Bay Area Plants and the Conservation Lands Network

BY LECH NAUMOVICH AND RYAN BRANCIFORTE

In 2005, the Bay Area Open Space Council, a collaborative of member organizations actively involved in permanently protecting and stewarding important parks, trails, and agricultural lands in the San Francisco Bay Area, embarked on a challenging endeavor to design a conservation plan to preserve the region's last wild places and working lands. Creating a plan for a 4.5 million acre landscape torn between urbanization and wilderness was not an easy task. The idea was to help direct new land protection efforts towards conserving lands that create a connected, baywide reserve of important habitat, while acknowledging the constraints of urban areas.

The Conservation Lands Network (CLN) identifies the type, amounts, and distribution of habitats needed to sustain diverse and healthy ecosystems in upland habitats. The project was initiated by organizing moderated sessions with biologists, land managers, conservation advocates, and planners. These sessions helped identify important areas and issues to consider alongside the scientifically driven Geographic Information Systems (GIS) analysis.

Members from the Bay Area’s CNPS chapters were invited to participate, and several botanists helped contribute specific information on target plant species and vegetation types that would serve well in setting conservation goals. The CLN plan, which stratifies the region into biogeographic Landscape Units, uniquely takes into account conservation targets at both the landscape and local level. Rare plant occurrences, for instance, are included as local targets.

How were plant and vegetation targets selected? Local rare plant botanists were given access to a list of taxa in the California Natural Diversity Database.

(continued on page 6)

Champion of Endangered Species

Holly Forbes receives top honor from Center for Plant Conservation

Holly Forbes, curator at the University of California Botanical Garden, has won the 2011 Star Award from the Center for Plant Conservation (CPC), located at the Missouri Botanical Garden in St. Louis, for her work with rare and imperiled plant species.

The award was presented last April at the organization’s national meeting, and recognizes individuals who demonstrate the concern, cooperation, and personal investment needed to conserve imperiled native plants. Forbes is a long-time member of the East Bay Chapter, CNPS, and has been active both locally and at the state level. For seven years she served as codirector of the CNPS Press, and most recently helped finalize the publication of the 2009 CNPS Conservation Conference proceedings.

Forbes’ tenacity and hard work have shown the recovery potential for even the smallest plant populations. Working with local partners, Forbes helped to expand plant populations such as the San Mateo thornmint (Acanthomintha duttonii), which exists in a single population close
From the Executive Director

A fond farewell

As previously announced, I made the difficult decision to resign from my position as Executive Director of CNPS back in mid-November. In doing so, I wanted to give the Society adequate notice to ensure that full transfer of important technical knowledge about CNPS’s administrative infrastructure could occur, and appropriate arrangements could be made for a new or Interim Executive Director.

I’m pleased to announce that the Board of Directors has retained Sue Britting, a CNPS Fellow, Chapter Delegate, and former CNPS Executive Director, to assume the role of Interim Executive Director until a suitable full time replacement can be found. During the month preceding my departure, I worked closely with Sue to bring her up to speed on operations and critical projects to ensure a smooth transition for the Society. I’m personally delighted that the Executive Director responsibilities will transfer into Sue’s capable hands.

I’d also like to say a few words about my time here at CNPS. I came on board in January of 2009, picking up the charge to lead and grow the organization after Amanda Jorgensen resigned to move to Washington DC with her family. That first month, I had the opportunity to participate in the first tri-annual conservation conference. Just last month, we conducted our second successful tri-annual conservation conference in San Diego. The three years between those two milestone events have been challenging—but incredibly rewarding too.

As I sit here today, ready to depart from CNPS and head in a new direction, my reflection is bittersweet. I’ve been proud to serve the organization as its Executive Director, and have worked very hard to upgrade and improve its organizational infrastructure. We refined and improved organizational messaging and communications, advocated for Native Plant Week, improved program reporting, and expanded our programs with key initiatives like the Rare Plant Treasure Hunt and the Desert Renewable Energy Initiative. I am so delighted to have had an opportunity to work with such a dedicated staff, volunteer Board, and chapter leadership group. CNPS is an effective conservation advocacy organization, and it is poised to become yet even more effective in achieving its mission and vision. It is hard to say goodbye.

But it is time, and I know that CNPS will continue to grow under new leadership. My parting desire is for CNPS to continue working to reach its full potential in protecting California’s uniquely beautiful native flora. I will miss working with all of you.

Most Sincerely Yours,

Tara Hansen
Executive Director

thansen@cnps.org
t.hansen2@yahoo.com

CNPS Press Welcomes Proposals

With the recent publication of Strategies and Solutions, the 2009 CNPS Conservation Conference Proceedings, CNPS Press continues its history of publishing important and useful references on California’s native plants. Past publications range from the spectacular California’s Wild Gardens and The Best Spring Ever to the second edition of the Manual of California Vegetation, and Flowering Plants of Mount Diablo, California.

The Press welcomes suggestions and proposals for new publications, including local and regional floras and wildflower books, books on horticulture and gardening, works on plant communities, restoration, conservation, or invasive plant management, or publications for children—all focused on California’s plants, of course.

Guidelines for submitting a publication proposal are available on the CNPS website under the Publications tab. Email Publications Committee Chair Nancy Morin (nancy.morin@nau.edu) with suggestions or questions.
Introducing CalWeedMapper

By Elizabeth Brusati

Invasive plants threaten many native California species. CalWeedMapper, a new website developed by the California Invasive Plant Council (Cal-IPC) in partnership with Calflora, provides a free, dynamic tool for mapping invasive plant distribution.

CalWeedMapper displays invasive plant data on 200 species from the Cal-IPC Invasive Plant Inventory. Users can generate a report that synthesizes information into three strategic management opportunities: surveillance, eradication, and containment. For some species, CalWeedMapper also provides suitable range maps that display where a plant might be able to grow in the future based on climate data.

The information in the database comes from two sources: interviews with invasive plant experts, and occurrence information from Calflora and the Consortium of California Herbaria (CCH). For each species the software creates maps (displayed by USGS quadrangle) that show abundance, spread, and whether the plant is being managed. (Additional information, such as suitable range maps and point locations, can be displayed by going to the “Advanced” tab and clicking on “Manage Map Layers.”)

CalWeedMapper generates reports (in PDF format) that can help land managers prioritize their work on invasive plants. For example, the Regional Management Opportunity Report provides a table of all plants in the database within a specified region and summarizes each plant’s distribution and climate suitability. The Regional Species Map Report illustrates the plant’s distribution in a specified region. Land managers can also use these maps and reports to coordinate projects at the scale of multiple counties and to justify funding requests.

This dynamic tool also allows users to comment on and update information in the database regarding the abundance, spread, and management of invasives. Any new data submitted to Calflora or CCH are automatically added to CalWeedMapper. As a result, its maps reflect the most current information.

CalWeedMapper can also show where a given plant is most likely to spread, based on climate variables. Computer models were used to generate suitable ranges for 30 plant species based on where they currently grow, and more will be added in 2012. These maps can help land managers prepare for the predicted movement of new invasive plants into their region.

CNPS members can use CalWeedMapper to learn more about invasive plants in their area and download specialized reports. They can also help Cal-IPC fill in information gaps on the spread and reduction of weed infestations by entering data into Calflora at http://calweedmapper.calflora.org.

Elizabeth Brusati is science program manager at Cal-IPC.

Join the Milkweed Survey

Each winter, hundreds of thousands of monarch butterflies gather in groves along the California coast, having traveled from breeding areas across the western United States. The overwintering sites have been well studied, yet very little is known about where and when these butterflies breed during the rest of the year.

With support from the Monarch Joint Venture, the Xerces Society for Invertebrate Conservation is working to provide answers. The Society has developed a short Web-based survey to gather information about the distribution of milkweed in the states west of the Rocky Mountains, and the location of stands that may serve as important monarch breeding areas.

If you know where milkweed grows—or will have time to go look—and want to help complete our knowledge of the western monarch migration, please visit http://www.xerces.org/milkweedsurvey/ to link to the survey.

The Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat.

Brianna Borders, Plant Ecologist
EL DORADO CHAPTER:
Regional Grant Funds Garden Tour

Both regional government agencies and non-governmental organizations alike can be funding sources to launch new Chapter programs. The El Dorado Chapter of CNPS, which is a very small rural chapter, had long wanted to sponsor a native plant garden tour and training in the use of native plants in home landscapes, but we didn’t have the money to do it.

In fall 2008, the Sierra Nevada Alliance, a nonprofit environmental group, received a block grant from the Sierra Nevada Conservancy, a California state agency, to fund grassroots outreach in sustainable living in four communities throughout the Sierra and announced a request for proposals.

The El Dorado Chapter won one of the four grants awarded throughout the 22 Sierra Nevada counties. As the grant writer, I believe that the key to our success in this competitive process was calling the Alliance contact and telling her about our past workshops, plant sales, and school programs, so that we were more than just an anonymous applicant.

The $25,000 grant allowed us to reach new people throughout the county with a free “Going Native Garden Tour” of ten native plant gardens with different soils, exposures, slopes, and canopy cover, and at varying elevations. Unfenced gardens showcased deer-resistant plants. Two of the gardens also included drought-adapted exotic plants suited to hot foothill summers. The tour was widely advertised at nurseries and in local newspapers.

For the first time, the general gardening public in our Chapter area could see large specimens of the state’s spring flowering native shrubs in gardens and ask questions about their culture. The high turnout clearly demonstrated the demand for this kind of information by those who want to learn about appropriate landscaping for Mediterranean-type climates.

Rosemary Carey, President
El Dorado Chapter

NAPA VALLEY CHAPTER:
Two New Partnerships Bring In Members

After the success our small chapter has had in sponsoring two seminars on growing natives, I would encourage all chapters that have not yet attempted hosting a horticultural event to at least consider the idea.

Whether you call it a seminar or a symposium, we found an unmet need among people in our region for information on growing native plants. We started on a small scale with a half-day event called the Growing Natives Seminar. It was so well received that we expanded it to a full day, including lunch, the following year.

Two factors critical to our success were having widely known experts speaking on a variety of topics, and matching these with a unifying theme. The first year’s theme was how to grow California native plants in the home landscape. In year two it was how to transform a traditional garden into a beautiful native landscape. Horticultural experts included Bart O’Brien and Glen Keator, as well as people from the U.S. Forest Service, Master Gardeners, and several members from our chapter.

Topics ranged from fire-safe landscapes, native grass alternatives to traditional lawns, planting in and around oaks, and how to deal with planting hillsides. One of the favorite events was the roundtable discussion, with four speakers fielding questions on failures and successes in using natives in specific landscape situations.

Because of these seminars, we have been able to recruit new members and have also initiated contact with almost one hundred people, many of whom were not even aware that we existed.

Bob Brown, President
Sierra Foothills Chapter

CORRECTION

On page 4 of the last CNPS Bulletin (Vol. 42, No. 1), the butterfly in the top photo caption was incorrectly identified as a pale swallowtail (Papilio eurymedon). Thanks to reader Jim Mori, who calls himself a “butterfly nut,” for letting us know it is actually an anise swallowtail (Papilio zelicaon).
Taking Stock
Issues, Problems, and Solutions from the 2012 Conservation Conference

BY DAVID CHIPPING

The successful 2012 CNPS Conservation Conference covered a lot of ground in its 23 sessions. When I was asked to give the closing plenary address, I told the organizers I wanted to focus on issues, problems, and solutions, based on input from session chairs and from attendees. This fueled my hour-long presentation. Below are some highlights, particularly those that must drive plant science and conservation forward in the next decade.

The two greatest foci for both angst and action were the destruction of our deserts for solar power, and related issues of global warming. Desert-related talks focused on the lack of knowledge about desert flora, and the failure of regional plans to sufficiently mitigate impacts. Speakers and participants agreed that solar energy should be developed in urban areas, or desert areas devoid of sensitive habitat. Global warming issues that were addressed included our inability to predict microclimate changes and plant responses to those changes. These revealed a failure of the botanical community to develop data clearinghouses or sufficient knowledge of individual species’ tolerance to change, or even to prioritize strategies such as physically moving plants to new locations.

Wildfire issues, particularly those in Southern California chaparrals, revealed a vast and destructive failure of several government agencies to manage vegetation for wildfire. This pointed to a need for CNPS to increase its influence in developing and promoting best management practices. Another issue raised was the increasing effect of pollution-generated nitrification and fire-enabling grass growth in deserts. Many scientific papers were presented at the conference concerning individual species, and many were given by students. Students communicated their dissatisfaction with the reduction of field and general botany courses, especially in view of a fast approaching extinction crisis.

The restoration-related conference sessions were the best attended. It seemed that people involved in “fixing stuff” were the largest contingent at the conference, a fact moderated by the obvious corollary that so much needs fixing.

CNPS Vegetation Program staff described several projects, including mapping and classifying grasslands in the southern Great Valley and Carrizo Plain. Staff would like to work more closely with other disciplines such as fire ecology and geomorphology, in order to better understand the interplay between plant associations and the larger world.

(continued on page 8)

In Appreciation: Conservation Conference Donors
An outpouring of financial support for students

The CNPS 2012 Conservation Conference had a number of goals: to increase understanding of plant diversity and ecosystems; raise awareness of critical conservation issues; present opportunities to participate, take action, and learn skills; and perhaps most crucially, to increase student attendance to greater than 20% of total attendance.

It almost goes without saying that the future of conservation in California and beyond relies on upcoming generations taking up the charge. A number of conference opportunities were created specifically with college and graduate students in mind: the oral and poster presentation contests, the Student Career Panel, an entire student session, and especially student fee waivers and travel stipends, without which many students in attendance could not have been present.

Thanks to the individuals, organizations, and CNPS chapters who generously donated to student support, 96 students were able to travel to and attend the CNPS 2012 Conservation Conference in San Diego. CNPS wishes to express its deepest gratitude to those who donated to sponsor these students.


Chapters: Sierra Foothills Chapter, Los Angeles/Santa Monica Mountains Chapter, South Coast Chapter, North Coast Chapter, Orange County Chapter, Santa Clara Valley Chapter, Santa Cruz County Chapter, Napa Valley Chapter, Sacramento Valley Chapter, Dorothy King Young Chapter, San Luis Obispo Chapter, and Willis L. Jepson Chapter.

Stacey Flowerdew
Membership and Development Coordinator
Conservation Lands Network (from page 1)

San Joaquin spear scale (Atriplex joaquinana) is but one of numerous rare plants that are being protected under a science-based plan to conserve sensitive plants and habitat in the San Francisco Bay Area.

(CNDDDB) segregated by landscapes. These local experts then submitted a list of five target taxa that were highest priorities for conservation within each landscape, based on local knowledge. The five selected plants coincided with a number of rare vegetation types, although some were located in a matrix of more common vegetation, such as annual grassland. The location of these unusual plants in more common habitat types was especially important in prioritizing conservation in more common vegetation types.

So how did the planning effort do at protecting rare plants and vegetation? The plan set high goals for rare vegetation types such as coastal prairie and juniper woodland and scrub, attempting to include 90% of those targets within the final network design. How about the rare plants located in more common vegetation stands, such as San Joaquin spear scale (Atriplex joaquinana)? Fifteen CNDDDB records of spear scale exist in the Mt. Diablo landscape, but none of these populations is protected. The CLN calls for the protection of 13 known stands, while the other two were located in urban or rural residential areas. There are other success stories similar to this example.

One notable goal of the Conservation Lands Network is to make the results accessible to all users regardless of their GIS skill level. The CLN Explorer, a brand new Web-based tool, allows users to draw the boundary of a property or area of interest, and explore the natural resources that may be present. Users can access numerous datasets compiled or developed by the project, including vegetation types, rarity rankings, protected lands, streams, topography, conservation suitability, and converted lands. In addition to just viewing the information on screen, the Explorer software also allows users to generate custom reports on areas they designate, and shows natural resources that are present as well as biodiversity.

Visit www.bayarealands.org to access the Conservation Lands Network final report, GIS data, the Bay Nature article on this exciting initiative, to use the Explorer tool, and to spread the news about this bold new plan.

Lech Naumovich is executive director at Golden Hour Restoration Institute. He also works as a professional botanist and serves on the Statewide CNPS Conservation Committee. Ryan Branciforte is director of conservation planning for the Bay Area Open Space Council.

Champion (from page 1)

to an urban center and was once threatened by a proposed golf course.

Her contributions in seed banking, cultivation, and restoration have clearly demonstrated the role of horticulture in saving imperiled species. For example, her team has worked with UC researchers, California State Parks, and the U.S. Fish and Wildlife Service to produce seeds that are being used in efforts to create more populations of Mt. Diablo buckwheat, which was thought to be extinct until a tiny population was rediscovered in 2005. (See CNPS Bulletin cover story, Vol. 35, No. 3, July-September 2005.)

“Besides having full responsibility for our entire collection,” said Dr. Paul Licht, following the propagation of our ‘wards,’ or supervising reintroduction programs.”

Dr. Kathryn Kennedy, executive director of the CPC, also praised Forbes. “I’ve known Holly for at least 15 years. It is a joy to watch the career of a real conservation hero. She has poured years of labor and passion in equal measure into work to help California’s priceless native plants endure.”

The endangered San Mateo thornmint in propagation at the UC Botanical Garden. Plans are underway to attempt to create two more populations in 2012.
Bunch Grasses Add Flair to the Native Garden

BY JUDY BRINKERHOFF

Bunch grasses, often called “ornamental grasses,” are not like lawn grasses that reproduce by underground stems, or rhizomes. Bunch grasses clump and grow outward, expanding gradually; some also put out seeds that may or may not sprout and grow. Our bunch grasses come from hills, meadows, coastlands, mountains, and woodlands—in short, from a great variety of plant communities.

Native bunch grasses add wonderful shapes, colors, and textures to a garden. They can be delicate, graceful, and soft, and some are so feathery you cannot help but reach out a hand to feel their plumes. Purple needle grass (Nassella pulchra), our California state grass, and nodding needle grass (Nassella cernua) both bloom with feathery awns. The needle grasses are cool season grasses, blooming in the winter and going dormant in the summer. Even in dormancy, they remain an attractive soft beige color, a perfect background for colorful perennials such as gum plants (Grindelia stricta var. platyphylla) or goldenrods (Solidago californica).

Pacific hair grass (Deschampsia cespitosa ssp. holocarinas) blooms in the spring and summer with airy clouds of green and gold inflorescences. Its winter dormancy is attractive with tan seed heads. These feathery grasses blend well with red-flowered buckwheat (Eriogonum grande var. rubescens) or sulphur buckwheat/American Valley sulphur flower (Eriogonum umbellatum var. dunosum) with its bright yellow flat-topped flowers.

In contrast to the fluffy grasses, the upright stiff bunch grasses provide a solid background on which to spotlight a planting of native annuals, bulbs, or perennials. Deer grass (Muhlenbergia rigens) becomes very large, up to four feet tall and wide, spreading out from the center with long, spiky flowering stems and tightly packed leaves. It needs room and full sun. Silver beardless grass (Bothriochloa barbinodis) blooms with silky panicles.

California fescue (Festuca californica) and Idaho fescue (Festuca idahoensis) are two stiffly arching cool season grasses with silvery blue leaves. The flowers may stand two to four feet above the plant. Fescues do well in part shade. Coast melic grass (Melica imperfecta), another cool season grass with tones of yellow in its leaves, would do well interplanted with purple-flowered coyote mint (Monardella villosa).

Grasses can be mixed in plantings of meadows with oaks, manzanitas, and ceanothus, all of which provide habitat for pollinators and birds. California poppies are naturals interplanted with grasses; so too are our native coast irises (Iris douglasiana). Showy milkweeds (Asclepias speciosa) are a good choice, as are seathrift (Armeria maritima) and coast seaside daisies (Eriogonum glaucus) that bloom in the summer and require little water.

Bunch grasses may be classified as cool season or warm season plants. Temperature, light, and moisture generally govern their growth. Thus, a gardener needs to understand the bloom time of the grasses and make the appropriate choice as to where to plant them. It's much easier to group drought-tolerant grasses with other drought-tolerant perennials, and keep the water guzzlers in a separate area. Grasses need little maintenance, are especially drought tolerant, do not require special soils or fertilizer, and are generally pest-free and deer-resistant, all of which contribute to their popularity. Dormant grasses, such as the needle grasses, can be cut back in the early summer after they flower, which is important in fire-prone areas. Others may be left for their beauty when the seed heads are in their prime, especially when interplanted with colorful perennials. Combining through the grasses with fingers or a metal rake is sometimes enough to pull out the old foliage. Be sure to wear gloves, as they often have sharp edges.

Beware of the highly invasive bunch grasses that are aliens to California and readily outcompete our native plants. Pampas grasses (Cortaderia selloana and C. jubata) take over entire hillsides to the exclusion of native buckwheats, sea thrift, and seaside daisies. Fountain grass (Pennisetum setaceum) is a beautiful African grass, but it is invasive and spreads its seeds everywhere. Some nurseries may still sell invasive bunch grasses and need to be informed of their dangers.

Judy Brinkerhoff, a long-time Sonoma County resident, is a gardener of California natives and other plants that attract pollinators. She has been writing monthly newspaper columns on gardening for wildlife since 1993.
Taking Stock  (from page 5)

The program is also beginning to develop a conservation prioritization strategy for the most threatened plant associations in the state.

Louise Jackson, the opening plenary speaker, suggested that increased cooperation with Resource Conservation Districts (RCDs) and agricultural interests is needed in order to conserve a heterogenous landscape with more native plant habitat. RCDs were also valued by speakers in the invasive plant sessions, where they already cooperate with CNPS through county Weed Management Areas.

One frequently overlooked aspect of conservation is the winning of hearts and minds. There were excellent sessions at the conference on K-12 native plant-centered curricula. In addition, the East Bay and Monterey Bay Chapters described coffee table books they produced to promote local conservation. A San Luis Obispo poster promoted extremely popular, inexpensive flower identification books appropriate for the general public.

In a related ethnobotany session, we were reminded that we should educate ourselves toward a more holistic view of landscape, and that CNPS should play a bigger role in protecting ethnobotanic resources, especially through horticulture.

There was so much more. At least to me, the conference was an outstanding success.

Dr. David Chipping served as vice president for conservation (1997–1999) on the Executive Council of CNPS, and was its conservation director from 1999 to 2005. He is currently president of the San Luis Obispo Chapter.

JOIN THE PHOTOGRAPHER POOL!

CNPS is compiling a list of photographers willing to be contacted when the CNPS Bulletin or Fremontia is in need of a specific photo of a native plant or plant community. Photos should be high-resolution—at least 5” x 3” and 300 dots-per-inch (1,500 x 900 pixels), and will be credited. If you are willing to be on the list, please send your name, phone, and email address to: bhass@cnps.org. Also, be sure to describe the types of photos you take (e.g., rare plants, all natives, home gardens, invasives, etc.).