

## **Got milkweed? Monarch butterflies depend upon it**

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In springtime, monarch butterflies begin a migration to their breeding grounds. Females search out milkweed. Will they find it?

Milkweed used to grow by the field full every summer in Maryland. I used to see it on the edges of cornfields. I remember the fuzzy leaves, the milky sap, the sweet balls of flowers abuzz with bees and butterflies, and those big seed pods with the fluff blowing out in the fall. But I just don't see those milkweed patches anymore.

It seems the open fields became housing developments, and the cornfields that are left just don't permit the weeds they used to. Without milkweed, I may be missing an old wildflower friend, but monarch butterflies depend on the plant for food.

Most butterflies deposit eggs on specific plants. That way, the baby caterpillar (larva) has the food they need right underfoot when they hatch. Zebra swallowtail caterpillars only eat leaves of pawpaw trees. Fritillaries choose violets. Monarch caterpillars need milkweed.

These plants that provide nutrition for the first part of a butterfly's life are called larval hosts. The plants can sacrifice some leaves to support the voracious appetite of munching caterpillars without lasting damage. And with different butterflies choosing different plants and lots of plants to go around, it should be a pretty neat system.

Millions of monarchs fly in North America in the spring and summer. Different broods or generations live in a season. The amazing part of the monarch's life is that they are the only butterfly that carries out a true migration.

When the overwintering generation takes flight in spring, they mate. The females fly north, and when they find an accommodating milkweed plant, they may deposit an egg, maybe two, and fly around in search of another plant. As adult butterflies fly north, the life cycle continues with the eggs.

The tiny larvae chew out of their egg shells to spend the first part of their lives eating milkweed leaves. As they eat, they ingest the toxin of the plant that protects them from predators. Milkweed contains a toxic alkaloid, known as a cardiac glycoside, that makes the plant unpalatable to birds, mammals and many insects. Those who adapted to the food source will not be a welcome food for others.

After a couple weeks, the monarch caterpillar will call a halt to the buffet and form a chrysalis. This stage is also called a pupa. As a pupa, the insect will transform from the crawling, chewing, striped caterpillar with white socks and black shoes into a lovely black and orange butterfly.

Now able to fly, but not chew, the butterfly floats from flower to flower sipping nectar through its proboscis -- sort of a straw for drinking its meals. The adult butterfly will live a few weeks as it finds a mate and starts the egg-larva-pupa-adult cycle again inhabiting the northern states and into Canada.

By summer's end, maybe four or five generations of monarchs lived and passed. As the weather changes and fall approaches, adults do not search for a mate. The milkweed is dying and wouldn't support caterpillars. Monarchs from east of the Rocky Mountains begin heading south and west. The millions of monarchs finding their way to the south will spend the winter as their ancestors did, on mountains 10,000 feet high in forests of oyamel trees in Michoacan in central Mexico.

Temperatures are cool at the high elevation of the transvolcanic mountains. It is perfect habitat for the tall, straight oyamel fir trees. The forests provide a protective canopy for the clustered butterflies. But the trees also require protection. Oyamels are logged from the forest, thinning the canopy and exposing monarchs to dangers of cold temperatures and rain; a deadly combination for butterflies.

As the monarchs are warmed by the sun on a winter day, and they burst into flight from the oyamels, it is also an amazing sound: butterfly wings batting by the millions. They head north in spring, starting the cycle yet again, looking for milkweed. There are still open spaces for milkweed to grow and host monarch caterpillars here in their breeding grounds. Common milkweed (*Asclepias syriaca*) is found over much of North America. It's a perennial that spreads by a rhizomatous root system. It may be too aggressive for some gardens, but there are lots of other species in the *Asclepias* genus to look for at a local nursery. A rain garden is a great spot for swamp milkweed (*A. incarnata*), and butterfly weed (*A. tuberosa*) is widely available and performs well in clay soils.

I urge gardeners to plant for butterflies. A butterfly garden should include native plants for nectar as well as larval hosts. Create and restore habitat that supports monarchs and other wildlife. Encourage schools, nature centers, parks and other public spaces to incorporate milkweed as a waystation for monarchs.

Visit [www.monarchwatch.org](http://www.monarchwatch.org).

Jim and Teresa Gallion own Wildlife Gardening Adventures. Check out their Web site at [www.gardeningadventures.com](http://www.gardeningadventures.com). Ms. Gallion is a National Wildlife Federation habitat steward, Master Gardener and caretaker of Certified Monarch Waystation #6.