

DEDICATED TO THE PRESERVATION OF THE CALIFORNIA NATIVE FLORA

The California Native Plant Society

Volume 21 No. 2 March 2001

The March meeting will be on Wednesday, March 28 in Lone Pine at the high school library (one block east of 395 on Muir St.). Jack Murphy, Assistant Professor of Biology at Deep Springs College, will give a talk and slide presentation entitled "Mushrooms and Plants-An Ecological Primer." It should be an interesting and informative talk for both fungiphiles and flower lovers.

New Chapter Illustration By Pat Crowther

The May meeting will be held at the Methodist Church in Independence on May 30. Sally Miller of The Wilderness Society and Paul McFarland of Friends of the Inyo will give a slide presentation on potential wilderness areas in the Eastern Sierra region. While the High Sierra mountains contain several million acres of designated wilderness, east of the crest there are over 1.5 million acres of unprotected, publicly-owned wildlands. Come learn about the natural and cultural history of our Eastside wildlands and how we can preserve them for future generations.

NEXT CHAPTER BOARD MEETING

Tuesday, March 20th at 7:00 p.m. at the White Mountain Research Station. All chapter members are welcome and encouraged to attend.

PRESIDENT'S MESSAGE

Now that we have had some fairly decent rains lately it looks like the Sierra Spring Sojourn will be a go. The Sojourn is always a lot of fun and I look forward to meeting the diversity of people from around the state. The deserts to the south of us have also been getting a pretty good amount of rain and hopefully our chapter members will be leading field trips throughout this region. I am always amazed when I see whole hillsides of flowers when for most of the year, these same hills seem to be nothing but rock! I think of the thousands of seeds that must have been produced, the thousands that must have been eaten by the birds, mice and ants and yet how there are still plenty of seeds around so that when the rains finally do come that once again these barren slopes come alive with flowers. I am also impressed that even the most minute seeds can lay dormant for many years and still germinate when the right mix of moisture and temperature exists - nature never ceases to amaze me.

.....Scott Hetzler, a.k.a, El Pres.

CHAPTER HIGHLIGHTS

The Mary DeDecker Botanical Grant Program recently awarded small grants to two recipients. Michael Honer from Ranch Santa Ana Botanical Garden received \$500 in support of his project, "A Flora of the Glass Mountain Region, Mono County, CA." Ruth Timme from San Francisco State University received \$500 for her project entitled "Phylogenetic Analysis of the Genus *Polemonium* (Polemoniaceae) Using both Molecular Sequence Data and Morphological Characters."

The Mary DeDecker Botanical Grant Program is an annual competition designed to promote research, awareness, and appreciation of the flora of the northern Mohave Desert, and the Sierra Nevada and Great Basin portions of eastern California. There are a wide range of appropriate possible subjects for funding, from basic taxonomic or ecological research to a school garden featuring native plants. The Funding Committee welcomes proposals and inquiries. The deadline for this year's program is November 16. Please contact Karen Ferrell-Ingram at ingram@telis.org or at (760) 387-2913 for more information.

UPCOMING EVENTS

Sierra Spring Sojourn

Our biannual Sierra Spring Sojourn featuring botanical trips throughout the eastern Sierra region will be held the weekend of June 1-3 at Camp Inyo, e.g. Bernasconi Center just as in previous years. For more information and a registration packet please send a self-addressed envelope to Sherryl Taylor, Sierra Spring Sojourn Registrar, P.O. Box 1638 Mammoth Lakes, CA 93546 or Sherrylt76@aol.com.

Our Sojourn speaker for the evening of June 2nd will be Dieter Wilken whose illustrated talk titled "215 years of botanical exploration in California", will highlight the early expeditions and some of the plant collectors that have documented the flora of California

Dieter Wilken has a B.A. in Botany from Cal State University, Los Angeles, and a Ph.D. from UC, Santa Barbara. He taught at Occidental College and Colorado State University before becoming Manager of the The

Jepson Manual Project at Berkeley. He was a contributing author to the "Great Plains Flora", "The Jepson Manual", and "The Flora of China". He currently serves as Vice-President of Programs and Collections at the Santa Barbara Botanic Garden, where he also manages the Conservation Biology Program and the Central Coast Flora Database."

CNPS Bristlecone Chapter 2001 Spring Field Trip Schedule

It appears that with the rain and snow we've had since the new year it should be a good, perhaps very good, wildflower year in the Mojave Desert. Below are listed our spring trips, many more trips are in the works for the summer and fall, these will be listed in our next newsletter in May and on our new website (www.bristleconecnps.org) as soon as the trips are confirmed. Please join us.

March 24, Saturday. Rock Creek winter flora, via cross country skis and snow shoes. Leader: Jerry Zatorski. Meet at 8.00 am at the "Y" in Bishop or at the Rock Creek Ski Park parking at 9.00 am. The late winter is a splendid time to explore the upper Rock Creek Canyon. From pinyon pine forest to white bark pine, this place has it all. Especially attractive this time of year are the colored barks of the many deciduous trees and shrubs. Winter's blanket also highlights the architecture of the various conifer species to be found in the area. This is definitely macro-scale botany at it's finest. Participants are responsible for their own ski and snow shoe equipment. Please, intermediate or above skiers and snowshoers only. There is also a \$5.00/car fee for

parking, so car pooling is recommended. For more information, call Jerry at 872-3818.

April 7, Saturday. Death Valley. Leaders: Jerry Zatorski and Kathy Duvall. Meet at 8:00 a.m. at the Furnace Creek Visitor Center in Death Valley National Park. Late winter rains have been fairly abundant this year and flowering annuals and perennials should be prolific. Botanizing sites will be determined just prior to the trip, but expect a day of exploring canyons, washes and fans with easy walking from the cars. Contact Jerry at 872-3818 or Kathy 872-1466 for further information.

May 12, Saturday. Eureka Valley and Eureka Dunes. Leader: Dana York, Death Valley NP Botanist. Meet at 8:00 am at the Glacier View Campground, junction of Hwy. 395 and 168 just north of Big Pine, or at 9:30 am at the northwest parking area at Eureka Dunes. We'll see the unique plants of the dunes and the surrounding sand flats and Dana will discuss the Park's new plans to move developed areas away from sensitive dune habitats. In the afternoon we'll drive a few miles over to the west side of the Last Chance Range to see some rare plants such as Gilman's cymopterus (*C. gilmanii*) and Gilman's buckwheat (*Eriogonum gilmanii*). East walking. Some of the roads are graded dirt, often wash-boarded, but a standard sedan will do fine. Contact Kathy Duvall at 872-1466 for more information.

May 19, Sunday. Swall Meadows wildflower walk. Leader: Karen Ferrell-Ingram. Meet at 9:00 am at the gravel pit on Sky Meadow Road in Swall Meadows. Details to follow in the May newsletter. Call Karen at 760-387-2913 for directions.

June 1-3, Friday evening-Sunday. Sierra Spring Sojourn. Bernasconi Education Center, Big Pine. Join us for our fifth Sojourn - a wonderful weekend of Eastern Sierra plant enjoyment. Four trips will be offered on Sat. and four different ones on Sun., along with evening speakers. Plant lists, meals, dorms and camping facilities provided. Some trips, not all, require a high clearance 4-wd vehicle. Advance registration is required and there is a fee. For a registration packet contact Sherryl Taylor at 924-8742 or Sherrylt76@aol.com.

FIELD TRIP POLICIES

Everyone is welcome, including non-members, but please no pets. Generally, day trips last most of the day while the overnight trips conclude early Sunday afternoon. For all field trips, be sure to bring plenty of water, lunch, good walking shoes or boots, and appropriate clothing for hot sun or inclement weather. Also useful are a hand lens, plant books and floras. Often we are near the vehicles at lunch, but be prepared to carry your lunch on a hike. Trips leave at the time announced, so please arrive at the meeting sites a few minutes early. Unless indicated, the average car should do fine. Car pooling is encouraged. For more information contact Field Trip Chairperson Mark Bagley at 760-873-5326 or e-mail: markbagley@qnet.com.

Additional Mojave Field Trips

Search for an Illusive Mint in Joshua Tree National Park

Do you love the Mojave desert in the very early spring? Do you like treasure hunts? Please join us in Joshua Tree National Park on **March 23-25, 2001**, where we will be hunting for Robison's monardella (a rare mint in a rock-climbing mecca!). This perennial, rock-outcrop loving species may not be in flower, but its characteristic smell will give it away! Hunting grounds will include a variety of situations, from strenuous hikes to casual strolls. Something for everyone! For more information, please contact Ileene Anderson at Andbotcon@aol.com or (323) 654-5943.

CONSERVATION

Proposed Pumping Station Enlargement: Where are the Inyo County Supervisors?

In the last issue (January 2000) of this newsletter I wrote about the ongoing attempt of the Los Angeles Department of Water and Power (DWP) to build a pumping station (as part of the Lower Owens River Project) with a capacity three times greater than the ceiling specified in the Inyo-LA Water Agreement. It is discouraging that DWP had the audacity to even propose this, given that it took 25 years to litigate and negotiate the Water Agreement and associated MOU. More discouraging is the fact that the Inyo County Board of Supervisors (as of 3/2/01) has yet to take a position on this year-old proposal.

In a previous case in which DWP decided it did not wish to comply with one of the provisions of the Water Agreement the Supervisors at least required something in return for letting DWP off the hook. In that case, Inyo County received \$2,500,000 to take over the upgrading of town water systems. In this case -- where the enlarged pumping capacity will reduce the water available to the Owens River delta for habitat improvement and open up about 71,000 acres of un-pumped land to wellfield development -- the Supervisors are not even attempting to make a deal.

The county Supervisors have a responsibility to protect the county's groundwater and native plant and wildlife resources even if this may be a tiresome and seemingly endless task. By taking no position on DWP's proposal they appear to be supporting it and acquiescing to DWP's use of this issue to delay the entire Lower Owens River Project (DWP is already about 9 months behind schedule).

By their inaction, the Supervisors are also relying once again on unpaid volunteers in the Range of Light Group of the Sierra Club and the Owens Valley Committee to do their work for them. Not only are these two groups opposing the enlarged capacity of the pumping station, they are prepared to take DWP to court to force it to abandon its delaying tactics and proceed with the Lower Owens River Project. In short, these two citizens groups are attempting to enforce both the Water Agreement and MOU while the Inyo County Supervisors watch from the sidelines.

If you would like the lower Owens River to be turned into the third barrel of the aqueduct and if you think expansion of DWP's groundwater pumping would be beneficial to Inyo County, you can sleep soundly - no action is required. If not, it is time Inyo County Supervisors heard from you. I suggest:

1) visit the Bristlecone Chapter website at www.bristleconecnps.org/conservation, (follow the link to Water Agreement and MOU issues page). Look at the map showing the extent of the area potentially impacted by the proposed enlargement of the pumping station capacity to see how much is at stake and why this is such an important issue;

2) call or write your supervisor and ask that the Board of Supervisors accept its responsibility to uphold the Water Agreement and insist that DWP adhere to the Water Agreement's ceiling in the pumping station capacity.

Inyo County Supervisors
Inyo County Court House
Independence, CA 93526

.....Daniel Pritchett
Conservation Chair

Upper Harkless Update: Taxpayers to fund a road to nowhere!

The struggle to protect the Inyo Mountains has now entered its third year and - thanks to your efforts - the beautiful little basin astronomers call "Upper Harkless Flat" remains relatively undisturbed and completely observatory-free. There have been several developments, however, worth reporting. First, the astronomers have become a consortium consisting of U.C. Berkeley, CalTech (Owens Valley Radio Observatory a.k.a. OVRO), and the Universities of Illinois and Maryland; the consortium is named the Combined Array for Research in Millimeter-wave Astronomy (CARMA). Second, CARMA has received a commitment of at least \$350,000 of taxpayers money from the National Science Foundation (NSF) to "conduct a study of and design a road to the new CARMA site"1 (a road to nowhere if there ever was one, because CARMA does not now nor has it ever had a new site!) Third, it has hired a full-time project manager to get the road and observatory built.

While this sounds rather grim, the news may not as bad as it first appears. In a recent meeting with newly-hired CARMA project manager Tony Beasley, Mr. Beasley made it clear that he worked for CARMA as opposed to OVRO -- which has been the leading proponent of the Upper Harkless site. Mr. Beasley explained that one of his first tasks is to undertake a complete review of the project, which includes a review of where to site the proposed observatory (and presumably where to build the road).

It may be that, as an outsider not previously involved in the controversy over the proposed Upper Harkless site, Mr. Beasley may be able to succeed where we have failed: We hope he will be able to persuade CARMA's members that regardless of how badly they may want Upper Harkless Flat, the biological, political, and legal obstacles relating to this site make it impossible for the consortium to obtain it. We will be following Mr. Beasley's efforts closely, hoping for the best while preparing for the worst.

New information regarding this issue will be posted on the conservation pages of the Bristlecone Chapter website at www.bristleconecnps.org/conservation as soon as it becomes available.

1 Abstract to NSF Award 9977420 downloaded from the NSF website and currently posted on the Bristlecone Chapter website at ww.bristleconecnps.org/conservation. We are attempting to obtain a copy of the entire proposal because the abstract raises interesting questions regarding what, exactly, CARMA disclosed to the NSF about potential sites.

Daniel Pritchett
Conservation Chair

P.E.S.T.E.R

Mono County citizens' group, Preserving the Eastern Sierra Tradition of Environmental Responsibility, has proven many times that public awareness and involvement can make a big difference in decisions affecting the quality of life in our region. P.E.S.T.E.R. works to "preserve the spectacular natural beauty of the Eastern Sierra and keep HWY 395 a scenic corridor now and in the future," and has a vital strategy for achieving that mission: the Eastern Sierra Agenda Network (ESAN).

The purpose of the weekly ESAN e-mail alert, produced by P.E.S.T.E.R. and sent to over 350 people, is "sending you the news you can use in time to make a difference." By providing late breaking news and upcoming agenda items for governmental and agency meetings on local environmental issues, the ESAN encourages public involvement in the decision-making process. Some of the 61 issues P.E.S.T.E.R. is currently tracking include Sierra viewsheds, the 395 scenic corridor, dark night skies, mining, airport expansion, and impacts of development. To learn more about P.E.S.T.E.R. and the Eastern Sierra Agenda Network, please check out the website at www.pester.org or e-mail Elizabeth Tenney, et@pester.org.

Notes From The Undersand

Ah yes, finally we're getting some regular precipitation, and with the moisture the stalked puffballs are popping. First of all, a stalked puffball is a type of mushroom belonging to the Basidiomycetes (club fungi). They look like a small ball about the size of a dime mounted on top of a stalk about 1-2 inches long. Instead of having gills like many more commonly seen basidiomycetes (i.e. what you'll find in your grocer's produce section), these fungi produce their spores in a gastric-like structure and release their spores through a pore or other opening on the top of the mushroom.

Tulostoma is the genus for the stalked puffballs that I have seen around the Owens Valley of which the two most common species are; *T. burmale*, common stalked puffball, and *T. macrocephalum*, flat-headed Tulostoma. Both of these species can occur in sandy soils, and the latter is associated with desert habitats as well as other Tulostoma species. Now stalked puffballs will probably never be considered culinary delights due to their size and toughness, but like many other terrestrial fungi they play an important role in the recycling of nutrients and associations with plants that often benefit both organisms. I have seen Tulostoma as isolated individuals and in small groups in sandy soil usually with a moderate amount of vegetative cover. So the next time you find yourself wandering around in the Owens Valley, and it has rained recently, be on the look out for a small mushroom about 2 inches high, usually a whitish color and in the open or under vegetation.

.....Happy Wandering the Fun Guy,
a.k.a Jerry Zartoski

Developing An Inter-Species Relationship

Maurandya petrophila Cov. & C. Morton
(Scrophulariaceae)

Common names: rock lady [Hrusa]

Plant community: Creosote Bush Scrub
[Lum/Walker]

Habitat: described by Walker and/or CNPS as occurring in carbonate substrate [Walker and/or CNPS Inventory 1994]

Maurandya petrophila, a dicot in the family Scrophulariaceae, is a perennial herb that is native to California [Hrusa] and is endemic (limited) to California alone [Lum/Walker]. It is ranked by CNPS as extremely rare [1997]. It is listed by the state of California as Rare [1997] and by the Federal Government as a Species of Concern [1997].

From the CalFlora Database
<http://www.calflora.org/>

It's a well known botanical fact that most rare plant populations are found near established roads. Rare plant distribution maps are often merely botanist distribution maps! Easily accessed locations get surveyed and hard-to-get-to populations are often left undiscovered.

A couple years ago we heard about a rare plant called *Maurandya petrophila*, or Rock Lady, a small flowering perennial in the snapdragon family. This particular species grows only in Death Valley National Park. The former park botanist, Arnie Peterson, mentioned it during one of our Eureka Valley rare plant service projects. As the person responsible for the continued existence of the Death Valley flora, he was most concerned about this obscure plant. It was not officially listed as endangered or threatened, yet there were only 24 known individuals and they were all relatively near a well-traveled park road.

We volunteered for plant survey work and were given the task of trying to find whether more populations of *Maurandya* existed. We had never seen *Maurandya petrophila* before and figured we could just drive into the Grapevine Mountains and easily spot the existing plants. The next day we reported back, embarrassed to confess we couldn't even find the known plants. Now, however, we began to get serious. We consulted geological maps for the locations of similar-aged limestone cliffs. We looked up herbarium records of prior sightings of *Maurandya*. We made sure we knew exactly where the known plants were, looked at slides of the leaves and flowers and reviewed the botanical descriptions for identifying characteristics.

We found the known populations and began to impress upon our brains what *Maurandya* looked like and where it was likely to grow. We hiked up to the 5300' location of the 1935 sighting by an early park botanist. All the rock up there was volcanic; how could he have seen *Maurandya* there? We later discovered by comparing his field notes for that day to the herbarium sheet that the elevation had been mis-marked by 1400 feet.

We were given the name of a geology student who had been mapping the mountain range for his graduate work. He told us where he knew of outcrops of the lower Bonanza King limestone formation, a Cambrian rock 500 or 600 million years old. We decided to do a four-day carry-water backpack into a new canyon (Fall Canyon) to search several miles of limestone walls for new populations. After a few miles of painstaking wall-peering we were pretty discouraged. We entered a narrows and continued on. Then, low and behold, right next to us, hanging from a wall at eye height was our first new *Maurandya petrophila*. A single plant. Nearby, we found another, and 250 yards down a third. As the light dimmed we mapped, drew, and photographed our new discoveries. We were an excited couple as we hiked back to our tents in the dark. The next day quite close to our camp we found six new locations, one with ten individual plants. We hiked out and proudly reported that now *Maurandya petrophila* was documented in two different canyons and totaled 48 known plants.

Over the next two weeks we dayhiked up other canyons and found an unnamed canyon with the "mother lode", one location with approximately 60 plants. Finally, we re-surveyed the original canyon containing the first 24

known plants. Since we had finely honed our mental search image we were able to find several new locations here as well - one had more than 25 plants. When we wrote up our final report we could now claim that rock lady grew in three distinct canyons and that we had located over 150 plants. We felt quite proud to be the world's foremost experts on the locations of *Maurandya petrophila*.

Of course *Maurandya* had gotten under our skin. We began to anthropomorphize. We became possessive. They were our babies. They were so cute. We missed them over the summer. We had many questions about their lifestyle. They were certainly much prettier than that nasty pretender *Eucnide urens*, the ubiquitous rock nettle.

Last thanksgiving we toured Fall Canyon again. All but two of the 24 plants identified more than a year and a half before were still there. Only three new plants looked like they were new starts, and we found fifteen additional plants which we had overlooked before. We also re-surveyed the unnamed canyon populations with similar results: very little change in the numbers of plants seen before. *Maurandya petrophila* must normally live for several years. We made more exact location recordings and individual descriptions in order to be able to track individuals over the years. We also made a tentative identification of four new plants in Red Wall Canyon, high on a limestone wall. This would be a fourth distinct canyon if it proves out.

Last year one of the Park staff located another site with about 50 more *Maurandya*. Our database keeps growing. We are now able to prove that nearness to a road is not a necessary condition for the *Maurandya petrophila* habitat. We have broken the 200 mark.

It has been fun getting to know these canyons in minute detail. We have very strong feelings for "our" *Maurandya*. We will be going back to learn more from our adopted species. We want to see them in bloom. Now what about that *Tetracoccus ilicifolius*?

.....Bob Ellis and Ingrid Crickmore

Maurandya petrophila
From the Jepson Manual

NEW MEMBERS

The Bristlecone Chapter would like to welcome the following new members.

Jane Bicek - Oakland
Carolyn Owen- Fort Bragg
Nancy Zierenberg-Tucson
Sally Miller-Lee Vining
Joan Benner-Big Pine
Bill and Barbara Schuck-Bishop

Next Newsletter Deadline: April 25th

THE CALIFORNIA NATIVE PLANT SOCIETY - Membership Application

The California Native Plant Society is an organization of lay persons and professionals united by an interest in the plants of California. It is open to all. The society, working through its local chapters, seeks to increase the understanding of California's native flora and to preserve this rich resource for future generations. Varied interests are represented.

Name _____ P.O. Box or Street _____
 City _____ State _____ Zip Code _____ Phone _____
 I wish to be affiliated with the Bristlecone Chapter _____ Other _____.

Membership Category

<input type="checkbox"/> Student/Retired/Limited Income	\$20.00
<input type="checkbox"/> Individual or Library	\$35.00
<input type="checkbox"/> International	\$35.00
<input type="checkbox"/> Family or Group	\$45.00
<input type="checkbox"/> Supporting	\$75.00
<input type="checkbox"/> Plant Lover	\$100.00
<input type="checkbox"/> Patron	\$250.00
<input type="checkbox"/> Life	\$1,000.00
<input type="checkbox"/> Benefactor	\$1,000.00
<input type="checkbox"/> Corporate	\$1,000.00

Please make membership checks payable to:

The California Native Plant Society.
Mail to: Bristlecone Chapter, CNPS
 P.O. Box 364
 Bishop, CA 93514-0364

Bristlecone Chapter Directory (Partial List)

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 Education - Vacant
 Programs - Stephen Ingram - (760) 387-2913
 Field Trips - Mark Bagley - (760) 873-5326
 Native Plant Sales - Karen Ferrell-Ingram - (760) 387-2913
 Publicity - Heidi Hopkins - (760) 647-6271
 Historian - Sacha Stuart - (760) 876-8012
 Librarian - EvelynMae Nikolaus - (760) 878-2149
 Rare Plant Committee - 2001 Chair. - Stephen Ingram

Gift Contribution: Where most needed _____ Conservation _____.

THE CALIFORNIA NATIVE PLANT SOCIETY Bristlecone Chapter Newsletter comes out bimonthly. It is mailed free to members of the Bristlecone Chapter, CNPS. The subscription is \$5.00 per year for non-members and can be obtained by sending newsletter subscriptions to CNPS. P.O. Box 364, Bishop, CA 93515-0364. Send newsletter articles not memberships to Newsletter Editor Anne Halford at 312 Shepard Lane, Bishop, CA 93514 - or email to: ahalford@ca.blm.gov

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