

The Monarch Butterfly

By Cindy Murray

Years ago, while strolling along my neighborhood roadside northeast of Flagstaff, I noticed that the entire strip of land fronting one of the homes was overgrown with weeds. As I got closer I spied scores of umbels of small white flowers on many of the tallest plants. I then realized I was seeing milkweed (*Asclepias spp.*)

A milkweed flower's profile is unmistakable, with two rows of petals—typically, the 5 lower petals flaring backwards and the 5 upper ones forming a “corolla” flared upwards, each enclosing a hornlike appendage. The fact that this stand of horsetail milkweed (*Asclepias subverticillata*) was flourishing close to home took me by surprise—my husband and I had been trying to grow several species of the plant for years, but most of them were destroyed by gophers or other hazards. Spying these plants in my own neighborhood inspired me to renew my efforts in starting my own milkweed patches. You see, milkweeds are the only plants on which monarch caterpillars feed.

Monarch butterflies (*Danaus Plexippus*) strike a sense of wonderment in the human psyche, not only because of their ethereal beauty but also their perilous several-thousand-mile migration from their winter habitats to their spring and summer breeding ranges across the U.S. and Southern Canada. This epic migration is not complete until the populations return to their overwintering grounds where temperatures are warm enough so the insects don't freeze, but cool enough to allow them to lower their metabolisms and conserve energy while clustering together by the thousands in trees. The western population overwinters on the California coast, while the eastern population heads even further to the mountains of central Mexico. Remarkably, it requires four generations to complete the journey, each individual following the same “monarch superhighway” as its ancestors. And seeing that adult butterflies don't feed as they overwinter, it is vital in warmer months for these superhighways to abound with the nectar-rich flowers, shelter, and milkweed egg-laying sites so needed by an energy-depleted and egg-laden butterfly.

Sadly, monarch superhighways are becoming fragmented, while climate change is compelling monarchs to migrate too early or too late, out of sync with their habitual nectar and milkweed sources.

The Nature Conservancy's winter 2023 magazine puts the monarch's plight in a nutshell, “Over the past two decades, monarch populations have declined by more than 75%. The biggest threats to this iconic migratory butterfly are disruptions to its habitat, including loss of grasslands in the central U.S. and degradations of the forests where it overwinters in Mexico and California. Other threats include climate change and exposure to pesticides.”

The International Union for Conservation of Nature has classified North American monarchs as vulnerable. And notably, the species is under consideration to be listed and protected under the U.S. Endangered Species Act.

The good news is that some monarch superhighways extend across parts of Arizona, including Flagstaff, to overwintering sites along the California coast. This means we can lend a helping

hand by offering up nectar-rich flowers and native milkweed, such as *Asclepias asperula*, *A. involucrata*, and *A. speciosa*. However, we must avoid tropical species, as they are believed to confuse the butterflies into breeding at the wrong time of year. *See note

Back when I came upon my neighbor's plot of milkweed, I had little hope it would become a roadside "way station" for migrating monarchs to lay eggs. There were many true, unsightly weeds among the milkweed, which would take some labor to remove. And even if the stand was uniformly milkweed, historically our HOA has frowned upon tall vegetation along the road. Within a few weeks all the vegetation was cut down.

Hugh and I now have two tiny plots of horsetail milkweed on our property. We coax them along by watering them during the driest months of spring and fall. (Those that had been thriving along the roadside were likely receiving extra moisture from rainwater spilling off the road.) Our own plants haven't yet become numerous enough to attract monarchs, but we are anticipating a day in the not-too-distant future when our property will boast its own milkweed and nectar migration way station for the regal monarch butterfly,

**Note: Entomologists are uncertain as to whether some monarchs migrate north from central Mexico through Arizona in the spring.*

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