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California Native Grasslands Association

Grasslands

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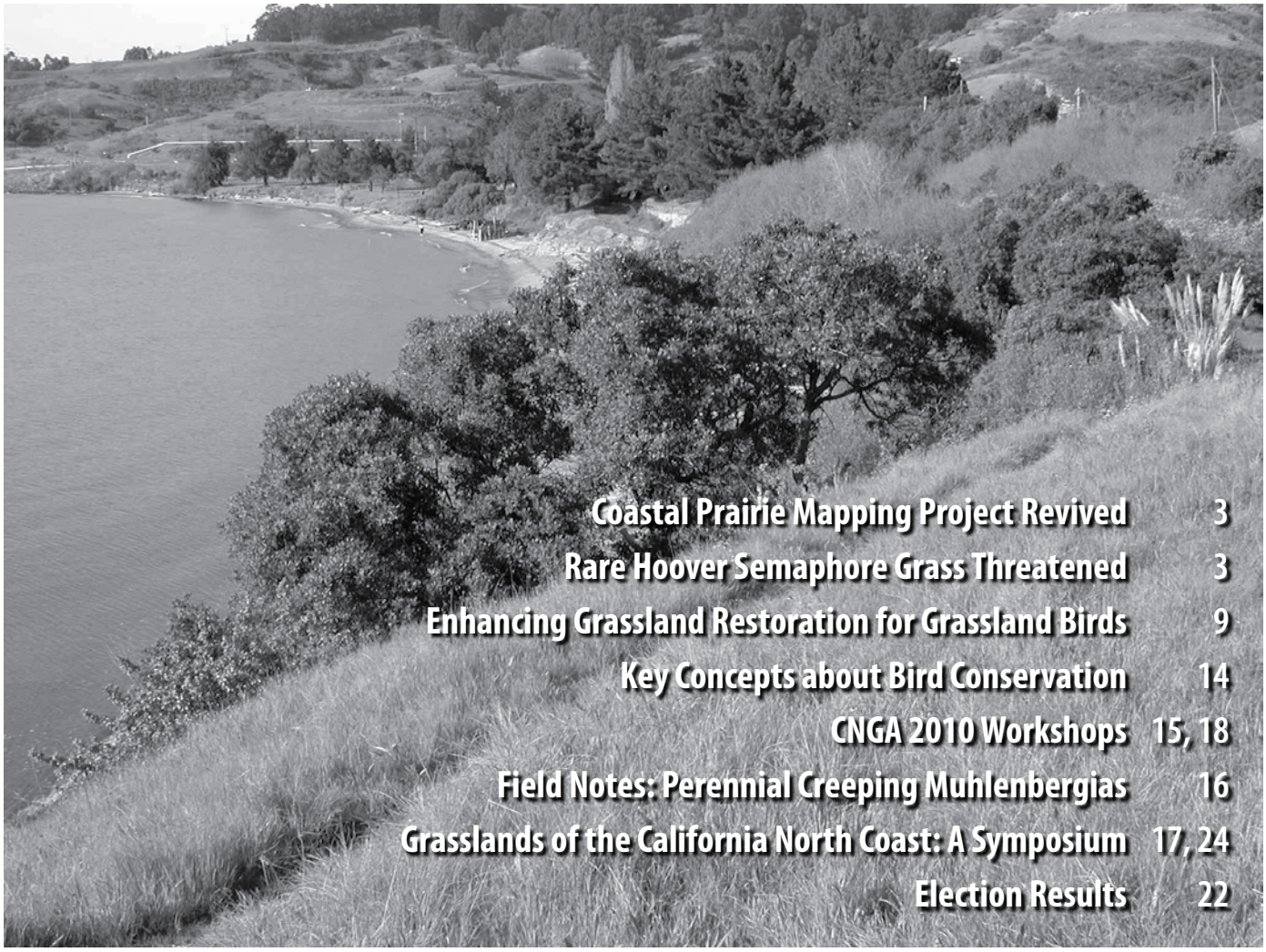
EIR Omits Rare Native Coastal Prairie at Proposed Casino Site 5



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.*

For advertising rates and instructions, or membership and other organizational information, contact CNGA Administrative Director: ADMIN@CNGA.ORG.

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Grasslands Submission Guidelines

Send submissions to:
Editor: MRODGERS@MACNEXUS.ORG.

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

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

Submissions are accepted electronically as e-mail attachments. Contact the editor for formatting specifications.

Submission deadlines for articles:
Spring 2010: Feb. 15, 2010 ; **Summer 2010:** May 15, 2010; **Fall 2010:** Aug. 15, 2010; **Winter 2011:** Nov. 15, 2010

From the President's Keyboard

Wade Belew

It was just two short years ago that I was a bright-eyed botanist who stumbled into a CNGA conference to learn more about this often-mysterious family of plants. Besides becoming enchanted with grasses, I became equally enamored with the people and mission of CNGA. Now I find myself deeply humbled and honored to assume the role of President of this organization.

While I'm a novice when it comes to grasses, I do have a successful track record at managing a highly regarded non-profit environmental restoration program. I'm hoping I can bring a fresh perspective to CNGA, with four main goals in the coming year.

Increasing efficiency of CNGA operations and programs. Currently, our board spends most of our time managing the operations of the organization. Ideally, the board would have staff and volunteer support for operations so the board can focus more on long-term planning and fundraising.

Increasing education and outreach to people with general environmental interest. The time is right for increased public awareness of the many significant ecosystem services provided by California grasslands. I see the public perception of grasslands sd similar to how wetlands were viewed just a generation or two ago, as vast expanses of land not providing known economic benefits. But being unrecognized can be used to our advantage; everybody loves an underdog, and grasslands are definitely an underdog here in Eden-esque California.

Grasslands are poised to be next ecosystem to be recognized and appreciated because of the undeniable economic benefits provided by valuable ecosystem services such as wildlife and livestock forage, topsoil formation and retention, stormwater attenuation and groundwater infiltration, carbon sequestration, biodiversity and migration corridors, not to mention the stunning viewscapes of California.

Top-down lobbying. Complimenting an increase in "grass-roots" (pun-intended) outreach and education, I encourage CNGA involvement at state-level decision making by agencies and regulators. I recently met with State Assemblymember Jared Huffman to offer CNGA expertise at State Parks and Natural Resource Committee meetings. This would give us a great opportunity to educate the policy-makers whose decisions have far reaching consequences.

Member involvement. In these challenging times, CNGA needs your help more than ever. We know times are tight for many of us with shrinking budgets and work furloughs. But there is a lot that you can do to help us if you can contribute your time and passion for native grasses. Volunteering builds your résumé and provides an opportunity to network with other members.

Here are some examples of what you can do to help CNGA spread our mission, *along with examples of what I'll be doing this year:*

PRESIDENT'S KEYBOARD, continued on page 3

PRESIDENT'S KEYBOARD, continued from page 2

- Offer to present our new PowerPoint, *Discover California Grasslands,* to a local school or organization.
- *I'll be guest speaker at the Environmental Forum of Santa Rosa Junior College on March 24th.*
- Offer to lead a grassland walk in conjunction with a local park or resource management agency.
- *I'll be leading a walk at Helen Putnam Park in Petaluma on April 18th with Sonoma County Regional Parks.*
- Take advantage of existing connections with your local resource managers and environmental community to collaborate in hosting a CNGA workshop or event.
- *I contacted the Sonoma County Water Agency and they agreed to host and sponsor our workshop "Using Native Grasses in the Water-Conserving Landscape" on February 5th. Their sponsorship allows us to offer this outstanding workshop for a $50 discount!*

Here are a few more ideas: Buy a gift CNGA membership for a friend or colleague; Help out on a CNGA committee; Think about running for a board position, truly an opportunity, as I've found, that allows you to be a part of something bigger than ourselves.

CNGA is a million-dollar organization… that operates on less than $100k per year! That's not a lot of money for an organization with statewide ambitions. But it's not just money that makes an organization successful; it's the passionate involvement of the members and willingness to give something back to the organization. Please join me in making this a successful year for CNGA—and for California's grasslands!

Visit us online: www·CNGA·org

Coastal Prairie Mapping Project Revived

The Coastal Prairie Enhancement Feasibility Study, a project of Ocean Song Farm and Wilderness Center and the Sonoma–Marin Coastal Grasslands Working Group, has been funded through September 2010 (the project had been dormant as a result of the state bond freeze). With this fresh infusion of funds, the project to map Sonoma and Marin coastal grasslands will be underway this spring.

Study participants will collect existing knowledge of native grassland locations. They are asking local grassland experts, including CNGA Past President David Amme, to contribute their knowledge. Over the past year, Alex Koltunov and Ayzik Solomesheh of UC Davis have been preparing a preliminary vegetation map and field sampling plan. Once the "local knowledge" information has been recorded, Alex will incorporate it into a new GIS layer that will aid in designing the field plan.

Kathleen Kraft and Linda Esposito have put together five large maps covering coastal Marin and Sonoma Counties from the Golden Gate to Gualala (at the border between Sonoma and Mendocino Counties). The inland extent of the project area is roughly the Highway 101 corridor. Approximate locations of significant grasslands (and wildflower fields) will be identified by the local experts and pinpointed on the maps.

Data for each location will be recorded and will include why the site is considered to be important, directions to the site, do you know of any species lists/maps/reports for that location.

Rare Hoover Semaphore Grass Threatened

David Amme
CNGA Past President

One of the few remaining extant populatons of the rare Hoover's semaphore grass (*Pleuropogon hooverianus*) in California is slated to be removed by Caltrans outside of Willits as part of the Willits Freeway Bypass project. This rare grass was highlighted in the summer 2009 issue of *Grasslands*. Hoover's semaphore grass is listed as threatened by the State of California.

The original Final EIR/EIS was completed in 2006. Apparently Hoover's semaphore grass was not mentioned in this document. After the FEIR/EIS was published, *P. hooverianus* was found within the project limits. Caltrans published a draft supplemental Environmental Impact Report (EIR) in November 2009 and released it during the holiday season. Public comments are due by January 15, 2010.

What is disturbing is that the Hoover semaphore grass was not mentioned in the original Caltrans FEIR/EIS and only came to light recently. As a former Caltrans Environmental Planner for District 4 (nine Bay Area counties) it was my duty to thoroughly review all federal and state documents *and* survey the presence and absence of all federal and state threatened and endangered species. Avoidance is the first priority for federal and state sensitive species. It is curious that a mapped California Department of Fish and Game occurrence was not identified "as all other significant impacts were identified at the time of the (2006) previous circulation." One can only imagine what kind of "detailed environmental review" took place in 2006. According to Caltrans, mitigation for Hoover's semaphore grass "will be considered less than significant" by the Draft Supplemental EIS. At this point the strategy is to "mitigate" for the oversight. This basically means to find another wet spot and throw out some seed.

CNGA is preparing comments for the Draft Supplemental EIR.

Special Report:

EIR Omits Rare Native Coastal Prairie at Proposed Casino Site

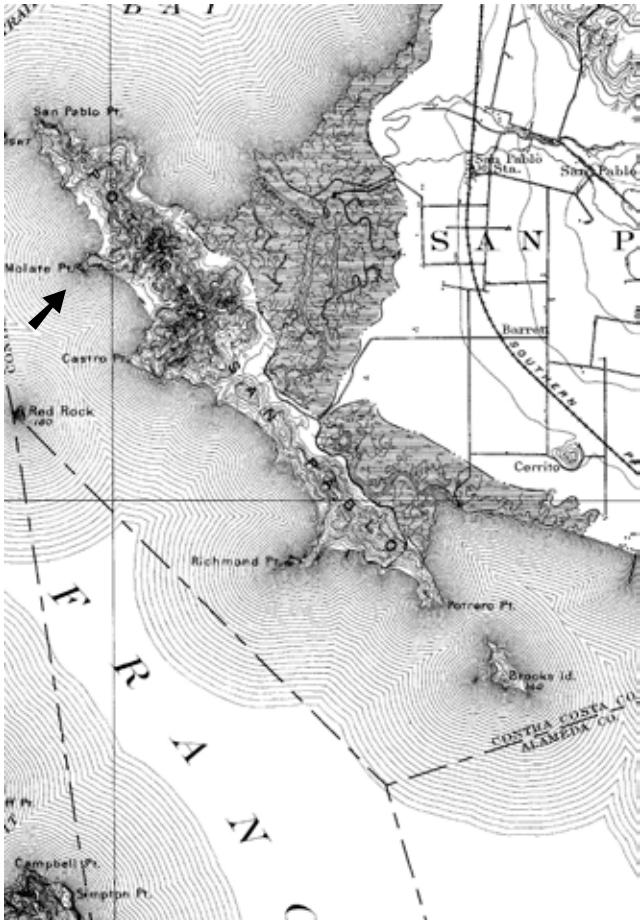
Jim Hanson, *CNGA Board Member, Oakland*

One of the last relatively undeveloped tracts of public land on the San Francisco Bay shoreline is being eyed for a mega-casino.

At 124,000 square feet of card tables and slot machines (4,000 of them), a developer/tribe partnership is pursuing a mega-casino on San Francisco Bay at Point Molate that would surpass the size of most casinos on the Las Vegas Strip.

Point Molate is at the western edge of the Potrero Hills at the tidal transition between San Pablo and San Francisco Bays. It is a quiet, natural landscape that most residents have never seen. From here one can take in breathtaking views from atop hills carpeted with native bunchgrasses.

Point Molate shares the geology of its sister hills across bay waters in Marin, still sustaining many of the same plant species that inhabited the area before San Francisco Bay existed (CNPS 2009). The bridge spanning from Richmond to San Rafael now connects them. This near-island was officially connected to the East Bay when a large, intervening shoreline marsh between Point Molate and Richmond was filled in (in an era when filling the bay tidelands was common) (Roselius 2005).



USGS survey map from late 1800s showing Point Molate and the surrounding hills when it was called "Potrero San Pablo." "Potrero" means "meadows/grasslands." *Map provided by David Amme*

Waves of Spanish, early East Coast, and post–World War II settlers have made an impact on eastern landscapes of the San Francisco and San Pablo Bays, but the first recorded settlements were by indigenous Costanoans (Contra Costa County 2008a, 2009). During the 1900s, a West-Coast wine distribution center and a Naval Fuel Depot occupied Point Molate. In 2003, the land was turned over to the City of Richmond by the Navy for $1 (Brenneman 2009).

Although some native grasslands are affected by management choices such as mowing or grazing, the stewardship of Point Molate's native prairie rests primarily on choices arising out of the political–economic ecology of local, state, and federal influences. Therefore, this article attempts to offer a glimpse of the dynamics and guiding beliefs that will affect the choices for this public land on San Francisco Bay.

What's on the Table Now for Point Molate?

Shortly after the City of Richmond acquired the land from the Navy, the developer, in partnership with the 11-member, Ukiah-based Guidiville Band of Pomo Indians, presented casino plans based on the claim that Point Molate was ancestral Pomo land.

A public hearing in September on the Draft Environmental Impact Report (DEIR) presented four development options for the site, three of which included a casino (Richmond/BIA 2009). Other health, educational institution, or "green" energy development alternatives that potentially could return a fiscal benefit to the City were not included for comment or consideration.

At the hearing, several people commented on the casino project and felt it would provide jobs for the city's unemployed, while others said the project DEIR—with its limited information on employment, crime, traffic, and environmental concerns—was sketchy on important details.

Some residents pressed for details on the actual number of promised jobs and estimated wages. Stories and statistics about how crime and problem gambling escalate when a full-scale casino (e.g., craps, roulette, betting on dog and horse racing) is brought close to an urban area were mentioned.

EIR OMITS COASTAL PRAIRIE, continued on page 5

EIR OMITS COASTAL PRAIRIE, continued from page 4

A traffic engineer volunteered his analysis of inadequate road access; access to the Point is by a two-lane road right next to the Richmond–San Rafael Bridge toll plaza. A 32-page Technical Peer Review of the DEIR by ESA Associates concludes that it is incomplete and that a revised Draft EIS/EIR should be prepared and recirculated (CFSPM 2009).

Lech Naumovich, California Native Plant Society (CNPS) East Bay Chapter conservation analyst, testified and submitted a detailed analysis of the DEIR (CNPS 2009). CNGA and CNPS spoke to the document's omission of the rare native coastal grassland community currently flourishing across the hills and along the shoreline.

Under federal and state law, the environmental review document is to contain a full and accurate description of the proposed project. An accurate project description provides the basis for assessing impacts to sensitive environmental resources and social concerns for avoidance or mitigation. The EIR is essentially an "environmental accountability statement."

In the consultant-prepared project document, the heritage native prairie located within the project boundaries is labeled only as a weedy "annual grassland" (Richmond/BIA 2009, p. 3.5-13, and Habitat Map, p. 3.5-1). The DEIR would mitigate any affected "annual grassland" by maintaining or replacing other annual grassland areas on site (Richmond/BIA 2009, p. 5-17). Coastal prairie within the 413-acre project boundaries, either inside or outside the direct construction area, is not recognized.

A Unique, Special Place

Besides providing the largest intact expanse of non-serpentine native coastal prairie remaining within the dense, urban San Francisco Bay Area, the site also provides rare habitat for populations of state- and federally protected birds. Point Molate falls within Audubon's North Richmond Wetlands Important Bird Area (IBA), which tallied 92 species in a 2007–2008 census. Surveyed taxa from the North Richmond Wetlands IBA included short-eared owl, black rail, Forester's tern, least tern, northern harrier, loggerhead shrike, song sparrow, and savannah sparrow (Audubon California 2008).

Large, intact expanses of eelgrass beds, considered indispensable for the health of the Bay, are "home to many small organisms that are food for large species… they provide protective cover for migrating salmon, provide a spawning substrate for Pacific herring, and act as a nursery for many other smaller fish" (CNPS 2009).

EIR OMITS COASTAL PRAIRIE, continued on page 6

Coastal scrub bluff on Point Molate in foreground. Hills in background support coastal prairie and coastal scrub at southern half of proposed project area. *Photo: Jim Hanson*

EIR OMITS COASTAL PRAIRIE, continued from page 5

For years, CNGA member Dave Amme has taken Bay Area residents on walks to the Point to explore the native grassland. Seed from *Festuca rubra* "Molate Point" (Molate fescue) now being used in native grassland revegetation settings as well as in drought-tolerant native landscapes, was originally collected, in the early 1980s, at Point Molate.

The East Bay CNPS Chapter has identified Point Molate as one of 15 Priority Plant Protection Areas in the East Bay, noting that, "the number of rare and unusual plants known from the Molate are as numerous as any given botanical preserve in the East Bay" (CNPS 2009).

Although dense, invasive broom (*Genista monspessulana*) and blue gum eucalyptus (*Eucalyptus globulus*) groves extend uphill from disturbed land around the former fuel depot and wine facilities, the author has observed that intact coastal prairie, coastal scrub, coastal strand, mixed riparian, and seasonal wetland plant communities still appear to cover the majority of the largely vegetated site. These native plant communities show signs of stability and a long residence. A walk through these hills will reveal stately toyon (*Heteromeles arbutifolia*) shrubs that can be mistaken for coast live oak (*Quercus agrifolia*) trees.

CNPS hkers take a lunch break on coastal prairie with view of San Pablo Bay. *Photo: David Amme*

Dense purple needlegrass (*Nassella pulchra*) prairie on hills in the south section of the project area; Toyon (*Heteromenles arbutifolia*) "tree" in background *Photo: Jim Hanson*

Visits by the author and others point to ecological mysteries awaiting discovery here. For instance, invasive fennel (*Foeniculum vulgare*) dominates in thick patches on disturbed sites in the Bay Area. In the coastal prairie at Point Molate, fennel plants appear to be in balance as simply another resident grassland forb. Sporadically spaced fennel plants are heavily pruned back and kept in check (possibly due to the acquired taste of the resident deer).

Among the blue gum eucalyptus, occasional *Ribes* species, toyon, and blue Molate fescue still persist.

Amme (pers. comm. 2003), has observed that the native coastal prairies seem to somehow also keep persistent coyote brush (*Baccharis pilularis consanguinea*) in check.

Claim to Point Molate Challenged

To turn Point Molate into a casino development, federal law requires that a tribe prove it has "a significant historical connection" to any land acquired after 1988. (A "Restored Lands exception" allows gambling if original ancestral land is restored.) (Contra Costa County 2008a,b; 2009).

The Contra Costa County Board of Supervisors weighed in on this question by conducting in-depth studies of the tribe's ancestral residence claim. In a February 27, 2008, letter, Board of Supervisors Chair Federal D. Glover stated unequivocally that "(the tribe) has no geographic, historic, cultural, or modern connection to the Point Molate property…. Outside investors acquired the property for the sole purpose of using the Band to build an urban casino in Contra Costa County and thus tap into the lucrative San Francisco Bay Area market" (Contra Costa County 2008a).

Despite the determination that the Band had no viable historical or modern connection to the Point Molate site, the Board of Supervisors recently dropped its objection to the project after Supervisor John Gioia abruptly reversed his position. Revenue promises were made to the County, a move the *Contra Costa Times* (2009) called paltry and "a horrible sell-out deal." (The County's determination that the Costanoans historically resided in the East Bay has not been retracted.)

Many residents to this day do not know that a mega-casino is actively in the works

EIR OMITS COASTAL PRAIRIE, continued on page 7

Classification of Grasslands at Point Molate, Contra Costa County, California, Using the New *Manual of California Vegetation*

With the release of the new *Manual of California Vegetation, Second Edition, (*hereafter *MCV2)* published by the California Native Plant Society in collaboration with the California Department of Fish and Game (Sawyer, Keeler-Wolf, and Evens 2009), it is possible for ecologists to communicate regarding vegetation types more clearly. We hope to review this document as it pertains to grasslands in a future edition of *Grasslands*. However, based on what we know of the grassland vegetation at Pt. Molate, we believe that much of the grassland vegetation most closely resembles the following Alliances, as described in the *MCV2*:

- *Danthonia californica* Alliance;
- *Festuca rubra* Alliance; and
- *Nassella pulchra* Alliance

Although we have no quantitative data on which to base this, we have species lists and observations from numerous field trips to the area led by CNGA Past President and Grass Identification Instructor David Amme. We observe that significant areas of native perennial grassland, along with a native perennial grass understory within coastal scrub, occur within the project site. However, in the environmental review documents for the proposed casino at Point Molate, all grasslands within the project boundaries have been lumped, we believe erroneously, into "California Annual Grasslands" without any discussion of the native perennial stands.

As noted in the accompanying article, the coastal prairie at Point Molate is rare in the Bay Area by virtue of size, substrate, abundance, and as a living example of the natural heritage of the San Franscisco Bay. Intact Bay Area coastal grassland is most often found on serpentine because the magnesium and iron-rich substrates inhibit annual weeds. Point Molate's high native perennial grass abundance is found on a fine "Millsholm" loam—a material weathered from sandstone and shale (California Soil Resource Lab 2009). The individual major native grassland plant communities that are present at Pt. Molate (*Danthonia californica, Festuca rubra,* and *Nassella pulchra*) are also considered rare plant communities by the California Department of Fish and Game (2003).

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for public land on San Francisco Bay. The Web sites and newsletters of many local politicians, and even several large, well-known Bay Area environmental groups, have yet to state a position. Consequently, media coverage has been scant. At the same time, Mayor Gayle McLaughlin of Richmond (Brenneman 2009) and Citizens for a Sustainable Point Molate (CFSPM 2009) continue to press for what they believe are more forward-thinking alternatives that better promote the health of Richmond and the Bay Area.

The Choice Ahead

The final decision may rest with the Bureau of Indian Affairs and Interior Secretary Kenneth Salazar's enforcement of federal law on the Restored Lands exception. In September, Senators Boxer and Feinstein wrote to Secretary Salazar expressing strong opposition to taking off-reservation lands into trust for gaming purposes.

The majority of Bay Area voters tend to be politically liberal and accept tribal gambling as a way to address past wrongs, which for Bay Area tribes began with Spanish settlements and missions (Goerke 2007). Yet, in-depth reports over the years are bringing to light economic and environmental justice issues resulting from current-day tribal gambling expansion (Barlett and Steele 2002a,b; King 1989; USA Today 2008; University of Buffalo 2005; Owings 2007; Marinucci 2009).

Also, differences of values for local land-use are surfacing in some California communities that already have large gambling complexes. Several years ago, the Rumsey Band of Wintun Indians proposed tripling their Cache Creek Casino complex in the rural, largely agricultural Capay Valley outside Woodland and Davis in Yolo County. For years, the Capay Valley has been a leading supplier of healthy fruits and vegetables by small, independent growers, many of whom deliver organic produce to Bay Area farmers' markets and restaurants.

Talks broke down after Supervisors concluded that the tribe's environmental impact report (TEIR) was inadequate and at odds with the preservation of the rural character and agrarian economy of Yolo County. Among other concerns, Supervisors asked how the TEIR could project a 37-percent increase in traffic when the tribe's complex would be expanded 300 percent. Yolo County Board of Supervisors Chair

EIR OMITS COASTAL PRAIRIE, continued on page 8

EIR OMITS COASTAL PRAIRIE, continued from page 7

Helen Thomson stated "my main concern (is) the apparent neglect the Tribal EIR shows toward the expansion's environmental impacts. It scratches the surface, then seemingly decides to leave well enough alone once a set amount of money is paid for specific county services" (Thomson 2009). (Note: The tribal operators of the Cache Creek Casino have joined the Point Molate casino development partnership and will provide initial financing for, and operation of, the estimated $1 billion project [Brenneman 2009]. The recent recession led to withdrawal of Cache Creek expansion plans in Yolo County).

The heritage native prairie located within the project boundaries is labeled only as a weedy "annual grassland."

Locally, some are asking why the Bay Area cannot instead assemble the region's technical, academic, and managerial wealth into a forward-thinking economic development that can grow trained, diverse talent for the competitive, new global economy, while enhancing Point Molate's quiet beauty at the same time.

In January 2010, the Richmond City Council is planning to decide the adequacy of the mega-casino Draft EIR/EIS for Point Molate and the Bay Area. CNGA takes the position that the Draft EIR is not acceptable as a Final EIR due to informational inadequacies, particularly regarding the specific description of, impacts on, and possible mitigations to rare coastal prairie.

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GET INVOLVED: *Readers are encouraged to research the mega-casino proposed for this natural area at Point Molate (soon) with the links provided and Web searches on the topic—and talk about what's at stake here with everyone you know.*

Send your position to any of decision-makers below. Short e-mails or twitters are fine.

- For Richmond City Council members, see http://www.ci.richmond.ca.us/index.aspx?nid=29 for e-mail contact links.
- For the Interior Secretary, write to: The Honorable Kenneth Salazar, Secretary of the Interior, U.S. Department of the Interior, 1849 C Street, N.W., Washington DC 20240; or access his e-mail link at http://www.doi.gov/contact.html.
- For Senator Diane Feinstein, e-mail from: http://feinstein.senate.gov/public/.
- For Senator Barbara Boxer, e-mail from: http://boxer.senate.gov/.
- California members of the House of Representatives are listed at: http://www.house.gov/house/MemberWWW_by_State.shtml#ca.

Northern Harriers are year-round residents requiring forb- or grass-dominated areas. Harriers may need nearby wetlands and will forage in certain types of agriculture (Draft Grassland Bird Conservation Plan). *Photo: Steve Baranoff*

Enhancing Grassland Restoration for Grassland Birds

Rodd Kelsey, *Audubon California*

Breeding bird surveys over the last four decades reveal a downward trend in California's grassland bird populations. About two decades ago grassland restoration efforts began in earnest in order to retain the benefits of California's native grassland diversity.

One of the often-cited justifications for native grassland restoration is to provide habitat for wildlife dependent on grasslands, including grassland dependent birds. However, we know relatively little about the specific habitat requirements of many species in California. It is important that we consider and account for how native grassland restoration projects can benefit grassland birds, especially since grassland birds vary significantly in their habitat needs in terms of grassland composition and structure (Vickery and Herkert 2001).

Grassland Birds in Decline

Grassland birds are of real conservation concern, and grassland restoration certainly has an important role to play in reversing declines. Grassland birds are among the fastest and most consistently declining birds in North America (Peterjohn and Sauer 1999). Seventy percent of the grassland birds in North America continue to decline, and nearly half are of conservation concern according to the North American Bird Conservation Initiative (U.S. NABCI Committee 2009).

Several species are state listed as Species of Special Concern: grasshopper sparrow, burrowing owl, short-eared owl, northern harrier (breeding and/or winter), and mountain plover (winter only).

While considerable focus has been given to grassland birds in the Midwestern prairies, similar declines are evident in California for some species (e.g., western meadowlark, Fig. 1). Major reasons for these declines are the same that have contributed to the loss of native California grasslands in general: habitat loss to agriculture, habitat fragmentation, disruption of natural fire regimes, encroachment of woody vegetation, and invasion of exotic plants.

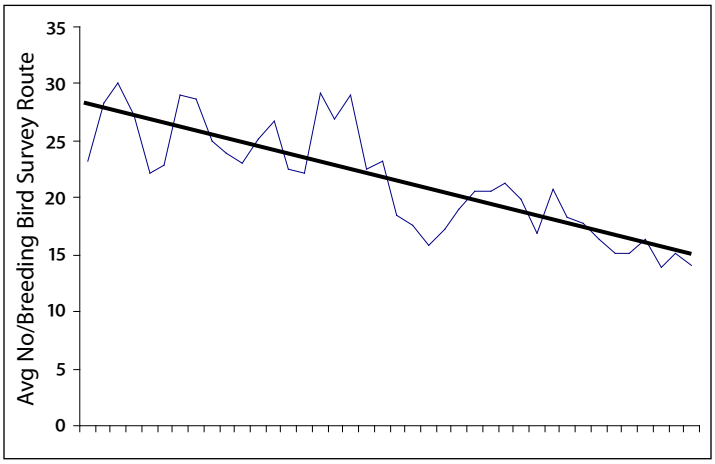


Figure 1. Western Meadowlark population trend in California, 1966–2007 (Sauer et al. 2008)

Grassland birds are among the fastest and most consistently declining birds in North America.

How Many Birds Rely on Grasslands?

Many bird species use grasslands for at least part of their life history; however, the simple physical structure of grasslands results in relatively few grassland specialists, birds that depend almost exclusively on grassland habitats. Approximately 55 bird species are typically associated with grasslands in California. Miller (1951) and Goerrissen (2005) found 76 different species in grassland study plots across California. About 20 of these bird species rely heavily on grasslands or surrogate habitats (e.g., agricultural crops), and only eight of these are considered grassland specialists that breed and forage in

GRASSLAND BIRDS, continued from page 10

GRASSLAND BIRDS, continued from page 9

California grasslands extensively (Table 1). It is important to recognize that grasslands may provide particularly valuable overwintering habitat for these and many other species since the diversity and abundance of birds in California grasslands is significantly greater during the winter and spring than it is during the summer breeding season (Goerrissen 2005). Nevertheless, the value of grasslands as wintering habitat is often overlooked, and the availability and condition of grasslands during winter may have significant consequences for continued migration and subsequent breeding success (Herkert et al. 1996; Vickery and Herkert 2001).

Comparisons of Non-native and Native Grasslands

Very few studies have been completed on grassland bird habitat preferences in California, or how reproduction and survival are influenced by habitat type. However, the effects of grassland physical structure and plant species composition on bird communities have been studied more extensively in other regions (Rotenberry and Wiens 1980, Best et al. 1997, Herkert et al. 1996). Two recent studies have indicated that there are no clear relationships between grassland bird abundance or diversity and native plant cover (Goerrissen 2005, Gennet 2007). Goerrissen (2005) found that diversity and abundance of bird species did not significantly differ during the breeding season among native and exotic grasslands in California. However, when the type of native grassland was accounted for, grassland bird diversity and abundance were greater in native fields dominated by bunchgrasses, but not in fields dominated by creeping wildrye (*Leymus triticoides*). Goerrissen (2005) also found that many bird species not considered grassland specialists were strongly associated with annual grasslands and grasslands dominated by creeping wildrye. Northern harriers and mallards that nest in grasslands may prefer these due to increased cover for nests and their ability to use more dense grasslands. However, it is important to note that northern harriers aren't completely grassland birds in the traditional sense—they are often heavily associated with shrubs and wetlands and a mosaic of habitat types and have the ability to hunt in a diversity of habitat types.

The grasshopper sparrow is a summer resident, but may be a year-round resident in some areas. It needs less than 30% total shrub cover, large patch size, and bunchgrasses (*Draft Grassland Bird Conservation Plan*) *Photo: Laura Erickson*

Table 1. Grassland specialist bird species in California

Species	Population Trend*
Northern harrier	–1.1
Ring-neck pheasant (non-native)	–1.7
Short-eared owl	–2.4
Burrowing owl	–1.4
Horned lark	–1.8
Savannah sparrow	–1.1
Grasshopper sparrow	–3.6
Western meadowlark	–0.9

*Breeding Bird Survey for U.S., 1966–2007

Similarly, Gennet (2007) found that relationships between grassland specialist birds and native plant cover varied from year to year (possibly associated with rainfall), and there was great variation in response among different bird species to native plant cover. These results suggest that restoration of native grasslands does not automatically provide superior habitat for grassland birds. In other words, whether grassland is valuable habitat is more complicated than native versus nonnative.

The Importance of Structure and Composition

Structure and management of grasslands may be more important than species composition of the grassland (Table 2). Bird community composition and species abundance have been found to vary across gradients of structural heterogeneity in grasslands of the Midwestern prairie

GRASSLAND BIRDS, continued on page 11

GRASSLAND BIRDS, continued from page 10

(Chapman et al. 2004, Sutter and Brigham 1998, Vickery and Herkert 1999) and in California (Goerrissen 2005, Gennet 2007). Not all grassland birds are created equal, and the degree to which they depend on grasslands of specific types varies. Grassland specialist birds may be particularly susceptible to differences in physical structure and presence or absence of specific kinds of plant species. These attributes are associated with both floristic composition and management of the grassland.

For example, the grasshopper sparrow preferentially selects and breeds more successfully in grasslands dominated by perennial bunchgrasses, presumably due to the clumped structure of bunchgrasses like purple needlegrass (*Nassella pulchra*) in which they can more easily hunt insects among bare ground patches (Goerrissen 2005, Collier 1994, Vickery 1996). Grasshopper sparrows and other similar species tend to avoid grasslands with very dense structure, including that created by creeping wildrye, a grass species commonly found in riparian and estuarine uplands.

However, other bird species are less particular. Western meadowlarks, both in the breeding season and winter, are more tolerant of a range of grassland types, using both native bunchgrass and exotic annual grasslands (Goerrissen 2005, Rotenberry and Wiens 1980, Gennet 2007). And still others, such as northern harriers (see photo, p. 9), appear to readily use dense grasslands such as those created by creeping wildrye, often in association with a mosaic of habitats, including freshwater wetlands and tidal marshes. Similarly, in Illinois, northern harriers and short-eared owls do not show a preference for native over non-native grasslands, but vary in their habitat selection based on grassland management that influences habitat structure (Herkert et al. 1999).

Floristic composition may also be critical. Many native grassland restorations tend to result in low-diversity monocultures when dominant species outcompete most

GRASSLAND BIRDS, continued on page 12

Table 2. Focal Grassland Bird Species Status and Habitat Needs Based on the *Grasslands Bird Conservation Plan**

Species	Life History	State Status	Federal Status	Habitat Needs
Ferruginous hawk	Winters in California.	CSC	MNBMC FSC	Large patch size of grassland; has adapted to some forms of agriculture.
Grasshopper sparrow	Summer resident, may be year-round resident in some areas.	None	MNBMC	Less than 30% total shrub cover, large patch size, bunchgrasses.
Mountain plover	Winters in California.	CSC	FPT MNBMC	Sparsely vegetated or heavily grazed grasslands, disked agricultural lands, or nearly barren areas.
Northern harrier	Year-round resident, numbers augmented by birds migrating from the north in winter.	CSC	MNBMC	Forb- or grass- dominated areas, may need nearby wetlands; will forage in certain types of agriculture.
Western meadowlark	Year-round resident, numbers augmented by birds migrating from the north in winter.	None	None	Grassland generalist
Savannah sparrow	Dependent on subspecies, most remain in California year-round, numbers augmented by birds migrating from the north in winter.	Subspecies *beldingi*: SE	None	Dense vegetation in open country: meadows, pastures, fields, etc.
White-tailed kite	Year-round resident, may be nomadic in search of prey.	FP	None	Uses open areas (grasslands, oak woodland, savannah, riparian, and some agriculture) for foraging; nests and roosts in woodlands.

*Source: California Partners in Flight (2000), Chapter 3: Conservation Planning Process

NOTE: The burrowing owl was not selected as a focal species under the *Grassland Bird Conservation Plan*.

Other species that nest and/or primarily forage (summer or winter) in grasslands include tricolored blackbird, horned lark, wintering sandhill cranes, Swainson's hawk, song sparrow, blue grosbeak, mallard, cinnamon teal, gadwall and ring-necked pheasant.

MNBMC: Fish and Wildlife Service Migratory Non-game Bird of Management Concern; **CSC:** CDFG California Species of Special Concern
FP: California Department of Fish and Game (CDFG) Fully Protected; **FPT:** Federally Proposed for listing as Threatened
FSC: Federal Special Concern Species; **SE:** State listed as Endangered

GRASSLAND BIRDS, continued from page 10

others (Lulow et al. 2007), whereas many grasslands that are diverse in plant species composition tend to support a greater diversity of birds (Herkert et al. 1996), even if that mix of plants includes exotic species. Forbs in particular may be a critical component, increasing the habitat value of grasslands for many birds by hosting more insects, which are frequently an essential food during the breeding season. Goerrissen (2005) found that forb diversity tended to be higher in remnant native grasslands and non-native annual grasslands than in restored grasslands, particularly if creeping wildrye was a major component.

In general, these and other results point to the importance of variable physical structure and floristic composition at local and landscape scales to provide high quality habitat for a diversity of grassland birds. Any grassland created or maintained as a monoculture may be less suitable because it does not allow for the structural diversity or floristic composition likely to support a diversity of birds.

The Horned Lark is a year-round resident that nests in ground depressions lined with grasses next to a grass clump or clod of manure. The male does a courtship flight up to 800 ft high, circling and singing at the top, then diving down quietly (Stokes 1996). *Photo: George Jameson*

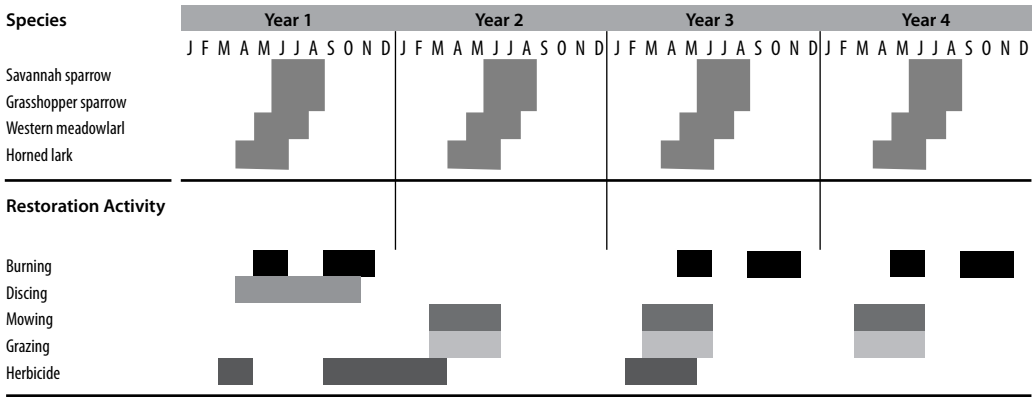
Conclusions and Recommendations

This review of grassland bird habitat preferences relative to grassland restoration is not exhaustive, and there are many unknowns. However, the following recommendations for approaches or actions, if incorporated into our planning, could result in greater habitat value of grassland restoration sites for many birds that really need the help. Goerrissen (2005) provides a valuable overview of impacts of varying restoration and management options for increasing the habitat value of California grasslands for birds.

- **Increase structural diversity of grasslands** or restore and manage to create structure appropriate for a target bird species. A dense stand of one bunchgrass species over a large area, with few openings among bunches, can have limited habitat value for certain birds. Related to this is thatch buildup; dense thatch tends to prohibit nesting for some birds. Means to increase the structural complexity of grasslands are the same used to restore grasslands, but they need to be applied with enhancing bird habitat in mind. These include appropriate selection and management for specific sets of plant species, use of reduced seeding rates that result in less dense stands, selective or rotational grazing, non-breeding season mowing, and/or prescribed burning.
- **Increase floristic diversity:** more diverse grasslands are likely to provide greater insect abundance that supports

GRASSLAND BIRDS, continued on page 12

Figure 2. Overlap in breeding season of grassland nesting birds and typical timing of grassland management activities.



GRASSLAND BIRDS, continued from page 11

bird populations. However, this is a central challenge for grassland restoration, particularly in terms of successfully incorporating forbs.

One way to increase floristic diversity may be management that creates patches of different types within the landscape, as opposed to working toward having uniformly diverse grasslands. This is likely to include public and private landowners managing for the conservation of existing native grass and forb islands within annual-dominated grasslands. Also, it is worth considering the potential for reintroduction of native grasses and forbs into existing grasslands, then managing to maintain a mix of both natives and non-invasive exotic annuals. Such an approach may help increase diversity and structural complexity of the grassland without requiring the efforts typically required to recreate an entirely native system.

- **Identify specific bird targets** as part of the planning process for grassland restoration: this will enable a restoration planning team and land managers to identify the attributes and management options to create habitat for a particular set of bird species of conservation concern.
- **To the extent possible, time mowing, grazing, burning, and herbicide treatments to avoid the nesting season** (March through July). This is challenging because it overlaps with the best time to control invasive exotic weeds (Fig. 2). Bird response to these activities varies among species and depends on the timing and intensity of management action. For example, some species respond favorably to moderate to heavy grazing, while others do not, and this is usually related to preferences for specific structural characteristics. An important option is to rotate management actions among fields or sites each year so that there always remains some portion of the managed landscape that is undisturbed or at a different stage every year. This is likely to increase the overall diversity of birds.
- **Use surveys to determine if sensitive species are present and breeding,** and change management to provide particular protection to these species.
- **Consider management of grasslands in winter** as an important component of managing a habitat for wintering songbirds and raptors. For example, in cases where management activities such as mowing or burning are being applied during winter for logistical reasons or to avoid the growing and breeding season, consider leaving some areas undisturbed that will remain as suitable winter habitat.

Resources

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GRASSLAND BIRDS, continued on page 13

The western meadowlark is a year-round resident and grassland generalist with numbers augmented by northern birds in winter (California Partners in Flight 2000) *Photo: Kevin Cole*

GRASSLAND BIRDS, continued from page 12

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Key Concepts about Bird Conservation

from the *Draft Grassland Bird Conservation Plan*

The following list of key concepts for bird conservation should be communicated through education and outreach programs. These concepts are important to include in any program concerning conservation, and are indispensable in programs focusing on birds and riparian habitats.

Reproductive success may be the most important factor influencing population health. It contributes directly to a population's size and viability in an area. A number of factors influence reproductive success, including predation, parasitism, nest site availability, and food availability.

Nesting habitat requirements vary among species. Different bird species place their nests in different locations, from directly on the ground to the tops of trees. Most birds nest within 5 meters of the ground. Managers should consider that habitat needs for different species vary. Leave grass and forbs greater than 6 inches in height for ground nesters, shrubs and trees for low to mid-height nesters, dead trees and snags for cavity nesters, and old, tall trees for birds that build their nests in the canopy.

The breeding season is a short but vital period in birds' lives. Birds nest during the spring and early summer of each year and raise their young in a rather short period. Nestlings are particularly sensitive to changes in the environment and are sensitive indicators of ecosystem health. Disturbance, such as vegetation clearing, habitat restoration, and recreation, may result in nest abandonment, remove potential nest sites, directly destroy nests, expose nests to predators, and decrease food sources such as insects. Predators, such as domestic cats, skunks, and jays, can decimate breeding populations, and managers should avoid subsidizing their populations.

Understory (the weedy, shrubby growth underneath trees) is crucial to many birds. A healthy and diverse understory with lots of ground cover offers well-concealed nest and foraging sites. Manicured parks and mowed lawns provide poor nesting conditions for all but a few bird species.

Native plants are important to birds. Native bird populations evolved with the local vegetation, learning to forage upon and nest in certain species. Introduced plant species may not provide the same nutrition or nest site quality. Introduced plants can also quickly dominate an area, reducing the diversity of vegetation. Less diverse vegetation can lower the productivity and viability of a bird population.

Natural predator–prey relationships are balanced, but human disturbance creates an imbalanced system. Interactions with predators are a natural and essential part of an ecosystem. However, a preponderance of non-native predators or a sustained surplus of natural predators severely affects the health and persistence of bird populations. Feeding wildlife, especially foxes, raccoons, and skunks, should be discouraged. Feeders that are frequented by jays and crows and cowbirds should not be maintained during the breeding season (most songbirds feed their young insects). Domestic and feral cats are responsible for an estimated 4.4 million birds killed each day (Stallcup 1991). It is not true that a well-fed cat will not hunt! In fact, a healthy cat is a more effective predator.

Natural processes, such as flood and fire, are integral to a healthy ecosystem. They provide the natural disturbance needed in an area to keep the vegetative diversity high, an important factor for birds.

Source: California Partners in Flight and Point Reyes Bird Observatory 2000

The Sonoma County Water Agency presents:

Using California Native Grasses in the Water-Conserving Landscape

A California Native Grasslands Association Workshop

Friday, February 5, 2010, 8 a.m. – 4 p.m.

SCWA, Redwood Rooms B & C, 404 Aviation Boulevard, Santa Rosa

$70/CNGA members & SCWA Staff, $110/Non-members, $50/Students w ID

Registration deadline January 28

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, contractors, engineers, planners, parks & recreation staff, biologists, regulatory staff, land & resource managers, nursery practitioners, and homeowners.

Reduced workshop fees are made possible by a generous donation from SCWA!

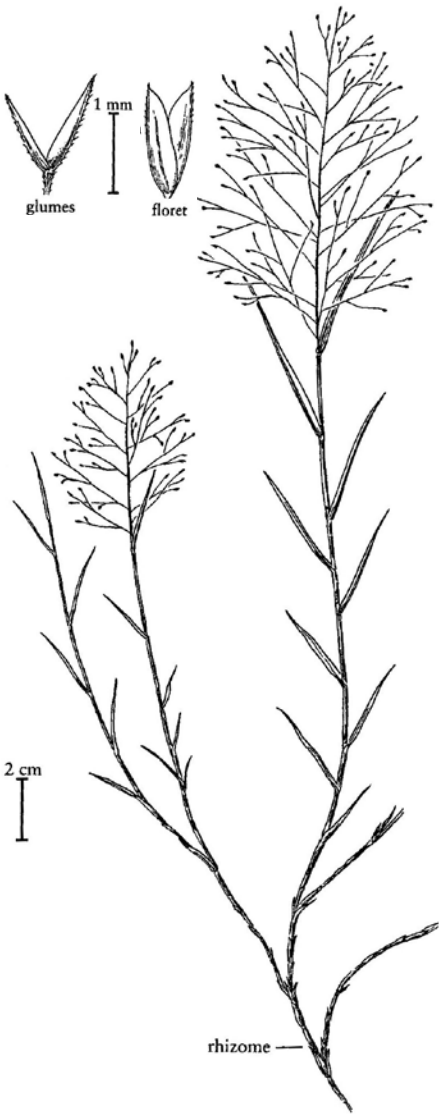
Instructors: Steve Nawrath, David Amme, and Wade Belew

Register online at www.CNGA.org or use form on page 19.

FIELD NOTES, continued from page 4

2,000 to 9,000 ft in the higher mountain elevations associated with yellow pine forest up to subalpine forest. At the Regional Parks Botanic Garden, it seems preadapted to forming permanent summer green meadows.

Scratchgrass is a delicate, perennial, creeping muhly with spreading slender scaly rhizomes and aboveground stolons (see illustration, below). It is associated with alkali soils and is found in wet meadows, irrigation ditches, and stream banks, growing from 400 ft to 7,000 ft in elevation. It grows up to a foot or more in height as a dense stand, binding the soil with its deep roots and surface rhizomes.



M. asperifolia

Scratchgrass *Flora of North America, Vol 25*

The California Native Grasslands Association presents

Grasslands of the California North Coast

A 2-day Symposium with Field Trips
& Optional 2-day Grass ID Workshop

Thu & Fri, June 3-4, 2010

Symposium, Humboldt Area Foundation, Bayside
$175/CNGA members, $215/Non-members*, $100/Students w ID

Sat & Sun, June 5-6

Grass ID Workshop, Humboldt State (more details at www.CNGA.org.)
(TAKE $20 OFF FEE IF YOU ALSO REGISTER FOR SYMPOSIUM)
$220/CNGA members, $260/Non-members, $135/Students w ID

Join us as we explore native grassland habitats "behind the Redwood Curtain." The Symposium will include guest speakers, field trips to the Lanphere Dunes and the Bald Hills, exhibitors, panel presentation, Q&A's, networking opportunities, and a no-host evening dinner with speaker David Amme on "Creating a Native Meadow."

Presenters include:

- **Keynote Speaker: James P. Smith, Jr.,** Emeritus Professor of Botany, Humboldt State University
- **Julie Evens,** Vegetation Program Director, California Native Plant Society
- **Todd Keeler-Wolf,** Vegetation Classification and Mapping Senior Biologist, Department of Fish & Game
- **Gordon Leppig,** Environmental Scientist/Botanist, Department of Fish & Game
- **Andrea Pickart,** Ecologist, Humboldt Bay National Wildlife Refuge
- **Leonel Arquello,** Supervisory Botanist, Redwood National and State Parks
- **Jennifer Wheeler,** Botanist, Bureau of Land Management
- **John Anderson,** Owner, Hedgerow Farms
- **Bryan Young,** Manager, Bufferlands, Sacramento Regional Wastewater Treatment Plant
- **David Amme,** Wildlands Vegetation Program Manager, East Bay Regional Park District

Register online at www.CNGA.org or use form on page 19.

CNGA 2010 Workshops and Events

1 Using California Native Grasses in the Water-Conserving Landscape

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.

Friday, February 5 • 8 a.m.-4 p.m.

Instructors: Steve Nawrath, David Amme, and Wade Belew

Co-sponsor: Sonoma County Water Agency

Location: Redwood Rooms A–C, 404 Aviation Boulevard, Santa Rosa

Enrollment: limited to 40

Registration Fees: *Reduced fees made possible by the generous sponsorship of SCWA:* $70/CNGA members and SCWA staff; $110/nonmembers (includes 1-yr complimentary membership); $50/students. Includes continental breakfast and lunch.

2 CNGA Field Day at Hedgerow Farms

Join us for this third annual opportunity for practical, hands-on learning about native grasses and grassland restoration.

Friday, April 16 • 8 a.m.-4:30 p.m.

Instructors: TBA (will include John Anderson, David Amme, Chris Rose, Bryan Young, plus others)

Location: Hedgerow Farms, 21905 County Rd. 88, Winters

Registration Fees: $45/CNGA members, $65*/nonmembers; $35/students. (*Nonmember registrants entitled to 50% off 1-year CNGA membership.)

Register online at www.CNGA.org or use form on page 19.

3 Identifying the Native and Naturalized Grasses of Southern California and the Santa Rosa Plateau

Learn about California's grassland ecology and the qualities of specific native grasses for restoration. Become skilled at recognizing the basic groups and common species through work with plant samples in the classroom on Day 1 and in the field on Day 2.

Friday–Saturday, April 30–May 1 • 8:30 a.m.-4 p.m.

Instructors: David Amme and Zachary Principe

Locations: Fallbrook Public Utilities Building, 990 E. Mission Road, and the Santa Rosa Plateau

Enrollment: limited to 35

Registration Fees: $220/CNGA members; $260/nonmembers (includes 1 yr complimentary membership); $135/students.

4 Identifying the Native and Naturalized Grasses of Northern California

Learn about California's grassland ecology and the qualities of specific native grasses for restoration. Become skilled at recognizing the basic groups and common species through work with plant samples in the classroom on Day 1 and in the field on Day 2.

Saturday–Sunday, May 22–23 • 8:30 a.m.-4 p.m.

Instructors: David Amme and Wade Belew

Locations: Point Reyes Dance Palace, 503 B Street, Point Reyes Station, and field sites

Enrollment: limited to 40

Registration Fees: $220/CNGA members; $260/nonmembers (includes 1-yr complimentary membership); $135/students.

5 OUR BIG EVENT! Grasslands of the California North Coast: A Symposium

Join us as we explore native grassland habitats behind the "Redwood Curtain." Two mornings include guest speakers, exhibitors, panel presentation, Q&As, and networking opportunities. Thursday is a no-host evening dinner with speaker David Amme on "Creating a Native Meadow." Two afternoons are field trips with transportation provided to the Lanphere Dunes and the Bald Hills.

Thursday–Friday, June 3-4 • 8:30 a.m.-4:30 p.m.

Location: Humboldt Area Foundation Community Center, 373 Indianola Road, Bayside

Enrollment: limited to 65

Speakers and Instructors: *See flyer on p. 17.*

Registration Fees: $175/CNGA members; $215/nonmembers (includes 1-yr complimentary CNGA membership); $100/students.

Identifying the Native and Naturalized Grasses of California's North Coast

On Day 1, learn about California's grassland ecology, the qualities of specific native grasses for restoration, and become skilled at recognizing the basic groups and common species through work with plant samples in the classroom. On Day 2, visit field sites to identify grasses and view restoration practices firsthand.

Saturday–Sunday, June 5–6 • 8:30 a.m.-4 p.m.

Instructor: David Amme

Locations: Humboldt State University, Arcata, and field sites.

Enrollment: limited to 30

Registration Fees: $220/CNGA members; $260/nonmembers (includes 1-yr complimentary membership); $135/students ***($20 discount for this workshop if you register for June 3–4 Symposium!)***

And there's more!

Look for these workshops in the fall:

Half-day: **Creating a Native Meadow Lawn**

Homeowners: Are you fed up with your lawn and all the attention and water it requires? This workshop is for you! Whether starting from bare ground or looking to replace maintenance-hungry turf, learn how to develop and maintain a native meadow on your own property.

One-day: **Grassland Restoration Field Practices Workshop**

This field course will provide attendees with real-world experience in the preparation, planting, establishment, and maintenance of native grasslands. Instructors will demonstrate tools of the trade applicable to both large- and small-scale native grassland restoration projects.

One-day: **Grassland Monitoring Workshop**

Monitoring is a critical component of a grassland management program. This course will discuss goal setting for rangeland/grassland management as well as grassland restoration projects. Attendees will then learn grassland monitoring techniques that can be used to ascertain progress toward meeting those goals.

Watch our website for more details on these workshops as they are finalized: www.CNGA.org.

Registration Form: CNGA Winter/Spring Workshops | 2010

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

Participant's name (print or type please) _____

Participant's organization or agency (optional) _____

Mailing Address: Street _____ City _____ State _____ Zip _____

Preferred phone _____ _____ Preferred e-mail _____

Registration Fees:

1. ***Using California Native Grasses in the Water-Conserving Landscape*** ..... ☐ $70/CNGA members/SCWA staff ☐ $110/nonmembers* ☐ $50/students
2. ***CNGA Field Day at Hedgerow Farms*** ..... ☐ $45/CNGA members ☐ $65/nonmembers** ☐ $35/students
3. ***Identifying the Native and Naturalized Grasses of Southern California and the Santa Rosa Plateau*** ..... ☐ $220/CNGA members ☐ $260/nonmembers* ☐ $135/students
4. ***Identifying the Native and Naturalized Grasses of Northern California*** ..... ☐ $220/CNGA members ☐ $260/nonmembers* ☐ $135/students
5. ***Grasslands of the California North Coast: A Symposium*** ..... ☐ $175/CNGA members ☐ $215/nonmembers* ☐ $100/students
6. ***Identifying the Native and Naturalized Grasses of California's North Coast*** .... ☐ $220/CNGA members ☐ $260/nonmembers* ☐ $135/students
   (20% discount with Symposium registration) ... ☐ $200/CNGA members ☐ $240/nonmembers* ☐ $115/students

* One year of complimentary CNGA membership benefits is included with registration at nonmember rate.
**Nonmember registrants entitled to 50% off 1-year CNGA membership

☐ Payment by check made payable to California Native Grasslands Association
☐ Payment by credit card (please check type) ☐ Visa ☐ MasterCard ☐ American Express

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Questions concerning registration? Please contact CNGA by phone/fax: 530-661-2280, or e-mail: admin@cnga.org.

CNGA Merchandise Order Form

Phone/Fax: 530-661-2280 **Mail:** P.O. Box 8327, Woodland, CA 95776

Name _____
Mailing address _____
City, State, Zip _____
Day phone _____ **E-mail** _____

Item (All prices include tax. Call for combined shipping.)	**Price**	**S/H**	**Qty**	**Total**
CNGA Logo Items				
SALE! **Sturdy canvas tote,** natural w/green logo, 13x15x7	$15	$4	___	____
SALE! **Baseball cap,** tan w/black logo, adjustable, was $20	$15	$4	___	____
SALE! **Crush hat** (aka **bucket hat),** green, S/M only, was $20	$15	$4	___	____
Tees unisex heather-green, short-sleeve (S/L/XXL/XXXL)	$15	$4	___	____
NEW! unisex natural, short-sleeve (S/M/L/XL)	$20	$4	___	____
NEW! women's, army-green, short-sleeve (S/M/L/XL/XXL)	$25	$4	___	____
Long-sleeve unisex, olive green (S/M/XL/XXL/XXXL)	$25	$4	___	____
CNGA Workshop Binders				
Restoration and Revegetation	$60	$6	___	____
Ecology/Management Vernal Pool Grasslands (supply limited)	$35	$5	___	____
Native Grasses/Graminoids Urban Landscape	$35	$5	___	____
Grass Identification	$20	$4	___	____
Posters: Grasses of CA 24x36, laminated	$25	$4	___	____
(CNPS) set of 4, each different, 24x36, unlaminated	$20	$4	___	____
SALE! **Notecards:** set of 6, with envelopes, was $10	$8	$2	___	____
Grasslands				
Complete set of back issues (1991–2009)	$60	$10	___	____
subtotals		$ ____		$____

Total Enclosed $_____

Make check payable to California Native Grasslands Association (or CNGA) or you may authorize payment by (circle one): Mastercard / Visa / AMEX

Card # _____ **Exp. date** _____
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Meet Your New CNGA Board Members

Election results are in for the 2010 CNGA Board of Directors! The 83 ballots received represent 15% of the CNGA membership, well beyond the 5% minimum specified in the bylaws. Re-elected were Jim Hanson for Treasurer, Sara Sweet for Secretary; and Board Members-at-Large Andrew Fulks, JP Marié, and Zachary Principe for 2-year terms. Newly elected are three Members-at-Large: Elizabeth Goebel, Jon O'Brien, and Christina Smith. Their bios appear below. For a complete list of the 2010 CNGA Board, see the *Contact List* below. Congratulations and welcome to all of the elected Directors and Officers. An official welcome will take place at the January 22, 2010, Board meeting.

Elizabeth Goebel is the Product Operations and Outreach Coordinator at Hedgerow Farms, a native plant seed production farm in Winters, California. She has a background in restoration ecology, public education, and outreach, and has volunteered and worked for Audubon California and mentored with the Center for Land-Based Learning in Yolo County.

Elizabeth, a UC Davis graduate (2009) with a Masters Degree in Restoration Ecology (specifically of grasslands), is interested in strengthening the Board's ties to academia and increasing its reach to the public of all ages. She would also like to improve outreach to contractors and government agencies implementing native plantings to increase awareness of the use of native grasses as replacements for non-native seed mixes in a variety of settings.

Jon O'Brien is a Habitat Restorationist at Audubon California's Landowner Stewardship Program in Winters, California, where his principal responsibilities include planning and performing habitat restoration in grasslands, oak woodlands, and riparian areas in the southern Sacramento Valley and surrounding foothills.

His work experience also includes habitat restoration in grassland and coastal sage scrub communities of Southern California and in the coastal dune habitats of Point Reyes. His Master's research at UC Davis focused on the effects of a biological control fungus on yellow starthistle.

Jon, a CNGA member since 2005, has attended and presented posters at several conferences. He is a self-identified "grass enthusiast" who is passionate about habitat restoration, especially in the grassland context.

Christina Smith, an Agronomist at the USDA, NRCS California Plant Materials Center in Lockeford, California, travels the state to make seed collections. She is interested in how integrated farming systems can work for both the producer and the environment.

Her interests have expanded from the traditional IPM approach of progressive conventional farming operations, to how such systems function in animal-based production systems. It was within this context that her interest in native grasses and the related ecosystems began.

Christina earned a Bachelor of Science Degree in Agronomy (emphasis in Crop Production Systems) from Cal Poly Pomona. She maintains a multi-category Pest Control Advisor license and Qualified Applicator Certificate and has been a California Certified Crop Advisor since 2002.

CNGA Contact List

Board of Directors

Officers

Wade Belew, President
Cotati Creek Critters; P.O. Box 7511, Cotati, CA 94931
707-694-5086; E-mail: wadekb@sonic.net

David Amme, Past President
East Bay Regional Park District
2950 Peralta Oaks Ct., Oakland, CA 94605
510-544-2344; E-mail: damme@epiphany2000.com

Sara Sweet, Secretary
The Nature Conservancy
13501 Franklin Blvd., Galt, CA 95632
916-683-1767; E-mail: ssweet@tnc.org

Jim Hanson, Treasurer
Caltrans: Mitigation and Highway Landscaping
438 49th St., Oakland, CA 94609 (mailing)
510-450-2450 (day); E-mail: greenhectare@yahoo.com

At-Large Members

Andrew Fulks (2010–2011)
UC Davis Putah Creek Riparian Reserve
2723 Ganges Pl., Davis, CA 95616
530-752-0763; E-mail: amfulks@ucdavis.edu

Erik Gantenbein (2009–2010)
3721 Fair Oaks Boulevard, Sacramento, CA 95864
916-709-0045; E-mail: erikg22@att.net

Elizabeth Goebel (2010–2011)
Hedgerow Farms
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530-662-6847; E-mail: egoebel@hedgerowfarms.com

Clare Golec (2009–2010)
Caltrans, Eureka Office, Distr. 1
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707-445-6322; E-mail: clare_golec@dot.ca.gov

Sarah Hoskinson (2009–2010)
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530-752-5609; E-mail: sahoskinson@ucdavis.edu

Richard King (2009–2010)
USDA NRCS; 1301 Redwood Way, Suite 215,
Petaluma, CA 94954
707-794-8692 x120; E-mail: richard.king@ca.usda.gov

JP Marié (2010–2011)
UC Davis Putah Creek Riparian Reserve
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530-304-3251; E-mail: jpmarie@ucdavis.edu

Jon O'Brien (2010–2011)
Audubon California, Landowner Stewardship Program
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530-795-0660; E-mail: jobrien@audubon.org

Zachary Principe (2010–2011)
The Nature Conservancy
402 W. Broadway, Suite 1350, San Diego, CA 92101
909-815-2227; E-mail: zprincipe@TNC.org

Christina Smith (2010–2011)
USDA-NRCS, California Plant Materials Center
P.O. Box 68, Lockeford, CA 95237
209-727-5319, x15; E-mail: christina.smith@ca.usda.gov

Bryan Young (2009–2010)
Sacramento Regional County Sanitation Dist.
8521 Laguna Station Rd., Elk Grove, CA 95758
916-875-9273
E-mail: youngb@sacsewer.com

Alternate Member

David Kaplow (2009–2010)
P.O. Box 744, Petaluma, CA 94953
707-769-1213
E-mail: dave@pacificopenspace.com

Judy G-Scott
Administrative Director
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Phone/Fax: 530-661-2280 E-mail: admin@CNGA.org

Mary Rodgers
Grasslands Managing Editor
3661 56th St., Sacramento, CA 95820-2342
916-455-0563; E-mail: mrodgers@macnexus.org

Visit CNGA online at: www.CNGA.org

Membership Application

Detach and mail this form with a check made out to CNGA. | Send to: CNGA, P.O. Box 8327, Woodland, CA 95776. | Students, send photocopy of current ID.

Name _____ Title _____

Organization _____

Street _____

City _____ State _____ Zip _____

Phone _____ Fax _____ E-mail _____

CNGA members have voting status, and receive the "Grasslands" newsletter, a monthly e-blast, and discounts to CNGA events.

Individual Membership

☐ **Regular member:** $45/year ☐ **Student:** $30/year ☐ **Retired:** $30/year ☐ **Life member:** (one-time payment) $500

Individual Joint Membership

☐ **CNGA + SERCAL*:** $70/year ☐ **CNGA + CAL-IPC**:** $75/year ☐ **CNGA + SERCAL* + CAL-IPC**:** $105

*SERCAL = California Society for Ecological Restoration • **CAL-IPC = California Invasive Plant Council

Corporate Membership

☐ **Associate or Agency level:** $125/yr. Full membership benefits for three employees within the same small business or agency location. No benefits for CNGA major event.

☐ ***Poa secunda* level:** $300/yr. Full membership benefits for two employees, a business-card–sized ad for 1 year in *Grasslands*, and (with member payment of at least one registration), a free exhibit space at a major CNGA event.

☐ ***Nassella pulchra* level:** $500/yr. Full membership benefits for five employees, a quarter-page ad for 1 year in *Grasslands,* one free registration and one free exhibit space at a major CNGA event.

☐ ***Muhlenbergia rigens* level:** $1,000/yr. Full membership benefits for ten employees, a half-page ad for 1 year in *Grasslands*, and two free registrations and a free exhibit space at a major CNGA event.

CNGA's Bunchgrass Circle

Life Members

Jack Alderson
Jane Anderson
John Anderson
Fred Ballerini
Sheila Barry
Bob Battagin
F. Thomas Biglione
Jack Booth
Janice Bridge
Cindy Burrascano
Sallie J. Calhoun
Sally Casey
Frank Chan
Vic Claassen
Mike Conner
Anne Corey
Duane Cornett
Charlice Danielsen
James Dekloe
Robert Delzell
Rene di Rosa
Jerome Domurat
Bruce Eisenman
John R. Ekhoff
David Gilpin
F. Thomas Griggs
Jim Hanson
Barbara Herren
Lesley Hunt
Richard Ibarra
Ellie Insley
Joni Janecki
David Kaplow
David B. Kelley
Micki Kelly
Paul Kephart
Charlotte Kimball
Lenora Kirby
Ron Lutsko, Jr.
Rod MacDonald
Garry Mahrt
Eugene Majerowicz
Carolyn Malmstrom
Tamia Marg
Rhonda and Bob Mark
Ron Martinolich
Ruth Mazur
Mary Kate McKenna
Richard Nichols
Paul Ostler
Carol Presley
Peggy Rathman
Paul Reeberg
Diane Renshaw
John Roberts
Warren Roberts
Craig S. Rust
Victor Schaff
Robert Schott
Susan Schwartz
Jon Shilling
Jacob Sigg
Diana Steidl
Robert Stephens
Scott Stewart
Lillian Vallee
MaryAnn Warmerdam
John Wick
Margaret Willits
Jeanne Wirka
David Yam

Corporate Members

***Muhlenbergia rigens* level**

Hedgerow Farms

***Nassella pulchra* level**

Delta Bluegrass • Pacific Coast Seed • S&S Seed

***Poa secunda* level**

Elkhorn Native Plant Nursery • Restoration Resources • Shilling Seed

Associate Members

American River Parkway Foundation • Andrea Cochran Landscape Architecture
Animal Science Department, California Polytechnic State University, San Luis Obispo • Audubon Canyon Ranch • City of Davis • Contra Costa Water District
County of Orange, RDMD/Harbors, Beaches and Parks • Hollister Ranch
Irvine Ranch Conservancy • Los Angeles Chapter, California Native Plant Society
Oak Creek Energy Systems • Orinda Horsemen's Association
Pinnacles National Monument • Sacramento Regional County Sanitation District
San Luis National Wildlife Refuge • Santa Lucia Conservancy
Sonoma County Ag Preservation and Open Space
StopWaste.org • Sun City Lincoln Hills • Thomas Klope Associates
Truax Company, Inc. • Wildlands, Inc.
Yolo County Resource Conservation District • Zentner & Zentner

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Thurs.–Fri., June 3–4, 2010

CNGA Presents:

A Northcoast Grasslands Symposium, Humboldt Bay Area

Come explore native grass habitats behind the redwood curtain.

Day 1: guest speakers at the Humboldt Area Foundation; Day 2 in the field.
Further details will be available in the winter issue of *Grasslands*.