



Raising Monarch Butterflies

by Sussex County Master Gardeners
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Collecting monarch butterfly eggs takes sharp eyes and patience. It is exciting to watch a newly-hatched caterpillar grow through its five-instar stages and into a chrysalis. Watching an adult butterfly emerge and spread its wings is captivating.

Feeling a butterfly's feet grip your finger and then watching it take off on its first flight is an experience like none other.



Sussex County Master Gardener Maureen Larkin Photo

Newly-eclosed male Monarch.

Delaware is the summer breeding grounds for the eastern portion of the North American monarch butterfly population. Every summer, monarchs can

Did you know that butterflies smell with their antennae and taste with their feet?

A monarch butterfly weighs less than a paperclip but can fly up to 30 mph and travel up to 100 miles per day on their over 2,500-mile fall migration south to the mountains in Central Mexico.

Delaware is the summer breeding

Eggs and Caterpillars

Collecting and Taking Care of Eggs and Caterpillars.

Look for monarch eggs on the undersides of milkweed leaves. Caterpillars are likely to be found on leaves that have been chewed. Tear-off the leaves that have eggs and caterpillars on them. Smaller caterpillars are more likely to be healthy so collect the smaller ones rather than the larger ones.

Caterpillars start eating as soon as they hatch and continue to eat day and night for the next 12-14 days.

There are at least two ways to make sure there is enough milkweed to feed your caterpillars:

Collect milkweed leaves to feed your caterpillars while you are collecting eggs and caterpillars. Caterpillars grow quickly. To feed one caterpillar for two to three days, the leaves of about four to five common milkweed plants are needed. Plastic containers with tops work well for the smaller caterpillars. Line the containers with paper towels. Clean the containers at least twice a day to remove frass (droppings) to reduce the chance of disease and add fresh milkweed. TIP: Dump the frass, spent leaves, and soiled paper towels into a paper grocery bag and set it aside.

be found wherever there is a milkweed patch. Monarch eggs and caterpillars can be collected from milkweed and, with the right knowledge and equipment, monarch butterflies can be raised in your home or garden – as long as you have an appropriate container and a steady supply of clean, fresh milkweed.

To see monarch raising in person, come visit the Master Gardener Demonstration Garden in Georgetown, Delaware. Keep reading to learn more about these incredible insects and how you and your family can raise them at home.

Why Raise Monarch Butterflies?

In the last 30 years, the monarch population in eastern North America has sharply declined (<https://xerces.org/monarchs/eastern-monarch-conservation>). The main reason for the decline is loss of habitat (milkweed and native nectar plants) in the monarch's northern breeding grounds. Also, farmers in the United States and Canada place herbicides on crops to kill weeds - which includes milkweed, the host plant for monarchs and the only plant that monarch caterpillars will eat. If the monarch North American population is to survive, more milkweed must be planted and the milkweed must be allowed to grow and to thrive.

What Can We Do to Help Monarchs Thrive?

Monarch butterflies can be raised in home gardens by planting a steady supply of fresh, clean milkweed for the females to lay eggs on, for the caterpillars to eat, and by including native nectar plants for butterflies to sip. Searching the community or nearby fields for milkweed is also recommended.

Participating in Community Science projects that benefit the monarch butterfly is recommended. Several Community Science projects are listed at the end of this article.

The Miraculous Migration

Every fall, monarch butterflies east of the Rocky Mountains fly south along flyways that merge into one big flyway in central Texas. These amazing butterflies fly up to 2,500 miles to a place they've never been before: overwintering sites in the mountains of Central Mexico.

As they travel, monarch butterflies need nectar from flowering plants to fuel their flight south and to survive the winter. In

Watch for caterpillars that might have hidden in the leaves.

As caterpillars grow, separate them by size into other containers. Once they are at least 1 ½ to 2 inches long, the caterpillars can be transferred to a wire-mesh container with a top.

Keep caterpillars separated from chrysalises. Eclosing (emerging) butterflies release meconium, waste materials from the chrysalis, that could fall on the feeding caterpillars and spoil the milkweed.

The eggs and caterpillars can be placed on potted milkweed plants and then the potted milkweed plants are placed in a butterfly tent or in a screened-in porch. The caterpillars will eat until all of the leaves are gone, so several potted milkweed plants will be needed to keep the caterpillars fed. When the butterflies eclose, put them in a large tulle-enclosed holding cage suspended from the ceiling until you are ready to release them.

For more detailed information on raising monarch butterflies, please consult the resources at the end of this article and visit us in the University of Delaware's Cooperative Extension Demonstration Garden in Sussex County.

Raising monarch butterflies is a wonderful do-it-yourself project for the entire family.

Mexico, they cluster together in the oyamel trees, go into a deep sleep, and roost for four to five months. In February to March, instinct drives the monarch butterflies to mate and to fly north to find fresh milkweed. After mating, this generation's males die while the females lay eggs on milkweed.

Caterpillars hatch, eat milkweed, mature into butterflies, and continue the migration north through two more generations until the last generation reaches southern Canada. The eggs that are laid by the females from the third generation evolve into the butterflies that migrate in the fall to the wintering sites in Mexico. In spring, this "last" generation migrates north and the miraculous migration continues.

Why Should We Care About Monarch Butterflies?

We humans eat food that grows on plants. We need pollinators like bees, hummingbirds, bats, and butterflies to enable plants to grow. The monarch butterfly is a flagship species for the health of all pollinators. What benefits monarch butterflies benefits all pollinators. We are all connected: Every living thing depends on others for its survival.

In the last 30 years, the North American monarch population has declined by 90%. There are at least three major ways to slow this decline.

First, the major cause of the decline is the decrease in clean fresh milkweed in the monarchs' summer breeding grounds in the United States and Canada. The single most important thing to help in reversing this decline is to plant milkweed. Being a perennial, once planted, milkweed will thrive and propagate.

The second major way we can help is to put native nectar plants for the butterflies in your garden.

The third major way to help slow the decline is to get involved with educating people about monarch butterflies.

Participating in Community Science Projects and raising monarch butterflies in your home garden are excellent ways to help.

Community Service Projects

Monarch Watch – www.monarchwatch.org

Volunteers help scientists to collect valuable data about migration routes and monarch survival by tagging and releasing butterflies.

Monarch Monitoring Project (Cape May) – <https://njudubon.org/monarch-monitoring/>

Cape May, New Jersey is an important stopover on the fall migration of monarchs along the east coast. Volunteers help count monarchs that congregate in Cape May before they fly across the Delaware Bay on their way south.

Journey North – <https://journeynorth.org/monarchs>

Volunteers help scientists to track fall and spring migrations by reporting when they sight milkweed, eggs, caterpillars, and butterflies. Weekly news updates and real-time interactive maps add to the fun.

Monarch Larva Monitoring Project – <https://monarchjointventure.org/mlmp>

Volunteers provide valuable data on monarch numbers and their geographical distribution during the summer breeding season.

RESOURCES

Raising Monarch Butterflies

Monarch Watch at www.monarchwatch.org

Monarch Butterfly Life-Cycle
www.monarchbutterflylifecycle.com

How to Raise Monarch Butterflies: A Step-by-Step Guide for Kids. Ages 6-12, by Carol Pasternak. Firefly Books (2012).
www.monarcherusader.com

Xerces Society for Invertebrate Conservation.
<https://xerces.org/monarchs>

Pollinator Partnership. <https://www.pollinator.org/monarch>



For more information about Master Gardener workshops, garden helplines, presentations, becoming a Master Gardener Volunteer, or other activities, please visit these websites.

UD Website - <https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/master-gardeners/>

DSU Website - <https://cast.desu.edu/cooperative-extension/agriculture-natural-resources/delaware-master-gardeners>

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