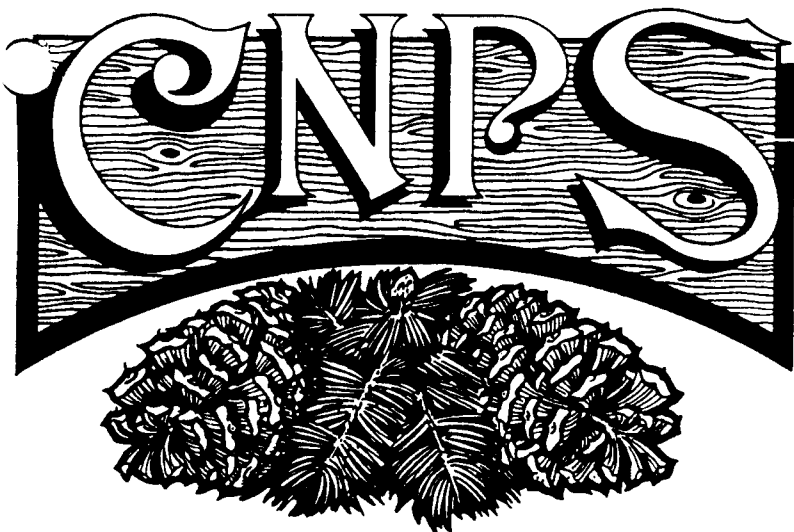


BRISTLECONE • CHAPTER

NEWSLETTER



Vol. 6, No. 6

November 1987

NEXT MEETING

December 2, 7:30 p.m., in the social hall of the Big Pine Methodist Church at the corner of Crocker and School streets. It will be a joint meeting with the Audubon Chapter. Mike Prather will speak on the Golden Trout Camp in the Cottonwood Basin.

PRESIDENT'S MESSAGE:

We've learned that the research staff of the Santa Ana Botanic Garden has voted unanimously to appoint Mary DeDecker as a Research Associate of the Botanic Garden. This honorary position allows her to use its resources and to formally identify herself with the renowned garden in Claremont, California. This recognition, coming from the Garden that I have known quite well, delights me.

Another pleasure came through a visit from Loyd Hopper, Caltrans Superintendent of Maintenance. He wishes to share Caltrans re-established policy of controlling unwanted growth along the highways, some of it obstructive, some of it dangerous, so he is contacting groups who work with native plants. He mentioned that Halogeton, the poisonous weed coming in from Nevada, had been found at highway marker 104 north of Big Pine. Before I could get there next day to see it, Mr. Hopper phoned to say that personnel of the Agriculture Department had Disposed of it. Such cooperation as this will benefit us all.

. Doris Fredendall

* * * * *

Election of officers for the coming year will take place at the December 2 meeting. Nominations are as follows:

- President. Doris Fredendall
- Vice-president Mark Bagley
- Secretary Evelyn Mae Nikolaus
- Treasurer Vincent Yoder

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SEASONS GREETINGS!

MERRY CHRISTMAS! Merry Christmas!

HAPPY NEW YEAR!



FIELD TRIP REPORTS

September 19, North Fork of Oak Creek.

Late in a dry year up a dry bajada into the canyon was not expected to produce an abundance of flowering annuals. However, the group had fun reviewing the many shrubby perennials along the trail. Among the unusual were *Keckiella breviflora* and *Acer glabrum*. Even a lone shrubby *Quercus wislizenii* was found. Pairs of shrubs in one genus were present which made comparison enlightening, such as: *Ceanothus greggii* and *cordulatus*; *Purshia tridentata* and *glandulosa*; *Keckiella breviflora* and *rothrockii*; *Chrysothamnus teretifolius* and *vicidflorus*; and *Ribes cereum* and *divaricatum*. Beautiful *Machaeranthera canescens* (sticky aster) was in full bloom. So was *Mimulus cardinalis* and *Aquilegia formosa*. In lava cliffs were *Heuchera rubescens*, *Trifolium dedeckerae*, and *Potentilla saxosa*. These were not in bloom. For so late in the season it was a rewarding walk in the sun.

. Vincent Yoder

October 10, Kern River Preserve

The visit to the Kern River Preserve on the South Fork of the Kern, just east of Lake Isabella, was a fitting finale to an altogether delightful series of field trips offered by our Bristlecone Chapter this year.

We met at the entrance to the Preserve at 10:30 a.m. Rick Hewitt, Manager of the Preserve, would not be available until noon, so Mark Bagley took us on a trail entering the Preserve from the west end. There we saw many plants where the dry hillside came down to meet the river bottomland. We saw jimsonweed and the Fremont cottonwood, the ever present saltbush, and the interesting coyote melon.

At noon we returned to the Preserve Headquarters, housed in the original old ranch buildings which were on the property at the time it was purchased by the Nature Conservancy in 1980. While we were enjoying our lunches on the lush saltgrass lawn, Rick Hewitt joined us for the guided tour.

The Preserve is the site of a revegetation project (4,000 cottonwoods and 1,000 willows), designed in part to track utilization by birds of both the old riparian forest habitat and the newly planted sites. Research into the breeding ecology of the state-listed yellow-billed cuckoo is an on-going project at the Preserve.

On the tour we were awed by the gigantic Fremont poplars. The river bottom flora provided a new experience for us. Rick was a wonderful host - very knowledgeable and eager to see that we enjoyed ourselves.

For those of you who are not familiar with the Nature Conservancy, of which the Kern River Preserve is a part, it is a nonprofit conservation organization that works to preserve natural lands and waters.

It concentrates on selecting jeopardized areas of the highest ecological value, purchasing those areas. Then they are managed to maintain and/or restore the natural habitat. Since its founding in 1951, the organization has won protection for over two million acres in the United States, Canada, and the Caribbean. There are 36 preserves in California alone. The Bristlecone Chapter has a membership in the Nature Conservancy.

We would like to say how very much we have enjoyed the summer's outings. The more knowledgeable members of the chapter have been most patient and willing to help neophytes like ourselves. We highly recommend these field trips.

. Bette and Ray Sisson

NEW MEMBERS

We extend a hearty welcome to the following new members. We urge each one of you to become active by participating in field trips, attending meetings, or by contributions to our newsletter.

D. K. Bailey
1441 Bluebell Avenue
Boulder, CO 80302

Claire & Don Murphy
312 Lee Street #5
Oakland, CA 94610

Eastern Sierra Interagency
Visitor Center
Drawer R
Lone Pine, CA 93545

Mrs. Rosalie Murphy
315 Waverly
Pasadena, CA 91105

Loyd J. Hopper
P. O. Box 277
Independence, CA 93526

Stephen Sawka
Route 1, Box 19
Keough Hot spring, CA 93514

Those of you who are White Mountain fans may recognize D. K. Bailey as the one who gave the Great Basin bristlecone pine its new name, *Pinus longaeva*. His intensive research in our western trees has led to his naming two new species of single-leaf pinyon, one in California and Mexico and one in Arizona. Neither of them occur in the Inyo Region. Watch for the publications.

ANNOUNCEMENT: The Planning and Conservation League will hold its Fifth Annual Environmental Legislative Symposium January 30-31, 1988, at the Clarion Hotel in downtown Sacramento.

Panels will cover such topics as CEQA, Planning and Urban Growth, Coastal Protection and Ocean Pollution; Environmental Computer Usage; Forestry and Native Plants; Fundraising, Lobbying, and the Press; Local and Statewide Initiatives; Sustainable Energy and Resources; Tahoe, Parks and Wildlife; Toxics and Pesticides; Transportation and Air Quality; and Water Development. Each panel will be led by 3 to 5 experts who will answer any questions the audience may have.

ADDITIONS TO THE FLORA OF THE WHITE MOUNTAINS. V.

contributed by
James D. Morefield, Dean Wm. Taylor and Mary DeDecker

Several botanists visited the White Mountains in 1987 for stays of up to 2 months. The mountains continue, slowly but steadily, to reveal their botanical secrets. The list below is fifth in a continuing series of updates to the *Flora of the White Mountains* (R.M. Lloyd and R.S. Mitchell, 1973, U. of Calif. Press). For previous lists see *Bristlecone Newsletter* 1(4):3-5; 2(6):4-6; 5(2):2-4; 6(2):3-6. The present list adds 25 more taxa (19 species and 6 additional varieties and subspecies) to the flora, including 1 new genus for the range, and one species new to California. Based upon modernized nomenclature, about 1090 taxa are now known from the White Mountains. These soon will be increased by 2 newly described endemic *Draba* species (Rollins and Price, submitted to *Aliso*). A complete working checklist of the White Mountain flora will soon appear in the proceedings of the second White Mountain Research Station Symposium held in May 1987.

The following genera remain poorly collected in the White Mountains and require further study, as some of the new additions demonstrate: *Chenopodium*, *Salix*, *Arabis*, *Draba*, *Potentilla*, *Epilobium*, *Gayophytum*, *Cuscuta*, *Aster*, *Juncus*, *Carex*, *Poa* and *Stipa* (and *Poaceae* in general).

The format for this list generally follows that of list IV (see ref. above). Collection dates cited are for the 1987 season unless noted otherwise. Voucher specimens are deposited at the Rancho Santa Ana Botanic Garden unless otherwise noted. Where initials (e.g., DWT) precede a voucher collection number, they refer to one of the authors of this list.

page (in Lloyd & Mitchell, 1973)

- 54 **EQUISETUM X NELSONII** (A.A. Eaton) Schaffner. Hybrid scouring rush. Mono Co. along N Fork of Cottonwood Creek, 10100'/T.S. Elias 10453 & K.A. Teare/11 JUL. =*E. laevigatum* X *E. variegatum*.
- 59 **RANUNCULUS ANDERSONII** A. Gray. Pink Buttercup. Inyo Co., Black Mtn. area at about 7000'/MD 5925/MAY. Replaces our earlier report of *Anemone drummondii*.
- 77 **ERIOGONUM PARISHII** S. Watson. Parish buckwheat. Mono Co., dry sandy drainages on alluvium above N Fork of Perry Aiken Creek, 7800'/JDM 4721/27 JUL.
- 83 **SALIX DRUMMONDII** Barratt var. **SUBCOERULEA** (Piper) C.R. Ball. Drummond Willow. Esmeralda Co. in deep shade of other willows along Middle Creek, 8300'/JDM 4640/15 JUL.
- 88 **ARABIS LIGNIFERA** A. Nelson. Rockcress. Esmeralda Co. on dry sagebrush banks of Middle Creek, 8300'/JDM 4637/15 JUL.
ARABIS MICROPHYLLA Nuttall var. **MICROPHYLLA**. Small-leaved rockcress. Esmeralda Co. in N-facing coniferous forest above Middle Creek, 10100'/JDM 4632/14 JUL.
ARABIS MICROPHYLLA Nuttall var. **SAXIMONTANA** Rollins. Small-leaved rockcress. With the variety above, 8300-10100'/JDM 4631/14 JUL.
- 90 **DESCURAINIA PINNATA** (Walter) Britton ssp. **NELSONII** (Rydberg) Detling. Alkali tansy mustard. Esmeralda Co. in marsh of Sand Spring, 5500'/JDM 4393/12 MAY.
- 102 **POTENTILLA GLANDULOSA** Lindley ssp. **PSEUDORUPESTRIS** (Rydberg) Keck. Sticky cinquefoil. Mono Co., soil pockets on rocky debris at head of N Fork of Perry Aiken Creek, 11000-12000'/JDM 4701/25 JUL.
- 110 **TRIFOLIUM VARIEGATUM** Nuttall. Clover. Esmeralda Co. in marsh of Sand Spring, 5500'/JDM 4547/6 JUL. Also along Indian Creek at Post Meadow, 7500'/W.A. Archer 7229/25 SEP 1938.
- 119 **APOCYNUM ANDROSAEMIFOLIUM** L. Dogbane. Mono Co. near the N Fork of Cottonwood Creek, 10500'/T.S. Elias 10504 & K.A. Teare/11 JUL.
- 136 **PLAGIOBOTHRYUS SCOULERI** (Hooker & Arnott) I.M. Johnston var. **CUSICKII** (E.L. Greene) Higgins. Clay Popcorn Flower. Esmeralda Co. in marsh of Sand Spring, 5500'/JDM 4390/12 MAY.
- 141 **COLLINSIA TORREYI** A. Gray var. **WRIGHTII** (S. Watson) I.M. Johnston. Wright blue-eyed mary. Mono Co., meadow margin near North Fork of Cottonwood Creek, 9500'/DWT 9169/14 JUL.
- 142 **MIMULUS GUTTATUS** DeCandolle var. **DEPAUPERATUS** (A. Gray) A.L. Grant. Monkeyflower. Occasional in moist, often rocky places throughout, 6990-9500'/JDM 4603/JUL. It is tempting to recognize these small, annual, often cleistogamous forms as *M. nasutus* E.L. Greene, but examination of a large geographic and phenologic series in the herbarium demonstrates complete gradation with more "typical" perennial forms.
- 148 **GALIUM TRIFIDUM** L. var. **SUBBIFLORUM** Wiegand. Bedstraw. Mono Co. on mossy tributary streambanks of N Fork of Cottonwood Creek, 9950'/JDM 4595/11 JUL.

page (in Lloyd & Mitchell, 1973)

- 167 **SENECIO PATTERSONENSIS** R.F. Hoover. Mt. Patterson groundsel. Mono Co. on steep S-facing talus on cirque of N Fork of Perry Aiken Creek, 11500-12000'/JDM 4703/25 JUL.
- 171 **CREPIS NANA** J. Richardson ssp. **RAMOSA** Babcock. Dwarf hawksbeard. Mono Co. on alpine talus in the vicinity of White Mountain Peak, 11200-12200'/JDM 4697; DWT 9153/JUL.
- 176 **CAREX ATHROSTACHYA** Olney. Bracted sedge. Mono Co., Tres Plumas Meadow, 10200'/DWT 9178/16 JUL.
- 180 **BROMUS MOLLIS** L. Soft chess. Mono Co., Fishlake Valley drainage, introduced at mouth of Furnace Creek, 5580'/JDM 4730.1/30 JUL.
- 181 **FESTUCA OVINA** L. var. **RYDBERGII** St.-Yves. Tall sheep-fescue. Esmeralda Co. on protected wooded slopes above Middle Creek, 9500'/JDM 4629/14 JUL.
- 183 **POA NERVOSA** (Hooker) Vasey var. **WHEELERI** (Vasey) C.L. Hitchcock. Wheeler bluegrass. With *Festuca* above, 9500'/JDM 4630/14 JUL.
- POA PATTERSONII** Vasey. Patterson bluegrass. Mono Co. on steep rocky N-facing cirque wall of N Fork of Perry Aiken Creek, 12000'/JDM 4695.1/24 JUL. New to California.
- 186 **APERA INTERRUPTA** (L.) Beauvois. Apera. Mono Co., Fishlake Valley drainage, introduced at mouth of Furnace Creek, 5580'/JDM 4401/13 MAY.
- 187 **CALAMAGROSTIS NEGLECTA** (J.F. Ehrhart) P.G. Gaertner, B. Meyer & J. Scherbius. Neglected reedgrass. Mono Co., with *Collinsia torreyi* above, DWT 9175.
- 190 **STIPA LETTERMANII** Vasey. Letterman needlegrass. Esmeralda Co. in Trail Canyon, 9000'/JDM 4676/20 JUL.
- STIPA** cf. **NELSONII** Scribner ssp. **DOREI** Barkworth & Maze (= *S. columbiana* var. *columbiana*, misapplied by various authors.) Columbia needlegrass. Esmeralda Co., alkaline soil of spring just below Dry Creek, Fishlake Valley drainage, 6980'/JDM 4649/18 JUL. Our material keys to this taxon, but is atypical in both form and habitat, and may be of hybrid origin.

The following should be deleted from previous lists (correct identity in parentheses):
Anemone drummondii (*Ranunculus andersonii*).

ACKNOWLEDGMENTS: David Bramlet, Virginia Dains, Thomas S. Elias, Robert F. Holland, Aaron Liston, Sara Meury, Robert Price, Timothy S. Ross, Kit Tan and Kathlene A. Teare generously shared specimens and/or time in the field. Morefield is grateful to the Rancho Santa Ana Botanic Garden and University of California's White Mountain Research Station for support and facilities generously provided during the 1987 field season.

MISTLETOES

It seems appropriate prior to Christmas to bring you something about mistletoes. Here are the basics, from one who has searched out mistletoes all over the world.

Most of us have noticed mistletoes growing on trees . They are most conspicuous in winter on deciduous trees after the leaves have fallen, thus exposing the evergreen mistletoes.

Since they grow on other plants they are parasites. But they are special parasites. Since they are green they have chlorophyll and are thus able to manufacture their own food through the process of photosynthesis. This utilizes sun energy which is trapped by chlorophyll. Free oxygen is a by-product. In fact, the oxygen given off by plants is the primary source of all atmospheric oxygen, which makes animal life possible on earth. It is well to remember that we are dependent on plant life. But back to mistletoes. If they are photosynthetic, why do we consider them parasites? The reason is that they are dependent on the host tree for their water and inorganic minerals such as nitrogen and phosphorus, and they are unable to exist without a host plant. Thus we may think of mistletoes as partial parasites, dependent on their hosts for only a portion of their nutritional requirements.

Typically we think of mistletoe as a green plant with evergreen leaves and white berries. Virtually all mistletoes have berry-like fruits. Only plants with flowers produce true fruits and mistletoes are therefore flowering plants, just as are petunias, snapdragons, or marigolds. Their flowers, however, are minute, perhaps an eighth of an inch long, and therefore overlooked by the casual observer. The fruits are eaten by birds, which gain nutritional value from the sticky, viscous layer. After going through the digestive tract, the seeds are defecated, some of which usually land on a young branch where they will germinate. In Europe there is a thrush that feeds so extensively on mistletoe berries that it is called mistletoe thrush. Mistletoe seeds are adapted to growing into the branches of trees instead of the soil. Once they gain entrance to a branch, the root system proliferates and absorbs water and dissolved minerals from the host, which is then used by the growing shoot outside of the host plant.

Most mistletoes cause damage to host trees by increasing their water loss, particularly during the winter when the host plants are absorbing little water. Some mistletoes also absorb carbohydrates from their hosts, thus doing more damage.

Plants called mistletoes are mostly members of two families of flowering plants called the Viscaceae and the Loranthaceae. As is so often the case with temperate plants, the families to which they belong are primarily tropical in their distribution. The mistletoes are no exception, except that they also extend into the south temperate regions of the earth. The Loranthaceae are largely pan-tropical and south temperate in their distribution. This family has about 700 species and their flowers are mostly large and showy with vivid, bright colors (reds and yellows). These are not found

in the United States but they do occur in Mexico. Often these mistletoes with large, showy flowers are so prolific in Mexico that when they bloom it appears as if the host plant, itself, is flowering. This genus is called *Psittacanthus*, which translates from Latin as "parrot flower". Its bright, showy flowers suggest the colors of parrots.

Strange as it may seem, there are actually tree mistletoes parasitic on roots of grasses. The largest and best known, *Nuytsia floribunda*, is limited to southwest Australia. It grows to about 20 feet tall, about the size of a small pinyon tree, but is very brittle--not a tree for climbing. It is commonly seen on pastures. There it is known as a "Christmas tree" and is prized for its abundance of showy orange to yellow blooms which appear at Christmas time. It was enjoyed for many decades before it was recognized as a parasite. Another tree mistletoe, *Atkinsonia ligostrina*, occurs in the Blue Mountains of southeast Australia. Still another one, in the Andes, is *Giaadendron pontatum*, and one in southeast Asia is in the genus *Helixanthera*.

The mistletoes which are used at Christmas are members of the family *Viscaceae*. It has about 450 species. They are primarily tropical in their distribution, with only a few species in the temperate zones. The original mistletoe of folklore is *Viscum album* which occurs in Europe. When the New World was settled, the immigrants discovered a mistletoe widespread in the eastern United States which was superficially similar to the European species and they understandably transferred the folklore surrounding the European mistletoe to this plant. The mistletoe of the eastern United States is *Phoradendron serotinum*.

In Inyo County there are four mistletoes. One grows on pinyon pine. It is *Arcuethobium campylopodum* forma *divaricatum*, a member of the so-called dwarf mistletoes. The others are of the genus *Phoradendron*. *P. bolleanum* ssp. *densum* forms dense, leafy masses on juniper trees. *P. juniperinum*, also hosted by juniper trees, appears to be leafless. Its leaves are reduced to small scales. Rare hybrids of these two species occur in the Whippoorwill Flats area of the Inyo Mountains. *P. californicum*, known as mesquite mistletoe, forms dense clusters on mesquite. It is abundant in Saline and Panamint valleys and in the Shoshone area.

Many ceremonial remnants of probably Druidical origin still exist in Europe. The cutting of mistletoe in German folklore at the midsummer solstice, and the Swedish celebrations at midsummer are probably such rites. The use of mistletoe in the most important Christian holiday of Christmas is interesting, and undoubtedly was taken into religion from original pagan rites. Kissing under the mistletoe is apparently English in origin. It is not generally practiced in other European Countries where it is commonly used in decorations and as a harbinger of good fortune. Precisely why the English custom of kissing under the mistletoe originated seems to have been lost in antiquity. Most of us are happy though that the custom survived and was brought to the United States.

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.

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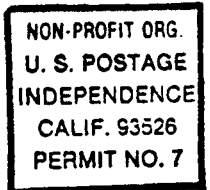
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