

Conservation and the Status of the Monarch Butterfly

by Danae Wolfe



Gardeners can play an important part in insect conservation by planting a variety of native plants like goldenrod to help support a community of wildlife—including monarchs.

AFTER DECADES of decline, the migratory monarch butterfly (*Danaus plexippus plexippus*)—the poster child of pollinator conservation—has been declared endangered by the International Union for the Conservation of Nature (IUCN), which added the species to its Red List in July 2022. (This designation does not apply to non-migratory monarchs that are found in parts of the southeastern U.S. and in other parts of the world.) Gardeners rejoiced in the announcement, but what does the addition of the migratory monarch actually mean for its protection in North America?

Established in 1964, the IUCN Red List offers information on the global conservation status of plants, animals, and fungi. To date, nearly 150,000 species have been assessed as part of a global effort to mobilize conservation action and policy change to protect natural areas and the species that depend on them.

In North America, there are two populations of migratory monarch butterflies. Western monarchs, which live west of the Rocky Mountains, migrate around 300 miles to the Pacific coast each winter. Eastern monarchs, which represent the larger of the two populations, migrate over 3,000 miles from the northern U.S.

and parts of Canada to their overwintering grounds in central Mexico.

Both populations of monarch butterflies have declined drastically throughout the last few decades. Research shows a 99.9 percent decline of Western monarchs from the 1980s to 2021, while the Eastern monarch numbers have plummeted around 80 percent. Intensifying agricultural production, suburban and urban development, pesticide use, disease, and climate change are all contributing factors to the decline of the butterfly.

MORE PROTECTION NEEDED

While the addition of the migratory monarch to the IUCN Red List can empower conservation action and catalyze change for their protection, it does not afford the butterfly federal protection or funding to support the development of a national recovery plan, something only the U.S. Fish and Wildlife Service (USFWS) can do. The USFWS administers the Endangered Species Act, which was created in 1973 to establish protections for fish, wildlife, and plants that are listed as endangered or threatened, provide for adding species to and removing them from the list of threatened and endangered species, and prepare and implement plans for their recovery.

In 2020, after a thorough assessment of the migratory monarch, the USFWS found that “adding the monarch butterfly to the list of threatened and endangered species was warranted but precluded by work on higher-priority listing actions.” In other words, the agency felt that the status and recovery of other species are more pressing.

THE DANGER OF TUNNEL VISION

Monarchs have long represented a cornerstone of insect and pollinator conservation. For years, organizations like the

Xerces Society and Pollinator Partnership have offered resources and education on how to help monarchs thrive in the home garden and along their arduous journey south for the winter. Campaigns imploring homeowners and communities to plant more milkweed (*Asclepias* spp.), the monarch caterpillar's only host plant, have long filled social media feeds and made headlines.

These efforts to save the monarch have effectively rallied a nation in support of the butterfly. But attempts to save a single species can sometimes create unintended—and even harmful—consequences for other wildlife.

Milkweed, for example, supports more than monarchs. Insects like red milkweed beetles and milkweed bugs—both native to the U.S.—also rely on the plant. Many gardeners, unfortunately, consider these insects pests. Google search “milkweed pests” and you’ll find a long list of articles

Resources

High survivorship of first-generation monarch butterfly eggs to third instar associated with a diverse arthropod community. M. Stevenson, K.L. Hudson, A. Scott, K. Contreras, and J.G. Kopachena. (2021). *Insects*. 12(6):567. <https://doi.org/10.3390/insects12060567>.

The Humane Gardener by Nancy Lawson. Princeton Architectural Press, 2017.

Nature's Best Hope by Doug Tallamy. Timber Press, 2020.

Xerces Society, <https://xerces.org>.

detailing how to protect milkweed from these less desirable species.

But milkweed is not meant for monarchs alone. In fact, an article published in the journal *Insects* about a 2021 study

in the southern U.S. showed that monarch butterfly egg and early instar survivability was higher on host plants where a greater number and variety of other, non-predatory arthropods were observed (see “Resources,” left). The study’s researchers suggest that the presence of a diversity of prey on milkweed allowed monarch eggs and larvae to be overlooked by possible predators, supporting the idea that an ecosystem approach is superior to the conservation of just a single species.

Supporting monarchs by planting milkweed for caterpillars is important. But stewarding our landscapes to support a thriving community of wildlife is critical to not only the health of monarchs, but the health of an incredible array of species that also need our help. That means not just growing milkweed, but other native plants—such as goldenrods (*Solidago* spp.), beeбалms (*Monarda* spp.), and asters (Asteraceae)—that provide nectar for adult monarchs as well as hummingbirds, bees, wasps, and other creatures.

SMALL ACTIONS, BIG IMPACT

It’s easy to feel helpless in the fight against climate change and biodiversity collapse. But even small actions—like replacing resource-intensive turfgrass with native flowering plants and reducing or eliminating pesticides—can create meaningful change.

My work has never been solely about the bugs. Yes, insects and spiders are important and deserving of our appreciation. But these animals are also critical for the health of people and nature. Without insects, ecosystems would collapse, our dinner plates would be barren, and wildlife food chains would topple. As macabre as it may seem, even those monarch caterpillars that we so desperately desire to see grow into beautiful butterflies can provide a much-needed meal for a baby bird. Where one life ends, another begins. This is nature. ♡

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Milkweed plays an important part in the life cycles of many insects. Milkweed tussock caterpillars, left, prefer consuming older shoots while monarch caterpillars feed on younger foliage, so both species can cohabitate—just like the pair of red milkweed beetles and the monarch caterpillar shown above on the plant’s leaves.