

BENEFICIAL INSECTS

Most insects in the garden are not harmful pests. Of the over one million known species of insects, more than half spend their time hunting and eating other insects or their eggs. These are called predators, parasites, or beneficial insects. Smart gardeners do everything they can to protect and encourage the presence of beneficial insects in their garden. This includes avoiding the use of chemical insecticides whenever possible, especially those that kill a broad spectrum of insects. Native bees and butterflies are particularly vulnerable to both broad and narrow spectrum insecticides.

Healthy gardens exhibit an ecologically diverse fauna of beneficial insects such as spiders, mites, centipedes, and harvestmen. These beneficials keep plant eater populations in check at tolerable, low levels and thus causing minimal damage. The presence of target "bad bugs" will naturally attract the associated predator insect. Harmful plant eaters such as mites, aphids, thrips, tent caterpillars and others serve an invaluable role as sustenance for beneficial carnivorous or parasitoid insects. Tolerating small populations of these plant eating insects will ensure associated populations of beneficials are present, and ready if damaging infestations of high-impact plant feeders do occur.

Strategies for Attracting and Keeping Beneficial Insects in your Yard

The single greatest impediment to attracting and maintaining a good population of beneficial insects and other arthropods in your yard is the regular use of synthetic, broad-spectrum pesticides. Extensive lawns are also non-conducive to attracting and retaining a diversity of beneficial insects, mites, and spiders, so it is best to minimize lawn areas and maximize shrub and bush plantings for better ecological diversity.

Providing some elements of a native habitat in and around yards will improve the abundance and diversity of natural enemies of pests and pollinators. Native flora also provides natural overwintering sites for many beneficials. It is useful to leave at much area as possible of native vegetation undisturbed during fall and winter.

Product Suppliers

If a sufficient source of beneficials is not available naturally, they can be purchased at garden centers or through mail order catalogs. Contact your local nursery or search online for beneficial insect suppliers. Purchasing lady beetles from a non-reputable supplier may introduce non-native Asian lady beetles which may out compete natives, so we recommend researching sources prior to purchase.

At first, provide the new insects with water sources such as pie tins of water placed around the garden. Planting flowers and native plants around the garden will help supply food for those who aren't predatory in their adult stage but produce a predacious immature stage. For best results, don't use either narrow or broad spectrum insecticides for at least a month before releasing beneficials.

Know Your Garden Friends

It is important to be able to identify insect, spider, and mite allies, and to recognize who your insect friends are, in order to gauge how the “war” against pests is going in your garden. Beneficial arthropods (insects, mites, spiders, centipedes, and harvestmen) that help maintain a garden with few or no outbreaks of damaging plant pests, are either predators or parasitoids. Predatory insects and spiders hunt, attack, kill, and consume insect and mite prey, usually smaller than themselves.

For More Information

For information on life cycles, images, and

Please refer to: Fact Sheet [EM067E](#) “Beneficial Insects, Spiders, and Other Mini-Creatures in Your Garden: Who They Are and How to Get Them to Stay.”

PREDATOR	Prey or Pest Targeted
Ants	Aphids, mites, thrips, leafhoppers, centipedes, millipedes, caterpillars, insect eggs, and whiteflies.
Centipedes	Spiders, cockroaches, beetles, caterpillars, earthworms, pill bugs, and earwigs.
Earwigs	Aphids, mites, thrips, leafhoppers, centipedes, millipedes, caterpillars, insect eggs, and whiteflies.
Harvestmen (daddy-long-legs)	Small larvae, beetles, mites, aphids, earthworms, slugs, and spiders.
Lacewings and snakeflies	Mites, aphids, leafhoppers, whiteflies, thrips, mealybugs, caterpillars, insect eggs, and scale insects.
Parasitic flies (tachinids, bee flies)	Aphids, mealybugs, caterpillars, true bugs, beetles, grasshoppers, leafhoppers, spiders, wasps, bees, whiteflies, and insect eggs
Parasitic wasps (chalcids, encyrtids, braconids, ichneumonids, etc.)	Aphids, mealybugs, caterpillars, true bugs, beetles, grasshoppers, leafhoppers, spiders, whiteflies, and insect eggs.
Praying Mantids	Flies, wasps, bees, caterpillars, moths, and butterflies.
Predatory beetles (ground beetles, lady beetles, rove beetles, soldier beetles, etc.)	Mites, aphids, leafhoppers, mealybugs, thrips, insect eggs and small larvae, scale insects, and whiteflies.
Predatory bugs (true bugs, including damsel bugs, big-eyed bugs, minute pirate bugs, mirid bugs, stink bugs, assassin bugs, ambush bugs, etc.)	Mites, aphids, leafhoppers, thrips, caterpillars, mealybugs, beetles, scale insects, and insect eggs.
Predatory flies (hover flies, robber flies, bee flies, dance flies, long-legged flies, predatory midges)	Mites, aphids, scale insects, thrips, caterpillars, beetle larvae, flies, wasps, grasshoppers, and bees.
Predatory mites	Mites, scale insects, insect eggs, and nematodes.
Predatory thrips	Thrips, mites, aphids, scale insects, and small caterpillars.
Spiders (orb-weaver, crab, jumping, etc.)	Aphids, mites, caterpillars, flies, wasps, beetles, wasps, bees, grasshoppers, leafhoppers, whiteflies, thrips, mealybugs, moths, and butterflies.
Stinging wasps (paper wasps, yellowjackets, hornets)	Caterpillars, spiders, Mantids, and beetles.