

Walappu' 'Uuchuthuu

Butterfly Home Place

Starting a Large-Scale Monarch Habitat on a Sierra Cattle Ranch

Heather Bernikoff, MCRCO Private Land Partner



Heather is an active community volunteer in Mariposa County. Her mother's Yoeme/Yaqui family has been in North America for over 10,000 years instilling a deep appreciation for the land and all our relations. When not digging in the dirt and dragging branches, she works as a capacity building partner with schools and nonprofits advancing educational and healthcare equity for children in the Central Valley.

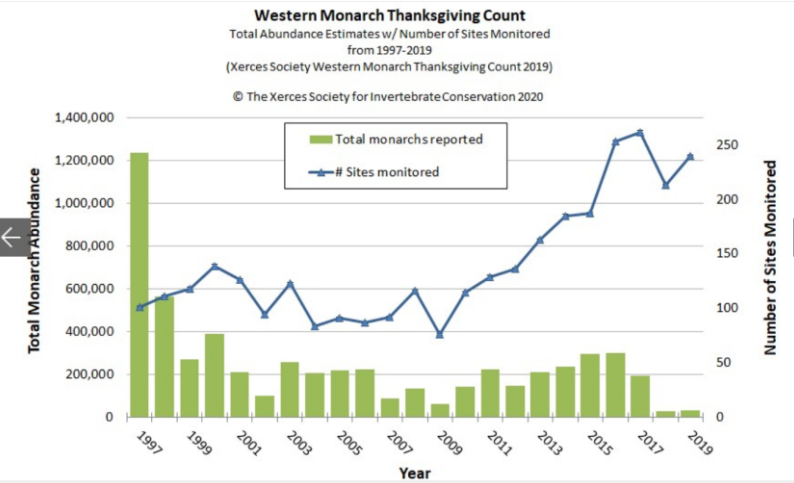
Lots of Helpers

Thank You

- Mariposa Native Plants – Ron Allen (UC Master Gardener) and Bev Andalora
- Mariposa County Resource Conservation District – Melinda Barrett
- Xerces Society – Deedee Soto and others
- NRCS – Jesse Bahm
- Point Blue – Elaina Cromer
- Southern Sierra Mi-Wuk Nation – The Council Board, elders and all members
 - Board: Bill Leonard, Gary Harlow, Irene Vasquez, Sandy Chapman, Richard Hogan
- Sierra Foothill Charter School – Mindy Bolar
- Tom Fane – TnT Fane Cattle Co.
- CA RCD – for my first grant and organizing this conference

My project began with reading this article in January of 2019

From over 1.2 million to under 22,000



With 86% Drop, California's Monarch Butterfly Population Hits Record Low

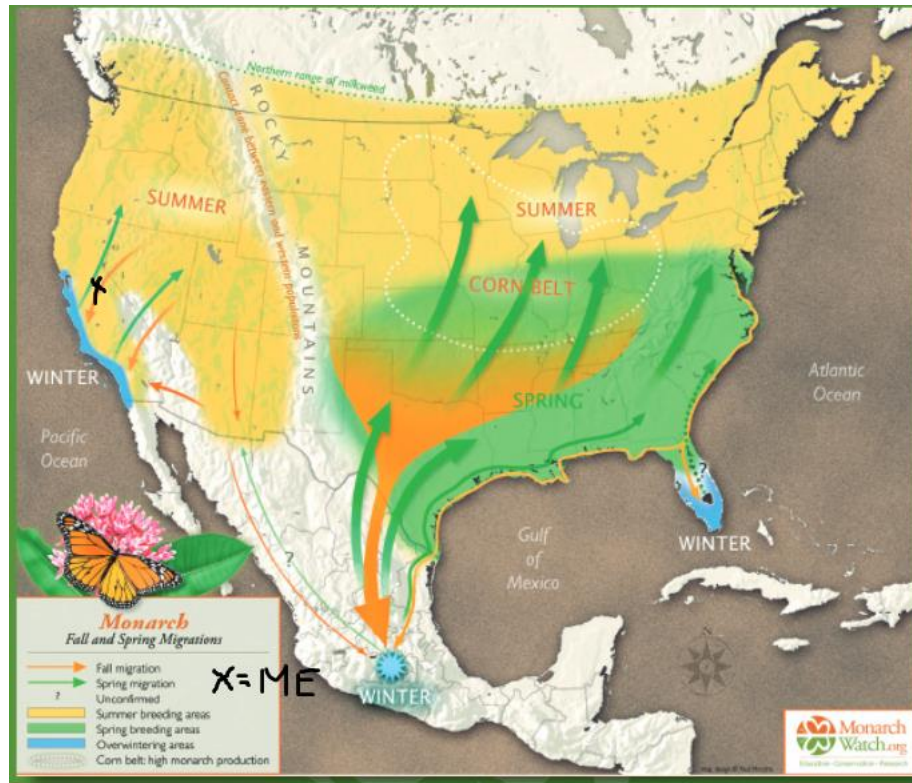


The population of western monarch butterflies in California dropped to a record low last year, according to a nonprofit conservation group. Jason Henry for The New York Times

By Laura M. Holson

Jan. 9, 2019

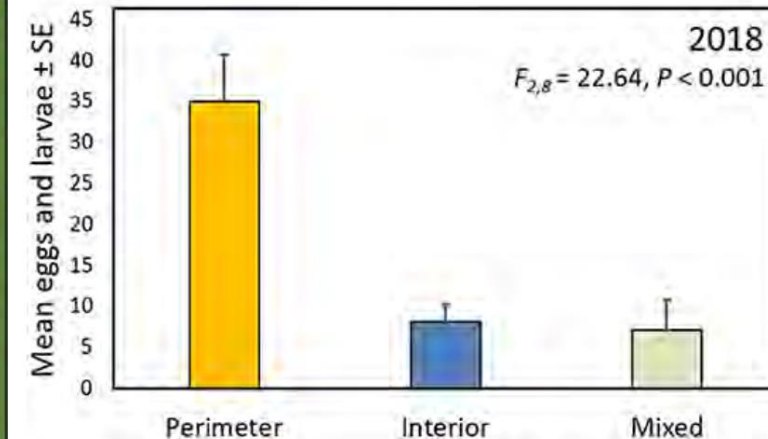
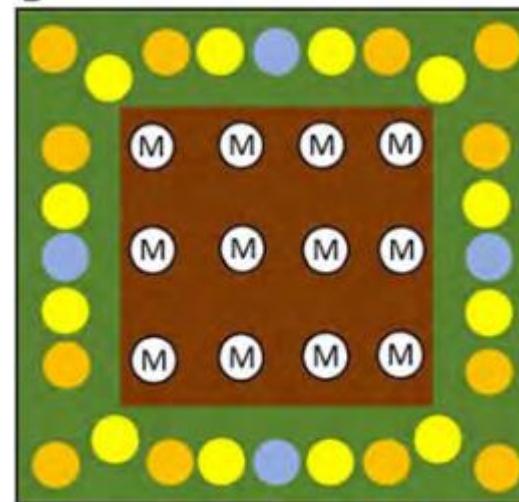
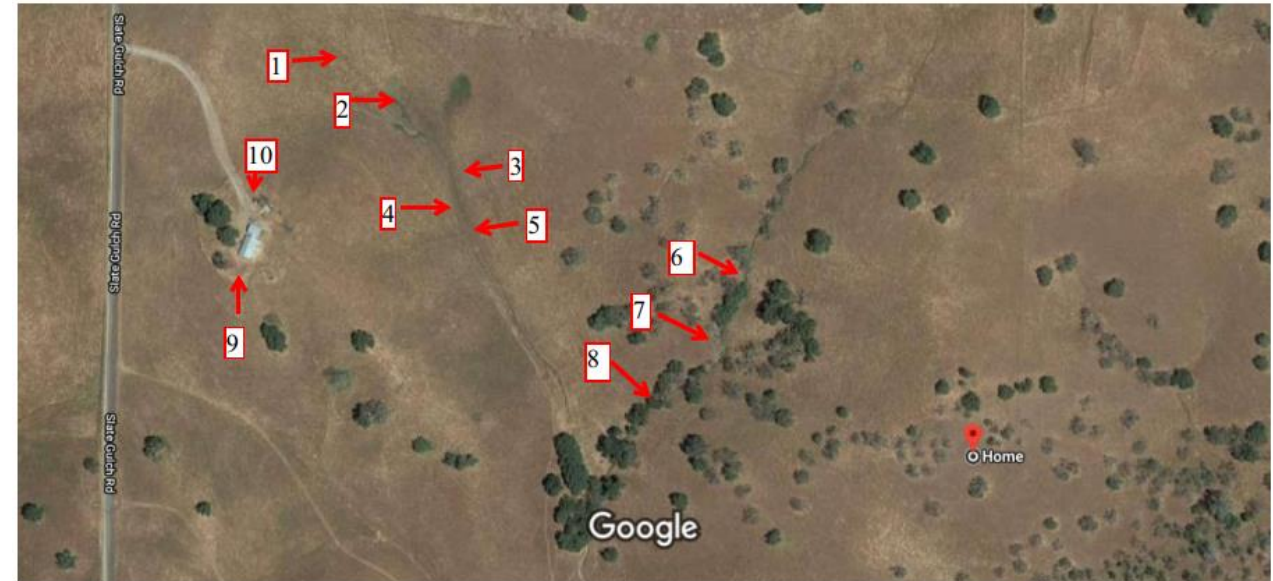
In the Migratory Flyway and Dreams of Milkweed Fields with Nectar Plants



Project Milestones and Timeline

PROJECT TIMELINE

- ❖ April and August 2019: South and North Test Plots. Planted 21 plants. Despite gopher baskets in place, gophers decimated all the plants.
- ❖ December 2019: Mariposa RCD put out a call for projects. Began planning for larger scale with RCD and my cattleman
- ❖ February-April 2020: Co-wrote CARCD grant (successful), Healthy Soils grant (unsuccessful) and included in RCD Xerces Society plant kit grant (successful)
- ❖ April 2020: Planting of Site 9
- ❖ May 2020: Planting of Sites 7 and 8
- ❖ June 2020: Planting of the nectar plants
- ❖ July 2020 – Now: Maintenance and Planning
- ❖ November 2020: Planting of Xerces kits



Baker AM and Potter DA (2019) Configuration and Location of Small Urban Gardens Affect Colonization by Monarch Butterflies. *Front. Ecol. Evol.* 7:474. doi: 10.3389/fevo.2019.00474



Grazing

Cattle are an asset. Grazing limits aggressive European grass growth around milkweed and nectar sites.

- Monarchs are expected as early as March. Can be present as late as October
- Cattle gone to the high country from about June to mid-Sept
- Rotational grazing Feb to May (rotate 10 to 14 days on and off)
- Static grazing mid-Sept to Oct
- Length of grazing depends on amount of RDM (dry grass feed), water availability and grass growth
- GOAL: Increase site protection during breeding and feeding months. Graze early milkweed areas for better growth.

	F-1	F-2	M-1	M-2	A-1	A-2	May-1	May-2	Ju-1	Ju-2	July-1	July-2	Au-1	Au-2	S-1	S-2	O-1	O-2	N	D	Ja	
NORTH	█		█		█		█									█	█	█	█	█	█	
SOUTH		█		█		█		?							?							
Monarchs			█													█						
								Cattle Gone (approximate)														
Site Protection	Open sites for grazing		█														█	█	█	Open sites for grazing		

Trial, Error, Surprises & Perseverance

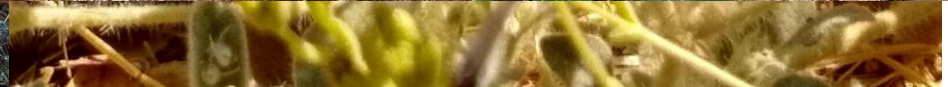
BARRIERS

- ✧ Gophers
- ✧ Fungus on seedling pots
- ✧ Wild pig attack
- ✧ Cattle intrusion
- ✧ Gophers
- ✧ Heat
- ✧ Smoke
- ✧ Locust
- ✧ Some plants failed to grow
- ✧ Did I say gophers?



BEAUTIES

- ✧ More blooms than ever
- ✧ Painted lady butterflies
- ✧ Lilac and blue little butterflies
- ✧ Spotted brownish butterflies
- ✧ White Sulphur butterflies
- ✧ One gossamer winged green butterfly (Sulphur?)
- ✧ One yellow swallowtail and some buckeye butterflies spotted at the creek.
- ✧ Thriving milkweeds
- ✧ Volunteer *a. californica* (heartleaf milkweed). Three communities!
- ✧ Pollinator flies
- ✧ Adaptive management practice used
- ✧ Great community of people who love this work



Quick Facts

- 105 plants planted so far (RCD)
 - 73 survived beyond the first 2 months
- 68 plants planted (RCD Xerces Kits)
- 7500 gallons of rainwater storage (leveraged an RCD rebate for 5K gal)
 - Used 5,480 gallons so far in 2020
- Five methods of water conveyance attempted to find most efficient
- Two wind and sun screens built
- Seven barbed wire enclosures and one massive branch fence built
- One water feature with various water depths built for pollinators
- One pair of boots and 2 buckets worn out
- Six different species of butterflies seen – no monarchs this year





Plants Used

PURCHASED

- ✧ Deergrass
- ✧ Narrow leaf mw
- ✧ Showy mw
- ✧ Wooly pod mw
- ✧ Romnea
- ✧ Carpenteria
- ✧ Primrose
- ✧ Aster
- ✧ Yarrow
- ✧ Coyote mint
- ✧ California fuschia
- ✧ Lupine
- ✧ Buckwheat
- ✧ Marigold
- ✧ Butterfly bush (non-native. I was desperate for more nectar. All hands on deck moment.)



VOLUNTEER/ALREADY HAD/GIFTED

- ✧ Heartleaf mw
- ✧ Poppies
- ✧ Many other wildflowers and blooms (dove weed, tarweed, lupine, sunflower)
- ✧ Willow
- ✧ Salvia
- From Xerces Kits
- ✧ Manzanita
- ✧ Indian hemp
- ✧ Golden currant
- ✧ Goldenrod
- ✧ Mulesfat
- ✧ Indian mw
- ✧ Coyote bush
- ✧ Ceanothus (Ca Lilac)
- ✧ Toyon
- ✧ Button bush



Lessons Learned

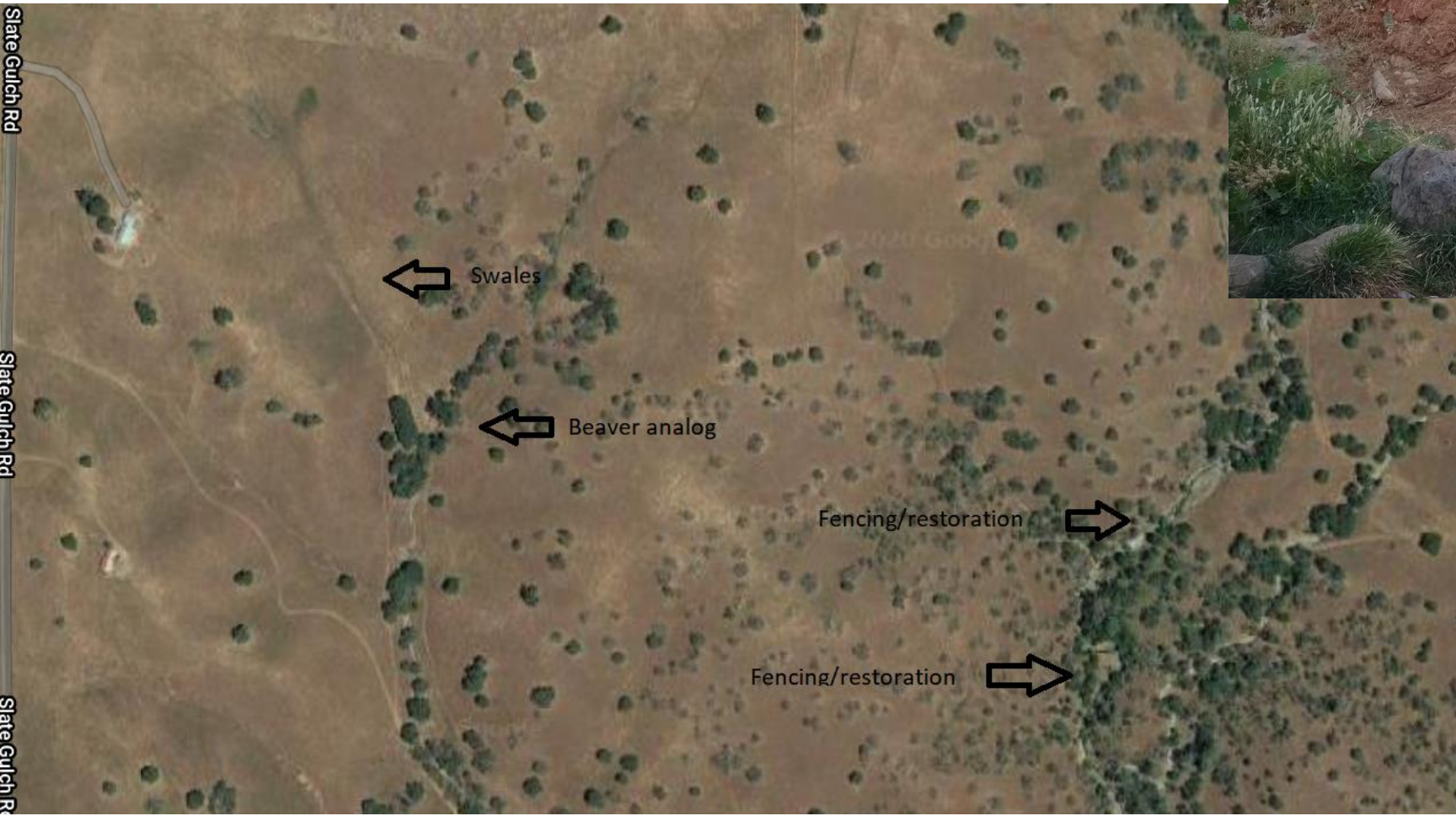
1. Plan as early as possible during the rainy season.
2. Use stainless steel mesh bags to plant in instead of gopher cages.
3. Start in one-gallon sized pots with local soil or sow directly into the ground vs. cow pots.
4. Plant as many plants as possible.
5. Don't be discouraged!.
6. Some natives, although heat tolerant, will need more shade than what is directed.
7. Some natives may need more water than they typically have needed due to climate change.
8. Be patient.
9. Keep observing.
10. Leverage the knowledge and wisdom of native plant experts. Their advice is beyond valuable!

Future Plans

- School
 - K-6 curriculum integration
 - Service Learning
 - Leave with love and wonder (and plants to place at their homes)
- Tribal Collaboration
 - Habitat, textile and medicinal plants restoration
 - Youth educator to work with schools and community members. They will also learn their native plants and traditions.
- Habitat Expansion - community
 - Offer plants and knowledge to other community members
 - Leverage other local restoration projects
 - Eliminate or greatly decrease new county roadside herbicide program
- Habitat Expansion – more on the ranch
 - After RCD grant, Odom creek restoration and convert lower pastures to butterfly plants (apply to NRCS and Healthy Soils)
 - Swale projects in arroyo and spring creek for more soil moisture

Future Plans – con't

More brush piles, branch fencing, rainwater catchment and creek work...





More Information

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