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CALIFORNIA NATIVE PLANT SOCIETY
BULLETIN

A Model for Rare Plant Conservation

By David L. Magney

In an effort to conserve our local flora, I have been identifying those plants that are rare locally in Ventura County. I decided to focus on locally rare species partly because the Ventura County General Plan has a policy specifically requiring the County to consider Locally Important Species (LIS) in their land use planning decisions.

That is a powerful conservation policy. However, the County lacked the funds to research which species were rare, which prompted me to pursue this line of research.

Once such a list is developed, it must be formally adopted by the Board of Supervisors. The County then gives LIS species the same status as species formally listed under the federal and California Endangered Species Acts when a project that may impact them is subject to California Environmental Quality Act (CEQA) review.

As a spin-off of my research on the *Flora of Ventura County* (*www.venturaflora.com*), and as a first step for the County's list, I rated every species known to occur within the County based on its abundance. Locally Rare species were designated as those with five or fewer extant (excluding extirpated) populations. Locally Uncommon species were those with six to ten extant populations. The resulting list was then published on the Channel Islands Chapter's website and updated at least annually. (The first edition of the "Checklist of Ventura County Rare Plants" was published in September 2002, the latest in June 2011.)





Both photographs by David L. Magney

Left: Early onion *(Allium praecox)*, rare in Ventura County with only one population known. Right: Nuttall's snapdragon *(Antirrhinum nuttallianum* ssp. *subsessile)*, rare in Ventura County with only five populations known.

The next step was to get the County to adopt a list of locally rare plants. Through grant funding, the Ventura County Planning Division (VCPD) brought together local experts to develop criteria and lists of locally rare species (plants and wildlife). This took a few years. In the meantime, I routinely referred to my list as a "CNPS list through the chapter" while

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Preserving Woodland Regional Park

CNPS is collaborating to preserve a vanishing ecosystem and its rare plants

By Jennifer Hogan

A grassroots movement is continuing to grow in the heart of Yolo County, in the City of Woodland. A handful of area residents and concerned Davis neighbors—some of whom are CNPS members—have come together to preserve a local treasure.

The Woodland Regional Park is a 167-acre property located just beyond a new residential development on the east end of Woodland. Unique alkali sink soils, a claypan layer, and the right topography provide a suite of rare and unusual plants in a vernal pool, alkali prairie, annual grassland, and riparian forest complex.

This site is known to contain some amazing species, many of which are California Rare Plant Rank 1B plants. Alkali milk-vetch (*Astragalus tener* var. *tener*) and Heckard's peppergrass (*Lepidium latipes* var. *heckardii*) were first observed in the early 1980s.

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From the Executive Director

A new year

CNPS is exciting! Of course CNPS has always been exciting: its thousands of members lead field trips, grow and share plants, save beautiful places, and expand the frontiers of science in one of the world's most beautiful laboratories. Year after year we face new challenges and are given new opportunities. Chapter by chapter we explore novel approaches and invent original solutions. Again and again we are joined by new members with fresh ideas, new energy, and new ways to celebrate and protect California's plants. The organization evolves and changes, learning and building and growing.

In recent months I have been fortunate to visit chapters across the state and, as you can imagine, my yellow pad notebooks are now filled with interesting and innovative ideas. CNPS has 33 chapters, both large and small, and each contributes something important—and sometimes unexpected—to our shared efforts. Volunteers and staff collaborate and communicate with others around the state and beyond, bringing new concepts and approaches back to their offices, newsletters, and plant sales. This spirit of innovation has given us horticultural symposia, regional conservation staff, Rare Plant Treasure Hunts, online plant identification forums, and projects to scan and rescue valuable slide collections.

Each chapter does something unique and each member has something to offer. Every year we make decisions about which ideas to promote. Sometimes we are limited by resources or funding, but time and again CNPS has shown that we can accomplish important and ambitious goals; all we need is the creativity and inspiration that you bring to the effort.

As we start another year I hope that you will resolve to continue contributing your ideas and energy, talking to others in CNPS about how we can make things better, and sharing with chapter leadership your priorities, beliefs, and excitement. Happy New Year!

Dan Gluesenkamp
CNPS Executive Director

Sign up for CNPS 2013 Workshops

REGISTER AT: *http://www.cnps.org/cnps/education/workshops/.*

Jan. 16–18, Vegetation Mapping, Todd Keeler-Wolf, Julie Evens, John Menke, Berkeley

Mar. 20–21, Conducting Rare Plant Surveys, Heath Bartosh, Aaron Sims, Concord area

Apr. 15–17, Vernal Pool Plant Taxonomy, Carol Witham, Jennifer Buck-Diaz, UC Davis and Central Valley vernal pools

Apr. 13–20, Guadalupe Island Flora, Steve Junak, Alan Harper, Guadalupe Island (dates could change to the following week)

Apr. 24–25, California Rangeland Biodiversity, Jennifer Buck-Diaz, Merced

May 7–9, Measuring and Monitoring Plant Populations, John Willoughby, Bodega Bay

Jun. 5–7, Riparian Ecology and Restoration, Bruce Orr, Amy Merrill, Cosumnes River and various sites in Marin County.

Jun. 20–22, Riparian Plants of Southern California, David Magney, Casitas Springs, Ventura County

Sept. 3–5, Vegetation Rapid Assessment, Julie Evens, location TBD (somewhere in the Sierra Nevada)



Josie Crawford

Vegetation Rapid Assessment workshop participants after a lovely day at Grass Lake in the Sierra Nevada.

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How SCV Chapter Trains People to Survey Rare Plants

By Toni Corelli

The Santa Clara Valley Chapter's rare plant committee needed more members to help update information about rare plants. So early this year we decided to grow and rejuvenate the committee by teaching members how to take surveys of rare plants. We planned four training sessions for 2012, and publicized them in our chapter newsletter and on our Facebook page.

Each training group is limited to 10 people, takes four hours, and is held outdoors. For each training session, we select ahead of time a rare plant we want to focus on. The sessions have attracted new and long-time chapter members, as well as professional consultants and State and County Park employees.

Before the training session, participants are sent links to reading material about the CNPS Rare Plant Program. Included



Toni Corelli

Rare plant training, Santa Clara County, for Tiburon paintbrush species. Fencing is for rabbit exclusions within paintbrush habitat, which is a part of the habitat restoration program for this species.

is an example of how to fill out a field survey form, a link to the online *CNPS Inventory of Rare and Endangered Plants*, and photographs of the plant.

During the training participants learn how to key out the plant, delineate the population, and map it using a handheld GPS. The group counts the plants within the population, records the plant associates and plant community, and completes the field survey form. At the end we review the information and hold a question-and-answer session.

A follow-up email is sent to the trainees with the draft field survey form and map in case they have any changes to suggest. The final form is submitted to the California Natural Diversity Database (CNDDB).

In the fall we will offer a follow-up meeting for all trainees so they can see the work each group completed, review surveying techniques, and choose the rare plants we will survey in 2013. We are excited about this influx of members who are now able to survey rare plants, and know their help will prove invaluable to us in future years.

Toni Corelli is rare plant cochair for the Santa Clara Valley Chapter.

Getting Real About Weed Control

Massive infestations require a more strategic approach

By David Chipping

Here in San Luis Obispo County, the invasive weeds are forcing us into smaller and smaller areas of weed-free landscape. At the last meeting of our county Weed Management Area, state agency representatives had nothing but bad news to report regarding resources, and we were informed of the virtual termination of funding.

Within the greater weed war in our county we have been skirmishing with veldt grass and cape ivy, and are always in retreat. Calls for reinforcements produce a few weary weed warriors, but not nearly enough considering the scale of the invasion. We clear one area, go on to other locations, come back to the first area, and the weeds are back. It would be easy to admit defeat.

However, I believe that a victory of sorts is possible in the war on weeds. But in most cases the complete elimination of the major pests is now almost an impossibility without either new weapons or vast infusions of money. The "victory" we can aim for will be the preservation of excellent samples of our many plant associations, and will be attained through relentless defense of relatively small perimeters.

Here in San Luis Obispo County we are using this model to identify relatively pristine patches that represent widely distributed systems, such as coastal dune scrub, and then making those the future battlefields. We draw inspiration from another San Luis Obispo County orga-

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David Chipping

The contrast between conserved dune scrub (left) and highly degraded, veldt grass-infected scrub (right) at the highway marking an edge of the Elfin Forest, Los Osos, CA.

CHAPTER NEWS

SACRAMENTO VALLEY CHAPTER:

Pollination Sensation

A celebration of bees and native plants

This past summer the Sacramento Valley Chapter of CNPS experimented by holding its first-ever public event focused on pollinators of native plants, and it proved a tremendous success.

Called "Pollination Sensation," the free event took place in the chapter-sponsored California Native Plant Demonstration Garden in the city's historic, park-like City Cemetery, and coincided with National Pollinator Week. Its purpose was to help people learn about pollinators, especially the amazing variety of native bees that live in the Sacramento area, and how to incorporate California native plants that are attractive to bees into the home garden.



Zack Cunningham

Bee hovering next to Cleveland sage

During the event, Julie Serences of the Xerces Society presented a talk about bees, their challenges, and how to make gardens bee-friendly. Local botanist Bonnie Ross led an interactive, hands-on children's walk. And Davis landscape designer Bernadette Balics hosted a garden tour showcasing pollinator-attractive native plants.

The native plant garden, which contains over 120 species of natives, was the perfect setting for the event. Participants could see bees in action as they collected food from the native plants, and also get design ideas for using natives in their own gardens. They could take guided or self-guided tours, chat with plant experts, and purchase bee houses, seeds, and books.

More information about the CNPS-sponsored native plant garden can be found at www.Facebook.com/CaliforniaNativePlantGarden or www.sacvalleycnps.org

Cassandra Nguyen Musto
Coordinator, SVC Native Plant Demonstration Garden

Getting Real *(from page 3)*

nization with which CNPS has a close association. Small Wilderness Area Preserves (SWAP) has dedicated itself to the maintenance of a 90-acre preserve called the "Elfin Forest," a dune scrub filled with its share of nasty invasive species. With a known boundary and an attainable goal, volunteers have been restoring the parcel for over 25 years, and it is now a great example of coastal dune scrub.

Using volunteers, and also finding grants that support some hired labor, SWAP was able to tackle weed-contaminated areas by attacking the perimeters of each infestation. Beyond this preserve, veldt grass and other invasives overrun progressively larger blocks of native habitat each year. If it all disappears, the SWAP lands will become the gene pool for restoration of the Los Osos coastal dune scrub habitats. An optimist must assume that new resources or control methods will eventually become available.



Yolanda Waddell, SWAP

Weed Warriors at work, returning frequently to the same locations to keep them weed free.

While this approach is not new, it could be followed more often. If each CNPS chapter chose even just one weed-infested place within its highest priority sensitive habitat areas and carried out ongoing restoration work, it would be more likely to experience success. Persistence is critical, as otherwise the weeds will win the war by attrition. Some chapters, either on their own or in cooperation with other groups, have already delimited a field of battle. Examples include the Santa Clara Valley Chapter at Edgewood Park, and the East Bay Chapter at Redwood and Huckleberry Parks.

David Chipping is president of the San Luis Obispo Chapter of CNPS and past conservation director for CNPS.

Volunteer Recognition Awards

CNPS regularly recognizes members for outstanding contributions to the preservation and appreciation of California's native flora through its Volunteer Recognition Award. CNPS is grateful for all these volunteers have done.

Since 1995, Gabi McLean and Cliff McLean's contributions to programs, teaching, field trips, plant sales, and local advocacy have increased membership and active participation in the San Gabriel Mountains Chapter. Gabi served as chapter president from 2005 to 2012, and Cliff as chapter vice-president and membership chair during that time. By their active support of the March Chapter Council meetings and welcoming attitude, and their participation in many statewide activities, they have materially benefited CNPS. Both are life members of the Society.



Steve Hartman

Gabi and Cliff McLean

Charles Blair, Chair
Volunteer Recognition Committee

New Book Explores Conifer Country

Conifer Country, a new book made possible with support from the North Coast Chapter of CNPS and the Redwood Science Project at Humboldt State University, is now available from the CNPS website: *http://cnps.org/store.php*. Its author is CNPS member Michael Kauffmann, a science teacher in Humboldt County.



Conifer Country is an innovative natural history and hiking guide that uses conifers as a lens to explore the astounding plant diversity in the Klamath Mountains of northwestern California and southwestern Oregon. Written for both amateur and expert botanists and hikers, it contains descriptions and color plates to assist in identifying 35 conifer species and 29 hiking destinations across the Klamath Mountains.

In Appreciation: Lawrence and Bettine Wallin

Artist's sensibility extends naturally to plants

CNPS members are as varied and interesting as the fantastic flora of our state. Longtime supporter Lawrence Wallin is a professional artist and sculptor, and his late wife Bettine was a gifted musician and educator.

Lawrence has worked as an artist since 1966 and has been listed in *Who's Who in American Art* since 1986. He has had over 20 solo shows and over 50 group shows across the globe. His artwork spans the range from the surreal to the natural world, in styles reminiscent of Millet to Picasso.

Bettine was a plant enthusiast her entire life. Even as a small child, her mother allowed her to have a part of the family garden. In 1987 she and Lawrence found a wonderful 20-acre property in Santa Barbara County that allowed her to use her creative gardening talent and provided Lawrence with an artist's studio for his work. Bettine enthusiastically took every botany and horticulture class she could to landscape their new home. This led her to the Santa Barbara Botanic Garden where she volunteered for 23 years, first as a grower and later as a docent. She joined CNPS in 1990 and introduced Lawrence to the organization.

Sadly, Bettine passed away in 2010, but Lawrence has continued their family membership in his name. When asked why he continues to generously support CNPS, his answer affirms his artistic eye and love of nature's variety.

"I want to help pass on a wonderful world to future generations, not a depleted, impoverished world of monoculture." We are truly grateful for this sentiment.

Stacey Flowerdew, Membership and Development Coordinator



"Bettine in the Garden" by longtime CNPS supporter Lawrence Wallin (2009). See more of his work at *http://www.wallinstudios.com.*

Ventura County

(from page 1)

commenting on CEQA documents and those I prepared myself as an environmental consultant. Now we are about to have a list of LIS formally adopted by the Ventura County Board of Supervisors.

This process has been arduous, both scientifically and politically. The list, which has taken decades to compile, is backed by verifiable evidence and sound science.

Anti-regulation interests, such as those represented by the Coalition of Labor, Agriculture, and Business, have been fighting the scientists and environmentalists the entire way. But the LIS list was put out for public comment and received no challenges to any of the species on the list. The County Planning Division is now preparing to take it to the Board of Supervisors for final approval.

To be successful, many members of the public will need to show up at the board meeting and voice their support. You can bet that the opposition will be there in force. Regardless, conserving rare plants in Ventura County has come a long way, and may serve as a model for rare plant conservation in other counties as well.

David Magney is a botanist, and owner of David Magney Environmental Consulting. He is currently president of the Channel Islands Chapter of CNPS, Chairman of the CNPS Chapter Council, and has served in various positions on the CNPS Board of Directors.

Woodland Park

(from page 1)

Since then, other special-status plants have been recorded: heartscale (*Atriplex cordulata*), brittlescale (*A. depressa*), San Joaquin spearscale (*A. joaquiniana*), Palmate-bracted bird's-beak (*Cordylanthus palmatus*), and most recently, saline clover (*Trifolium hydrophilum*).

The Woodland Regional Park contains a vanishing ecosystem. Vernal pools in Yolo County are historically rare, and only a remnant of what was here remains. This site should be permanently protected and appropriately managed in perpetuity.



Ellen Dean

Woodland Regional Park, site of a vanishing ecosystem containing numerous rare and unusual species.

The City of Woodland owns the land. Before the country's financial bust, the city was ready to sell the property to a large housing developer. Since then, a solar developer has proposed leasing the land for solar farming. Prior to 2008, the land was leased to aeromodelers, whose mowing management was great for the rare plants. However, the city terminated their lease and the land has since been left fallow, allowing non-native invasives to move in rather aggressively.

Last summer our newly formed group began meeting with environmentally friendly Woodland City Council members in order to educate them on the benefits of selling the land for preservation. Having at least a few council members on our side, we met with city staff to present our case. We have now met several times with them, providing biological facts and social and economic reasons to preserve the land.

We are proposing that they sell the property to the State using Wildlife Conservation Board funds. The land can then be passed on to a local land trust organization that manages preserved lands for the long-term. Ultimately, this property can be folded into the Yolo County Natural Heritage Plan once it is approved by state and federal regulatory agencies.

We have reasons to be optimistic. The City of Woodland will likely finance a controlled grazing regime to assist with weed abatement. They have verbally committed to having their economic analysis of the site completed by year's end and will then meet with us to discuss their conclusions. They will then present their findings to the city council, which will make the final decision.

You can be sure that our neighborhood activist group will be there every step of the way, reminding them to do what's right for this one-of-a-kind alkali grassland vernal pool wonder known as Woodland Regional Park.

Jennifer Hogan, MS, has been an active volunteer with the Sacramento Valley Chapter of CNPS for about 18 years. She has served in the role of vice president, president, and for the last ten years as chair of the Kids in Native Gardens grant program.

The Special Case Of Coastal Manzanitas

By Brett Hall

Manzanitas are fascinating, beautiful native plants, and play an important role in telling the story of California vegetation. Everyone loves manzanitas!

Manzanitas, in the genus *Arctostaphylos*, are ground-hugging shrubs to small trees, with gorgeous cinnamon red-brown trunks, and glossy green to silver hairy leaves with profuse bunches of urn-shaped flowers colored ivory white through deep pink.

They are among the first flowers to appear during winter and early spring in communities from northernmost California into Baja and from the coast to the High Sierra. For this reason alone, many gardeners love having them in home gardens because their flowers appear when nothing else is blooming.

All manzanitas develop nascent (immature) inflorescences at the end of their flowering season essentially as "prepackaged" flower buds, ready to burst into flower at the first hint of the next spring, with some species actually flowering in winter or even late autumn. Many pollinators depend upon manzanitas for their survival, particularly during the colder months when few other food sources are available.

A flowering manzanita patch is like a busy airport, with bees, wasps, and other insects zooming in and out unloading and reloading cargo. Manzanitas also provide seasonal nectar for hummingbirds when other floral reserves are in short supply.

A quick glance in *The Jepson Manual* or the online *eFlora* reveals 95 accepted *Arctostaphylos* taxa. Along the central coast and San Francisco Bay area, manzanita diversity reaches its zenith with some 54 taxa encircling the Bay, while a trip from Santa Cruz through Monterey to San Luis Obispo could turn up close to 50 species. A further search on the *CNPS Inventory* reveals over 60 currently recognized taxa, some so rare they are known only from a single population (or individual) and others considered "not rare but of limited distribution." Many others are in between these designations.

Most *Arctostaphylos* species are very localized, occurring over small distributions and restricted to specialized ecological conditions. Most rare manzanita species also occur in rare communities or associations whose future is at risk. In addition to the usual threats such as habitat loss and fragmentation, climate change induced by global warming looms over their existence like a dark cloud.

Rare maritime chaparral communities are often dominated by one or more species of *Arctostaphylos*. In Monterey County, for example, on ancient sand dunes in Fort Ord, eight *Arctostaphylos* taxa occur within six species. On Santa Cruz mudstone along the uppermost ridges of Scott Creek, six species have been recorded! Similar combinations involving different taxa occur sporadically from Mendocino to Ventura counties and out onto the Channel Islands.

Manzanitas are woody shrubs and reproduce from seed following fire. A handful of species also regenerate after fire by sprouting from burls harboring dormant vegetative buds. In coastal maritime chaparral, the fire interval can range from 60 to 200 years, unlike the more frequent fire regimes of inland chaparral communities. These rare coastal chaparral communities nonetheless depend on this long fire return cycle for their regeneration.

Climate change models over the next 50 years along the Central Coast are worrisome. They predict increasing temperatures, less rainfall with late rains ending earlier, and possibly less fog. Some predictions indicate that future climates further north may be suitable for the growing requirements of manzanitas. However, given the special environmental circumstances surrounding manzanitas and especially considering their propensity to hybridize, relocating a species to the north is problematic at best.

The UCSC Arboretum, together with collaborators Tom Parker and Mike Vasey (coauthors of the genus *Arctostaphylos* for *The Jepson Manual*), are actively growing living collections and developing seed storage with strict protocols for tracking wild populations. The goal is to develop a series of refugia that could serve to safeguard sufficient genetic diversity in order to reestablish rare maritime chaparral populations in the future. Successful seed germination would contribute enormously to the project.



Brett Hall

***Arctostaphylos glandulosa* ssp. *howellii*, seen here along the South Coast Ridge in the Santa Lucia Mountains, is an attractive candidate for gardens.**

The current effort is focused on creating conservation gardens where populations would be established in favorable landscapes (preferably urban) well away from other *Arctostaphylos* species.

Brett Hall is director of the UCSC Arboretum where central coast maritime chaparral conservation gardens are under development (*brett@ucsc.edu*).



Next Chapter Council Meeting

(Details available at: *http://cnps.org/cnps/admin/cc/*)

MARCH 9-10, 2013 – RANCHO SANTA ANA BOTANIC GARDEN, CLAREMONT, CA, HOST CHAPTERS: SAN GABRIEL MTNS., RIVERSIDE/SAN BERNARDINO

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