

In order to certify your waystation with Monarch Watch, it needs to meet some guidelines. It should be at least 100 square feet and located in an area that receives at least six hours of sun a day. The waystation should have at least 10 milkweed plants, made up of two or more species, and at least 4 annual, biennial, or perennial plants that provide nectar for butterflies that are located relatively close together. General management practices should include eliminating insecticide use and removing invasive plant species.

Butterfly Releases

Public interest in butterflies is increasing dramatically and many organizations are participating in the mass release of butterflies at events across the country. Several butterfly conservation groups have spoken out against this practice. Releasing commercially raised butterflies can have negative consequences on our local populations of butterflies. When released, these butterflies may spread diseases and parasites to wild populations or even compete for habitat. Often, butterflies are released great distances from where they were raised, resulting in inappropriate genetic mixing of different populations when the same species is locally present. There are better ways to celebrate occasions or honor or remember someone.



RESOURCES

Monarch Joint Venture: Monarch Joint Venture works throughout the U.S. to conserve and protect monarch populations and their migratory phenomena by implementing science-based habitat conservation and restoration measures in collaboration with multiple stakeholders. Their goal is achieved through a combination of habitat conservation, enhancement and restoration, education, and research and monitoring. Find out more at www.monarchjointventure.org.

Monarch Watch: Monarch Watch is a nonprofit education, conservation, and research program based at the University of Kansas that focuses on the monarch butterfly, its habitat, and its spectacular fall migration. Learn about monarch conservation and research at www.monarchwatch.org.

FOR MORE INFORMATION

If you find a wild animal and are concerned, leave it alone and call Brukner Nature Center at 937-698-6493, seven days a week, 24 hours a day.



5995 Horseshoe Bend Rd.
Troy, OH 45373

www.bruknernaturecenter.com

Brukner Nature Center is a non-profit, privately funded organization promoting the appreciation and understanding of wildlife conservation through preservation, education, and rehabilitation.

The purpose of our wildlife rehabilitation program is to educate people regarding the natural history of Ohio's wildlife, to offer help and advice when wildlife and people conflict, and to care for, rehabilitate, and release native Ohio wildlife expected to survive in their natural environment.

Living with **MONARCHS**

in Miami County



Brukner Nature Center

Each fall, millions of monarch butterflies migrate thousands of miles from areas in the US and Canada east of the Rocky Mountains to the trans-volcanic mountains in Mexico, where they wait for winter to pass. In spring, once favorable weather returns, they make a return migration to their breeding grounds in the US. The monarch's migration is one of the great migrations in nature, but we may lose it due to the challenges they face from climate change and habitat loss across the continent. But there are simple actions we can each take to help this incredible creature!

MONARCH LIFECYCLE

Monarchs, like all other butterflies, undergo complete metamorphosis. This means that the butterfly changes completely from its early larval stage, when it is a caterpillar, to the final stage, when it becomes an adult butterfly. The butterfly life cycle has four stages: egg, larva (caterpillar), pupa (chrysalis), and adult. Each stage has specific requirements of its environment.



CREATE A BUTTERFLY GARDEN

One of the easiest things we can do to help monarchs and other wildlife is to plant a butterfly garden. A butterfly garden provides a safe haven for monarch eggs and caterpillars and helps fuel the adults, especially during their migration! Good monarch habitat must meet the needs of all four monarch life stages, and ideally, the monarch migratory cycle as well.

Choose the Site

Choose a sunny site for your garden. Butterflies need the sun's energy to warm up and most nectar and milkweed plants grow best in sunny spots. Butterflies prefer areas that are sheltered from wind. A fence, shrub, or a wall can serve as a windbreak, and can also be a good place for pupation. If your site does not have a wind break, consider planting on the protected south or southwest side of a building, fence, or hedge.

Caterpillar Food

The caterpillar is the only stage in a monarch's lifecycle where growth occurs. Female monarchs lay eggs on milkweed plants because their caterpillars can only eat milkweed. When choosing milkweed to plant, try to



find varieties native to Ohio. These include common milkweed (*Asclepias syriaca*), swamp milkweed (*A. incarnata*), butterfly milkweed (*A. tuberosa*), purple milkweed (*A. purpurascens*), Sullivant's milkweed (*A. sullivantii*), and milkweed vine (*Cynanchum laeve*). Include several plants of at least three different types of milkweed in your garden if you can.

Once the caterpillar is fully developed, it often leaves the host plant to find a safe place to pupate, or form its chrysalis.

Plants for Adult Monarchs

As adult butterflies, monarchs need nectar plants. Flying requires a great amount of energy and flower nectar contains energy rich sugars and provides the fuel they need. After the adult butterfly emerges, it uses its long straw-like mouth, or proboscis, to sip nectar from a variety of different flowering plants.

A wide variety of flowers can provide the proper nectar for butterflies, but they do have preferences. Include a variety of brightly-colored plants especially red, yellow, orange, pink, or purple. Plants with flat flower heads, such as asters, furnish butterflies with landing pads where they can rest, sip nectar, and pollinate the plants. Whenever possible, use native plants with which butterflies and other insects have evolved a mutually beneficial association.



during the hybridization process, these plants may have lost their ability to produce nectar. When planting for butterflies and nectar, it's best to choose simpler, single flowered varieties.

As monarchs migrate, they need nectar plants to fuel their long flight. Be sure to include flowering plants that bloom in fall when planning your butterfly garden. Monarch fall blooming favorites include goldenrod and aster.

Avoid the Use of Pesticides

Planting for butterflies, like monarchs, also benefits many pollinators including our native bees. You may also find insects that you don't recognize, or discover

some that are not wanted. Before reaching for an insecticide, keep in mind that most do not target a single species. Other insects will also be harmed or killed including caterpillars and butterflies.



Neonicotinoids or neonics, for short, are a group of insecticides that are used widely on farms and in plant nurseries, as well as our homes, schools, and city landscapes. Neonics are systemic, which means that they are absorbed by the plant tissues and expressed in all parts, including nectar and pollen. Neonics target sap-sucking and leaf-chewing insects (such as caterpillars), but unfortunately, bees, butterflies, and other flower-visiting insects are harmed by the residues in the pollen and nectar. As a gardener, you can help protect pollinators by avoiding the use of insecticides, asking your local nursery or garden center if plants have been treated with neonics, and encouraging your city or park district to stop using pesticides on plants that are visited by pollinators.

PREDATORS

Monarch caterpillars are toxic, having ingested milkweed sap as they ate the leaves containing a cardiac glycoside. When a bird eats a monarch caterpillar it finds the taste very unpleasant, and is likely to suffer consequences including vomiting, nausea and visual disturbance. This toxin is present in the adult monarch butterflies, too. Their bright orange color warns potential predators that they are not to be eaten. Another butterfly, the viceroy, mimics the coloration of the monarch and is also afforded this protection from predators.

MONARCH CONSERVATION

Monarch Waystations

Monarch Waystations are places that provide resources necessary for monarchs to produce successive generations and sustain their migration. To show your support of monarch conservation, you can have your monarch habitat certified as an official Monarch Waystation by Monarch Watch.