

DEDICATED TO THE PRESERVATION OF THE CALIFORNIA NATIVE FLORA

BRISTLECONE • CHAPTER

NEWSLETTER

Vol. 12, No. 1

January 1993

NEXT CHAPTER MEETING

Wednesday, January 27, 7:30 at the
White Mountain Research Station.

The presentation will be hosted by
Richard Potashin our Green Thumb
Chariman and Jim Roberts,
horticulturalist and operator of
Sierra Gardens Nursery in Bishop.
Richard will discuss cutting edge native

plant propagation techniques developed by the Joshua Tree National Monument,
Center for Arid Land Restoration which specializes in vegetation restoration of desert
systems. Jim will bring us a local example of restoration work by presenting his
techniques in using native plants on the California Edison revegetation project.

PRESIDENT'S MESSAGE

It is time to wish everyone a happy, prosperous, WET, New Year. As your new president, my New Year's resolution is to match the achievements of our past presidents to advance the goals and objectives of the California Native Plant Society in the Eastern Sierra. I can only succeed with your help.

A new environmentally concerned administration in the White House promises to focus on protection and enhancement of our natural resources. President-elect, Bill Clinton, has stated that "Economic strength will increasingly depend on sound environmental performance. Achieving a healthy economy and a healthy environment are complimentary, not contradictory objectives. Caring for nature is good business". Vice-President elect, Al Gore, has made an even stronger statement for global ecology with his book, Earth in the Balance.

The two new women senators from California have made an early priority to move the long-stalled Desert Bill forward. Optimistically then, the new year offers positive, productive change and the opportunity to protect as we enjoy our unique and precious Eastern Sierra environment.

.....Betty Gilchrist

1. Quote from the Los Angeles Times, 11-8-92, Opinion Section article, Perspective on the Environment, by Bill Clinton.

1993 DIRECTORY

BRISTLECONE CHAPTER - CALIFORNIA NATIVE PLANT SOCIETY

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Poster Sales	Vince Yoder	See above	

Directory continued

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Telephone Tree	Bette Sisson	Rt. 2 Box 161 Lone Pine 93545	876-5841
Green Thumbs	Richard Potashin	524 N. 3rd. Bishop 93514	387-2680

ANNOUNCEMENT FROM YOUR EDITOR

After eleven years of editing your Bristlecone newsletter I feel that I have served my turn. Anne Halford, BLM botanist from the Bishop office will begin this year by assuming the duties of layout and editing. This will be a transition period in which I will continue with the business duties. That is handling the subscriptions, having the printing done, and folding and preparation for bulk mailing. Next year Anne will do it all. K.C. Wiley is continuing to do the mailing labels. Beginning now, all material for the newsletter should be sent directly to Anne Halford, Route 2, Box 149. Bishop, CA 93514. We are already familiar with Anne's ability and enthusiasm, so we can expect that to show in her newsletters. Please cooperate by getting articles to her on time. It would be nice to check your own spelling.

In bowing out I want to express appreciation for your support these many years. Together we have represented an outstanding region in our state. I have especially appreciated K.C. Wiley's help in keeping the mailing labels up to date and for helping with the folding and preparation for bulk mailing. Evelyn Mae Nikolaus, also has spent many hours helping with folding. Special thanks go to our accommodating printer, Jack Pound, who hand delivers the finished product.

.....Mary DeDecker



1993 BRISTLECONE CHAPTER FIELD TRIPS, SPRING SCHEDULE

MARCH 6. DEATH VALLEY: Leaders: Douglas Threlhoff and Sally Manning. Join Douglas, Resource Specialist for Death Valley National Monument, and Sally, Plant Ecologist to learn CNPS plant community mapping and inventory techniques. See how your results are then used in the Monument's Geographical Information System (GIS) data base to build a better understanding of the unique plant communities in Death Valley. Please feel free to attend even if you are not interested in working with the inventory techniques. Meet at 8:00 am, at the Lone Pine Visitor's Center. The option to make this an overnight trip is available if people are interested. Please let Anne Halford (387-2781) know of your interest two weeks before the trip so campground reservations may be secured.

MARCH 27. SAND CANYON: Leader: Mary Ann Henry. Explore this canyon and find out what desert jewels have emerged under this winter's more bountiful precipitation. Meet at 8:00 am, at the Lone Pine Visitor's Center. High clearance vehicles recommended. Easy walking.

APRIL 3. RED ROCK CANYON (tentative). Leader: Mark Faul. Another great canyon to explore. This trip will take us to locations of "Charlotte phacelia" *Phacelia nashiana* as well as to many other undoubtedly resplendent sites. Meet at 9:00 am at the Lone Pine Visitor's Center. Easy walking.

APRIL 17. FOSSIL FALLS: Leader: Vince Yoder. We will enjoy the undulating terrain of spring color and diversity along this popular route towards Little Lake. Meet at 8:00 am, at the intersection of Crater Rd. and U.S. 395 in Lone Pine. Easy walking.

APRIL 24. BLACK CANYON: Leaders: Doris Fredendall and Ray Mosher. A trip that will take us through the many interesting plant communities that exist along the sloping alluvial fans and canyon narrows. There will be frequent stops along the fans to find the "rose four-o'clock" (*Mirabilis alipes*) and the "Mono penstemmon" (*Penstemmon monoensis*). Meet at 9:00 am at the White Mountain Research Station in Bishop. Easy to Moderate walking.

MAY 1. ALABAMA HILLS. Leader: Vince Yoder. Explore new botanical haunts with an individual well versed in the diverse flora of this unique area. Meet at 9:45 at the intersection of Whitney Portal and Movie Rd. in the Alabama Hills or at 9:00 at CNPS Chapter President, Betty Gilchrist's home, if you are familiar with the location. Easy walking.

MAY 15. EUREKA VALLEY: Leaders: Mary DeDecker and Clem Nelson. This will be a combined botany and geology trip led by two veritable experts. Saturday will be spent at Eureka Dunes which is home to the rare "Eureka primrose" (*Oenothera avita* ssp. *eurekaensis*) and on Sunday we'll embark to DeDeckera Canyon to find the intriguing dolomite endemics and learn about their geologic medium. Primitive, dry camping. Meet at 9:00 am Saturday morning, at the Triangle Campground in Big Pine, junction of U.S. 395 and Highway 168. High clearance 4-WD vehicles required for DeDeckera Canyon. Those without a 4-WD can share a ride. Easy walking.

MAY 29. VOLCANIC TABLELANDS: Leaders: Mary DeDecker and Anne Halford. There should be a plethora of annual color along the red rock terraces and plateaus of this area. Meet at 9:00 am, at the junction of Highway 6 and U.S. 395, behind the Texaco station in Bishop.

FIELD TRIP POLICIES

Generally, day trips last most of the day while the overnight trips conclude mid-afternoon on Sundays. On all trips bring a lunch and plenty of water. Although we are often near vehicles at lunch, always be prepared to carry your supplies on a hike. On overnight trips be prepared to have food and water supplies for two days. Other essentials to bring for all trips include; a hat, sunglasses, sunscreen, and sturdy walking shoes and don't forget your hand lens and field guides!

Family, friends, and visitors are welcome to come along, but please, no pets. Unless indicated, the average car should be fine on our trips. All vehicles however should be reliable, have good tires and full gas tanks. Trips will LEAVE at the time announced, so please arrive a few minutes early. Car pooling is encouraged. Please contact Anne Halford, field trip chairman at 387-2781, for more information. Note: Additional 1993 spring and summer field trips will be announced in the upcoming March newsletter.

CONSERVATION CORNER

Maybe this one will be the "Environmental Administration", I hope so! At least the prospects seem better. We know that we will have a Vice-President, Al Gore, who has deep environmental concerns. How so? Read his book, Earth in the Balance.

This is a thoughtful, provocative book which makes it clear that without a major change in the way in which we relate to and utilize our resources, the capability of the earth to sustain the population explosion will be increasingly curtailed. Air pollution, CO_2 increase, poisoning the ocean, forest depletion, garbage accumulation, radioactive waste pile-up, water shortages and contamination, soil loss, contamination and loss of soil productivity, change in eating habits, loss of genetic diversity, renewable energy sources, energy conservation, population control, gross overindulgence and conspicuous consumption, organic food production (less chemically intensive), biological pest control, decertification, etc., etc.

This book is not just a laundry list of environmental concerns, it is a plea for a new look to save the earth through a renewed moral commitment. Its emphasis is towards the metaphysical. We have a moral duty to utilize the earth's resources to satisfy our needs but in a way that does not just exploit, degrade, mine (soils and forests, etc.), but rebuilds the resources for the benefit of ourselves and future generations.

A must read for all. Now available locally in paperback with a new foreword. Run to the nearest bookstore for your copy.

.....Vince Yoder

NEW MEMBERS

A warm welcome to the following new member in our chapter.

Bill Brown
3203 SE Woodstock Blvd.
Portland, OR 97202-8199

CONGRATULATIONS

The Bristlecone Chapter would like to extend our congratulations to Sally Manning who has recently received her Doctorate Degree in Botany from the University of Davis, Davis CA. Sally's thesis topic; Competition for water between two desert shrubs; *Haplopappus cooperi* (Gray) Hall and *Chrysothamnus teretifolius* (Dur. & Hilg.) Hall in the Owen's Valley, is an important work which greatly contributes to the ecological understanding of desert plants. We will undoubtedly see much more of Sally's excellent research in the future and wish her the best in all her endeavors.

CURRENT REPORTS AND BOOKS OF INTEREST

A new White Mountain Symposium Report (Vol. 4) is available through; The University of California, 6713 Geology Bldg. Los Angeles, CA 90024-1567. The cost is \$35.00. Articles include many contributions from local researchers that encompass hydrology, plant ecology and water issues in the Owens Valley. A worthwhile purchase!

Martha Barnette's recent Book, A Garden of Words is a wonderful work "that weaves together the ancient root words, the legends and folklore, botanical facts, and medieval stories into a lively exploration of the origins of flower names". ISBN# 0-8129-1848-7. Cost: \$15.00



Plants and the Winter Environment

The recent winter storms have not only brought a change of color and texture to the landscape, but have also evoked the rigor of plant survival. The mechanisms that plants have evolved for avoiding freezing temperatures are both fascinating and diverse. These adaptations include both morphological as well as physiological characteristics. There are no set answers for the overwintering success in plants, but here are some interesting examples.

Take plant morphology for-instance. The aesthetic, conical shape of conifers also has an adaptive advantage. The pronounced spire form of conifers in the Far North is a result of hormonal suppression of lateral branch growth, that ultimately may reduce snow loading on the upper branches of the tree (Marchland 1987). In areas continually exposed to high winds, it is not heavy snow loads, but rather the abrasive force of winds that shapes the trees. Under extreme wind exposure some species with sufficient genetic flexibility like the "black spruce" (*Picea mariana*) in New Hampshire's White Mountains, develop mat forms which never produce verticle leaders and are thus protected even under shallow snowcover. In the White Mountains close to home, "limberpine" (*Pinus flexis*) also forms these dense, cushion-like mats.

These extremes in temperature and wind conditions also stimulate complex physiological change. Photosynthesis for-instance often comes to an abrupt halt during winter. However, an advantage is afforded to evergreen species, since chlorophyll (the light harvesting molecule) does not undergo the seasonal degradation so obvious in the autumn leaves of deciduous trees (Marchland 1987). This "evergreen advantage" however is of benefit only when there is a balmy period during the winter. Photosynthesis in the "bristlecone pine" (*Pinus longaeva*) of the White Mountains for example completely shuts down even though daytime temperatures may rise above freezing for several days. Indicative of this abrupt loss in photosynthetic capacity is the continuously negative carbon balance from mid November to the end of April (Schulze and Mooney 1967).

Deciduous species like aspen have a different photosynthetic mechanism to deal with winter. The bark of aspen may comprise up to 15% of the total photosynthetic surface area of the tree, in turn substantially increasing the annual carbohydrate gain of the tree. This adaptation may indeed enable this species to more effectively compete with the northern conifers during the long leafless season (Marchland 1987).

It is intriguing to imagine all of these hidden mechanisms functioning in the plants we are familiar with. Every time I'm out skiing in the snow laden red fir forests or along exposed alpine ridgelines, I can't help but respect the virulence and beauty plant species exhibit in this sometimes severe and uncompromising season.

.....Anne Halford

Literature cited: Marchland, Peter J. 1987. Life in the cold, an introduction to winter ecology. University Press of New England.

Schulze, E.D., Mooney, H.A. 1975. Wintertime photosynthesis of Bristlecone Pine (*Pinus aristata*) in the White Mountains of California. Ecology 48:1044-47.

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 understanding of California's native flora and to preserve this rich resource for future generations. Varied interests are represented.

Name _____ P.O. or Street _____

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Membership Category:

Student/Retired/Limited Income
 Individual or Library \$25
 International \$35
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 Supporting \$50
 Plant Lover \$100
 Patron \$250
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I wish to be affiliated with the

\$18. Bristlecone Chapter _____
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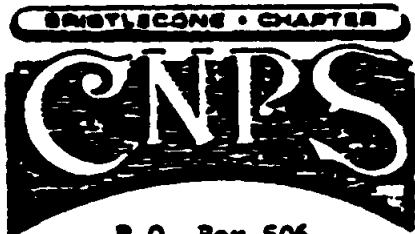
Please make check payable to:
 California Native Plant Society

Mail to: Bristlecone Chapter, CNPS
 P.O. Box 506
 Independence, CA 93526

GIFT contribution: Where most needed _____. Conservation _____.

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 Editor: Anne Halford

California Native Plant Society



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