

Beneficial Insects

Only a few of the world's 750,000 known insects are worthy of the label 'pest'. Most are harmless, and some are beneficial. So the next time you spot an unfamiliar critter in your garden, consider it innocent until proven guilty. Beneficial insects provide a number of essential services including pest control, pollination and the breakdown of decaying matter.

Attract and Protect

Beneficial insects will help you attain great garden success. Follow these guidelines to attract and protect a diversity of garden allies:

- Fill a shallow birdbath or dish with stones and water so tiny beneficial insects can drink without drowning.
- Attract adult insects with a variety of nectar- and pollen-rich plants including herbs (e.g., fennel, dill and parsley) and flowers of the daisy family (e.g., cornflower, coneflower, sunflower and coreopsis).
- Leave some weeds in your yard including lamb's quarters, Queen Anne's lace and dandelion for food and shelter. Dandelions are especially important as they play a part in the ecology of 93 different insect species.
- Avoid chemical pesticides and fertilizers, as well as botanical insecticides that kill good insects with the bad. If you must use these products, spot-spray instead of broadcast spray.
- Plant hedges and windbreaks to protect beneficial insects from dehydrating dust.
- Minimize tillage to protect the habitat of soil insects and animals.
- Establish permanent walkways and perennial beds, apply mulch and allow some leaves to remain where they fall for year-round shelter.
- Top-dress lawns and gardens with finished compost to enrich soil life.

The Usual Suspects

Here is a list of beneficial insects commonly found in gardens. The larval (immature) form of most of these species differs greatly from the adult form. Familiarize yourself with the appearance, diet and shelter requirements of all life stages.

ladybugs (ladybird beetles)

Adults range in colour from pale yellow to red to black and are often spotted. They are attracted to angelica, tansy and scented geraniums. Larvae look like spiny alligators. Both adults and larvae feed voraciously on small, soft pests such as aphids, mealybugs and spider mites.

lacewings

The pale green or brown, alligator-like larvae prey on aphids, scale insects, small caterpillars and thrips. Adults have large, finely veined wings and feed mainly on flowers including Queen Anne's lace, wild lettuce, goldenrod and tansy.

parasitic wasps

Adults of these mostly tiny and non-stinging wasps are attracted to members of the carrot and daisy families, strawberries and clover. Females inject their eggs into or onto pests such as aphids, flies, beetles and many caterpillars. Larvae grow by absorbing nourishment through their skin.



parasitic wasp

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tachinid flies

These large, bristly, dark grey flies place their eggs on cutworms, sawflies, stinkbugs and other pests. Adults are attracted to pollen and nectar plants including bee balm, comfrey, rudbeckia and butterfly bush.

aphid midges

Delicate, long-legged adults feed on the honeydew left by aphids. Larvae, which look like tiny orange maggots, voraciously consume aphids.

syrphid flies

Also known as hover flies, these black-and-yellow- and black-and-white-striped flies resemble wasps, but do not have stingers. They are attracted to bee balm, butterfly bush, marigold and members of the daisy family, and are highly-effective pollinators. Females lay their eggs in aphid colonies. The greenish-grey larvae that emerge eat aphids in tight places too small for most other insects.

true bugs

This is the common name for insects in the Hemiptera order. Members of this order have needle-like beaks for sucking fluids and leathery wings crossed flat over their backs. Immature insects closely resemble adults. While some are garden pests, many others are allies. Assassin, ambush and minute pirate bugs prey on the tomato hornworm, thrips, leafhopper nymphs, corn earworms and a great number of other pests.

ground beetles

These large, iridescent black beetles hide under rocks and logs during the day and move quickly when disturbed. They live in the soil and eat a variety of pests including slugs, snails, grubs, cutworms and root maggots. They are attracted to perennial groundcovers, logs and stones.

spiders

Although not insects, spiders are often grouped with them. Some of the best predators in the garden, spiders catch their prey in webs or leap on their prey using silk thread as a dragline. Common garden spiders do not move indoors come fall and are nonpoisonous.

earthworms

Earthworms — also not insects — are highly beneficial in gardens. Referred to as ‘nature’s plow’, earthworms aerate and enrich the soil. Worms are highly sensitive to chemical and physical changes, so avoid synthetic pesticides and fertilizers, and minimize tillage.



ground beetle



Additional Resources

- Bradley, Fern Marshall and Barbara Ellis (ed.). *The Organic Gardener's Handbook of Natural Insect and Disease Control*. Rodale Press, 1992.
- Canadian Wildlife Federation Wild About Gardening — Beneficial Insects page www.wildaboutgardening.org/en/attracting/section5/index.htm
- Cornell University — *Biological Control: A Guide to Natural Enemies in North America* www.nysaes.cornell.edu/ent/biocontrol
- Jesiolowski Cebenko, Jill and Deborah Martin (ed.). *Insect, Disease and Weed I.D. Guide*. Rodale Press, 2001.
- Starcher, Allison. *Good Bugs for Your Garden*. Algonquin Books, 1998.