



FREMONTIA

A JOURNAL OF THE CALIFORNIA NATIVE PLANT SOCIETY



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40TH ANNIVERSARY OF CNPS



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California Native Plant Society

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CALIFORNIA NATIVE PLANT SOCIETY

Dedicated to the Preservation of the California Native Flora

The California Native Plant Society (CNPS) is a statewide nonprofit organization dedicated to increasing the understanding and appreciation of California's native plants, and to preserving them and their natural habitats for future generations.

CNPS carries out its mission through science, conservation advocacy, education, and horticulture at the local, state, and federal levels. It monitors rare and endangered plants and habitats; acts to save endangered areas through publicity, persuasion, and on occasion, legal action; provides expert testimony to government bodies; supports the establishment of native plant preserves; sponsors workdays to remove invasive plants; and offers a range of educational activities including speaker programs, field trips, native plant sales, horticultural workshops, and demonstration gardens.

Since its founding in 1965, the traditional strength of CNPS has been its dedicated volunteers. CNPS activities are organized at the local chapter level where members' varied interests influence what is done. Volunteers from the 32 CNPS chapters annually contribute in excess of 87,000 hours (equivalent to 42 full-time employees).

CNPS membership is open to all. Members receive the quarterly journal, *Fremontia*, the quarterly statewide *Bulletin*, and newsletters from their local CNPS chapter.

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CNPS members and others are wel-
 come to contribute materials for pub-
 lication in *Fremontia*. See the inside
 back cover for manuscript submission
 instructions.

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THE CALIFORNIA NATIVE PLANT SOCIETY PRESS *by Holly Forbes and Gail Milliken* 11

CNPS Press is alive and well, and celebrating with a timely reprint of California's Wild Gardens. This brief overview lets readers know what to look for in terms of publications, and how to submit manuscripts.



CALIFORNIA NATIVE PLANT SOCIETY LEGISLATIVE
PROGRAM *by Vern Goebbring* 13

Vern Goebbring has been the contract legislative advocate for the California Native Plant Society since 1997, following many years as an advocate for State agencies, including the Department of Fish and Game. Here he reviews the many ways CNPS engages in the legislative process and outlines valuable ways in which CNPS members can participate in the Society's advocacy efforts.

THE TEMBLORS: UGLY DUCKLING OF THE COAST RANGE
by Neil Havlik 15

In this excellent introduction to the Temblor Range, the most interior and desert-like of the South Coast Ranges, the author describes the overall aspect of the landscape and plants, and plant communities, along with ideas for interesting places to visit in the upcoming field season.



THE RESTORATION OF GUADALUPE ISLAND *by Bradford Keitt, Steve Junak, Luciana Luna Mendoza, and Alfonso Aguirre* 20

Guadalupe Island, Mexico, is an extension of the California floristic province. Feral goats have severely affected the island, causing several plant extinctions. The authors describe current efforts to remove goats from the island and discuss vegetation recovery inside fenced areas designed to exclude goats.

MUSING ON LEAF AND TWIG: NOTES ON WINTER PRUNING OF NATIVE
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THE COVER: Redbud Chapter members at Hells Half Acre, Nevada County, on Earth Day, 2005. Participants cleared illegally dumped trash before enjoying a wildflower tour. Photograph by J. Carville.

EDITORIAL: WHERE WILL CNPS BE ON OUR 50TH ANNIVERSARY?

I began our 40th Anniversary year with an article on the mission, history, and heart of the California Native Plant Society (CNPS)—a celebration of who we are and how far we have come. I'd like to end the year by exploring where we might be on our 50th Anniversary.

As this year draws to a close, our Society finds itself in transition, with a need for change driven, in part, by internal forces. Our Chapter Council is currently reviewing our mission, vision, and goals in a new strategic planning process intended to carry us through the next three years. With the departure of our Executive Director, Pam Muick, our Board of Directors is searching for a new leader to facilitate the good work of our programs, paid and volunteer staff, and 32 chapters and subchapters. The pending departure of the *Fremontia* Editor, Linda Vorobik, will also require us to find another editor for our quarterly journal. And finally, our Rare Plant and Conservation programs each recently completed a series of meetings where they envisioned future goals.

External forces are also driving the need for change. The current administration continues to attack and weaken the federal resource protection laws that have helped to support our mission since the 1970s. Our population is growing, and California is paving over its natural resources at an alarming and escalating rate. Regional conservation plans (those infamous NCCPs and HCPs), which determine conservation goals for 50 or more years, are being formulated without adequate science and often without including environmental stakeholders. Our diverse conifer and hardwood forests are being systematically replaced with monoculture tree farms. And one of my favorite ecosystems—vernal pool grassland—is being consumed by out-of-control urban sprawl. And although internal changes within the society at times seem daunting, it is the external pressures that present the greatest challenge to us as a Society.

So many transitions at once might seem burdensome, but in reality they require only a few changes in how we operate, both internally and with the outside world. Transitions will not and *can not* change who we are as a Society: a group of highly dedicated and motivated members and volunteers who care about the beauty and uniqueness of California's native flora and natural habitats.

I see a bright future for CNPS. Given our past history of dedication to both the native flora and to the spirit of volunteerism, we can only get better. In the year 2015, when we look back upon our struggles and successes, I expect that we will be proud of who we are and what we have accomplished.

Carol W. Witham
CNPS President

USEFUL WEBSITES AND CONTACT INFORMATION

California Native Plant Society (CNPS):

www.cnps.org, with links to conservation issues, chapters, publications, policy, etc.

For updates on conservation issues:

Audubon Society www.audubon.org

Center for Biological Diversity
www.sw-center.org

Native Plant Conservation
Campaign www.plantsocieties.org

Natural Resources Defense
Council
www.nrdc.org

Sierra Club
www.sierraclub.org

Wilderness Society
www.wilderness.org

For voting information:

League of Women Voters
www.lwv.org, includes online voter guide with state-specific nonpartisan election and candidate information.

US Senate
www.senate.gov

US House of Representatives
www.house.gov

California State Senate
www.sen.ca.gov

California State Assembly
www.assembly.ca.gov

To write letters:

President George W. Bush
The White House
1600 Pennsylvania Ave. NW
Washington, DC 20500

Senator Barbara Boxer
or Senator Dianne Feinstein
US Senate
Washington, DC 20510

Your CA Representative
US House of Representatives
Washington, DC 20515

CHAPTERS OF THE CALIFORNIA NATIVE PLANT SOCIETY:INSTALLMENT IV

This, the final installment of summaries of the California Native Plant Society (CNPS) regional chapters, includes chapters from the northern part of the state. The first three installments appeared in Fremontia Volume 33, Numbers 1–3. I hope you have enjoyed reading about other chapters in the state, and will share these articles with those who might be interested in joining our Society.

NORTH COAST CHAPTER

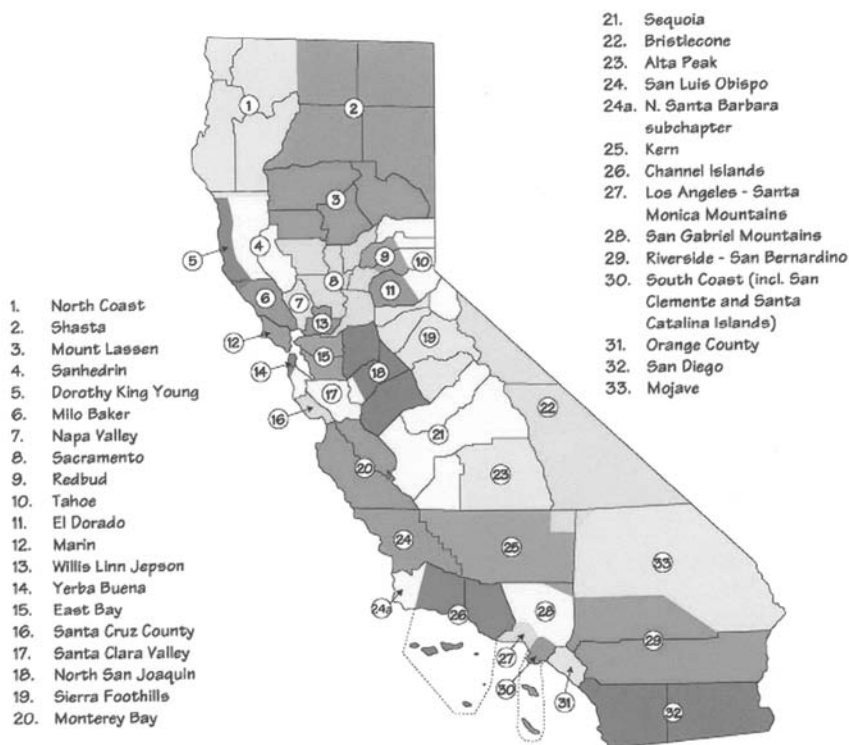
Size of chapter: Approximately 280 members

Website address:
northcoastcnps.org

From its inception in the Biological Sciences building at Humboldt State University in March 1970, the North Coast chapter has been dedicated to native flora conservation and education throughout Humboldt and Del Norte County communities. With field trips and presentations as its initial focus, the chapter branched out to become instrumental in conservation in the local dunes and the unique serpentine habitats near the Oregon border.

Today, through the hard work of many dedicated volunteers, we have brought the message about native plants to diverse segments of our community. We are active in native plant conservation and education with county, state, and federal agencies and other organizations as well as with private landowners, schools, and gardeners. We credit our founding members, John Sawyer, James P. Smith, and Virginia Rumble with setting the stage for a very active and involved chapter.

Many segments of our chapter are involved in working with local agencies and governments to promote the conservation of native plants. Jen Kalt, our conservation chair, has been instrumental in leading letter writing campaigns, and in



Map of the local chapters of the California Native Plant Society. The chapters summarized in the text include the North Coast (1), Shasta (2), Mt. Lassen (3), Sanhedrin (4), Dorothy King Young (5), Milo Baker (6), Napa Valley (7), Sacramento Valley (8), and the Redbud Chapter (9).

providing information as well as commenting on various agency environmental projects (herbicide use in managed forests, road building, timber harvest plans, off-highway vehicle use) and management plans.

Our rare plant co-chair, Dave Imper, has been actively involved in the restoration of western lily (*Lilium occidentale*) habitat throughout our area. This year he has teamed with the US Fish and Wildlife Service to sponsor two habitat restoration workdays in Del Norte County on land that had previously been slated for development. Out-

side of the regulatory arena, our rare plant program volunteers have collected demography and trend monitoring data on several other taxa. We have also joined with the Humboldt County Weed Management Area and the Humboldt National Wildlife Refuge to eradicate non-native invasive species. With the City of Arcata we help to maintain a native plant garden and have influenced the planting of natives on several city projects.

We provide an array of services and activities for individual gardeners and plant lovers. We presently



The April 2005 spring flower display at the North Coast Chapter Wildflower Show. Photograph by N. Krahforst.

have 30 members who grow native plants for our twice-a-year plant sales. The plant sales are a lucrative fundraiser and also provide an opportunity to educate community members about native plant issues. Through our native plant conservation service we have provided advice on how to replace any invasive or non-native species in a garden with native plants. Providing this expertise to both public and private entities and seeing the results in

gardens and landscapes throughout our community has been very rewarding for the 20 volunteers involved. We also offer informative handouts on plants for north coast gardens, as well as on invasive non-natives to avoid in our area.

For anyone who enjoys plants, we offer a variety of field trips and presentations throughout the year. Our field trips are always fun and led by experts who inspire learning. Our monthly presentations offer speakers and topics that are always relevant and well-received. We have also organized workshops on specific taxa co-sponsored with the Humboldt State University Natural History Museum. The highlight of every spring for our chapter is the wildflower show. Our chapter coordinates approximately 50 volunteers from several organizations to produce an amazing display of spring flowers, plus interpretive walks, illustrated lectures, and demonstrations. Approximately 800 people plus three school groups visited this year.

The success of our chapter is exemplified by two recently completed projects. To protect the habi-

tat of the two-flowered pea (*Lathyrus biflorus*) a group of members, with the support of the chapter, purchased 40 acres on Red Mountain south of Eureka. This property lies adjacent to federal land and contains half of the world's population of this rare species. In the future the chapter will be helping to develop monitoring and management plans to directly influence the protection of this plant. In 2002 our chapter organized a symposium, "The Ecology and Management of Rare Plants of Northwestern California," and this year the proceedings from that conference have been published. This publication and the symposium are indicative of the dedication and commitment of our members.

SHASTA CHAPTER

Size of chapter: Approximately 158 members

Website address:
users.snowcrest.net/cnps

The Shasta Chapter of CNPS covers a large area of northeastern California that includes Shasta, Siskiyou, Modoc, and Lassen counties. Geographically we encompass the northern end of the Central Valley, the Klamath Mountains, the Southern Cascade Mountains, and the western edge of the interior basin-and-range province. This region is extremely diverse in geology, landform, climate, and biology.

The center of activities for our chapter is Redding, California, but very active "outposts" in Siskiyou County and the Alturas/Susanville region keep the chapter alive in those areas. Activities that define the chapter include the wide array of fieldtrips, engaging monthly programs, annual plant sale, Mother's Day wildflower show, school Acorn Grants, and a scholarship.

Field trips are never hard to arrange, as flower season runs from

North Coast Chapter members on a field trip to Groves Prairie, east of Eureka, in 2003. Photograph by N. Krahforst.





Top: Spring display at Millville Plain, Shasta County. • **Above left:** Shasta Chapter field trip to the McCloud River Preserve (Nature Conservancy property). • **Above right:** Award-winning display at the Shasta County Fair. Photographs by J. Thesken.

about February to September, depending on the elevation of our destination. Sites visited can range from vernal pools in the Central Valley to serpentine formations and alpine meadows of the Cascade Range, Klamath Mountains, and northern Sierra Nevada. Our chapter leads approximately two field trips a month throughout the year. Since Redding is the center of government for the northern third of the state, many wildlife and botany experts from several agencies are chapter members and contribute their

expertise as program speakers and field trip leaders.

Two events that are well attended by the public are the fall plant sale held at the Shasta Community College Horticulture Department, and the Mother's Day Wildflower Show at the Siskiyou County Fairgrounds. This year the wildflower show included over 300 species.

Acorn Grants of up to \$500 each are awarded to primary and secondary schools that apply for financial assistance for native plant-re-

lated projects, such as developing native plant gardens on school grounds and going on botany field trips to Lassen National Park. An annual scholarship is awarded to a graduating high school senior or junior college transfer student from this region who is entering a four-year college or university and plans to major in a life science. The recipients of these grants and awards often attend our membership meetings to introduce themselves and tell us about their projects.

MT. LASSEN CHAPTER

Size of chapter: Approximately 220 members

Website address: none

The Mount Lassen Chapter was formed in November 1977 when 80 people gathered in Chico to hear a talk titled, "What is so special about California plants?" Today the chapter offers a host of activities and projects including eight monthly meetings with speakers, a June picnic, and field trips every month of the year. A wildflower show is held with a plant sale every two years; it provides a major educational event for the public. We also host educational booths and displays that are geared especially to children at environmental events in Chico such as the Endangered Species Faire and the Home and Garden Show.

Over the years, members from the chapter have also participated in activities at the state level, serving as CNPS *Bulletin* editor, on the Rare Plant Scientific Advisory Committee, and in various positions on the Board of Directors, Chapter Council, and various state committees. The chapter has also hosted three state meetings.

The chapter, which encompasses a vast region spread out among three counties—Butte,



Above: Mount Lassen members Barbara Castro and Lawrence Janeway delighted at their 1993 rediscovery of veiny monardella (*Monardella douglasii* ssp. *venosa*), a plant not seen since the 1930s. • Left: Veiny monardella. Photographs by R. Schlising.

Plumas, and Tehama—boasts a rich field trip tradition whereby members from many walks of life showcase the local area they call home. Outings to local vernal pools and serpentinite areas have been popular as have forays to Oroville's Table Mountain, to local ranches at opposite ends of Butte County, and to areas in need of broom bashing. Trips to more distant places occur as well, such as to Butterfly Valley and Mount Lassen National Park.

Rare plants have been a major focus throughout the chapter's history. Chapter members—including students and faculty at Chico State—conducted studies and wrote theses on rare plants in the region. Members began conducting work on floristics, especially of Butte County, early on in the chapter's history. Later, intensive field work culminated in the CNPS publication, *Butte County Flora*.

The chapter is equally fortunate in having developed, over time, a close relationship with California State University at Chico; local environmental organizations; Butte College and Department of Fish and Game (Table Mountain activities); and Friends of Bidwell Park.

have become more involved in local, state, and federal issues, and in speaking at city and county planning meetings.

SANHEDRIN CHAPTER

Size of chapter: Approximately 90 members

Website address: none

The Sanhedrin Chapter comprises the inland part of Mendocino County and all of Lake County, although, even from its origins in 1981, the active core has invariably resided in the 40-mile long inland valley corridor between Hopland to the south and Willits to the north. The first CNPS activities occurred several years before the Sanhedrin Chapter was formed when Lucille (Lou) McKinney of Ukiah, a member of the Milo Baker Chapter, organized and advertised Milo Baker field trips in Mendocino County. This drew the Mendocino and

Chapter members have served in important agency positions where major conservation work is often accomplished, including the California Dept. of Fish and Game, the US Fish and Wildlife Service, and the US Forest Service. In addition, in recent years members

Lake County wildflower lovers out of their own backyards and woods and into the wider realms of botanical diversity—from redwood forest, through mixed oak and conifer woodlands, along the riparian corridors of the Russian and Eel rivers, into the chaparral scrub and vernal pools of the Mayacamas Mountains and then higher onto some of the loftiest peaks in the northern inner coast ranges: Hull, Sanhedrin, Anthony, and Snow. When sufficient interest and momentum was attained as a result of these flower outings and mushroom forays, it was decided to organize a new CNPS chapter north of Sonoma County and this became Sanhedrin, named for the dominant peak east of Highway 101 between Ukiah and Willits.

We currently hold quarterly potluck/working meetings where the newsletter, field trips, and conservation issues are discussed as is news from the state level of CNPS. Over the years we have been active in local weed (broom and *Arundo donax*) abatement. We also perform a yearly census of plants in bloom at Low Gap Park around the first of April. This survey, which involves mainly the native flora of the park, is in its 22nd year and provides participants the opportunity to learn to key out species and to corroborate or disprove sometimes long held beliefs on the identities of local natives.

Field trips run the gamut from

Sanhedrin members participating in 2004 Low Gap plant survey. Photograph by Vishnu.



biweekly springtime plant walks, where only common names are used, to more science-based trips into remote regions pursuing rare and listed species. Fall and winter trips include oak identification walks (where one can see nine major species, four shrub varieties, and assorted hybrids), mushroom forays, and trips to look at mosses, liverworts, and lichens.

Local endangered species that have experienced conservation efforts on their behalf by Sanhedrin members include Baker's meadowfoam (*Limnanthes bakeri*) and North Coast semaphore grass (*Pleuropogon hooverianus*). Also, just this spring, the Sanhedrin chapter pledged \$500 as a matching grant with the National Forest Foundation for a chapter project to monitor and control the spread of tansy ragwort (*Senecio jacobaea*) which is threatening to impact a population of checkerbloom (*Sidalcea hickmanii* ssp. *viridis*), a listed species that occurs in a remote region of the Mendocino National Forest.

DOROTHY KING YOUNG CHAPTER

Size of chapter: Approximately 130 members

Website address: www.dkycnps.org

The Dorothy King Young Chapter serves coastal Mendocino County and the northern coastal area of Sonoma County. Our membership includes people from the communities of Jenner, Gualala, Sea Ranch, Point Arena, Mendocino, and Fort Bragg. Our chapter, which formed in 1966, is named for Dorothy King Young, a Humboldt University graduate who later settled in Gualala with her husband, Charles Young. The chapter was initially formed when the Youngs put out a call for volunteers to rescue plants from a species-rich site that was scheduled to be bulldozed. Later, Charles



Above left: Dorothy King Young Chapter members weeding ice plant (*Carpobrotus edulis*) on a bluff near the Pt. Arena Lighthouse. Photograph by P. Howard. • Above right: Calypso orchid or fairy slipper (*Calypso bulbosa*), the namesake for the newsletter of the Dorothy King Young Chapter. Photograph taken near Gualala by B. Rutemoeller.



Young was honored as the first CNPS Fellow (1973) and Dorothy was similarly honored in 1988. Dorothy's plant identification booklet, *Redwood Empire Wildflowers*, was edited by Vinson Brown and first published by Naturegraph in 1964.

Today the chapter continues its strong dedication to native plant education and preservation. We recently donated \$1,000 to a local nonprofit group, the Redwood Coast Land Conservancy, toward the purchase, enhancement, and protection of coastal headland habitat near Gualala. Two chapter members conducted the required botanical surveys on land that includes important coastal communities and six rare plant species. Other conservation projects that chapter members have worked on over the years include the acquisition of the plant-rich Glass Beach property in Fort Bragg, and advocating for a more environmentally friendly golf course and park project, also in Fort Bragg.

Currently the chapter is working with Caltrans at a site along Highway 1 inhabited by two CNPS List 1B species, Roderick's fritillary (*Fritillaria roderickii*) and purple-stemmed checkerbloom (*Sidalcea malvaeflora* ssp. *purpurea*). We are filing for an encroachment permit with Caltrans so that we can transplant the *Sidalcea* to an appropriate site.

We also have an active education program, and are coordinating a Learning Landscape native plants project with several schools in Point Arena. As part of the project, students are learning about plant identification, plant uses, pollinators, foragers, and other relationships of native plants in the environment. The chapter supported the Learning Landscape budget by donating matching funds to it.

MILO BAKER CHAPTER

Size of chapter: Approximately 470 members

Website address: www.cnpsmb.org

The Milo Baker Chapter serves Sonoma County which extends from the Pacific Ocean through Redwood forest and oak woodlands, grasslands, and vernal pools to the chaparral on the border with Lake and Napa counties. Sonoma County contains nine major plant communities and chapter members help monitor 160 species of rare plants that occur in our area.

The chapter was organized in 1972. It was named after Milo Baker, an instructor of botany at Santa Rosa Junior College from 1923 to 1961 and the premier botanist of the North Coast flora. We manage four sensitive habitat areas that contain

rare and endangered plants: Vine Hill near Sebastopol, Southridge Preserve and Rincon Ridge Park in northeastern Santa Rosa, and Cunningham Marsh south of

programs are well attended and feature talks, slide shows, and demonstrations by specialists in botany, horticulture, photography, invasives, and various conservation

Wildflower Festival was the result of the first retreat. Another benefit has been that members get to know each other better and learn to work well together to achieve common goals.

NAPA VALLEY CHAPTER

Size of chapter: Approximately 190 members

Website address: www.ncfaa.com/skyline/cnps

Soon after its founding in 1973, the Napa Valley Chapter became one of the first groups to participate in efforts to inventory rare and endangered plants in California. Since then, field checks have remained an important part of preservation efforts; some sites have been monitored continuously for over 20 years. Using information gathered from these surveys, the chapter advises both conservation groups and developers alike as to where threatened native species are likely to be found.

In 1979 the chapter took a lead-



Above: Members of the Milo Baker Chapter setting up for their yearly plant sale. • Left: Pitkin lily (*Lilium pardalinum* ssp. *pitkinense*), one of the rare plants in the region of the Milo Baker Chapter. Photographs by R. Parker.

Sebastopol. The Rare Plant Group prioritizes areas in need of plant surveys, sets up a schedule for monitoring, and organizes volunteers to carry out this work. In addition, we monitor development in Sonoma County, and if it threatens native habitat, we communicate chapter support or opposition when appropriate. The chapter has also been involved in the update of the county's General Plan and presented recommendations to policymakers to increase protection for rare plants and plant communities.

One of our chapter's strengths is its field trip program, which is both fun and educational. We offer a range of weekend hikes and walks at least monthly or more frequently. These excursions are sometimes combined with opportunities to remove non-native invasive plants, to take surveys of rare plants, and to photograph them. In 1980, a group of retired members formed the Monday Walkers and, as the name implies, hike together every Monday.

Our monthly newsletter and website keep members informed of our various activities. The monthly

serving Santa Rosa Junior College student who plans to study plant science at a four-year college.

The chapter has held two very successful Vision-to-Action member retreats where a full day is devoted to identifying immediate and long-term chapter goals. A spring

Napa Valley Chapter weeders at land trust site on Atlas Peak Road proudly display exotics removed from vernal pools. This is part of an experimental project designed to protect rare plants from future weed invasion. From left to right: Roger Demmin, Marcie Danner, and Jake Ruygt, Rare Plant Coordinator. Photograph by S. Banks.



ing role in helping to establish and plan Skyline Park, situated on 900 acres of undeveloped public land. Today extensive trails weave through the park's wooded hills, providing the public with ready access to an abundance of native species in their natural setting. The park is also home to the chapter's Martha Walker Garden, where visitors can learn more about native species they may have seen in the wild, and the chapter's central growing grounds, where much time, energy, and funds have been expended in developing methods for propagating and growing various native plants. This increased knowledge of the unique requirements of individual species has allowed the cultivation of the plants needed for both revegetation efforts as well as the biannual plant sale.

Currently the chapter sponsors an array of programs that help spark interest and spread information about native plants to the public. Prominent activities include wildflower symposiums and shows, bi-weekly plant walks, and a traveling "trunk" education program that makes visits to Napa County schools.

SACRAMENTO VALLEY CHAPTER

Size of chapter: Approximately 670 members

Website address:

www.sacvalleynps.org

The Sacramento Valley Chapter was formed in December 1965 under the leadership of Dr. G. Ledyard Stebbins, a distinguished plant evolutionist, and a primary figure in the Society's development and activities. Dr. Stebbins was later named a Fellow of the Society. Our chapter's other Society Fellows include Florence Marsh, who served 24 years as our Chapter's first secretary; Lillian Mott, an authority on Nevada County's flora; Lyman

Donald Smith, an expert on El Dorado County's flora; and Dr. George Clark, a prominent botanist and activist, and past Society president. George's sudden, unexpected death in 1996, while botanizing on Walker Ridge above his beloved Bear Valley in Colusa County, is currently inspiring our chapter's fight to preserve this same serpentine ridge from a proposed wind farm.

Currently the chapter is planning its first annual Wildflower Weekend, a major community outreach event designed to showcase the area's diverse plant communi-

ty. The chapter also supports an active subchapter in Stockton. Our chapter's primary efforts include conservation work (such as preserving habitat on the Fair Oaks Bluffs, American River Parkway, the Mather Field vernal pools, and Deer Creek Hills oak woodlands), popular fall and spring plant sales, a native demonstration garden at the

historic Old City Cemetery in Sacramento, and a woodland and wetland restoration project at Longview Oaks in the Capitol City. None of our chapter's accomplishments would be possible without the efforts and dedication of our members. One member creates significant chapter income by selling native wildflower seeds and his own handcrafted bird and bat houses. Another has led field trips and Spanish broom removal efforts along the American River Parkway since the 1980s, familiarizing area residents with our local treasures. The Sacramento Weed Warriors, a



The 2004 Sacramento Valley Chapter Board at Demonstration Garden in the Old City Cemetery. Among those photographed are Cassandra Nguyen Musto and Sabrina Okamura Johnson, long time co-chairs, and the garden's founder, Eva Butler. Photograph by C. Lewis.

ties. The chapter also supports an active subchapter in Stockton. Our chapter's primary efforts include conservation work (such as preserving habitat on the Fair Oaks Bluffs, American River Parkway, the Mather Field vernal pools, and Deer Creek Hills oak woodlands), popular fall and spring plant sales, a native demonstration garden at the

project of the chapter, enlists the help of volunteer groups to remove some of the most troublesome weeds along the American River Parkway. Since 2001 over 18,000 volunteer hours have been logged. The chapter has led efforts in the region to conserve many vernal pool areas through public activism and education. As a result, the vernal

pools at Mather Field now have a preserve plan; public field trips are led by trained docents each spring; and an award-winning fifth-grade curriculum, *Splash*, has been used by hundreds of school children (our next ambassadors for habitat preservation!).

REDBUD CHAPTER

Size of chapter: Approximately 190 members

Website address: www.nccn.net/~cnps

The Redbud Chapter started as an offshoot from the Sacramento Valley Chapter. In 1991, Sierra College biology teacher, Shawna Martinez, saw the need for a CNPS chapter for the fast-growing foothill communities of western Placer and Nevada counties. CNPS members from the Auburn, Grass Valley, and Rocklin areas responded to Shawna's letter inviting them to an organizational meeting. The newly formed chapter made field trips and programs available locally, and the first native plant sale was held in Rocklin in November 1992.

Nevada and Placer counties include grasslands, meadows, vernal pools, oak woodlands, and extensive mixed conifer forests. The canyons of the Yuba River and the American River provide large areas of rugged scenic beauty for hiking and exploration. Native plant enthusiasts enjoy an extended spring season from February in the lower elevations (600 feet) of our area until August in the higher elevations (9,000 feet). Our chapter area also includes botanically interesting sub-alpine, serpentine, gabbro, and volcanic habitats. We have a natural affinity with eastern Yuba County, Sierra County to the north, and with the eastern Sierra Nevada region.

Redbud Chapter's major activities are plant sales, field trips, and educational programs. Redbud's



plant sales are popular and important public outreach events, especially for newcomers and home gardeners. We rely on independent nurseries to participate as vendors for our spring and autumn sales. Our annual spring wildflower show presents another opportunity to educate the public. At the show we exhibit over 100 species, all of which contain educational labels. Volunteers have also established a native plant demonstration garden at Bridgeport in the South Yuba River State Park for school classes and park visitors.

Since 1997 we have been working on a conservation-oriented guidebook to the wildflowers of Nevada and Placer counties. Eleven authors and four photographers have contributed to the book's text and illustrations. Several more volunteers are involved in the book's production phase. Redbud members have also been raising funds over several years for the printing expenses of our book.

Redbud Chapter has a long-time interest in preserving several important local native plant habitats. The future of the privately owned Hells Half Acre is very uncertain. This is a 25-acre wildflower field on an ancient volcanic mudflow with at least three rare plant species.



Milo Maciulis examines flowers while his dad, Justin, helps with the Redbud Chapter's spring clean-up at Hells Half Acre. Photograph by J. Carville. • Scadden Flat checkerbloom (*Sidalcea stipularis*), a rare species endemic in the Redbud Chapter region. • Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*), a CNPS List 4 taxon that grows in the Sierra foothills in Placer and Nevada counties. Photographs by K. Callahan.

Chapter members managed to rescue the southern-most *Darlingtonia californica* fen in the Sierra from logging damage and protect it under a permanent conservation easement. With many large-scale development projects planned for the next decade in our counties, we anticipate that increased organization and effort will be required to preserve habitats for rare plants.

Each chapter summary was authored by one or more representatives from that chapter.

THE CALIFORNIA NATIVE PLANT SOCIETY PRESS

by Holly Forbes and Gail Milliken

For many years CNPS Press, in the capable hands of volunteer Phyllis Faber, produced an array of important books in support of the Society's mission. These books have provided critically important information and support for our science-based organization to use in plant conservation, and to promote appreciation for the California flora. They have addressed the state's habitats from coastal sand dunes to Central Valley vernal pools and the Sierran alpine. After a hiatus in production, we are working to rejuvenate the Press: to build on the successful list of titles developed by Phyllis, and on the substantial efforts of the former Publications Committee.

Recent projects that have come to fruition through the efforts of our last Executive Director, Pam Muick, and the state office staff (especially Paul Maas) include the reprinting of *California's Wild Gardens: A Guide to Favorite Botanical Sites* by UC Press

Gail Meadows Milliken, CNPS Press co-director, during the March 2005 desert outing with Holly Forbes. Gail is the Garden Shop and Visitor Services Manager of the Santa Barbara Botanic Garden. Photograph by H. Forbes.



(now represented by Phyllis Faber), in collaboration with CNPS and the California Department of Fish and Game. This book is a treasure; it is the best of the pictorial genre representing California's amazing flora and treasured flowery places. Its timely re-release during the 40th anniversary of CNPS provides yet another tool in our mission to promote appreciation for the California flora. Need we say it makes an excellent gift item? Delivering a copy to your elected representatives in concert with an appointment to discuss how they can help protect the California flora is sure to make a positive impact.

A second title, *The Best Spring Ever: Why El Niño Makes the Desert Bloom*, released just in time for another fantastic desert wildflower season in 2005, was edited and shepherded through the publishing process by Steve Hartman. It features incredible desert images by Carll Goodpasture, and the story of climate as it affects desert ecology by Janice Emily Bowers.

Also in keeping with our mission, the Press assisted the North Coast Chapter in publishing the proceedings of the North Coast Rare Plant Conference, *The Ecology and Management of Rare Plants of Northwestern California—North Coast Proceedings*, edited by Melissa Brooks, Sydney Carothers, and Tony LaBanca. It was shepherded through the printing process by former state president Sue Britting.

CNPS Press priorities are to produce works directly related to the CNPS mission, e.g., conference proceedings, standardized floras, treatments of botanical subjects for the lay audience, and how-to guides. The Press will reissue out-of-print



Holly Forbes, CNPS Press co-director, during a March 2005 trip to Anza Borrego Desert State Park. Holly is curator of the University of California Botanical Garden at Berkeley. Photograph by G. Milliken.

books for which there is demonstrable demand; print local floras and checklists; and produce works with a statewide focus for general audiences, such as children's books, horticulture, and ethnobotany, as well as coffee table books that popularize native plants. The Press also supports the development of local field guides.

CNPS Press will use these criteria when evaluating potential publications:

- Works will be fact-based or science-based and must pass a review process for accuracy.
- Works with projected greatest conservation impact will have priority.
- Works will include information about conservation where appropriate.
- Works must meet minimum editorial standards of content as set by CNPS Press.
- Reprints will meet current

nomenclature and current publication standards (including quality and style of prose).

The state Board of Directors has approved these publication criteria and priorities, as well as a revision of the Publications Fund Operating Procedures. These documents, along with editorial guidelines and standards for revision/reprinting, production guidelines, and a book publishing process, will enable the CNPS Press to move forward on important and timely works to further the Society's mission. Based on



advice from experienced members, we will not be reconstituting the publications committee, but we will be calling upon volunteers where skills and interest intersect.

As you might imagine, publishing books is not an inexpensive process. Phyllis Faber was very successful in fundraising to cover the production costs for many titles, making their financial return less important than it would otherwise be, and getting information into members' hands as soon as possible. The Press is seeking financial sup-

A montage of photographs from *California's Wild Gardens* (see book review on page 32). Clockwise from left: *Fremontodendron californicum*. Photograph by W. and W. Follette. • Sky lupine (*Lupinus bicolor*) and California poppy (*Eschscholzia californica*) at Figueroa Mountain. Photograph by S. Cochrane. • Giant sequoias (*Sequoiadendron giganteum*) in the Sierra National Forest. Photograph by B. Evarts. • Santa Catalina Island, Channel Islands National Park. Photograph by R. Herrman.

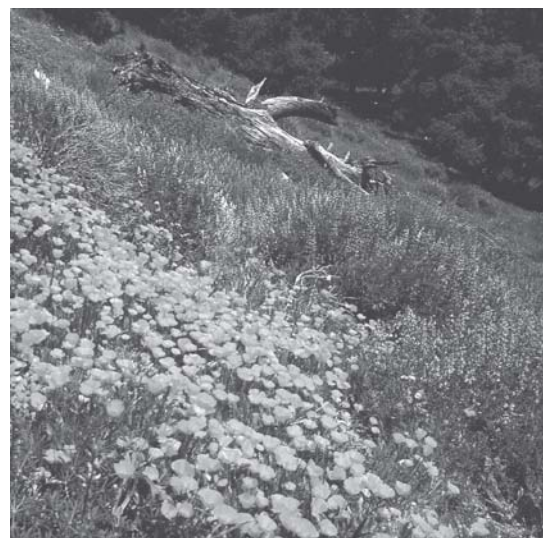
port for new and reprinted titles, and welcomes your suggestions to successfully fund them.

If you or a colleague have a book project that you would like considered for publication, please prepare a brief proposal that includes the following:

- rationale for CNPS to publish (1-2 page letter),
- table of contents,
- sample chapters (2-3 and a rough idea of length in words),
- sample illustrations (or clear descriptions of such),
- any funding sources or marketing connections, and
- any known competition.

Please submit your proposals to the state office, addressed to CNPS Press.

Holly Forbes, Botanical Garden, University of California, Berkeley, CA 94720. hforbes@berkeley.edu



CALIFORNIA NATIVE PLANT SOCIETY LEGISLATIVE PROGRAM

by Vern Goebring

The majority of legislative bills are introduced and acted upon within one year, or two at most. However, it took five years to get a major reform of the Natural Community Conservation Planning Program (NCCP) enacted. While complex and highly controversial proposals frequently take many years to gather sufficient support to be successful in the legislature, NCCP reform was delayed in part due to a difference of opinion among environmental organizations regarding the nature of reform that was necessary and possible. Environmental organizations made numerous attempts to draft and refine bill language over several years before a consensus was reached and the political environment was such that reform was possible in 2001.

The California Native Plant Society (CNPS) was one of the key

organizations that helped to achieve the NCCP Program reform. We explored options, facilitated discussions, implemented political strategies to build support, and negotiated the final legislation. CNPS's efforts over the years involved volunteers (Dave Chipping, Joe Willingham, Sue Britting, Carol Witham, and others), staff (Emily Roberson), and our legislative advocate. Because of this significant contribution of resources, CNPS was possibly the most important environmental organization working to bring this effort to a successful conclusion.

The CNPS legislative program does not just focus on the occasional major campaign, as occurred with the NCCP Program, in order to advocate for native plant conservation. The program works on many fronts to encourage the conservation and appreciation of native

plants. We initiate (sponsor) legislation, monitor legislation sponsored by others, testify in legislative hearings, meet with legislators and interest groups, analyze legislation, propose and negotiate amendments to bills, and work to get the State administration to support our position. In addition, the legislative program monitors and advocates positions on administrative actions and regulations.

This year CNPS is sponsoring two bills. One removes a bias against native plants in laws pertaining to firebreaks and weed abatement. The other promotes a multi-state program to replace tamarisk in the Colorado River basin with native plants. Sponsoring legislation requires a considerable investment of time and effort. When we sponsor legislation, we draft bill language, develop arguments in support of the bill, join the author in presenting the bill in legislative hearings, recruit other supporters, educate legislative staff on the issues, meet with those opposed to the bill, and if necessary negotiate amendments.

In addition this year, as in most years, CNPS worked to strengthen the budgets of key State departments and programs critical to native plant conservation. CNPS was instrumental in organizing a coalition of organizations concerned with funding for the Department of Fish and Game, including groups representing environmental interests, commercial and recreational fishing, and hunting. While this coalition was successful in getting several funding augmentations and fee proposals adopted by the legislature, final budget negotiations and governor vetoes reduced our accomplishments significantly.

The author with Assemblymember Fran Pavley (Agoura Hills), CNPS Legislator of the Year, 2004. Pavley, a solid champion of the environment, will leave the Legislature at the end of 2006 due to term limits. Photograph by T. Odisho.



IDEAS FOR LOCAL GRASSROOTS ACTION

1. Register CNPS members to vote.
2. Appoint a legislative chair and committee in your chapter.
3. Identify CNPS members in positions of influence in the community.
4. Send a chapter delegation to meet annually with your local legislators.
5. Invite local legislators to chapter events and ask them to share their thoughts on issues.
6. Add legislators to your mailing lists.
7. Plan photo opportunities for legislators.
8. Write letters to the editor thanking or critiquing a legislator for his or her actions.
9. Get to know your legislator's local staff.
10. Get to know city, county, and school board members. They are all future legislators.
11. If you support a legislator in an election, let him or her know that you are a CNPS member.
12. Get to know local media reporters.
13. Issue local press releases on important issues and write letters to the editor.
14. Attend local forums, town hall meetings, breakfasts, Rotary Clubs, etc. and speak up for native plants.

TIPS ON WRITING YOUR LEGISLATOR

Most legislators want to know what constituents think. They realize that people who write are likely to be voters who have influence in the community. Legislators generally consider a concise personal letter as reflecting the opinion of 30 to 40 people. When writing, follow these guidelines:

1. Be concise. Limit your comments to one page and discuss only one issue or bill per letter.
2. Identify yourself as a member of CNPS.
3. Type the letter, if possible. If submitting a handwritten letter, be sure it is legible.
4. Mention the issue or bill number at the beginning.
5. Refer to local newspaper articles or credible reports that support your position.
6. Ask for a specific action (e.g., a vote for or against a bill).
7. Be helpful, polite, and firm—don't threaten or be insulting.
8. On emergency issues (i.e., when time is short or something unexpected has occurred) it is better to fax your letter or make a phone call (email is the least effective communication).
9. Always send a thank you note when the legislator responds in the way you have requested.

A successful legislative program requires more than just working within the halls of the State Capitol. It requires that legislators know their constituents care about native plants. Few things are more effective politically than when voters contact their own legislator, especially voters who have established a relationship through earlier communications and who periodically meet with legislators in their local office or at community events. Regardless of one's experience or lack of experience, all CNPS members can participate in the CNPS grassroots lobbying efforts. Interested members can join with other local members in lobbying local legislators, learn about key legislative issues by visiting the Legislation section of the CNPS website, and join the CNPS action alert network at www.cnps.org/alerts.htm.

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THE TEMBLORS: UGLY DUCKLING OF THE COAST RANGES

by Neil Havlik

We have all heard the story of the ugly duckling, who didn't look like his siblings and just didn't fit in. Well, this story is about a mountain range that doesn't look like its neighbors, and just doesn't fit in—at least at first glance. But like the ugly duckling, who turned out to be a thing of beauty after all, this mountain range holds great and pleasant surprises for those who care to look in more detail.

I am speaking of the Temblor Range, the innermost of the Coast Ranges of California. The Temblors extend along the San Luis Obispo-Kern County boundary for some 70 miles, from the Polonio Pass and Highway 46 in the north to the Grocer Grade and Highway 166 in the south. Rainfall averages 5 to 10 inches per year, and the highest point in the range is McKittrick Summit at 4,332 feet. This is too low and too dry for coniferous forest, but the Temblor Range does have some fairly extensive juniper and juniper-oak woodlands. Other conspicuous vegetation includes an interesting semi-desert scrub, and lots of grassland.

People tend to think of the Temblors as a kind of wasteland. The extensive oil fields at their eastern base and their usually austere aspect, which may look overgrazed for much of the year, presents a vision of a place forgotten, overlooked, abused, and generally worked over with no thought for the resources that are there. It's not the kind of place that, at first glance, appears at all inviting or interesting—even to one for whom the desert and desert-like regions are of special interest.

It reminded me of Solano

County where I worked years ago, a place I originally considered so plain and boring compared to the dramatic hills and mountains—yes, mountains—of Contra Costa and Alameda counties where I have spent much of my professional life. Mount Diablo is dramatic; the Jepson Prairie—at least at first glance—is not. But places like the Jepson Prairie grow on you, and as you get to know them more, you find that the drama is not absent, it is just subtle. And that is how it is with the Temblors.

My interest was piqued when I had an opportunity to serve on an advisory committee established as a sounding board for the Bureau of Land Management (BLM). This is the federal agency charged with the administration and management of 261 million acres of America's public lands, located primarily in 12 western states. The Carrizo Plain

National Monument, which was created by presidential proclamation on January 17, 2001 by outgoing President Clinton, is one of the sites BLM manages. The monument's boundaries go up to the crest of the Temblors, and so I had a reason to familiarize myself with that part of the range. My son had a seasonal position there, so we did some exploring. We drove along the ridge; we went up to McKittrick Summit; we drove a jeep road down Crocker Canyon; we followed old mining and prospecting roads here and there. We got out of the car and hiked many of the canyons of the Temblors.

It was a real eye-opener. What we found was a rich grassland-scrubland mix that clearly supported a lot of wildlife. We found healthy juniper groves at the higher elevations. We found ancient oak trees—*Quercus john-tuckeri*—in various

Valley oak savanna at the northern end of the Temblor Range, along Bitterwater Road, with scattered valley oaks (*Quercus lobata*), blue oaks (*Q. douglasii*), and buckwheat (*Eriogonum fasciculatum*) shrubs within the annual grassland. All photographs by the author.





Top: Juniper-oak woodland at the road summit on Highway 58. This open woodland is dominated by California juniper (*Juniperus californica*), blue oak (*Quercus douglasii*), and goldenbush (*Haplopappus linearifolius*). • **Bottom:** Juniper-oak woodland at McKittrick Summit (4,332 feet), the highest point in the Temblor Range. Here the blue oak (*Quercus douglasii*) has largely been replaced by Tucker oak (*Q. john-tuckeri*).

locations throughout the range, some of them quite unexpected, as though these groves were left over from some earlier, wetter time. There were also plenty of signs of human use: lots of jeep roads, off-road vehicle tracks, old mine and drill sites, and communication facilities. But somehow these things didn't dominate the landscape. Rather, they appeared subordinate to the wildness of the place, as if human activity, which has clearly crawled all over these mountains, just couldn't overcome nature.

Ultimately I think that is what impressed me the most: the nature

of the place. Fifty years ago Ernest Twisselmann, a member of a notable local family that has made its living ranching in the Temblors for generations, wrote a flora of the range. He described the plant communities and their intimate connection to local history. The Temblors—at least in the slightly wetter north—were opened for homesteading in the 1920s. Twisselmann reported that many settlers tried to make a living on 320 acres (the allowable homesteading acreage for that area), but couldn't, and in his time the land still showed many of the scars of that attempt.

The wholesale cutting of junipers and oaks for fences, firewood, and even building materials decimated many woodland tracts. Clearing for subsistence agriculture and trying to run too many livestock on small acreages resulted in other damage. Only as these efforts failed and people moved away, did the lands become consolidated into viable ranchlands. This led to some respite for the plants and wildlife, and Twisselmann chronicles the slow return of the junipers and regrowth of the oaks as more sustainable land uses took effect.

While there has been a continuing interest in preserving the Carrizo Plain area for quite some time, it was not until the 1980s that it began to pick up steam. In 1982 the Nature Conservancy purchased 82,000 acres in the Carrizo Plain area, which added to the 100,000 or so acres already in public ownership. Since that time, the Carrizo partners—the Bureau of Land Management, the Nature Conservancy, and the California Department of Fish and Game—have acquired additional lands until today the Carrizo Plain public lands total well over 200,000 acres. In 2001, outgoing President Clinton declared this area to be a National Monument. The map that went with the declaration included the western side of the Temblors from near Highway 58 almost all the way to Highway 166. The west side of the Temblors were included by virtue of their association with the Carrizo Plain watershed, and probably not for anything notable of their own. But it was this fortuitous inclusion that led to my studies (which were on my own time), and to the desire to share the pleasant surprises that I found there.

Grassland with juniper-oak woodland on north-facing slopes near McKittrick Summit. Soda Lake on the Carrizo Plain can be seen in the distance.



SHRUBS AND WILDFLOWERS

The biggest surprise to me was the wide occurrence of a plant association that I had never seen before. Wisselmann referred to it as the Upper Sonoran subshrub community, and the classification by Sawyer and Keeler-Wolf refers to it as the bladderpod-California ephedra-narrowleaf goldenbush series. This association evidently is found in the foothills and low mountains surrounding the southern end of the Central Valley, including the Temblors, the San Emigdio Mountains to the south, and the Greenhorn Mountains southeast of Bakersfield. In the Temblors there are as many as ten co-dominant species.

Density of the shrub community varies from quite sparse to quite dense. It is intermixed with grassland dominated by non-native annuals such as ripgut brome (*Bromus diandrus*) and Arabian grass (*Schismus arabicus*). However, these grasslands are rather sparse, and this sparseness has allowed the persistence of many native wildflowers. This in turn leads to generally good wildflower displays in the Temblors in most years. In spring of 2003 the orange of fiddleneck colored whole hillsides in the Temblors, and mixes of yellow *Monolopia* and purple *Eriastrum* were also abundant.

The shrub cover is thinner at the lower elevations and on drier slopes, but canyons such as Hale McLeod Canyon and Dabney Canyon featured dense stands of shrubs in the upper levels and on north facing slopes. Certain areas along the crest of the range were also quite dense. In April and May these stands were bright yellow with the widespread occurrence of the narrowleaf goldenbush (*Haplopappus linearifolius*).

Wisselmann believed that livestock grazing benefitted this species because of its relative unpalat-

TABLE 1. COMMON SHRUBLAND SPECIES IN THE TEMBLORS

COMMON NAME	SCIENTIFIC NAME
Narrowleaf goldenbush	<i>Haplopappus linearifolius</i>
Spiny goldenbush	<i>Isocoma menziesii</i>
Morman tea	<i>Ephedra californica</i>
Bladderpod	<i>Isomeris arborea</i>
California buckwheat	<i>Eriogonum fasciculatum</i>
Eastwoodia	<i>Eastwoodia elegans</i>
Matchweed	<i>Gutierrezia bracteata</i>
Saltbush	<i>Atriplex polycarpa</i>
Winter fat	<i>Krascheninnikovia lanata</i>
California sagebrush	<i>Artemisia californica</i>

ability. I am inclined to agree: the species is the most common of the shrubs and it also occurs commonly with the junipers and oaks which are regularly grazed by livestock. However, by far the most interesting thing about this shrubland is its diversity. At least ten species can be found here in some abundance. They include the species listed in Table 1.

The grasses and wildflowers of the grassland community are completely intermixed with the shrub community, and colorful colonies

of *Eriastrum*, *Amsinckia*, *Monolopia*, and other species are often observed among the shrubs. Interestingly, the fragile wind poppy (*Stylomecon heterophylla*) in the Temblors is basically restricted to the shrub community and can be found in many areas among the shrubs or in small openings. The Crocker Grade is a good place to look for them. Another interesting wildflower is the desert candle (*Caulanthus inflatus*). This beautiful member of the mustard family forms colonies in steep slopes which are free of competi-

Crocker Canyon, looking southeast.





Top: Tucker oak (*Quercus john-tuckeri*) woodland in upper Crocker Canyon. • Bottom: Upper Sonoran subshrub and grassland community near Crocker Grade. The dark shrubs are Mormon tea (*Ephedra californica*).

tors, and in favorable years can be quite obvious and dramatic. Also abundant in some places is our lord's candle (*Yucca whipplei*).

THE TREES OF THE TEMBLORS

As mentioned earlier, the Temblors are relatively treeless. In the north, blue oaks and valley oaks can be found on hillsides and canyons about as far south as Highway 58 and McKittrick Summit. The Tucker oak then seems to replace the oth-

ers and it occurs in widely scattered locations all the way to the southern end of the range. Twisselmann reported that the Temblors held the only Kern County locations for coast live oak (*Q. agrifolia*) and toyon (*Heteromeles arbutifolia*). The coast live oak is found in Chico Martinez Canyon about four miles north of Highway 58, and the toyon was found by Don Bedell in upper Cedar Canyon.

Both of these locations apparently represent the most interior locations for the two species in the Coast Ranges, and both were de-

scribed as senescent (aging) colonies. Twisselmann attributed this condition to a general drying trend over the past several hundred years, and to severe drought in more recent years. Again, although I have not seen these stands, I am inclined to agree, and look to the Tucker oaks for confirmation. Some of the Tucker oak colonies are found at quite low elevations, and upon close inspection, they turn out to be obviously quite old. In many cases the roots are exposed and the plants look like they are standing on prop roots like mangroves, as the land around them has eroded away. There are virtually no signs of any seedlings, at least in the southern part of the range. They clearly give the impression of trees that got established under much more favorable conditions many years ago.

The California juniper is the characteristic tree of the range despite having been harvested extensively for fenceposts, corrals, and firewood, and is found from one end of the range to the other. It is most abundant from the Cedar Canyon area south to near Crocker Grade, with small populations and individuals scattered both north and south of that core region. Twisselmann commented upon the return of the junipers following the end of the homesteading period, and that recovery appears to be continuing today.

One other tree that is seen occasionally is the Fremont cottonwood (*Populus fremontii*). There are no perennial streams in the Temblors, and only occasional springs, so the occurrence of these cottonwoods is notable. They can be found along the few seasonal watercourses in the range, mainly in the north, and at an occasional spring or seep elsewhere. When you spot one in a canyon, it is worth making a special trip to see whether the water source that is keeping it alive really amounts to anything or not, since reliable surface water is so rare. Generally,

it doesn't, and the most reliable sources of water in the range are artificial, being water troughs for livestock installed by ranchers, or at the numerous wildlife guzzlers installed years ago by the Department of Fish and Game. There are, however, a few important natural water sources. One of the largest springs in the area is called Bitterwater Spring, located at the southern end of the range. When I visited there recently, I was rewarded by the sight of a few cottonwoods and willows, some old Tucker oaks on the hillside above, and an extensive growth of mule fat (*Baccharis viminea*) that extended along a small, live watercourse for about a half mile. This wet area abounded in quail and was very different from the dry, sere scrublands just a few yards away.

SEE FOR YOURSELF

Should you decide to visit the Temblor Range, you will find it to be a sparsely populated country consisting of large ranches plus other public lands west of the city of Taft, in addition to the land within Carrizo Plain National Monument. State Highway 46 crosses the northern end of the range, Highway 58 crosses the middle, and Highway 166 crosses at the southern end. To really experience the Temblors, however, one must get off these major roads and travel some of the local roads. Bitterwater Road between Highways 46 and 58 travels through ranching country on the west side of the Temblors, and a few roads radiating from this road penetrate into the range a bit. Annette Road travels a few miles into the Temblors, and Bitterwater Valley Road cuts through at Cedar Canyon, eventually connecting up again to Highway 46. It should be pointed out that while traveling along Bitterwater Road, one is traveling along the San Andreas Fault, and the landslide topography and



Our lord's candle (*Yucca whipplei*) near the Cochoro Ranch, with *Eastwoodia elegans* in foreground.

numerous ponds associated with the fault are conspicuous.

Highway 58 goes over the middle of the Temblors and reaches an elevation of over 3,200 feet. It is wooded for a short distance, with interesting views especially of the Central Valley. But to get a real sense of the Temblors one should travel Elkhorn Road. This unpaved road parallels the Temblors for about 30 miles in the Elkhorn Plain, a smaller version of the Carrizo Plain to the east that is also part of the national monument. The road travels into the foothills of the Temblors as well as the floor of the Elkhorn Plain, and provides excellent views into the mountains. About halfway down is the Crocker Grade, which crosses the Temblors over to the towns of Fellows and Taft. This road also affords a good view of the mountains.

At the southern end of the Elkhorn Plain, one can turn east and proceed over Elkhorn Grade Road to Highway 166. This road travels the Bitterwater Canyon (not the Bitterwater Valley or Bitterwater Road mentioned earlier) and affords a real feel of the desert-like southern Temblors. One can also travel west for about three miles and connect to Soda Lake Road,

which traverses the Carrizo Plain. About two miles further south one again intersects Highway 166.

All roads mentioned are suitable for passenger vehicles, although it is not advisable to drive the unpaved roads during or immediately after rainstorms. April is perhaps the best month for wildflowers, but they can be found from February through June. Once you have been through the Temblors, and if your interest is piqued like mine was, you can travel numerous roads suitable only for four-wheel-drive vehicles that will provide access to many remote parts of the range. Then you can walk some, enjoy the views and the wind, feel the solitude, and discover as I did that the ugly duckling is really a thing of beauty after all.

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Cypress forest on Guadalupe Island showing signs of goat herbivory. The islets Toro and Zapato are in the far distance. All photographs courtesy of Island Conservation unless otherwise noted.

THE RESTORATION OF GUADALUPE ISLAND

by Bradford Keitt, Steve Junak, Luciana Luna Mendoza, and Alfonso Aguirre

“Guadalupe is remarkable for endemism in the flora and fauna; but it is a naturalist’s paradise despoiled by feral goats, housecats, and mice. [The island] is a Mexican national treasure in dire need of protection” (Moran 1996).

Guadalupe Island rises like a rampart from the wind-whipped sea off the Pacific coast of the Baja California Peninsula. As the westernmost territory in Mexico, the 26,000 hectare island is a lonely outpost for a small military garrison and a community of about 70 fishermen and their families. The island is home to over 30 plant taxa that are found nowhere else in the world. It also supports several southern California ecosystems that are now rare or threatened on the continent, includ-

ing an extensive lichen flora and important remnants of unique coastal scrub and island chaparral communities.

Guadalupe stirs a love-hate relationship in those that have come to know its sere, rugged landscape. Botanist Reid Moran, whose 40 years of work on Guadalupe brought attention to its unique flora, called it his “very favorite island,” but he mused that “at too close a range it has sometimes seemed a hot, ugly, weedy, insuperable rock pile that I have almost wondered, at least fleetingly, why anyone in his right mind would subject himself to climbing it” (Moran 1998).

A primitive dirt road now makes traversing the island easier than it was for most of Dr. Moran’s career, but after three hours of bounc-

ing across the island in our own cloud of dust and exhaust, we’ve also wondered what lures us back year after year. Yet, just as the barren beauty of Guadalupe and the excitement of finding rare and exotic plants seduced Dr. Moran, we too are captivated by the island’s ecosystem. For that reason, we have committed ourselves to protecting and restoring the remaining pockets of its unique flora and fauna with the hope that the island can eventually recover some of its original biodiversity.

Thankfully, the political climate in Mexico now exists to help this dream become reality. Over the past decade Mexico has become a world leader in the conservation of island ecosystems, protecting more than 25 islands by removing damaging in-

troduced mammals, both predators and herbivores. With these successes in hand, the Mexican environmental ministry (SEMARNAT), the Grupo de Ecología y Conservación de Islas, and Island Conservation are collaborating with several Mexican and US groups¹ on an ambitious plan to restore Guadalupe, one of the largest and most biologically rich islands in the country.

In this article we offer a glimpse of Guadalupe Island before the introduction of the non-native plants and animals that have radically altered the island's ecosystems, and a brief tale of what has happened to those ecosystems over the past 120 years. We describe efforts initiated in 2001 to exclude goats from some of the most sensitive areas of the island, and the early, promising results of those efforts. And based on results from other islands, we look ahead to what might happen to Guadalupe's vegetation and endemic birds once the goat removal effort, which began in December 2004, is completed.

EARLY DESCRIPTIONS OF THE ISLAND'S VEGETATION

Early descriptions of Guadalupe Island are few, but they paint a picture of extensive shrublands, large juniper forests, and impressive cypress, oak, pine, and palm forests. The lush far-northern end of the island was once blanketed with endemic pines (*Pinus radiata* var. *binata*), island oaks (*Quercus tomentella*), and endemic Guadalupe palms (the common southern California landscaping tree *Brabea edulis*). Shrubs at the north end included *Ceanothus* and *Ribes*, and endemic taxa such as the remarkable *Hesperalcea palmeri*. Moving southwards,



Palm trees on the far north end of Guadalupe Island. This area is among the hardest hit by goats. In May 2005 Luciana Luna Mendoza found the first recorded palm seedlings on the island since goats were introduced.

pine forests blended into cypress forest dominated by the endemic *Cupressus guadalupensis* ssp. *guadalupensis*. It is thought that this forest included associated shrubs like *Ceanothus crassifolius* and an undescribed endemic *Arctostaphylos* taxon.

Spreading south and downslope from these forests was an extensive coastal scrub and chaparral ecoregion, similar to the coast of southern California, yet with enough endemics to make it unique. Species like the endemic *Senecio palmeri*, a striking shrub with white foliage, *Sphaeralcea palmeri*, and *Lotus argophyllus* ssp. *ornithopus*, plus more widespread species like *Dichelostemma capitatum* and *Calystegia macrostegia* ssp. *macrostegia* filled the landscape (all descriptions based on Moran 1996). Because the vast ma-

jority of these plants are closely associated with the islands off California, Guadalupe is considered a southern extension of the California Floristic Province.

Unfortunately, the island today



Top right: *Senecio palmeri* seedling. • Right: *Senecio palmeri* in flower, safely ensconced atop a cliff looking down 3,000 feet to the ocean. This species is called "white sage" by some, but belongs in the groundsel genus, and is a member of the sunflower family.



¹ Santa Barbara Botanic Garden, The Nature Conservancy, Conservation International, Secretaria Marina, CICESE, Universidad Autonoma de Baja California, Seacology.



Pine enclosure fences with *Ceanothus* and *Calystegia* inside.

is very different from that described by the handful of naturalists who visited it before introduced goats and cats caused widespread devastation. Between 1885 and 1905 visitors documented the destruction of the *Ceanothus*, *Juniperus*, and many of the endemic shrub species (Moran 1996). Over the ensuing 100 years the island has become largely devoid of vegetation across extensive areas. Several endemic plant species

A *Ceanothus* plant inside and a dead pine outside an enclosure. This is the first *Ceanothus* reported on the island in over 100 years.



have apparently gone extinct, while numerous natives have disappeared from the island. Many other species have become restricted to a few small populations clinging to sheer cliffs and other areas inaccessible to goats. This habitat destruction, combined with predation by introduced cats, also led to the extinction of six endemic bird species, including the Guadalupe caracara, the Guadalupe kinglet, and the Guadalupe storm-petrel (Jehl and Everett 1985, Keitt et al. in press).

This kind of destruction has become a familiar story played out on islands everywhere—introduced species wreaking havoc on fragile insular ecosystems that have evolved in the absence of terrestrial predators and large herbivores (Coblentz 1978). Goats are especially devastating and are considered “the single most destructive herbivore” of island ecosystems. Because they can survive on almost no water and will eat virtually anything, including bark and roots, goats can kill not only grasses and shrubs, but also adult trees. Their ability to literally strip the landscape bare eventually leads to soil and substrate destruction.

Fortunately, over the past sev-

eral decades, techniques have been developed to remove goats from islands. At present, goats have been successfully removed from more than 100 islands worldwide in efforts to protect biodiversity and restore island ecosystems (Campbell et al. 2004). The results of these removals have been dramatic and positive even on the most devastated islands.

RESTORATION EFFORTS ON GUADALUPE

The first steps in the restoration effort on the island were to inventory existing plant species and build a series of fences (exclosures) to exclude goats from sensitive areas. In June 2001, Island Conservation, Grupo de Ecología y Conservación de Islas, Santa Barbara Botanic Garden, and the Instituto Nacional de Ecología sent a team to survey the island and mark locations for fences (Junak et al. in press). A rugged group of ranchers from Sonora then overcame incredible logistical obstacles to transport 2 km’s worth of fencing materials to remote parts of the island and build 12 fenced exclosures. This was an amazing feat made even more heroic considering that there is no dock at Guadalupe, and everything had to be hand loaded into small open boats to transport it from a Mexican Navy ship to the island. Once on the island, the majority of the gear had to be carried by horses to sites many miles from any road. The main goals of this effort were to see what species grew up in the absence of goat herbivory and try to protect some critically endangered species long enough to enable them to reproduce.

Plant response inside the exclosures was rapid and positive. In January 2002, after only one growing season, 47 seedlings of the endemic pine had sprouted inside one

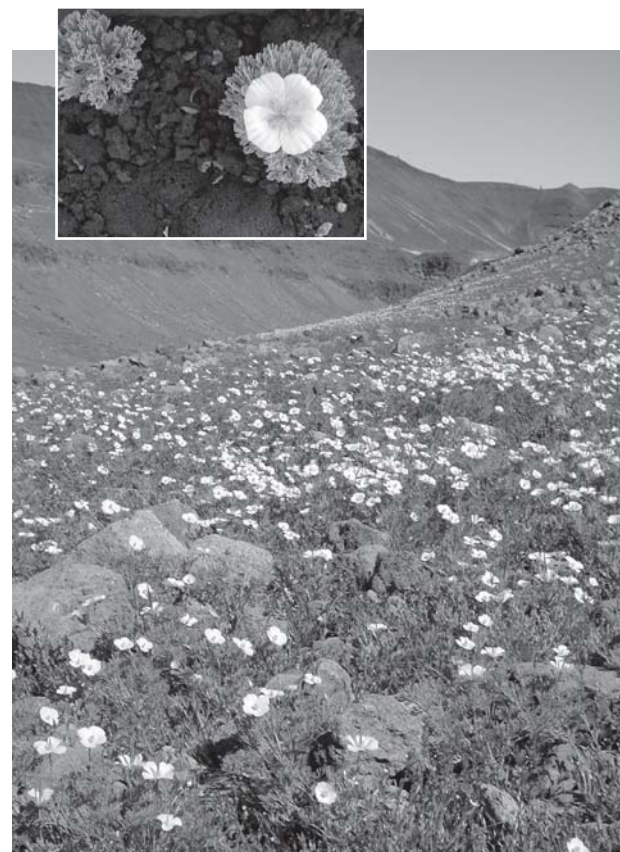
of the exclosures built around nine adult pine trees. It is estimated there are 220 adult pine trees on the island (Rogers et al. 2003), so this one growing season produced a greater than 20% increase in the number of pines on the island. By June 2003, the number of seedlings inside two of the exclosures was up to 231 and by April 2005, about 1,700 young pines had been counted.

Perhaps the most amazing discovery inside the exclosures was that of a small *Ceanothus*. Another member of this genus, *C. perplexans*, was collected on the island by early botanical visitors (D. Wilken, pers. comm., 2005) but has not been seen there since the late 1800s. Early examination of this *Ceanothus* seedling indicates that this is a new species for the island, closely resembling *C. arboreus*. However, the leaves on this plant are different enough to suggest that this could possibly be an undescribed endemic subspecies. Between May 2004 and April 2005, four additional juveniles

of this *Ceanothus* have been discovered around the southernmost pines on the island.

We have also made exciting discoveries outside of the exclosures. In June 2001 we found *Calamintha (Satureja) palmeri* in small patches around the north end of the island. This mint family member was first described in 1876 and had not been seen since 1885, leading Moran (1996) to consider it “undoubtedly extinct.” Also in June 2001 *Nicotiana attenuata*, a native species last seen in 1898 and considered extinct on the island, was found under the cypress trees at the high north end of the island and protected with a fenced exclosure.

The striking “white sage,” *Senecio palmeri*, is a Guadalupe endemic that once covered large areas of the island but has not been seen on the island since 1974, and even then was known from only a few individuals in inaccessible cliff areas. To our great delight, in April 2004, we discovered a healthy population of more than 50 *Senecio palmeri* individuals, many in flower, on cliffs along the west side of the island. Giant coreopsis (*Coreopsis gigantea*), common on the offshore islets of Guadalupe but never reported on



A field of island poppies (*Eschscholzia ramosa*). Inset: Closeup of *Eschscholzia palmeri*, which is endemic to Guadalupe Island. Photograph by R. Henry.

the main island, was discovered in spring 2005 at a remote beach area at the south end of the island. Likely a favorite food of goats, this species



Above: Laysan albatross on Islote Zapato amidst giant coreopsis (*Coreopsis gigantea*). Common on the offshore islets, Luciana Luna Mendoza discovered the first specimen of *Coreopsis gigantea* ever recorded on the main island. Probably once abundant, this species was rapidly wiped out as a favorite food of the goats. • Right: Laysan albatross family on Islote Negro with the succulent *Cistanthe guadalupensis* in the foreground. Photographs by R. Henry.



may have been very common across the south end of the island but disappeared before botanists ever reached the island.

Amazingly, in good years some native taxa can still dominate even in areas accessible to goats. Following heavy winter rains, the spring of 2003 saw whole mountainsides blanketed with blooming island poppies (*Eschscholzia ramosa*), and fields blue with the flowering stalks of blue dicks (*Dichelostemma capitatum*).

Discoveries such as these are helping establish momentum towards restoring Guadalupe Island. After an extended planning period, goat eradication efforts began in summer 2004. Presently goat populations are so low that they are having little detectable impact over most of the island. The few remaining goats are confined to steep inaccessible cliffs, and it will undoubt-

edly take some time before the island is completely free of goats. In the meantime, the island is already recovering dramatically; plants (both native and non-native) are growing up and providing much needed protection against erosion across large parts of the island. Annuals are surviving long enough to go to seed, and perennial and shrub species are spreading out into areas formerly overrun with goats.

Restoring vegetation will have far-reaching impacts on Guadalupe Island's ecosystem. An example is the change in precipitation due to destruction of the island's forests. At 26,000 hectares, Guadalupe is slightly larger than Santa Cruz Island off southern California, but is considerably drier except near the top of its 1,300 meter peak, where the nearly constant northwest winds drive clouds up and over the ridge. Previously, the extensive cypress

Pine seedlings growing inside a fenced enclosure. Over 1,700 seedlings have been counted. These are perhaps the first seedlings to reach this size since goats were first introduced to the island.



Luciana Luna Mendoza and Clokey's nightshade (*Solanum clokeyi*) inside an enclosure in the cypress forest. This *Solanum* has peculiar clonal growth habits compared with other nightshades on the Channel Islands, and may be a unique taxon.

and pine forest caught the fog and increased precipitation. As the goats have devastated the forests there has been much less water capture, and only one main spring now remains on the island.

Although it is impossible to know exactly what will happen to the vegetation on Guadalupe Island when goats are removed, the data from our exclosures and the rapid changes we are seeing outside the exclosures now that goat numbers are reduced indicate that the benefits to native plants will be dramatic. Another place we can turn to learn about the potential future for Guadalupe's plants is the Channel Islands off Southern California—the islands most floristically similar to Guadalupe. On San Clemente Island, where goats were eradicated in 1992, the initial response was a flush of non-native grasses. However, over time native species began prospering and in some areas they now dominate the landscape.

Although we may not be able to predict exactly what will happen to the island's vegetation, we do know that removing goats from Guadalupe Island is already having dramatic results and will be more effective than any other action to prevent the extinction of the majority of the island's

GUADALUPE ISLAND BIOSPHERE RESERVE

In order to protect Guadalupe Island forever, Island Conservation and the Grupo de Ecología y Conservación de Islas partnered with the Mexican federal government (SEMARNAT and CONANP), the Mexican Navy (SEMAR), and the local fishing cooperative to develop a proposal to create a federally protected area that includes Guadalupe Island and the surrounding marine region. In April 2005 Mexican President Vicente Fox signed into law the decree, officially creating the Guadalupe Island Biosphere Reserve. This means the conservation of Guadalupe Island will be forever monitored under the watchful eye of the Mexican Natural Protected Areas system. To learn more about the decree, visit www.islandconservation.org.

HOW CAN YOU HELP?

You can support the conservation work on Guadalupe and the other islands off the Baja California Peninsula by making a tax deductible donation to Island Conservation. Island Conservation is an action-oriented organization dedicated to the protection of island life. Together with our partner organizations Grupo de Ecología y Conservación de Islas in Mexico and Island Conservation Canada, we have eradicated damaging invasive animals from 27 islands in western North America. While Guadalupe Island is our most important project to date, the results described here are similar to those we have found on some of the other 27 islands we have worked on. For example, on the San Benito Islands, the endemic live-forever, *Dudleya linearis*, appeared to be extinct in the wild due to overgrazing by invasive European rabbits. Once the rabbits were eradicated, the *Dudleya* came back from the seed bank and, along with the other native plants, is now flourishing. Please send tax deductible donations to: Island Conservation, 100 Shaffer Road, Center for Ocean Health, Santa Cruz, CA 95060. Or visit our website to donate online: www.islandconservation.org.

endemic plant species and, in turn, the loss of the remaining endemic birds that depend on those plants. While the damage to Guadalupe's ecosystem is significant, the observations of rare and presumed extinct plants over the past four years demonstrate that many pieces of the island's unique biotic puzzle still exist. It is now a question of whether these pieces can again be connected. Inside the fenced exclosures, where pine seedlings are growing up out of the shade of their dead and fallen neighbors, recovery of the native vegetation is well underway. On the rest of the island, we are already

seeing the beginnings of what we hope will be a process of recovery that will repeat itself across the entire island.

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MUSING ON LEAF AND TWIG: NOTES ON WINTER PRUNING OF NATIVE TREES

Dan Songster

The first winds of winter swirl into the garden, pushing the rattling, paper-thin leaves of the sycamore back and forth like the pulse of a tide, depositing them in piles against boulders and shrubs, returning later to collect them for another dance. The smaller leaves and debris are sent scampering about the garden floor like children with too much energy. In the wind above, the leaves still clinging to the Fremont poplar politely applaud their antics and later these spectators also fall, becoming part of the moving mulch show. The willows and the mesa oaks bend quietly in the winds as the large California lilacs pepper the soil beneath with a dark sprinkling of seeds from their swaying branches. Birds fly in quickly, snapping up the seed. The sky darkens. The seasonal changes in a native garden are dynamic and a pleasure to observe and be immersed in.

While I do enjoy contemplat-

Desert willow (*Chilopsis linearis*) with light bloom in July. Six months ago it stood without leaf, ready for a gentle hand to tip back overreaching branches and remove a bit of clutter.



California buckeye (*Aesculus californica*) in spring bloom. Often a large shrub, this one is well on its way to becoming a small tree after being “lifted” a few months earlier. All photographs by the author.

ing this seasonal mood swing in the native garden at Golden West College in southern California, winter months are also a practical time for pruning the trees there. After all, by November most of the leaves have fallen from the garden’s deciduous trees, revealing their various branching structures and pruning needs. The evergreens take pruning most kindly in the cooler winter months when their growth has slowed greatly. Winter pruning of most flowering species interferes the least with their lovely floral show just a few months away! Winter is also a slower season for garden chores and provides more time to carefully attend to this important and gratifying work.

Glancing around the garden I see the sycamore (*Platanus racemosa*) will need some thinning this year; too many interior branches, crossing and cluttering. The white alder (*Alnus rhombifolia*) also needs thin-

ning, but mainly to allow its understory neighbors more space and light. Over in the very driest corner of the garden, the desert willow (*Chilopsis linearis*) stands without leaf just two months after being the center of attention with its bright fall blossoms of cranberry and pearl. Now its rather jumbled branch pattern is revealed, and loppers and hand pruners help with a little untangling and a light tipping back. A sharp handsaw is used to lift the skirt and a few crossing branches of the six-year-old California buckeyes (*Aesculus californica*). This grants more space to the spicebush (*Calycanthus occidentalis*) living beneath but also promotes upward growth, encouraging these particular plants to be small trees rather than broad shrubs. The fern-leaved Catalina ironwood (*Lyonothamnus floribundus*) is now old enough to have its lower branches removed, displaying the beautiful cinnamon colored, shred-



Fern-leaved Catalina ironwood (*Lyonothamnus floribundus* ssp. *asplenifolius*) has lovely flowers, dark green foliage, and when lower branches are removed, displays distinctive cinnamon-colored, ribbon-like bark.

ding bark. The fountain or water birch (*Betula occidentalis*) has several suckers shooting up from the base—perhaps a normal event in the wild, but not desirable in the garden. Several cuts with sharp and clean loppers eliminates the unwanted growth and the plant's energies are once again directed gracefully upward.

Another gust of wind sweeps through, pulling at the leaves of the coast live oak (*Quercus agrifolia*), causing a few to spill into the deergrass (*Muhlenbergia rigens*) beneath. Although evergreen, the canopy seasonally thins and I can now see it could use a bit of gentle tennis shoe climbing to take out some small interior branches which have died—a natural event in a 30 year old live oak. Corrective pruning is done to help our small blue oak (*Quercus douglasii*) whose leader was snapped two years ago. Another branch shows energy and promise, and a few small cuts help ensure the direction the tree will take. Nearby, an elderberry (*Sambucus* sp.) reveals its unruly habit, with multiple trunks producing a mass of arching and crossing branches in real need of sorting out. Pruning is

a pleasure on a quiet morning. The wood is soft and in a half hour the job is done and the mockingbirds return to glean the last of the drying berries.

Of course, not everything needs pruning. The incense cedar (*Calocedrus decurrens*) is tall and full, quite possibly the most perfect green in any garden, and needs nothing. Next to it stands the old western redbud (*Cercis occidentalis*) that was gently thinned and lightly headed back last year. Its multi-trunk form has certainly improved, and it is now more compact and less likely to lose a heavy branch in the winter winds as it did last year. We look forward to its thick show of cherry pink flowers this spring. The pungent California bay (*Umbellularia californica*) needs no work, and neither does the 30-year-old Catalina cherry (*Prunus ilicifolia* ssp. *lyonii*) near the amphitheater. The California walnut (*Juglans californica*) can wait another year or two before the lowest branches are removed to re-

veal the squawbush (*Rhus trilobata*) spreading beneath. Leaving the lower branches on promotes secondary growth and a thicker, stronger trunk. This is also the proper course for our rather young valley oak (*Quercus lobata*) and big-leaf maple (*Acer macrophyllum*). Leaving the lower branches simply increases the trunk girth and eventual strength of the trees.

It seems particularly true with native trees that pruning promotes a conscious direction of growth. No severe topping or shearing, please! A branch is cut only after envisioning what the absence of that living part will mean for the plant. All cuts should have a good reason for being made and are best accomplished when the tree is young. These small cuts gently direct growth and do not severely wound the tree. Large cuts on mature trees, however cleanly made, are to be avoided if at all possible. Prune for tree health, strength, and shape/structure, and less often for imag-

Coast live oak (*Quercus agrifolia*) seldom needs more than a slight lifting or occasional small branch removed. Structural pruning for its adult shape should be done when the tree is young. Avoid large cuts on mature trees if at all possible.



ined aesthetic reasons. It is very easy to damage a tree, however noble your intentions. (If you feel unsure of your skills ask the advice of a trusted arborist, especially one familiar with native trees). I especially take my time when working with slow growing, less forgiving hardwoods like oaks. It takes them quite a while to recover from any “wrong” cuts.

Later, long after the once dancing leaves have been deposited in the compost pile and the rains have

mostly passed, we watch as leaf buds burst into that fresh, vital green of early spring. It is then we begin to see the results of our careful efforts during the early winter. The sycamore (*Platanus racemosa*), which had its crossing branches removed, will have dappled light penetrating through the canopy, allowing more air to circulate and possibly slowing mildew and other fungal problems. The coffeeberry (*Rhamnus californica*) and Douglas iris (*Iris douglasiana*) beneath the alder will enjoy

Some trees rarely need any form of pruning, like incense cedar (*Calocedrus decurrens*). Perhaps after a decade or two some light lifting of lower foliage may help, and then that's it.



Top: Blue elderberry (*Sambucus mexicana*) needs some work sorting out this clutter. Branches tend to send off a lot of sucker growth that can easily be cleaned out annually with loppers and a small tree saw. • Bottom: Dead branches, due to fungal problems, of young madrone (*Arbutus menziesii*), that need removing. Older trees can use a bit of canopy thinning to best show off beautiful bark color and interesting branching structure.

the added light once it is thinned. The elderberry will explode into leaf, looking sturdier and more balanced since our winter work. The buckeye and ironwood will have the higher canopies we wanted, and the blue oak will emerge a tree on the mend. Slowly the garden matures, and season after season we learn more about our trees and how best to treat them. Perhaps we learn from a friend's advice, a particular talk in a symposium, or from an evening's quiet reading. With time, it is more likely we learn from the trees themselves and their response to our hopeful attention.

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CALIFORNIA NATIVE PLANT SOCIETY FELLOWS: LIZ PARSONS AND BOB SOOST

by the CNPS Fellows Nominating Committee, Reny Parker, and Bob Hass

The California Native Plant Society (CNPS) Board of Directors and Chapter Council have named Bob Soost, Liz Parsons, and Malcolm McLeod Fellows for the year 2005. This honor is conferred upon individuals who have made an outstanding contribution to the organization's success and to the appreciation and conservation of California native flora. The tributes to Liz Parsons and Bob Soost appear below; that for Malcolm McLeod appeared in the January 2005 issue of Fremontia (Volume 34 (1):30-31).

LIZ PARSONS

In 1972 Liz was browsing in a Sebastopol bookstore when she came across a book written by someone with her name—Mary Elizabeth Parsons. Even though she was not particularly interested in the subject of the book—*The Wildflowers of California*—she bought the book because of the name coincidence. The first wildflower that she identified with the book was the exotic filaree (*Erodium cicutarium*). She has now identified many more wildflowers by exploring the world that this book opened up to her.

When she purchased the book, she was enrolled in a horticulture class at the Santa Rosa Junior College (SRJC), and she was in the process of adjusting to her new California home. In 1971, at the age of 30, she had moved to Sonoma County and was intrigued by the new wild plants. They were all so different from those she knew in her native Illinois. In 1975 she enrolled in Steve Barnhart's SRJC field botany class. Steve's assistant, Nancy Harrison, was president of the Milo Baker Chapter of CNPS



Liz Parsons holding up her work-in-progress at the Milo Baker Chapter's annual wreath-making workshop in December 2004, which she led. Photograph by G. Hundt.

and encouraged all of the students to attend the meetings. The botany course was taught in Baker Hall, named after Milo Baker who had taught botany at the Junior College for over 30 years.

Liz began attending CNPS meetings and started to apply her horticultural training to the challenge of growing native plants. She constructed a small greenhouse and was soon experimenting with annuals, perennials, and shrubs. She particularly remembers her success with *Penstemon spectabilis*. She began volunteering to work at the chapter plant sale. It was only a matter of time before she was asked

to co-chair the sale. She worked with many co-chairs and by 1988 was the sole coordinator of the sale.

Records for the sales are rather sketchy; however, at the 5th annual sale in 1976 the gross sales were \$1,516 with \$1,020 net. Sales continued to improve until in the year 2000 the chapter had the best year ever with \$12,760 gross after taxes and \$10,223 net.

Under Liz's guidance the plant sale has evolved. In the beginning many sale plants were the result of salvage activities. Liz has fostered strong and continuing relationships with native plant nurseries in Sonoma County including Califor-

nia Flora, Mostly Natives, and Shooting Star. Four potting workshops are held every year and members grow these plants until the October sale. Liz is constantly striving to improve the selection of natives that are sold at the sale and to increase her own knowledge of the native flora.

Although she received a B.A. from the University of Illinois in 1963, she continued her studies of horticulture at the Santa Rosa Junior College for many years taking one to two courses a year. Plant propagation, landscape design, landscape maintenance, pruning Japanese maples, irrigation design, and pest management are some of the courses that she completed.

In May 1991 California Garden Clubs, Inc. awarded Liz a special award for "Plant Propagator of the Year." This award was in recognition of her successful propagation of California native plants from seeds and from cuttings.

As she learned about California native plants and horticulture in general, she enjoyed sharing this knowledge with the public. She has published many articles in the Milo Baker Chapter newsletter, wrote a gardening column for her local paper, *The Kenwood Press*, and wrote and illustrated articles for the *Bulletin of the California Horticultural Society* in San Francisco.

For 18 years Liz has been cultivating California natives in her Kenwood garden. These plants are the source of cuttings, seeds, and divisions that go to the plant sale. This is also where she learned about the habits of the plants that she wrote about and propagates.

Liz has presented many programs for the chapter. Every December she organizes a popular wreath-making workshop. She has also given programs on gardening with natives, organized panel discussions with local native plant experts, and presented a slide show on Pacific Coast native iris.

A popular and unique program that she developed is Transect Across Sonoma County. Liz uses slides from the Milo Baker Chapter slide library to illustrate the nine Sonoma County habitats one would encounter as one traveled across the county from the seaside in the west to the chaparral in the east where Sonoma County joins Napa County.

Liz has served the chapter in publicity, hospitality, and as president (1984-86). She has been a moving spirit of the Milo Baker Chapter for 30 years and an enduring source of energy, good humor, and enthusiasm.

BOB SOOST

Bob Soost, a CNPS Marin County Chapter member, has been active in the Society since 1987, working energetically in multiple capacities on behalf of the chapter. His initial involvement began in 1987 when he

joined a group that had been monitoring rare plants for the Point Reyes National Seashore. After Virginia Norris's untimely death in 1997, Bob took over as leader of the group which meets on Fridays most of the year.

Bob has been a strong advocate for plants by contributing to conservation plans, writing well-researched letters, and attending public meetings. At various times over the past 18 years, he has represented CNPS at no fewer than seven organizations, including the Marin Environmental Alliance, Marin-Sonoma Weed Management Area, and the Fire Management Plan for Point Reyes National Seashore.

Since 1997, Bob has served as the chapter representative on the Marin Environmental Alliance. In 1998, he represented CNPS at a Coastal Dunes Guild Workshop and a meeting on the Sierra Nevada Framework for National Forests. Starting in 1999, he has ac-

Wilma Follette, Bob Soost, and Jean Soost at the presentation of Bob's CNPS Fellow award. Photograph by W. Elliot.



tively represented the Marin Chapter at Marin-Sonoma Weed Management Area meetings, and has been an active participant in the fire management plan for Pt. Reyes National Seashore following the immense fire there.

Bob has written letters and attended meetings advocating the Bayfront Corridor Open Space Plan, as well as a county tree ordinance opposing the unnecessary removal of native trees. On behalf of the chapter, Bob wrote to the Marin County Open Space District expressing opposition to bicycles on single-track trails, and to the Presidio Trust and Golden Gate National Recreation Area Advisory Committee urging adoption of the preferred alternative vegetation management plan.

In 2000, at the request of the West Marin Environmental Action Committee, Bob drafted the "Biological Resources" section for comments on the Draft EIR requested by the County for the Lawson's Landing (Dillon Beach) proposed septic system. In 2001, he attended a hearing and wrote comments on proposed changes to the County Development Code affecting agricultural lands. This past spring he worked on the Tomales Bay State

Park General Management Plan and the Coast Plan portion of the County General Plan. He also wrote a letter in support of the Marin Municipal Water District's application for funds to restore the Cataract Trail on Mt. Tamalpais. Over the years he has also somehow found time to write well-researched letters of support or opposition to numerous legislative measures in Sacramento.

More recently he has become involved in fundraising, helping to secure monies for trail restoration on Mt. Tamalpais, assisting with a grant application for a plant database to be hosted by the Marin County Open Space District, and writing in support of a proposal for eradication work to be coordinated by the local weed management area.

From 1995 to 2001 Bob served as president of the Marin Chapter, during which time he also represented the chapter at State Board meetings, and continues to do so as chapter delegate. He also served on a review of the 1999 State CNPS budget. The September 2004 State Board meeting at Walker Creek Ranch was largely organized by Bob, along with representatives from the Milo Baker, Napa, and Yerba Buena chapters.

In 1996 he represented the chapter in a joint arrangement with Pt. Reyes National Seashore to produce a booklet with photographs of flowers of the Seashore. He also served as chapter representative at a Monterey meeting on "Dune Restoration" in cooperation with the San Francisco Book Festival. For the past several years Bob has helped with annual vegetation surveys at Pt. Reyes National Seashore.

Over the years he has also managed to find time to contribute articles to the chapter newsletter, regularly lead hikes for the Marin Chapter and occasionally for other chapters, and grow plants for the chapter's annual plant sale. Currently Bob is devoting much time and correspondence addressing the possible extinction of rare-listed *Delphinium bakeri* caused by road crews fighting a wildfire along the Marshall-Petaluma Road last fall.

At the December 2003 State Board meeting Bob was presented with a plaque recognizing "his clear thinking and unwavering support for the protection of California's remarkable flora."

CNPS Fellows Nominating Committee, CNPS 2707 K Street, Suite 1, Sacramento, CA 95816. cnps@cnps.org

NOTES AND COMMENTS

APPRECIATION TO PAM MUICK

Pamela C. Muick, PhD, Executive Director, has left the California Native Plant Society (CNPS) to take a well-deserved sabbatical, culminating nine years of serving as a non-profit executive director. At CNPS, working closely with volunteers and staff, Pam dedicated herself to implementing the strategic plan. A few highlights of CNPS accomplishments during her three-year tenure include: a revised budgeting and accounting system; new employment and con-

tract policies; a new Development Program; and revitalized programs for Rare Plant, Horticulture, and CNPS Press, including several new publications.

Pam is particularly pleased that she was able to visit more than half of the chapters in their home ecosystems; she plans to continue giving oak talks to chapters upon request. CNPS thanks Pam for all of her contributions, and wishes her the best in her future endeavors.

A search for the next Executive Director is progressing; in the meantime, past CNPS President Sue

Britting will be serving as the interim Executive Director.

Carol Witham
CNPS President

PRESIDIO THOUGHTFULLY STEWARDED

A recent letter to the editor on revegetation at the Presidio's Inspiration Point (*Fremontia*, Volume 33, No. 2; April 2005) brought up the issue of using nursery stock in rare plant habitat, and the value of serpentine seeps

and wetland areas. These are very good points, worthy of much discussion. The letter neglected, however, to mention important details that would have put the project into proper context.

The two acres referred to in the letter had been, up until October of 2000, a 60 year-old stand of non-native trees composed primarily of blue gum (*Eucalyptus globulus*) with an understory dominated by French broom (*Genista monspessulana*) and other invasive species—far from the “rich grassland where *Clarkia franciscana* once grew.” In the fall of 2000, the Presidio Trust and National Park Service initiated a project to reveal the serpentine characteristics of this site. Workers removed the accumulated duff layer under the blue gum stand and planted

native perennial grasses and forbs into soil that existed below the eucalyptus duff layer—not into a “serpentine rock surface.” The Presidio nursery grew plants from seeds and cuttings gathered within the Inspiration Point watershed, insuring maintenance of the site’s genetic integrity. These plants have never been planted into the adjacent intact grassland that supports the main population of the endangered Presidio clarkia (*Clarkia franciscana*).

Less than two years after initial plantings, Presidio clarkia has self-established in the restored serpentine area and has continued to expand each year. In addition, a population census of Presidio clarkia conducted in May 2005 found it to be more numerous in the intact grassland than at any

other time in its recorded history.

The letter also stated there was an effort to “shunt water off the serpentine area” but failed to accurately identify the source of water in question—a channelized storm water drainage ditch. The drain was utilized temporarily to prevent erosion during major storm events. It redirected road runoff, not groundwater, a short distance along the contour of the slope to prevent slope failure.

Terri Thomas

Director of Cultural and Natural Resources, The Presidio Trust

Daphne Hatch

Chief, Natural Resources and Science, Golden Gate National Recreation Area, National Park Service

BOOK REVIEW

California’s Wild Gardens: A Guide to Favorite Botanical Sites, edited by Phyllis M. Faber; Introduc-

tion by Robert Ornduff. University of California Press, Second Printing, 2005. 236 pages, 9 x 11-3/4 inches, nu-

merous color photographs, soft cover. Price \$34.95.

This publication was produced

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jointly by the California Native Plant Society (CNPS) and the California Department of Fish and Game and has value at several levels. Not only does the subject appeal to the natural instincts of members of CNPS but it goes further. It is an annotated guide to places suitable of being called botanical jewels in California's crown.

Eighty-four sites are presented in logical geographic and ecologic order introducing the reader, and the traveler, to the features of these special places. Publication was partially spurred by a concern over increasing encroachment of urbanization into areas surrounding many of these gardens.

Just as newly arrived residents need to learn the location of the post office and grocery store, this book could serve as a guide to the features of their surrounding landscape. This insight will hopefully stimulate their desire to learn more and to develop a caring attitude for their new home territory.

Although only provided with glimpses of these wild gardens, the reader will learn not only about each

site's flowers, but also something about that site's geology and ecology. And if the reader peruses the first 37 pages in the introductory chapter he will have a real appreciation for how precious, and often threatened, each of these wild gardens is.

Upper Newport Bay Salt Marsh is an example of a site in an urbanized area. Knowledge of the subtle zonation of its marshy vegetation will add to the understanding of those who pass by on a daily basis, and may prompt some to stop for a closer look. Santa Monica Mountains is another example of an urban-surrounded wild garden that offers visitors much to experience and enjoy.

The images in this book will surely inspire readers to learn more about these native gardens; more than 100 native plant species are featured. The design presents the colorful photos with skill and taste which, combined with quality printing, causes me to think of this as every bit as artful as the best coffee table book.

Norden H. (Dan) Cheatham
East Bay Chapter

MATERIALS FOR PUBLICATION

Members and others are invited to submit material for publication in *Fremontia*. Instructions for contributors can be found on the CNPS website, www.cnps.org, or can be requested from *Fremontia* Editor, Linda Ann Vorobik, vorobik@rockisland.com, or c/o University and Jepson Herbaria, 1001 Valley Life Sciences Bldg. #2465, University of California, Berkeley, CA 94720-2465.

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FROM THE EDITOR

Autumn is here, and the year of celebrating the 40th Anniversary of the California Native Plant Society (CNPS) draws to a close in *Fremontia* with the final installment of articles on chapters, which includes chapters from the northern portion of the state. If you missed the first three installments of these articles, don't forget that past issues of *Fremontia* are available at www.cnps.org (under Publications, then *Fremontia*) in PDF format. Copies of the issue which include your chapter's write-up might be sent to prospective new members as part of an invitation to join the Society.

This issue's articles about CNPS state programs include one on CNPS Press and one on the Legislative Pro-

gram. These articles describe additional ways our organization works to educate and influence others to understand the value of native plants and their natural habitats, and thus help protect them.

The next two articles enlighten the reader about two different geographic areas: In the first, Neil Havlik shares his intimate knowledge of the Temblor Range, the innermost of the central coast ranges. Bradford Keitt and co-authors describe restoration work on Guadalupe Island, located in Mexico, but part of the California Floristic Province. The authors provide an intriguing picture of the island's flora and tell an environmental success story.

Our native plant gardening article is written by Dan Songster, who with words leads us through the garden and shares with us what he has learned pruning natives. This *Fremontia* issue closes with an article on two of this year's CNPS Fellows: Liz Parsons and Bob Soost. Their wonderful contributions are much appreciated.

Not-the-end note: this should have been my final issue of *Fremontia*, but the Society still searches for a new editor. Come forth, you crafty turner of phrase, tenacious hunter of typos, and tireless herder of production team! Send letters of interest to the CNPS office.

Linda Ann Vorobik
Fremontia Editor

CONTRIBUTORS

Alfonso Aguirre is the executive director of the Grupo de Ecología y Conservación de Islas in Ensenada, Mexico.

Holly Forbes co-director of the California Native Plant Society (CNPS) Press, and works at the University of California Botanical Garden, Berkeley.

Vern Goehring is the CNPS legislative advocate.

Bob Hass is the *Fremontia* copy editor, *CNPS Bulletin* editor, and conservation co-chair for the Milo Baker Chapter.

Neil Havlik, PhD, is a long-time former resident of the Bay Area and CNPS member since 1967. Neil is currently the Natural Resources Manager for the City of San Luis Obispo.

Steve Junak is an expert on the flora of the California Islands and works for the Santa Barbara Botanic Garden.

Bradford Keitt is a biologist with the non-profit Island Conservation. Trained in marine ornithology, Guadalupe Island has opened his eyes to the wonders of native plant restoration.

Luciana Luna Mendoza works for the Grupo de Ecología y Conservación de Islas in Ensenada, Mexico. She is director of the Guadalupe Island Restoration Project.

Gail Millican is co-director of CNPS Press, and works at the Santa Barbara Botanic Garden.

Reny Parker is president of the Milo Baker Chapter and a wildflower photographer.

Dan Songster is co-director of the Golden West College Native Garden in Huntington Beach, Orange County.



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