

## A Greener View: Bringing butterflies to your yard

by Jeff\_Rugg

As we think about the history of our native landscape, we realize how much it has changed. The shape of the land has been altered and the prairies, wetlands and forests have been reduced. With those changes, some of the native wildlife has disappeared or been reduced.

One group of wildlife that many people tell me they miss is the butterflies. Of all of the insects in the world, butterflies are probably the most fun and the most colorful. In the past, many people collected them, but now there are field guides so that you can identify them in the field and learn about their behaviors. It seems to me that butterflies are the jewelry for the face of the earth.

There are about the same number of species of butterflies as birds in North America, about 700 kinds. Less than a hundred are common anywhere and most people only know a few. They are not hard to attract to your yard, but it does take a little understanding about their life cycle.

A butterfly starts life as an egg. Only about the size of a pinhead, the egg is covered in liquid, waterproof glue that dries and holds it on a leaf. Some eggs rival Faberge's eggs for their beauty and intricate detail. Depending on temperature, the egg may hatch in as few as three days or as long as two weeks.

The tiny caterpillar or larva is about as big as your eye lash and it often eats the eggshell. It scrapes the leaf for food until it is large enough to eat chunks of leaf. A few larva are predatory or eat other plant parts.

They are incredibly made. They have 12 simple eyes and chewing mouthparts. On their lower jaw are spinnerets that make silk. Three pairs of hard legs pick things up, while five pairs of soft legs are used to walk. Both the caterpillar and adult butterfly breathe through a row of holes down each side of the body. Some caterpillars are covered in spikes or hairs that are irritating to predators. Many have camouflaged skin to hide them.

The caterpillar skin does not grow and stretch, so it must be shed. The caterpillar weaves some silk and holds on with the walking legs. It then produces a new skin under the old one separated by a layer of liquid. It then gulps in air until it splits off the old skin. It must wait until the new one dries before it can move again. It may do this six times as it grows. The bigger it grows as a caterpillar the bigger the adult butterfly will be.

When it has developed enough, it grows a skin that will be a hard shell so that it can become a pupa. In butterflies, this pupa is known as a chrysalis. Some pupate in silken coverings or covers made of bits of leaves held together with silk.

Inside the pupa a miracle takes place. The caterpillar's body dissolves into a gooey substance that feeds the few cells that develop into the adult butterfly's organs. The adult butterfly's body is incredibly different from the caterpillar; it has four wings covered in overlapping multicolored scales.

The wings are pumped full of fluid after it crawls out of the pupa. The butterfly also has six, long jointed legs. It has two antennae that are long, slender and end in a bump, unlike moths that have antennae that look like feathers. The antennae are incredibly good at detecting scents. The compound eyes can also see in ultraviolet light. It has a long coiled tongue that comes in two halves, which have to zip together in order to use. The butterfly can only drink fluids. The adult butterfly has sexual organs and scent-producing glands as well.

The caterpillar probably never went any farther than the branch it was born on. The butterfly can fly hundreds of miles in a few weeks. If it is one of the migratory species it may fly thousands of miles to the area that one of its great-great-grandparents came from five months earlier. The last generation each year of these butterflies may live for nine months instead of two weeks.

To attract butterflies you must work to provide both lifecycle stages a home. The most important thing to do for the caterpillar stage is to provide a food plant. The adults need a nectar plant, water and a place to bask in the sunshine.

There are only a few plants that provide both food for the caterpillar and nectar for the adults. If you have several generations of a butterfly in a summer, the caterpillars from one generation can not eat the whole nectar-giving plant that they need after they pupate into adults. The following plant groups can be used for both purposes: asters, cherry, clover, marigold, milkweed, Queen Anne's lace and thistle.

Many species lay their eggs on only a few types of plants. If you want a certain type of butterfly, you need to find out the proper plant for its caterpillar. For example, fennel and parsley are both good choices for attracting black swallowtail butterflies. Birch and elm trees are needed to attract mourning cloak, white admiral and question mark butterflies.

You must remember that the caterpillar only has chewing mouthparts and can't walk very far; therefore, it is going to eat as much of the plant as it can so that it can grow into a larger butterfly. Chewed up plants is part of the butterfly game, so if you want to play you need to be tolerant of the consequences.

You must be careful when using insecticides around their food plants. Don't use any product containing Bt, *Bacillus thuringiensis*. It is designed to kill the larvae of butterflies and moths.

Adult butterflies do not harm plants, but instead they help pollinate them. There are many nectar producers among the native plants: perennial garden flowers, annuals and even some trees and shrubs. Some of the best include composite family plants like coneflower, coreopsis, and rudbeckia. Liatris, monarda, goldenrod and milkweed are good prairie plants to use. Butterfly bush (*Buddleia davidii*), caryopteris, clethra, privet, spirea and lilac are good shrubs. Good annuals include: cosmos, lantana, nicotiana, petunia and zinnia. Try to have plants blooming in all seasons for the best success.

Some butterflies are attracted to butterfly feeders similar to hummingbird feeders. Some are also attracted to pieces of rotting fruit that can be placed on the feeders.

Some butterflies like mud puddles where they not only get needed moisture, but extra nutrients. Having a

mud or sandy puddle will help attract butterflies.

Butterflies fly best when the air is warm. To fly in cool air they must warm themselves by using the sun. They can open their wings and face them at the sun, or use them as mirrors and reflect the sun at their body. Generations born earlier in the spring are often darker so they can warm up easier.

Butterflies live through winter in several methods. Some can tolerate below freezing temperatures and some migrate to warmer climates. Most have a dormant stage in the egg or pupa phase of the life cycle. The few butterflies that over winter as adults seek shelter in cracks or in and around trees and brush piles. There are even houses made for them to find shelter that keeps out birds and other bigger animals.

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