. Mail-order ladybugs usually fly away; the ones that live in the neighborhood are more reliable.

**Lynx spiders** These spiders are wandering hunters with no need for a web. They course through grass and low vegetation, and leap upon flies, leafhoppers, other spiders, or whatever they can catch and kill.

**Paper wasps** They suspend small, gray, papery combs from the rafters or ceilings of toolsheds, patios, or other elevated structures. They police the garden, capturing caterpillars and other plant-eating insects.

**Praying mantises** These tackle a wide range of prey, from aphids to grasshoppers and moths. If they're in your garden, be careful when pruning rose canes not to remove the insect's brown, accordionlike, 1-inch-long, 3/4-inch-wide egg cases.

**Snakeflies** Adults eat aphids and other small insects. The young are predatory larvae that live under the bark of dead trees, where they attack immature beetles and other wood-boring larvae. They're rare: Protect and treasure a snakefly if you find one.

**Tachinid flies** come in many species. Most resemble bristly, overgrown houseflies. They lay eggs on various insects and caterpillars, and the larvae burrow into their hosts' bodies, killing them.

**Trichogramma wasps** These destroy the eggs of various harmful worms and caterpillars. Other species of wasps parasitize aphids, scale insects, and whiteflies.

## 10 ways to attract (and keep) beneficial insects

**1. Interperse vegetable beds** with rows or islands of annuals. Corn cockle (*Agrostemma*), cosmos, marigold, sunflower, sweet alyssum, and tithonia add decorative elements while luring beneficials toward prey.

**2. Plant an herb garden** Coriander (cilan-

tro) in bloom is one of the top insectary plants throughout the West, so let it bolt with your blessings. Caraway, chervil, dill, fennel, lovage, and parsley flowers also score high as insectary plants. The blooms of many ornamental herbs, notably tansy and santolina, also attract beneficials.

**3. Include perennials** that are rich in nectar and pollen in permanent flower beds. Agastache, a showy, aromatic summer perennial in the mint family, also happens to be nectar-rich, making it irresistible to beneficials. Bees and hummingbirds like it too. Other beneficial plants that look good in a border include cone-flower, coreopsis, golden marguerite, goldenrod, scabiosa, and yarrow.

**4. Find room for native plants** The tiny flowers of wild buckwheat (*Eriogonum*) are alluring to many beneficials; some buckwheats are low and compact enough to tuck into even the smallest garden. If you have more space, consider ceanothus, coffeeberry, and toyon.

**5. Fill empty corners with a border mix** Nichols Border Mix for Bees and Beneficials (\$4.95 for 5g packet; 800/422-3985 or [www.nicholsgardennursery.com](http://www.nicholsgardennursery.com)) contains many of the insectary plants listed at right, with some extras for bees and butterflies.

**6. Experiment with hedgerows** Organic growers plant mixed hedges of tall insectary plants at the edges of their fields as both shelter and food source for beneficials. A row of sunflowers or fennel along the fence or encircling the compost pile could have the same effect. Or let a silver lace vine (*Polygonum aubertii*) cover a chain-link fence or arbor.

**7. Grow green manure** Clover and vetch (often sown as cover crops in fall and winter and then turned under in spring to enrich the soil) happen to be excellent insectary plants.

**8. Allow some of your salad and cabbage crops to bloom** Beneficial insects love the flowers of arugula, chervil, chicory, and other greens. Brassica flowers (bok choy, for instance) are also appreciated.

**9. Provide food, shelter, and water for birds** Trees and shrubs make good nesting and hiding places. Plants that produce

nectar, berries, or seeds are a bonus. Many birds eat insects too.

**10. Be patient** Arriving at an optimal balance between beneficials and pests doesn't happen overnight. It requires patience and could take several years to build up enough beneficials to neutralize pest invasions. It means using the least toxic pesticides applied only to the plants under attack (or better yet using none at all—beneficial insects are also susceptible to pesticides). It requires close observation to determine who's living in your yard—a 10x or 15x hand lens and an insect guidebook are handy. A little tolerance for chewed leaves will also help.

## 13 top insectary plants and the insects they attract

Nutrient-rich flowers give adult insects the energy they need to thrive, mate, and lay eggs on or near the plants and crops that attract pests. By the time the pests arrive, the eggs will have hatched into larvae—the hungry teenager stage of beneficials—ready for some serious chomping. These voracious adolescents provide most of the pest control. Letters indicate the insects that these plants attract (see key at bottom).

### Annuals

**Cosmos** Spring through fall. HF, LB, LW.

**Sunflowers** Summer into fall. HF, LB, PW.

**Sweet alyssum** Summer; year-round in mild areas. HF, LW, PW, TF.

### Herbs

**Coriander** Spring. HF, LW, PW, TF.

**Dill** Spring and summer. HF, LB, PW.

**Fennel** Spring through fall. HF, LB, PW, TF. (Reseeds readily; not for small gardens.)

### Perennials

**Agastache** Summer. HF, PW.

**Clovers** Spring and summer, depending on type. LB, PW.

**Coreopsis** Spring through fall. HF, LB, LW, PW.

**Pincushion flower (Scabiosa)** Spring to fall. HF, PW.

**Tansy** Summer. HF, LB, LW, PW.

**Wild buckwheat (Eriogonum)** Spring through fall. HF, PW, TF.

**Yarrow (Achillea)** Spring through fall. HF, LB, PW.

## Abbreviations key

**HF:** Hover flies (syrphid flies)

**LB:** Ladybird beetles

**LW:** Lacewings

**PW:** Parasitic wasps

**TF:** Tachinid flies