

Caterpillars: Pests Versus Butterflies

"There is nothing in a caterpillar that tells you it's going to be a butterfly."

– R. Buckminster Fuller

The black swallowtail caterpillars prefer parsley, dill and fennel and can nearly defoliate plants overnight.

Planting clusters of colorful nectar-producing plants, such as butterfly weed (*Asclepias* spp.) will attract plenty of butterflies including the monarch.



Colorful butterflies are welcome visitors and bring a natural beauty to the home flower garden. Many gardeners are creating attractive habitats for butterflies by providing the proper setting, with food plants for the immature stages (caterpillars), nectar sources for the adult butterflies, and a sheltered environment away from harsh winds.

Butterfly Development

Butterflies undergo four distinct life stages – egg, larva (caterpillar), pupa and adult (butterfly). Butterflies are often seen dancing from one flower to another, drinking nectar that provides energy for their busy activities. Female butterflies also spend time searching for food plants required for the development of the immature caterpillar stage. Each butterfly begins life as an egg that has been laid on the underside of the leaves of a host plant. Most butterfly larvae have specific host plants on which they develop. For example, caterpillars of the very recognizable monarch butterfly only develop on the plants of the milkweed family, whereas the black swallowtail larvae only feed on parsley, dill and closely related plants.

Caterpillars have a ravenous appetite, since they are growing so quickly. Chewing insects, such as beetles (flea beetles, for example), leave holes in the middle of the leaves, but caterpillars will start feeding at the leaf edges and work inward, causing

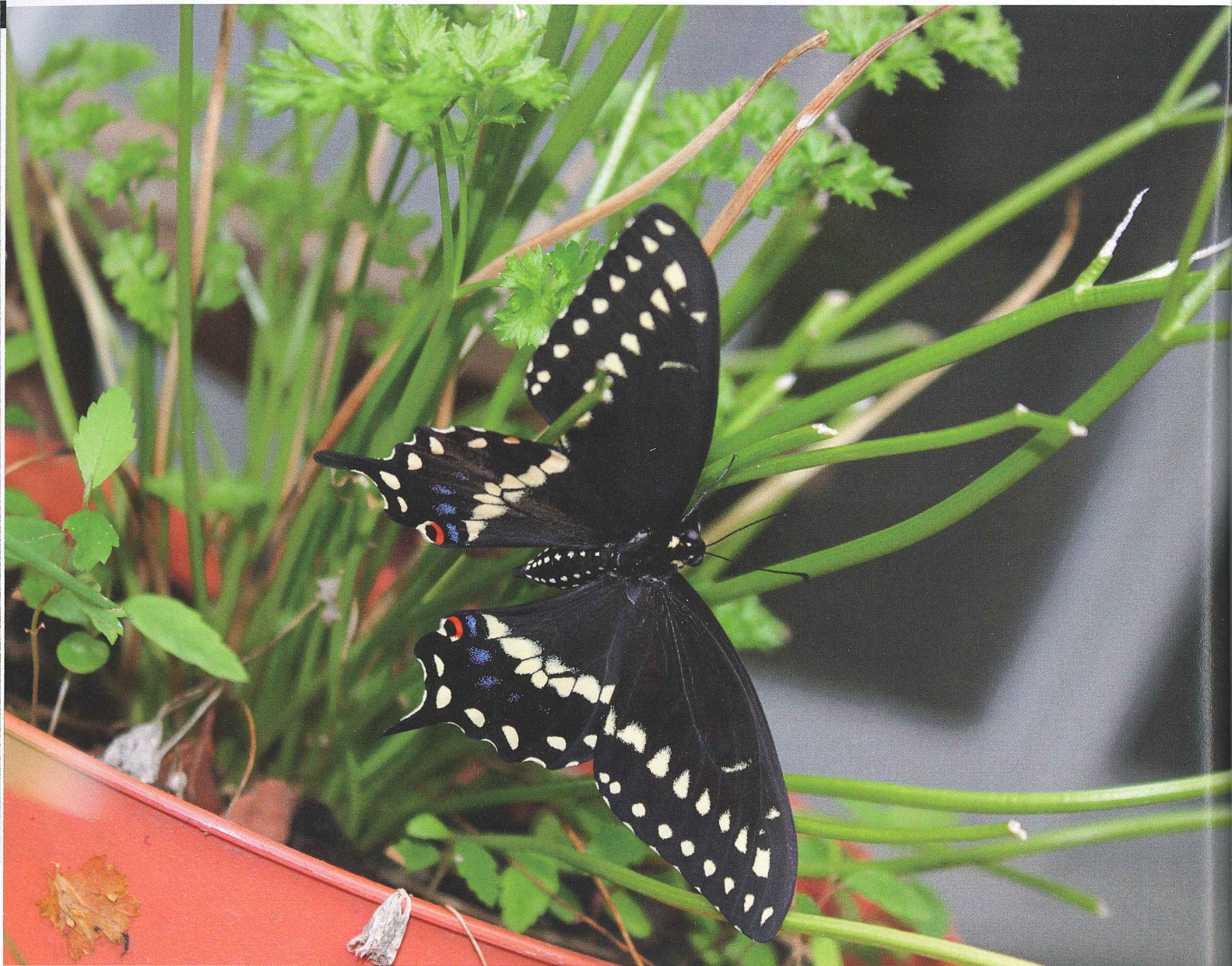
a ragged leaf appearance. Other evidence of caterpillars is their frass (droppings), that looks like pepper grains.

The Challenge

Although many caterpillars will eventually become colorful butterflies, some develop on certain garden crops and may be pests if the vegetable is considered more important than the insects. When only a few caterpillars are present in the garden, their damage may not be significant and not warrant treatment. However in greater numbers, caterpillars can completely defoliate smaller plants in a matter of days or cause enough damage to ruin a crop. Damage to plants in the cabbage family (*Brassica* spp.) is probably the greatest threat. For example, the cabbage white butterfly caterpillar is fond of eating the leaves of cabbage, broccoli and cauliflower – it is a garden pest which may require pesticides to control. Similarly, the black swallowtail caterpillars can nearly consume the leaves of a parsley plant overnight.

When Control Is Necessary

Caterpillars may not be the only pests found in the vegetable garden that need controlling. Although it may be possible to pick off a few caterpillars that might be seen, some vegetables may need to be treated for other damaging pests like aphids, beetles and bugs. If insects do become a problem, try first using



more environmentally friendly methods of pest control like hand-picking or hosing off the pests. Physical barriers such as floating row covers (garden fabric) often provide a chemical-free method of preventing damage in the garden where only a few plants or rows are particularly vulnerable.

Butterflies are insects, so pesticides that kill insect pests also kill butterfly caterpillars. Even organic products like *Bacillus thuringensis* are harmful to butterfly larvae. If you do need to use pesticides to control a pest infestation, do so sparingly and treat only infested plants. If possible, do not spray when flowers are in bloom and attracting beneficial insects. Adult butterflies also can be killed by resting on insecticide-treated surfaces. Spray in the evening when pollinators are less active.

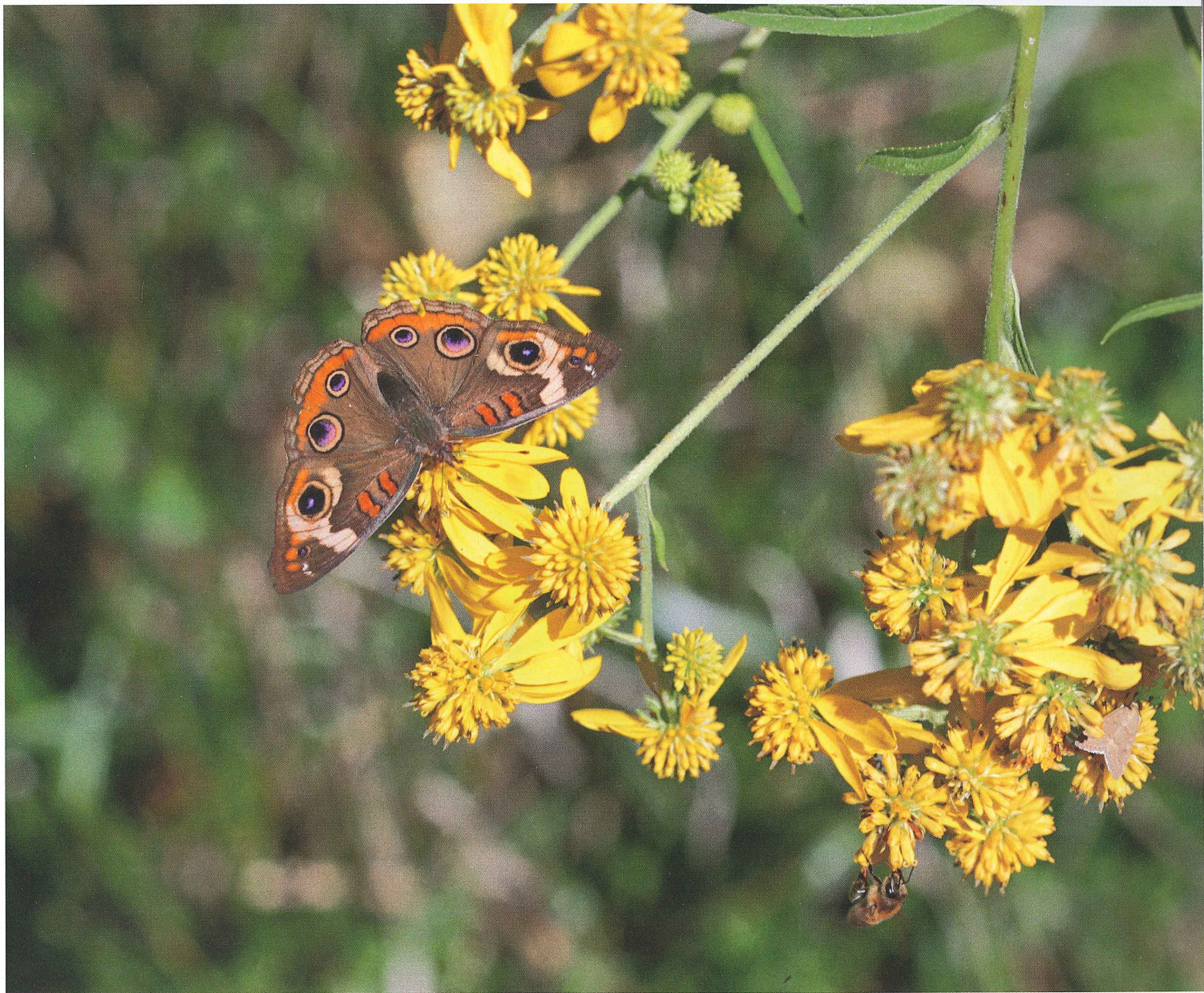
Butterfly 'Weeds'

Many of the butterfly-attracting plants can be naturalized in property borders and away from vegetable gardens. This not only brightens up the boundaries but provides needed butterfly harborage. These plants may include black-eyed Susan (*Rudbeckia*

ABOVE: A black swallowtail butterfly has developed on curled-leaf parsley and is ready for flight. OPPOSITE PAGE, TOP: Native perennial plants can also be attractive to butterflies, like this common buckeye butterfly on woolly ragwort. OPPOSITE PAGE, BOTTOM: Pearl crescent butterflies are commonly found in open areas, here on Queen Anne's lace.

Basic Tips for Designing a Butterfly Garden

- Locate your garden in an open sunny area with shelter from harsh winds.
- Research the butterflies native to your area.
- Select the appropriate butterfly-attracting nectar flowers.
- Include caterpillar host plants in your garden.
- Plant colorful plants for successive seasons of bloom (perennials and annuals).
- Avoid applying pesticides when possible.



spp.), coreopsis (*Coreopsis* spp.) and purple coneflower (*Echinacea purpurea*). However, some native plants attractive to butterflies are commonly considered weeds in most settings, may be quite tall and are better suited for more out-of-the-way areas of your property. If possible, put away the weed killer and let these flourish: ironweed (*Vernonia* spp.), milkweed (*Asclepias* spp.), Queen Anne's lace (*Daucus carota*), sumac (*Rhus* spp.) and Joe-Pye weed (*Eutrochium purpureum*). Although Canada thistle (*Cirsium arvense*) attracts butterflies in midsummer, it is commonly considered a noxious weed and prohibited from being cultured in many states.

Butterfly gardens and vegetable gardens can be compatible if some forethought is put into the planning and management of such areas. Some of the vegetable plants that you do not want to "share" with the caterpillars may need to be protected, and tolerance might be needed for a chewed leaf or two, potentially saving a butterfly or two. ♪

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