

Monarch Conservation Resources and Questions Answered by Expert Panel during the April 21, 2021 EPN Virtual Event Take Flight!

Guides to Planting and Maintaining Monarch Butterfly and Other Pollinator Habitat

- Ecoregional Planting Guides
- Garden Grant Opportunities
- Integrated Monarch Monitoring Program
- Milkweed and Wildflower Vendor Map
- Monarch Conservation: How to Get Involved
- Monarch and Milkweed Misconceptions
- Monarch Population Decline Importance
- Native Plants for Gardening and Restoration
- Native Plant Finder
- Natives in Harmony

- · Plant Milkweed for Monarchs
- Pollinator-Friendly Native Plant Lists
- Pollinator Partnership
- Rearing Monarchs: Why or Why Not?
- · Risks of Neonicotinoid Use to Pollinators
- Scioto Gardens Nursery
- Should I Kill Insects in my Garden?
- Yard Signs for Pollinator Garden (Ohio Native Plant Month)
- Yard Signs for Pollinator Garden (Midwest Native Plant Society)
- Report a Monarch observation to an app like <u>iNaturalist</u> or <u>Journey North app</u>

Establishing Pollinator Habitat on Utility Rights-Of-Way

- First solar array pollinator habitat project in Ohio
- · Monarch Wings Across Ohio (Guide to Monarch Habitat on Rights-Of-Way)
- Nationwide Candidate Conservation Agreement on Energy and Transportation Lands
- Pollinator Power Party
- Utility Arborists Association's "LifeLines"

Links to Program Partners and Featured Speakers

- Monarch Joint Venture
- Ohio Pollinator Habitat Initiative
- Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard by Dr. Doug Tallamy
- The Natives Raising Natives Project founded by Jane Breckinridge



Questions posed live during the event by program participants and answered by the program panelists, including Gabe Karns, Jennifer Thieme, Becky Spach, Doug Tallamy, and Jane Breckinridge. Responses are attributed to the collective panel.

Answers to questions about planting and maintaining habitat for the Monarch Butterfly and other pollinators.

1. I usually have many Monarch caterpillars on my butterfly weed and common milkweed. But this year only one survived because of a wasp that I saw come and attack them. I was told not to take them from their environment, so I am asking if there is anything, I can do to keep the caterpillars from being attacked and killed?

Predation is a part of a healthy ecosystem. Survival of monarch eggs & larvae is known to be very low, less than 10%. One-way monarchs contend with this is by laying 300-500 eggs during the female's lifetime. Lean more here.

2. What can we do as residents and neighborhoods to help the monarch? Is there hope for the Monarch (and so many other species)? How can smaller urban areas be transformed to help the Monarch survive?

Plant native milkweeds and other native nectar sources in your garden or containers on your porch. Be proud of your native habitat and share its purpose with your neighbors. There are several places, including the Xerces Society and National Wildlife Federation, to purchase native habitat signage to share your message with passerby's. Speak out locally at homeowner association meetings and township planning meetings in support of planting native plants.

There is hope for the monarch, which we see in so many collaborations that have arisen in the past several years as monarchs have declined. Monarchs are generalists that can benefit from small prairie patches and urban gardens, which brings even more hope that collective action can positively impact them, even in our changing landscape. Learn more here.

3. Monarchs and other butterflies may use nectar sources in shade, esp. if temps are over 80 - true?

I'm not sure how hard and fast the 80-degree rule is, but I can attest that we have Monarchs attending to our backyard natives in full shade in the fall when temps are certainly less than 75 degrees. That said, pollinators ARE a fan of the sun. And full, or mostly full sun, is preferred if available. (Not to mention growing most plants is easier when sunlight isn't limited!) Great question.

4. If we plant milkweed for the cats, what companion plants do we need for nectar for the butterflies themselves and do those plants naturally bloom on time and for long enough to feed the butterflies?

It is great to think about nectar resources as well as milkweed for monarchs! The answer depends on where you live. In Ohio, a few good options include purple coneflower, cup plant, prairie blazing star, and showy goldenrod, for starters. Select a few species that bloom early, mid, and late season. Xerces Society has a great resource and you can look up options by state. Learn more here.

5. If I have a monarch stop early in its travels would it be the same monarch that eventually goes on to Mexico or is the eventual traveler a descendant of the early one?

What is the situation for monarchs at their wintering sites in Mexico? Is there a movement to help monarchs there?

Great questions, Monarchs pass the baton between 4 different generations to complete the journey. Ohio is KEY for sending the final 4th generation south late in the growing season.

The primary overwintering colonies are protected as part of the Monarch Butterfly Biosphere Reserve. Many organizations are working to protect this and surrounding buffers, including getting local people involved and employed in conservation, and planting more trees for monarchs to overwinter in.

6. What are the specific flowers we should plant in central Ohio?

Here are some great resources that give options based on your state or zip code:

- https://pollinator.org/guides
- https://xerces.org/pollinator-conservation/pollinator-friendly-plant-lists

Thanks to Monarch Joint Venture partners Pollinator Partnership and The Xerces Society for these great resources!

7. I have heard whorled milkweed is toxic to monarchs. Is that true?

Recommendations for native shrubs/plants that are nontoxic to pets.

Whorled milkweed is not toxic to monarchs. Like other milkweeds, it contains cardenolides, which are toxic to vertebrates if consumed in large quantities. Monarch caterpillars can grow well on whorled milkweed. "Is your concern that milkweeds contain a toxin called cardenolides? This can be harmful to vertebrates if consumed in large quantities. Here is a resource about milkweed and its toxicity. See other questions answered here for finding native nectar resources to plant. Learn more here.

8. Is asclepias syriaca the only milkweed variety that's good for monarchs? How about asclepias tuberosa? Swamp milkweed, etc.?

Common milkweed (A. syriaca) is great for monarchs, but monarchs will use all milkweed species. Here's a great resource to find a variety of milkweed species native to your area.

9. What plant is best to plant near milkweed for the chrysalis stage?

Monarchs will pupate on all kinds of firm surfaces, from shrub branches, fences, picnic tables, and even under windowsills! Consider native shrubs - depending on your location, this might be leadplant, New Jersey tea, or others - Also consider native nectar resources to plant near your milkweed, which will support the adults once they emerge.

10. Do you have any recommendations or guides on container gardening for monarchs and pollinators?

A pollinator patch does not have to be big in order to attract attention. Annuals such as black-eyed Susans or other species that you can seed and get rapid growth in the first year. Other alternative would be to purchase native plugs of perennial wildflowers that will get you flowering resources quickly. One thing to remember, native species can tolerate droughty conditions better than most non-native cultivars, be careful not to overwater!

11. Many butterflies and insects will use invasive plants. For example, I have seen Monarchs and Viceroy (Monarch mimic) on thistle. Should we actively eliminate such invasives?

It may be best to work on a remove/replace strategy. As you remove nonnative plants, also add seed from native nectar plants. Depending on the size of the habitat you are restoring, a widespread treatment, such as mowing prior to when the invasive plant goes to seed or using prescribed fire to set back nonnatives not adapted to these conditions, can be beneficial. There may be short term losses for long term gains.

12. My Township is updating its land use plan, as a member I want to include pollinator gardens in existing and future housing developments which must set aside a % of open space. As home rule twp, hope to include in zoning code update.

Interesting, getting that integrated early is ideal. Lots of resources available to promote these sorts of initiatives, look on Ohio Division of Wildlife's website, Monarch Joint Venture, Monarch Watch, and Pollinator Partnership, and more for those small grant opportunities - not to mention huge catalogs of resources.

13. How beneficial are/what impact do butterflies have on human health? Is the home butterfly raising kits detrimental to the butterflies?

Monarchs benefit humans – and flowering plants – by acting as pollinators. A third of the food we eat is make possible because of pollination. The declining monarch population parallels other declining pollinator populations, which in turn impacts human food systems. <u>Learn more here.</u>

Rearing monarchs in the home can provide a meaningful education experience for children and a fulfilling experience for adults. Research shows that rearing monarchs indoors can negatively impact that individual monarch, producing an adult that is weaker than its outdoor counterpart, or that cannot orient itself to migrate south. Thus, rearing is recommended in limited quantity and only for education, community science, or personal enjoyment. Learn more here.

14. I have a terrible infestation with Canadian thistle in my garden. Should I just try to live with them, are the flowers good for pollinators?

Love Hate relationship with Canada thistle - phenomenal nectar source. If you can get rid of them though and REPLACE them with something equally beneficial, that would be my recommendation. Problem with Canada thistle is that it does not stay where it supposed to.

Answers to questions about establishing pollinator habitat on utility Rights-Of-Way

1. How we incentivize corporations to implement monarch-friendly habitats on their land (ex. converting a portion of turfgrass surrounding their buildings to shortgrass prairie)?

I wish "because it's a good thing to do" was a simple and effective enough answer. Truth be told though, often safety as well as aesthetics are at play. Taller vegetation may not deliver on both those objectives perfectly. That said, lawn care is not cheap. And once pollinator habitat is established, maintenance drops to a bare minimum / perhaps an economic justification there to capitalize upon.

2. What did Becky (Spach) say about power company using herbicides?

Herbicides are selectively used on tall growing plants to allow compatible flower plants emerge and thrive. Over time biological control occurs minimal herbicides are used. Through competition compatible plants out compete the taller growing plants. This is integrated vegetation management.

3. We have a powerline on our property, and we have no end of problems with invasives introduced by the powerline maintenance. They are great for spreading autumn olive in particular.

Timing of mowing is important; many Departments of Transportation time their mowing just prior to when an invasive plant of interest goes to seed. That way spreading of seed is reduced. Training of staff is critical and takes a lot of effort to build up. Here's a great resource from Pollinator Partnership.

- 4. Do you have links for the power & pollinator collaborative and also the nationwide Candidate Conservation Agreement (CCAA) program? See below:
 - https://www.epri.com/pages/sa/pollinators
 - https://www.fws.gov/savethemonarch/CCAA.html
- 5. Curious how the Mansfield campus ROW project is doing. Are you managing the vegetation in any specific way?

Currently it continues to be a demonstration plot we continue to collaborate and host annual events with all partners involved and look to incorporate research. On the remainder of ROW that is not part of demonstration plot we are using integrated vegetation management practices.

Please see email contact information below if you would like to connect with the program panelists:

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- Rebecca Spach spachr@firstenergycorp.com
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If you would like to learn more about Ohio State's Environmental Professionals Network:

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