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California Native Grasslands Association

# Grasslands

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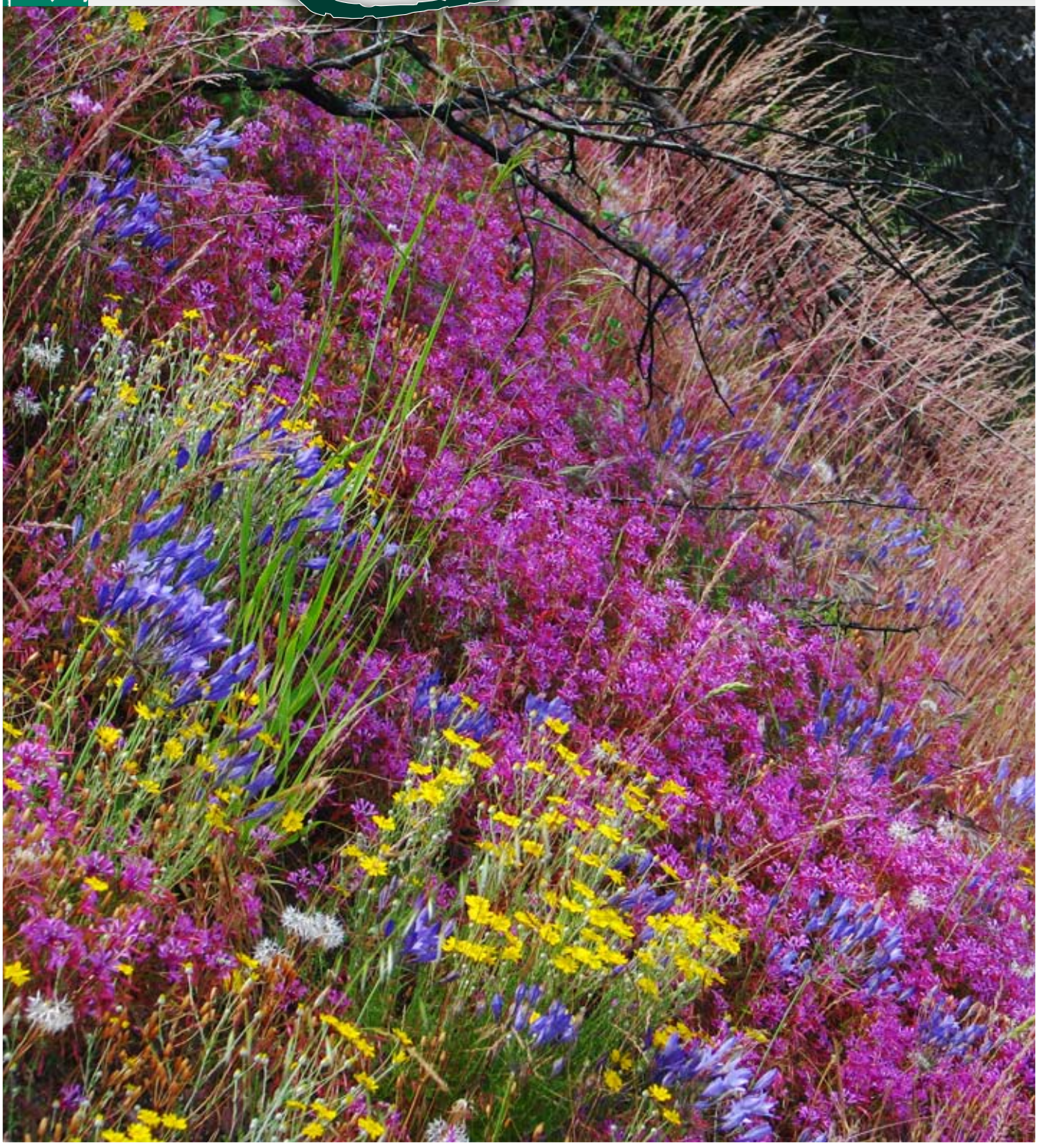

California Native Grasslands Association

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***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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## 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:**
**Fall 2011:** Aug. 15, 2011; **Winter 2012:** Nov. 15, 2011; **Spring 2012:** Feb. 15, 2012; **Summer 2012:** May 15, 2012;

## From the President's keyboard

**Wade Belew,** *President*

One of the best parts about being President of CNGA is participating in great events like the recent CNGA Field Day at Hedgerow Farms on April 15. Over 100 attended our Fourth Annual. You know it's a popular event when a show of hands reveals about half the people had come before, and still wanted to come again. For the first time, we held a grass identification class the day before, and over half of the attendees took advantage of the location and returned for Field Day.

I have to say thank you to our Workshop Committee headed by Bryan Young, Administrative Director Judy G-Scott, John Anderson and the staff of Hedgerow Farms, and all our sponsors for making Field Day such a huge success.

On a serious note, the state budget crisis has resulted in the announcement that the State of California is planning to close 70 parks to save money. Voters had an opportunity to avoid this problem last fall when a ballot initiative to fund State Parks with an $18 tax on vehicle registration was denied by voters already reeling from a tumbling economy.

It costs money to operate parks, but closing them has costs too.

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Maintenance needs already deferred become immediately amplified when a facility is unused and essentially abandoned. Leaky roofs don't get fixed, roads go unmaintained, weeds go unmanaged. Maintenance costs can spiral exponentially when small, unaddressed problems grow huge within a few years of neglect. Throw in some vandalism and risk of fire or other problems from persistent visitors who won't let a budget crisis deny them access to a park they may have visited for decades.

State Assemblyman Jared Huffman (D-San Rafael) sponsored a bill (AB 42) that on May 19 passed the Assembly unanimously (amazing!). AB 42 allows nonprofit organizations to submit plans to run individual State Parks. As of press time, AB 42 still had not reached a final vote in the State Senate. This presents interesting opportunities, but questions too. Nonprofit organizations have been managing more and more preserve and public land in California with good success. But nonprofits are scrambling for funding just like everyone else now, so will they be able to succeed when the state cannot?

Nonprofits can do a great job of managing parks and preserves and offer several advantages. Nonprofits tend to be local, focused, and passionate about a particular property or place. They are not encumbered by the huge state bureaucracy, which can make them more efficient, responsive, and flexible. They often utilize large numbers of volunteers to staff their efforts. But will they be able to recruit, train, and retain enough volunteers over the long term? Will there be the expertise and staffing to handle technical or difficult work?

After a nonprofit is running a park, what motivation will the state have to take back responsibility for these properties? What initially is seen as a stop-gap measure may become the new norm. It may work, but we should acknowledge and anticipate these issues before handing over the keys to the park gate.

# CNGA receives *Grasslands Education Grant*

CNGA has been awarded a $3,500 grant by the Tides Foundation and the California Wildlands Grassroots Fund to develop basic educational materials about California's native grassland ecosystems.

This grant will be used to develop, produce, and fine-tune a basic PowerPoint slide presentation on California native grasslands for high-school level and up as well as for the general public in Sonoma County. With the assistance of the Tides Foundation grant, CNGA was also able to offer reduced registration charges to a new introductory workshop on grasslands and grass identification held on June 11 at Pepperwood Preserve. We also plan to add to CNGA's Web content so that high school to beginning college students in the Sonoma County area will have Web-accessible, basic information on local native grasses, their role in coastal systems, and where to walk among them.

If you are interested in assisting with this project or have any questions or comments, please contact President Wade Belew at WADEKB@SONIC.NET.

## *GRASSLANDS* DESIGN UPDATE

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

You have likely noticed the Editorial Committee has already made some changes to the look of *Grasslands.* We are going to continue updating our look—do you have any suggestions for design or content that you'd like to see in our newsletter? We are working on giving *Grasslands* a cleaner, streamlined look, and we aim to provide information for grass lovers of all backgrounds. Please send us feedback: GRASSLANDS@CNGA.ORG.

### Interested in reading *Grasslands* online?

We are thinking of offering both the mailed paper copy of *Grasslands* and a Web-based version. If you are interested in only reading *Grasslands* online, please let us know (GRASSLANDS@CNGA.ORG). If we decide to offer the Web-based version, we will give you the option to sign up via a GrassBlast e-mail.

## 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 information.

# Managing California's grassland ecosystems for *Athene cunicularia hypugaea*

**Scott W. Artis,** *Founding Director, Burrowing Owl Conservation Network, P.O. Box 128, Brentwood, CA 94513; scott@Burrowing-Owl.org*

Burrowing owls (*Athene cunicularia*) are grassland specialists that occupy shrub, grassland, and desert habitats and are increasingly found in human-modified environments and urban open spaces (Rosenberg et al. 2007; Wilkerson and Siegel 2010). Nesting, roosting, and foraging primarily occur on landscapes characterized by short, low-density vegetation, conditions historically satisfied by the presence of native perennial grasses (Klute et al. 2003; Rosenberg et al. 2009). Although there are two subspecies found in North America, only the western burrowing owl (*Athene cunicularia hypugaea*), hereinafter referred to as burrowing owl, inhabits California (Shuford and Gardali 2008).

**Western burrowing owl (*Athene cunicularia hypugaea*) in Antioch, CA** *Photo: Heather Artis*

Considered the most historically important habitat for burrowing owls in the state (Rosenberg et al. 2007), California native grasslands have been described as one of the most endangered ecosystems in the United States (Noss et al. 1995). They have been reduced from 22 million acres to 2 million acres since the 1700s (Stromberg and Kephart 1996).

Because this small grassland raptor does not generally dig its own burrow, the burrowing owl is typically found in close proximity to colonizing fossorial (burrowing) mammals such as the California ground squirrel (*Spermophilus beecheyi*), but burrowing owls also capitalize on the abandoned burrows of foxes, coyotes, and badgers (Rosenberg et al. 2007; Trulio 1995).

With the advent of intense agricultural processes, urbanization, and widespread control and eradication of burrowing mammals over the last 150 years (Trulio 1995), the burrowing owl, North America's only raptor to nest underground (Trulio and Chromczak 2007), has witnessed significant declines as historic critical habitats have been converted for anthropogenic purposes (Trulio 1995; Wilkerson and Siegel 2010). The burrowing owl is a California Species of Special Concern (as designated by the California Department of Fish and Game), and recent surveys have shown a 36 percent population decline in the Imperial Valley (Imperial Irrigation District 2010) and a 28 percent decline in the San Francisco Bay–Delta region (Wilkerson and Siegel 2010).

A critical component of managing grasslands for burrowing owls is the availability of natural burrows (Dechant et al. 1999). As such, restoring, maintaining, and increasing populations of fossorial mammals through translocations, reductions in lethal control measures, and landowner education programs are required (Klute et al. 2003). In cases where burrowing mammals cannot be reestablished, artificial burrows may be used as a means to increase burrowing owls on human-disturbed sites (Barclay 2008; Trulio 1995).

Ultimately, the preservation and restoration of native grassland communities are essential for the conservation of the species (Klute et al. 2003). Although large, contiguous grasslands are recommended as a means for sustaining the state's population (Klute et al. 2003), small, fragmented parcels maintained as suitable burrowing owl habitat have proven successful in supporting local urban colonies (Artis, pers. comm. 2010).

Considering that less than 10 percent of native perennial grasslands remain in California (Dell et al. 2007), historic burrowing owl habitat is now predominantly comprised of nonnative vegetation that grows taller than native vegetation species (Menke 1992; D'Antonio et al. 2000; Solomeshch and Barbour 2006; Rosenberg et al. 2009) and is rendering this habitat unsuitable (Rosenberg et al. 2009). These dense, exotic grasses restrict nesting and foraging abilities of resident and migratory burrowing owls (Dechant et al. 1999; Rosenberg et al. 2009).

However, nonnative dominated grassland systems can be maintained as suitable short-grass habitat structures through

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mowing, grazing, and prescribed burning (Menke 1992; Rosenberg et al. 2009). If properly managed, these strategies can even ease the competitive edge of exotic flora and thus aid the return of native grasses (Menke 1992; Rosenberg et al. 2009). Mowing has been used as a tool to control the height, growth, and seed production of grasses for burrowing owl conservation (Dechant et al. 1999; Klute et al. 2003; Rosenberg et al. 2009). Depending on the dominant grass species, strategically timed mowing can be implemented when grasses have flowered but not yet produced seeds (Menke 1992). Mowing throughout the February 1 to August 31 breeding season (CDFG 1995) with some restrictions to coincide with the typical emergence of chicks in May through June, has proven effective in enhancing nest sites and has shown no apparent adverse effects to burrowing owls and their chicks (Rosenberg et al. 2009).

Prescribed burning prior to the dropping of seeds has been used as a method to control nonnative grasses and more recently explored as a means to maintain suitable burrowing owl habitat (USFWS 2004; Rosenberg et al. 2009). Late spring prescribed burnings reduce exotic annual plant seed production, seedbank size, and annual plant density and increase the establishment of perennial grass seedlings (Menke 1992). According to Rosenberg et al. (2009), there were no detected negative effects to burrowing owls and chicks, and habitat appeared to have improved as a result of prescribed burning in regard to density of native grasses and biodiversity. The U.S. Geological Survey reported similar observations in Oregon, with burrowing owls nesting in previously unused habitat recently subjected to burning (Dechant et al. 1999). The U.S. Fish and Wildlife Service found a reduction in nonnative annual grass cover and creation of high-quality nesting and foraging habitat in Alameda County, California (USFWS 2004).

Grazing has also been a viable management technique in the creation and restoration of burrowing owl habitat (Dechant et al. 1999; Klute et al. 2003; Rosenberg et al. 2009). Excessively grazed grasslands result in a low vegetative structure that increases visibility and provides high-quality foraging and nesting habitat for burrowing owls (Dechant et al. 1999; Rosenberg et al. 2009). When performed during the dormant season, prescribed, infrequent, high-intensity spring or summer grazing restores and increases the abundance of native grasses through the removal of thatch and dead stem bases, and promotes nutrient recycling as trampling by ungulates increases the rate by which plant material comes into contact with decomposers (Menke 1992). Burrowing owls prefer grazed grasslands (Dechant et al. 1999; Klute et al. 2003), and such systems have supported high-density owl populations in the San Joaquin Valley (Rosenberg et al. 2009).

Mowing does not eliminate dry plant material that may shade or limit emerging tillers and native plants (Menke 1992; Rosenberg et al. 2009); frequent grazing can result in habitat degradation (Dell et al. 2007); and prescribed burning has inherent risks and is the most costly tool for grassland habitat management (USFWS 2004). Therefore, combining strategies to maintain and restore burrowing owl habitat may prove useful.

Carefully grazed and mowed native- and exotic plant-dominated grasslands have provided optimal breeding and foraging habitat across the burrowing owl's range, including California, Colorado, Montana, Nebraska, North Dakota, South Dakota, and Wyoming (Dechant et al. 1999).

## Literature Cited

Artis, H. 2010. Personal communication.

Barclay, J.H. 2008. A simple artificial burrow design for burrowing owls. Journal of Raptor Research 42(1):53–57.

California Department of Fish and Game (CDFG). 1995. California Department of Fish and Game Staff Report on Burrowing Owl Mitigation, Appendix F. Sacramento.

Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, P.A. Rabie, and B.R. Euliss. 1999 (revised 2002). Effects of management practices on grassland birds: Burrowing Owl. Northern Prairie Wildlife Research Center. Jamestown, ND.

Dell, R.E., S.L. Young, and V.P. Claassen. 2007. Native roadside perennial grasses persist a decade after planting in the Sacramento Valley. California Agriculture 61(2):79–84.

Imperial Irrigation District. 2010. 2009 Annual Report of the Imperial Irrigation District Pursuant to SWRCB revised Order WRO 2002-013. Imperial Valley, CA.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman. 2003. Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003. Washington, DC.

Menke, J.W. 1992. Grazing and fire management for native perennial grass restoration in California grasslands. Fremontia 20(2):22–25.

Noss, R.F., E.T. Laroe, and J.M. Scott. 1995. Endangered ecosystems of the United States: A Preliminary Assessment of Loss and Degradation. U.S. Department of the Interior, National Biological Service Biological Report 28, Washington, DC.

Rosenberg, D.K., L.A. Trulio, D. Catlin, D. Chromczack, J.A. Gervais, N. Ronan, and K.A. Haley. 2007. The Ecology of the Burrowing Owl in California. Unpubl. report to Bureau of Land Management, Bakersfield.

Rosenberg, D.K., J.A. Gervais, D.F. DeSante, and H. Ober. 2009. An Updated Adaptive Management Plan for the Burrowing Owl Population at NAS Lemoore. The Oregon Wildlife Institute, Corvallis, OR, and The Institute for Bird Populations, Point Reyes Station, CA. OWI Contribution No. 201 and IBP Contribution No. 375.

Shuford, W.D., and T. Gardali, Eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Game, Sacramento.

Stromberg, M.R., and P. Kephart. 1996. Restoring native grasses in California old fields. Restoration and Management Notes 14(2):102–11.

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# Restoration through modern interpretations of yesterday's actions

**Brian Shomo,** *Natural Resources Manager, Riverside County Habitat Conservation Agency, bshomo@rctlma.org, 951-955-4325*

Grazing animals have always been an integral force in changing California's landscapes. Before European settlement, large flocks of native antelope and bison species grazed in grassland habitats by continuously moving to find sufficient forage and avoid predation. Typically, these animals only clipped the tops of native bunchgrasses, then moved on to other areas. This resulted in a relatively infrequent and moderate disturbance to the landscape.

European colonization in the Nineteenth Century displaced the native grazers with millions of domestic sheep and cattle. Native antelope were eventually decimated by the sheer volume of the introduced herds. The domesticated livestock ate grass much differently than did the native animals they displaced. Cattle and sheep, unless moved frequently, will eat plants down to the ground. Domesticated animals typically stay in one place and graze continuously, never lifting their heads when they are protected from predators by people and dogs.

Fast forward to today, where Riverside County Habitat Conservation Agency (RCHCA) ecologists are experimenting with a hybridization of historical and modern grazing styles, often referred to as "targeted grazing." These scientists are using modern domesticated sheep to mimic historical antelope grazing behavior. That is to say, the sheep continuously move throughout the landscape in a manner similar to historic antelope grazing patterns.

The long-term objective is to reduce the annual nonnative Mediterranean grass seed by clipping the seed heads before seed set, eventually depleting the seed bank, thereby reducing grass density. Nonnative grasses reduce native plant cover by competing for limited resources and also persist as thick thatch layers, unlike native plants that desiccate and break up.

**Sheep managed to mimic historical antelope grazing behavior** *Photo: Brian Shomo*

Nowhere is this methodology more evident than at RCHCA's land within the Lake Mathews/Estelle Mountain Ecological Reserve. This reserve was primarily established for the long-term conservation of Stephen's kangaroo rats (*Dipodomys stephensi*), an endemic, threatened California species, as well as other grassland species. RCHCA is working closely with the ovine grazers to achieve the goal of landscape conservation and the benefits of free-range food and wool production.

The optimum number of sheep per acre appears to be around five to seven but can change with the weather. The sheep are brought out beginning in December or January and removed or restricted just as the native forbs really start to flower. Of course, this also allows some grass to set seed, but such are the tradeoffs in life; so far, this one is acceptable. A careful balance must be maintained; this requires diligent care and timing by the land managers, and these factors change with each rainy season.

The results after 3 years of targeted grazing are dramatic. Previously, nonnative grass cover approached 100 percent and choked out a large portion of the native forbs and grasses. Recent vegetation monitoring demonstrates that nonnative grass cover is declining and native vegetation abundance is increasing, with only a slight loss in native richness. The most abundant natives making a comeback include tidy tips (*Layia platyglossa*), goldfields (*Lasthenia californica*), popcorn flower (*Plagiobothrys tenellus*), *Cryptantha intermedia,* red-maids (*Calandrinia ciliata*), and *Amsinkia menziesii,* among others that are being added during the restoration. However, a few native forbs such as lupine (*Lupinus* spp.) may be declining; consequently much remains to be learned and studied. But at Lake Mathews, it is clear that habitat for endangered Stephens' kangaroo rats is increasing as grass density decreases.

As an added benefit, burrowing owls have returned and begun nesting for the first time in nearly two decades. If the owls

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*Area of Critical Environmental Concern*

# Take action: Save Walker Ridge

**Andrew Fulks,** *CNGA Board Member*

Walker Ridge public lands cover an area of 14,000 acres along an 11-mile, north–south trending ridge located on the boundary of Colusa and Lake Counties, north of Highway 20 in California's Inner Coast Range. The Ridge has significant ecological, scenic, and educational values. It is situated immediately to the west of Bear Valley—a renowned wildflower area—and immediately to the north of the Cache Creek Wilderness.

California's Walker Ridge is cherished for its wildflower displays. It is an ecologically important site, and the California Native Plant Society (CNPS) has petitioned that it be protected as an Area of Critical Environmental Concern (ACEC) because of its many unique and rare plants. A proposed Walker Ridge Wind Project would have significant impacts to the area's biological resources, including potential mercury and chromium contamination of water resources, and alteration of wilderness-quality lands.

Canadian developer Alta Gas Income Trust has proposed a 29-tower commercial wind development project on Walker Ridge. This would require earthmoving on a massive scale, approaching ridge-top removal. And yet, the project represents marginal wind energy potential associated with the significant level of ecological damage. Were it not for massive subsidies, this project would not be cost effective. Renewable energy is an essential part of our nation's clean energy future, but some wild places just aren't right for development—of any kind. In California, Walker Ridge is one such place.

The California Native Grasslands Association is concerned about the very real and substantial impacts this project will have on the rare plants inhabiting the serpentine grasslands within Walker Ridge.

CNPS has nominated the entire Walker Ridge public lands as an ACEC. An ACEC designation recognizes the special ecological, educational, recreational, and scenic values of the region. Help us support CNPS in this effort!

**Clustered broomrape (*Orobanche fasciculata*) at Walker Ridge** *Photo: Andrew Fulks*

**Take Action Today**

Tell BLM to designate all of Walker Ridge as an Area of Critical Environmental Concern.

Call, or send an e-mail or letter to:

Jim Abbott, State Director
Bureau of Land Management
2800 Cottage Way, Suite W-1834
Sacramento, CA 95825
(916) 978-4600
JIM_ABBOTT@CA.BLM.GOV

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successfully fledge nestlings, the first generation to be born here after being absent so long will hopefully settle and begin raising families of their own.

Surprisingly, after stripping away the nonnative grasses, the sheep revealed a previously undocumented vernal pool containing vernal pool fairy shrimp (*Branchinecta lynchi*), a species federally designated as threatened. The surprises continue as large patches of *Plantago erecta*, the host plant for the rare Quino checkerspot butterfly (*Euphydryas editha*), have begun to pop up throughout the area.

As RCHCA continues to refine its methods, one thing is for sure: modern interpretations of yesterday's actions are restoring habitat and species once thought lost.

***Mimulus* sp. in Idaho fescue field, Walker Ridge** *Photo: Andrew Fulks*

# City okays Oakland Zoo's *California Exhibit* in rare native prairie

**Jim Hanson,** *Conservation Committee Chair*

Knowland Park is a little-known, 500-acre expanse of intact native grassland, oak woodland, and chaparral sloping down from the hillside ridgelines above Oakland and drained by Arroyo Viejo Creek. William Knowland gifted the land to the State, and the State deeded it to the City in 1975, stipulating that it be used for "public park purposes." At the base of Knowland's grand, rolling hills is the Oakland Zoo.

From 1996 to 1998, the Zoo prepared a plan to build a *California Exhibit* to feature locally extinct California wildlife species like the grizzly bear and wolf. Their CEQA report claimed no significant environmental impacts. The City approved it.

In March of this year, 13 years later, the Zoo returned with major revisions to the original plan. However, rather than produce a full Environmental Impact Report (EIR) with alternative build-out options, an elaborate "Supplemental Mitigated Negative Declaration/Addendum" was prepared with only one plan option.

The Master Plan amendment includes a gondola with steel support columns running through chaparral that is critical habitat for the threatened Alameda whipsnake. A 30,000-square-foot visitors' building replaces the original 7,500-square-foot interpretative center. The location and type of animal exhibits have been modified significantly from the original plan.

The proposed 56-acre facility would be built in park highlands above the Zoo in oak woodland, chaparral, and native grassland prairie. This is some of the highest-quality native prairie remaining on the west-facing hills above the East Bay. The highlands support robust and widespread populations of purple needlegrass (*Nassella pulchra*), California oatgrass (*Danthonia californica*), blue wildrye (*Elymus glaucus*), leafy bentgrass (*Agrostis pallens*), and several other native grass species.

An updated native grassland map of the proposed building site requested by the California Native Grasslands Association (CNGA) during the first CEQA hearing confirms native stands covering slopes at 10 percent to 40 percent and higher. Purple needlegrass predominates. The California Department of Fish and Game (CDFG) has determined that this is a rare natural community statewide (CDFG, Natural Communities List, HTTP://WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMMUNITIES.ASP). Within Knowland Park's plant communities, 44 rare and unusual native species were identified by local plant expert Dianne Lake.

### CNGA, others call for design alternatives

Although behind the project concept, several local organizations do not support the choice by the City and Zoo to expand on park land comprising rare natural habitat. These groups include Friends of Knowland Park, East Bay Chapter of the California Native Plant Society (CNPS), Sierra Club, California Wildlife Foundation/California Oaks, and CNGA.

Local media have picked up on the issue. The *East Bay Express* (April 13–19) reported on "The Cruel Irony of the Zoo's Expansion." At the same time, coverage by other large Bay Area media has focused on the "progress" and jobs represented by the development. In March, CNGA and others asked Oakland Planning Commissioners to require the Zoo to conduct a full EIR so that less environmentally damaging alternatives are at least considered.

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## What you can do:

The City of Oakland has become a new home for many cultures, urban artists, young families, and restaurants featuring regionally grown food. Mayor Jean Quan, the City Council, and the residents would like to see the CIty's reputation improved. The Mayor calls it "a fresh look at Oakland."

If you think the Zoo expansion into rare native grasslands needs a fresh look, drop a short e-mail to the Mayor (see address below). Besides, you're a contributor through a very large State grant to the Zoo from bonds funded through State income taxes.

### Here's a sample e-mail message:

***Subject:*** *Oakland Zoo California expansion needs better alternatives*

"I look forward to seeing the existing native grasslands, chaparral, and oak woodlands in the Knowland Park highlands kept intact and whole as part of the Oakland Zoo's expansion plans. These highlands came about over centuries of natural processes. They represent the natural wealth of Oakland and California and should be retained as a living California exhibit. Thank you."

### Send messages ASAP to:

Mayor Jean Quan, City of Oakland: OFFICEOFTHEMAYOR@OAKLANDNET.COM

***Please send a short e-mail today. It matters.***

**For more information:** For a close-up view of the highlands and perspectives on the current expansion plan, see *Bay Nature Online* article: "The Subtleties of Knowland Park" (HTTP://BAYNATURE.ORG/ARTICLES).

To read the *Oakland Tribune* Op-Ed on the larger zoological issues underlying the expansion, see: HTTP://WWW.INSIDEBAYAREA.COM/OPINION/CI-18271245.

To read the "Supplemental Mitigated Negative Declaration Addendum" on the Zoo Master Plan amendment, see the City of Oakland Planning Dept. (HTTP://WWW2.OAKLANDNET.COM/GOVERNMENT/O/CEDA/O/PLANNINGZONING/S/APPLICATION/DOWD009157).

For a run down on how local groups have tried to get better alternatives to the current Zoo plan, see East Bay CNPS (HTTP://EBCNPS.WORDPRESS.COM/?S=ZOO).

Knowland Park grasslands, *Photo: Jim Hanson*

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At the hearing, CNGA commented that the analysis of impacts and proposed mitigations for this rare, high-quality grassland are wholly inadequate. For instance, impacts on the grasslands from enclosed, intensive animal use are claimed to be "low to limited disturbance," even though intensive animal use within current Zoo enclosures shows the opposite. Removal of the intact native grassland system would be largely mitigated by removing some French broom (*Genista monspessulana*), and by "enhancing" some remaining grass stands. The overall deficit in the City and Zoo's CEQA process is that no other design alternatives are being considered.

Commissioners went ahead and approved the CEQA Negative Declaration/Addendum on a 3–1 split vote. The Friends of Knowland Park, CNPS, and CNGA joined in an appeal of the Planning Commission action (the appeal fee alone cost $1,350). On April 21, the Oakland City Council defeated the appeal to explore development alternatives and voted to approve the Zoo's Master Plan Amendment to expand into the highlands of Knowland Park.

### Knowland Park habitat and the modern conservation zoo

Several western state zoos have expanded or added exhibits that educate children about native animals currently at risk of extinction. They have also crafted hands-on programs to actively involve the public in helping these threatened mammals, birds, and amphibians.

Condors roost in a large pole-and-mesh exhibit linked with the Condor Recovery Program at the Santa Barbara Zoo's recently completed *California Trails* exhibit. These large birds once glided on the up currents of the nearby Santa Ynez Mountains. Despite limited available land, the zoo didn't build into a nearby natural area; it enlists children and volunteers to help steward it.

The California Living Museum in Bakersfield includes raccoons so that people might learn how to better live with common urban wildlife.

The San Diego Zoo has an Applied Plant Ecology program and is investigating restoration of semi-arid bunchgrass ecosystems.

CNGA and others question the conservation message that would be taught by the Oakland Zoo's plan for a California exhibit. Not only would rare California habitat be taken, but the planned exhibits largely center on large animals—bears and wolves—extirpated from the area long ago. At 56 acres and a publicly subsidized $72 million price tag, it would become largest zoological representation of California's conservation ethic to the rest of the country.

CNGA continues to work with others for an expansion plan that keeps the native grasslands intact so that the Zoo's *California Exhibit* tells a conservation story by genuinely practicing it.

# Pt. Molate mega-casino project turned down

**Jim Hanson,** *Conservation Committee Chair*

In April, plans for a 4,000 slot-machine casino complex on the shores of San Francisco Bay were defeated in a 5–2 Richmond City Council vote following a packed 5-hour meeting. CNGA testified at the meeting because of Pt. Molate's rich and resilient expanses of native coastal prairie. It is the collection source for 'Molate fescue' (*Festuca rubra* 'Molate'), a perennial bunchgrass used widely for erosion control and ornamental landscapes.

Pt. Molate is a source of rare beauty and inspiration. For the past decade, CNGA founding member David Amme has been taking people on walks through open sections of the Pt. Molate headlands. The "walk and grass talk" is followed by lunch perched on a hilltop native grassland taking in the wide vista across San Pablo Bay.

The CNGA Conservation Committee submitted comments on the Draft EIR for the casino proposal in September 2009 because of inaccurate labeling of the grasslands—they were characterized solely as "annual grasslands," or weeds (*Grasslands,* Winter 2010). We joined with the East Bay Chapter of the California Native Plant Society and others with comments on the inadequate mitigations in the EIR.

When the Final EIR was released in February 2011, the grasslands were still described as solely annuals. A few days before a scheduled hearing, a set of biological reports completed the previous summer were added online as "errata" to the already-published Final EIR. The reports contained a grassland inventory and maps that more accurately describe the native grassland biological resources on this 413-acre coast side property.

Although these last-minute submissions corrected the biological description, they did not address the inadequate mitigations for impacts to the rare native prairie, especially in the southern valley watershed of the Pt. Molate headlands.

The southern valley headlands support an amazing array of interlocking plant communities starting in scrub and native grasslands hillsides abundant with birds. The uplands drop down to a coastal marsh/willow riparian area that hides sedges and California pipevine (*Aristolochia californica*). The coastal marsh/willow riparian area leads to a coastal bluff above a coastal strand beach. The bay waters lapping on the beach hide a shallow bay bottom of large and productive eelgrass beds.

Although consideration of the casino was discontinued, the Final EIR was approved. That means there are still 1,000 tribal and market condos proposed in the EIR for potential development in this remarkable valley. For an alternative vision, Citizens for a Sustainable Point Molate, a Richmond residents group, received help from an infrastructure planning firm to draw up a conceptual plan for a "world-class destination village and working park."

The developer/tribe partnership has until the beginning of August to return with a non-gaming development. CNGA will continue to follow the plans as they affect the native grassland community at the Pt. Molate headlands.

# CNGA notes from the field: *Our recent activities*

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

Are you interested in becoming more involved in CNGA, attending one of our events, or just curious what we've been up to? Here's a compilation of our recent activities. For upcoming fall workshops, see page 13.

**Discover California Grasslands** presentation at Sonoma State University (February 27)

President Wade Belew presented our PowerPoint presentation to a group of Sonoma State University interns who will be assisting board member Kathleen Kraft with the Coastal Prairie Mapping Project, announced in the Winter 2010 issue of *Grasslands*.

**Taylor Mountain** hike (April 12)

Wade Belew led a hike for LandPaths, a Sonoma County nonprofit, to this Sonoma County Open Space District (OSD), which is only open to the public by special permit. This evening hike was attended by about 35 people. The property, an OSD acquisition, will become a regional park once planning and funding are in place.

**Identifying and Appreciating the Native and Naturalized Grasses of California,** Yolo County (April 14)

Grass connoisseur David Amme and Wade Belew taught this 1-day workshop at Hedgerow Farms. A morning classroom session

***FROM THE FIELD,*** continued on page 11

**Taylor Mountain evening hike—Santa Rosa in background**

**Dave (GrassMan) Amme with the Hedgerow grass ID class** *Photos: Wade Belew*

# Holistic Management for restoring grasslands

**Lindsay Dailey,** *CNGA Board Member*

In March, over 30 ranchers from throughout California gathered at California Native Grasslands Association (CNGA) lifetime member Sally Calhoun's Paicines Ranch to learn from South African instructor Ian Mitchell-Innes about the techniques of Holistic Management. Ranchers and land managers learned how to enhance the productivity, efficiency, and health of their land. Mitchell-Innes shared examples of how holistically managed land in his native South Africa has been restored through intensively managed grazing.

Holistic Management, a framework for decision-making used to restore damaged land, has been used on every continent to manage over 30 million acres of land, primarily through intensive managed grazing regimes. The practice of Holistic Management yields a "triple bottom line" of sustainable economic, environmental, and social benefits. Under Holistic Management, land managers manage the relationships between land, grazing animals, and water in ways that mimic nature.

**In the classroom (above) and field (below) at Paicines Ranch**
*Photos: Richard King*

The first step in Holistic Management is the establishment of a clear, encompassing goal that embraces all desired outcomes and expresses the will and commitment of those who will be involved in achieving it. Every significant planning and monitoring decision is tested against this holistic goal.

Ranch Owner Sally Calhoun entered the realm of ranching through a love of native grasses; she holistically manages the grazing on her ranch with the specific objective of enhancing the grasslands and restoring perennial native grasses. Over the last five years of implementing Holistic Management and shifting toward intensively managed grazing systems, Calhoun has witness the enhancement of diversity of flora and fauna on the ranch. For example, in one riparian area where the cattle have been intensively managed, what was once a small remnant patch of a few creeping wildrye (*Leymus triticoides*), is now a healthy stand that has been steadily expanding along the river for the last several seasons.

"Holistic Management is a tool that can make a huge impact," said Calhoun. "I get really passionate about the thought that we could improve the world's grasslands, save endangered creatures, improve the lives of ranchers, and as a sideline, sequester carbon and address climate change with no negative impacts."

CNGA is hosting a Holistic Range Management workshop this fall. See the workshop announcements on page 13, or go to www.CNGA.org.

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***FROM THE FIELD,*** from page 10

was followed by an afternoon walk through Hedgerow Farms' production fields.

**CNGA Field Day at Hedgerow Farms** (April 15)

Our fourth annual Field Day event was another big success. Again we had a walking tour and a hay ride tour covering many aspects relating to native grasses: seed production, restoration, use of natives in agricultural areas, habitat restoration, restoration methods, grass identification, and much more. Lunchtime speakers included Tom Griggs of River Partners, Truman Young of UC Davis, and Rachael Long of the UC Cooperative Extension.

**Wildflower Festival at Pepperwood Preserve** (April 17)

Wade Belew represented CNGA at this well-attended and well-organized event, where he promoted upcoming CNGA workshops.

**Intro to California Grasslands and Grass ID** (June 11)

A new CNGA offering at Pepperwood Preserve in Santa Rosa, attended by over 50 people. A classroom session was followed by exploriation of Pepperwood's grasslands.

Wade Belew developed a first draft of new grass ID specimen cards for the workshop, and evaluations of the event spoke highly of these new materials. Our favorite comment from the evaluations was, "CNGA is developing outstanding teaching techniques, a model for other organizations to follow." This workshop will be offered again!

# CNGA Research Committee

**Barbara Going,** *CNGA Board Member*

At the heart of grassland conservation and restoration is an understanding of how this important ecosystem functions. The mission of the Research Committee is to serve as a nexus between land managers and academia to facilitate active research and to broadly disseminate knowledge gained from this research.

Our goals are to identify critical gaps in our understanding of grassland ecosystem function, restoration, and management and to direct new research in these areas by connecting researchers and students with project ideas and resources.

We also aim to cultivate a deeper understanding and appreciation of grasslands by producing summaries of current research, which will be accessible on our website and in *Grasslands*.

We are building a list of preserves and other potential California research sites, as well as a list of academic programs focused on grasslands, including ecology, restoration, and rangeland management.

If you have information on preserves or programs, or would just like to help out, please send a message to: RESEARCH@CNGA.ORG. We also welcome suggestions for additional ways the Research Committee can achieve its mission!

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***BURROWING OWLS,*** from page 5

Trulio, L. A. 1995. Passive relocation: A method to preserve burrowing owls on disturbed sites. Journal of Field Ornithology 66(1):99–106.

Trulio, L.A., and D.A. Chromczak. 2007. Burrowing owl nesting success at urban and parkland sites in northern California, pp. 115–122 in J.H. Barclay, K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, eds., Proceedings of the California Burrowing Owl Symposium, Nov, 2003. Bird Populations Monographs No. 1. Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

U.S. Fish and Wildlife Service (USFWS). 2004. Final Environmental Assessment for Seasonal Grazing, Prescribed Burning, Mowing, and Herbicide Application on the Warm Springs Seasonal Wetland Unit of the Don Edwards San Francisco Bay National Wildlife Refuge, Alameda County, California. U.S. Department of Interior, Fish and Wildlife Service, Newark, CA.

Wilkerson, R.L. and R.B. Siegel. 2010. Assessing changes in the distribution and abundance of burrowing owls in California, 1993–2007. Bird Populations 10:1–36.


Over the last 10 years Scott Artis has been in the field of molecular and cellular biology at the research, application, and management levels. Since 2008 he has been actively advocating and working for the conservation of western burrowing owls in California. Scott holds degrees in microbiology, molecular biology, and fisheries and wildlife science, has a masters certificate in environmental resource management, and is pursuing a masters degree in environmental science and policy.

## Coming . . . Spring 2012

## Sonoma Grasslands Symposium

CNGA's next big event!

**Keep it on your radar screen—you don't want to miss this one!**

## *CNGA's Bunchgrass Circle*

### Corporate Members

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

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Contra Costa Water District
Erdman Farms
Gold Ridge Resource Conservation District
Hollister Ranch
Irvine Ranch Conservancy
Los Angeles Chapter, California Native Plant Society
Oak Creek Energy Systems
Orinda Horsemen's Association
Ransom Seed Laboratory
Sacramento Regional County Sanitation District
San Luis National Wildlife Refuge
Santa Lucia Conservancy
Selby's Erosion Control
Solano County Water Agency
Sonoma County Ag Preservation & Open Space
Stone Lakes National Wildlife Refuge
Thomas Klope Associates
Truax Company, Inc.
Westervelt Ecological Services
Wildlands, Inc.
Yolo County Resource Conservation District
Zentner and Zentner

# Registration is open for fall 2011 CNGA workshops!

Register by mail, fax, phone, or online: 530-661-2280 | www.CNGA.org

### 1–2. September 29 or 30, 2011: Using California Native and Grasses in the Water-Conserving Landscape

Two separate 1-day Southern California workshops: Fallbrook and Arcadia
- Thursday, Fallbrook Public Utilities Building;
- Friday: Los Angeles County Arboretum and Botanical Garden

Landscaping that conserves water is fast becoming the number-one focus of conservation programs. Not merely a passing trend, water conservation is the future of urban landscape principles in "thirsty" California.

Are you ready to meet this challenge? Let the experts from CNGA show you how to use native grasses, sedges, and rushes successfully in a variety of settings to create beautiful residential, commercial, and public landscapes. Besides saving irrigation water, native grasses can rebuild soil and prevent erosion, enhance wildlife habitat, and lower maintenance costs. The latest applications of native grasses for treatment, attenuation, and infiltration of storm water in bio-swales will be addressed.

This workshop is appropriate for landscape architects and contractors, engineers, planners, parks and recreation staff, biologists, regulatory staff, land and resource managers, nursery practitioners, and homeowners.

**Location:** Fallbrook or Arcadia, California **Fees:** $120 CNGA members / $140 non-members / $75 students w ID

**Instructors:** ***Steve Nawrath,*** Landscape Architect and Certified Professional in Erosion and Sediment Control, California State Parks
***Wade Belew,*** Restoration Practitioner; President, CNGA

### 3. October 13, 2011: Introduction to Holistic Planned Grazing—Unleashing California Native Perennial Grasses and Forbs

A 1½-day event in San Luis Obispo

Whether you love cows or hate them, learn why and how livestock can either help protect and restore native species and soils in our California grasslands or destroy them. The key is how they are managed. And that requires sound planning to ensure that livestock are in the right place at the right time and for the right reasons. Need an overview or refresher of key princples? Need to see real examples? This workshop is for you. A classroom session will explain the principles, and field trips will show them being practiced.

Whether a newcomer or a past attendee of CNGA holistic or sustainable grazing workshops, all are invited to learn or review the principles, share your own experiences, and ask questions. Build grassland life, build soil, build profitability, and build what you most value—they are all interdependent. This is an ideal introductory course prior to attending *Holistic Grazing Planning—A Planning Workshop for Ranchers.*

**Location:** San Luis Obispo **Fees:** $80 CNGA members / $100 non-members / $50 students w ID
$50 if enrolled in previous Holistic Planned Grazing Course

**Instructors:** ***Richard King,*** Ecologist, USDA–NRCS; ***Rob Rutherford,*** faculty, Cal Poly Department of Animal Science

## Registration Form: CNGA Fall Workshops | 2011

Mail to: CNGA, P.O. Box 8327, Woodland, CA 95776 Fax to: 530-661-2280

Participant's name (print or type please) _____
Participant's organization/agency (optional) _____
Mailing Address _____ City _____ State ____ Zip __
Preferred phone _____ Preferred e-mail _____

Fees: ***1. Using California Native Grasses in the Water-Conserving Landscape*** *(Fallbrook, CA)*..... ☐ $120/CNGA members ☐ $140/non-members ☐ $75/students
***2. Using California Native Grasses in the Water-Conserving Landscape*** *(Arcadia, CA)* ..... ☐ $120/CNGA members ☐ $140/non-members ☐ $75/students
***3. Introduction to Holistic Planned Grazing*** *(San Luis Obispo, CA)*..... ☐ $80/CNGA members ☐ $100/non-members ☐ $50/students

☐ Check made payable to California Native Grasslands Association ☐ Payment by credit card (please check type) ☐ Visa ☐ MasterCard ☐ American Express
Card number_____ Expiration date_____/_____
Street address for card _____ Zip _____

*Questions concerning registration? Please contact CNGA by phone/fax: 530-661-2280, or e-mail: ADMIN@CNGA.ORG.*

California
Native
Grasslands
Association

P.O. Box 8327
Woodland, CA 95776
http://www.CNGA.org

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PAPER

**Register now for fall workshops!**
*see p. 13*

Cover photos

Front: Walker Ridge hillside (see p. 7) *Andrew Fulks*

Back: Narrowleaf mule's ears at Knowland Park (see p. 8) *Ken-ichi Ueda*