The Paintbrush

Winter 2012 Newsletter, Volume 28, Number 1

San Gabriel Mountains Chapter, California Native Plant Society

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EVENTS

JANUARY
8 Plant Walk, 9 am
19 Board Meeting, 7:30 pm
26 Program, 7 pm

FEBRUARY
12 Plant Walk, 9 am
23 Program, 7 pm

MARCH
11 Plant Walk, 9 am
15 Board Meeting, 7:30 pm
22 Program, 7 pm

Don Davis's prize-winning photo of Johnston's monkeyflower

Chapter Sweeps Awards in Contest

Rare Plant Treasure Hunt Awards

extracted and edited from project coordinator Amber Swanson's blog

THE recipient of the 2011 Grand Prize Rare Plant Treasure Hunt Award for most occurrences updated is new SGM chapter member **Don Davis**, Treasure Hunter Extraordinaire! Don caught the botany bug this spring and went into the field almost every weekend from the end of April through October. He found 42 new and historic rare plant occurrences in the desert and mountains of southern California. Don documented many *Opuntia basilaris* var. *brachyclada* (Shortjoint beavertail cactus), *Orobanche valida* ssp. *valida* (Rock Creek broomrape) and *Calystegia peirsonii* (Peirson's morning glory). Don is studying botany and hopes to make a career of it in the future. Thank you, Don, for all your long hours planning, traveling, searching, photographing, identifying and documenting!

Don also took a lot of great pictures this year. His photograph of the pollination of *Mimulus johnstonii* (Johnston's Monkeyflower) has snatched our second place prize. *See photo, lower left.*

Volunteer Hour Award

The award for most volunteer hours completed goes to both **Jane Tirrell** for 491 hours and **Walt Fidler** for 394 hours. These San Gabriel Mountains Chapter members visited the Lily Spring study site weekly throughout the season.

Chapter Award

The winner of the Grand Prize for CNPS chapter with the most rare plant occurrences found and updated and hours logged is the San Gabriel Mountains Chapter. As a part of their continuing Lily Spring project they documented many populations and put in hundreds of hours. Thank you to all participants including **Jane Tirrell, Graham Bothwell, Walt Fidler** and **Jane Strong**.

Former Members' Prizes

The Red Jeepsters, the husband and wife botanical team of **Kathy and Rich LaShure**, have earned our second place award as Intrepid Treasure Hunters. They decided this summer and fall to combine their weekly hikes in the Southern Sierras with treasure hunting and they found 32 rare plant populations! Kathy is president of the Creosote Ring CNPS sub-chapter, volunteers at the Maturango Museum in Ridgecrest and makes artisan soaps out of her home. She's a busy lady. Thank you both for taking the time to find and document rare plants!

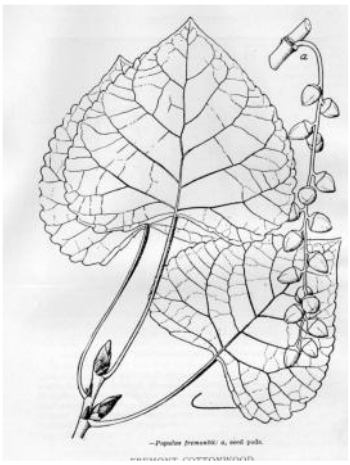
A lovely photo showing treasure hunters at work in the meadows of the southern Sierras was taken by Rich LaShure and won our third place prize. Good work, Rich!

How Wind Affects Trees

by William R. Chaney, Purdue University
excerpted from
http://www.inwoodlands.org/storage/past-issues/windaffe.htm

A CRUCIAL factor in determining a tree's resistance to breakage or uprooting is the air drag or sail effect of the canopy. Deciduous hardwoods seem to suffer windthrow more commonly during the growing season when they have leaves to catch the wind. However, many trees such as sycamore (*Platanus occidentalis*), sweetgum (*Liquidambar styraciflua*), and black locust (*Robinia pseudoacacia*) have leaves that curl or cluster together in strong wind, reducing the exposed surface area and wind drag on the canopy.

Another adaptation to strong wind is a flattened petiole, such as that of aspen (and our local Fremont cottonwood—JS), that causes the leaves to quake in even the slightest breeze. In strong wind, the flat petiole permits the leaves to twist easily and reconfigure, accounting for the resistance of aspen and other poplars to wind damage.



Many conifers are more susceptible than broad-leaved trees to damage by wind because they have foliage throughout the year. However, the steeple-shaped crown of spruces and firs adapted to mountainous areas, reduces the air drag by the canopy and improves the chance for these trees to survive the frequent strong winds.

Open grown, strongly tapered trees common in urban areas are most stable. However, poor construction practices that allow excessive compaction, trenching, removal, or filling of soil around the base of trees can damage root systems, making trees more susceptible to windthrow. Restricted root development of trees growing on shallow or waterlogged soil also increases the likelihood of windthrow. If heavy rains precede high winds and soften the soil, uprooting is more likely than if the soil is dry. In dry soil, stems often break off before the roots fail. Overmaturity and root or butt-rot diseases also increase the chance for wind to break the stem near ground level.

Can you assist the Newsletter Editor with newsletter distribution? Contact Jane Strong at zelicaon@yahoo.com.

PlantRight Spring Nursery Survey Coming Up!

by Kathy Sturdevant

THE PlantRight campaign kicks off their third annual Spring Nursery Survey between March and June 2012. Last year's CNPS-SGM volunteers enjoyed the experience so much that we plan to participate again this year.

PlantRight partners with the nursery industry to stop the propagation, distribution and sale of invasive plants while promoting commercially viable and environmentally safe alternatives. Invasive plants can alter entire ecosystems by displacing native plants and animals, choking waterways and contributing to fire danger. The economic cost is said to be $85 million annually in control efforts alone while damages are estimated in the billions.

The information gathered from this survey is used by PlantRight to evaluate their effectiveness and guide their strategy to stop the sale and use of horticultural invasive plants. The most commonly found invasive plants from the 2011 survey include periwinkle, pampas grass and green fountain grass.

Our 2011 CNPS-SGM surveyors included **Constance Brines, Barbara Eisenstein, Roger Klemm, Nancy White** and **Kathy Sturdevant**. **Mary Montes** and **Ty Garrison** watched the training webinar. Thank you to all of our volunteers for participating in this effort! A special "thank you" goes to Constance for covering 4 stores and bringing our CNPS-SGM total to 8 stores!

Please contact kathy.sturdevant@sbcglobal.net if you would like to participate in this fun, educational and rewarding volunteer opportunity. For additional details on the PlantRight campaign, please see http://plantright.org.

January 10-14, 2012, San Diego

Conservation Conference Highlights

- Over 200 oral presentations in 22 sessions
- Scientific posters, chapter conservation posters
- Speakers: Drs. Louise Jackson, Bruce Pavlik, and Peter Raven
- 14 skill-building workshops, 2 field trips, 25 exhibitors and vendors
- Banquet, welcome reception, student social events
- Poetry reading and songfest, botanical art and photography exhibition and contest, silent auction and drawing

Just added: Reception to celebrate the Jepson Manual, Second Edition!

An Ode to Orobanche

Text and photographs by Daniel L. Geiger
geiger@vetigastropoda.com

I often wonder, whether it takes a trained biologist to fully appreciate the oddities of nature. Take sponges. Are they even alive? They barely have five cell types. Place a couple of specimens in calcium-magnesium-free seawater, and they dissociate into individual cells. Put those cells back into normal seawater, and *voilà*, a couple of hours later you have two separate functioning sponges. Astounding! Try that with a human and a fly, and we know from the movies what happens.

And suddenly it dawned on me: one of those plants lacking chlorophyll, flowering. How neat is that!

Species that lack a supposedly essential character are another favorite of mine. What do plants do? They photosynthesize using chlorophyll. But then there are groups without chlorophyll, and not just one, but several. In Europe there is the orchid *Neottia nidus-avis* and on the West Coast further up north there is the Indian pipe, *Monotropa uniflora*. Locally we have the dodder genus *Cuscuta*, and then there is *Orobanche*, the broomrape. Unlike other parasites like mistletoe, which steal some nutrients from their host, but still have the capacity to assimilate carbon, *Orobanche* and company are completely tied to the welfare of their host. I can't help but to admire that level of commitment.

I found my first *Orobanche* along the trail in Trail Canyon in Sunland. I just noticed those dried up curved stems sticking out of the ground. But they just looked off, not sufficiently ragged for dead stems. Examining them more closely, I discovered some flowers, kind of straw colored, but the color was also too yellow for dried flowers. Inspecting the flowers even more closely, I noticed different parts of the flower, and the stems were pliable. And suddenly it dawned on me: one of those plants lacking chlorophyll, flowering. How neat is that! The field guide to the Santa Monica plants quickly identified it as the clustered broomrape, *Orobanche fasciculata*. Usually, where there is one specimen, there are more around. The following years I went several times to Trail Canyon and found more sites with *O. fasciculata* under coast live oak *(Quercus agrifolia*), associated with chamise (*Adenostoma fasciculata*) and yerba santa (*Eriodictyon sp.*). I could not resist taking a few dried seed capsules to have a look at the seeds. As I happen to run a scanning electron microscopy facility, I imaged some of them to reveal their tiny beauty.

Hiking in various other areas, I found a few more spots with *O. fasciculata*. Then one day, along the trail just west of Malibu Creek State Park I saw this mound of dry plant matter with a purple tinge. Getting closer showed it was a second local species, the chaparral broomrape, *Orobanche bulbosa*. I found the species also in Simi Valley in the Rocky Peak area. The CalFlora website has the species only "reported" from north and northeast of Fillmore and northwest of the 210 Freeway. So those localities are interesting additions to the known distribution of the species.

I am also an enthusiastic photographer. I usually take a camera with me on those hikes. "A camera" is a bit of an understatement, as usually it is 1–2 bodies, 6–8 lenses, 1–2 flashes, reflectors, tripod, the works. So I am difficult to miss. But even with a camera pointed at the subject, many people ask what I am taking a picture of as they can't see anything worthwhile. Excited about my find, I explain about those atypical plants, and how wonderful and rather uncommon it is to see them. However, I think the most charitable reply I have ever received was a tepid "that's nice". Obviously, I never ran into a biologist.

The holy grail of *Orobanche*, though, is growing it in my yard. This is most likely going to be difficult, to say the least. Given the tiny size of the seeds, they need to be in the perfect spot near the right site of the host to successfully parasitize the host. Just one more project on my list.

Orobanche fasciculata, clustered broomrape, in Trail Canyon, Angeles National Forest, by Daniel Geiger

Author's parkway garden featuring repeating deergrass and coast live oaks.

Front parkway garden was left unirrigated for one year. Weedy grasses have mostly gone brown by late June.

Grass has been dug out, soil graded and mounds of cobbles arranged across the parkway garden.

Native Plant Gardening

Kicking Around Ideas on Parkways

By Barbara Eisenstein, Native Plant Garden Writer and Consultant

In this continuing series I share answers to questions that I receive about gardening with California native plants. If you have any questions on topics you would like covered, please email me at barbara.eisenstein@gmail.com

Q: My house is located on a busy, residential street. I am clearing the parkway–the strip between the sidewalk and street–of weedy grass so that I can landscape it with low-water use, low-maintenance plants. Any suggestions on how I should go about planning and executing this project?

A: This question is one that I have been pondering for the past several months and it has made me appreciate how difficult it can be to transition from a traditional lawn-dominated landscape to a more sustainable garden.

I started the project by taking note of interesting parkways that I observed both while traveling in my neighborhood and while surfing the internet. I saw raised beds used for food production and swales intended to capture rain water. I saw parkways covered with gravel and others that appeared to be a collection of random plants. Although I got some ideas, I was still far from determining what my parkway should be.

Next, I asked family, friends, and colleagues for suggestions. Over the months I considered the following possibilities:

1. Striking, architectural succulents, a modern look, may be too modern for our 100 year old Craftsman with its naturalistic gardens.
2. Limited plant palette of dudleya, wiregrass and seaside strawberry to create an interesting combination of succulent, stiff and spreading textures and colors of powdery gray, blue-green and dark green.
3. Decomposed granite or collection of boulders.
4. Sage scrub plants like the parkway along the side of our corner lot, only smaller and less wild.

None grabbed me, so I wrote down properties and conditions I want for the parkway:

1. Good habitat plants, preferably locally-native species.
2. Little to no supplemental water.
3. No new materials brought in, though a few new plants and seeds are fine.
4. Low maintenance, even during establishment.
5. Lower-growing, and neater than the planting along the side yard, but similar in feel.

The sustainable aspects of the garden are important to me. In the past I have been enticed by many wonderful plants native to California or cultivars selected or hybridized from them. My heart, though, yearns for a more natural, wilder garden that takes me back to a time I can only imagine. For this reason I am going to try to stick with local natives that might have lived here

before the land was cleared to build my house.

Furthermore, I am going to resist the urge to bring in new materials. Limiting myself in this way, a picture begins to emerge. Cobbles (previously used in my garden for paths and borders) will be moved to the parkway. Although larger boulders are preferable, I will group the available cobbles into mounds that drift across the parkway. Clumps of small bunch grasses interspersed with wildflowers will spread along the narrow strip with a higher concentration in and around the rocky mounds.

Most of the grasses will be taken from the parkway garden on the side of the house where the needlegrasses (*Nassella* species) and purple three-awn (*Aristida purpurea*) have spread by seed. I will try some other locally native grasses, such as squirreltail (*Elymus elymoides*), Junegrass (*Koeleria macrantha*), melic grass (*Melica imperfecta*), and California brome (*Bromus carinatus*).

I would love to put in some deergrass (*Muhlenbergia rigens*) but know it will get too large. The city landscape ordinance requires the use of low-growing plants in parkways. Although I did not pay strict attention to this regulation on the side yard–with some consequences–I will stay within the confines of the law especially along the busy street in front of my house.

The project is well on its way. Right now it looks somewhat bare, though new little grasses appear each day. This spring it will be a riot of wildflower color from phacelias, tidytips, poppies, madias, chia and gilias. For more pictures as the garden develops, check out my blog, http://www.wildsuburbia.blogspot.com.

Closeup of cobble mound planted with needlegrass that was taken from seedlings growing in the older side parkway garden.

Does weather matter?

Plant Sale Review

Dire weather predictions of threatening storms precede plant sale weekend. Contingency plans are made. Forecaster reports that storm was a "paper tiger". Preparations continue. The eventful day arrives. One-tenth of an inch of rain falls in the wee morning hours. Light snow sifts down on the mountaintops. By sale time, a patch of sunlight appears on the slopes with showers to the east. Showers devour the canyon. Eat up the valley. Spit out drops. Drip, drip, drip.

Cliff reports: Today's plant sale was a great success, in spite of the threats of rain. Early results show a gross income slightly higher than last year. Thank you for all your enthusiastic support. I heard several customers commenting very favorably about the high quality, friendly assistance. All of the customers appeared to be very happy when they left with their plants.

Graham the treasurer reports: The financial result of today's plant sale looks like being excellent. The takings were $8,464, including sales tax. This is $413 more than last year.

Thank you to these people who helped with the sale either Friday, Saturday, or both.

Barbara Eisenstein
Bernie Mateer
Cliff McLean
Cynthia Null
Daniel Geiger
Daniel Howell
Emily Yarnall
Eva Morgan
Frances Liau
Gabi McLean
George Null
Graham Bothwell
Helena Bowman
Jan Rutiz
Jane Tirrell
Jay Lieske
Jeff Sellers
Joy Walters
Jude Schwendenwien
Karen Suarez
Kathy Sturdevant
Laura Scott Sellers
Marge Mayotte-Hirn
Marilynn Hildebrandt
Mickey Long
Mort Gorel
Orchid Black
Peggy Burhenn
Rick Fisher
Susan Brown
Terry Keller
Tom Brady
Ty Garrison
Yvonne LeGrice

CNPS Plant Sale 2011 by Karen Saurez

Book Review

A Californian's Guide to the Trees Among Us, 2011, Matt Ritter, paperback, 148 pp.+xxxvi, Heyday, Berkeley, CA, $18.95

by Mickey Long

On opening night of the Botany for Birders class I recently taught, one of the participants held up a new book I hadn't seen. I had no time to look through it but I knew any book that helps me with urban trees would be of personal value, especially if it was specific to California. I ordered one and received it after the course was finished, but it is good enough that a review, to make it known to others, seemed in order.

Our parks, roadway medians, sidewalks and yards are filled with trees from all over the world and I know from years of working with the public that there is interest in knowing what they are.

First, I know we are the California Native Plant Society, and focus on trees, shrubs and annuals indigenous to our State. It is also true that we are surrounded by urban landscapes especially rich in trees. Our parks, roadway medians, sidewalks and yards are filled with trees from all over the world and I know from years of working with the public that there is interest in knowing what they are. There is also some confusion over which are native and which have been introduced.

This book covers 150 species of non-native and native California trees in the urban and suburban environment, focusing on the most widely planted in cities throughout the state. The author omits California natives unless they are commonly cultivated in the metropolitan landscape. He also omits shrubs, even large ones that may commonly be pruned into single-trunked trees. In so doing, he keeps the book to a very handy 9" x 6" x ½". I appreciate this nice size and the ½" thickness won't scare off beginners who fear larger tomes.

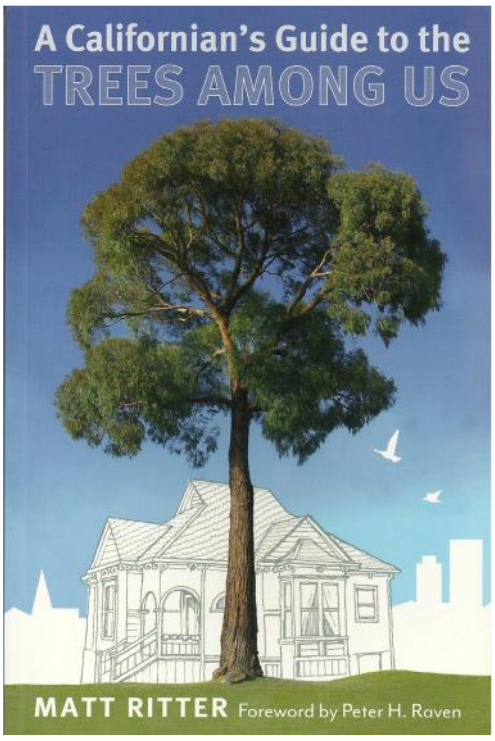
A pie chart indicates that our common landscape trees come primarily from Australia (33%), E. Asia, China, Japan (23%), Europe and the Mediterranean (13%), and South and Central America (11%). Just 6% of our urban landscape tree species are California natives.

Ritter covers conifers (15 species), palms (17 keyed and 11 pictured) and flowering trees (Angiosperms, the majority of the remainder). Dichotomous keys are provided for any unknown tree encountered and specific keys for larger genera (like pines, oaks, eucalyptus, figs, and many more).

Trees are treated alphabetically by scientific name, but the index will help locate a species by common name. Each species or generic group treatment includes photos of the whole tree, often the bark, leaves, flowers and fruit, close-up. Also provided nicely is a pronunciation tip and synonyms for scientific names, the meaning of the names, a statement of the tree's family and location of origin, reproductive mode, typical height, and a solid paragraph of description and interesting facts.

I still have more reading to do, but I've already been surprised to realize I'd never thought about the buckeye being named for the seed's resemblance to the eye of a buck (deer), or that a number of those palms, that look superficially alike, are quite different species. I didn't know the orchid tree, genus *Bauhinia*, was named by Linnaeus for the botanist brothers Bauhin, as Linnaeus thought the twin-lobed leaf exemplified two brothers working together, nor did I know for sure that olive was the first tree to be cultivated in California (1769 at Mission San Diego). I found the book to be well-written and quite error-free, although I'm sure "Brittle-cone Pine" (*Pinus longaeva*) should be Bristle-cone Pine.

There are many other books covering horticultural trees of the West. For many years, my standby for helping me identify a street or horticultural tree has been the old McMinn and Maino, *Manual of Pacific Coast Trees*, and I still use it for its coverage of natives as well. Matt Ritter, a Cal Poly San Luis Obispo professor, has done a masterful job, and this new book, more pocket-sized, will get a lot of use as I expand my interest in the diversity of exotics among us.



BOARD MEETINGS
On the third Thursday of alternate months from 7:30 to 9 pm. All members are welcome to attend. Meeting place at Eaton Canyon Nature Center.
January 19
March 15

PROGRAMS
On the fourth Thursday of each month except July, August, November, and December. The meetings begin at 7:30 pm and are preceded by a social gathering at 7 pm.
January 26 to be announced
February 23 to be announced
March 22 to be announced

PLANT WALKS
Join us on the second Sunday of each month except July and August at 9 am for a gentle walk around the Eaton Canyon Nature Center. Make friends with people of similar interests and learn the names and habits of the native plants in the surrounding area.
January 8 with Eva Morgan as leader
February 12 with Cynthia Null as leader
March 11 with Bob Dollin as leader

Milkmaids
Cardamine californica

FIELD TRIPS
On occasional Saturdays throughout the year. The walking is easy, usually on wide fire roads. If a convenient place is available nearby, we love to picnic afterward. Weather is unpredictable; snow, rain, fire and ice cancel. Email Jane Strong, zelicaon@yahoo.com, if unsure about weather, ability level or directions.

Can you assist the Field Trips Chair in arranging field trips? Contact Jane Strong at zelicaon@yahoo.com.

✉ If you wish email reminders about these events or if you would like to get the newsletter by email, send a request to Cliff McLean at cliff.mclean@verizon.net

EVENTS SPONSORED BY OTHER GROUPS
The following events are sponsored by the Natural Science Section of the Angeles Chapter of the Sierra Club. See http://angeles.sierraclub.org/nss/outings.htm.

February 26
Mushroom Walk
What is a mushroom, fungus, or toadstool anyway? Are they related? Are they edible? Where can you find them in the Los Angeles area? What roles do they play in our lives? If you would like to know more about mushrooms, come join us for a walk. Florence Nishida, mycologist, will accompany us on a hunt for mushrooms in the Santa Monica Mtns. Specific location and time TBD due to condition of rainfall. Permit limited to group size. Email leader for location, time, and availability. Ldr: Mei Kwan. Co-ldr: Laura Franciosi.

March 2 , 9 am
Introductory Botany Walk, Millard Canyon
We'll see signs of fire recovery and learn common plant families and flowers of the coastal sage scrub, chaparral, and riparian habitats. Hike with frequent stops about 3 miles on road and trail, 1000 ft gain. Bring hat, water, sturdy walking shoes, and any plant ID materials you may have. Optional lunch in the canyon after the hike. Meet at 9 am in the parking lot at Millard Canyon in Altadena. Forest Service pass required. Leader Ginny Heringer, assistant leader Liz Pomeroy.

March 24, 9 am
San Dimas Experimental Forest
Join us for this tour, conducted by Forest Service technician Mike Oxford, of Tanbark Flats Forest Research Station, and learn about past and present research projects in the Experimental Forest. Meet 9 am at the San Gabriel River Ranger District office, 101 Wabash St (NE corner Foothill) in Glendora with water, lunch, and clothing suitable for a chilly or rainy day. Ldrs: David Czamanske, Ginny Heringer

March 31, 9 am
Natural Science Hike and Observation Workshop, Lower Arroyo Seco
Take a short hike with naturalist Mickey Long, former director of Eaton Canyon Nature Center, and learn how biologists observe and take notes on the environment. Meet at 9 am in the Lower Arroyo Seco in Pasadena, parking at the Casting Pond parking lot. Bring water, snack, hat and sunscreen, good walking shoes, notebook and pen. Leader Ginny Heringer, Asst leader Liana Argento.

CALIFORNIA
NATIVE PLANT SOCIETY

stamp

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Field Trips, Newsletter Editor

OFFICER ELECTIONS will be held at the January 26, 2012 meeting. The proposed state of officers is President: Orchid Black, Vice-president: Mickey Long,Treasurer: Graham Bothwell, Secretary: Shelly Magier. For additional information, please see the chapter website. For election related questions, please contact the Nominating Committee Chair, Terry Keller by e-mail at tkeller@riohondo.edu.