

NEXT CHAPTER MEETING

Our September meeting will be in Lone Pine at the Lone Pine High School library (1 block east of Hwy. 395 on Muir St.) on Wednesday, September 29, at 7:00 p.m. Art Cowley, Program Coordinator for the California Register of Big Trees, will give his program, "Update on the Biggest Trees in California." Mr. Cowley has visited and photographed 130 of the 180 California "champion" trees, and is working on adding more. He will focus his slide presentation on the biggest native trees in our state, and will discuss the value of big trees.

NEXT CHAPTER BOARD MEETING

Tuesday, July 20th, at 7:00 p.m. at Doris Fredendall's residence in Big Pine. Doris has been gracious enough to host this month's board meeting at her home. All chapter members and other interested individuals are welcome and encouraged to attend. Members, please contact Doris to find out what you can bring.

PRESIDENT'S MESSAGE

Our chapter now has a nice little nest egg in the bank which prompted us, at our last board and general meeting, to give some of these funds to help support conservation in our neck of the woods. Some of the projects include; funding to help with a nature trail for the Mammoth Creek Park project which will include trail signs to help identify native plants and explain a bit about their natural history, \$200 to the Friends of the Kern River Preserve to help with the purchase of the Foster Property near the Preserve, \$1000 to the University of Montana in cooperation with the U.S. Fish and Wildlife Service and the BLM to complete an ecophysiology study on the effects of flooding and herbivory on the federally threatened Fish Slough milk-vetch (*Astragalus lentiginosus* var. *piscinensis*), and \$2000 to help with the printing of a new edition of Mary DeDecker's Northern Mojave Flora.

This still leaves our chapter with money in the bank. If you would like to see our chapter spend more money on worthy projects how about serving as our chairperson for special projects? Our chapter brings in money but we would like to see the money go out to help with the conservation of our native flora. Any ideas?

.....Scott Hetzler, a.k.a. El Presidente

NATIVE PLANT SALE PREVIEW 1999

To showcase the wonderful and unusual plants offered at this year's plant sale, we are holding a preview slide show and Deepest Valley Cooperative Native Plant Propagation Center tour. Each species offered at the sale will be illustrated by nature photographer Stephen Ingram's slides and plant culture needs will be described. Gardeners will be able to view the plants and get advice on the basics of native plant gardening.

The plant sale preview will be held on Wednesday, September 8 at 7:00 p.m. at the White Mountain Research Station in Bishop. Refreshments will be served and there will be a free raffle of several easy-grow native plant packages. Please call Karen at 387-2913 for more information.

NATIVE PLANT SALE

The third annual native plant sale will be held on Saturday, September 11 at 9:00 a.m. at the Tri-County Fairgrounds in Bishop. This year we will be offering many great plants - all the favorites along with some new and exciting species. There will be a special rock garden section with some tiny jewels ready to be set out. For a species list or other information or to volunteer help, call Karen at 387-2913 or e-mail at ingram@telis.org

CNPS Bristlecone Chapter 1999 Summer-Fall Trip Schedule

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 would be a hand lens, binoculars, camera, floras, and plant lists. Trips will 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. Everyone is welcome, but please no pets. If you need more information contact Field Trip Chairperson Mark Bagley at 760-873-5326 or e-mail: markbagley@qnet.com.

July 17, Saturday. Native Plant Gardening at the Mono Lake Visitors Center, Lee Vining. Leader: Karen Ferrell-Ingram. Meet at Tom's Place at 9:00 a.m. to carpool up to Lee Vining. We will spend the morning working in the new native plant garden at the Forest Service Visitor's Center. After lunch, we'll look for seed collecting opportunities in the area. Please bring gardening tools, gloves, hat, repellent, lunch, and water. Call Karen at 387-2913 for more information.

August 7, Saturday. Middle Gaylor Lake and above, Sierra Nevada. Leaders: Kathy Duvall and Cathy Rose. Meet at Tom's Place for carpooling at 8:00 am or just outside the Tioga Pass entrance to Yosemite at 9:00 a.m. We will hike steeply (but briefly!) up from the pass to Middle Gaylor Lake, then across to Granite Lakes and up again to the snow rivulets above the Granite Lake cirque and back around and down to Middle Gaylor. There are magnificent views of the Cathedral Range in a classic flower area. This is a moderately-strenuous, high elevation, mostly trail-less,

all-day trip with great rewards. Bring Weeden's Sierra Nevada Flora.

Call Cathy at 935-4329 for more information.

August 28, Saturday. Minaret Summit, Sierra Nevada. Leader: Mark Bagley. Meet at the Mammoth Lakes Forest Service Ranger Station at 9:00 a.m. for carpooling up to Minaret Summit. There are fantastic views at the summit and along the San Joaquin Ridge, and many wildflowers should be in bloom at this time. This will be a fairly easy walking trip along the summit and possibly down the east side, depending on where the bloom is best. Be prepared to carry your lunch and walk for the day.

September 11, Saturday. Native Plant Sale, at 9:00 a.m. at the Tri-County Fairgrounds in Bishop.

October 9, Saturday. Shadow Lake for fall colors, Sierra Nevada. Leaders: Kathy Duvall and Cathy Rose. Meet at the Mammoth Lakes Forest Service Ranger Station at 8:30 a.m. for carpooling down to Agnew Meadows (8335'). A 3-mile hike (6 miles round-trip) to beautiful Shadow Lake (8750') set below the Ritter Range, with aspen along the way. A stiff climb from the San Joaquin River up to the lake but otherwise a moderate hike. Bring Weeden's Sierra Nevada Flora. Call Cathy at 935-4329 for more information.

FIELD TRIP REPORTS

Manzanar National Historic Site, Owens Valley - May 1

On the first day of May, Sally Manning and I joined Richard Potashin at the Manzanar Historic Site for a fascinating tour that combined both botanical and historical elements. During the past 150 years the site

has been inhabited by Indians under Chief George, pioneer ranchers like Hohn Shepherd, farmers growing apples and pears from about 1910 to 1924, and Japanese-Americans relocated during World War II. It was interesting to learn how rapidly the Japanese-Americans transformed the landscape, not only operating a large, diversified farm, but creating traditional Japanese pond gardens within a few months of their arrival.

Today, away from the watercourses, native shrubs are slowly reclaiming the site. Prominent are four-wind saltbush (*Atriplex canescens*), cattle spinach (*Atriplex polycarpa*), gray rabbitbrush (*Chrysothamnus nauseosus*), Great Basin sagebrush (*Artemisia tridentata*), greasewood (*Sarcobatus vermiculatus*), and Mormon Tea (*Ephedra nevadensis*).

Many introduced trees remain, including the ubiquitous black locust (*Robinia pseudoacacia*), apple (*Pyrus malus*), pear (*Pyrus communis*), and the “bad” and “not-so-bad” tamarisk species; *Tamarix ramosissima* and *Tamarix parviflora*.

Most of the native forbs were not yet in bloom, but we did see flowers on desert alyssum (*Lepidium fremontii*), early-blooming peppergrass (*Lepidium flavum*), whitestem mentzelia (*Mentzelia albicaulis*), desert dandelion (*Malacothrix glabrata*), indian paintbrush (*Castilleja chromosa*), woolly star (*Eriastrum densiflorum*), desert calico (*Loeseliastrum matthewsii*) and purple mat (*Nama demissum*).

Altogether, it was an enjoyable and informative day, and we thank Richard for sharing his extensive knowledge of Manzanar.

.....Mary Allen

WHO'S IN A NAME?

California Chicory, *Rafinesquia californica* **Nutt.** and White Chicory, *Rafinesquia neomexicana* **A. Gray**

These two very similar species (the only members of the genus) occur in the Eastern Sierra. Mary DeDecker's specimen cards note *R. californica* presence in the Kingston and Panamint Ranges; also found in the Whites, it extends eastward through the southern Great Basin and westward to the California coast. *R. neomexicana* is found in the desert valleys where the Creosote bush reigns and extends east to Texas (Mary collected specimens in the Panamint Valley and east of Independence). Their names link three major botanists of early to mid 19th century North America: Thomas Nuttall and Asa Gray, respected pinnacles of the mainstream, and Constantine Rafinesque, a brilliant but erratic taxonomic “bad boy”. As authors of botanical names they are referred to as **Nutt.**, **A. Gray**, and **Raf.**, respectively.

Rafinesque (1783-1840), thought of by both friend (few) and foe (lots) as eccentric, was an early 19th century naturalist with very broad interests, botany being a major one. He roamed over much of the northeast and northcentral U.S. studying natural history and archaeology in the field. He was obsessively driven to name new species and genera. Most of his thousands of names have not been accepted, though the names of many fish, mammals, mollusks, and plants still bear his imprint. Some 43 California plant taxa have his stamp, including the beautiful Rosy Stonecrop, *Sedum roseum* (**L.**) **Scop.** ssp. *integrifolium* (**Raf.**) **Hulten**, found in Eastern Sierra mountains. Also noteworthy locally, the genus *Lomatium* was coined by Rafinesque.

an article assessing the career of Rafinesque

He is often credited with anticipating Darwin by over two decades, based on these statements in an 1833 article: "The truth is that Species and perhaps Genera also, are forming in organized beings by gradual deviations of shapes, forms and organs, taking place in the lapse of time. There is a tendency to deviations and mutations through plants and animals by gradual steps at remote irregular periods...Every variety is a deviation which becomes a species as soon as it is permanent by reproduction. Deviations in essential organs may thus gradually become new genera." He continued with a sentence that helps explain his tendency toward generosity in name-giving: "Yet every deviation in form ought to have a peculiar name; it is better to have only a generic and specific name for it, than 4 when deemed a variety."

Rafinesque dearly wanted a genus honoring his name, so much so that he coined a few himself! All of his Rafinesquias, however, were rejected.

Enter Thomas Nuttall. In 1836, just having turned 50, he was at the end of his last and most extensive natural history excursion in North America. At San Diego, while awaiting a ship to take him and his collections back to the east coast, he gathered specimens of the plant now called California Chicory, which he described as a new genus and species in an 1841 publication. Following the technical description of the genus he explained that the name was "dedicated to the memory of an almost insane enthusiast in natural history; sometimes an accurate observer, but whose unfortunate monomania was the giving of innumerable names to all objects of nature, and particularly to plants." Asa Gray was even less complimentary in

published the year after his death. He suggested that Rafinesque's thoughts on evolution were evidence enough of his lunacy.

Gray was "general" of an "army" of explorer-collectors who sent plants to him at the Harvard Herbarium "HQ". Around 1851, Charles Wright, a standout among Gray's collectors, sent back specimens from "El Paso, New Mexico" (actually Ciudad Juarez, Chihuahua) which Gray deemed to be a new species of *Rafinesquia*; he called it *Rafinesquia neomexicana* in his 1853 publication on Wright's plants.

Now, as mentioned, the two species are very similar. Cronquist, et al., in Volume 5 of their Intermountain Flora, say "The species seem wholly distinct in the field, but all the measurements of herbarium specimens are confluent." Why didn't Gray make the "New Mexican" plant simply a variety of Nuttall's plant (the full name would have been *Rafinesquia californica*, Nutt. var. *neomexicana*, Gray)? Gray had no compunctions about devising varieties. Could it be that he didn't like being linked to a man who had referred to him as a closet botanist?

Whatever - Rafinesque would have approved.

.....Larry Blakely

Note: A somewhat longer version, with pictures and references, may be found on the internet at:
http://Inr.dragonfire.net/NATR HIST/who_raf.htm

CONSERVATION

Upper Harkless Flat Update

Will Upper Harkless Flat be sacrificed for construction of an observatory or protected for its outstanding biodiversity values? (See the previous three issues for background) The drama continues without resolution.

The Bristlecone Chapter recently filed a Freedom of Information Act request with the Inyo National Forest (INF). This will allow us to find out exactly who wrote what to whom with regard to this ill-conceived project. Representatives from the Bristlecone Chapter and other local Environmental groups also agreed to seek a meeting with INF Supervisor Jeffrey Bailey to discuss this issue.

We recently acquired from INF the rare plant and vegetation survey of the proposed project area done by consultant Mark Bagley for OVRO and we encourage anyone interested in this issue to read it. The report documents, among other things, that there are at least 14 CNPS- listed species occurring in the proposed project area, and that the vegetation at the proposed array site is not adequately described in existing vegetation classifications. Contact Vern McClean at INF (873-2400) to get a copy or contact Daniel Pritchett (873-8943; skypilots@telis.org) for further information.

Water Agreement Worries

Periodically, I remind readers that there are many more issues needing attention than I, as Conservation Chair, can possibly deal with and that there is a constant need for others to get involved. One issue which

very much needs attention is the

implementation of the Inyo County - Los Angeles Department of Water (LADWP) Water Agreement. The agreement and accompanying Environmental Impact Report and Memorandum of Understanding control the pumping of groundwater for export by LADWP.

Under terms of the Agreement, meetings of the Technical Group, the scientists and engineers from both LADWP and the Inyo County Water Department (ICWD), are supposed to be open to the public. Since the agreement was signed there have been only two meetings. I attended the most recent one and learned several disturbing facts: 1) LADWP, which is obligated under the agreement to dig test wells for monitoring groundwater, had taken no action upon a request for new test wells which ICWD had made a full year before, and; 2) ICWD did not seem at all concerned about this and accepted without a peep LADWP's vague promise to provide an unspecified plan within 45 to 60 days.

Even more disturbing was the fact that the Technical Group meeting was, in fact, a press conference rather than a meeting. Instead of attempting to reach agreement on some of the serious issues on which the two agencies disagree, members of the staffs of each agency gave brief presentations to the public and then accepted questions. It was very clear that decisions had already been made in secret and this meeting was a sham.

I subsequently attended a meeting of the Inyo County Water Commission -- which oversees the work of the ICWD. At this meeting it was revealed that the 1999 pumping plan proposed by LADWP (and since approved by the Inyo County Board of Supervisors) allows LADWP an 18-fold increase in pumping at well 349 near Little Seeley Springs in the Taboose Aberdeen

wellfield. Unfortunately, ICWD stated that there are not enough test wells near that pump to adequately monitor changes to the water table caused by the pump, nor are ICWD's hydrological models refined enough to make any useful predictions with regard to the impacts of the pumping. While both ICWD and DWP have agreed to a "Conservative Pumping" program for the next two to four years, ICWD admitted that it cannot make any determination as to whether this pumping meets its own definition of "conservative" or not.

Ultimately we, the citizens of Inyo County, are responsible for the actions of our county government. When an agency appears to be floundering as much as the ICWD, it is only attention by the public that will generate the political pressure to get it back on track. Anyone who is willing to spend a few hours a month to keep up on the complicated (but interesting) issues relating to the Water Agreement and to attend occasional meetings could make a large, positive, impact. For more information contact Daniel Pritchett, PO Box 1411, Bishop CA; Skypilots@telis.org; 760-873-8943.

.....Daniel Pritchett

BOOK REVIEW

Conifers of California, by Ronald M. Lanner. 1999. 288 pages, with 165 color photographs, 54 original watercolor botanical illustrations by Eugene O. Murman, and 54 range maps. Published by Cachuma Press. It is available directly from Cachuma Press, P.O. Box 560, Los Olivos, CA 93441, via e-mail at cachuma@silcom.com, or at local bookstores. Cost is \$36.95 hardcover, or \$24.95 softcover.

This book was given a glowing review by Michael Barbour in *Fremontia*, so you can rest assured that it's a great book. In fact, Barbour calls it "a perfect book." Other books by the author you might be familiar with are *The Piñon Pine: A Natural and Cultural History* (1981), *Trees of the Great Basin: A Natural History* (1984), and *Made for Each Other: A Symbiosis of Birds and Pines* (1996).

The author's broad knowledge and ability to write well about the trees and the forest, gives the reader a real sense for the relationships among conifers and their environments. Lanner's descriptions of 55 taxa cover the basics, but also address the unique ecology of each conifer or genus. For instance, for western hemlock we read about the importance of "nurse logs," for grand fir we learn about "hybrid swarms" of grand and California white fir, and we read about the genetic variability of Monterey pine that has made it so favorable for domestication in places like New Zealand, Kenya, and Uruguay. Human uses and interesting anecdotal information is given for many species. In his description of Santa Lucia fir, Lanner writes "Like cones of other firs, those of Santa Lucia fir form only in the very top of the crown and perch upright on the bearing branches... only in Santa Lucia fir are the midribs of those bracts so

long and drawn out - to over two inches - that the cone looks like a vegetable hedgehog... Gobs of resin congeal at many of the bristle tips, presumably exuding from beaks in the epidermis. In the nineteenth century the Franciscans at nearby Mission San Antonio used Santa Lucia fir resin for ceremonial incensios, candles that contributed more aroma than light."

Conifers of California is highly informative without being overly technical, and very

interesting without digressing too far from the subject. In a discussion of the longevity of bristlecone pine, Lanner writes: "Great Basin bristlecone's age record has been challenged by botanists who advocate quaking aspen or creosote bush as the longest-lived plants. Those competing plants, however, are clonal; their tissues are short-lived, and they perpetuate themselves by putting up new sprouts into nearby open ground... To argue that they are ancient requires one to have faith that the clone itself has been around in its present genotype for thousands of years. However logical that may seem, it does require belief in the absence of data. But no faith is needed to acknowledge that a pine with 4,000 rings in its trunk has stood on the very spot where it stands today for 4,000 years."

The format, layout, and the style of writing all make this book very readable. Eugene Murman's illustrations are not only accurate, but exquisitely drawn, and the fine color photos are reproduced very well. The annotated bibliography is thorough, and five appendices include information on hybrids, keys, and a species list. This is a book that should be on the shelves of anyone with even the remotest interest in our state's coniferous trees and forests.

.....Steve Ingram

NEW MEMBERS

**The Bristlecone Chapter warmly
welcomes the following new members**

**Linda Aberbom, Benica, CA
Ed Ceread, Bishop
M.K. Gerstner, Bloomington MN
Sam and Sara Glasser, Bishop
Phillip Kidoo, Bishop
Sara Mathews, Oakland**

Next Newsletter Deadline: August 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	\$500.00
<input type="checkbox"/> Benefactor	\$1,000.00
<input type="checkbox"/> Corporate	\$1,000.00

Please make check payable to: The California Native Plant Society. **Mail to:** Bristlecone Chapter, CNPS. P.O. Box Drawer 989, Lone Pine, CA 93526

Gift Contribution: Where most needed_____. Conservation_____.

THE 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 others. Please 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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