

Conserving Monarchs on Rangelands



Ranchers and Resource Conservation Districts partnering on conservation

The western population of monarch butterflies, which overwinter along the California coast and breed west of the Rocky Mountains, has plummeted to near extinction levels causing widespread concern. This is due in part to the decline of milkweed (*Asclepias* spp.)— the monarch’s host plant— and other flowering plant populations because of competition with non-native species, land conversion, climate change, and targeted removal by mechanical or chemical means. Fortunately, ranchers are well-positioned to play a key role in bringing back the monarch. In California, over 40 million acres are grazed by cattle and can be managed to increase wildflower and milkweed abundance.

Milkweed restoration is compatible with cattle grazing. Although milkweed contains potentially toxic compounds, there are no reports of death in cattle from milkweed consumption— however, it can be harmful to sheep, goats, or other livestock when consumed in large quantities. Avoid planting milkweed near corrals or areas where large numbers of cattle are kept in tight quarters with little alternate forage.

To benefit monarchs on rangelands:

- Restore habitats that support butterfly-attractive plants (e.g., Narrow leaf milkweed (*A. fascicularis*) prefers seasonally wet locations like seeps, riparian areas, and inlets/outlets to livestock ponds)
- Add early- and late-blooming species to provide nectar resources during the monarch’s annual migration
- Plant early-emerging milkweeds like California, Heart-leaved, and Woolly milkweed (*A. californica*, *A. cordifolia*, and *A. vestita*) to provide breeding sites for the first generation of monarch offspring in the spring
- Use seasonal grazing— stocking cattle at specific rates and times— to promote wildflower abundance (e.g., Use cattle to knock back weedy species in the winter, then rotate them to alternate fields during bloom periods to avoid trampling or browsing restoration areas. After restored species have set seed, assuming there is sufficient forage, the pasture can be grazed again later in the season.)
- Limit use of pesticides and herbicides near flowering plants and milkweed when controlling noxious weeds



Rancher helping collect seed from milkweed growing on his property. Photo: Diana Benner.



Monarch on showy milkweed. Photo: Emily Reinhart.



Cattle grazing in a pasture with abundant wildflowers. Photo: Ling He.

Get help creating monarch habitat on your ranch

Contact your local Resource Conservation District (go to “Find Your RCD” on www.carcd.org) or Natural Resources Conservation Service (NRCS) office. They can help with planning, determine eligibility for cost share programs through the California Department of Food and Agriculture’s Healthy Soils Incentives Program (HSP) or USDA NRCS Environmental Quality Incentives Program (EQIP), assist with implementation, and provide management guidance over time.

CASE STUDIES

Walapp' 'Uuchuthuu and Mariposa County RCD

Walapp' 'Uuchuthuu means butterfly home place in Southern Sierra Miwuk. It's also the name of a monarch habitat restoration project on a 160-acre cattle ranch in the Sierra Foothills of Mariposa County owned by Heather Bernikoff and David Raboy. After hearing of the decline of the monarch butterfly from a newspaper article in 2019, Heather consulted with the elders of the Southern Sierra Miwuk Nation, in whose historic territory her ranch is located. They remembered that the area had long supported butterflies of many types, including monarchs. Heather partnered with the Mariposa County RCD, NRCS, and Xerces Society for Invertebrate Conservation to install 10 "stepping stone habitats" containing milkweed and nectar plants across her property. To help the plants establish, she protects them from gophers using root baskets and from browsers with branches and/or cages. She's also installing beaver dam analogs to increase water availability to support the plantings. To follow this project's progress, check out Heather's blog: <http://heatherbernikoff.home.blog>



3 Calhoun Sisters' Ranch and Alameda County RCD

3 Calhoun Sisters' Ranch is located in the Diablo Range near Livermore, CA. The sisters had been working with the NRCS for years when they discovered milkweed scattered along some of the seasonal creeks on their property. They then partnered with the Alameda County RCD to create monarch habitat plantings at three locations on their working cattle ranch. Cattle grazing helped to reduce competition from annual grasses in the planting areas. Irrigation for restored sites is often limited in rangeland, however, the sisters were able to provide consistent irrigation to a planting located next to their vegetable garden. Due to the prolonged drought, the plants at this location have done the best. In fact, they even attracted a monarch within a year of being planted. The sisters plan to add an early-season milkweed species, California milkweed to provide breeding habitat for monarchs in the spring. They have noticed that cattle occasionally browse milkweed plants, but never consume it in sufficient quantities to cause harm. For more on this project: <https://www.3calhounsisters.com/pollinator-program>



Branches around enclosure to protect seedlings. Photo: Heather Bernikoff.



Root baskets to thwart gophers. Photo: Heather Bernikoff.



Cow grazing near narrow-leaf milkweed. Photo: Nancy Mueller.

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