



We Are Temescal Valley: Beautification & Identity Milkweed to Monarch Project 2020

- In 2015 the committees learned of the plight of the Monarchs.
- As an insect enthusiast, I initiated the project in 2016.
- Convincing 7 Oaks Nursery to partner and grow native milkweed for the project. Skeptical it would sell.
- Temescal Valley Community Faire has given more than 500, 2 inch Narrowleaf Milkweed for kids craft, the last three years.
- 2018: We scattered over 5000 Woolly Pod and Showy Milkweed seeds along roadside and preserve areas with permission.
- 2019: I have given over 5000 seeds Woolly Pod Milkweed to Temescal Valley Residents.





Xerces Society Western Monarch Call to Action

- ★ An estimated 4.5 million of monarchs overwintered along the Pacific coast in California and Baja, Mexico in the 1980s.
- ★ By 2015, the population had declined by about 97%.
- ★ In 2018, the annual Xerces Western Monarch Thanksgiving Count hit a record low! An 86% drop from the previous count completed at Thanksgiving 2017.
- ★ A DRASTIC 99.4% decline from the numbers present in the 1980s.
- ★ For a different sense of scale, the decline from 4.5 million to 28,429 monarchs is similar to the difference in size between Los Angeles and Temescal Valley.

CALL TO ACTION

Protect and manage California overwintering sites.

Restore breeding and migratory habitat in California.

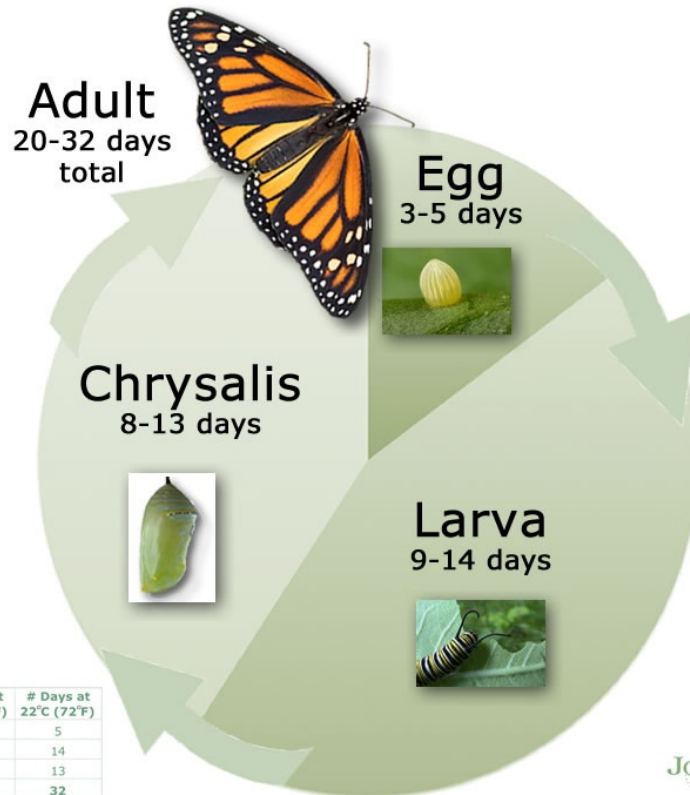
Protect monarchs and their habitat from pesticides.

Protect, manage, and restore summer breeding and fall migration monarch habitat outside of California.

Answer key research questions about how to best aid western monarch recovery.

MONARCH Life Cycle

Monarch Butterfly Life Cycle



About one month for one generation

Development rates are temperature dependent.
Monarchs develop more quickly in warm temperatures and more slowly in cool temperatures.

Adapted from Zalucki, M. P. 1982. Temperature and rate of development in two species of *Danaus*, *D. plexippus* and *D. chrysippus*. *J. Aust. Entomol. Soc.* 21:241-46.

- ▶ Complete Metamorphosis in a month: Egg, Caterpillar, Chrysalis, and Butterfly
- ▶ Milkweed *Asclepias* sp. is the **only** food source for the Monarch caterpillar.
- ▶ In Temescal Valley, we have five about generations before migration to the coast. Generations begin between late February and October.



Monarch Migration

- Monarchs need tall trees (of at least 60 feet) Eucalyptus, Monterey pine and Monterey cypress.
- The forest must be dense enough to provide wind protection.
- The tree canopy must be open so that the roosting monarchs receive filtered sunlight to keep their bodies warm.
- The monarchs need enough moisture, dew and/or fog provide the ideal amount of moisture.
- Note: Unclear if all California monarchs migrate.

Roosting Locations visit:

<https://www.monarchwatch.org/download/pdf/where.pdf>

CALL TO ACTION

#1- Protect and manage California overwintering sites.



Habitat: Why Natives

- ★ Milkweed *Asclepias* sp. is the only food source for the Monarch caterpillar.
- ★ Habitat decline due to farming, pesticide, herbicide, and human population increases.
- ★ Keeps the migration patterns the same, dormant in winter when the adults are along the coast.
- ★ Possible spread of disease??? *Ophryocystis elektroscirrha* (OE) O-free-us-sis-tus Electra-sceer-rah, a protozoan parasite that is spread from infected adults to plants, both nectar and milkweed, then eaten by the caterpillars. Heaviest transmission suspected during winter breeding because tropical milkweed, *Asclepias Curassivica* is the only food source available during winter, while natives are dormant.
- ★ Native Milkweed included in the project, Narrow Leaf Milkweed *Asclepias fascicularis*, Showy Milkweed *Asclepias speciosa*, and Woolly Pod Milkweed *Asclepias Eriocarpa*.

California Milkweed Species



Mexican Whorled Milkweed
Asclepias fascicularis
Dry climates and plains.
Photo by Christopher Christie



Showy Milkweed
Asclepias speciosa
Savannahs and prairies.
Photo by Robert Potts © California Academy of Sciences



Desert Milkweed
Asclepias erosa
Desert regions.
Photo by Christopher Christie



California Milkweed
Asclepias californica
Grassy areas.
Photo by Christopher Christie



Heartleaf Milkweed
Asclepias cordifolia
Rocky slopes.
Photo by Dee E. Wärenycia



Woolly Milkweed
Asclepias vestita
Dry deserts and plains.
Photo © 2010 Neal Kramer



Woolly Pod Milkweed
Asclepias eriocarpa
Clay soils and dry areas.
Photo by Br. Alfred Brousseau,
St. Mary's College



CALL TO ACTION
2# - Restore breeding
and migratory habitat
in California.



*Common names vary from place to place, so we have used the USDA names for consistency.

Narrowleaf Milkweed

Asclepias fascicularis



Woollypod Milkweed

Asclepias eriocarpa



California Milkweed

Asclepias californica



Habitat: Nectar Sources

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2# - Restore breeding and migratory habitat in California



Monarch Watch Way Station Nectar Plant List

Nectar Plants - Annuals or Biennials

- | | |
|---|---|
| <input type="checkbox"/> Blanket Flower (<i>Gaillardia</i> spp.) | <input checked="" type="checkbox"/> Pentas (<i>Pentas</i> spp.) |
| <input type="checkbox"/> Cleome (<i>Cleome</i> spp.) | <input type="checkbox"/> Porterweed (<i>Stachytarpheta</i> spp.) |
| <input checked="" type="checkbox"/> Cosmos (<i>Cosmos</i> spp.) | <input checked="" type="checkbox"/> Sweet William (<i>Dianthus</i> spp.) |
| <input type="checkbox"/> Floss Flower (<i>Ageratum</i> spp.) | <input type="checkbox"/> Thistle (<i>Centaurea</i> and <i>Cirsium</i> sp.) |
| <input type="checkbox"/> French Marigold (<i>Tagetes patula</i>) | <input checked="" type="checkbox"/> Verbena/Vervain (<i>Verbena</i> spp.) |
| <input checked="" type="checkbox"/> Lantana (<i>Lantana</i> spp.) | <input checked="" type="checkbox"/> Zinnia (<i>Zinnia</i> spp.) |
| <input type="checkbox"/> Mexican Sunflower (<i>Tithonia rotundifolia</i>) | <input type="checkbox"/> <u>X/S</u> Other Annuals or Biennials |

Nectar Plants - Perennials

- | | |
|--|--|
| <input type="checkbox"/> Bee Balm (<i>Monarda</i> spp.) | <input type="checkbox"/> Joe-Pye Weed (<i>Eupatorium purpureum</i>) |
| <input checked="" type="checkbox"/> <u>X/S</u> Black-Eyed Susan (<i>Rudbeckia hirta</i>) | <input type="checkbox"/> Blazingstar/Gayfeather (<i>Liatris</i> spp.) |
| <input type="checkbox"/> Blazingstar/Gayfeather (<i>Liatris</i> spp.) | <input type="checkbox"/> Mallow (<i>Malva</i> spp.) |
| <input type="checkbox"/> Boneset (<i>Eupatorium perfoliatum</i>) | <input type="checkbox"/> Phlox (<i>Phlox</i> spp.) |
| <input checked="" type="checkbox"/> Butterfly Bush (<i>Buddleia</i> spp.) | <input checked="" type="checkbox"/> <u>X/S</u> Purple Coneflower (<i>Echinacea purpurea</i>) |
| <input type="checkbox"/> Caryopteris (<i>Caryopteris</i> spp.) | <input checked="" type="checkbox"/> <u>X</u> Sedum (<i>Sedum spectabile</i>) |
| <input checked="" type="checkbox"/> Catmint, Catnip (<i>Nepeta</i> spp.) | <input type="checkbox"/> Senna, Cassia (<i>Senna</i> spp.) |
| <input checked="" type="checkbox"/> Coreopsis (<i>Coreopsis</i> spp.) | <input checked="" type="checkbox"/> <u>S</u> Violet (<i>Viola</i> spp.) |
| <input type="checkbox"/> Goldenrod (<i>Solidago</i> spp.) | <input type="checkbox"/> Vitex (<i>Vitex</i> spp.) |
| <input checked="" type="checkbox"/> <u>S</u> Hollyhock (<i>Alcea</i> spp.) | <input type="checkbox"/> <u>X/S</u> Other Perennials: <i>Composite and</i> |
| <input type="checkbox"/> Ironweed (<i>Vernonia</i> spp.) | <i>cluster flowers best for Monarchs who like to sit and sip.</i> |

X= Plants in stock S= Seeds in stock

- ★ We also need nectar sources to feed the adults. The nectar list is long, but look for flowers that Monarchs can rest on while feeding.
- ★ Composite heads: like sunflower, daisy or aster types OR clusters of flowers: like lantana and pentas.
- ★ Nectar sources do not have to be native but choose drought tolerant for our area.
- ★ Monarch Watch Way Station registry could get our project national attention.



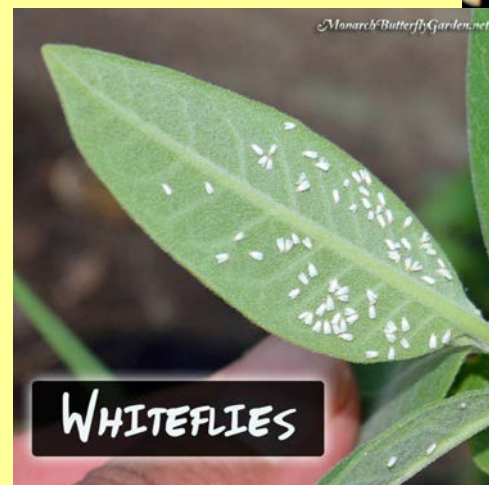
Milkweed Pests and Remedies

DO NOT USE PESTICIDES it will kill your caterpillars.

- ✗ Common Milkweed pests include aphids, Milkweed bugs, white flies, scale insects, spider mites, thrips and leaf miners.
- ✗ Remedies: watch out for eggs and caterpillars.
 - ➔ Squish what you can
 - ➔ Rinse with plain water
 - ➔ If infestation is greater, try 10% dawn solution, and rinse with water.
 - ➔ **Cutting back the plant**, if the control is still not managed.

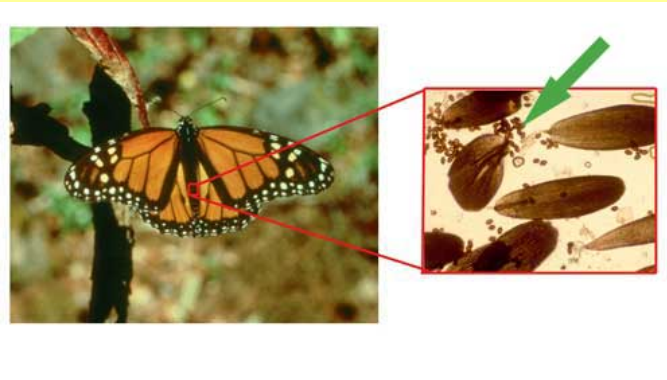
CALL TO ACTION

3# - Protect monarchs and their habitat from pesticides.



Caterpillar Pests:

DO NOT USE PESTICIDES it will kill your caterpillars.



CALL TO ACTION
3# - Protect monarchs and their habitat from pesticides.

OE *Ophryocystis elektroscirrha*

- Prevent winter breeding by planting natives.
- Keep milkweed healthy.
- Wash and prep all of your habitat milkweed.
- **TRANSITION** to native milkweed and cut back any tropical milkweed, during the winter **EVERY MONTH**.

Tachinid Fly:

- Smaller skinnier caterpillars usually die in pupa stage, long white strands hanging from the pupa and you can find the maggot below.
- Raising in a habitat is the only way to prevent.



Tips on preparation:

- ★ Natives will die back and regrow next spring. Keep our native milkweed healthy.
- ★ Cut back any Tropical milkweed in the fall during migration and winter.
- ★ Keep to six inches with no flowers between October to February.
- ★ Raising monarchs, you will want to know if you are releasing any with OE. Microscope will work.
- ★ Keep it SIMPLE, make a habitat to increase the monarchs.
- ★ JUST KEEP FLYING!





Sources



Thanks to our partners:

7 Oaks Nursery- 21501 Temescal Canyon Road, Temescal Valley, CA 92883, (951) 277-2927

Sycamore Creek Interpretive Center: a Riverside Corona Resource Conservation District (RCRCD)
11875 Indian Truck Trail, Temescal Valley, CA 92883 951-515-2097

Sources:

- Monarch Joint Venture <http://www.monarchjointventure.org/>
- Xerces Society <http://www.xerces.org/>
- Monarch Watch <http://www.monarchwatch.org/>
 - Monarch Way Station Registry: Temescal Valley Residents: Please use Temescal Valley as your designation. <https://www.monarchwatch.org/waystations/>

University of Minnesota Larva monitoring project. <https://monarchlab.org/mlmp>

http://monarchjointventure.org/images/uploads/documents/Oe_fact_sheet.pdf

<http://monarchjointventure.org/images/uploads/documents/MilkweedFactSheetFINAL.pdf>

More information about the project??? <http://www.wearetv.org/2016/06/16/milkweed-to-monarch-project-learn-all-about-it-here/> or check out the whole page <http://wearetv.org/>

Contact Tracy Davis, Identity Chairwoman/ Milkweed to Monarch project lead <mailto:tracycyto@yahoo.com> 951-277-3253