DEDICATED TO THE PRESERVATION OF THE CALIFORNIA NATIVE FLORA

BRISTLECONE • CHAPTER

CNPS

NEWSLETTER

Vol. 5, No. 1 January 1986

NEXT MEETING

January 29 at 7:30 p.m. at St. Timothy's Episcopal Church, 700 Hobson St., Bishop. Program to be announced in the news media. Join us in beginning the new year.

PRESIDENT'S MESSAGE:

The new year to me is a time for hope, for wonderful things to come. We have some great field trips planned. For a couple of others we need suggestions and/or leaders. If you have ideas contact Mark Bagley.

I appreciate the trust you have shown in electing me your president. I hope I can maintain the high standards that have been set by previous presidents.

.....Ann Yoder

NEW MEMBERS.

New members are always appreciated. We welcome each one.

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Lone Pine, CA 93545

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MORE APPRECIATION.

Gratitude goes to Past President Doris Fredendall for her gracious and responsible leadership through 1985. She is truly a plant person! Her eager interest was an inspiration throughout the year.

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And now AN APPRECIATION OF LICHENS
Tim Messick, CNPS Representative to International Union for the Conservation of Natural Resources (ICUN). Also an authority on the Bodie Hills, Mono County.

While winter grips the high mountains and most vascular plants are dormant, there are still plants about that flourish with the return of moisture and

display their brightest colors. These are the lichens, an often overlooked group of plants that challenge taxonomists, ecologists and casual observers alike to appreciate their peculiar place in the natural world.

The lichen is a union of two very different creatures, a fungus and an alga, in a mutually beneficial symbosis. Algae are autotrophs, turning sunlight, water and air into chemical energy. Fungi are heterotrophs, depending on sugars from the algae for their energy. The fungi provide a durable and safe environment in which algae can grow. Together, in lichenized form, they can establish themselves and even thrive in extreme habitats that neither alone could endure.

One of the most easily recognized lichens of the high Sierra is bright orange and grows in granular patches on exposed boulders and cliffs. This is *Caloplaca elegans*, an example of the crustose growth form. Other familiar crustose lichens are the brilliant yellow *Acarospora chlorophana*, and the chartreuse and black *Rhizocarpon geographicum*. One of the most widespread lichens of western mountains is blackish-brown, leaf-like, roughly circular and attached to the rock only by a short central stipe. This is *Umbilicaria phaea*, one of the rock tripes.

Many more lichens are less conspicuous; a single glacial erratic may be home to a dozen species in several different microhabitats. The taxonomy of many groups is still unsettled.

One common misconception about lichens is that their colors are produced by the algae. In fact, the color is predominantly that of fungal pigments produced in the uppermost layer of the lichen. The color of the spore-producing apothecia is usually different from that of the rest of the lichen.

Lichens play important roles in strengthening the web of an ecosystem. They provide shelter for numerous invertebrates, food and foraging habitat for lizards and birds, and nesting material for birds and rodents.

They commonly grow along with mosses and algae on patches of otherwise barren soil or leaf litter. These communities are called "cryptogamic crusts". They reduce soil erosion and promote establishment of larger plants by absorbing the impact of raindrops, decreasing runoff, increasing infiltration, and even fixing nitrogen in the soil.

Lichens also help us to monitor the condition of our environment. Many of them are highly sensitive to acids and other oxidizing compounds. Such species lose their vigor, deteriorate visibly, and eventually disappear from lichen communities in areas affected by coal-fired power plants, urban automobile exhaust and mineral refineries. For this reason, lichens are becoming favorite tools in air pollution biomonitoring research.

Lichens are curiosities of the biological world because of their strange diversity, surprising beauty, peculiar ecology and unlikely benefits to man. Take a moment on your next trek to desert, mountain or forest to look closely and to enjoy them.

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RARE PLANTS.
Mary DeDecker, Rare Plant Chairman.

Now that we are into a new year, you are urged to think "Rare Plants" and to be so tuned in to them that you will recognize them upon sight. The CNPS Advisory Committee on Rare Plants is looking toward still another updated inventory of Rare and Endangered Plants. Our input is needed in order to provide data for the best

possible judgment in rating each species. (See the present 3rd Edition issued in September 1984.) The alert observer may discover new sites which may make a difference in rarity or endangerment. There is always the hope that a species now considered rare may be found in enough safe new sites to be removed from the list, or perhaps lowered to a watch list.

Rare species noted by Bristlecone Chapter members during the dry year of 1985 are as follows:

Cymopterus ripleyi. The plant is a small perennial with shining leaves and globular heads. On April 4 I found tiny plants in the Joshua Tree Woodland on Lee Flat south of the Nelson Range. On a return trip in May when I hoped to find them mature, there was no trace of them. The site was extremely dry and badly trampled by cattle. California's only known sites are in the Coso Range. One should be alert for the species, however, on sandy loam below 6000 feet, most often in the vicinity of Joshua trees.

Gilia ripleyi. This rare species is a perennial which resembles the common annual *Gilia latifolia*, but it is limited to limestone crevices or the base of limestone cliffs, often in white places. Its leaves are more strongly holly-like. Also in April, I found a single plant at the base of a limestone streak in San Lucas Canyon, Inyo Mountains. There should be more in a favorable year.

Oryctes nevadensis. We saw the only known well established population in California on our May 11 field trip. A few days later Vince and Ann Yoder went to check on a place where an *Oryctes* was sighted in 1976. They did not find it there, but did discover two of them en route. This rare little annual nightshade occurs on sandy soil on the floor of Owens Valley in the Greasewood Scrub Plant Community. Surely there are more out there!

Eriogonum ampullaceum. This elusive annual buckwheat has been known from a few sites in Mono County. It is the source of some confusion because it resemble the common *E. baileyi* in form. Its very short tepals, however, are decidedly different. It was an exciting find when Kathleen Nelson discovered it in Owens Valley east of Manzanar in mid-September. Having worked in Mono County, Kathleen readily recognized the species. She was occupied at the time in a vegetation mapping project with Patti Novak for the Los Angeles DWP. The plant was fairly frequent there, so it may occur elsewhere on the valley floor. It is more alkali tolerant than *E. baileyi* and should be sought in the Greasewood Scrub Community where its minihabitat receives a little extra moisture.

Any new sightings of these or any other rare or endangered species should be accurately recorded and reported. Photographs are encouraged, but one never picks a rare plant. I have the necessary report forms. They should be sent to Rick York, CNPS Botanist, Natural Diversity Data Base, 909 12th Street, Sacramento 95814. A copy should come to me for our Bristlecone Chapter records. Please call on me for any help you may need.

It is good news, indeed, that a third rare plant in Inyo County has been federally listed. This recognizes serious endangerment and provides some protection. The species is *Nitrophyla mohavensis* in Carson Slough east of Death Valley Junction, just inside the California line. The Yoders and DeDeckers spent two days in June, 1983 checking its distributional limits. It occupies less than two square miles of the heavy moist clay of the slough, and could be wiped out by any extensive pumping nearby. Inyo's other species on the Federal List are *Swallenia alexandrae* and *Oenothera avita* ssp. *eurekensis*, both endemic to the Eureka Dunes.

D I R E C T O R Y

1986

BRISTLECONE CHAPTER

Eastern California

LOGO: *Pinus longaeva*

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BRISTLECONE CHAPTER FIELD TRIPS

It's time to be planning ahead for our 1986 spring field trips. Five trips have been scheduled through May. This year we'll begin with a trip in February, there won't be alot of flowers then, but it should be very interesting. May is usually our best month for desert wildflowers, so we've decided to have two trips then. Take your pick or attend both! Hopefully, the rest of our schedule will be planned in time for the March newsletter. Please contact Mark Bagley, field trip chairman, if you have any ideas for trips or would like to lead one.

FIELD TRIP SCHEDULE

FEBRUARY 8. OWENS VALLEY. Leader: David Groeneveld, Plant Ecologist for Inyo Co. We will start with a 60-90 minute discussion of Owens Valley vegetation and the effects of groundwater pumping. David will discuss how the problem is being studied and present some preliminary results. An L.A. Dept. of Water and Power representative has been invited to discuss their vegetation and soils mapping program. Bill Hutchison, Inyo Co. Water Dept. Hydrologist, will present hydrologic management concepts and how they can be used to prevent impacts of pumping. Following this will be a tour of some study areas near Bishop. Meet at 9:30 am at the Inyo Co. Water Dept. in the City of Bishop Building on Line St. (northside center entrance). Bring a lunch. It will be easy walking.

MARCH 15-16. DEATH VALLEY. Leader: Peter Rowlands, Botanist and Environmental Specialist, Death Valley National Monument. We will visit areas below 3000 feet with a good early spring bloom. Camping Saturday night will be in a developed campground in the valley. Motels are available at Stovepipe Wells and Furnace Creek (advance reservations recommended). Meet Saturday morning at 7:45 in the Lone Pine Town Park (north end of town, west side of US 395) to carpool from Owens Valley. Otherwise, meet at 9:30 am by the general store in Stovepipe Wells, Death Valley. Easy to moderate walking.

APRIL 19-20. EAST SIDE OF ARGUS RANGE, WEST EDGE OF PANAMINT VALLEY. Leaders: Mary Ann and Ronald Henry. We will visit some of the interesting canyons on the east slope of the Argus Range. Be prepared for a primitive, dry camp on Saturday night. Meet Saturday morning, 9:00, in Panamint Valley at the junction of Hwy. 190 and Panamint Valley Rd., just east of Panamint Springs. Moderate, cross-country walking.

MAY 10-11. BULLFROG HILLS AND TITUS CANYON, DEATH VALLEY NATIONAL MONUMENT. Leaders: Mary and Paul DeDecker. Saturday we will explore the Bullfrog Hills, hoping to find, along with other interesting plants, the rare Lathyrus hitchcockianus. Sunday we will return via Titus Canyon in the Grapevine Mts., an area rich in rare plant species. Dry, primitive camp on Saturday night. Meet at the top of Daylight Pass (on the road to Beatty, Nev.) Saturday morning, 10:30, OR carpool from the Owens Valley by meeting in the Lone Pine Town Park (north end of town) at 7:45 am. Short, easy to moderate walks.

MAY 31. FISH SLOUGH, OWENS VALLEY. Leaders: Mary and Paul DeDecker. Fish Slough, a BLM Area of Critical Environmental Concern, is a relatively pristine alkali slough habitat which supports a rich assemblage of desert marsh plants and alkali tolerant species. Several rare species occur here (see the Bristlecone Newsletter, Sept. 1985). Meet at 9:00 am in Bishop, along Hwy. 6 (the road to Laws) just beyond the junction of Hwy. 395 and Hwy. 6 (the "Y"). Easy walking.

FIELD TRIP POLICIES

Note that some trips are day trips and some are overnight. Generally, day trips last most of the day while the overnight trips conclude early Sunday afternoon. If you have your own vehicle you can stay as long as you wish, but if you leave the group early please inform the trip leader so there's no unnecessary worrying. Bring a lunch and drinks on a day trip. Often we are near the vehicles at lunch, but always be prepared to carry your lunch on a hike. Bring plenty of water or other thirst quenching beverages (one gallon per person per day if it's hot, plus water for the car and for cooking and cleaning if we're camping), a hat, dark glasses, sunscreen, and sturdy walking shoes. Don't forget to bring along field guides and a hand lens!

Unless indicated, the average car should do fine on our trips. Please use a reliable vehicle, with good tires, and start out with a full tank of gas. Trips will LEAVE at the time announced, so please arrive a few minutes early. Car pooling is encouraged.

Family, friends, visitors, and members from other chapters are welcome to come along, but please no pets.

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REPORT ON THE LOS ANGELES DWP'S WATER CONSERVATION PLAN.

Inyo County's Water Director Greg James is critical of the Los Angeles Urban Water Management Plan which was prepared incompliance with Assembly Bill 787. According to James, it is not a plan at all because it has no provisions for any mandatory conservation program. We quote from an article in the Inyo Register of January 5, 1986.

"A plan is supposed to describe what they're going to do to control their demand. They list a lot of things they hope to do but they don't have an actual plan. They don't have any madatory conservation programs to control the demand for water in Los Angeles," James said.

"We would like to see measures to actually set limits on their demand," he continued. "If they don't have any controls on what they use, how can they possibly know what they are going to need?"

James also said that the DWP plan fails to consider the possibility of reduced supplies from Owens Valley, where exports are limited by an agreement between Inyo County and Los Angeles, and the Mono Basin, where a series of lawsuits have put the city's exports in jeopardy.

"What if they lose the litigation, or if our agreement terminates and they go back to 149 or even 89 (the number of cubic feet per second of groundwater DWP was permitted to pump under previous court orders)? Those are fairly reasonable possibilities," James said.

"If this were truly a plan it would address these kinds of questions, but they haven't addressed them," he added.

James said Los Angeles should be required to live with limited water consumption, because of DWP's poor record in predicting water usage in the past.

"They've already exceeded the usage they had predicted for the year 2010," he said. "They made that projection in their EIR in 1979, and they've already exceeded it. If that's their pattern, how can we rely on something like this? Their conservation efforts, while certainly commendable, are fruitless in the absence of any real plan with mandatory measures," James said.

James was asked if his sudden barrage against DWP might endanger the peaceful relations between the county and city. "I guess it's possible, but I'd rather have DWP yelling at me than have the citizens of Owens Valley yelling at me," he said.

"And if we're ever going to have a plan that provides meaningful protection for the Owens Valley, it's going to have to concern the actual use of water in Los Angeles,"James said.

As usual, the outlook from Inyo County is quite different from the glowing viewpoint centered in Los Angeles. A DWP press release describes the document as "an aggressive conservation plan that will substantially increase the city's conservation efforts."

The following comment by Rick Carusa, vice president of the Los Angeles Board of Water and Power Commissioners, "Our goal in developing the city's water

plan was to increase the efficiency of water use while not diminishing the quality of life that Los Angeles residents have chosen and established," leaves the residents of Owens Valley wondering what, if any, quality of life they will be allowed.

It remains to be seen whether the Inyo County Supervisors will be willing to support Greg James. They have consistently refused to see any loopholes in the documents prepared by their flattering friends in Los Angeles.

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MONO LAKE SHORELINE REVEGETATION.
Ellen Hardebeck, Great Basin Air Pollution Control District, 157 Short St., Bishop.

A recent amendment to the California Health and Safety Code allows the Great Basin Air Pollution Control District (Inyo, Mono, and Alpine counties) to require the City of Los Angeles to undertake reasonable measures to mitigate the air quality impacts of its water diversions. One of these impacts is the dust that blows off the shore of Mono Lake exposed by the lowering water level.

A study began in July 1985 to determine if it is possible to establish native vegetation on these exposed areas to hold down the soil. Some of the shore in the vicinity of springs has naturally revegetated. It is not known what factors have prevented the revegetation of the rest. The study is being done under an agreement between the Department of Water and Power (DWP) and the Great Basin Air Unified Pollution Control District. This study is being funded by the DWP.

Transplants of four-wing saltbush, rabbitbrush, and sagebrush were planted in small plots on three distinct terraces on the north shore in July of 1985. Another more extensive planting of shrubs will be done in the spring of 1986. This is to test the theory that the environment may be too harsh (salty, wet, dry, etc.) for the establishment of seedlings, but may not be too harsh for the survival of well-established plants.

Three 100-foot long sand fences were installed in October of 1985 on the southeast shore where there is evidence of sand movement. The intent is to trap the sand and subsequently stabilize it with plantings of saltgrass and alkali bulrush. Once the sand is prevented from scouring the area, plants may be able to establish themselves naturally. Other barren areas have been seeded to determine if the only limiting factor to revegetation is lack of a seed source.

The plants will be monitored monthly during the summer of 1986 and a report is due in December of 1986.

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Sales Chairman, Doris Fredendall, has long sleeved T-shirts with the simplified Bristlecone Chapter design by Pat Crowther for sale. They come in various colors for men and women. Also sweat shirts by special order. The prices for T-shirts, including tax, are $8.00 for short sleeves, $10.00 for long sleeves.

Vince Yoder, who handles poster and book sales now has the new Sierra Wildflower poster in addition to those previously handled. The price on all posters is $5.30 to members and $7.50 to non-members, both including tax. The Flora of the Northern Mojave Desert by Mary DeDecker is still available for $9.50, including tax. Mail orders are $10.45 each, including tax and shipping.

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_____

City_____ State_____ Zip_____ Phone_____

Membership Category:

_____Life, Couple	$500
_____Life, Individual	450
_____Supporting	50
_____Household	30
_____Individual or Library	18
_____Student or Retired	12
_____Retired Couple	15

GIFT contribution: Where most needed_____ Conservation_____

I wish to be affiliated with the Bristlecone Chapter _____
Other_____

Please make check payable to:
California Native Plant Society

Mail to: Bristlecone Chapter, CNPS
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