

## Steps for Success with Milkweed and Monarchs for the Inland SoCal Valleys

The Western monarch population is believed to have declined more than 99% since scientists started tracking populations annually since the 1980's.

### Why are Monarchs in Decline?

1. Plants of the *Asclepias* genus (milkweeds) are the **only** food source for the Monarch caterpillar. Lands with native milkweed populations have declined due to land use changes to agriculture and urbanization.
2. Broad use of pesticides.
3. Monarch health is impacted by "OE", *Ophryocystis elektroscirrha*, a microscopic parasite that is spread among milkweed and nectar-source plants by infected butterflies.

Other factors include: loss and degradation of over-wintering sites, loss of plants that provide nectar, and climate change.



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Narrow Leaf Milkweed, *Asclepias fascicularis*



PHOTO: JURAMER, PIXABAY

Monarch butterfly on a Narrow Leaf Milkweed.

In inland Southern California, Narrow Leaf Milkweed is the Monarch's native host plant, and its flowers also provide nectar. It is a perennial that grows 3-4 ft. high and forms colonies. It grows best in full sun to part shade and is a low to moderate water user. It is dormant during winter, resprouts in spring, and tolerates clay soils.

Milkweed is also an excellent resource for many pollinators and other beneficial insects, including native bees and syrphid flies.

**TOXIC: Wear gloves while handling milkweed. After handling, immediately wash hands. Do not rub your eyes. If milkweed sap does get into your eye, seek immediate treatment. Milkweed can be toxic when ingested by people, pets and other animals. After feeding on milkweed, the Monarch itself becomes toxic to animals, which helps protect it.**



## Ways to Help Monarchs

1. The simplest approach is to grow a lot of native milkweed: the *host* plant for Monarch eggs and caterpillars. Our native Narrow leaf milkweed (*Asclepias fascicularis*) goes dormant during winter here, so **don't weed it out if it appears dead**. It should re-emerge around Valentine's Day.

Keep newly-planted milkweed watered until it goes dormant.

2. If you are growing non-native milkweed, it's important that it be cut back around Halloween to mimic the dormancy pattern of native milkweed. If you happen to have eggs/caterpillars at that time, wait to cut off leaves until butterflies emerge and leave. Cut back non-native, tropical milkweed (*Asclepias curassavica*) every month throughout the winter. Cut tropical milkweed to no larger than 6 inches. Remove leaves and regrowth until February.

You can tell if you need to cut back non-native milkweed by the color of the flower. Remember this:

***Yellow or red, disease is spread – pink or white, Monarchs are all right.***



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Tropical Milkweed  
Keep it cut back from November 1 through February.



© Dave Struthers

Native Milkweed will go dormant during fall and return around Valentine's day.  
*Don't weed me out!*

3. Grow a variety of plants (particularly natives) that provide nectar year-round, especially in early Spring and Fall. For butterflies, include those plants with flower clusters (like yarrow and *Eriogonum*) and flowers with composite heads that butterflies can rest on (like sunflower, daisy and asters). Larger pollinators like hummingbirds, get nectar from tubular-shaped flowers.

Nectar sources do not have to be native, but "waterwise" plants are important for conserving water in the inland area. Not all flowering plants provide nectar resources for Monarchs.

Find a list of monarch nectar plants at this link:

<https://xerces.org/monarchs/monarch-nectar-plant-guides> .

Visit the LandUse Learning Center (4500 Glenwood Dr., Riverside) for a demonstration planting of pollinator plants.

Pick up the correlating plant checklist for planning your yard and to take to your nursery.





4. Eliminate pesticide use. Pesticides also kill the beneficial insects that help control pests. Use the least-toxic alternative including diluted soaps, oils, ant traps, etc.

For milkweed, start by removing pests by hand or spraying with a jet of water. Before spraying, check for caterpillars, eggs, and beneficial insects. If you place your hand behind the part you're spraying, any caterpillars or beneficials will hit your hand and drop, rather than blow too far from the plant. That way, it's possible for them to climb back on the plant. When the sap-sucking pests are actively sucking, then hit with a blast of water, it breaks off their mouthparts.

If there are a lot of pests, spray with water three days in a row. It's fine if some remain as food for the beneficial insects. The beneficials, like ladybugs and green lacewings, usually need a week or two to lay eggs and build up their numbers to provide a more thorough control of an infestation.

Be careful when watering milkweed to not accidentally spray off eggs and caterpillars. If you accidentally knock off caterpillars, gently place them back on the milkweed.

### Milkweed Pests

Common milkweed pests include aphids, white flies, milkweed bugs, scale insects, spider mites, thrips, and leaf miners.



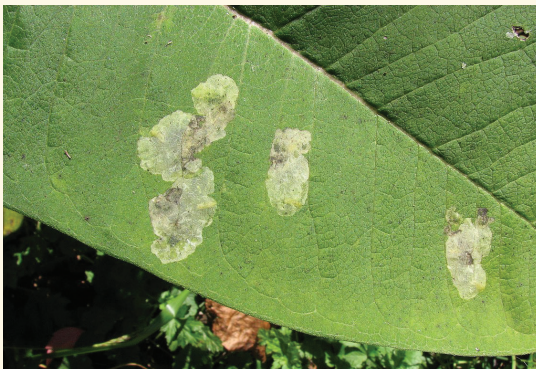
Milkweed Bug (*Berberis nevinii*)

PHOTO COURTESY OF GREG HUME



Oleander Aphids (*Aphis nerii*)

PHOTO COURTESY OF LUIS PARRA RUBIO



Damage from Leaf Miners

PHOTO COURTESY OF BEATRIZ MOISSET



Spider Mites (*Tetranychidae*)

PHOTO: FLOU, SHUTTERSTOCK

For more information about Monarchs and other pollinators:

Pollinator Partnership - <https://www.pollinator.org/pollinators>

Xerces Society - <https://xerces.org/pollinator-conservation>

Monarch Joint Venture - <https://monarchjointventure.org/>

Monarch Watch - <https://monarchwatch.org>

Bee City USA - <https://www.beecityusa.org/>

Calflora - <https://www.calflora.org/>



## Lifecycle of a Monarch Butterfly

The Western Monarch lives a very short time, with a generation lasting between one-two months.



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Females lay eggs on milkweed. Eggs last 3-5 days before becoming caterpillars.



PHOTO: SKEEZE, PINEAPPLE

The Monarch is a caterpillar for 9-14 days.



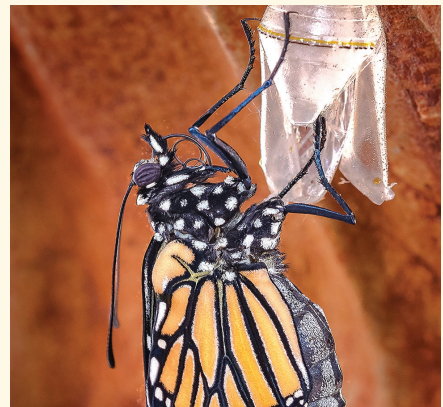
PHOTO: DIANA RUIZ

A new chrysalis is bright green and opaque. It will gradually become transparent.



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The caterpillar spends 8-13 days inside the chrysalis transforming into a butterfly.



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A butterfly newly emerged from its chrysalis. It will live 20-32 days as an adult.



PHOTO: YELFMAN, SHUTTERSTOCK

Overwintering Monarchs on a Eucalyptus tree near the California coast.

Several generations occur between late February and October when migration occurs back to the coast.

The returning generation overwinters along the mild climate of the Pacific coast from California to Baja CA, Mexico. For this reason, it's critical that overwintering sites be protected. Monarchs need tall trees (of at least 60 feet) like Eucalyptus, Monterey pine, and Monterey cypress.

The forest must be dense enough to provide wind protection, yet the tree canopy must be open enough so that the roosting Monarchs get filtered sunlight to keep their bodies warm.

