

# BUTTERFLY GARDENING

IN WEST VIRGINIA



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**DNR**

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Butterflies bring beauty, color and life to your backyard, patio or windowsill. Watching them flit from flower to flower and observing their transformation from caterpillar to chrysalis to adult are just some of the delights that attracting butterflies to your yard can provide. A butterfly garden in your yard also will help attract birds and mammals, adding even more diversity to your surroundings.

## Observing butterflies

Observing and learning about your local butterfly species will help you plan your butterfly garden. Butterflies begin to appear in spring as temperatures rise above 60 degrees and continue to be active until late fall. Try to identify different butterfly species and take note of the date you observe them throughout the season, as well as what plants they seem to use most often. Field guides and online resources can help you identify the butterflies you see, and which plants they prefer.



*Red admiral butterfly on aster*



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## The butterfly life cycle

All butterflies in West Virginia go through the same four life stages:

- Egg
- Caterpillar
- Pupae
- Adult



Caterpillar eggs are laid on or near a plant so the caterpillar can begin eating once it hatches. The caterpillar eats and grows, molting several times before it encases itself in a pupa or chrysalis to begin metamorphosis.



Inside the pupa, caterpillars transform into an adult butterfly. Once the adult emerges from the chrysalis, it spends a while unfurling its wings and then takes flight to feed, find a mate and begin the cycle anew.



## Nectar plants

To attract butterflies to your backyard, you'll need sources of nectar for adult butterflies to feed on. Plant different species with overlapping bloom periods so that there's always something available. A good minimum guideline for pollinator plantings is to follow the Rule of Three:

- Three different species
- Three different colors
- Three different bloom periods

Having multiple plants blooming during each bloom period (early, mid, late) will attract the greatest variety of butterflies to your garden. Limit the planting of cultivated varieties, such as flowers labeled "Aztec Sunset" or "Forest Pansy." These flowers are bred for showy blooms and may not provide as much food for pollinators.

Most adult butterflies feed on nectar, though some butterflies feed on rotting fruit, tree sap, carrion or animal dung. Many butterflies will gather, or puddle, to lick at muddy ground in order to get minerals not present in nectar sources. You also may want to provide a shallow water source for butterflies to drink, though butterflies in West Virginia can often get all the water they need from nectar and dew.



*Butterflies will lick mud for minerals (see left).*

Several woody species like red maple, serviceberry and redbud can provide nectar as early as February. Flowering dogwood, violets, azaleas and creeping phlox bloom in early spring. Milkweeds, purple coneflower and sunflowers bloom during the warm spring and summer months. Buttonbush, asters and goldenrod will bloom into late summer and early fall.



Garden placement

When it comes to placement for your butterfly garden, you'll want it to be in a place where you can see and enjoy it. Beyond that, here are a few suggestions on where to place your butterfly garden:

- Butterflies need sunny areas, so plant in an area that gets lots of sunlight.
- Butterflies struggle in strong wind, so use plantings or other structures to shelter your butterfly garden from wind exposure.
- Some shade is essential during hot summer months, so plant a few trees and shrubs near — but not in — your garden to provide shade and places for butterflies to perch.

It can be easy to get overwhelmed, so start small by selecting three or four native plants and build from there as you have time and energy. Another benefit of using native plants in your butterfly garden is that they require almost no maintenance once established. Be patient, though, since many native perennials take up to three years to bloom when planted from seed.



Patience is key when starting native plants from seed.



Trees and shrubs planted near a butterfly garden provide shade.

Host plants

Host plants are the plants that butterflies need to lay their eggs and raise their young. Nectar plants will attract butterflies, but host plants are what keep them on the landscape into the future. Just like how monarch caterpillars need milkweed, many other caterpillars can only eat the leaves of a few native plant species.

While many non-native ornamental plants can provide nectar for adult butterflies, butterfly bush leaves (*Buddleja* spp., below left) don't support a single native caterpillar. Contrast that with native meadowsweet and steeplebush (*Spiraea* spp., below right) that support nearly 60 species of caterpillar, in addition to providing nectar for adult butterflies. Native oak, maple and dogwood trees support hundreds of species of caterpillars. The future of native butterflies depends on native host plants to provide their young with nutritious leaves.



Butterfly bush



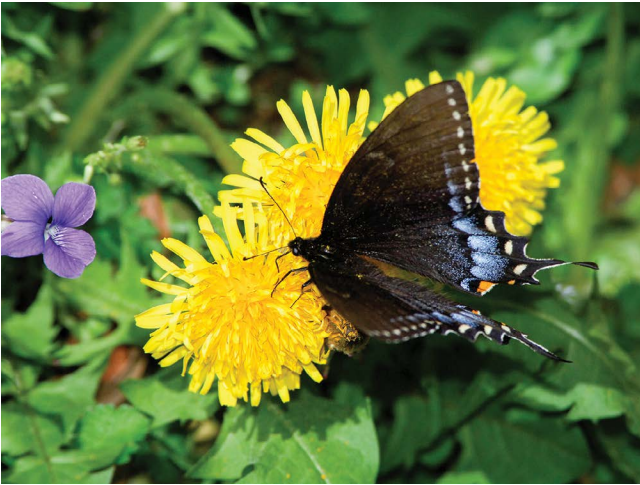
Steeplebush



Zebra swallowtail on butterfly weed

Managing backyard butterfly habitat

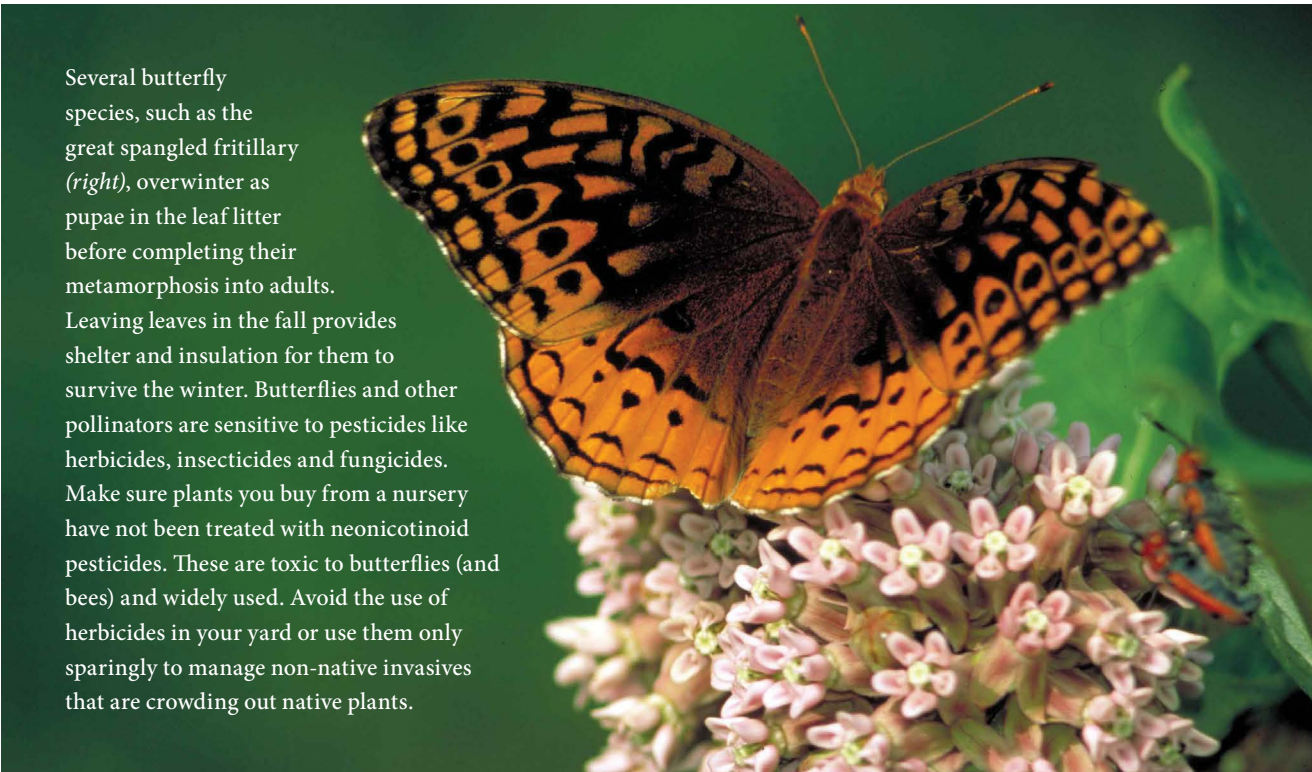
Take it easy with the lawn mower! Raising the blade on your lawn mower (or leaving your lawn unmowed in early spring) so low-growing yard weeds such as clover, violets and dandelions can bloom is an easy way to provide nectar for butterflies early in the season. Violets are also the only host plant for many Fritillary butterflies.



It can be upsetting to see caterpillars munching on your precious wildflowers, but don't worry. When you use native plants, your butterfly garden is part of an ecosystem! A balanced ecosystem has enough food to go around, so plant enough of your favorite flowers to share with caterpillars. Those caterpillars are also important food for other wildlife! Did you know that 95 percent of songbirds feed caterpillars to their young or that chickadee parents need more than 6,000 caterpillars to raise just one nest of hatchlings? If there is an abundance of caterpillars around, the birds will notice and may take care of your pest problems for you.



Far left, black swallowtail feeding on dandelions. Left, monarch caterpillar munching a leaf.



Several butterfly species, such as the great spangled fritillary (*right*), overwinter as pupae in the leaf litter before completing their metamorphosis into adults. Leaving leaves in the fall provides shelter and insulation for them to survive the winter. Butterflies and other pollinators are sensitive to pesticides like herbicides, insecticides and fungicides. Make sure plants you buy from a nursery have not been treated with neonicotinoid pesticides. These are toxic to butterflies (and bees) and widely used. Avoid the use of herbicides in your yard or use them only sparingly to manage non-native invasives that are crowding out native plants.

Native plants for butterflies and caterpillars of West Virginia

BUTTERFLY COMMON NAME	PRIMARY HOST PLANTS	NECTAR SOURCES
Pipevine Swallowtail	Dutchman's pipe	Milkweed, joe-pye-weed, ironweed, †
Zebra Swallowtail	Pawpaw	Dogbane, redbud, milkweed, †
Spicebush Swallowtail	Spicebush, sassafras	Joe-pye-weed, dogbane, †
Eastern Tiger Swallowtail	Black cherry, yellow poplar	Milkweed, ironweed, azaleas, †
Cabbage White	Mustards, (broccoli, cabbage)*	Mustards*, clover, aster
Clouded Sulphur	Clovers	Clover, aster, goldenrod
Orange Sulphur	Legumes, clover	Clover, goldenrod, ironweed
Eastern Tailed-Blue	Red clover, legumes	Cinquefoil, dogbane, aster
Spring Azure	Dogwood, black cherry, wingstem	Black cherry, dogbane, spicebush
Great Spangled Fritillary	Violets, pansies*	Dogbane, ironweed, †
Meadow Fritillary	Violets	Aster, wingstem, goldenrod
Pearl Crescent	Aster	Aster, ironweed, black-eyed Susan, †
Question Mark	Nettle, elm, hackberry	Sap, rotting fruit, dung, †
Eastern Comma	Nettle, elm	Sap, rotting fruit, dung, †
American Lady	Pussytoes, pearly everlasting	Milkweed, dogbane, goldenrod
Red Admiral	Nettle	Sap, rotting fruit, dung, †
Red-spotted Purple	Black cherry, poplar, oaks	Sap, rotting fruit, dung, †
Little Wood Satyr	Grasses	Sap, carrion, dung, †
Monarch	Milkweed	Milkweed, dogbane, goldenrod
Silver-spotted Skipper	Black locust, tick-trefoil	Ironweed, Joe-pye-weed

\* Plants that are not native to West Virginia, but not aggressive invaders  
† Native thistles also are a common nectar source.

Note: Nectar sources are not limited to the plants listed.



Pipevine swallowtail



Cabbage white



Orange sulphur



Little wood satyr



## Other resources

- “The Butterflies of West Virginia and Their Caterpillars” by Thomas Allen
- Pollinator Partnership at [pollinator.org](https://pollinator.org)
- West Virginia Pollinator Best Management Practices:
  - Planting For Pollinators,
  - Mowing Lawns and Meadows, and
  - Pollinators in Urban and Suburban Areas, available through the West Virginia Division of Natural Resources and West Virginia Department of Agriculture
- WVDEP Native Plant Selection Tool at [tags.dep.wv.gov/seeds](https://tags.dep.wv.gov/seeds)
- Xerces Society at [xerces.org](https://xerces.org)

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