DEDICATED TO THE PRESERVATION OF THE CALIFORNIA NATIVE FLORA

BRISTLECONE • CHAPTER

CNPS

NEWSLETTER

Vol. 10, No. 4 July 1991

NEXT CHAPTER MEETING

Wednesday, September 25, 7:30 p.m. White Mountain Research Station on East Line Street. Program to be announced in the news media.

PRESIDENT'S MESSAGE:

In the annual progress of seasons we have come to the time when our field trips turn to John Muir's "Range of Light". (Oh where have all the flowers gone? They have gone to higher elevations.) John, the original environmentalist, stated "Climb the mountains and receive their glad tidings."

There are several publications that would suggest that it is possible to leave home with only sufficient clothing and rely on the land for sustenance for as long as you wish to stay out, until you read their preceding remarks. In the long run, their conclusion is that most Sierran plants, while doing you no harm, either do not taste very well or do not grow in sufficient quantities to sustain one for more than an emergency--that the best survival is that of one's inner self.

Man has attempted to graze animals in the Sierra for economic survival, but without extremely careful supervision such grazing leads to failure of the meadows and streams. Hence the parkland use shines forth as the best use for most of the Range of Light. Thus we can be grateful to John, his fellow travelers, and those of succeeding generations, with the foresight to set aside these lands for park uses to assist us in recharging our batteries.

. . . . . .Evelyn Mae Nikolaus

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CALLING ALL GREEN THUMBS

How does your garden grow? Silver bells and cockle shells or row upon row of tumble weeds and puncture vine? Do you yearn to bring your favorite local plants into your everyday setting? Or has your favorite plant become so at home in your garden that you would like to share its offspring and tell others how you did it? Some bristlecone members would like to learn more about enhancing their home environment and would like to have you join them in their quest of knowledge. Call 878-2149, Evelyn Mae Nikolaus, or 876-5841, Ray and Bette Sisson, to leave a message about when you can meet, what knowledge you can share, or what you want to know.

LATE SUMMER-FALL FIELD TRIP SCHEDULE

AUGUST 3. EMERALD LAKE, MAMMOTH LAKES BASIN. Leader: Diane Payne. This will be an easy leisurly walk up Coldwater Creek to the lake. It's about 2 miles round-trip, at 9000-9500 feet. Bring lunch, water and mosquito repellant on the hike. Lots of wildflowers are expected along the creek. Meet at 10:00 Saturday morning at the Coldwater Creek Campground parking area at the Emerald Lake trailhead.

AUGUST 17. MINARET SUMMIT AND "SECRET" MEADOW. Leader: Ann Howald. This interesting area is a low point in the Sierra crest where a number of west-slope plants make their way onto the east side. We'll see alpine sagebrush, whitebark pines and a lush meadow on pure pumice with a pollywog pond. Ann is a chapter member from Sacramento where she is a Botanist in the Fish and Game Endangered Plant Program. Meet at 10:00 Saturday morning, at the Mammoth Ski Area parking lot in front of the main lodge. Easy to moderate hike at about 9000 feet elevation. Bring lunch, water and mosquito repellant on the hike.

SEPTEMBER 14. BISHOP CREEK. Leader: Mark Bagley. Several stops will be made to look at the elevational changes in plant communities as we travel up from Bishop to Lake Sabrina (at 9700 feet). Meet at 9:00 am Saturday in the Home Street School parking lot, on the corner of West Line St. and Home St. in Bishop. Easy walking.

OCTOBER 5. LOWER OWENS RIVER. Leader: Sally Manning. We will visit a variety of habitats which occur along the river between Independence and Keeler Bridge. Meet at 9:00 Saturday morning, at the roadside park along Highway 395 at the south end of Independence. Easy walking.

Generally, day trips last most of the day. Bring lunch and plenty of water or other thirst quenching beverages, a hat, dark glasses, sunscreen, and sturdy walking shoes. Please no pets. The average car will do fine on these trips. Contact Mark Bagley, field trip chairman at 873-5326, for more information.

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CONSERVATION CORNER

This report is short (and sweet).

I was recently appointed to the Inyo County Water Commission to fill the vacant seat Carla Scheidlinger held, so I must be alert for any conflict of interest.

Some of my letters, reports and statements in the past concerning the City of Los Angeles or County of Inyo were about their actions, orlack thereof, or positions which could easily be considered to compromise my actions on the Commission. So to avoid even the appearance of conflict I will relinquish commenting on any CNPS action which concerns the City or County. Carla has graciously consented to take over this portion of the Chapter's work. It is mostly concerned with water, grazing, or impacts to riparian areas.

So, welcome Carla to theposition of Joint Conservation Chair. Of course if you want to cover other stories, too, that's OK!

. . . . . Vince Yoder
Co-Chairman of Conservation

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The least benefit we derive from a forest is the lumber.

From INSOMNIA GRAMS by KIrk Martin

from Calif. Native Pl. Soc. Newsletter Mar, 1991 Vol. 10, #3 Mary DeDecker, editor

Fish Slough Field Trip Report

by Rick Burgess

On the weekend of June 29, the C.I. and Bristlecone Chapters of CNPS were joined by members of the Bishop Audubon Society and the Los Padres Chapter of the Sierra Club for a tour of the fascinating desert wetland known as Fish Slough. Our trip leader and botanical guide was Wayne Ferren, Curator of the UCSB Herbarium. Also on hand was Mary DeDecker, staunch defender of California's deserts and author of the Flora of the Northern Mojave Desert.

Fish Slough is located approximately 5 miles north of Bishop at the north end of the Owens Valley in the transition zone between the Northern Mojave Desert and the Big Basin Desert. Spectacular scenery is afforded by the precipitous slopes of the Sierra Nevada on the west and the White Mountains on the east, both of which were snow-capped when we were there. The verdant wetland itself is in stark contrast to the surrounding arid volcanic tableland.

How can a wetland exist in an area which gets less than six inches of rain a year and frequently experiences summer temperatures in excess of 100 degrees Fahrenheit? The answer lies in the unique permeability of the volcanic Bishop Tuff which forms the bedrock of the area. Water from the meager annual rainfall percolates through the Bishop tuff and flows underground in a southeasterly direction collecting in a water basin which resurfaces as springs in Fish Slough, forming the only remaining natural springs on the Owens Valley Floor.

Wayne pointed out that the seasonally flooded alkali habitats contain most of the endemic plants. The alkali deposits are in the form of calcium chloride and, in the most low-lying areas, sodium chloride. There is a notable difference between the flora found in habitats containing sodium chloride and those characterized by calcium chloride. Because of the harsh conditions in the sodium chloride areas, only plants which can tolerate the high sodium levels such as iodine bush (Allenrolfia occidentalis) occur. Calcium chloride does not have the same toxicity to plants and the majority of sensitive and endemic species are found in these habitats. We observed such rare species as Ash Meadows mousetail (Ivesia kingii), with its narrow many-divided leaves and small white flowers; the pale lilac Inyo County star-tulip (Calochortus excavatus); the Fish Slough milk vetch (Astragalus lentiginosus var. piscinensis) which was discovered by Mary DeDecker in 1974; and the closely related silverleaf milk vetch (Astragalus argophyllus var. argophyllus). It seemed strange to find these plants growing through a white crust of alkali deposits. Even stranger was finding more familiar species such as alkali shooting star (Dodecatheon pulchellum) and star flower (Smilacina stellata) in this seemingly inhospitable environment.

Wildlife was also much in evidence. A tremendous diversity of dragonflies and damselflies could be seen sporting over their

favorite springs and pools. We observed darners, gomphids, biddies, common skimmers and damselflies in a dazzling array of colors. Also well represented were colorful blister beetles which could be found dining on flower petals. Among the birds observed were a colony of rare bank swallows (a life-lister for me) which had constructed their nesting burrows in a large gravel pile and a family of golden eagles which were nesting on the rocky cliffs on the east side of the slough.

Because of the area's unique resource values, Fish Slough and a portion of surrounding desert were designated an Area of Critical Environmental Concern (ACEC) in 1982. A portion of the 36,000 acre ACEC which includes the most important wetlands and the majority of endemic species has been denoted as Zone 1, with other less biologically significant areas grouped into other zones. However, because of the interconnectedness of this desert wetland, it is probable that the functioning of Zone 1 depends on the hydrology of the other surrounding zones.

A number of federal, state and local agencies are involved in managing Fish Slough. These include the U.S. Bureau of Land Management, the City of Los Angeles Department of Water and Power, the California Department of Fish and Game, the University of California, and the U.S. Fish and Wildlife Service. In order to keep these disparate agencies coordinated, a cooperative management plan was completed for the Fish Slough ACEC in 1985. Under the provisions of the management plan, zone 1 is managed as a recreational and multi-use area. Unfortunately, we could not help but notice a number of serious environmental problems which pose a definite threat to the continued functioning of this important ecosystem.

Ill conceived plans to introduce game fish into the area have placed the continued survival of the native fish species such as the Owens pupfish and Owens tui chub in serious jeopardy. In addition, livestock grazing is widespread, even in wetlands and areas where endemic plants are found. We found evidence of cattle grazing and trampling in areas where the rare sedge, hot springs fimbristylis (Fimbristylis spadicea) is known to occur. The introduction of cattle waste products into the wetlands also causes algae blooms which result in an added strain on the endemic fish species. In order to preserve this wonderful environmental resource, these negative impacts and others such as off-road vehicle use must be stopped, at least in Zone 1.

Anyone who has been fortunate enough to go on a trip led by Wayne, will know that he has an amazing ability to relate a multitude of facts on history, archaeology, geology, and hydrology as well as botany. All of these attributes were evident on out trip to Fish Slough. As we drove home on Sunday afternoon, we had a lot to think about. Perhaps the most important insight gained from our experience was the evident vulnerability of this extraordinary area to a host of impacts and landuse conflicts. It is obvious that without the vigilance of environmental organizations, areas like

Fish Slough would soon be irreparably damaged. Now would be a good time to write the Bureau of Land Management, the Los Angeles Department of Water and Power, the California Department of Fish and Game and the Fish and Wildlife Service and let them know of your concerns regarding this important area.

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This is to express congratulations and appreciation to two members of our Bristlecone Chapter:

Brian Miller, Inyo National Forest Botanist, was appointed in the spring to the CNPS Rare Plant Scientific Advisory Committee. Brian's knowledge of the forest plants of eastern California will lend a valuable balance to The RPSAC.

Vincent Yoder was recently appointed to the Inyo County Water Commission. He has been active in Owens Valley water issues since the beginning of negotiations toward a long term agreement with Los Angeles, so he is well prepared to assume the position. We are happy to say that our Inyo County Supervisors have come a long way since negotiations began. The vote to appoint Vince was unanimous, knowing that he would represent the environmental viewpoint which was frowned upon in the past. The informed input from the environmental community has been appreciated in these troubled times relating to the water issue.

Enid Larson , the Chipmunk Lady, 1905-1991

The following tribute to Enid Larson was submitted by Derham Giuliani, a friend and close associate;

" The next time you are driving Highway 395 beyond Mammoth and come to the divided highway north of Wilson's Butte, take notice of the strip of beautiful conifers.

Lodgepole pine chipmunks of the Glass Mountains and of the Eastern Sierra move back and forth through a narrow lodgepole pine corridor that crosses Highway 395 in this area. Gene flow is unbroken from Glass Mountain all the way to the Sierran west side.

When this portion of 395 was under considerat ion for widening to 4-lane, possible disruption of this movement was apparent to Enid Larson and Derham Giuliani. This species of chipmunk avoids entering any lengthy open space such as a 4-lane highway with its graded edges. The ancient dispersal route might be cut in two.When Caltrans was consulted about this problem, they changed plans (with no added cost) to provide two small open spaces in place of the single large one, allowing a 'breathing space' for chipmunks between the east and west lanes. "

RECYCLE ALL

We trust that all of you have formed the recycle habit. Containers may be found in all of the communities. We remind those of you who go to the recycling center by the Manor Market in west Bishop to credit your payment to the Bristlecone Chapter. This acomplishes two good deeds in one.

Another reminder is to continue reporting any oak tres that you find. We are adding new populations to the known list. Surely there are more out there.

CNPS/FOREST SERVICE Trips

The schedule of trips to assist the USFS in locating and mapping rare pant sites on Forest Service land has been completed. We report as follows:

June 15. *Calochortus excavatus*. Our chapter was represented by Doris Fredendall, Lawrence Wylie and Mary DeDecker. We checked out a population near the Wilkerson tract south of Bishop.
Although we found the plant in large numbers, it was evident that this population is doomed by the gradual drying of the site. Only two sad plants of *Sidalcea covillei* remained of what was once a healthy population on the same site. A second reported *Calochortus* site could not be located. It is presumed that it no longer exists.

June 22. *Phacelia monoensis*. The same three Bristlecone members accompanied Brian Miller, Inyo National Forest botanist, to a remote area in the northern end of the White Mountains. In fact, it was over the line in Nevada. We found an extensive population of the modest *Phacelia* along a road in the pinyon woodland. Then we located a reported site for *Eriogonum beatleyae*, but are not convinced that it differs from *Eriogonum rosense*. A search for *Streptanthus oliganthus* turned up a beautiful crucifer which may or may not be the species in question. The entire trip was a floral treat.

July 6. *Dedeckera eurekensis*. Besides four Forest Service people, there was a good chapter turnoput for this one. Besides the usual three there were Betty Gilchrist, Vince Yoder, Ruth Elwonger and Tina Kasbeer. We visited two unnamed canyons in the White mountains east of Bishop, one which we called "Cliff Canyon", to count and map the species. The shrubs were in full bloom which made the golden plants easy to locate. It was a rewarding day in spite of the high temperature.

We are happy to welcome as a new member **Tina Kasbeer** of Bishop who has transferred to our Chapter.

The History of Water: Eastern Sierra, Owens Valley, White-Inyo Mountains

Where Did All the Water Go?

"Thirty thousand inches of water to be brought to Los Angeles...

...engineers say that a few centuries ago Owens River was a tributary to the Los Angeles River; that a mighty earthquake threw mountain ranges across the river bed, making the stream tributary to a salt lake, and that they have evolved a feasible plan for tunneling these mountains and bringing the water again into the San Fernando Valley"

—*The Los Angeles Daily Times*, front page
Saturday Morning, July 29, 1905

Early in the 1900's, engineers of the city of Los Angeles discovered the ample water resources of the Owens Valley, situated 200 miles to the north and 4,000 feet higher than the city basin: gravity and a bit of clever engineering could provide water to a million people in the "parched and growing metropolis" to the south.

The history of water in the ground, streams, lakes, and ancient seas of the eastern Sierra-Owens Valley-White-Inyo region, the past and present ecosystems, and the mining and conservation of this precious resource will be discussed at "The History of Water: Eastern Sierra, Owens Valley, White-Inyo Mountains," a four-day-long symposium held in Bishop, California, September 19-22, 1991. The four general topics to be covered by geologists, hydrologists, engineers, botanists, biologists, ecologists, and social scientists include: (1) Ancient seas and waterways (paleogeography, paleozoogeography, paleoecology, paleoenvironments, and basin analysis); (2) Climate and climate indicators (paleoclimates, modern climate, climate modeling, forecasting); (3) Water usage (biology/ecology, sociology/economics, and legal/ethical aspects); and (4) Enhancement, recovery; and protection of water resources (availability, recapture, groundwater/hydrology, limnology, water quality/geochemistry, education/conservation).

The symposium is being offered to the general public by the University of California White Mountain Research Station. "Water" is a timely topic following five years of drought in California, and the Symposium has attracted over forty distinguished speakers, among them Marc Reisner, noted author of *Cadillac Desert* and *Overtapped Oasis*. Mr. Reisner will be the keynote speaker at the Symposium banquet. The speakers and poster session authors for the Symposium are drawn from over 20 college and university departments and institutes, the California Department of Fish and Game, the USDI Bureau of Land Management, U.S. Department of Energy, the USDA Forest Service, U.S. Geological Survey, the Inyo County Water Department, the Inyo County Office of Education, the Desert Fishes Council, private industry, and individual research specialists.

The "History of Water" will be the fourth of the biennial White Mountain Research Station Symposium Series, which has been developed over the last decade as part of the University's mission to promote research and education in this special and fragile portion of California. Proceedings volumes are published following each WMRS symposium.

The "Water" Symposium also commemorates the Fortieth Anniversary of the WMRS, and the anniversary will be noted in a special celebration at the Symposium banquet on Saturday evening, September 21. Four "Medals for Distinguished Science" will be presented by University of California President, David Gardner, to physical and biological scientists who have made long-standing, significant contributions to understanding the science of the region or to physiological or astrophysical researchers who made significant scientifc contributions while utilizing the WMRS facilities. Three Inyo Valley residents are among the nominees for these awards.

Complete four-day Symposium registration ($60 per person/$35 students), which includes the Thursday evening reception, Saturday fieldtrip (coordinated by UCLA Geology Professor Emeritus Clemens A. Nelson of Bishop) and picnic lunch, refreshments and 40th anniversary commemorative banquet and festivities at the Station, will be limited to 200. The lectures and poster sessions will take place at the "Home Economics Building" at Inyo County Fairgrounds where there will be seating for an additional 200 guests. A $10-at-the-door fee will admit those who have not registered by mail and would like to attend the lectures and poster sessions only.

Those interested in registering or obtaining information about "The History of Water" Symposium may call 213-825-2093 or 619-873-4344 or may write the White Mountain Research Station, 6713 Geology Building, University of California, Los Angeles, CA 90024-1567.

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:

_____Life, Couple	$500
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_____Household	30
_____Individual or Library	18
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GIFT contribution: Where most needed_____ Conservation_____

I wish to be affiliated with the Bristlecone Chapter _____

Other_____

Please make check payable to:
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