

Attracting Pollinators to Your Garden

Pollination & Pollinators

The National Academy of Sciences estimates one-third of human food and a greater portion of wildlife food comes from plants that require pollinators to produce fruits and seeds. Therefore, helping pollinators thrive yields tangible benefits for all of us.

Common pollinators include birds, bees, butterflies, moths, flies, and beetles. Around our gardens, honey bees and hummingbirds might be the most noticeable. However, native wild bees, including bumblebees, mining bees, mason bees, sweat bees, leafcutting bees, and carpenter bees make invaluable contributions. Native bees are prolific pollinators -- better able to tolerate colder and wetter weather compared to honey bees -- they become active earlier in the spring and work longer hours each day.

Recent Threats to Pollinators

Habitat Loss: As wildlife habitats are converted for other uses, it destroys pollinator's food sources and homes.

Pesticides: Bees, butterflies, and most other insects are susceptible to pesticides. Exposure can kill, or gradually weaken the ability to fly, forage, and produce young.

Invasive Species: Some introduced plants take over natural areas and displace native plants that provide a diversity of food resources and habitat types for native pollinators. See *Invasive Species: What Gardeners Need to Know* for more information.

Ways to Help Pollinators

Provide Food with Flowering Plants Spring through Fall

Flowers provide nectar (sugar) and pollen (protein) for pollinators and their young. Because different pollinators may have different food preferences (see table below), 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 to, as a general rule, provide a minimum of three species of blooming plants at any given time spring through fall. Place like flowers together to catch the attention of passing pollinators.

General Flower Characteristics for Pollinators

Flower	Bee	Butterfly	Bird	Fly
Color	Bright white, yellow, blue	Orange, red, purple	Orange, red, white	Pale, dull to dark-brown, purple
Shape	Shallow, landing platform, tubular	Wide landing pad, narrow tube	Large funnel-like, strong perch support	Shallow; funnel-like or trap-like
Odor	Fresh, mild, pleasant	Spicy, none	None	Putrid
Nectar	Usually present	Ample, deeply hidden	Ample, deeply hidden	Usually absent

Source: Gail Langellotto, Oregon State University.

Include spring-blooming plants so that early-season, native bees have an immediate food source upon emerging from winter dormancy. Plant late summer bloomers to fuel bees that over-winter as adults (i.e., bumblebees). *Plants for Pollinators*, a 10-Minute University™ handout, offers many ideas.

Provide Nesting Habitats for Native Bees

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 nests. Other bees nest in abandoned beetle tunnels in dead tree trunks or brush piles. Ideal nesting areas are dry, warm, protected from predators, and are close to food sources.

Provide Host Plants for Butterflies and Moths

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 for many species.

Use Native and Exotic Plants

Native plants are fantastic host plants for butterflies and moths and provide food for other pollinators. However, home gardeners who favor exotic plants, particularly floriferous annuals and smaller perennials, should not hesitate in using them to maintain a long-season of blooms in the garden.

Avoid Pesticides

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, etc. To protect pollinators, 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.

OSU and Other Resources

Xerces Society Pollinator Conservation Resource Center, www.xerces.org/pollinator-resource-center/#
Gardening with Oregon Native Plants West of the Cascades, *Native PNW Woody Trees and Shrubs Fact Sheet*, <http://extension.oregonstate.edu/yamhill/eco-gardening/native-plant-gardening>
Invasive Species: What Gardeners Need to Know, EM 9035, www.extension.oregonstate.edu/catalog
How to Reduce Bee Poisoning from Pesticides, PNW 591, www.extension.oregonstate.edu/catalog
National Pesticide Information Center, 1-800-858-7378, <http://npic.orst.edu/contactus.html>
Plants for Pollinators, 10-Minute University™ publication, www.cmastergardeners.org

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
- Submit gardening question online at www.metromastergardeners.org

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