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GRASSLANDS

Published quarterly by the California Native Grasslands Association

North Bay Grasslands Symposium:

Exploring Upland, Coastal Prairie, Vernal Pool, and Serpentine Communities

Sonoma County May 3–6, 2012, see page 3

CALIFORNIA NATIVE GRASSLANDS ASSOCIATION

Mission Statement:
The Mission of the California Native Grasslands Association is to promote, preserve, and restore the diversity of California's native grasses and grassland ecosystems through education, advocacy, research, and stewardship.

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For program information related to tours or training workshops, contact CNGA Administrative Director: ADMIN@CNGA.ORG.

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GRASSLANDS Submission Guidelines

Send submissions to:
Editorial Committee Chair: GRASSLANDS@CNGA.ORG

Submissions include peer-reviewed research reports and non-refereed articles, such as progress reports, observations, field notes, interviews, book reviews, and opinions.

All submissions are reviewed by the *Grasslands* Editorial Committee for suitability for publication.

Submissions are accepted as e-mail attachments. Contact the Editorial Committee Chair for formatting specifications.

Submission deadlines for articles:
Winter 2012: Nov. 15, 2011; **Spring 2012:** Feb. 15, 2012; **Summer 2012:** May 15, 2012; **Fall 2012:** Aug. 15, 2012

FROM THE PRESIDENT'S KEYBOARD

WADE BELEW, *President*

I am pleased to announce the dates and venues for our *North Bay Grasslands Symposium* that will be held in Sonoma County on May 3–6, 2012. The theme is "Exploring Upland, Coastal Prairie, Vernal Pool, and Serpentine Communities." Sonoma County is my "home turf," and I am looking forward to putting on a world-class event. Sonoma County has a wide diversity of grasslands that will be featured at the Symposium. CNGA has booked two venues that will provide a window to these fascinating communities: Pepperwood Preserve for Thursday, May 3, and Bodega Marine Reserve and Laboratory for Friday, May 4.

CNGA has partnered with Pepperwood for workshops and meetings in the past, and we are happy to continue this relationship by having the Symposium at the Preserve. It is the perfect venue—its 3,000 acres include open grasslands, understory, vernal pool, and serpentine plant communities, with an uncommon abundance of native grasses. Pepperwood also has a modern education facility with high-tech classrooms, herbarium, and library. The view from the courtyard, where we will have lunch and the evening banquet, is stunning.

The Bodega Marine Reserve is perched on the edge of the Pacific Ocean near Bodega Head. This day will feature coastal prairie communities and walks around the Reserve to learn about important and interesting research taking place there. As of press time we have not booked our weekend workshops and field trips, but I assure you they will be just as appealing as these two days.

If you have attended previous CNGA conferences, you may be wondering why we are calling this event a "symposium" instead of a conference. It came from the realization that a lot of our members who would normally attend big, state-wide conferences don't have the budget to do so these days, and we would be better off planning smaller, more regional events. We did that in 2010 with our *Grasslands of the North Coast* Symposium in Humboldt County.

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Not only was this smaller event of equal quality to a larger conference, it was more intimate and personal. The smaller group made it easier to get to know people, and it was far quicker through the lunch line, too! The day-long technical sessions at a big conference can be a bit overwhelming. The North Coast Symposium was engaging and inspiring. We would rather mix it up with field walks and other experiences that get you out of a chair and in the real world.

Besides being a great learning experience, the *North Bay Grasslands Symposium* will also provide time for social interaction. Learning is best reinforced through discussing with others what you have learned. Some of the most interesting things I've learned at conferences have come from talking to other attendees over lunch. And speaking of food, we'll enjoy great local food and drink. Sonoma County is a "foodie" heaven, and we'll do our best to feature it in all it's delicious glory!

We hope to build on our experience with the *North Bay Grasslands Symposium.* The only disadvantage to a smaller event is we can't have as many people attend. This Symposium will sell out, so when registration opens, I encourage you to book early to assure your place at what will be the "must-attend" event of the year. You'll receive notice of the registration opening with an e-mail grass-blast.

We could use help planning the Symposium, so if you can assist, please contact me at WADEKB@SONIC.NET. Individuals, companies, and agencies wishing to sponsor this important event are invited to contact CNGA at ADMIN@CNGA.ORG. Levels of sponsorship and accompanying benefits will be announced soon. And remember to mark May 3–6 on your calendar; the *North Bay Grasslands Symposium* will be an event not to be missed!

THE CALIFORNIA NATIVE GRASSLANDS ASSOCIATION presents

North Bay Grasslands Symposium:

Exploring Upland, Coastal Prairie, Vernal Pool, and Serpentine Communities

Sonoma County May 3–6, 2012

The rich grassland diversity of Sonoma County will be on display and under examination during this four-day event that will feature

- technical sessions,
- panel discussions,
- guided field walks, and
- workshops.

Enter the photo contest, and enjoy great local food and beverages for catered lunches, social hours, and a banquet.

Locations have been selected for beauty as well as functionality for an engaging learning experience.

CNGA invites you to attend the *North Bay Grasslands Symposium* in Sonoma County. Visit our website at WWW.CNGA.ORG for updates on:

- schedule,
- registration,
- sponsorship information, and
- photo contest submissions.

Thursday, May 3. Pepperwood Preserve is a 3,000+ acre property northeast of Santa Rosa. This virtual museum of native grasses also has a fabulous, new education center, which offers many learning opportunities. Besides a full day of programs, a courtyard banquet will feature delicious food and spectacular views of the Mayacamas and surrounding areas.

Friday, May 4, at the Bodega Marine Lab will be dedicated to coastal prairie. Presentations and field walks will immerse you in North America's most diverse grassland community at a stunning location overlooking the Pacific Ocean.

Saturday–Sunday, May 5–6, will feature **workshops and guided field walks** to further your understanding of these complex and intriguing communities.

Saving California's golden grasslands

Jon Christensen, *Executive Director, Bill Lane Center for the American West*

Reprinted with permission from the San Francisco Chronicle

The natural beauty of Northern California's grasslands is a paradoxical thing. There is little that is natural about it.

For many years, this caused no end of consternation. Early explorers, missionaries, and ranchers were unsettled by constant fires set by Indians to keep grasslands open, producing seeds and attracting wildlife. In more recent times, environmentalists have battled to get rid of cattle, which brought new grass species to California, pushing aside native plants in almost all of the state's grasslands.

Those emerald green hills of spring and summer golden waves of windswept beauty? Turns out they're an impure product of human history. But in the Bay Area, ranchers and environmentalists are coming "full circle," in the words of rancher Scott Stone, to fully embrace this paradox and work together to ensure that these "working landscapes" continue to work.

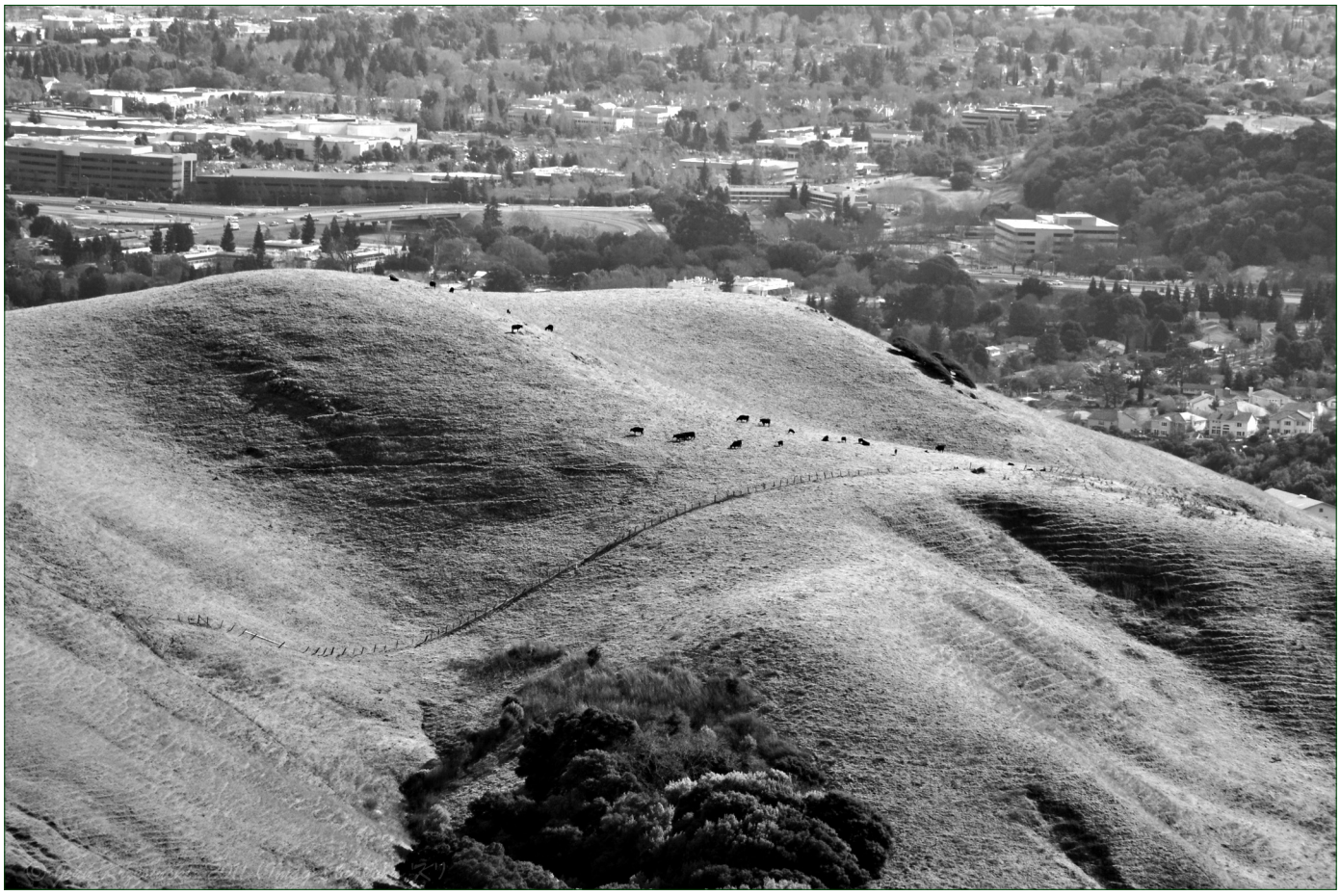
Around the globe, grasslands are in dire need of such care. Nearly half of all temperate grasslands, like those in Northern California, have been plowed up or paved over. They are the most threatened and least protected habitat in the world. Less than 5 percent of temperate grasslands are protected globally.

The Bay Area is doing stunningly better. Of the 1.7 million acres of open ranchland remaining here, more than 1 million acres are protected under agreements with ranchers who keep working the land. They're happy to do it. "It's great to go to work every day," says Stone, a fourth-generation rancher whose herd of 800 cows grazes the oak-studded hills atop Blue Ridge east of Lake Berryessa.

These days, environmentalists are happy to see ranchers and cows out there, too. "Grazing is an important tool for conservation," says Bettina Ring, executive director of the Bay Area Open Space Council.

Around the Bay Area, grazing is being used to create and maintain habitat for threatened species such as the San Joaquin kit fox, the burrowing owl, the red-legged frog, the tiger salamander, the bay checker-

GOLDEN GRASSLANDS, continued on page 5



Dublin Hills Regional Park *Photo: © John Krzesinski, 2011*

GOLDEN GRASSLANDS, continued from page 4

spot butterfly and the Ohlone tiger beetle. Grasslands also provide habitat for native bees and other pollinators. Scientists at UC Berkeley have calculated that native bees living in nooks and crannies in the soil and trees and in the hollow stems of grazed grasses and reeds pollinate 35 to 39 percent of California's crops, a service worth $937 million to $2.4 billion a year.

Claire Kremen, a professor of environmental sciences, announced those findings at a recent "uncommon dialogue" among ranchers, environmentalists, scientists, and historians at Stanford University.

Darrell Sweet, a fifth-generation rancher in the sere, treeless grasslands of Altamont Pass, says he has been "surprised and delighted" by the growing recognition of the importance of keeping working ranches in the mix of the Bay Area's metropolitan matrix. His ranch looks down on Livermore. Wind turbines and housing developments march across the nearby hills.

"If the habitats are a result of what ranchers have been doing, how are you going to protect the habitat without protecting what the ranchers have been doing?" Sweet asked the group at Stanford.

He has some answers. The Sweet ranch is protected under the Williamson Act, a California law that enables the ranch to be taxed as rangeland rather than the far higher market value it would have if it were subdivided into ranchettes. That helps the Sweets make the ranch pay economically and keep it in the family. He also has used Caltrans funding for wetland mitigation and federal funding for wildlife habitat to create and protect habitat for three endangered species—tiger salamanders, red-legged frogs, and kit foxes.

Ranchers in other parts of the Alameda Creek watershed are working with the San Francisco Public Utilities Commission to protect an important source of drinking water for the city's Hetch Hetchy system. Well-maintained rangelands with good grazing management shed fewer contaminants and sediment into waterways than the roads and homes of subdivisions. Paying ranchers to stay on the land and improve their rangelands turns out to be a better investment than paying for additional water treatment facilities. Farther south, in the Santa Clara Valley, environmentalists want to make sure ranchers keep their cattle grazing on habitat for the threatened bay checkerspot butterfly. The cows keep down the grass, making room for native wildflowers, and the butterfly thrives. If the cows disappear, the butterflies disappear, too.

Up on Scott Stone's ranch, they're raising Swainson's hawks on land protected by a conservation easement as well as growing grass-fed beef sold in Whole Foods Markets throughout Northern California. The beef is marketed by Panorama Grass-Fed Meats, a natural and organic beef distributor founded by Darrell Wood, who grazes his cattle in the Vina Plains, where Coho and Chinook salmon run up Deer Creek, and endangered fairy shrimp thrive in vernal pools protected by a conservation easement purchased by the California Rangeland Trust. Conservation easements paid Wood and Stone for the development rights on their ranches, which now can never be subdivided. These ranchers love talking about their "ground" and the critters that share it. There is a soft side to their hard-working cowboy drawls. Yet they are hard-nosed businessmen. "Cattle ranching is a business," Wood emphasizes. And it ain't easy making ends meet.

Increasingly, it is a business that concerns everyone who cares about California's grasslands and what they produce for all of us. But Stone and Wood chuckle ruefully when asked about a successful "business model" for keeping ranching in the Bay Area. "You'll never find two outfits that are the same," says Stone. "There's no one-size-fits-all model," says Wood.

Most successful ranchers have multiple family members with jobs off the ranch "to support our ranching habit," says Stone. They piece together other payments for the "ecosystem services" that they provide for all of us—clean water, habitat for species, and maybe someday, capturing and storing carbon dioxide in the soil—through conservation easements, tax breaks, mitigation monies, government grants, and cooperative projects with conservation organizations. And they sell a premium product to customers who care about what they eat and where it's grown—in some of Northern California's most iconic scenery, those oak-studded golden grasslands.

Jon Christensen is executive director of the Bill Lane Center for the American West, which sponsored the recent "uncommon dialogue" on ranching and rangelands with the Woods Institute for the Environment at Stanford University. This article first appeared in the San Francisco Chronicle's "Insight" section on August 21, 2011.

Call for Submissions
California Grasslands **photo exhibit**

A picture is worth a thousand words, and your photo can help tell the story of California grasslands. CNGA uses the Web, PowerPoint presentations, brochures, and printed educational materials to tell others about our important mission and the value of grasslands. You can help by participating in this contest and sending us your high-quality photos of grassland subjects. Photographers will be credited for their work when published.

Twenty-five finalists will be selected for exhibition at the 2012 CNGA Sonoma Grasslands Symposium. Symposium attendees will vote for winners, who will receive CNGA merchandise.

Subjects can include grasses, grasslands, associated species (including people!), and restoration projects.

Deadline for entries is December 31, 2011. Check www.CNGA.ORG for submission details.

Partners restore riparian and grassland habitat along Putah Creek

Emily Peffer, *UC Davis Graduate Group in Ecology*

This winter, the Lower Putah Creek Coordinating Committee (LPCCC)[1] and Putah Creek Council (PCC)[2] began partnering with the University of California Davis chapter of the Society for Conservation Biology (SCB)[3] to restore land along lower Putah Creek in Davis. The property, owned by David Nishikawa, contains some of the last remaining floodplain habitat along Putah Creek but has been degraded by off-highway vehicle (OHV) trespassers, including dirt bikes, four-wheelers, and mud trucks. The site is overrun with invasive grasses and thistles.

LPCCC and PCC are funding the project with a grant from from the California State Parks Off Highway Vehicle Program, which uses money from OHV licensing fees to restore areas damaged by illegal OHV activity. Project goals include restoring native grassland and riparian habitat and creating living barriers of trees and shrubs to prevent further trespass.

The UC Davis SCB chapter has adopted this site as a service project and will provide student volunteers for the three-year duration of the project.

A subset of these students has been helping PCC plan and design the project to learn more about the practice and science of restoration. For example, students will look for cost-effective ways of establishing perennial forbs such as yarrow, mugwort, and lupine by comparing three methods: (1) a commonly-used method of planting plugs or container stock and surrounding them with a protective tube, (2) planting seeds on-site inside the same type of tube, and (3) planting seeds without a tube.

Students and other community members have planted a hedgerow of over 300 seedlings of a variety of native riparian species along the length of the site. These plants are being monitored by students to assess survival over time, and this information will be used to guide future plantings.

Plans for the coming year include establishing creeping wildrye and other native grasses.

Emily Peffer is a PhD student in Ecology at the University of California, Davis, and a volunteer coordinator with the UC Davis Society for Conservation Biology.

[1]The Lower Putah Creek Coordinating Committee is a watershed management group representing stakeholder interests in the environmental stewardship of Putah Creek. (www.putahcreek.org/)

[2]The Putah Creek Council is an organization dedicated to protecting Putah Creek through restoration, advocacy, and environmental education. (www.putahcreekcouncil.org/)

[3]The Society for Conservation Biology is an international organization whose mission is to advance the science and practice of preserving biological diversity on the planet. (www.conbio.org/)

Invasive Weed Symposium

November 10, 2011

Laguna Seca Recration Area, Monterey, California

The theme for the *Thirteenth Annual Central California Invasive Weed Symposium* is "Movin' On Up! Stages and Strategies for Weed Control." This all-day event will include field trips to restoration sites at Fort Ord and Monterey beaches. Tickets $35–50.

The Symposium is sponsored by the Weed Management Areas of Monterey and Santa Cruz Counties.

More information is available at http://ag.co.monterey.ca.us/pages/invasive-weeds-symposium. You can register at http://cciws2011.eventbrite.com.

Volunteers clear away milk thistle and invasive grasses to plant native riparian trees and shrubs. *Photo: Emily Peffer*

Hedgerows for pollinators and beneficial insects

Heather Nichols-Crowell, *Project Manager, Yolo County Resource Conservation District*

Photos: Phil Hogan, NRCS

Bolander's sunflower (*Helianthus bolanderi*): good foraging and nesting habitat for pollinators

Over 80 farmers, ranchers, gardeners, and conservationists came out to the Historic Oakdale Ranch in Esparto for the Yolo County Resource Conservation District's (RCD) first workshop of the season: "Insectary Hedgerows." The September 8 workshop was developed with growers who will be installing hedgerows on their property this winter in mind. The RCD worked closely with the Xerces Society, UC Cooperative Extension (UCCE), and the Natural Resources Conservation Service (NRCS) to provide a program that would cover practical information on designing, installing, and maintaining hedgerows for pollinators and beneficial insects.

Rachael Long discussing beneficial insect use of hedgerows

Presenters included Jessa Guisse, of the Xerces Society, who discussed the importance of native bees in diversifying, enhancing, and stabilizing pollination services for production agriculture. Jessa also discussed installation and maintenance regimes for forb strips in cropland settings. Rachael Long of UCCE shared her research on beneficial insect use of floral resources and distance traveled from native hedgerow plantings on farm edges. Site preparation, installation, and maintenance of hedgerows were covered by Yolo RCD's Jeanette Wrysinski and the author.

Workshop participants got to see and hear about many plants that are recommended for insectary hedgerows. Taylor Lewis of Cornflower Farms described a suite of native trees and shrubs that provide pollen and nectar sources throughout the year, including California lilac (*Ceanothus* spp.), coyote brush (*Baccharis pilularis*), and buckwheat (*Eriogonum* spp.). John Anderson of Hedgerow Farms introduced a number of forb species that he has been growing and field testing. Coyote mint (*Monardella villosa*), California phacelia (*Phacelia californica*), and California aster (*Aster chilensis*) were a few that he has found to be particularly good wildflowers for pollinators.

John Anderson sharing some of his favorite hand-weeding implements

To learn more about cost-share programs for installing hedgerows on your farm or ranch, please contact your local NRCS field office.

For more information on this and other upcoming RCD workshops, please contact the Yolo RCD at 530-662-2037, ext. 117. Or e-mail the author at Nichols-Crowell@yolorcd.org.

Levee soil cover: native grasses doing the job

Liz Cieslak, *CNGA Board Member and Grasslands Editorial Committee Chair*

Native grasses are being established in an area you might not expect: on the new levees under construction surrounding the Natomas Basin, an area along the Sacramento River in Sacramento County.

The Sacramento Area Flood Control Agency (SAFCA) is implementing the Natomas Levee Improvement Program (NLIP). NLIP is a major civil infrastructure works program designed to fix levees and significantly improve the level of flood protection for the Natomas Basin. The NLIP's conservation and mitigation strategy to compensate for habitat impacts includes revegetating levees slopes, seepage berms, and adjacent maintenance areas with native California bunchgrasses, using a new, custom-fabricated seeder designed specifically for levee seeding. In all, the project should seed over 750 acres of native grasses on levees, seepage berms, corridors, and borrow sites.

Once established, the roots and vegetative cover of the native grasses provide erosion control by physically covering the soil surface and holding soil particles together. Because of their deep rooting depth, native bunchgrasses will provide better erosion control than various nonnative annual grass species, which have shallower roots.

Established native grasses will provide stable cover and occupy space that would otherwise be covered by invasive weed species. These invasives, including many nonnative annual grasses and thistles, are typically controlled by levee maintenance districts using a variety of methods, including costly herbicides and burning, which result in a barren soil surface. Native grasses also provide habitat for native wildlife species, including Swainson's hawk and giant garter snake.

Photos: Peter Buck, SAFCA

Testing ridger roller seeder

The seed mix used on the levee slopes in 2010 included *Elymus glaucus* (blue wildrye), *Leymus triticoides* (creeping

LEVEE COVER, continued on page 9

Levee slope seeded with native grasses using ridger roller seeder in spring 2011

LEVEE COVER, continued from page 8

wildrye), *Elymus trachycaulus* (slender wheatgrass), *Hordeum brachyantherum californicum* (California barley), and *Nassella pulchra* (purple needlegrass). Combined, these species tolerate very dry and moister conditions on the levee slopes and berms. A new seeding mix to be used on the levee slopes in fall 2011 will include all of the 2010 species plus *Melica californica* (California oniongrass) and *Poa secunda* (one-sided bluegrass).

Seeding preparation of levee slopes requires balancing the creation of a suitable seedbed with adequate rooting depth, while also ensuring that the levee's slope stability is not compromised. After levees are constructed and the soil compacted to create a stable levee, 8–10 in. of topsoil is spread on the levee slopes. Seeding crews follow with shallow ripping (1.5–2.5-ft depth) and disking of the soil surface. The native perennials are all deep rooted and require the ripping and disking to become established and outcompete broad-leaved weeds and annual grasses.

A new seeder, the ridger roller seeder (RRS), was custom fabricated for this project to specifically operate on a 3:1 horizontal/vertical levee slope. SAFCA tested a traditional Truax drill seeder and tractor and discovered it could not effectively operate on the steep levee slopes. Cost effectiveness for designing this new seeder comes from the reduced amount of seed needed—traditional hydroseeding frequently uses seeding rates from 50 to 70 bulk lb per acre and up, while the rates used in 2010 RRS seeding were 22.5 PLS (pure live seed) lb per acre (about 27 bulk lb per acre).

The RRS has two 8-ft native grass Truax seed boxes welded onto a sturdy frame holding a 4.5-ft-diameter × 16-ft-long steel cylinder with V-shaped ridges similar to a traditional rice roller.

The seed is fed down through tubes just like in a regular Truax drill seeder, then drops into soil grooves created by the roller ridges. The seed is then covered by a chain harrow or ring roller that is pulled behind the RRS.

Disked condition alongside seedbed created by ridger roller seeder

The RRS also has a 500-gallon fertilizer tank and fertilizer injector knives, which till the soil a bit more, reducing surface compaction. The RRS is pulled by a "low ground pressure" D-6 dozer, equipped with 36-in.-wide tracks for better stability and traction for pulling the heavy RRS with minimal soil compaction.

The next round of seeding is due to begin this fall and will continue in 2012. Watch *Grasslands* for updates!

Special thanks to Peter Buck of SAFCA and Steve Chainey of AECOM.

CNGA's Bunchgrass Circle

Corporate Members

***Muhlenbergia rigens* level** ($1,000/yr)

Hedgerow Farms

***Nassella pulchra* level** ($500/yr)

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***Poa secunda* level** ($250/yr)

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Orinda Horsemen's Association
Ransom Seed Laboratory
Sacramento Regional County Sanitation District
San Luis National Wildlife Refuge
Santa Lucia Conservancy
Solano County Water Agency
Sonoma County Ag Preservation & Open Space
Stone Lakes National Wildlife Refuge
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Cover photographs by Wade Belew

Front: *Stand of meadow barley at Tolay Lake Regional Park near Petaluma*

Back: *Jenner Headlands (14 miles north of Bodega Bay; Symposium 2012 field trip locale)*