



C227

GARDENING FOR BUTTERFLIES AND MOTHS

Why plant a garden for butterflies and moths?

Butterfly populations are generally in decline, largely due to habitat loss and the use of pesticides. These beautiful insects are lovely to see in our gardens, serve as pollinators for many plants, and are important food sources for both invertebrates and many birds. Moths are more numerous and are even better pollinators, so their presence in our gardens is very important. North America is home to approximately 800 butterfly species and 11,000 moth species. Gardeners can truly make a difference in their survival by creating healthy backyard ecosystems.

What are the basic differences between butterflies and moths?

These insects make up the insect order Lepidoptera, so they are commonly referred to as lepidopterans. Although there are exceptions, butterflies are generally active in the day, while moths are active at dusk or night. Butterflies are more often colorful, hold their wings upright over their bodies when at rest, and have club-like tips on their antennae. Moths are usually muted in color and hairier, hold their wings flatter, and have antennae that are feathery or pointed without clubs at the end. A group of butterflies called skippers resemble small moths, with fuzzy bodies in earthy colors. These insects all undergo complete metamorphosis, meaning that their life cycles include eggs, caterpillars (larvae), chrysalises (pupae), and adults. Female butterflies and moths generally lay their eggs on very specific plants, called host plants, which serve as critical food sources for hatching larvae. Understanding these four stages of life is critical in providing habitat that meets all their needs.

What are the needs of butterflies and moths? What gardening practices support them?

The basic needs of these insects include larval food and adult nectar rewards, water, shelter, and host plants or nesting sites.

- Plant diverse flowers (a good goal is 8 - 10 different plant species).
- Choose native plants: they offer the best pollen and nectar, as they are perfectly adapted to native soils.
- If some nonnative plants are desired, choose those which are excellent food sources, such as coneflower, coreopsis, lavender, salvia, cosmos, zinnia, and many common garden herbs.

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- Plant both annuals and perennials.
- Avoid new varieties or cultivars of flowering plants, as insects may not be able to access their nectar, and some cultivars produce limited nectar. Double-flowered cultivars are not recommended.
- Choose plants with overlapping bloom times from spring to fall.
- Select host plants for caterpillars (these vary with the species of butterfly)
- Provide a sunny, meadow-like habitat for butterflies. Moths prefer shade.
- Group individual plant species together, in clumps at least 3 feet in diameter, to make foraging less energy intensive for pollinators.

Dangers of pesticides

Both insecticides and herbicides are detrimental to butterflies and moths. Insecticides kill them directly. Nonselective herbicides can kill both nectar plants and host plants for caterpillars. An unhealthy habitat results when pesticides drift beyond their intended target. The elimination of milkweed with herbicides has been a major factor in the decline of the monarch butterfly.

Classic “Pollination Syndromes” or general flower preferences

The term “pollination syndromes” is frequently used to describe flower characteristics that typically attract a certain kind of pollinator. Flower preferences relate to the pollinator’s physical characteristics, such as color vision, proboscis length and shape, and size of the animal pollinator. Butterflies, **in general**, choose white, yellow, orange, pink, and red flowers, while moths prefer white, cream, and pastel colors that show up well in dim light. Scents are also important to moths in locating flowers, but butterflies do not respond very much to scent.

The concept of pollination syndromes is not used scientifically, but is a useful introduction to flower choices for butterfly gardens.

Overwintering tips

Insects need shelter for hibernation and overwintering places that are undisturbed. Butterfly species vary in which stage overwinters. Many blues and hairstreak butterflies overwinter as eggs, with the eggs lasting many months. Many skippers overwinter as caterpillars. Some butterflies, including swallowtails, overwinter as chrysalises. Only a few species overwinter as adult butterflies, mainly tortoiseshells and anglewings. In nature, these butterflies overwinter in natural shelters, such as tree cavities, under rocks or logs, or within foliage. Leave these sites undisturbed from late fall to early spring. Commercial overwintering boxes for butterflies are not effective.

Some recommended plants for the Inland Northwest
(with blooming season)

- Aster (*Symphotrichum subspicatum* and *S. chilense*) fall
- Blanketflower (*Gaillardia aristata*) summer
- Blazing star (*Liatris spp.*) summer
- Broadleaf lupine (*Lupinus latifolius*) spring
- Checkermallow (*Sidalcea malviflora* and *S. oregana*) spring, spring and summer
- Edible thistle (*Cirsium edule*) summer
- Giant hyssop (*Agastache spp.*) summer
- Globe gilia (*Gilia capitata*) spring
- Joe Pye weed & Boneset (*Eupatorium spp.*) summer
- Oregon sunshine (*Eriophyllum lanatum*) spring and summer
- Pearly everlasting (*Anaphalis margaritacea*) summer
- Purple coneflower (*Echinacea spp.*) summer
- Showy milkweed (*Asclepias speciosa*) summer
- Slender cinquefoil (*Potentilla gracilis*) summer
- Sunflower (*Helianthus spp.*) late summer to fall
- Western yarrow (*Achillea millefolium*) summer
- Wild buckwheat (*Eriogonum spp.*) summer to fall

References

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