

Best Management Practices

Monarch Habitat in Your Backyard



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Monarch butterflies are perhaps the most well-known and beloved butterfly in North America and are a familiar sight in natural areas throughout the United States. The monarch is renowned for their seasonal migration that spans thousands of miles. However, monarch populations have declined over 90% in the past two decades, partially due to habitat loss.

Monarchs need milkweed. Milkweed is the monarch butterfly's host plant, in that, the female monarch will lay her eggs only on milkweed plants and the caterpillars feed exclusively on milkweed leaves until they pupate. Without milkweed, monarchs are unable to complete their life cycle, contributing to their diminishing populations.

The Missourians for Monarchs Collaborative understands this important issue, and has created this, and other Best Management Practices (BMPs) to help integrate quality pollinator habitat into everyday life. While we realize these BMPs will not work for everyone, our intent is to offer multiple practices to help Missourians create a space that can work for them.

One of the most important things you can do to help monarchs is create habitat. This can be done in your front/backyard; on a porch/balcony; or you can organize an effort with your local school(s), community, or other public spaces to integrate milkweed and native nectar plants into their landscape.

MILKWEED SPECIES



Butterfly Milkweed
(*A. tuberosa*)



Common Milkweed
(*A. syriaca*)



Purple Milkweed
(*A. purpurascens*)



Spider/Green Milkweed
(*A. viridis*)



Swamp Milkweed
(*A. incarnata*)



Whorled Milkweed
(*A. verticillata*)

Milkweed and other nectar plants can be established in both wet and dry soil conditions, but you must choose plant species accordingly. Keep in mind, you should always have a plan to sustain your monarch habitat. Specific actions you take will depend on the various aspects of your habitat; however, some general examples include mulching, thinning, amending the soil, watering, eliminating insecticide use, and weeding-out invasive plant species.

The following information provides specific information about habitat requirements for monarch habitat. For more information on matching site selection and species in MO, visit Missourians for Monarchs' partner Grow Native! at www.grownative.org.



Photo credit: Maureen Mahar

HABITAT REQUIREMENTS

Size

Suitable monarch habitat can be easily integrated into an existing flower garden or in container plantings on a balcony or porch. There is no minimum area requirement for your habitat; however, the more resources you provide, the more pollinators will visit your site.

Exposure

Most monarch plants require full sun; therefore, it's easiest to establish monarch habitats that receive at least six hours of sun a day. However, many pollinator plants can thrive and require partial sun, such as, purple and whorled milkweed. Both require partial shade, preferably, early-day sun with afternoon shade. Always check the shade tolerance of plants you include in your garden.

Soils and Drainage

Native milkweeds and nectar plants have adapted to Missouri's high-clay soils and can thrive in these native soils with little or no amending. However, they can also do very well in relatively light (low-clay) soils. Good drainage helps avoid root rot and provides aeration of the roots. Areas with poor drainage may need more tolerant species such as swamp milkweed and New England aster.

Shelter

All monarch life stages need shelter from predators and the elements. To assure the maximum number of monarchs survive in your habitat, the plants should be relatively close together without overcrowding. Be sure to follow the planting recommendations specific to each plant.

Food (Nectar Plants)

Missouri's native plants have variable bloom times from April through October, which simplifies planting nectar sources that bloom sequentially, spring through fall. Doing so ensures your garden can provide the much-needed resources for monarchs during their breeding season and their fall migration. Whenever possible, monarch habitat should contain at least four biennial or perennial native plants that provide nectar for butterflies.

Ideal Specifications

- 100 square feet for the planting location. The total area may be split among several sites at your location. There is no upper limit for the size.
- 10 milkweed plants of two or more species; plant more than 10 plants if only planting one species of milkweed
- Four biennial or perennial native species for nectar habitat.

To maximize the utilization of your habitat by monarchs, be sure to include more than one milkweed species. Additionally, having at least 10 plants, made up of two or more species is best; however, having a large number of plants (more than 10) of one species can still offer monarchs some much needed habitat.

The different milkweed species mature and flower at different times during the season. By increasing the number of milkweed species in your habitat, you increase the likelihood that monarchs and other pollinators will utilize your property for a longer period. Below are sample planting diagrams to get you started in creating your ideal monarch and pollinator habitat.

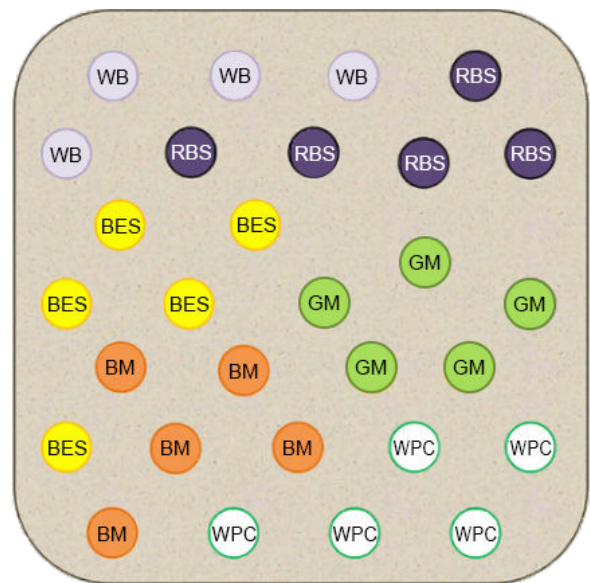
Sample Planting Diagrams

Planting diagram

- Full sun, well-drained (dry) soil conditions
- 100 square feet, ex: 10 ft. x 10 ft.
- Two different milkweed species, 5 plants each
- 19 plants of 6 different biennial/perennial native species

Legend

- 5 - (GM) Green milkweed
- 5 - (BM) Butterfly milkweed
- 5 - (WPC) White prairie clover
- 5 - (RBS) Rough blazing star
- 4 - (WB) Wild bergamot
- 5 - (BES) Black-eyed Susan



Total: 29 plants all spaced 18" apart

Planting diagram

- Full sun, poorly-drained (wet) soil conditions
- 250 square feet, ex: 25 ft. x 10 ft.
- 15 of one milkweed species
- 49 plants with a mix of different biennial/perennial native species

Legend

- 6 - (CP) Cup plant
- 21 - (BL) Blue lobelia
- 19 - (CR) Culver's root
- 15 - (SM) Swamp milkweed
- 3 - (NEA) New England aster

Total: 64 plants

24 spaced 24" apart across 150 square feet

40 spaced 16" apart across 100 square feet

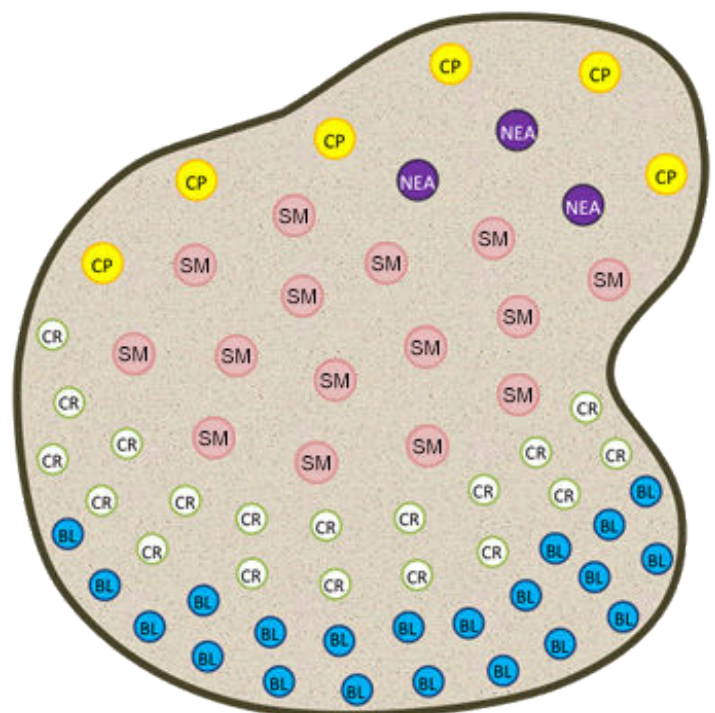




Photo credit: Maureen Mahar

Following these BMPs can help improve your property for monarchs, pollinators and other grassland dependent wildlife like quail and grassland songbirds while improving water quality and holding soil in place. If you would like to discuss your plans with a resource professional, please contact your local office(s) via the links provided below....

Private Lands Services biologist with the Missouri Department of Conservation:
<https://mdc.mo.gov/regional-contacts?county=103&=Go>

U.S. Fish and Wildlife Service - Missouri Private Lands Office:
<https://www.fws.gov/midwest/partners/index.html>

Natural Resources Conservation Service
 Field Office: <https://www.farmers.gov/working-with-us/service-center-locator>

Soil and Water Conservation District Office:
<https://mosoilandwater.land/>



The Missourians for Monarchs collaborative is a partnership between producers, federal, state and local conservation organizations to sustain habitat for monarch butterflies and pollinators through voluntary citizen involvement. The Collaborative agrees to create 385,000 acres of pollinator habitat by the year 2036.

Learn more at moformonarchs.org