



Beneficial Insects in the Home Garden

Overview

Among the more than 28,000 species of insects in the Pacific Northwest, only one to two percent damage crops, plants or structures. The majority is beneficial and helps the home gardener with controlling garden pests or pollinating fruits and vegetables. This handout explores common, beneficial insects found in our region and shares ideas on ways to encourage their presence in our home gardens.

Beneficial Insects

The 3 major types of beneficial insects are pollinators, predators and parasitoids.

Pollinators include bees, flies, butterflies and moths. In the home gardens, honeybees, bumblebees, orchard mason bees, and syrphid flies are the most important pollinators, but many other minor pollinators, such as wasps, ants, midges and beetles also play a part. Pollinators play a critical role in the production of our food crops and garden plants. Home gardeners help their own garden's health and productivity by encouraging pollinator presence.

Predators, such as lady beetles, praying mantis, lacewings, ground beetles, minute pirate bugs, damsel bugs, syrphid fly larvae and snake flies, eat a large number of other insects. They keep down the level of pests. By encouraging presence of predators, the home gardener lessens the need to control harmful insects.

Parasitoids are insects that live on or in a host insect, feeding on the host and usually killing it over time. Common beneficial parasitoids are small stingless wasps and tachinid flies. These insects are not easily seen but research shows they have an important impact on pest insect populations. The home gardener can attract parasitoids with their favorite food plants. This includes plants that bear umbrella-shaped clusters (umbels) of minuscule flowers such as carrots, cilantro, dill, sweet clover, fennel, and Queen Anne's lace.

How to Encourage Beneficial Insects

Create Habitats

You can provide habitat for a variety of beneficial insects in your home garden. Ground beetles and rove beetles which patrol the soil at night munching on slugs and cutworms need a place to hide from their enemies during the day. Ground covers and coarse mulches such as bark dust, straw, and organic leaf mulch provide this habitat. Many native bees nest in the ground. A patch of bare soil or a dry bed of sparsely planted ornamental grass clumps are ideal. Covering soil with plastic mulch or frequent rototilling can destroy native bee nests. You can attract and keep native bees such as Mason bees by providing them with homemade or purchased nest boxes.

Provide Food and Water

Insects need water to live. Offer water in a saucer filled with pebbles; keep it full on dry days.

Flowers provide nectar (sugar) and pollen (protein) for pollinators and their young. Because different pollinators may have different food preferences, variety is important. Recent research shows that areas that include 15 or more species of flowering plants increase bee diversity. Gardeners who want to conserve bees should strive, as a general rule, to provide a minimum of three species of blooming plants at any given time, spring through fall.

Adult butterflies and moths usually prefer to feed on nectar, but their young feed on plant leaves. This “host plant” is where the adult lays its eggs. Native, ornamental trees and shrubs often are great host plants.

Many adult predators and parasitoids feed on nectar and pollen of insectary plants, such as yarrow, dill, marigold, and sunflower.

Practice Integrated Pest Management

Integrated Pest Management is a comprehensive and systematic approach to plant problems.

At first sign of plant distress, collect evidence for a proper diagnosis. Understanding the problem is requisite to taking effective action. Many plant problems, when detected early, can be managed through non-chemical means. So be vigilant in the garden.

Before using systemic pesticides, particularly on plants visited by pollinators, think twice about the benefits relative to the drawbacks. Systemic pesticides protect plant leaves from pests, and can be transported in small doses to nectar and pollen. Plant-feeding caterpillars or nectar and pollen-collecting bees can be harmed when feeding on plants protected by systemic pesticides.

If pesticides must be used, follow label instructions so that it is applied at the right concentration, under suitable weather conditions, to the correct part of the plant. Don't treat blooming plants, including weeds; stay away from nesting areas; and spray in the cooler parts of the day, such as at dusk or in the evening, when most pollinators are less active.

Resources

Insects of the Pacific Northwest, Peter and Judy Haggard

Encouraging Beneficial Insects to Your Garden PNW 550

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/38715/pnw550.pdf>

Attracting Pollinators to Your Garden, 10-Minute University™ Handout, www.cmastergardeners.org

Clark County Washington Presents Bugs and Pests

<http://www.co.clark.wa.us/recycle/documents/BadBugs.pdf>

Master Gardener™ Advice

- Call Home Horticulture Helpline: 503-655-8631 (Clackamas County), 503-821-1150 (Washington County), 503-445-4608 (Multnomah County).
- For other 10-Minute University™ handouts and class schedule, visit www.cmastergardeners.org

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