Considerations When Planting California Native Plants

Depending on the choices we make, it is possible to minimize the chances for genetic pollution.

BY SUE BRITTING

Nearly every day, CNPS and its supporters promote the use of native plants in landscaping and restoration. Drought tolerance, improved adaptation to specific site conditions, and unsurpassed beauty are just a few of the many benefits of using natives.

However, what effect might our use of native plants have—whether grown in nurseries or taken from places far from where we live—on the natural stands of vegetation near areas we want to landscape or restore? To help us explore this topic, we invited Deborah Rogers, conservation geneticist with the Genetic Resources Conservation Program, University of California, Davis, to speak at the CNPS Conservation Conference held on September 8, 2007.

Rogers began by defining genetic pollution or contamination as the “introduction of germplasm to a native population that can, through hybridization, eventually undermine the local adaptations and/or evolutionary potential” of that native population. Essentially, this means that native plants which are not started from local seed or cuttings may contain genetic information that is different from that in the local plant populations, which often have evolved and adapted to local growing conditions.

If the non-local and local species exchange genetic information through cross-pollination, a new variant or hybrid will emerge that may grow differently than the local species. In this way, introducing plants with different genetic compositions (even if they are the same species) can affect the local vegetation that occurs naturally in an area.

Is this a bad thing? Rogers spent the balance of her talk identifying situations in which the introduction of non-local plants negatively impacted a local area or had the potential to do so. One undesirable outcome she described involved the hybridization between a non-native plant and a native one. In the case presented, the hybrid was spreading in a restoration area and taking up space and other resources that could be occupied by the native species.

Everybody Wins with UC Merced

Revised plan for new campus reduces its ecological footprint

BY BRAD JENKINS

For a while, it looked like worst-case scenarios could happen. The new University of California at Merced campus would be an environmental disaster or lawsuits would hold up construction of this much-needed campus. VernalPools.org took the lead to publicize environmental planning weaknesses and gather support from other environmental organizations. CNPS was on board from the start. Various government agencies wrote conflicting opinions and reports that presented both significant problems and barely any problems at all. As time dragged on, the University was under increasing pressure to build the campus.

Someone suggested that everyone get together at the same table and jointly figure out a solution. The U.S. Fish and Wildlife Service offered a meeting place. Early meetings highlighted differences instead of common ground, and lawyers started to make appearances. Then somewhere along the line, key facts and smart minds began to drive solutions. By late summer, UC Merced planners had a new map that took into consideration a huge number of variables. Using input from all the players at the table, they created a win-win solution.

Why do we say win-win? Local species and areas of connected prime habitat receive long-term preservation. The campus footprint was reduced to preserve land and yet kept big enough

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One of the numerous reasons I enjoy working for CNPS is that everyday I am inspired by the work our volunteers do. I write this after having perused two recent CNPS articles featured in the last issue of the CNPS Bulletin. I am referring to Marin Flora: An Illustrated Manual of the Flowering Plants, Ferns, and Conifers of Marin County, California, by John Thomas Howell, Frank Almeda, Wilma Follette, and Catherine Best, copublished by the California Academy of Sciences and the Marin Chapter of CNPS; and Wildflowers of Nevada and Placer Counties, California, published by the Redbud Chapter of CNPS.

To me, these projects not only exemplify the excellent work that CNPS volunteers do to promote and conserve California’s native flora, but they also illustrate the essence of what makes CNPS a unique organization. While being very different in their content and design, these two projects have much in common.

First, they are the result of the extraordinary efforts of dedicated and caring professionals and native plant enthusiasts who took upon themselves these challenging and important projects. The authors devoted nearly a decade each to complete these tasks. Each guide is educational as well as beautifully illustrated. Likewise, both projects received the financial support of generous CNPS donors. These two books will continue to educate and inspire readers for years to come.

If your chapter has accomplished something noteworthy, I hope you will let us know. We’d love to be able to share it with all of our members by publicizing it in this newsletter.

Amanda Jorgenson
Executive Director

Vegetation Mapping Gets Legislative Attention in 2007

Following a budget hearing in 2007 regarding the Department of Fish and Game, several state legislators worked to ensure there were adequate resources to carry out what they realized is a critical need for conservation and smart regional planning.

Assemblymember Sam Blakeslee (R), San Luis Obispo, introduced AB 350, requiring the Department to expand its existing vegetation classification and mapping program (VegCAMP). CNPS worked to support Mr. Blakeslee and made sure that AB 350 was a priority bill for Green California, a coalition of conservation groups.

However, at an estimated cost of $40 million and requiring 30 years to complete, AB 350 was held up in the legislature. Blakeslee and others did not give up. Working with the Department, they investigated other opportunities to provide funding and necessary legal authority.

First, a proposal for $3.8 million from Proposition 84 was submitted to the Wildlife Conservation Board (WCB), expanding the current VegCAMP program to $5.4 million. The proposal includes funds for the Northern Sierra Nevada Foothills Project (in which CNPS has had an integral role) to convert extensive vegetation classification data into actual maps. This funding was approved by the WCB in August 2007.

Next, AB 828, sponsored by Assemblymember Ira Ruskin (D), Redwood City, was amended to include within the Department’s Significant Natural Areas Program the requirement to complete a statewide assessment of habitat corridors and vegetation mapping. AB 828 stated legislative intent that the WCB work with the Department to fund this ongoing effort. Finally, language in SB 85, the budget bill, directs the Department to develop vegetation classification and mapping standards for the state. In the end, the Governor vetoed AB828, noting that SB 85 and WCB’s previous commitment of funds to VegCAMP had made the bill unnecessary.

Hopefully 2007 started a multi-year effort that should contribute much to native plant conservation.

Vern Goehring
CNPS Legislative Consultant
Plant Science Workshops

The CNPS Plant Science Training Program is offering a number of workshops for professional botanists, biologists, and ecologists. Below is a list of the current offerings through May 2008. Most workshops are a mixture of field and lab exercises.

Jan. 16: Two Field Season Refresher Workshops, CSU Chico
- Workshop 1: Conducting Rare Plant Assessments; Instructor: John Dittes
- Workshop 2: Rare Plants of Northern California Vernal Pools; Instructor: Carol Witham and Jennifer Buck, Register with the N. Calif. Botanists Symposium: http://rce.csuchico.edu/norcalbotany/


Apr. 14–16: Vernal Pool Plant Taxonomy, UC Davis and Sacramento-San Joaquin Valley Vernal Pools; Primary Instructors: Carol Witham, Ellen Dean, and Jennifer Buck

Apr. 17–18: Vernal Pool Vegetation Classification, UC Davis and Sacramento-San Joaquin Valley Vernal Pools; Primary Instructors: Michael Barbour, Ayzik Solomehesh, Stephen Rae

May 4–5: Identification, Ecology, and Management of the Most Invasive Plants of California’s Wildlands, UC Davis and Sac. Valley habitats; Primary Instructors: Joe DiTomaso, Guy Kyser, and Jacob Barney

May 28–30: Wetland Plants of the Lower Sacramento Valley and Delta, Cosumnes Preserve, Galt and Delta sloughs aboard the Tule Queen; Primary Instructors: Virginia Dains, Bob Holland, and Jeff Hart

The purpose of the CNPS Plant Science Training Program is to teach skills and provide tools and resources for conducting sound scientific surveys for rare plants, rare plant communities, wetlands, and vegetation. To register for any of the workshops, go to http://cnps.org/cnps/education and click on “Workshops.” For additional information, contact Josie Crawford at jcrawford@cnps.org, or call 916-447-2677.

Josie Crawford
CNPS Plant Science Training Coordinator

NEW VEGETATION ECOLOGIST

I am very pleased to announce that Jennifer Buck is CNPS’s new Vegetation Ecologist. A botanist at heart, Jennifer brings to CNPS extensive work experience with different plant communities across the western United States, ranging from grasslands to forests, alpine peaks to saline marshes. In her new position, she will inventory, map, and describe California’s vegetation.

Prior to joining CNPS, Jennifer worked as an ecologist with The Nature Conservancy at the Cosumnes River Preserve. She has both a B.S. and an M.S. degree in plant biology from the University of California, Davis. Her thesis focused on temporal dynamics of vernal pool grassland vegetation, and she recently participated in a statewide classification project on fine-scale vegetation in vernal pools.

Amanda Jorgenson, Executive Director

CNPS Conference

CNPS, in partnership with CDFG and other government agencies and conservation groups, is busily planning a statewide conservation conference January 17–19, 2009 in Sacramento. It has been over 20 years since CNPS teamed up with others to produce a conservation event of this magnitude.

Titled “CNPS 2009 Conservation Conference: Strategies and Solutions,” the conference will bring together more than 1,000 scientists, land managers, conservationists, planners, and policymakers to learn about the latest conservation science and public policy tools available to protect, restore, and enhance California’s plant communities.

Volunteers from throughout the state are needed before and during the conference. The Arrangements Committee needs help with hospitality, field trips, audiovisual equipment and computers, student activities, media relations, merchandise, fundraising, and a silent auction/raffle. The Program Committee needs volunteers to help organize contributed papers and posters, and to assist with registration and audiovisual needs.

To volunteer or for more information, visit http://www.cnps.org, contact us at cnps@cnps.org, or phone 916-447-2677.

Gordon Leppig
North Coast Chapter
YERBA BUENA CHAPTER:
Restoration Work Parties, Dynamic Website Calendar

In 2007 the Yerba Buena Chapter celebrated its 18th year of weekly restoration work parties. Although chapter members have worked sporadically in natural areas of San Francisco since the 1970s, it wasn’t until 1989 that Greg Gaar and Jake Sigg started to work there on a weekly basis. They moved around the city, discovering pockets of native plants in unexpected places. Soon they realized that in order to save them, they’d have to recruit a lot more help.

Utilizing Greg’s enormous collection of historic photographs, which documented the development of the city and its concomitant destruction of its biological heritage, they talked to neighborhood groups. Gradually a small cadre of volunteers developed to remove invasive plants on Wednesday afternoons.

Simultaneously, as members of the city’s Open Space Advisory Committee, Jake and Greg convinced San Francisco to acquire natural areas remaining in private hands, and develop the Natural Areas Program. The city continues to manage the program, which today encompasses approximately 860 acres in 31 parks.

Also in 2007, the chapter’s webmaster, Kipp McMichael, designed an interactive events calendar that showcases native plant activities around the Bay Area. The calendar renders a monthly display of all local events—including field trips, talks, and restoration work parties—with clickable dates that lead to detailed schedules and event information.

The chapter hopes the user-friendly calendar will increase local participation in native plant protection, restoration, and horticulture. The calendar can be found at: http://cnps-yerbabuena.org/calendar. To receive a free copy of its easy-to-use calendar code, contact Kipp at kimcmich@hotmail.com.

Jake Sigg and Kipp McMichael
Yerba Buena Chapter

SIERRA FOOTHILLS CHAPTER:
Wildflower DVD Distributed in Four Counties

The Sierra Foothills Chapter has produced a DVD that discusses and illustrates 50 common spring wildflowers of our four-county chapter area. It is designed to be used with elementary school classes and will be distributed to each school and library in Tuolumne, Calaveras, Amador, and Mariposa Counties, along with a copy of the book Discovering California Wildflowers (now out-of-print) by chapter member Mary Ruth Casebeer. The DVD is 22 minutes long and complements the California elementary school science curriculum.

This project grew out of slide programs that were presented to school classes by CNPS chapter members. These were difficult to schedule and so we decided to develop a DVD that classroom teachers could use themselves. Our education committee chair at the time was Dr. Wayland Ezell, who wrote a script and began to collect slides to illustrate the project. Dr. Ezell died in February of 2005 and the project was then taken over by the chapter’s education committee, led by Steve Stocking.

Steve Stocking,
Education Committee Chair
Sierra Foothills Chapter
SANTA CLARA VALLEY CHAPTER:
A Growing Success Story: Gardening with Natives Group

Like many members, I was drawn to CNPS through gardening. I was interested in replacing my lawn with native plants, so that my landscape would mimic the local natural areas I saw while hiking. A listing for a group called Gardening with Natives (GWN) in the newsletter of the Santa Clara Valley Chapter of CNPS caught my eye. I attended the meeting and was hooked. Shortly thereafter, I somehow found myself persuaded to chair the group. Thanks to many active volunteers, our group has now expanded from about 50 members to an e-group of over 400! We also have a website: http://www.gardeningwithnatives.com.

How did GWN start and what accounts for its popularity? According to longtime CNPS member Don Mayall, a “teaser” was published in the chapter newsletter. It read: “Are you interested in landscaping with native plants in your yard? Would you like to get together with others to share successes/failures? cuttings? seeds?...invite others to see your garden?”

The response was immediate, and a small group began to meet monthly. Members gave presentations, planned garden visits, and hosted seed/cutting exchanges. Gradually the group’s numbers increased.

To this day, the group has remained faithful to its original concept. We’ve always encouraged a mix of seasoned experts and novice gardeners. In the past two years, we’ve transitioned our chairperson to a six-person steering committee, which has further propelled the group’s success. We can now organize many high-quality speakers per year, along with discussions and field trips—all without burning out our volunteers!

Stephanie Morris
Santa Clara Valley Chapter

In Appreciation: Rita Delapa and Peter St. Clair
Promoting native plants in public places

Rita Delapa, a member of the San Diego Chapter of CNPS, died in early 2005 at the age of 45. Some years before, she and her husband, Peter St.Clair, had decided to include a bequest to CNPS in their wills. Both believed in CNPS, and were happy to back up their personal commitment and volunteer work in this way.

Rita did not expect to die so young, but was diagnosed with terminal cancer in the fall of 2004. The money from their bequest is now being used by the San Diego Chapter to promote “Native Plants in Public Places.” This city program aims to restore and expand native plant gardens and interpretive signage at San Diego’s Old Town State Park, one of the most highly visited urban parks in the United States.

The focus of the bequest is especially appropriate, given that Rita’s work with county officials, landscape architects, and contractors had increased her desire that CNPS create local showcases for native plants—at fire stations, schools, and parks. She wanted the public to see native plants in attractive ornamental settings and so begin to incorporate them in their own yards, as well as to encourage officials to increase native plant use in public projects.

Peter currently serves on the board of the San Diego Chapter, and in that role works with state and federal legislators. He also continues to volunteer at a number of gardens and nature preserves in the county. Peter hopes more members will evaluate their own estate plans and include a bequest to CNPS.

Amanda Jorgenson
Executive Director

Rita Delapa at the Water Conservation Garden on the campus of Cuyamaca College, San Diego, where she was a regular volunteer.
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desired native species—essentially becoming an invasive itself and compromising not only the native plant, but potentially other species in that natural community.

She then offered suggestions on how to avoid or minimize such unintended effects. She emphasized the importance of evaluating beforehand the effect of using non-local stock in planting projects. First, what is the objective of the project? Is it a habitat restoration project? If so, particular care should be taken that the plants used reflect the genetic diversity of the area being restored. This is best accomplished by growing locally collected stock in conditions similar to those at the site. This advice closely follows the guidelines developed by CNPS in 2001 to address this same issue (http://www.cnps.org/cnps/archive/landscaping.php).

If the objective is not to restore the site, but rather to landscape it, considerations of scale become important. Is the landscaping area small in comparison to the natural stands of vegetation that may be affected, or is the site remote from such natural stands? In both situations it is less likely that any newly introduced genetic material will impact existing native vegetation. And in urban areas or in small isolated gardens, potential negative effects may be minimal.

Another situation Rogers addressed was landscaping in somewhat rural areas, where native stands of vegetation are often found adjacent to landscaped areas. For this situation, Rogers indicated that potential genetic impacts depend on the size of the landscaping effort relative to the neighboring plant populations, the distance between them relative to pollen and seed dispersal distance, the genetic differences between them, and other factors.

During the presentation and subsequent discussion, one point was repeatedly acknowledged: that it is often not possible to purchase “off the shelf” locally collected and grown native plants for use in restoration or landscaping projects. Some chapters (Santa Cruz is one example, East Bay is another) are attempting to fill this gap at their plant sales by providing native plants from locally collected and grown materials. One step CNPS members can take when commenting on restoration projects is to ask that sufficient time be allotted for the collection and propagation of plant materials appropriate to the site.

Rogers’ full presentation, along with the others given at the conference, are now available on the CNPS website (http://www.cnps.org). To access them, click on “Conservation” and then on “2007 Santa Cruz Conservation Conference Proceedings.”

Sue Britting is a member of the CNPS Conservation Team and vice-president of CNPS’s Board of Directors.

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for efficient urban environmental solutions. UC Merced can start building and start providing much needed classes. The city of Merced, which wants to grow, now has a smart development plan for its northeast area. Students will have a beautiful campus next to environmentally protected sensitive wetlands. Potential lawsuits were avoided.

CNPS was a proud member of the environmental community at these fact-driven meetings. CNPS member and former president, Carol Witham, was a driving force for making environmental issues heard. The University of California also deserves credit for this successful outcome, due to their willingness to reconsider and then revise plans for the new UC campus.

Many approaches exist for preserving native flora in this complex state. You can count on your Society to continue to use its local knowledge, statewide influence, fact-based presentations, and legal capabilities to pursue preservation of California’s unique native flora.

Brad Jenkins was president of the CNPS Board of Directors from 2006 through 2007, and is now chair of the CNPS Chapter Council.
Native Gardening in Season

The Winter Garden

By Arvind Kumar

Have you noticed the gardening articles in the daily paper becoming sparser during the winter months? This is the season when garden writers and editors, many accustomed to East Coast and northern European seasonal cycles, retreat indoors, fuss over their houseplants, and dream of spring.

What they don't know is that in California, winter is the season of regeneration and growth. This is the time when holes are easily dug, seeds germinate readily, and new plantings take root without fuss. This is why winter is the busiest time of year for the experienced native gardener. Here is a checklist for my seven-year-old native garden in San Jose:

- Plant new plants. Winter moisture minimizes transplant trauma and improves chances of success. You can work the soil as long as it is not water-logged.
- Scatter wildflower seeds at the base of established shrubs.
- Place potted dudleyas out on the patio where they can catch the rain and puff up.
- Cut back yarrow (Achillea millefolium) to the ground to promote fresh, new growth.
- Cut back Douglas iris (Iris douglasiana) to the ground, making sure not to damage the tender rhizomes.
- Remove dry stalks and leaves of hummingbird sage (Salvia spathacea).
- Cut to the ground the stalks of these summer bloomers: California fuchsia (Epilobium canum), California aster (Aster chilensis), narrow-leaved milkweed (Asclepias fasciculata), and sacred datura (Datura wrightii).
- Remove dead stems of sword fern (Polystichum munitum) for neatness and to promote new growth.
- Cut back cool season grasses like purple needlegrass (Nassella pulchra) and California fescue (Festuca californica) to a few inches above ground.
- Prune the sticky monkeyflower (Mimulus aurantiacus) for desired height and width. Stick cuttings into the ground or in pots to produce new plants.
- Reduce the volume of purple sage (Salvia leucophylla) by half to keep it at a manageable size for the small garden. Cuttings root easily.
- Prune shrubs like toyon (Heteromeles arbutifolia) and coffeeberry (Rhamnus californica), golden currant (Ribes aureum var. gracilimum), and pink-flowering currant (Ribes sanguineum var. glutinosum) for size and dense habit.
- Be vigilant in pulling weeds before they reseed.
- Pick snails and slugs which can decimate young native plants like lupines, dudleyas, and Chinese houses. Persistent picking (late night or early morning) can significantly reduce their populations within a few seasons.
- Winter is not just all work, either. This is the time to enjoy the fragrant blooms of the chaparral currant (Ribes malvaceum). This is when the silver catkins of the silk tassel bush (Garrya elliptica) make it a standout garden element. This is when the pendant red flowers of the fuchsia-flowered gooseberry (Ribes speciosum) attract hummingbirds as well as appreciative humans. This is when manzanitas (Arctostaphylos spp.) of all kinds—shrubs, subshrubs, and groundcovers—fairly twinkle in a stellar display of tiny white flowers.

A California native garden in winter has endless possibilities for work and for enjoyment.


Arvind Kumar tends a garden of over 100 species of native plants in San Jose. A member of the Santa Clara Valley Chapter, he serves on the CNPS Board of Directors.
Two New Don’t Plant a Pest! Brochures

Two new brochures in the popular “Don’t Plant a Pest” series are now available from the California Invasive Plant Council (Cal-IPC). Aquatic Plants is aimed at the growing interest in water gardening. Thanks to CDFA funding, Cal-IPC is distributing this brochure at no charge. Sierra Foothills describes alternatives to invasive groundcovers, grasses, shrubs, and trees, and joins similar versions for other regions of the state, including the San Francisco Bay Area, Central Valley, Central Coast, Lake Tahoe, and Southern California (English or Spanish). There is also a brochure, Trees of California, that offers alternatives to invasive trees. To order, visit http://www.cal-ipc.org/shop or call 510-843-3902.

Public Programs: Thinking Outside the Box

Does your chapter offer a range of programs that appeal to a broad cross-section of CNPS members? Have you lately expanded the types of programs you offer? Are your programs innovative, artistic, or creative? Do you manage to get speakers no one else ever can? Do you vary the format of your programs (speakers, panel discussions, hands-on activities, other)? Do you think it’s high time someone wrote an article about all of this? If you answered “yes” to any of the above questions, please email cnpsbulletin@comcast.net and tell us more.