



THE CATERPILLAR EFFECT

BY CATERING TO CATERPILLARS, YOU CAN CREATE A BUTTERFLY GARDEN // BY NANCY LAWSON

POP QUIZ: What's the best way to help butterflies in your backyard?

If you answered "Plant butterfly bush," you're in good company. A recent survey of my gardening friends elicited the same response from more than a few.

It's easy to understand why: Aside from its self-reinforcing moniker, the plant validates its reputation by attracting many of its namesake insects in the height of summer. Garden centers sell it with abandon, and online searches for best butterfly plants invariably draw the species into top results.

But a growing number of wildlife-friendly gardeners understand that, for all its beauty, this shrub, native to Asia, has no place in our ecosystem. In fact, it takes over habitats that are of far greater value to butterflies and other creatures. Like many nonnatives, the butterfly bush provides no sustenance to butterfly babies, turning gardens into adults-only communities without the amenities that allow youngsters to flourish and grow.

The struggling monarch butterfly, whose larvae rely on the leaves of disappearing milkweed, has become the poster child for the critical relationship between specific plant and animal species. But it's just one of many insect "specialists" who can digest only plants they've co-evolved with.

Factoring in the needs of other animals reveals an even broader problem when nonnatives dominate a landscape. As entomologist Douglas Tallamy notes in *Bringing*

Nature Home, 96 percent of this continent's terrestrial bird species rely on insects to feed their young. Chickadees, for example, require an average of 9,100 caterpillars to raise a single brood.

Fortunately, many of the plants essential to the butterfly life cycle carry considerable aesthetic appeal. And thanks to the efforts of wildlife lovers and native plant enthusiasts, it's easier than ever to find species that will help you cater to caterpillars and the species that depend on them.

Whether you have a large property that can accommodate the greatest of wildlife-sustaining plants, the oak tree, or a balcony that can house pots of the beautiful joe-pye weed, you can create a space that offers baby food for young residents and nectar, berries and seed for their parents.

The key is to make sure you're planting the right variety for the animals in your region. Seek advice at native plant sales, nature centers, arboretums, state and

Providing food for caterpillars will bring butterflies, birds and other wildlife to your backyard. Clockwise from top left: silver-bordered fritillary on a joe-pye weed flower, American painted lady caterpillar, Pandora sphinx caterpillar on Virginia creeper, American painted lady butterfly, American painted lady in chrysalis, spicebush swallowtail caterpillar.

local native plant societies, and websites such as wildflower.org, plants.usda.gov and beautifulwildlifegarden.com. Here are some ideas to get you started.

PERENNIAL FAVORITES. Though many of the plants most useful to wildlife have the word “weed” in them due to their once abundant presence on the continent, they now need help to repatriate the land. For example, milkweed, which supports monarchs and many other butterfly caterpillars, is being wiped out by the proliferation of chemical-laden corn and soybean crops in the Midwest. To help reverse this trend, plant butterfly weed, not butterfly bush, and other milkweed species.

Another butterfly favorite is joe-pye weed; just one of these plants in my backyard last summer had dozens of swallowtail butterflies fluttering around it all day for weeks, making it even more of a nectar magnet than a butterfly bush. Even better, the plant also feeds the caterpillars of more than three dozen species of *Lepidoptera* (the large order of insects that includes both butterflies and moths).

Black-eyed Susans host the caterpillars of dozens of species and are broadly distributed throughout the United States. The wide-ranging cloudless sulphur butterfly prefers wild senna and related plants in the pea family, and native violets host a number of fritillary species while also providing beautiful ground cover.

AMBITIOUS CLIMBERS. If you’ve ever had English ivy, you’re probably aware of how invasive it is. Virginia creeper, our native alternative, provides food for the Pandora sphinx moth caterpillar and berries for bluebirds and other animals. Many people still confuse this plant with three-leaved poison ivy and yank it from their gardens, but its five leaves make it easily distinguishable.

Passionflower, a gorgeous tropical-looking vine, hosts caterpillars of gulf fritillaries, zebra longwings, red-banded hairstreaks and other butterflies. An added bonus: For all its delicate beauty, the plant requires no extra care.

TALL LEAFY LAYERS. Gardeners with yards can also provide habitat for swallowtails by planting bushes and trees that serve as larvae hosts. For spicebush swallowtails, spicebush and sassafras trees work well in smaller spaces. Pawpaw trees provide a custard-like fruit for animals (and humans!) and tasty leaves for the zebra swallowtail caterpillar.

For Eastern tiger swallowtails, plant the fast-growing and low-maintenance tulip poplar; in my yard these bright yellow butterflies flutter down from the poplars early in the morning, feast all day and return to the trees at night. Native willows are popular with Western tiger swallowtails and mourning cloak butterflies.

Whatever natives you plant, be mentally prepared for the visible evidence of insect approval. A mass of eggs or a crowd of caterpillars chewing through your leaves may at first surprise you, but this feasting should be cause for celebration of your hard work to make your property a life-sustaining sanctuary for all animals—including the babies who will one day spread their wings and grace your garden as beautiful butterflies.

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Marbled salamander
in Alabama

LEAF ECOLOGY

// BY RUTHANNE JOHNSON

FALL BRINGS the sounds of raking, blowing and vacuuming, along with the smell of burning leaves. But these familiar autumn rituals can have a devastating effect on backyard wildlife.

Leaf and brush piles represent an ecosystem “much more diverse than a coral reef,” says Kefyn Catley, a biology professor at Western Carolina University in Cullowhee, North Carolina. Caterpillars and other insects produce nutrient-rich excrement that mixes with fallen leaves, twigs and other natural debris. Worms, snails and other invertebrates shred and eat the debris, helping to turn the layers into rich humus that replenishes the soil.

Turtles, snakes, salamanders, birds and other animals dine on creatures living in the leaf litter. Spiders will “turn a leaf into a tunnel and molt in there,” says Catley, explaining that some moths, bees and butterflies overwinter under the dead leaves.

So rather than scraping the leaves from your yard, keep them around for the critters. If you can’t resist the urge to tidy up nature’s “mess,” move the leaves beneath a tree or some bushes, Catley suggests. The layer should be about 4 to 8 inches deep to provide good cover. Come spring, he says, “you’ll be amazed at the animals it will attract.”