

Craig Dremann's Method to Restore Wildflower Meadows...

with 95% or better native cover!

*...in less than a decade, by unearthing
100-250 year old dormant native seeds
in the soil underneath the weeds—
without burning, grazing or herbicides,
and no sowing of any native seeds!*

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Photos by Craig Dremann, unless otherwise noted.

Past attempts at California wildflower meadow restoration,
focused on eradication of individual weeds, using many
different methods...like the hand pulling of star thistle...



Image: <https://baynature.org/wp-content/uploads/2015/03/GGRA-Intern-pulling-Yellow-Star-Thistle.jpg>

... Goat grazing...



Image: https://ohv.parks.ca.gov/?page_id=27458

..Cattle grazing..



Image: https://cnps.org/wp-content/uploads/2018/03/FremontiaV39.2_39.3.pdf

... “Prescribed burns” ...



Image: www.sierraclub.org/sierra/prescribed-burn-associations-are-one-answer-california-s-megafires

...and native seed sowings are sometimes attempted..like \$450,000 spent by Caltrans for UC Davis to plant 2-acres, and after 5 sowings was abandoned with thick star thistle...



Image: www.ecoseeds.com/road.test.html - *Junction I-505 and Avenue 14*



Plus, these old grassland management methods are usually only focused on the eradication of individual weeds, and frequently because of their fire risks—Each foot tall weed grasses are allowed to grow, equals one ton of fire fuel per acre.

Photo of the summer 2020 Bay Area wildfire smoke during mid-day, with sun obscured.

Abundance
Ecology
Report

Price: \$5.00

Releasing the Native Seedbank

An Innovative Approach to Restoring a
Coastal California Ecosystem

by Craig C. Dremann with Michael Shaw



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In 1992, a new method was invented to convert the grassland weeds back to solid natives -- by Craig Dremann and Michael Shaw, on 70 acres at 300 Byers Lane in La Selva Beach, about 15 miles south of Santa Cruz.

—Done without burning, pulling, grazing, and no sowing of any native seeds.

Shaw on the cover of Ecological Restoration journal June, 2002
Article can be downloaded at
www.ecoseeds.com/shaw.pdf

This new method depends on a remarkable discovery, that can be found in most of California's grasslands—Underneath the weeds are dozens of species of dormant 100-250 year old native seeds!



Wildflower seedlings coming up in Yellow star thistle thatch- Russian Ridge Preserve.



What the weed grasses covering California usually look like, *when you start to manage them.* And you never expect that there could be hidden treasures in the soil, that are 100-250 years old to help you?

Photo of the start of Craig's current 14-acre project in Woodside.

The PLAN – 1.) Mow no lower than 8 inches high and 2.) Never allow weeds to set any more viable seeds-- Cut seeds while still green. You never need to remove the mowed weed-straw. “Before-picture” of Craig’s current project in Woodside on “Kite Hill” 14 acres of serpentine across from **144 Alta Mesa.**



Craig's method stops grassland weeds from reproducing, and many of the seeds of grasses like ripgut-grass and wild oats, only have a 2-3 year viability in the soil. *Mow monthly and stop their reproduction!*



When you get weeds off the 100-250 year old dormant native seeds in the soil--Those seeds are able to sprout, **when they are released from the suppressive effects of pre-emergent alleochemicals that the weeds produce.**



Keep mowing every month!– and making sure weeds never produce a fresh crop of seeds--Then very soon, your wildflowers can return and cover the area--after decades or a century of absence!



Mow at least once a month, and more frequently in spring if needed--to keep the weeds from making any new seeds.



Once weeds are managed, dormant native seeds can sprout...like tidy tips...***at the rate of 5-10 seedlings per square inch!***



Tidy tips as a solid meadow, **produce the least amount of fire-fuel per acre possible--about one gram per square foot,** vs. the 3-4 tons per acre produced by the weeds.



Each acre contains about 200 pounds of dormant native seeds, that can produce about 50 million plants per acre.



When you are close to being done with your Weeds-to-Native conversion project, you should be able to unearth the beautiful Butterfly/Mariposa/Calochortus lilies...



By mowing monthly and stop the weeds from producing seeds, you can convert a 99% weed-covered area, back to 95% or better native cover in only a few years. ***Future weeding or restorations of California grasslands, no longer need to be never-ending, decades-long projects!***





Using Craig's mowing method, **California's rare and Endangered grassland plants** could very easily be recovered, and *go from 100s to thousands of plants in a population.*

***Lessingia* blooming in Woodside, went from 100 plants to 300,000, to one million in only six years.**

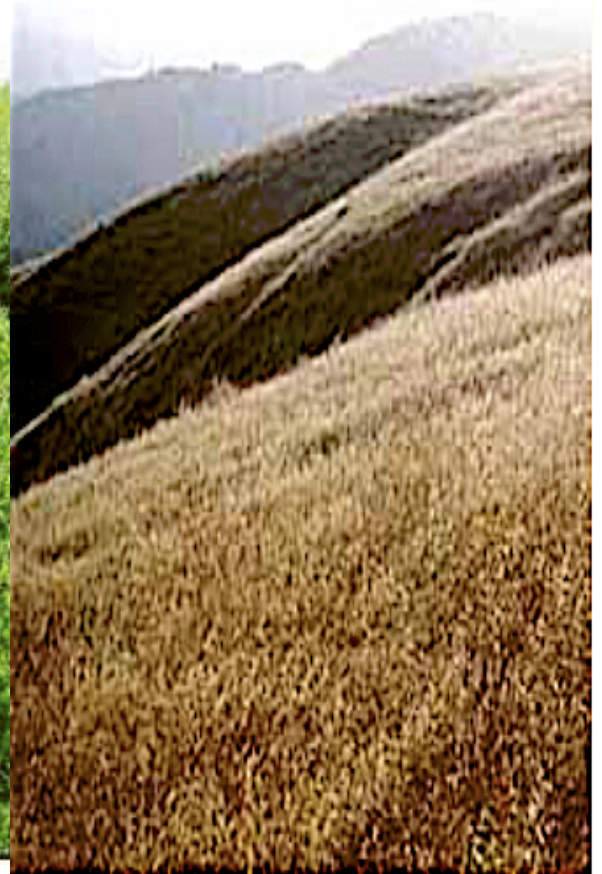
Always add fertilizers where needed—especially check lands that were originally part of a Spanish Rancho grant--where cattle severely removed soil nutrients in the past, and changed soil pH.



When you have a solid native grassland back in place -- in late summer and fall mowing of the native straw, *will help produce diversity in your project area.* Mowing *Stipa* straw in Woodside in fall.



During an extreme drought, weed grasses and thistle seedling cannot survive, so the wildflowers can “unearth” themselves, like during the spring 2021 drought. Russian Ridge--prior to the 2021 drought was a mess of yellow star thistle, Italian thistle and wild oats.



When wildflowers are unearthed during an extreme drought, to **keep them permanently in place, start your monthly mowing in October,** and never allow the weed grasses or thistles ripen any more seeds.



Russian Ridge transect area, same as last slides, wildflowers not in this abundance in 20 years.

And keep an eye out for the *native Pseudomonas host plants*, that produce the rain clouds in California—Made visible right after a rain shower, the bacteria gets airborne and a new cloud is born. *GOOGLE: “Discover magazine, clouds, bacteria”* for the 2012 article. *Nobody knows what these plants are yet, that produce our rain!*



Photo of the mountains above Woodside, California--a new rain cloud being born.



Since 1992, Craig has restored 800 acres of grasslands in California -- including areas infested with star thistle and cheatgrass—and ***“restored” means back to 95% or better native cover***--and can bring a crew to work on your grassland project, or train your own crew to unearth the dormant native seeds in the soil.

Picture of Bitterroot (Lewisia) at Craig’s Woodside project.

Also-- visit Craig's 85 pieces of Environmental Artwork at www.ecoseeds.com/art.html



Title: "Wish You were Here--Owls Clover on the California hillsides

And visit Craig's current project—the 14 acres of serpentine wildflowers at Kite Hill in Woodside, and *decide if that is what YOU want to see in your own grasslands, instead of the flammable weeds?*
Call Craig for a tour at 650-325-7333



---Final frame---