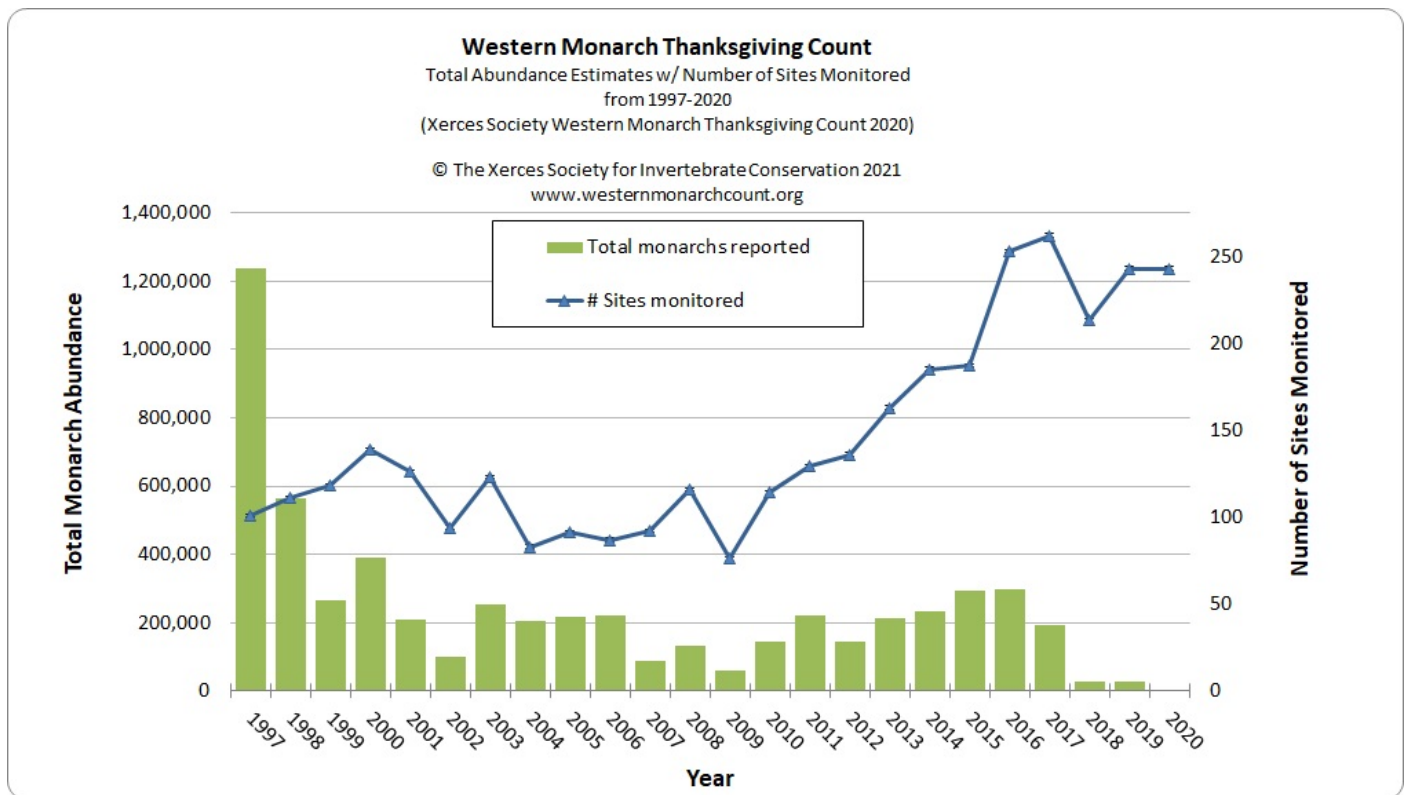


Gardening to help save the monarch butterfly

According to the 24th annual [Western Monarch Thanksgiving Count](#) by the [Xerces Society](#), there has been a "99.9% fall from the number of monarch in the 1980s, when butterflies filled trees from Marin County to San Diego County." Over 1.2 million monarchs were counted in 1997. Despite an increase in volunteer monitors, the count of overwintering monarchs in forest groves along the coast of California during their migration **in 2020 was a mere 2,000**. Indeed, the numbers have shown a precipitous decline since monitoring began. As such, [Xerces Society](#) has issued a [Call to Action](#).



Notice that the blue line indicates an increase in sites monitored from 1997 to 2020

[Western Monarch Thanksgiving Count](#), [Xerces Society](#)

Friends of South Pasadena Nature Park Answers the Call

Weeding Wild Suburbia

All About Gardening with California Native Plants

<http://www.weedingwildsuburbia.com>

In 2016 [Friends of South Pasadena Nature Park](#) installed a [Monarch Waystation](#) in the park. We are now increasing our efforts to establish stands of [narrowleaf milkweed](#) on which the monarch butterflies lay their eggs. The eggs hatch out to caterpillars (larva) that only feed on milkweeds. Scientists believe that the loss of milkweed and nectar plants due to herbicide use, especially glyphosate (Roundup™), may be one of the reasons that monarchs are in trouble. We are working to establish local native plants that will provide both milkweed for caterpillars and nectar for the butterflies and other pollinators.

Grow Only Native Milkweeds

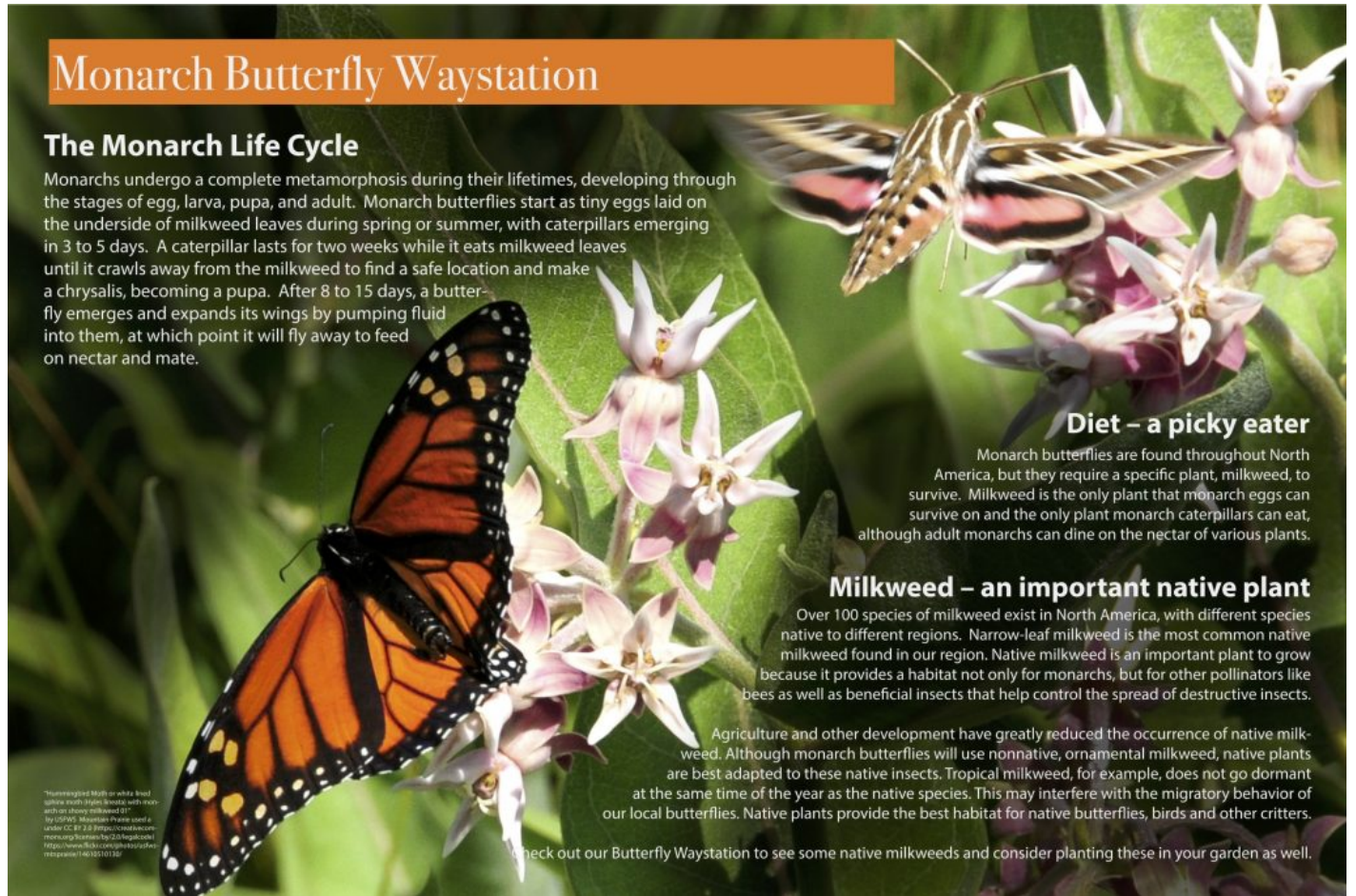


In the park we only grow milkweed that is native to southern California. Scientific research ([Satterfield, et al., 2016](#)) suggests that the nonnative tropical milkweed may be linked to an [increase in disease](#) among monarchs. Since the nonnative [tropical milkweed](#) (*Asclepias curassavica*) does not go dormant, butterflies hang around for an easy life. Unfortunately, they also share diseases, such as the protozoan parasite, *Ophryocystis elektroscirrha* or OE. It appears that OE is less prevalent in migratory monarchs because those infected with OE are unable to survive the journey and therefore are less likely to infect the larger population.

([Photo: Dara Satterfield / Project Monarch Health, xerces.org](#))

Get Your Own Free Native Milkweed Seed Packet

In addition to improving habitat at the nature park for the monarch (and other pollinators), [Friends of the South Pasadena Nature Park](#) is also reaching out to the public with information and native milkweed seeds. Beginning February 18th, volunteers will be at the [South Pasadena Farmer's Market](#) with free seeds and information. Look for our Monarch Butterfly Waystation sign. The sign, also displayed in the nature park was created in 2019 by Carrie Hashimoto, at the time a high school student at Polytechnic School.



Monarch Butterfly Waystation

The Monarch Life Cycle

Monarchs undergo a complete metamorphosis during their lifetimes, developing through the stages of egg, larva, pupa, and adult. Monarch butterflies start as tiny eggs laid on the underside of milkweed leaves during spring or summer, with caterpillars emerging in 3 to 5 days. A caterpillar lasts for two weeks while it eats milkweed leaves until it crawls away from the milkweed to find a safe location and make a chrysalis, becoming a pupa. After 8 to 15 days, a butterfly emerges and expands its wings by pumping fluid into them, at which point it will fly away to feed on nectar and mate.

Diet – a picky eater

Monarch butterflies are found throughout North America, but they require a specific plant, milkweed, to survive. Milkweed is the only plant that monarch eggs can survive on and the only plant monarch caterpillars can eat, although adult monarchs can dine on the nectar of various plants.

Milkweed – an important native plant

Over 100 species of milkweed exist in North America, with different species native to different regions. Narrow-leaf milkweed is the most common native milkweed found in our region. Native milkweed is an important plant to grow because it provides a habitat not only for monarchs, but for other pollinators like bees as well as beneficial insects that help control the spread of destructive insects.

Agriculture and other development have greatly reduced the occurrence of native milkweed. Although monarch butterflies will use nonnative, ornamental milkweed, native plants are best adapted to these native insects. Tropical milkweed, for example, does not go dormant at the same time of the year as the native species. This may interfere with the migratory behavior of our local butterflies. Native plants provide the best habitat for native butterflies, birds and other critters.

Check out our Butterfly Waystation to see some native milkweeds and consider planting these in your garden as well.

*Hummingbird Moth or white-lined sphinx moth (right) breeds with monarchs on many milkweeds.
© 2015 University of California, Berkeley. All rights reserved. Under CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>

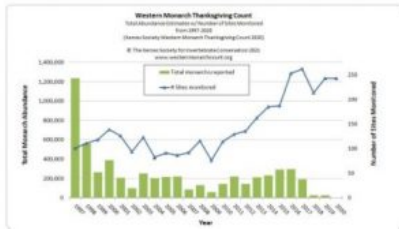
Interpretive sign from South Pasadena Nature Park will be on display at the Farmer's Market

The following brochure with information and resources will be available along with the seed packets and planting information.

“Western monarch population is closer to extinction”

Xerces Society (xerces.org)

The final results from the 24th annual Western Monarch Thanksgiving Count show a 99.9% fall from the number of monarchs in the 1980s, when butterflies filled trees from Marin County to San Diego County.



<https://www.xerces.org/blog/western-monarch-population-closer-to-extinction-as-wait-continues-for-monarchs-protection>

Notice that the blue line indicates an increase in sites monitored from 1997 to 2020.

Possible causes

- ~ Loss of overwintering sites
- ~ Loss of native milkweed, nectar plants, and useful habitat
- ~ Use of pesticides, especially glyphosate (Roundup™)
- ~ Global climate change causing extreme weather conditions like extended drought, extreme heat, and fires

Resources

Websites

- ~ Xerces Society, xerces.org/monarchs
- ~ Monarch Watch, monarchwatch.org
- ~ Calif. Native Plant Society, cnps.org; cnps-sgm.org
- ~ N. Amer. Butterfly Assoc, www.naba.org
- ~ US Fish & Wildlife Serv, fws.gov/savethemonarch
- ~ Project Monarch Health, monarchparasites.org
- ~ World Wildlife Fund; worldwildlife.org/teaching-resources/toolkits/monarch-toolkit

Books

- ~ Butterfly Gardening in Southern California, Brian Brown, Ed., 2009, NHM of LA County
- ~ An Introduction to Southern California Butterflies, Fred Heath, 2004
- ~ Insects of the Los Angeles Basin, Charles Hogue, 2015, Natural History Museum-LA County

Citizen Science (Monarch Count, Milkweed Mapper)

- ~ inaturalist.org/projects/western-monarch-milkweed-mapper
- ~ westernmonarchcount.org
- ~ monarchmilkweedmapper.org/communityscience/

Where to buy native plants and milkweed

- Nurseries that specialize in native plants**
- ~ Artemisia Nursery, artemisiannursery.com
- ~ Grow Native Nursery – California Botanic Garden calbg.org/grow-native-nursery/gnn
- ~ California Native Plant Society – San Gabriel Mts. Chapter, annual sale cnps-sgm.org/plantsale/plantsale.php
- ~ Hahamongna Native Plant Nursery arroyoseco.org/nursery.htm
- ~ Theodore Payne Foundation, theodorepayne.org

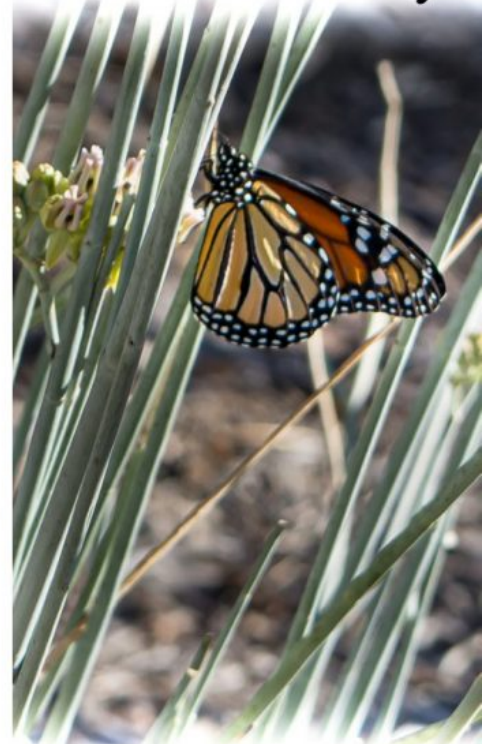
Retail nurseries that carry native plants

- ~ Bellefontaine Nursery bellefontainenursery.com
- ~ Lincoln Avenue Nursery lincolnavenuenursery.com



Photo credit: © B. Eisenstein, unless noted

Gardening to Help Save the Monarch Butterfly



South Pasadena Guide to Saving the Monarch
Created by Friends of South Pasadena Nature Park
weedingwildsuburbia.com/nature-park
February 2021

Save the Monarch

- ~ DO NOT use pesticides or plants treated with neonicotinoids (ask your nursery)
- ~ DO NOT use blowers in gardens
- ~ DO NOT grow tropical milkweed (*Asclepias curassavica*)
- ~ DO NOT breed monarch butterflies



Ladybug eating aphids on milkweed

A monarch butterfly infected with *Ophyrocystis elektroscirrha* (OE) may not be able to emerge from its chrysalis, or may emerge with wings that cannot extend and flatten.



(Photo: Dawn Satterfield / Project Monarch Health), xerces.org

Flowering stem of tropical milkweed, Photograph by: Renjusplace Creative Commons Attribution-Share Alike 3.0



Tropical milkweed, though pretty, durable and easy to find, is likely harmful to our western monarch. Because it does not go dormant, monarchs stay put, eating, living and reproducing on these plants, year around. These stationary populations are more susceptible to disease like OE shown above, that can then spread into the wild, migratory populations.

To help save the monarch



Narrowleaf Milkweed (*Asclepias fascicularis*)
Monarch caterpillar (larva), upper left;
Male monarch butterfly, lower

Plant milkweed that is native to our area



Kotolo (*Asclepias eriocarpa*)



Bladderpod



Pink Flowering Currant

Grow nectar plants, especially those that bloom in late winter to early spring when flowers less abundant



California Lilac



De La Mina Verbena



Bush Sunflower



Golden Currant



Cleveland Sage