Items You Need For A Thriving Butterfly Garden:

by: Demi and Kayla

CONTENTS OF A BUTTERFLY GARDEN:

- Plants and flowers that serve as food for the caterpillars and butterflies that nourish them and help them thrive
- Go organic → DO NOT use pesticides
- Shelter to help them hide from predators
    - Grow out lawn
    - Let log decompose on the ground
    - Allow a dead tree to stand to create nooks for the butterflies
- An area where sunlight will reach everyday
- Water sources such as:
    - Bird bath
    - Water garden
    - Catch basin for rain

Information from: https://nababutterfly.com/start-butterfly-garden/

Thank You!

Why Monarch Butterflies Are Endangered:

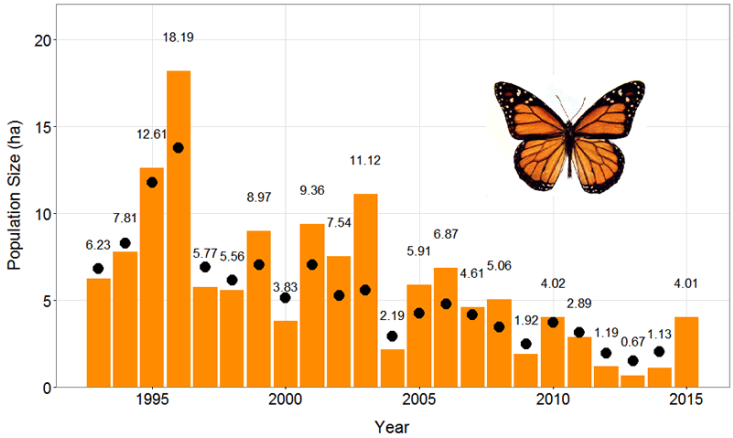
Loss of Native Plants- Monarch butterflies rely on plants, mainly milkweeds, in order to, not only eat, but as the main source to lay their eggs on as well. With these plants disappearing along their migratory paths due to genetically modified plants and the building of more development projects, it makes it more difficult for them to survive the trip.

Climate Change- Over only the past 20 years, researchers have found that 80% of the monarch population has been lost, and one of the main causes is climate change, especially in Mexico and California. With more common out-of-season storms, huge temperature drops, heavy rains, and other extreme weather events, monarch butterflies have been hit hard.

Deforestation- Like many other animal species, monarch butterflies are suffering due to deforestation. More construction and the expansion of buildings and cities cause the destruction of natural habitats and sometimes even harm those living in and around them.

Overuse of Pesticides and Herbicides- Farmers now use herbicides to get the desired plants they want in the area of their farms. Herbicides help them to kill all plants, except for crops they want like corn and soybeans. Even though this is useful to them, it is the complete opposite for the monarch butterflies. Milkweed, a major plant that they rely on to survive, is among those that they do not want growing near them. Because they are dying, monarch butterflies are required to fly greater distances to get to them. This causes their body fat to be depleted and, therefore, less eggs to be produced.

Although there are many reasons that contribute to the extinction of the monarch butterfly, these are the main ones.



Life Cycle of a Monarch Butterfly:

There are 4 stages in the butterflies' life cycle.

1. Eggs

The eggs are laid on milkweed plants, and usually hatch around four days after they are laid.

2. Caterpillar

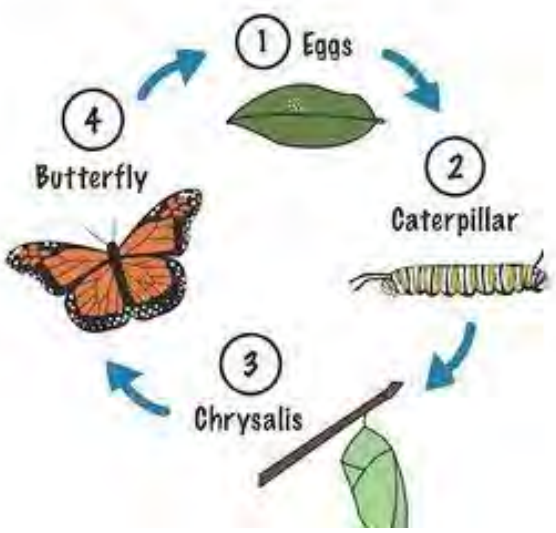
After being hatched, the small caterpillar focuses on growing by eating the milkweed plant they are on. This stage lasts about two weeks and the caterpillar will be fully grown and ready to form their chrysalis by the end of it.

3. Chrysalis

The caterpillar creates its chrysalis out of silk and is changing inside for 10 days. There is so much going on inside the chrysalis, even though it doesn't appear like that from the outside. Within, the caterpillar is shedding its old parts and growing new ones that belong to a beautiful butterfly.

4. Butterfly

The new monarch butterfly emerges and is ready to live its life feeding on flowers and their nectar.



Monarch Butterfly Migratory Path

Monarch butterflies make a two-way migration. They travel south in the fall to warmer climates and north in the spring back to their home and to many native plants needed in order to survive.

- In the **fall**, specifically late August, monarch butterflies fly from their current home in Canada or the northern parts of the U.S. to the south. As it gets colder, they migrate to warmer weather and move to live in oyamal trees in Central Mexico. Traveling southwest, the monarch butterflies are guided by the bodies of water in that area, including the Great Lakes and the Gulf of Mexico. Around 300 million monarch butterflies stay there during the winter. The fall migration lasts until around November or December.

- In the **spring**, specifically late February, only about half of the monarch butterflies that started the journey continue it. 40-60% of the others died in Mexico during the winter. As they fly back home, some breed and lay eggs. A singular female monarch lays hundreds of eggs, so as some butterflies do not make it during the travel back home, the population nonetheless increases and creates a whole new generation of butterflies. It takes multiple generations of monarch butterflies in order to return back to their home. The spring migration lasts until around June.

Along their migratory path, monarch butterflies feed on many flowers in order to fuel themselves to fly around 50 miles per day at 12 miles per hour. These butterflies also face many challenges such as storms, predators, humans, or simply being tired from the incredibly long journey. Many butterflies are killed due to these reasons but, regardless, try their hardest to reach their destination or rely on the next generation to ultimately succeed in their migration.

Importance of native milkweed:

Milkweed is an essential plant for butterflies to have available to them, but it is also important that this milkweed is native to your area.The leaves on the plant will provide food for monarch caterpillars and is a place for adult monarchs to lay their eggs.

Milkweed is a toxic plant, but monarch butterflies have developed the ability to eat this plant and still survive. This is also vital because the toxins in the milkweed help the monarch butterflies and serve as their defense against predators. However, non-native milkweed plants are beginning to grow in the U.S. and, because they are non-native, the plants are not used to the habitat, such as the temperature, and sometimes produce too much or too little of the toxins monarch butterflies need in order to survive. Milkweed is very important in order for monarchs to survive and is something they ingest everyday, so with these non-native milkweeds starting to grow more in the area, they are suffering and some even die.

Monarchs need to migrate to stay warm in the winter. Native milkweed plants will usually die off during those months, which encourages them to look for food in other places. Some non-native milkweed, such as tropical milkweed, will grow all year round and prevent the butterflies from migrating. Though tropical milkweed is a non-native plant, it is very common and sold in a lot of nurseries.

Plants that attract butterflies:

Milkweed- Milkweed is the most important plant that you should have in a butterfly garden, but it is also important that this is the native kind to your area. It is the only plant that monarch caterpillars will eat, so it is important to have these if you want the caterpillars to thrive and have access to food when they hatch.

Aster (native)- Aster is a flower that butterflies love! It is also a must-have in a butterfly garden because this plant can be used as a host plant and a nectar source. This means that butterflies are able to get nectar from this plant and are also able to lay their eggs on it too.

Black-eyed Susans (native)- These plants are also used for nectar, but their sturdy platforms for landing also draw the attention of butterflies.

California Coneflower (native)- These types of flowers also attract butterflies because of the sweet nectar they produce. These plants attract many different types of butterflies like monarchs, painted ladies, and swallowtails.

Other plants such as **Yarrow (native)** are also used for their nectar by butterflies.

Geraniums (native)

These flowers have hundreds of known species in a variety of colors. They have a strong smell and do best in warm weather right after winter. Less care is required and they attract hummingbirds, butterflies, bees, and other insects.

Heliotrope (native)

This plant provides nectar for butterflies and attracts many different types late in the summer through fall, and into spring. It is alsoknown as the Cherry Pie Plant because of its pleasant scent for both insects and humans.

Tanacetum (Tansy)

This plant blooms flowers that look like yellow discs with jagged leaves. These flowers bloom from summer to fall, and are toxic to humans and some animals. They grow three to four feet tall and naturally repel flies and mosquitoes. Tansy flowers attract butterflies, moths, and bees, whose job it is to pollinate this plant.

Silver Groundsel

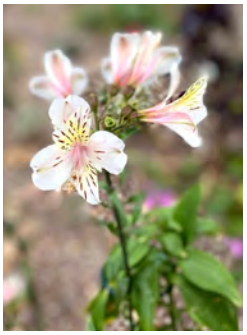
This wooly, gray green, and silvery white leaved plant blooms round, yellow flowers during some parts of the year. Bees, butterflies,and other insects are attracted to this plant and pollinate it as well. Silver Groundsel is known to be toxic, especially if eaten, but is used rarely for medicinal purposes.

Oxalis (native)

These flowers are seen blooming during spring and summer. They have lots of nectar and attract pollinators easily. Their leaves are either green or purple and produce yellow, purple, or pink flowers.

African Daisy

African daisies are colorful flowers that bloom from spring to summer. They can look stunning, even despite bad caretaking. These flowers' nectar attracts bees and butterflies.



Lily

The Lily's bright colors and rich nectar are it'sattributes that cause it to attract butterflies. These flowers bloom during the spring and summer, but go dormant during wintertime. Lilies grow best in groups ofthree to five and can range from two to six feet tall. Their petals are usually white, yellow, orange, pink, red, or purple and sometimes have freckles.

Satin Flowers

Satin Flowers are funnel or trumpet shaped flowers,each made up of four petals. They are usually found to be pink, orange, red, or violet and bloom during the summer months. These flowers are very bright, beautiful, welcoming and come in over 40 species--many of which are native to western North America. Butterflies, bees, and other beneficial insects are attracted to this type of flower.

How to Register Your Way Station

If you want to register your own Way Station, click this link to help you certify your own home butterfly garden!

https://shop.monarchwatch.org/product/Waystation-Certification-Application/190004

"Why Monarch Butterflies Are Endangered" information from:

1. https://cronkitenews.azpbs.org/2021/03/22/monarch-butterflies-endangered-species-list/
2. https://www.npr.org/2021/02/26/971650046/climate-change-deforestation-threaten-monarch-butterfly-migration
3. https://www.fws.gov/cno/es/monarch/monarch.cfm
4. https://www.biologicaldiversity.org/species/invertebrates/monarch_butterfly/

"Life Cycle of a Monarch Butterfly" information from:

1. https://www.cityofirving.org/2737/Monarch-Butterfly-Life-Cycle

"Monarch Butterfly Migratory Path" information from:

1. https://www.fs.fed.us/wildflowers/pollinators/Monarch_Butterfly/migration/
2. https://monarchjointventure.org/monarch-biology/monarch-migration
3. https://www.monarch-butterfly.com/monarch-migration.html
4. https://www.saveourmonarchs.org/monarch-migration.html

"Importance of Native Milkweed" information from:

1. https://www.nwf.org/Garden-for-Wildlife/About/Native-Plants/Milkweed
2. https://houstonarboretum.org/2015/09/native-milkweed/

"Plants that Attract Butterflies" information from:

1. https://www.gardeners.com/how-to/attracting-butterflies-hummingbirds/7265.html
2. https://gilmour.com/geranium-care
3. https://www.plantdelights.com/blogs/articles/butterfly-garden-plants-host-attract-butterflies
4. https://plantcaretoday.com/heliotropium-arborescens.html
5. https://www.gardeningchannel.com/how-to-grow-tansy-tanacetum-vulgare/
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