



MONARCH JOINT VENTURE

Partnering across the U.S. to conserve the monarch migration

www.monarchjointventure.org

The Monarch Joint Venture is a partnership of federal and state agencies, non-governmental organizations, and academic programs that are working together to protect the monarch migration across the lower 48 United States.

PARTNERS

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The Xerces Society for Invertebrate Conservation

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Gardening for Monarchs:

Creating habitat for monarch butterflies and other pollinators

Habitat needs

Good monarch habitat must meet the needs of all four monarch life stages, and ideally, multiple parts of the monarch migratory cycle. Female monarchs lay eggs on milkweed host plants because their caterpillars only eat milkweed leaves. Once the caterpillar is fully developed, it often leaves the host plant to find a safe place to pupate, or form its chrysalis. After the adult butterfly emerges, it uses its long straw-like mouth, or proboscis, to consume nectar from a variety of different flowering plants. Thus, monarchs need both milkweed and nectar plants during the breeding part of their annual migratory cycle. As they migrate, they need nectar plants to fuel their long flight.

Because monarch-friendly gardens are usually focused on breeding and migrating, the information here targets milkweed and nectar plants. More information on overwintering habitat requirements for monarchs in the western U.S. can be found on our website.

Increasing use of herbicides, habitat loss due to real estate and agricultural development, and climate change are all factors in a declining monarch population. However, conservation efforts can start in your backyard. Plant a butterfly garden, and provide a safe haven for monarch eggs and caterpillars, and help fuel adults during their migration!



First steps

Start by replacing a patch of lawn or bare ground, or simply add native plants to an existing garden. Planning and creating a butterfly garden is a great way to increase the amount of time you spend outdoors and connect with nature.

1. 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. Adding flat rocks can help create basking zones for butterflies to regulate their temperature.
2. Include windbreaks. Butterflies prefer to feed in areas 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 a shrub.
3. Testing garden soil can determine whether the area is suitable for growing plants, or if it needs amendments. Sand, clay or wet soils may be difficult to plant in, and may require specialized techniques.
4. Prepare the soil by removing lawn or other plant cover, and raking the soil. Additional soil can be brought in as needed.
5. In difficult areas, or if space is limited, consider planting in containers.

The Importance of Monarch Conservation

The monarch butterfly is a flagship species for conservation. As a national partnership organization, the Monarch Joint Venture utilizes the social and cultural presence of monarchs to promote conservation for more than just monarchs.

With a tremendous geographic range and amazing migration, monarchs draw attention from all over North America. Many other pollinators benefit from monarch conservation efforts, as people throughout the entire breeding, migration, and overwintering range work to preserve and create habitat. Adding native milkweed to an area provides food for monarch caterpillars, and nectar for a diversity of other pollinators.

Planting the habitat

1. Whenever possible, use native plants for your garden. Plants that are native to your area are hardy, suited to live in the region, and usually require less maintenance. The Pollinator Partnership's Eco-regional Planting Guides¹ can help you find a list of plants that are suitable to your area, and determine the time of year that they flower.
2. Find a nursery that sells native plants. You may find a native plant nursery in your area at the Plant Native website² or by contacting your local Wild Ones chapter. Most nurseries provide a list of native plants that they have in stock. Choose plants that have not been treated with systemic pesticides, meant to deter insects, as these can affect pollinators, including monarchs, and their caterpillars.
3. Using potted plants or plant plugs (plants that have germinated and are ready for planting) may be the easiest choice for small garden areas. Seed mixes may also be used, and may be more cost-effective in larger areas.
4. Planting perennial plants will ensure that your garden comes up year after year. You can supplement these with annuals if needed, to add color once perennials are done blooming.
5. Choose a diverse array of plants that flower at different times to attract butterflies throughout the growing season. Plants that bloom early are critical for monarchs during the spring migration. Late blooming plants, such as goldenrod, many asters, and blazing stars, are critical during the monarch's long migration each fall.
6. If using potted plants, plan your garden and prepare the bed before purchasing plants. Group plants by color and type. Butterflies are attracted to large splashes of color in the landscape, especially red, orange, yellow and purple. Place short plants in front of tall ones.
7. Whenever possible, avoid hybrids and cultivars that are bred for their size, as they usually have less nectar in their flowers.
8. Include larval host plants. Monarchs need milkweed, so include species of milkweed native to your area. For a list of native milkweed, see the Monarch Joint Venture Milkweed Information Sheet³. Milkweeds are also a good source of nectar for butterflies and other pollinators.
9. Keep plants well-watered after purchase but prior to planting.
10. When you are ready to plant, dig a hole just large enough for the plug's roots. Use soil to cover the roots so that only the leaves and stem of the plant are above ground. Add straw or grass mulch around the plants to retain water in the soil and prevent weed growth. Water newly planted plugs.
11. If seed is used, prepare the area by removing lawn and invasive plants. Seed can be spread manually, or for

larger areas, use a broadcaster to get an even spread. Frost seeding, or the application of seed in the late winter, when snow is starting to melt, may also help the seed settle into the soil. Add mulch to conserve moisture.



Maintenance

1. Water plants until they are well established. Follow the vendor's directions on watering, and keep in mind that additional water may be needed during warm dry spells or if the plants appear to be drooping. Once established, native plants typically do not need additional water.
2. Butterfly requirements vary from site to site. Don't be surprised if a plant that is touted as being a butterfly magnet does not attract any butterflies to your garden. Watch your habitat over time and determine which flowering plants are most popular to butterflies in your area.
3. Weed by hand as needed. Avoid using herbicides and insecticides to rid your garden of unwanted plants and insects, as they may also be harmful to beneficial organisms.
4. Remember that host plants are meant to serve as food for caterpillars, so chewed leaves are a sign that they are doing their job!

Additional features of a good butterfly habitat

1. Keep dead trees and wood piles to serve as winter shelters. While monarchs migrate in the fall, many other butterflies and pollinators may overwinter in the area and use these features as shelter.
2. Consider other wildlife friendly practices. Bird feeders and a heated bird bath can help resident birds in the winter months. Bee nesting boxes can help native bees overwinter. Having bare ground can help ground nesting pollinators find a spot for the winter.
3. Register your monarch habitat online with the Monarch Joint Venture as a "Success Story" to share with others!

Resources:

1. **Pollinator Partnership Eco-Regional Planting Guides** - <http://www.pollinator.org/guides.htm>
2. **Plant Native Website** - <http://www.plantnative.org/>
3. **MJV Milkweed Information Sheet** - <http://monarchjointventure.org/images/uploads/documents/MilkweedFactSheetFINAL.pdf>

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INTERNATIONAL PROGRAMS
US Forest Service, Department of Agriculture

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