

Board Meeting:
Tuesday, February 19, 2007, 6 p.m.
Brooks Ranch Restaurant – Chestnut & 99 Freeway

No meeting (general or board) is held in January. We will hold a board meeting in February on the 19th. Members are encouraged to attend, as we look ahead to activities that we feel support the mission of CNPS, keeping in mind that active volunteers tend to be a small group.

The meeting will be primarily business. Dinner is optional (you cover the cost of your own meal) but lively discussions are likely to ensue so please join us!

General Meetings in March, May, September, and October. Watch the March newsletter for details!

Board Meetings in February, April, August, and November. Watch the April newsletter for details!



CARPENTERIA
*Newsletter of
The Sequoia Chapter
California Native Plant Society*

**January-February
2008**

China Creek Update

Warren Shaw

Our first workday of 2008 gave us a chance to see how the park was weathering the winter. It was a beautiful day, and while the park looked good, with little vandalism and negligible trash (someone did leave us a TV), the weeds seemed to have a head start. We had a good group of willing workers who annihilated a flourishing patch of bull thistle near station 3.



Others walked the trail and found it in good shape. Fences were checked, and will require very little work before spring grazing. Deer grass, both those we've planted and Mary McClanahan's experimentally burned plants in the native patch, are thriving. We were also pleased to note that the huge old cottonwood for whose life we had pled with ACRT, PG&E's vegetation contractor, had been spared (though they had topped it in typical lop and chop style).

Paul Mitchell found a beautiful white fungus on a dead log that he later identified as *Herichium ramosum* (common name is Comb *Herichium*), a member of the *Hydnaceae* family (often called the "Tooth Fungi Family"). Although a photo from China Creek is not available, if you do an Internet search you will find lots of photographs of this most unusual-looking fungus.

Workdays

The remainder of the 2008 "spring semester" workdays have been scheduled as follows: (all are Saturdays) Feb. 23, Mar. 29, Apr. 19, May 24, June 21. We may also call some special days later in the spring; to spread chips on the trail if, as last year, the county is unable to help us and/or to hand cut remaining Yellow Star Thistle after grazing and mowing.

China Creek is a beautiful place to spend a Saturday morning, and we hope you'll put these days on your calendar and plan to join us at the park. Bring your binoculars – yes, we do work but frequently interrupt ourselves identifying birds, emerging plant life, and listening to the sounds. Please join us!

Call Warren at 855-4519/281-8080 or email warshaw@netptc.net for directions or information. We hope to see you there.

Home & Garden Show Friday-Sunday, March 7, 8, 9

We will again have a booth at the Home & Garden Show. Each year this show seems to bring more interest, as local homeowners become increasingly conscious of reducing their water consumption. We need volunteers to help staff the booth. If you can spend some time in the booth handing out fliers and smiling at passing folks, it would be a tremendous help. In exchange you receive free admission to the show. Contact Marian Orvis (mforvet@earthlink.net) or Thelma Valdez (nmtv@att.net). Even just a couple of hours would be a big help.

California Native Plant Introduction Program

Madeleine Mitchell, Master Gardener

The Garden of the Sun was chosen to be part of a native plant grow-out study. This is a Masters project by S. Karrie Reid, a graduate research assistant in Environmental Horticulture at UC Davis. The goal is to introduce new native species to the horticultural trade. Master Gardeners in other California counties, including Santa Clara, San Diego, and Mariposa, were also involved.

The first plants were *Carex spissa* (San Diego Sedge), *Bouteloua gracilis* (Blue Gramma Grass), and *Heuchera* 'Rosada' (Coral Bells). Six of each species were planted late October of 2006.

Other plants were added later: in April, an *Aquilegia formosa* (Western Columbine) and in June, *Ceanothus* "Valley View". In November of 2007, three *Artemisia californica*, five *Muhlenbergia dubia* and five *Sedum palmeri* were planted. My job, as monitor, was to take measurements and photograph the plants monthly. They are all doing well so far.

The *Heuchera* was especially wonderful but after our hot summer a couple of plants had died. The *Carex* and *Bouteloua* also suffered during the extremely cold winter of 06-07 and we lost four of those, too. I decided to move most of the plants into the original bed beneath the native oaks on the north side of the garden. This made it easier for me to do the measurements with most of the plants in the same bed. The *Ceanothus* are between the trash bins and port a potty with mixed results. I suspect the *Eucalyptus* leaf drop may be the cause.

New Species of Orchid

Excerpted from the article in the *North American Native Orchid Journal*

The newest species of orchid in the world is from northern California. It is *Spiranthes stellata* (Starry Ladies'-tresses) and was just published in mid-January 2008 in the *North American Native Orchid Journal* by Paul Martin Brown with Lucy A. Dueck and Kenneth M. Cameron. The distinctive plants are common in the moderate elevation fen meadows found Yosemite National Park and have been observed as far north as southern Oregon and as far south as Tulare County.

The full article is worth reading and contains color photographs as well as the distinctions between *S. stellata* and *S. romanzoffiana* Chamisso and *S. porrifolia* Lindley. The description, *stellata*, was chosen for the star-like appearance of the flowers.

<http://wiki.terrorchid.org/tow:journals>



Spiranthes stellata
P.M. Brown, L.A. Dueck
& K.M. Cameron

CNPS is hiring...

The state organization of CNPS is hoping to fill new staff positions, including a Vegetation Data Coordinator and multiple Vegetation Team Leader and Field Assistant positions.

These positions will support new statewide vegetation mapping projects in the Sierra Nevada foothills and greater San Joaquin Valley regions, in collaboration with the Department of Fish and Game. They hope to begin interviewing and hiring for these positions in late January and early February.

Job announcements and the full job descriptions are found at www.cnps.org.

At long last cold weather arrived in late December and early January. And then what we'd all been hoping for - rain. The storms brought a wide range of moisture to the area covered by the Sequoia Chapter. The wind meant that some days one area was soaked and another was lightly sprinkled only to reverse the trend the next day. At higher elevations, however, snow, snow, snow! Yes, yes, yes!

Winter in the Central Valley usually finds us human surface dwellers slowing down. We seek out warmth - hot drinks, warm clothes, and warm homes. And for a brief time the plants are quiet. But for plants, winter is especially about what's happening underground and what's happening overhead. The rains seep into the soil and I imagine the life activity below ground. Worms, fungi, bacteria, roots, bulbs. Nothing happening very fast but before you know it, filaree everywhere! And California Poppy seeds that laid invisible on the ground all hot summer long, now are acting like weeds, popping up everywhere promising a good spring showing. Much of the aboveground activity is on a small scale - lichens, fungi, emerging leaves of a gooseberry, and the beginnings of manzanita blossoms.

Our "back four" is a reflection of winter's moisture. During wet years the field bursts into a "lawn" of Harvest brodiaea leaves in January that foretell a spring field of lavender-blue blossoms. I can hardly wait.

It's good to get out into the weather. Playing in the snow is fun but a day spent in and out of the rain and wind brings me closer to plant life. Plants are strong and flexible; a model to be emulated.

In the foothills the recent storms removed the last of the leaves from the blue oaks, sycamores and buckeyes. This has the effect of making roosting raptors (and our neighbors' junk piles) more visible. It also makes interior live oaks stand out, as well as clumps of mistletoe. There is nothing blooming yet, but lichens, fungi and mosses are extremely happy. Annual grasses and some broad leaves are up and growing fast, and the hills are beginning to have a green tinge.

Warren Shaw saw snow from the 4" or so that fell one night dropping in clumps from the roof and the blue oaks around the house. As it melted on the ground, it contrasted strikingly with the bright green annual grasses and the occasional early blue dick spears that popped up in the last week or so, and mosses and lichens were looking very happy.

- Editor

RELATED PLANT AND FIELD TRIP ACTIVITIES

Sat., Feb 2 9 a.m.	Table Mountain Table Top or Smith Basin Table Mountain Table Top is a six-mile round trip on a trail for most of the hike with some level walking and then a climb on a good trail to the top. Elevation gain is 1000 feet and takes about five hours allowing for lunch at the top. Smith Basin is a strenuous, eight-mile round trip with 1000 ft. elevation to the top and 800 ft. into the basin. Six hours including lunch in Smith Basin.	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sat.-Sun., Feb 2-3	Orthotrichum Orthotrichum is one of the larger genera of mosses in North America This workshop will focus on learning the intricacies of peristome morphology and field characters useful for species identification and will include both microscope sessions and field experience.	Jepson Herbarium Weekend Workshops \$225 (\$250 non-members). For more info, contact Anna Larsen at 510.643.7008 or visit http://ucjeps.berkeley.edu/workshops
Sun., Feb. 3 8:30-12 noon	River Restoration Walk An easy 4-5 mile walk starting at Woodwark Park and back to some possible sites that restoration ecologists are considering along the river.	San Joaquin River Parkway & Conservation Trust \$2 (free to River Parkway Trust members) To register, call 559.433.3190 x3
Sun., Feb. 3 9 a.m.	Black Mountain Summit Fairly easy hike with good footing on a four-mile, three-hour round trip along a dirt road with an elevation gain of 800 ft.	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sat., Feb. 9 9 a.m.	Table Mountain Table Top is a six-mile round trip on a trail for most of the hike with some level walking and then a climb on a good trail to the top. Elevation gain is 1000 feet and takes about five hours allowing for lunch at the top.	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sat., Feb. 9 8:30 - 12 noon	Willow Unit Wonders An easy 2-3 mile walk through the Willow Unit of the San Joaquin Ecological Reserve. This area is only available by guided walk and only at certain times of the year. Don't miss your chance to visit this protected 250-acre wildlife habitat.	San Joaquin River Parkway & Conservation Trust \$2 (free to River Parkway Trust members) To register, call 559.433.3190 x3
Sat., Feb. 16 9 a.m.	Fine Gold An easy hike with emphasis on learning about the streamside habitat of Fine Gold Creek. Hike distances are 1-2 miles and appropriate for children. In early spring parents need to exercise caution with children alongside the creek.	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sat., Feb. 16 8:30 - 12 noon	Bike Tour of the Lewis S. Eaton Trail 5 miles one-way from Woodward Park to the River Center on Old Friant Road. Take a leisurely ride and learn the history and future of the trail, learn about the sights along the way.	San Joaquin River Parkway & Conservation Trust \$5 (free to River Parkway Trust members) To register, call 559.433.3190 x3
Sat., Feb. 23 9 a.m.	Table Mountain Loop Trail A strenuous eight-mile seven-hour round trip hike with quite a bit of cross-country (no trail). The hike contains a 1000 ft. cross-country climb, a 700 ft. drop to the San Joaquin River, and then an 800 ft. climb up to the table top and back.	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sun., Feb. 24 9 a.m.	Black Mountain Summit (see description above)	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sat.-Sun., Mar. 1-2	Introduction to Bryophytes There are 23,000 described bryophyte species worldwide, making it the largest group of land plants except for the flowering plants. The group includes three distinct lineages: mosses, hornworts, and liverworts. The first day will be in the lab, the second in the lab and field to identify at least major bryophyte groups. Be prepared for a 4-mile hike on Sunday.	Jepson Herbarium Weekend Workshops \$225 (\$250 non-members). For more info, contact Anna Larsen at 510.643.7008 or visit http://ucjeps.berkeley.edu/workshops
Sat., Mar. 1 9 a.m.	Table Mountain table Top (see description above)	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Sun., Mar. 2 9 a.m.	Black Mountain Summit (see description above)	Sierra Foothill Conservancy. Free. 559.855.3473 or www.sierrafoothill.org
Tue., - Wed., Mar. 4-5	Surveying the Rare Plants of San Diego County Location TBA.	CNPS. Contact Josie Crawford at jcrawford@cnps.org or call 916.447.2677

The following articles are reprinted from the November-December 2006 issue of the Sierra Club Yodeler. Dan Norris is Curator of Bryophytes on the research staff of UC Berkeley's University and Jepson Herbaria. His bryophyte collection, at over 106,000 specimens, is one of the largest in the world, and forms the nucleus of the university Herbarium bryophyte collection.

California Mosses in Winter

By Dan Norris

In winter, when flowering plants slow or cease growth, California mosses begin their main growing season. This seems to be a survival strategy that avoids shading by the larger associated flowering plants. (Our California trunk-growing mosses virtually never grow on the evergreen conifers.)

This strategy is possible because the moss photosynthetic system can harvest net energy at temperatures very close to freezing. In contrast, the growth of flowering plants usually requires temperatures above 50 degrees F.

In the winter, mosses at low elevations in the moister parts of California cloak the forest trees in a manner reminiscent of Tolkien's novels. In spring and summer, these same mosses lose their intense greens, partly because drying contorts them and also because most or all of the annual growth has ceased.

These dried mosses are not, however, dead, but dormant, and will resume growth when they again become wet. This capacity, almost unique among plants, allows those mosses to live through even very long or very frequent periods of dryness. Some specimens have been revived decades after collection and, with the addition of water, proved capable of resuming growth. It is interesting in this connection that dry mosses are seldom damaged by temperature extremes, but wet mosses may be killed after a short time at temperatures in the 80's.

Most mosses are perennial, with leaves and stems living indefinitely. The cascading tresses of mosses on the trees of northwestern California will only get longer and more beautiful through the years - until their weight pulls them down from the trees. In grasslands and disturbed areas, however, grow a large number of seemingly annual species. These so-called "ephemeral mosses" render the soil surface a green hue markedly more attractive than the drought-cracked clay of the previous summer. Many of these mosses may live for only the two months of the winter,

and will be regenerated by spores with the wet weather of the next fall. Some are so small that the leafy plant and its spore-producing capsule are approximately the size of a pinhead. In January or February, when you see an old man crawling on his knees in grassland, it may be me, in search of the hidden ephemeral.

Mosses are unique among land plants in their total lack of a root system, even in embryonic development. They have instead evolved the capacity to take in water through all parts of their bodies - a rapid absorption accompanied by ease of evaporation. The growth of the tiny mosses in grassland does not even depend upon an autumn rain. The same dew that we wipe off our windshields in October is enough to begin the growth of ephemerals. It does not get into the soil to restart the flowering plants but is sufficient for the soil mosses.

Even the larger mosses on the bark of trees may benefit from the slightly wetter nights of fall. In coastal California these mosses show the first signs of growth in October, when mist and dew, intercepted by tree canopies, flows slowly down the trunks, where it is absorbed by the mosses. Without roots, the erect stems of some of these mosses can be spaced much more closely than among flowering plants with their sensitivity to root competition. Such closely spaced mosses move water out from the tree trunk almost like the wick of a candle.

Mosses (including hornworts and liverworts) are abundant in all parts of California, including its deserts. More than 750 species are documented in the state, and new ones are regularly discovered. For more on California's mosses, see the July 2003 issue of *Fremontia*, the publication of the California Native Plant Society, available at www.cnps.org.

Mossy links

Professor Brent Mishler of UC Berkeley's Integrative Biology Department
<http://ucjeps.berkeley.edu/bryolab/>
The International Moss Genome Project
<http://www.mossgenome.org/>

Moss genome tells of origin of land plants

By Robert Sanders, Media Relations | 13 December 2007

BERKELEY - Some 400 million years ago, on a lifeless lakeshore lapped by waves, floating algae learned to survive in the open air and launched an invasion that transformed the Earth into a green paradise.

The secrets of these first steps onto land are now being revealed thanks to the sequencing of a modern descendent of these first land dwellers, a dainty moss called *Physcomitrella patens* that sprouts on recently exposed shorelines, quickly fruits, and then dies.

The sequencing of the moss genome was reported today (Thursday, Dec. 13) in *Science* magazine's rapid online publication *Science Express* by an international team of scientists led by the Department of Energy's Joint Genome Institute in Walnut Creek, Calif. It will be printed in *Science* in January 2008.

"Land plants may have evolved in this transition zone where, as the water rises and falls, aquatic plants found themselves repeatedly but not continuously exposed to the air and had to come up with ways of protecting their seeds or spores from desiccation," said Joint Genome Institute project leader Jeffrey Boore, an adjunct associate professor of integrative biology at the University of California, Berkeley, and chief executive officer of Genome Project Solutions in Hercules, Calif.

"One of the claims to fame of mosses is the ability to dry up completely and come back to life again," said Mishler, who is director of the University and Jepson Herbaria, two collections of pressed plants housed together along with research labs, libraries and archives at UC Berkeley.

"We have been looking for years at all levels, from the organism down to the molecular level, at how mosses do this, and the genome sequence will help speed that work."

Newsletter



Send newsletter corrections or suggestions to Thelma Valdez at nmtv@att.net. The deadline for contributions for the March newsletter is Wednesday, March 5, 2008.

E-mail newsletter recipients receive the extra page containing native plant photographs. If you wish to receive the newsletter electronically contact Helen Shaw.

We would like to publish photos you wish to share. You remain sole owner and are given credit or you can remain anonymous, as you wish. Photos will not be used for any other purpose. E-mail Thelma Valdez with photos or questions at nmtv@att.net.

Membership

December 2007 and January 2008

*New Members and Membership Renewals

The Sequoia chapter serves Fresno, Madera, and Kings counties.

- Fresno:** Cameron, Copp, CSUF Madden Library, Gorman, Haffner, Hansen, Kauffman, Roberts, Sherriffs/Rubinstein, Stebbins, Thorburn, *Tung
Madera: Daley, Oulton, Richie
Out of Area: Botti, Kreps, Graber, Pitman, Ver Steeg

Thanks to all for your continuing support. Send membership corrections to Helen Shaw at helshaw@netptc.net.

SEQUOIA CHAPTER OFFICERS* AND COMMITTEE CHAIRS

*President	open	
*Vice-President	Paul Mitchell paul30@comcast.net	559/638-2784 (h)
*Secretary	Marian Orvis mforvet@earthlink.net	559/226-0145 (h)
*Treasurer	Jeanne Larson jrjlars@aol.com	559/243-0815 (h)
*Past President	Peggy Jones autumn_aspen@hotmail.com	559/897-9646 (h)
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Education	Peggy Jones	(see President)
Rare Plant	John Stebbins johnst@cvip.net	559/297-0144 (h)
Plant Sale	Marian Orvis	(see Secretary)
Conservation Co-chairs	Jeanne Larson Joseph Oldham	(see Treasurer) (see Horticulture)
Directors at Large	Jim Seay Verna Arnest	jaseay@comcast.net vernaj@sti.net

The Spring Rain

Spring rain:
Everything just grows
More beautiful

Chiyo-ni
(R.H. Blyth)

The IRS considers dues in excess of \$12.00 per year and all gifts to CNPS as tax deductible.



JOIN THE CALIFORNIA NATIVE PLANT SOCIETY RENEW

Membership includes the quarterly CNPS journal, *Fremontia*; the quarterly *Bulletin* which gives statewide news and announcements of Society activities and conservation issues; and our chapter newsletter, *Carpenteria*.

I wish to affiliate with the Sequoia Chapter.

Name: _____
 Address: _____
 City: _____
 State: _____ Zip: _____

- Student, Limited Income..... \$25
- Individual \$45
- Family, Group, or Library..... \$75
- Plant Lover \$100
- Patron \$300
- Benefactor \$600
- Mariposa Lily \$1500

Make your check payable to "CNPS" and mail with this form to:

- New Member Renewing Member

California Native Plant Society
 2707 K Street, Suite 1
 Sacramento, CA 95816-5113

The California Native Plant Society is a statewide nonprofit organization of amateurs and professionals with a common interest in California's native plants. The mission of the Society is to increase understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education, science, and conservation.

CARPENTERIA

January-February 2008



CALIFORNIA NATIVE
PLANT SOCIETY
SEQUOIA CHAPTER

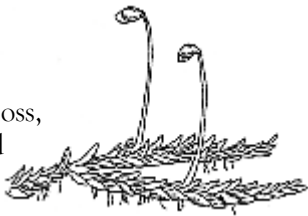
c/o Jeanne Larson • 3457 Redlands • Fresno, CA 93726

Dedicated to the Preservation of the California Native Flora.
For a membership brochure call Helen Shaw at 559/855-4519.
CNPS Web site: www.cnps.org.

FEATURED CALIFORNIA NATIVE PLANT

Mosses

“Gathering Moss, A Natural and Cultural History of the Mosses,” by Robin Wall Kimmerer, 2003, Oregon State University Press, Corvallis, OR.



The mosses (and other bryophytes) are a remarkable group of plants and many botanists and plant enthusiasts have yet to be exposed to their diminutive beauty. Robin Kimmerer’s book is a great place to start learning about mosses for those unfamiliar with the topic. Kimmerer is a biologist and a Native American woman who shares her experiences of how the mosses speak to us and of their importance. Despite its non-technical approach, the book provides information about

general ecology as well as examples of scientific principles.

Here are a few passages of Kimmerer’s prose and how she brings us into the world of mosses.

“...Learning to see mosses is more like listening than looking. A cursory glance will not do it. Straining to hear a faraway voice or catch a nuance in the quiet subtext of a conversation requires attentiveness, a filtering of all the noise, to catch the music. Mosses are not elevator music; they are the intertwined threads of a Beethoven quartet. You can look at the mosses the way you listen deeply to running water over rocks. The soothing sound of a stream has many voices, the soothing green of mosses likewise.

“...In indigenous ways of knowing, we say that a thing can not be understood until it is known by all four aspects of our being; mind, body, emotion, and spirit. The scientific way of knowing relies only on the empirical information from the world, gathered by the body and interpreted by the mind. In order to tell the mosses’ story I need both approaches, objective and subjective. These essays intentionally give voice to both ways of knowing, letting matter and spirit walk companionably side by side. And sometimes even dance.”

Excerpted from a review by James R. Shevock, Department of Botany, California Academy of Sciences.



Clockwise from upper left

- Lichen
- Oregon Grape (*Mahonia sp.*)
- Moss
- Sulphur Buckwheat (*Eriogonum umbellatum*)
- Desert Willow (*Chilopsis linearis*)
- Foothill view after snowfall
- Lichen on oak branch
- Mistletoe on Sycamore
- Moss on rock

Center

- Harvest brodiaea leaves



JANUARY 2008



SEQUOIA CHAPTER CNPS

