

The California Native Plant Society



Bristlecone Chapter

Volume 22 No. 1 January 2002

January Meeting: Our January meeting will be at 7 p.m. on Wednesday, the 30th at White Mountain Research Station in Bishop. Dr. Trevor Burwell, a consultant with Jones & Stokes in Sacramento, will give a slide presentation entitled: "Environmental History of the Pinyon Woodlands and Lower Montane Treeline in Eastern California." Dr. Burwell did his dissertation work on this subject in our area in the late 1990's, completing his Ph.D. in Geography at the University of Wisconsin-Madison in 1999.

NEXT CHAPTER BOARD MEETING

Tuesday, January 22 at 7:00 p.m. at Kathy Duvall's residence. All chapter members are welcome and encouraged to attend. Please call Kathy at 872-1466 for directions.

President's Message:

It's starting off to be a great winter with average or above average precipitation in most parts of Bristlecone territory. If the wet weather persists, it will be a fantastic year for wildflowers in our local desert regions! A year of high snowpack also means Mono Lake will rise, riparian areas will experience healthy runoff, and the Owens Valley aquifer might have time for moderate recharge before LADWP sinks more wells for water export, despite the lack of recovery for groundwater-dependent plants in the valley. See Daniel Pritchett's Conservation column, and an article about the Drought Recovery Policy and DWP's selective reading of the policy on the Owens Valley Committee's website at: www.ovcweb.org.

With the start to a new year, we tend to reevaluate our lives and make resolutions for the coming year. So why not take this opportunity to become more active with our local CNPS chapter? We still need people to work on education and hospitality for the Bristlecone Chapter. And we can always use field trip leaders and field trip ideas.

We have a few new Bristlecone Chapter Board members this year. Roseanne Higley will take over for Mary Allen as Treasurer. Thanks for your dedication as Treasurer for the past seven years, Mary! Alisa Ellsworth has volunteered to be Field Trip Chairperson. Please let her know if you'd like to lead or co-lead a trip, or have suggestions. (We will have a field trip "brainstorming" session just prior to this month's meeting at WMRS.) Thanks again to Mark Bagley, our previous Field Trip Chairperson. Sue Weis has taken over Book Sales from Diane Payne. Thank you, Diane, for handling book sales for the past several years! Sherryl Taylor, who is currently our Legislation Chairperson, will also take over as our new Vice-President. Thanks, Roseanne, Elisa, Sue, and Sherryl for your work with the Bristlecone Chapter!

.....Stephen Ingram

CHAPTER HIGHLIGHTS

The results of the 2002 Bristlecone Officers Election on November 14 are as follows:

President: Stephen Ingram
 Vice President: Sherryl Taylor
 Secretary: Sarah Sheehan
 Treasurer: Roseanne Higley

See complete Chapter Directory on page 6.

Mary DeDecker Botanical Grant Program

The Mary DeDecker Botanical Grant Program recently completed a call for proposals and received six very interesting project descriptions. The grant program committee considered the following proposals:

- Inyo County Community School riparian revegetation project
- Study of *Swallenia alexandrae* of the Eureka Sand Dunes
- Survey and collection of bryophytes in the deserts and mountains for a Bryoflora of California
- Study of the response of high altitude subalpine pine forests (Bristlecone and Foxtail pines) to elevated CO² and nitrogen deposition
- Study of the evolution of *Opuntia*
- Study on the comparative ecophysiology of Sierra Nevada alpine plants on differing substrates.

The DeDecker Grant Program was initiated last year and we hope to offer the program every year. The purpose of these grants is to honor the memory of Mary DeDecker by facilitating research and projects that increase the understanding and appreciation of our region's native flora and ecosystems. The only requirement is that the project be relevant to the native plants of the northern Mojave Desert, Sierra Nevada, and Great Basin portions of eastern California. Selected researchers receive up to \$500 each for

expenses and recipients are asked to present their findings to the Bristlecone Chapter either at a regular meeting or in an article in the newsletter. Last September we enjoyed an interesting presentation by one of our first recipients, Michael Honer, on the flora of the Glass Mountains in Mono County. The grant program is a natural outgrowth of the success of our annual native plant sale. Due to the enthusiastic support our plant sale receives, we are able to fund worthy projects such as these research proposals and other educational efforts.

After much thought and discussion, the grant program committee chose the following proposals for funding: Linah Ababneh's proposal to study responses of Bristlecone and Foxtail pines to elevated CO² and nitrogen, Eve Laeger's proposal to survey and collect for the Bryoflora of California in the desert mountains, and Hester Bell's proposal to study *Swallenia alexandrae* and its relationship to *Distichlis* (Saltgrass). We were also very interested in the Inyo County Community School's riparian revegetation project and hope to work with the school by sharing our members' expertise and providing financial support.

For more information about the Mary DeDecker Botanical Grant Program contact Karen Ferrell-Ingram at ingram@telis.org or call (760) 387-2913.

Who's In A Name -Larry Blakely - Please check out the whole Alice Eastwood essay on-line, with photos and references. Thanks Larry!

A Molecular Phylogeny of the Genus *Polemonium* (Polemoniaceae)

Polemonium is a genus of flowering plants comprising an estimated 28 species. Its distribution is almost entirely within the northern hemisphere, with a single species occurring also in Chile. There are two primary forms of *Polemonium*. The most widespread part of the genus consists of semi-tall, leafy perennials that usually grow from a woody caudex or rhizome. The leaves are pinnately compound and are the most striking feature of the plant, giving it the common name Jacob's Ladder. The flowers are generally in cymes, and the corollas which are most frequently blue or violet are rotated to campanulate.

The western United States supports an alpine form of the genus, the Sky Pilot, which has diversified throughout higher elevations of the Rocky Mountains, the Sierra Nevada, and several Intermountain Ranges. These plants exhibit a reduced caudex, with most of their leaves forming a basal cluster and a lightly clustered inflorescence extending out beyond the leaf rosette. The leaves are also pinnately compound, with most taxa also having dissected leaflets.

The majority of recent phylogenetic studies of this genus has focused on the seven alpine species--including *P. chartaceum* and *P. eximium* in the Sierra--and has neglected the remainder of the genus. Despite recent allegations that these and the Rocky Mountain alpine members constitute one lineage that may have evolved from a sub-alpine species (*P. pulcherrimum*), ITS sequence data (non-transcribed nuclear DNA) provides an evolutionary tree in which the alpine species belong to several different lineages. It is evident that, rather than undertaking further investigations of relationships of *Polemonium* subsets, it is more important at present to examine the evolutionary history of the entire genus.

For my masters thesis at San Francisco State University, I sequenced the ITS region for 37 taxa representing most of the species in the genus. These data allow the following conclusions to be drawn: 1) *Polemonium* is a strongly supported monophyletic

genus, which means that the genus derived from a single common ancestor; 2) the one annual, *P. micranthum*, is nested within the genus and is not a distinct genus as has been suggested by some; 3) the Mexican-Southwestern *P. pauciflorum*, *P. grandiflorum*, and *P. mexicanum* form a well supported monophyletic group; 4) five species are not monophyletic in the ITS phylogeny, which could be due to hybridization in their species history.

The biogeography of this genus is also of interest. The story that the molecular data tells us is that the genus originated in the western US, probably in the Rocky Mountains. It then has at least two lineages that dispersed to the Old World, most likely through Alaska. One fascinating aspect to consider is that *Polemonium occidentale* from the Sierra Nevada is more closely related to *P. caeruleum* in China than it is to its neighboring *P. californicum*.

Thanks to the CNPS Bristlecone Chapter for providing funds to complete this project!

Ruth Timme - 2001 recipient of the Mary DeDecker Botanical Grant

Mary DeDecker Memorial Garden

Letter from Joan and Annette Busby: This arrived too late to make it into the November newsletter, but Joan and Annette wanted it included with our January newsletter.

Dear Chapter Members, October 25, 2001

September 29 was not only a beautiful autumn day in Independence, it was also the day that the Memorial Garden for my mother, Mary DeDecker, was planted. We were pleased to be a part of the large group of volunteers who planted the garden. People ranged in age from the six-month-old Sean Halford and four-year-old Claire Jellison to Mary's husband, 93 year-old Paul Dedecker, who came to see the garden and walked the perimeter path with a big smile on his face.

"It looks like they're doing a good job. Mary would be pleased," he commented.

Special thanks go to Sally Manning, who served as liaison person with the Eastern California Museum; Jerry Zatorski, who designed the garden and supervised the planting; Ron Tiller who installed the irrigation system; Karen Ferrell-Ingram, who raised the plants at the Deepest Valley Native Plant Propagation Center (at White Mountain Research Station), and who helped distribute each plant to its assigned site. Volunteers worked on the two previous days in September, cutting brush and preparing the site. Words like "Eriogonum" and "Lupinus" could be heard as we volunteers dug holes, set each plant, and assembled and installed a wire fence (rabbit proofing) around each one. With so many people helping out, we were finished by 2:30. There was animated conversation about future plans for the garden.

We can think of no more fitting tribute to our mother/aunt/grandmother/great grandmother than this memorial garden, where people can learn about the native plants Mary loved. What could have pleased her more! She would have especially enjoyed the way everyone pitched in and had fun together. Our thanks to everyone who contributed to the garden, from donations of money, time, planning, and generosity of the heart. Be sure to stop by and see it in Independence.

Sincerely,

Joan Busby and Annette Busby for the DeDecker Family.

CONSERVATION

Inyo Mountains Still Need Your Help!

The Inyo National Forest announced earlier this month that it had received and accepted an application for a Special Use Permit (SUP) from the Owens Valley Radio Observatory for construction of an observatory in the Inyo Mountains proposed by the Combined Array for Research in Millimeter-wave Astronomy.

Acting District Ranger Mary DeAgüero wrote that no action will be taken on the SUP application until a full assessment under the National Environmental Policy Act has been completed. She did not give a date as to when the assessment will be initiated.

If you haven't already familiarized yourself with this issue, please visit the Bristlecone Chapter website at <http://www.bristleconecnps.org>. If you value the open, undisturbed landscapes of the Inyo Mountains, and all the native organisms – rare and common – which live there, Inyo National Forest Supervisor Jeff Bailey needs to hear from you.

Mr. Jeff Bailey
Supervisor
Inyo National Forest
873 N. Main
Bishop, CA 93514

.....Daniel Pritchett

Death by a Thousand Cuts: LADWP's Selective Reading of the Drought Recovery Policy

Over the past few months Mike Prather, President of the Owens Valley Committee has used the image "death by a thousand cuts" to describe the strategy of the Los Angeles Department of Water and Power (LADWP) in implementing the Inyo-LA Water Agreement. At the Technical Group Meeting of 12/10/01 there was a striking example of this in LADWP's interpretation of the Drought Recovery

Policy (DRP) as unveiled by its new consulting firm Montgomery Watson Harza (MWH).

LADWP's interpretation of the DRP is based on two main premises: 1) the sole factors to be considered in determining the applicability of the DRP are soil moisture and depth-to-water-table – condition of native vegetation is irrelevant; and 2) the unit of analysis is the entire wellfield, rather than parcels within wellfields. Both premises are derived from a selective reading of the DRP.

The goal of the DRP is that “soil water *in the rooting zone* recover to a degree sufficient so that the *vegetation protection goals* of the [Water] Agreement are achieved.” To attain this goal “...soil water, water tables and *vegetation conditions will be monitored* by the Technical Group to ensure the goal is being achieved.[all italics added]” Both the goal and means of implementation of the DRP clearly require consideration of the condition of native vegetation. This contradicts LADWP's first premise.

The use of the entire wellfield as the unit of analysis is (LADWP's second premise) is inappropriate because vegetation is not uniform within wellfields. Recognizing this, LADWP itself delineated parcels of relatively homogeneous vegetation within each wellfield in the 1980's, and the parcels have been used as the basis for vegetation monitoring and management under the Water Agreement ever since. It follows from the explicit goals and implementation methods of the DRP that the vegetation parcel – rather than the wellfield – should be the basic unit of analysis. Decisions regarding wellfields should be made based upon the status of the parcels within them.

When MWH applied LADWP's interpretation of the DRP, it found that all wellfields have recovered and that “termination of the DRP is appropriate.” When the Inyo County Water Department analyzed vegetation conditions as well as depth-to-water and systematically applied the analysis to individual parcels, it found that parcels farthest from pumps have generally met the goal of the DRP while those closest to pumps often have not and therefore the DRP still applies to many

parcels throughout the valley. ICWD's most recent DRP status report (as well as the text of the DRP) is available on its website at www.inyowater.org.

In addition to exemplifying one of the “thousand cuts,” LADWP's DRP interpretation should be considered in light of a recent remark by LA Water and Power Commissioner Dominick Rubalcava, (as reported by ICWD Director Greg James at the Inyo County Water Commission meeting of October 8, 2001). According to Mr. James, Commissioner Rubalcava bragged that LADWP's budget for litigation alone is larger than the entire annual budget for Inyo County. The implication is that LADWP can do what it wishes with regard to the Water Agreement because Inyo County doesn't have the resources to continually initiate dispute resolution proceedings. Is it any surprise that LADWP has now put forward a self-serving interpretation of the DRP which would allow LADWP to end the pumping constraints of the DRP by ignoring the DRP's explicit mandate to consider vegetation conditions?

.....Daniel Pritchett

2002 Bristlecone Chapter Directory (Area Code 760)

President	Stephen Ingram	387-2913
	140 Willow Road	
	Swall Meadows, CA 93514	
ingram@telis.org		
Vice President	Sherryl Taylor	924-8742
	P.O. Box 1638	
	Mammoth Lakes, CA 93546	
sherrylt76@aol.com		
Past President	Scott Hetzler	873-8392
	3000 E. Line St.	
	Bishop, CA 93514	
cactusscott@wmrs.edu		
Secretary	Sarah Sheehan	872-4039
	2530 Sunset	
	Bishop, CA 93514	
scsheehan@earthlink.net		
Treasurer	Roseanne Higley	387-2803
	424 Mountain View Dr.	
	Swall Meadows, CA	
	93514	
Membership	Kathy Duvall	872-1466
	737 West Pine Street	
	Bishop, CA 93514	
kduvall@telis.org		
Newsletter Editor	Anne Halford	873-6714
	312 Shepard Lane	
	Bishop, CA 93514	
fkhalford@earthlink.net		
Conservation	Daniel Pritchett	873-8943
	P.O. Box 1411	
	Bishop, CA 93514	
skypilots@telis.org		
Rare Plant Committee 2002 Chair	Anne Halford	873-6714
	312 Shepard Lane	
	Bishop, CA 93514	
fkhalford@earthlink.net		
Plant Communities	Sally Manning	873-3790
	401 E. Yaney	
	Bishop, CA 92514	
smanning@telis.org		

Invasive Exotics	Brian Cashore	387-2789
	309 Swall Meadows	
	Bishop, CA 93514	
Legislation	Sherryl Taylor	924-8742
	P.O. Box 1638	
	Mammoth Lakes, CA 93546	
sherrylt76@aol.com		
Programs	Stephen Ingram	387-2913
	140 Willow Road	
	Swall Meadows, CA 93514	
ingram@telis.org		
Field Trips	Alisa Ellsworth	387-2081
	CA Dept. of Fish & Game	
	407 W. Line St.	
	Bishop, CA 93514	
Books	Sue Wies	387-2349
	P.O. Box 146	
	Bishop, CA 93515	
Posters	Stephen Ingram	387-2913
	140 Willow Road	
	Swall Meadows, CA 93514	
ingram@telis.org		
Plant Sales	Karen Ferrell-Ingram	387-2913
	140 Willow Road	
	Swall Meadows, CA 93514	
ingram@telis.org		
Publicity	Heidi Hopkins	647-6271
	P.O. Box 409	
	Lee Vining, CA 93514	
Historian	Sacha Stuart	876-8012
	P.O. Box 1213	
	Lone Pine, CA 93545	
Librarian	EvelynMae Nikolaus	878-2149
	P.O. Box 396	
	Independence, CA 93526	
evieindyca@juno.com		
Sierra Spring Sojourn	EvelynMae Nikolaus	878-2149
	P.O. Box 396	
	Independence, CA 93526	
evieindyca@juno.com		

NEW MEMBERS

Many thanks for all our members who renewed their memberships. The Bristlecone Chapter would like to warmly welcome new members:

Clark Trowell - Bishop

Brian Knaus - Beatty NV

Stuart Garrett - Bend OR

Larry and Sarah Wylie - Bishop

Chris Howard & Rosie Beach Howard - Bishop

Bob Harrington & Darla Heil - Bishop

Jack & Marilyn Ferrell - Bishop

Janelle Kent - Big Pine

Cathy Cannon - Bishop

Alisa Durgarian - Bishop

Georgia C. Connon - Bishop

Leslie Goethals - Mammoth Lakes

Eleanor & Gary Gossen - Dyer

Joan Lubeck - Big Pine

Renee West - Carlsbad

Next Newsletter Deadline: February 27th - Thank you for all your excellent and timely contributions!

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 _____.

Bristlecone Chapter Directory (Partial List)

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

President - Stephen Ingram - (760) 387-2913 Vice President - Sherryl Taylor (760) 924-8742 Secretary - Sarah Sheehan - (760) 872-4039 Treasurer - Roseanne Higley (760) 387-2803 Membership - Kathy Duvall - (760) 872-1466 Newsletter Editor - Anne Halford - (760) 873-6714 Conservation - Daniel Pritchett - (760) 873-8943 Plant Communities - Sally Manning - (760) 873-3790 Invasive Exotics - Brian Cashore - (760) 387-2789 Legislation - Sherryl Taylor - (760) 924-8742 Education - Vacant Programs - Stephen Ingram - (760) 387-2913 Field Trips - Alisa Ellsworth (760) 387-2081 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 - 2002 Chair. - Anne Halford Book Sales - Sue Weis (760) 387-2349

Please make membership checks payable to:

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

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: fkhalford@earthlink.net

The California Native Plant Society
 Bristlecone Chapter
 P.O. Box 364
 Bishop, CA 93515-0364
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