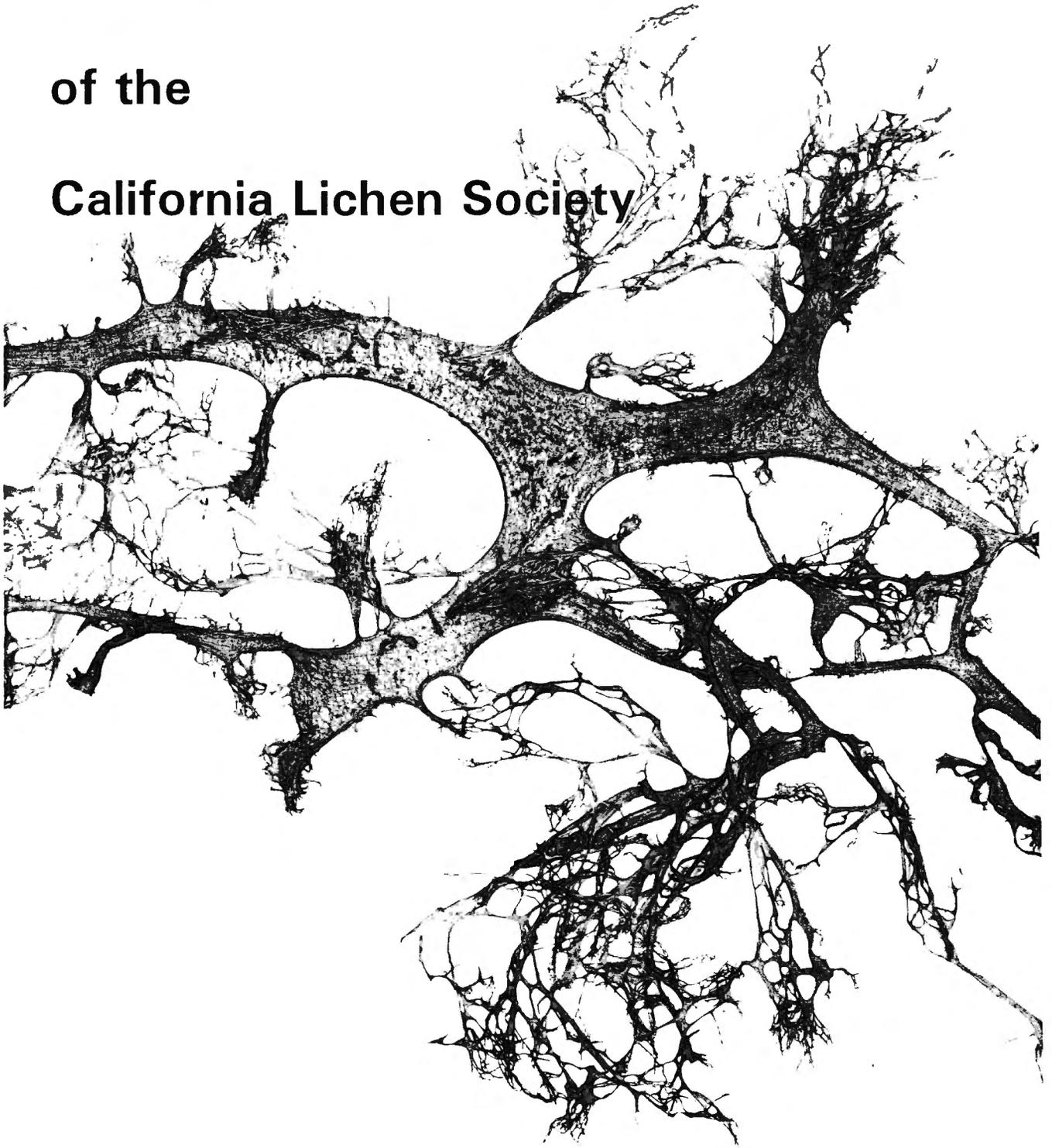


Bulletin

of the

California Lichen Society



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thereby extended 500 km north from Santa Barbara Co. (Hale & Cole 1988). *Rimelia* was segregated from *Parmotrema* (Hale & Fletcher 1990) on the basis of rhizine, conidial, apothecial, and chemical characters, and in *California Lichens R. reticulata* appears as *Parmotrema reticulatum* (Taylor) Choisy. "One of the commonest foliose lichens in the world" (Hale & Fletcher 1990), rare in Marin County at what may be the northern limit of its distribution in the western states (Hale 1979).

Collections cited are in my personal herbarium and in the herbarium of C. Bratt who kindly provided information on *P. crinitum* in Santa Barbara County.

References cited:

- Goward, Trevor and B. McCune. 1994. The Lichens of British Columbia. Illustrated Keys. Special Report Series, No. 8. Ministry of Forests, Research Branch, Victoria, B.C.
- Hale, M.E., Jr. 1965. A monograph of *Parmelia* subgenus *Amphigymnia*. Contributions from the U.S. National Herbarium 36:193-358.
- 1979. How to Know the Lichens. 2nd ed. Wm. C. Brown Co., Dubuque.
- and M. Cole. 1988. California Lichens. U.C. Press, Berkeley.
- and A. Fletcher. 1990. *Rimelia* Hale & Fletcher, a new lichen genus (Ascomycotina: Parmeliaceae). The Bryologist 93:23-29.
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Darrell Wright

Lichen Research at the Hastings Reservation

A team of researchers from the Max Planck Institute for Chemistry in Mainz, Germany, are studying the chemistry of lichens at U.C. Berkeley's Hastings Natural History Reserve in Carmel Valley, Monterey County. They have concentrated on *Ramalina menziesii*, which grows there in great profusion, and have found by gas chromatography that *R. menziesii* uses carbonyl sulfide (COS) as well as carbon dioxide (CO₂) in photosynthesis. When damp the lichen takes up large amounts of sulfur from the atmosphere, and this has been found to be true of the 11 other lichens tested thus far. The researchers are now working on the premise that there is an enzyme present which makes it possible for the lichen to manufacture carbohydrates from COS.

This hitherto unknown property of lichens was investigated after research planes testing the atmosphere over the arctic tundra found that sulfur levels were even lower than expected in those areas. The tundra has a massive ground cover of lichens, which suggested that the low sulfur levels and the lichens might be connected. The thought now is that lichens may play an important role as sinks for atmospheric sulfur and may be helping to detoxify the atmosphere (Uwe Kuhn, Hastings Reservation, pers. comm.)

Florida Lichen Declared an Endangered Species

I am not sure if this is good news or bad, but the Ecological Services Office of the Fish and Wildlife Service has put *Cladonia perforata* Evans in Florida on the Endangered Species List. It is good news, of course, that an awareness of the lichens is developing and that they are being monitored, bad news that they are endangered. *C. perforata* does not appear in S. Hammer, "A Taxonomic Survey of the Lichen Genus *Cladonia* in California", unpublished M.A. thesis, San Francisco State University, 1988.

Janet Doell

News

Sonoma/Mendocino County Field Trip

Hidden in the woods near Salt Point State Park in a patch of sun on a curve of the road, a redwood tree (*Sequoia sempervirens*) stands festooned with *Usnea longissima* in such a way that it quite takes your breath away as you come upon it. The lichen truly lives up to its name here with thalli to two meters looping and intertwining from great heights (fig. 1).

This was the first stop on the July 23-24 CALS field trip to Sonoma and Mendocino Counties. Present were Doris Baltzo, Mona Bourell, Richard and Janet Doell, Sara Fultz, Bill Hill, Barbara Lachelt and Harry and Ellen Thiers. From the *U. longissima* stand we went on to the Sea Ranch area where we examined lichens on rocks near the shore. Saturday night was spent at the cabin of Dr. Dickie Hill and his wife Gail, who had generously invited us to camp there. We joined other Hill guests for a dinner and musical evening.

On Sunday we continued north to Mendocino County where Bob and Pat West and Don Kowalski joined us. With Don leading, we proceeded to the Pygmy Cypress forest near the town of Mendocino, where an excess of iron in the soil has stunted the growth of trees but where lichens flourish. The trip disbanded Sunday afternoon amidst a general feeling of having seen, gathered and learned enough to last us until the next one.

The following lichens were collected by CALS members on this trip (nomenclature follows Egan 1987, 1989, 1990):

- Alectoria sarmentosa* (Ach.) Ach.
- Aspicilia* sp.
- ~ *Buellia* sp.
- ~ *Caloplaca cinnabarina* (Ach.) Zahlbr.
- Cladina portentosa* (Dufour) Follm.
- ~ *Cladonia chlorophaea* group
- ~ *C. cervicornis* (Ach.) Flot. ssp. *verticillata* (Hoffm.) Ahti

Graphis scripta (L.) Ach.
Hypogymnia enteromorpha (Ach.) Nyl.
H. inactiva (Krog) Ohlsson
Lecanora pinguis Tuck.
Leptogium corniculatum (Hoffm.) Minks
Mycoblastus sanguinarius (L.) Norm.
Niebla ceruchis (Ach.) Rundel & Bowler
N. cephalota (Tuck.) Rundel & Bowler
Parmotrema chinense (Osbeck) Hale & Ahti
Physcia adscendens (Fr.) Oliv.
Pilophorus acicularis (Ach.) Th. Fr.
Ramalina evernioides Nyl.
R. farinacea group
Tuckermannopsis orbata (Nyl.) Lai
Usnea californica Herre (*U. ceratina* of *California Lichens.*)
U. longissima Ach.
U. rubicunda Stirt.

References cited:

- Egan, R.S. 1987. A fifth checklist of the lichen-forming, lichenicolous and allied fungi of the continental United States and Canada. *The Bryologist* 90:77-173.
- . 1989. Changes to the "Fifth Checklist of the Lichen-Forming, Lichenicolous and Allied Fungi of the Continental United States and Canada. Edition I. *The Bryologist* 92:68-72.
- . 1990. Changes to the "Fifth Checklist of the Lichen-Forming, Lichenicolous and Allied Fungi of the Continental United States and Canada. Edition II. *The Bryologist* 93:211-219.

Janet Doell

Field Trip to the Santa Lucia Mountains, Los Padres National Forest, Monterey County

On October 1, 1994 CALS visited the rugged, isolated Arroyo Seco area in the outer Coast Ranges of Monterey County. Except for a visit by Cherie Bratt, there had been no previous lichen exploration of the area, as far as is known. Present were Cherie Bratt, Nancy Brewer, Janet and Richard Doell, Bill Hill, Barbara Lachelt, Harry and Ellen Thiers, and Darrell Wright. The first stop was Santa Lucia Memorial Park where a mesic, shaded, mossy boulder had a nice array of foliose and crustose species including *Leptochidium albociliatum*, *Physconia americana*, and an as yet unidentified *Pannaria*. Most of the area, however, is dry *Quercus* and *Pinus sabiniana* woodland, shrub oak brush, and *Arctostaphylos* chaparral with plenty of large rocks. The rocks and soil turned out to be rich in crustose and squamulose species. Not all the collections have been determined, and this must be considered a very preliminary report. The area certainly deserves more exploration.

The following species were found at Santa Lucia Memorial Park (an asterisk indicates species found also at the Wagon Caves area):

Acarospora geogena
Aspicilia cf. *caesiocinerea*
Buellia cf. *punctata*

Buellia sp.
Caloplaca cinnabarina
C. cf. *modesta*
C. cf. *vitellinula* (old mortar)
Candelaria concolor
Candelariella cf. *terrigena*
Catapyrenium lachneum
Collema sp.
Diploschistes sp., not *scruposus*.
D. scruposus *
Lecanora campestris
L. argentata?
L. muralis
Lecidea auriculata (endolithic)
L. tessellata
L. cf. (*Japewia*) *tornoënsis*
Lepraria membranacea
Letharia columbiana *
Melanelia subelegantula
M. glabra *
Parmelina quercina *
Peltula obscurans var. *hassei*
Pertusaria sp. undescribed (HDT)
Physcia aipolia
P. stellaris
P. adscendens
Physconia enteroxantha
P. isidiigera
Psora californica
P. decipiens
P. nipponica
Punctelia subrudecta
Rinodina cf. *tephraspis*
Tuckermannopsis merrillii
Umbilicaria phaea *
Usnea sp.
Xanthoparmelia cumberlandia
X. mexicana
X. taractica
Xanthoria polycarpa

The group then went on to the Wagon Caves area 7 km to the s.e. at the edge of the Hunter-Liggett Military Reservation. This is a single very large rock surrounded by brush, grassland and *Quercus-Pinus sabiniana* woodland. In addition to the species above which are marked with an asterisk, the following were collected at Wagon Caves:

Acarospora sp.
Caloplaca cf. *festiva* (*Blastenia* f. of Hasse)
C. saxatilis
Dermatocarpon miniatum
Evernia prunastri
Flavoparmelia caperata
Lecanora pacifica
L. cf. *cenisia*
Melanelia glabroides
Pannaria sp.
Peltigera collina

Psora cf. tuckermanii
Toninia massata
Xanthoria fallax
X. ramulosa

The Doells served a fine hot dinner that evening at Escondido Camp high in the headwaters of the Arroyo Seco, which was followed by a productive business meeting.

Darrell Wright

CALS Booth at Fungus Fair

On December 4th the California Lichen Society had an exhibit at the annual "Fungus Fair" of the Mycological Society of San Francisco. Our display featured a huge map of California with lichens labelled and fastened in appropriate locations. On a second table were Janet Doell's posters explaining lichen terms, illustrated with specimens. Bill Hill presided over two microscopes in constant use by adults and children peering at spores and the green algal layer. In the auditorium Barbara Lachelt used slides to explain lichens to the mushroom crowd. Richard Doell showed his visually stunning lichen slides accompanied by music. To date CALS has four new members as a direct result of all this activity.

Barbara Lachelt

Upcoming Events

January 14: Mini-Conference in Room 401, Hensill Hall (Biology), San Francisco State University.

10 a.m. Crustose lichens and their spores: discussion and lab with Cherie Bratt, Santa Barbara Museum of Natural History.

12 p.m. Lunch, to be served in the herbarium.

1 p.m. Short business meeting.

1:30 p.m. A simplified thin-layer chromatography method accessible to our members: discussion and demonstration with Darrell Wright.

2:30 p.m. Crustose lichen clinic. Bring pesky problem collections and get help determining them.

Time of adjournment will depend on level of interest. Please let Janet Doell (510-236-0489) or Barbara Lachelt (415-456-2918) know if you are planning to attend this conference.

April 8-9: Field Trip to the Dillon Beach area, Marin County.

CALS members Bob and Pat West have offered the use of their house at Dillon Beach as headquarters for this event. Darrell Wright, who is familiar with the area, will lead. Further details will be sent out closer to the date.

Janet Doell

Retrospective on Herre

Our president proposes that we re-visit A.W.C.T. Herre's (1868-1962) collecting sites to document the current status of his lichens. Some of the sites probably have not been checked since the turn of the century. As a coordinated activity, it would be good to locate and, with the help of experts, verify the identity of his collections, at least such as are still in California. All of this should be published. We will keep our members posted as plans are made to do it.

Book Review

Trevor Goward, Bruce McCune, and Del Meidinger. *The Lichens of British Columbia. Illustrated Keys. Part 1 - Foliose and Sqaumulose Species.* 181 pages, 9 figures, over 500 sketches of key characters, 124 distribution maps. Research Program, Ministry of Forests, 31 Bastion Square, Victoria, B.C. V8W 3E7. 1994. [ISBN 0-7726-2194-2, QK587.7.B7G68.] Price: Not given (paper).

Although aimed at non-lichen biologists, this well-written, nicely printed book promises to be of help to lichen specialists with groups like California *Hypogymnia* and *Peltigera*. I like the placing of species information in fields, database fashion, while the plentiful sketches, located in the margins of the keys next to the couplets to which they refer, show the first author to be a skilled botanical illustrator. No doubt there will be editorial quibbles with a few things the authors have done, but, if I didn't own a copy of this, I would definitely send for one.

Darrell Wright

President's Corner

The general response to the formation of the California Lichen Society last January confirms my feeling that it was an idea whose time had come. With our public relations limited to word of mouth and a few announcements in journals, our membership has grown from 10 to 38. *The Bulletin* has generated a lot of interest and may well be our most important activity during our formative years.

Seminars and field trips, for the present, will of necessity be more easily accessible to members who live in or near the Bay Area. As time goes on, however, we will try to

take in all regions of the state.

I would like to take this opportunity to do three things. First, to welcome our new members. Second, to invite others to join us and at least receive and hopefully contribute to *The Bulletin*. An interest in the lichens and \$10.00 a year sent to

The California Lichen Society
1200 Brickyard Way, #302
Pt. Richmond, CA 94801

are all that is required. Last but not least, I would like to thank Dr. Harry Thiers and his wife Ellen for being supportive in so many ways during these important early months of our existence. We wish them much happiness in their new lives in Peoria, Illinois, but will sorely miss them and their cheery countenances.

Janet Doell

Members of the California Lichen Society

ASHMEAD, Phyllis
BALTZO, Doris
BAUER, Lisa
BOURELL, Mona
BOWLER, Peter
BRATT, Cherie
BROWN, Irene
CORBIN, Beth Lowe
DOELL, Janet
DOELL, Richard
FOLEY, Kevin
FREEDMAN, Bill
FREEDMAN, Louise
FULTZ, Sara
HILL, Bill
HORVATH, Carol
KOWALSKI, Don
LACHELT, Barbara
MCGEE, Mikki
MOORE, Peggy
MUIRHEAD, J. Fraser, M.D.
RIEFNER, Richard E.
RILEY, James
ROSENRETER, Roger
SHARNOFF, Sylvia

SPARLING, Shirley
STEVENS, Fred
STEWART, Bob
STEWART, Leslie
TAVARES, Isabelle
THIERS, Ellen
THIERS, Harry
VAN SEVENTER, Helen
WEST, Patricia
WEST, Robert, M.D.
WILLIAMS, Barbara
WINTER, Kirsten
WRIGHT, Darrell
YARDLEY, William



Fig. 1. *Usnea longissima* on *Sequoia sempervirens* on ridge east of Salt Point State Park, Sonoma County, July, 1994.

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The cover shows the second in a series of *Ramalina menziesii* variants, this one from Crystal Springs Reservoir, San Mateo County. Note the broad, imperforate straps. The cover of volume 1, No. 1, showed a more typical specimen from Santa Venetia in Marin County.