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CALIFORNIA NATIVE PLANT SOCIETY

BULLETIN

# Introducing the New Manual of California Vegetation

## Significant revision of classic work was 14 years in the making

By Todd Keeler-Wolf & Julie Evens

The second edition of *A Manual of California Vegetation* has arrived! The 1,300-page book is a complete revision of the original 1995 edition published by CNPS. Based upon 14 years of rigorous surveying, analysis, description, and mapping of vegetation, it presents a refined picture of the state's diverse vegetation patterns.

The new edition contains descriptions of over 450 different vegetation types. The descriptions have been expanded to include sections on life history strategies, quantitatively-based rules to distinguish between types, remarks on plant taxonomy, fire characteristics and other natural processes that shape the ecology of each type, and regional distribution information. Each description is accompanied by a range map and a complete list of known plant associations. The Manual also contains new descriptions on desert, mixed conifer, grassland, fen, vernal pool, and other wetland types.

The content is arranged conveniently in three main categories: vegetation characterized by trees, by shrubs, or by herbaceous vegetation. At the front of each is an ecological key to the vegetation types, followed by their descriptions arranged in alphabetical order. The volume also contains an extensive set of references which alone totals 122 pages, and attests to the meticulous research that went into producing this volume.

Introductory chapters on "What is Vegetation," "The History of Vegetation Classification," "The CNPS Approach to Classification," and "Conservation and Management" are augmented by two additional chapters. One focuses on the changes in the book since the first edition; the other is a guide to interpreting the descriptions.



**Left: New descriptions in the Manual include this montane herbaceous alliance of *Carex scopulorum*, pictured at Dana Plateau in Mono County. Photo: Todd Keeler-Wolf. Right: Maritime chaparral on sandstone along the Central Coast includes rare alliances with *Arctostaphylos montereyensis* and *A. tomentosa* in Monterey County. Photo: Julie Evens.**

Four of the appendices include a comprehensive list of life history traits of the principal species identifying each type, a detailed fire regime table, a new national vegetation classification hierarchy applied to California, and a glossary. Two other appendices discuss reclassified or tentative vegetation types that have been defined or suggested in other studies. The indexes include two with scientific names for the vegetation and species, and two others—the California Wildlife Habitat Relationships System (WHR) and the Classification and Assessment With Landsat of Visible Ecological Groupings (CalVeg)—to assist users familiar with those habitat classification systems.

The book serves as a backbone to CNPS's science-based approach to conservation by furthering the understanding of local variation, restoration, conservation, and management of vegetation throughout the state. Because of its breadth, it also provides a significant new source of California natural history and biogeographic information for plant lovers. It is already heralded as a major advancement in plant ecology and vegetation science by members of the Ecological Society of America's vegetation section.

The book sells for $82 and can be purchased directly through the CNPS online bookstore at *www.cnps.org* (click on Shop Online).

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**Todd-Keeler Wolf** is senior vegetation ecologist for the Biogeographic Data Branch of the California Department of Fish and Game. **Julie Evens** is director of the CNPS Vegetation Program.



# From the Executive Director

## Civic action for plant conservationists

When meeting new people I almost always bring up the topic of civic involvement in conservation and local land use. To me, it is a natural extension of loving native flora and fauna, because the continued survival of most of what we hold dear in the wild depends on the land-use decisions made by our local, state, and federal agencies in California.

Both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) allow citizens and other agencies to evaluate, comment, and recommend mitigation for proposed "projects" that impact our physical environments. But the laws only work when citizens actually take the time to pay attention to proposed actions and get involved. By doing so, citizens can lay the groundwork necessary to pursue enforcement actions when appropriate to make sure that local, state, and federal agencies comply with the law.

Recently, CNPS partnered with other conservation organizations in two federal enforcement actions that resulted in favorable decisions for plant habitat within California. The first, a case against the U.S. Bureau of Land Management pertaining to designation of more than 5,000 miles of destructive off-highway vehicle (OHV) routes in the California desert, ended in a ruling that essentially invalidated the designation of OHV routes developed since 1980. The second resulted in a ruling that U.S. Forest Service Management Plans for four southern California forests did not adequately protect the forest landscapes. Without the involvement of CNPS members and other concerned citizen advocates in the project review processes laid out by NEPA and CEQA, groups like CNPS would not have legal "standing" to sue, and these enforcement actions could not have occurred.

While some land-use and agency rule-making processes are complicated, getting involved in land-use planning efforts at the local and regional level is relatively easy to do and can have a major impact on habitat conservation efforts near where you live. In the coming months, our Conservation Director Greg Suba will be scheduling regional conservation meetings at key locations around California. One of the primary topics at these meetings will be local land-use processes and civic involvement in city, county, and regional land-use planning efforts. We hope you will plan to attend one of these meetings.

**Tara Hansen**
Executive Director

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# David Chang Receives Agency Award

David Chang, coordinator of Santa Barbara County's Weed Management Area since 2001, has been named CNPS Agency Staff Person of the Year. He received the honor at an evening awards banquet during the annual symposium of the California Invasive Plant Council (Cal-IPC) this past October.

David was cited for his tireless work that has resulted in significant benefits to native plant communities and wildlife habitat in areas including Santa Cruz Island, and a wide variety of terrestrial and riparian areas in addition to agricultural lands.

As an active participant in Cal-IPC, he served four years on its board of directors and chaired the organization's annual symposia. Recently, his wider outreach included a presentation on invasive aquatic weeds at the June 2009 Southern California Vector Control Environmental Taskforce.

He has also given numerous presentations and organized workshops on invasive weed concerns as a representative of Santa Barbara County and Cal-IPC to numerous agencies and organizations, and at Cal-IPC Symposiums.

**Charles Blair, Chair**
CNPS Volunteer Recognition Committee



Traci Lewis

**David Chang**

## From the State CNPS Education Program

# 2010 CNPS Plant Science Workshops

The CNPS Plant Science Workshop Program provides training for professional and student botanists, ecologists, land managers, and resource specialists. We teach skills and provide resources for conducting floristic and vegetation surveys for rare plants, wetland plants, and vegetation. You can find workshop details at *http://cnps.org/cnps/education/workshops.php*. For additional information, contact Josie Crawford at *jcrawford@cnps.org*. Below is a list of the offerings for 2010.

**Jan. 13.** Introduction to the 2nd edition of *A Manual of California Vegetation*, Northern California Botanists Symposium, Chico. Todd Keeler-Wolf, John Sawyer, Julie Evens.

**Mar. 1–5.** Dunes, Wetlands, and Coastal Scrub Volcanoes: An Introduction to the Plants and Habitats of the San Quintin, Baja California. Sula Vanderplank, John Rebman.

**Mar. 25–27.** Rare Plants and Habitats of Eastern San Luis Obispo County. David Keil, Deborah Hillyard, Kevin Merk.

**Mar. 29–31.** Vegetation Rapid Assessment, Carrizo Plain. Todd Keeler-Wolf, Julie Evens.

**Apr. 12–14.** Vernal Pool Plant Taxonomy, UC Davis and Central Valley vernal pool sites. Carol Witham, Jennifer Buck, Nick Jensen.

**Apr. 15–16.** Classification of Vernal Pool Plant Communities, Central Valley vernal pool sites. Michael Barbour, Ayzik Solomeshch.

**May 4–6.** Measuring and Monitoring Plant Populations, Los Angeles National Forest. John Willoughby.

**May 18–20.** Riparian Ecology and Restoration, Davis and various field sites. Bruce Orr, Amy Merrill.

**June 1–3.** Wetlands Plants and Ecosystems, Hopland Field Station, Hopland. Kerry Heise, Gerri Hulse-Stephens, Joel Butterworth.

**June 15–17.** Treasures in an Ancient Landscape: Rare Plants of the Eastern Klamath Ranges, Shasta. Jim and Julie Nelson.

**July (TBA).** Soil and Vegetation Relationships, Mount Lassen. Marchel Munnecke, Andrew Conlin.

**Sept. (TBA).** Vegetation Mapping, San Diego. Todd Keeler-Wolf, Julie Evens.

**Oct. (TBA).** Legends of the Fall: Exploring the Clandestine Flora of Early Fall in the Eastern Mojave Desert, UC Granite Mountains Desert Research Center. Jim Andre, Tasha LaDoux.

**Nov. 17–20.** Environmental Negotiations, Sacramento. Jim Nelson, Carol Witham.



Josie Crawford

**Participants hike to Ebbett's Pass during a September 2009 workshop on the 2nd edition of *A Manual of California Vegetation*.**

**Josie Crawford**
CNPS Education Program Director

### LOOKING AHEAD

The next CNPS Conservation Conference will be held in southern California in 2012! Watch the CNPS website, finish your research, and volunteer for one of the many committees!

# CNPS E-Newsletter Now Available

The CNPS E-Newsletter began in April 2009 as an experiment, with monthly issues going out since June. This new communications vehicle is designed to share timely news about CNPS, and to alert members and friends to emerging issues requiring action. Brief news submissions of a paragraph or two about Chapter activities are encouraged and will be included when space is available.

With the transition to a new member database now complete, we hope to expand the e-newsletter circulation to the full membership. We have begun efforts to secure members' email addresses as well as information on members' interests. We'll be using a variety of methods to gather this information, the simplest of which is visiting *www.cnps.org* to sign up for the e-newsletter or by contacting Jack Tracey at *jtracey@cnps.org* or (916) 447-2677.

**Jack Tracey**
CNPS Development Director

# CHAPTER NEWS

## LOS ANGELES/SANTA MONICA MOUNTAINS CHAPTER:
## Annual Fungus Foray and Picnic

Each year in late winter, our chapter hosts its annual Fungus Foray and Picnic. The Forays are led by Florence Nishida, a well-known southern California mycologist who is currently researching and writing a book on the mushrooms of the Santa Monica Mountains.



Bill Yuan

**CNPS member David Hollombe smells a mushroom found by foray participants. Smell is often combined with visual clues to help identify wild mushrooms. Foray leader Florence Nishida is on the left. Also pictured are Sid Mendel and Bob Burns.**

While hiking through the Salvation Army's Camp Gilmore, attendees scan the duff under oaks and other shady areas looking for emerging fungi, which are carefully dug up with a tent stake, wrapped in waxed paper, and placed in a basket. Florence uses these specimens to illustrate basic lessons in mushroom identification, classification, and ecology.

The Foray attendees collect a surprisingly diverse array of mushrooms. These include shelf fungi, bright orange blobby jelly fungus (*Tremella mesenterica*), as well as edibles such as egg-yellow fluted chanterelles, velvet domed boletes, and crinkle capped morels. Florence also teaches the hazards of amateur mushroom identification with particular attention paid to destroying angels (*Amanita ocreata*), which cause the majority of mushroom-related deaths but are often mistaken for edible species such as *Amanita calyptrata*.

Although fungi and mushrooms are not part of the plant kingdom, they are an integral part of plant ecology and warrant study by the botanical community. Florence is a patient and skilled teacher and clearly enjoys introducing neophytes to the field of mycology.

The Forays are concluded by a delectable picnic hosted by our chapter board. After lunch, there is the option of a hike to search for early spring and late winter wildflowers or to hunt further for mushrooms.

**Snowdy Dodson, President**
LA/Santa Monica Mtns. Chapter

## NORTH COAST CHAPTER:
## Spring Wildflower Show raises public awareness of California's flora and CNPS

Imagine a room filled with a visual and fragrant cornucopia of California spring wildflowers from seaside dunes, majestic redwood forests, serpentine mountains, and lush agricultural lands, all labeled and grouped by family, and free for the public to experience. This is the core of our Spring Wildflower Show, the chapter's biggest event, held each year during the first weekend of May. Between 50 and 80 volunteers help create it, including some from other community organizations, and about 1,000 visitors attend.

Seven years ago the chapter took leadership of this 25-year-old event. Keeping the same basic plan—a three-day show encompassing a school day so students can visit—the chapter added a native plant sale. Attendees also peruse displays on varied topics (dune plants, local invasive plants, and local insects), attend lectures or a drawing workshop, browse plant books, walk with guides in the dunes beside the community center venue, and pick up literature about CNPS. Visiting school groups are scheduled and escorted through two hands-on lessons and a walk in the dunes.

The chapter budgets about $1,000 for the show (rent, insurance, printing) and this year grossed $12,000 from plant sales, merchandise, and donations. This



Carol Ralph

**Teacher John Cromwell and students from Maple Creek School at the spring wildflower show.**

celebration of California's wild plants is an exhausting, exciting, and effective educational event and plant lovers' social. For more information, contact Carol Ralph at (707) 822-2015, *theralphs@humboldt1.com*, or visit *www.northcoastcnps.org*.

**Jennifer Tompkins and Carol Ralph**
North Coast Chapter

# The Rare Plant Treasure Hunt

## A new CNPS statewide initiative

By Nick Jensen

Despite our best efforts, the current status of many populations of California's rarest plants is not well known. Furthermore, thousands of California rare plant occurrences have not been documented for decades. Up-to-date information on rare plant occurrences and their associated habitats are vitally needed to inform conservation actions and to aid planning efforts across the state.



M. Strassforth & CNPS

**The San Diego Chapter will conduct surveys for and update occurrences of the endangered San Diego thornmint *(Acanthomintha ilicifolia)* this coming spring.**

As a result, starting now the CNPS Education and Rare Plant Programs, along with interested local chapters, will initiate a statewide effort to update data on rare plants and their associated habitats. Potential chapter projects include surveys for rare plants in areas with little history of botanical exploration, the relocation of historical rare plant occurrences, and updating known occurrences of high priority rare taxa. This winter and spring we will work with chapters to help identify potential projects, and provide plant identification materials and maps to be used by volunteer participants.

Efforts statewide may coincide with plans to survey for rare plants and associated vegetation types on BLM lands in the Mojave Desert and Carrizo Plain. This project, which may be funded by a grant from the National Fish and Wildlife Foundation, will team experienced botanists and CNPS members with less experienced community and youth group members to search for and document rare plants on BLM lands.

We hope to make the treasure hunt a funded, multiyear project complete with prizes. For more information on how to become involved in the Rare Plant Treasure Hunt Project, go to *www.cnps.org* or send an email to *treasurehunt@cnps.org*.

**Nick Jensen**
CNPS Rare Plant Botanist

# In Appreciation: Ron Evens

## Promoting conservation via land trusts

Ron Evens, Pharm.D., a CNPS member for more than ten years, has long been a strong supporter of CNPS and land conservation. A member of the Channel Islands Chapter, Ron now resides in Jacksonville, Florida, where he is active with the North Florida Land Trust and several other local nonprofits. Ron and his wife Sally Ann have been instrumental in ensuring that several significant parcels of land in North Florida were preserved for conservation through the land trust process.

Ron is president and CEO of MAPS 4 Biotec, Inc., and consults to the biotechnology industry for strategy, planning, staffing, and operations of medical affairs groups for drug research and provider/patient services. He also serves as clinical professor at the University of Florida's College of Pharmacy.

Ron has been a strong supporter of CNPS conservation efforts and our Vegetation Program. His strong interest in conservation has spread within his family, as his daughter Julie is CNPS Vegetation Program Director!

CNPS Executive Director Tara Hansen presented Ron with a certificate to recognize his membership in CNPS's Donor Circle, which recognizes members who contribute $25,000 or more within a ten-year period. For information on how you can support CNPS, please contact



**Ron Evens**

Jack Tracey at *jtracey@cnps.org* or (916) 447-2677.

**Jack Tracey**
CNPS Development Director

# Gardening for Biodiversity

## The importance of using native plants in home gardens

DONNA WILDEARTH AND BOB HASS

People love to garden for all sorts of reasons. It's rewarding to design a garden and watch it become transformed into a place of beauty. Some love finding new, rare, or unusual species to add to their garden. Others simply derive pleasure from watching plants grow and thrive. And many CNPS members know that gardening is a good way to acquire first-hand knowledge of native plants.

But, as Douglas Tallamy explains in his new book, *Bringing Nature Home: How You can Sustain Wildlife With Native Plants*, there is now an additional reason to garden:

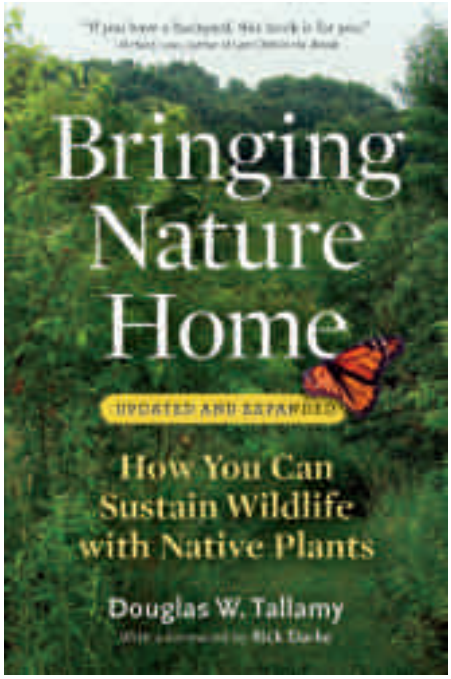
> For the first time in history, gardening has taken on a role that transcends the needs of the gardener…It is now within the power of individual gardeners to do something that we all dream of doing: to make a difference. In this case, the "difference" will be to the future of biodiversity, to the native plants and animals of North America and the ecosystems that sustain them.

Tallamy is a professor and chair of the Department of Entomology and Wildlife Ecology at the University of Delaware. He has written a passionate, carefully argued and researched book explaining why using native plants in our gardens is not just a nice idea, but critically important, especially given current extinction rates of plant and animal life around the world. He contends that most remaining natural or undisturbed areas in this country (estimated by landscape ecologists to be only 3–5%) represent fragmented habitats and have high rates of species extinction. It will be impossible to reverse extinction rates, he says, if we rely solely on these small areas.

However, he sees great potential in preserving species if we redesign our landscapes to promote biodiversity. Tallamy envisions this occurring primarily in the gardens and open spaces surrounding suburban dwellings.

He goes on to discuss some of the scientific issues related to the biodiversity problem. One is the issue of alien plant species.

> All plants are not created equal, particularly in their ability to support wildlife. Most of our native plant-eaters are not able to eat alien plants, and we are replacing native plants with alien species at an alarming rate, especially in the suburban gardens on which our wildlife increasingly depends.




**A book that makes perhaps the strongest case yet for the use of native plants in home gardens.**

Tallamy emphasizes that insects play a vital but often unappreciated role in the food chain. As prey for birds and animals, insects function as an important means by which the energy produced by plants is made available to higher orders of life. Because native insects, as a general rule, can't eat nonnative plants, gardens containing primarily nonnatives don't support many native insects. In a research study he conducted, Tallamy found that native plants in the study supported a whopping 35 times more caterpillar biomass than the nonnative species. Caterpillars comprise the largest diet component of insectivorous birds.

In other book chapters, Tallamy explores which native plant species produce the most insect biodiversity, what insects birds like to eat, and debunks the conventional wisdom that a garden devoid of insects is a desirable goal.

This book is especially valuable for bringing together information on insects, birds, and gardening practices. The good news is that, as gardeners, we can make a difference by intentionally planting natives to increase habitat value. As Tallamy concludes:

> Because food for all animals starts with the energy harnessed by plants, the plants we grow in our gardens have the critical role of sustaining, directly or indirectly, all of the animals with which we share our living spaces…Which animals will make it and which will not? We help make this decision every time we plant or remove something from our yards.

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**Donna Wildearth** is a member of the North Coast Chapter, and is a landscape designer in Eureka. **Bob Hass** is editor of the *CNPS Bulletin* and *Fremontia*.

*[Editor's Note: While the examples in this book refer primarily to East Coast natives, the principles explained in the book apply to any region of the world. Gardens serve the environment best by including plants native to their own area.]*

# Gardening With Natives

## Change in the Native Garden

By Barbara Eisenstein





**Left: Native bunchgrasses and perennials provide interest to this sidewalk garden while young coast live oaks *(Quercus agrifolia)* mature. Right: In spring, spaces between the perennials are filled with baby blue eyes *(Nemophila menziesii)*, tidytips *(Layia platyglossa)*, and other wildflowers. In the future the oak trees will dominate, providing the street, sidewalk, and garden with comforting shade. Photos by Barbara Eisenstein.**

Last fall's wildfires in southern California epitomize the changing nature of landscapes. Change can come suddenly through disturbance that accompanies catastrophic events like fires or floods, or it can be incremental, occurring slowly over years. Stasis, or the lack of change, is nonexistent in nature.

Too often we forget that gardens, also, are systems that change, both gradually and abruptly. When we remove lawn to create a garden, we are the instrument of disturbance. Although we may try to rush change by installing plants that have gotten a head start in a nursery, the garden knows what is happening. Like wildflowers that follow devastating wildfires, seeds lying in wait in the garden are ready to go. Most of these seeds are nonnative weeds that germinate easily in the tilled soil, and so young gardens require conscientious weeding.

In my yard I sow native annual seeds when creating new garden beds in order to mimic the appearance of wildflowers that follow fires. When spring arrives, young perennials are hardly noticeable among the riotous color of poppies *(Eschscholzia californica)*, tidytips *(Layia platyglossa)*, and gilias *(Gilia capitata)*. In addition to adding excitement to the new garden, I believe—though I have no hard evidence—that the practice of sowing wildflower seeds is helpful in controlling weeds and improving soil.

As the garden matures and change occurs more gradually, there is less room for wildflowers. But the larger specimens provide structure, and with less soil disturbance, fewer weeds emerge. Though the garden is no longer subject to major disturbance, change continues.

In my sidewalk garden, oak saplings *(Quercus agrifolia)* will eventually shade out the sun-loving plants beneath them. This was understood when the trees were planted. The smaller herbaceous plants were selected as filler while the trees mature. Buckwheats *(Eriogonum spp.)*, sages *(Salvia spp.)*, native bunchgrasses, and other perennials grow rapidly in the early years and give a young garden a lush, full appearance. In time, as the oaks mature—and I grow old—the smaller, sun-loving perennials will be removed. Oak leaf duff will cover the ground, and the sidewalk garden will require little work on my part.

When planning a garden, visualize it both in its initial state and as it will be in years to come. As unlikely as it seems, the spindly twig in the one-gallon pot will reach its mature size, and if you do not leave room, you will be confronted with an overcrowded garden, requiring frequent pruning. Remember also to plan for the shade cast by larger plants. If you wish to preserve a sunny space, locate trees on the north side of the bed. Plant trees southwest of the house to cast comfortable, cooling and money-saving afternoon shade.

Recently, while looking at an old, dilapidated fence on the side of our yard my husband asked, "Can't we do something about that?" I saw the fence, as if for the first time, but was more focused on the small shrubs in front of it that I know will provide excellent screening in a few years.

Our different perspectives are clear. He sees what is there now, while I see the future, sometimes missing the present. The best gardeners see both what is there now and the changes that the future will bring.

**Barbara Eisenstein** is a native plant garden writer, consultant, and enthusiast. When not working in her own garden or in the South Pasadena Nature Park, she may be found updating her website: *www.weedingwildsuburbia.com*.

CALIFORNIA NATIVE PLANT SOCIETY
BULLETIN

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The California Native Plant Society is a statewide, nonprofit organization of amateurs and professionals with a common interest in learning about and preserving California's native plants and plant communities. Membership is open to all. Visit cnps.org

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