

Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 22 No. 7

July 1989

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New *Bulletin* Editor

Bryan Boyce is the new Editor of the *Bulletin*.

Please send all contributions to Bryan at:
3235 N.E. 26th Avenue
Portland, Oregon 97212
or call: 284-7835.

Please remember that the **deadline** for submitting material is the **10th** of the month!

CHAPTER NEWS

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS

Field trips will take place rain or shine, so proper dress and footwear are essential. Trips may be strenuous and/or hazardous. Please contact the trip leader for information about difficulty, mileage, and terrain. Your participation is at your own risk. Bring water and lunch.

Blue Mountain

For information, contact Bruce Barnes (276-5547).

Corvallis

8 July, Sat.

Field trip to Iron Mountain in the Old Cascades. Leave at 8:30 am from parking lot off 27th St. north of Wilkenson Hall, OSU campus. Leader: Dan Luoma (758-8063).

Emerald

For information, contact Diane English (484-9287).

High Desert

15-16 July, Sat.-Sun.

Field trip to Rooster Combs Research Natural Area, Steens Mountain. Our purpose in visiting this unique RNA is to assist the BLM in the inventory of the flora of the area. We will meet in French Glen at noon on July 15. Our first stop will be at Riddle Ranch for some botanizing, then on to the Rooster Combs area. A dry camp at Riddle Ranch on Saturday night is proposed, so bring water. Moderate hiking and spectacular scenery. Leader: Marge Ettinger; information: Brantley (389-4838).

22 July, Sat.

Field trip to Pringle Falls Research Natural Area. This trip will feature remnants of the once vast low elevation ponderosa forests that blanketed Central Oregon prior to white contact. We will visit a forest that has not been logged, and the effects of fire and results of fire suppression will be observed. Experts on forestry and fire, Bill Hopkins and Joyce Bork, will be along. Easy hiking and driving. Leader: Stu Garrett (389-6981 or 382-2811).

5 Aug., Sat.

Field trip to Broken Top volcano. A 5 mile moderate to strenuous hike with a 1500 ft elevation gain, mostly in the Three Sisters Wilderness. Limited to 18 people. To register, call leader: Stu Garrett (389-6981 or 382-2811).

Mid-Columbia

5 July, Wed.

Meeting 7:30 pm at the Mosier School. Chris Topik, Associate Areas Ecologist for the Gifford Pinchot and Mt. Hood National Forests will present the program "Using Plant Communities in Forest Management," and will discuss our July 29th field trip.

29 July, Sat.

Field trip and inventory work party at Gumjuwac Tolo, a proposed Research Natural Area in the Mt. Hood National Forest. Leave at 9 am from the Hood River Inn parking lot, or 9:30 am from the US Forest Service office parking lot on Hwy. 35 just south of the community of Mt. Hood, or meet at 10 am at the Gumjuwac Saddle trailhead. Leaders: Chris Topik (666-0700) and Dave Gross.

2 Aug, Wed.

Meeting 7:30 pm at the Mosier School. A special taped music-slide presentation entitled "From Maine to the Canadian Rockies---A Search for Unspoiled Nature" will be presented by local photographer Paul Kuiper. It features many native plants which Paul is soliciting our help in identifying.

North Coast

6 July, Thur.

Meeting, 7 pm at State Office Building, 3600 3rd St., Tillamook.

14 July, Fri.

Special program, location to be announced. Jerry Igo will present "Wildflowers of the Columbia River Gorge. For information, contact Sallie Jacobsen, 842-4350.

15 July, Sat.

Field trip to Elk Prairie in Oswald West State Park. Leave from the South End of Cornet Store parking lot at 1 PM.

Portland

1 July, Sat.

Field trip to Monte Carlo. Leave at 8 am from Gateway MAX Park-and-Ride, or 8:45 am from north end of Bridge of the Gods. Hike is about 7 miles. Leader: Elizabeth Handler (244-5320).

8 July, Sat.

Field trip to Cone Peak. A joint trip with Willamette Chapter. Leave at 7 am from Tualatin K-Mart (east end of parking lot). Meet Willamette Valley Chapter at South Salem K-Mart. Leaders: Willamette Valley Chapter, Barbara Halliday (1-371-1025), Portland, Elizabeth Handler (244-5320).

11 July, Tues.

Meeting 7 pm at First United Methodist Church, 1838 SW Jefferson St., Portland. Don and Priscilla Eastman will give an up to date slide presentation on Oregon endangered plant species.

15 July, Sat.

Field trip to Deer Meadow in Skamania County.. Leave at 8:30 am from K-Mart at NE 122nd and Sandy (SW corner of lot). Hike about 8 miles RT, elevation gain 1400 ft. Leader: Russ Jolley (286-2350).

22 July, Sat.

Field trip to Sheep's Canyon on west side of Mt. St. Helens. Leave at 8 am from K-Mart, 122nd and Sandy, or 9 am from Yale Park on Yale Reservoir near Cougar. Hike about 6 miles RT. The trail passes through one of the largest stands of Noble fir in the world. Leader: Carroll Dubuar (234-4135).

29 July, Sat.

Field trip for alpine flowers west of Cloud Cap. Leave at 8:15 am from Sandy Safeway Parking lot. Hiking distance to be determined by blooms. Leaders: Laura and Steve Gasaway (668-5076).

Siskiyou

1 July, Sat.

Field trip to Lone Pine Ridge in the Soda Mt. Wilderness. Leave from Ashland Bi-Mart at 8:30 am. An easy hike on the Pacific Crest Trail. Spectacular views and several endemic species. Leader: Richard Brock. Info: 482-4111.

8 July, Sat.

Field trip to Mount Ashland. Leave from Ashland Bi-Mart at 9:30 am. We will be looking for the Mt. Ashland grape ferns. Leader: Dr. Frank Lang, Botany Instructor at SOSC. Info: 482-5235.

22 July, Sat.

Field trip to Elk Meadow Basin. Leave from Medford K-Mart at 8:30 am. In the Cook and Green Pass area adjacent to Red Buttes Wilderness Area. Many Siskiyou endemics. Strenuous cross country hiking and rugged terrain. Leader: Wayne Rolle, Botanist for the Rogue River and Siskiyou National Forests. Info: 482-0093.

5 Aug, Sat.

Field trip to Red Mountain. Leave from Valley of the Rogue Bank in Talent at 8:30 am. See some later blooming alpines, including some rarities. Leader: Richard Brock. Info: 482-4111.

Willamette Valley

Please notify the trip leader if you plan to go on any Willamette Valley Chapter field trip.

- 1 July, Sat **Field trip** to Opal Creek's Ancient Forest, on the headwaters of Little North Santiam River. Moderate hike. Leave at 8 am from South Salem K-Mart. Leader: Wally Eubanks (390-2257).
- 8 July, Sat. **Field trip** to Cone Peak, near Iron Mountain. Moderate hike. A joint field trip with the Portland Chapter. Leave at 8 am from South Salem K-Mart. Leader: George Schoppert, Stayton (859-2613). Salem contact: Barbara Halliday (371-1025). Portland contact: Elizabeth Handler (244-5320).
- 16 July, Sun. **Field trip** to Sheridan Peak, 20 miles west of McMinnville. A BLM ACEC, site of many botanical studies and headwaters of the Nestucca River. Leave at 9 am from Polk County Fairgrounds entrance, just south of Hwy. 22 in Rickreall. Leader: Larry Scofield, Falls City (787-3833). Salem contact: Barbara Halliday (371-1025).
- 22 July, Sat. **Field trip** to Chinidere Mountain, near Wahtum Lake, north of Mt. Hood. Moderate hike, 4 mile round trip. Leave at 7:30 am from South Salem K-Mart, 7:45 am from North Salem K-Mart. Leader: Frances Schaeffer (393-7492).
- 29 July, Sat. **Field trip** to the north side of Mt. Hood -- Cooper Spur and Cloud Cap. We'll explore the subalpine meadows at an easy pace. Leave at 7 am from North Salem K-Mart, 7:45 am from North Salem K-Mart. Leader: Bill Egan (393-2131).
- 5 Aug., Sat. **Field trip** to the wildflower-filled Canyon Creek Meadows below Three Fingered Jack Mountain. Moderate hike, 6.6 miles round trip. Particular emphasis will be on monitoring of endangered plants (*Elmera* and *Heuchera*) in the area. Leave at 7:30 am from South Salem K-Mart. Leader: Wilbur Bluhm (393-2934).
- If you want to be notified about unscheduled mid-week trips, call Clint Urey (743-2802) or Glenn and Barbara Halliday (371-1025).

Wm. Cusick

8-9 July, Sat.-Sun.

Field trip to Duck Lake. This will be an overnight camping trip to the southern end of the Willows. Duck Lake is a unique area, featuring several interesting plants, including insectivorous sundews. For details, call Karen Antell (963-0267).

Help! Present *Bulletin* Mailing Committee Wants to Retire

Volunteer(s) needed to take over the task of mailing the NPSO *Bulletin* each month. Must be in the Portland area. For more information call Sara Barnum at 639-3353.

Jean Davis Memorial Fund Scholarship Awarded

The Jean Davis Scholarship has been awarded to Keli C. Kuykendall of Corvallis. She is a student at Oregon State University and a member of the Corvallis Chapter of NPSO. We are happy to make this award and feel confident Keli will use this in the spirit it is given, to help in the preservation of the native plants of Oregon.

Mary Falconer
Chairman, Scholarship Committee

Volunteers Wanted

To assist with the Native Landscaping Conference to be held in Portland on September 29 and 30. NPSO is a cosponsor of this conference. We need computer-literate individuals to assist with making labels and in late August people will be needed to help stuff envelopes. Please contact Mark Wilson at 222-0134.

PLANT PUZZLE

Sponsored by the Emerald Chapter

June's prize winner was Scotty Fairchild of Corvallis, he correctly identified Ceanothus velutinus, mountain balm, sticky-laurel, greasewood, or tobacco-brush.

(This was the last of the Plant Puzzles. The person responsible for them, Peter Zika, is moving to New York State to take a job with The Nature Conservancy. Good Luck, Peter, and thank you.)

(The "Plant Family Profiles" were a series of articles written by Herm Fitz in the late 1970's and early 1980's for the NPSO Bulletin and possibly to be compiled into a booklet at some future date. Many members have requested that these articles be reprinted, so periodically they will reappear.)

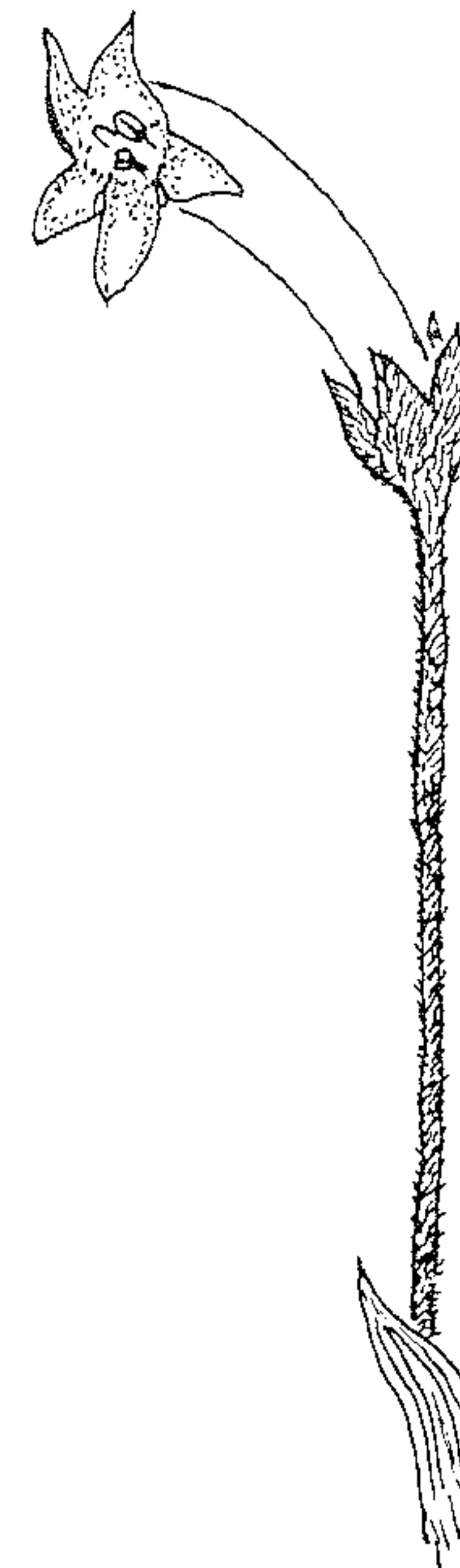
PLANT FAMILY PROFILES by Herm Fitz

The Orobanchaceae - BROOMRAPE FAMILY

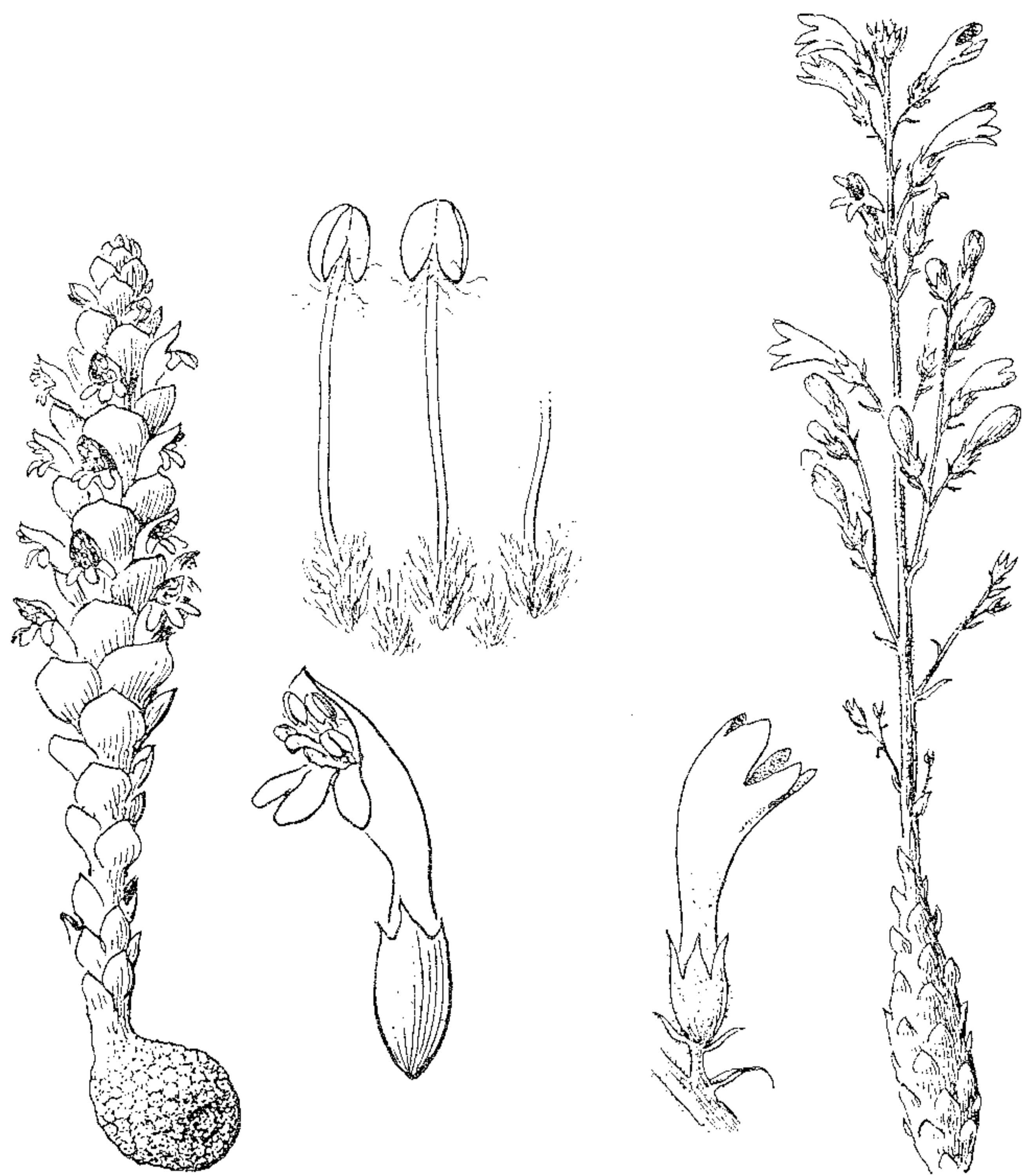
The Orobanchaceae is a small family of annual or perennial herbs that are total parasites attaching to the roots of other plants. They are mostly lacking in chlorophyll and appear in various non-green colors. Although about 180 species in 14 genera are distributed chiefly in north temperate Eurasia, elsewhere in the world they are not well represented - there are few tropical or American species. The United States is home for four genera, and only two of these occur in Oregon: Broomrapes (*Orobanche*) and Ground Cone (*Boschniakia hookeri*). The Broomrapes, with about 140 species worldwide (the great majority of the family), have seven representatives spread here and there in Oregon. Pine Broomrape (*O. pinorum*) occurs sparsely throughout the state and is said to be "parasitic on various conifers" in the floras. This is an error - as was pointed out to me several years ago by Dr. Ken Chambers of OSU, who told me that it actually is a parasite on Ocean Spray (*Holodiscus discolor*)! Indeed, this important tip allowed me to locate the plant (just once in all my years of searching) well-hidden among the bases of the stems of a shrub of Ocean Spray near Jumpoff Joe in the South Santiam. I would not ordinarily have been looking so carefully there! Now I glance at the base of each Ocean Spray I encounter, hoping someday to find it again. I also think perhaps its name should be changed to *O. holodiscorum*, or something. Clustered Broomrape (*O. fasciculata*), with yellowish flowers, is less host-specific; it may choose from a wide variety of host plants. I have seen this plant only once, near Quaking Aspen Swamp in the McKenzie Drainage several years ago. Naked Broomrape (*O. uniflora*), with purplish-violet corolla, is perhaps the most common in western Oregon, found often on low-to-medium elevation outcrops in the Western Cascades - parasitic on many species, but particularly *Sedum*, or various saxifrages or composites. I still recall vividly my first encounter with this beautiful little dwarf - on Echo Mountain - and I always get a thrill when I see one, or many, as I did one year on Eagle's Rest. California Broomrape (*O. californica*) prefers the east side of the Cascades, and can be found parasitizing Big Sagebrush (*Artemisia tridentata*) in its range. Two years ago, while drifting 72 miles of the John Day River below Clarno Bridge in late June, members of our party found several specimens in moist sand near the river. Stout Broom Rape (*O. grayana*), on both sides of the cascades, seems to like Compositae; *O. ludoviciana*, again of the eastern part of the state, takes a variety of hosts, but is often on Big Sage and other Compositae. Clover Broomrape (*O. minor*)

is introduced from Europe, and prefers Leguminosae and Compositae, especially clover in cultivated fields, where it can become a serious crop pest. The Ground Cone (*Boschniakia hookeri*) occurs in the coniferous woods of coastal mountains from California to Washington, and is parasitic on various members of Ericaceae.

Members of this family are rooted, but have no extensive root system; instead, either a congested mass of short, thick roots is found, or a large, single complex swollen organ. The underground structure connects at one or more points via penetrating haustoria to the root of the host plant, which supplies virtually all the nourishment to the parasite. Above ground, a stem, usually single and erect, bears scale-like brownish leaves, and terminates in the flowering spike or raceme. Flowers are essentially similar to those of the typical bilabiate Scrophulariaceae (see February, 1980, NPSO newsletter). In fact, the Orobanchaceae appears to be a wholly parasitic offshoot from the Scrophulariaceae



A single flower of Clustered Broomrape (*Orobanche fasciculata*). Note the bilabiate corolla as found in Scrophulariaceae, and two of the four didynamous stamens. The flower is subtended by a bractlike leaf.



Boschniakia hookeri

Orobanche pinorum

(Reproduced from Hitchcock et al.,
Flora of the Pacific Northwest, with
permission from the publisher.)

and differs from that family only in its nutritional habit. Thus, the flowers are irregular, ± bilabiate, and bisexual. Two-to-five sepals fuse to form a two-to-five toothed calyx. The corolla, of five fused petals, bears two lobes in the upper lip and three in the lower lip (just like a monkeyflower!). The stamens are didynamous - i.e., two long and two short, although a staminode (vestigial 5th stamen - only a filament, as in *Penstemon*!) may be present. The superior ovary is of two united carpels (rarely 3) with a single locule, with four parietal placentae, each bearing numerous ovules. The style is single, with a 2-4 lobed stigma. The resulting capsule splits along two sutures and releases small, very numerous seeds, which are effectively dispersed by the wind.

The floral formula may be written:

$$Ca \overline{2-5} \quad Coz \text{ (5) } \quad S^{2+2} \quad p \text{ (2) } \quad \text{with a}$$

superior ovary. This is the same formula that we find in the Scrophulariaceae. So, when you encounter a red, brown, purple, or whitish herbaceous root parasite with scroph-like flowers, you will know surely that you have found one of our eight delightfully intriguing members of the Orobanchaceae - the Broomrape Family.

“Wildflowers of Oregon” Poster

The new, full color poster featuring 13 of Oregon’s most beautiful wildflowers is now available. Produced by the Native Plant Society of Oregon, the poster has been praised for its accuracy and detail. The original painting was done by Jay Wesley Miner, a young Oregon artist. The brilliant colors of Kalmiopsis, Western Lily, Yellow Bell and the Cobra-Plant draw attention to the poster. Several of the flowers are on the Oregon Rare and Endangered plant list.

This striking poster will brighten up a home, office or classroom and will help increase appreciation for Oregon’s natural heritage. The large (18” by 24”) poster is printed on heavy paper. The reverse side contains information on each species illustrated. Posters are mailed rolled in a tube.

Single posters are \$4.95 including postage. Ten posters to one address are at the reduced rate of \$30 plus postage. Checks should be made out to The Native Plant Society of Oregon. Send orders to Susan Gabay, PO Box 151, Mosier Or. 97040 (478-3576).



NATIVE PLANT SOCIETY OF OREGON

Malheur Field Station Classes

This spring the southeastern Oregon desert is having an exceptional bloom of wild flowers and shrubs. We expect the spring rains and snow to also produce excellent summer opportunities to study these plants through Malheur Field Station in southeastern Oregon.

July 2-22: Identification of Plants in the Field

Karl Holte from Idaho State University, who has taught courses at MFS since 1972 and is curator of the Ray I. Davis Herbarium at ISU, will be teaching this field course.

Emphasis will be on learning how to key plants in the field using hand lenses and books of the region. Plant characteristics and terminology, plant requirements and edible plants of eastern Oregon desert, marshes, and Steens and Strawberry Mountains will be learned. This course may be taken for one, two, or all three weeks.

Week one will emphasize hand lens keying of marsh and desert plants on the Malheur National Wildlife Refuge and on Diamond Craters.

Week two will emphasize plants of Ponderosa and other coniferous dominated areas located on granite and limestone. Much of the time will be spent camping in the Strawberry Mountain area east of John Day.

Week three will emphasize plants of the basalt areas such as Steens Mountain and the Alvord Desert. Steens Mountain provides an ideal field laboratory for studies in plant systematics. Cordilleran, Cascadian, and Sierran floristic elements combine to make Steens one of the most floristically diverse mountains in Oregon.

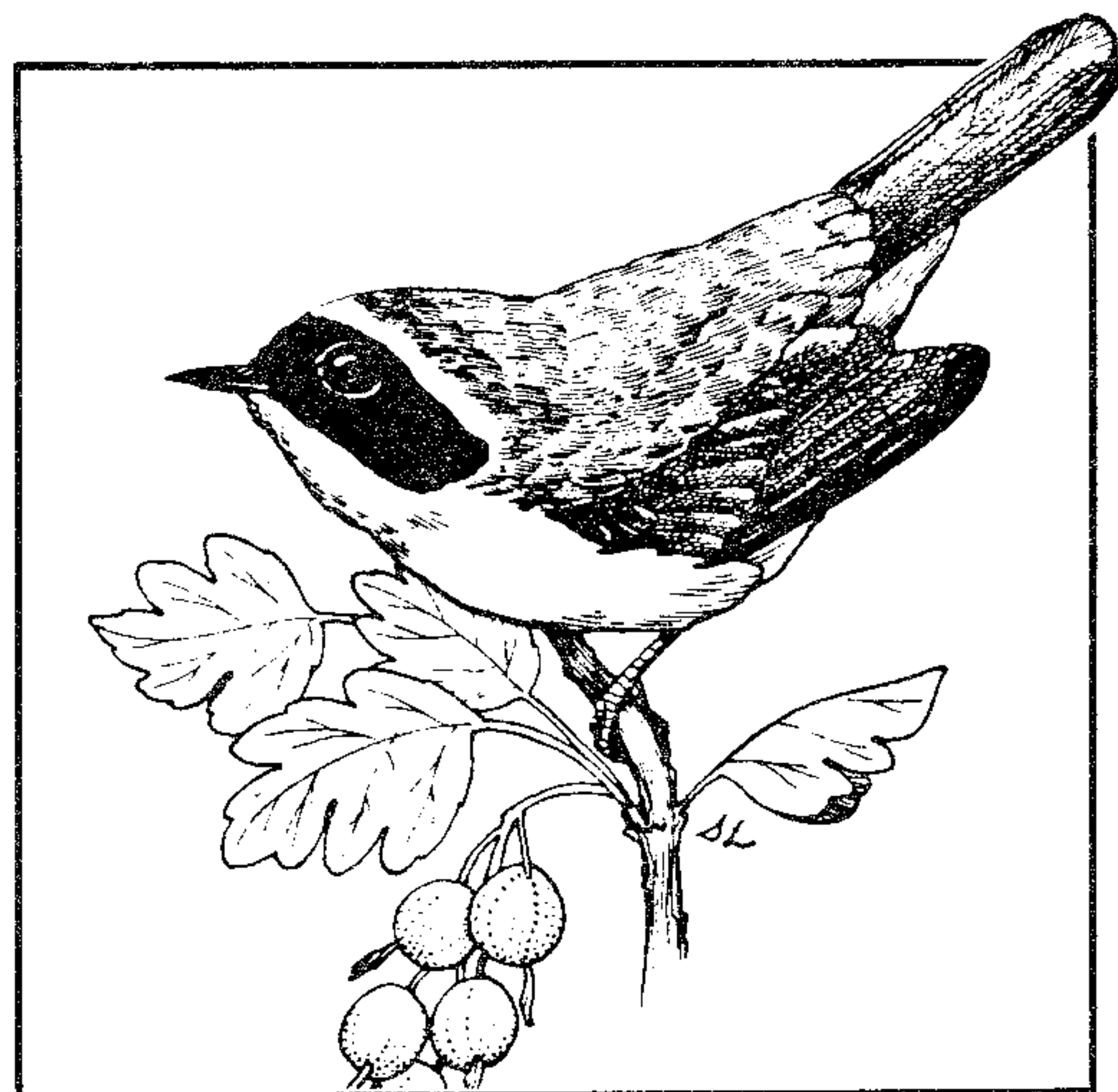
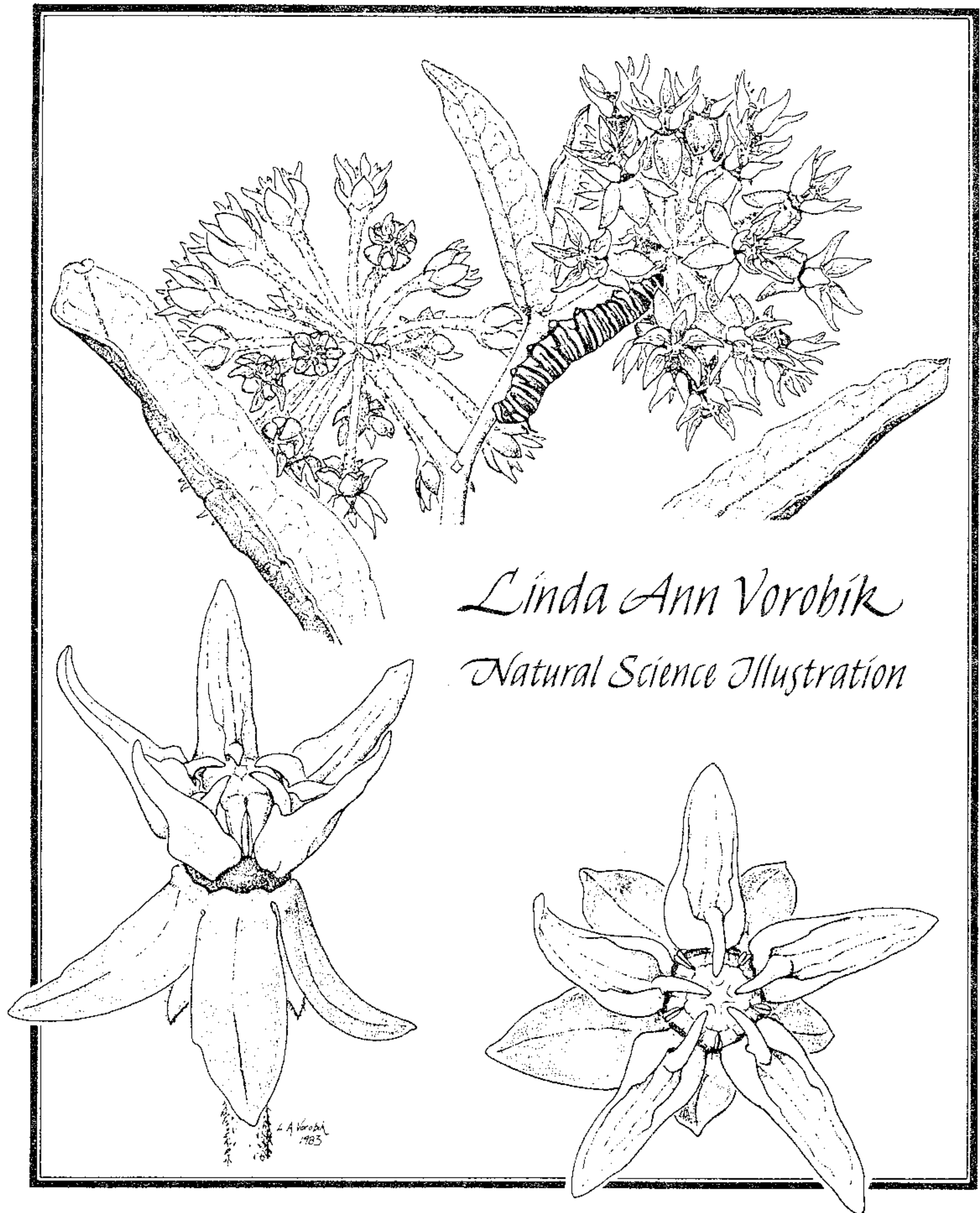
August 13-September 2: Natural Science Illustration

Linda Vorobik, who many Native Plant Society people know from when she wrote and drew for the NPSO *Bulletin*, will be the instructor. Linda has studied, taught, and worked in Oregon and Washington. Currently, she is one of two illustrators for the new Jepson's *Manual of Vascular Plants of California*, and is the staff artist for the University of California Herbarium and botany department.

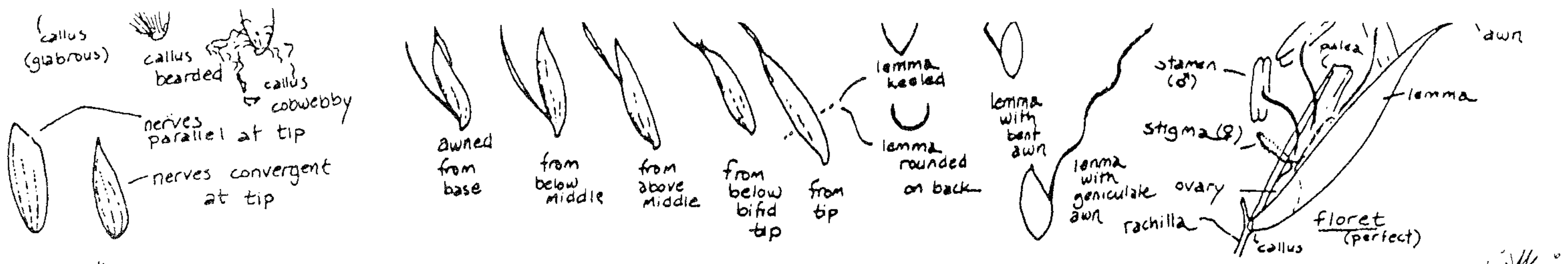
This course will be a marathon of artwork from daily field sketching to production and marketing techniques. It is designed to accommodate the needs of the beginning illustrator as well as to teach new methods to the more seasoned artist. Learn basic drawing skills in the field, and how to render organisms with both aesthetics and accuracy in mind. Learn the tools of trade for preparing preserved specimens and working from such specimens, and how to turn field sketches into finished, marketable works.

These courses and many others being taught this summer may be taken for credit or noncredit. For more information, contact:

Lucile A. Housley
Malheur Field Station
HC 72 Box 260
Princeton, Oregon 97721
503-493-2629



Common Yellowthroat on *Ribes*
Geothlypis trichas
By Susan Lindstedt, Malheur
Field Station



Grass Scholar's Verse

This poem was written by the late Dr. Harold D. Harrington of the Department of Botany and Plant Pathology of Colorado State University. He is the author of *A Manual of the Plants of Colorado* (1954) and other works on Colorado plants.

His last work was *How to Identify Grasses and Grass-like Plants* (1977), in the introduction of which there appeared the following poem.

The Identification of Grasses

A grass can be "glumey" in more ways than one,
 When its classification remains to be done;
 You pull off the parts, and soon feel your age
 Chasing them over the microscope stage!

You peer through the lenses at all of the bracts
 And hope your decisions agree with the facts;
 While your oculist chortles with avid delight
 As you strain both your eyes in the dim table light.

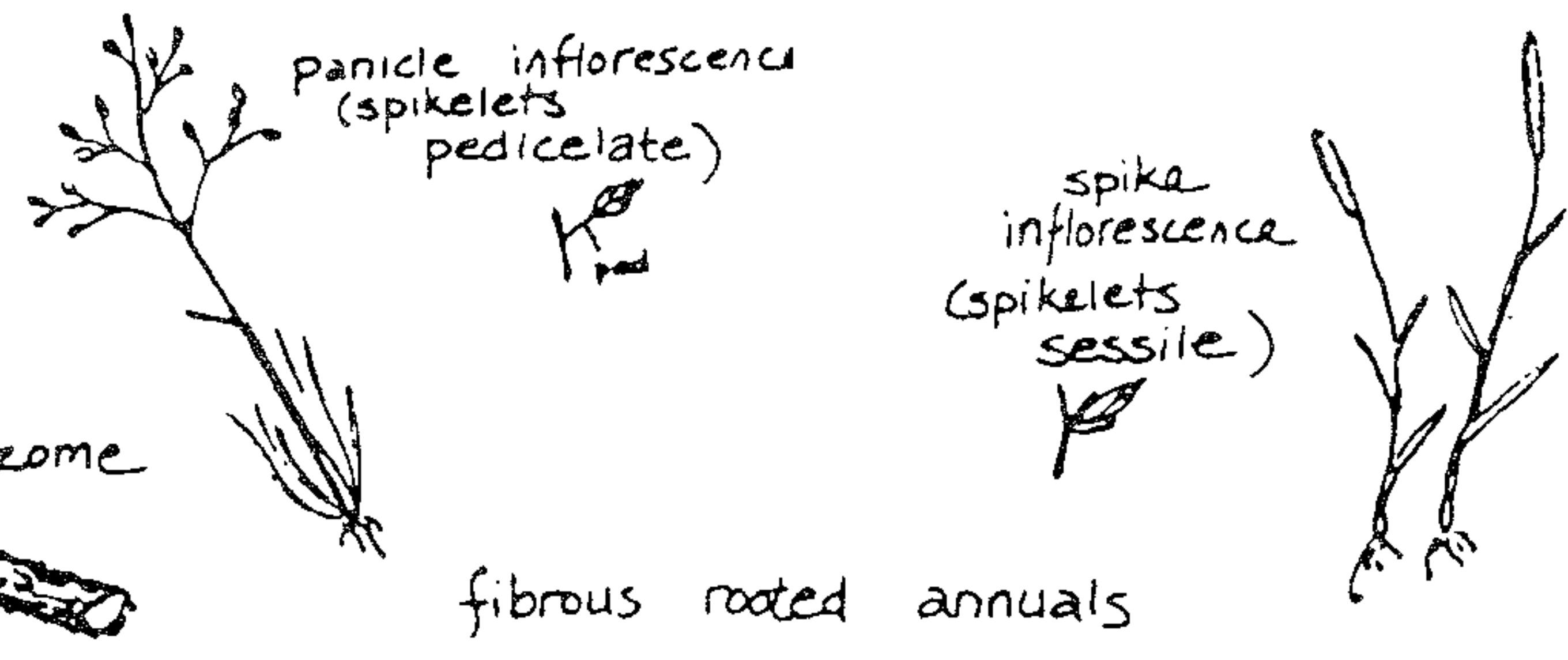
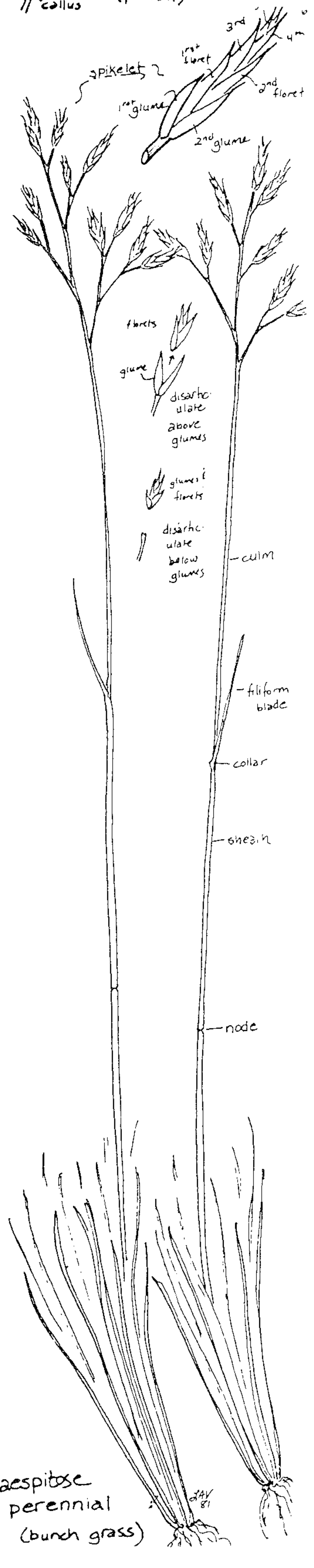
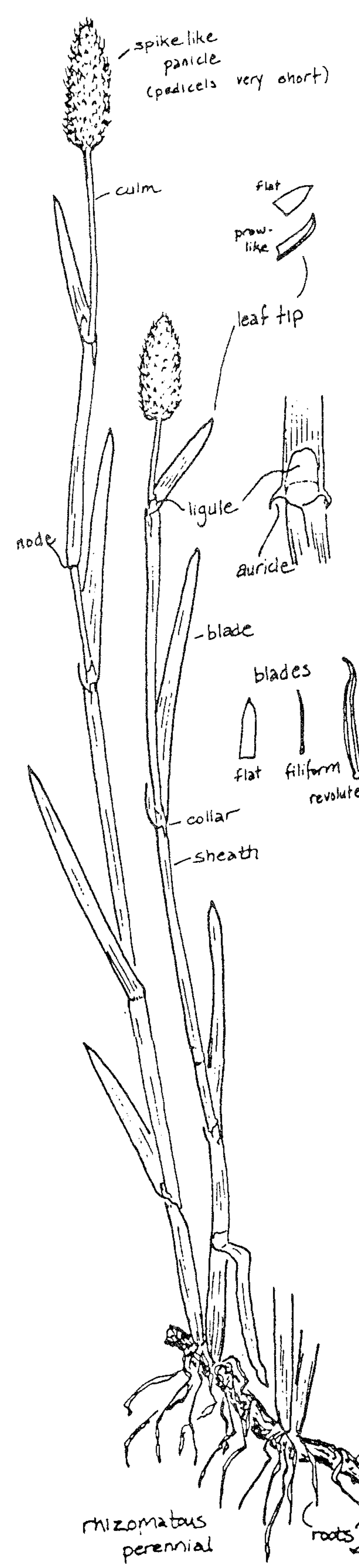
You are left on the horns of quite a dilemma
 When you count the nerves on the back of a lemma;
 Then you really get snooty and turn each one turtle
 To see if the flower is sterile or fertile.

And then the compression, no problem is meaner --
 Is it flat like your wallet or round like a wiener?
 "How simple," you think "for a mind that is keen"--
 But what do you do when it's half-way between?

You probe and you guess how the florets will shatter,
 For you know later on it is certain to matter;
 You long for the calmness of labor that's manual
 When the question arises - "perennial" or "annual"?"

And that terrible texture, the meanest of all,
 Is one of the pitfalls in which you can fall;
 "Cartilaginous" maybe - or is it "chartaceous"?
 Has even the experts exclaiming "Good gracious!"

Then you wail as you wade through the long tribal key,
 "Oh, why must this awful thing happen to me?"
 "Grasses are easy," our teacher declares,
 As he mops off a brow that is crowned with gray hairs!





Mountain Hemlock
Tsuga mertensiana

Drawing by Ramona P. Hammerly, from *Northwest Trees*, by Stephen F. Arno & Ramona P. Hammerly, The Mountaineers Books, Seattle.

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GUIDELINES FOR CONTRIBUTORS

The NPSO *Bulletin* is published monthly, as a service to NPSO members and the public. News, articles, letters to the Editor, photos, drawings, and non-copyrighted materials are welcome.

Deadline: Copy is due by the 10th of the month, and should be sent to the Editor.

Text Format: Typed, camera-ready copy is preferred, but no submission will be rejected because it is not typed. Copy should be typed in 4-1/4 inch wide columns, of any length. If laser printed, use 12 point "Times" font. Author's name and affiliation are typed at the end of the article. Double space between paragraphs, and do *not* indent the beginning of each paragraph. For special material (e.g., plant keys) choose an appropriate format, keeping in mind that readers may wish to carry your article pasted inside their favorite field guide.

Computer Disks: Articles may be submitted on MacIntosh diskettes. Please call the Editor for details before sending a diskette. IBM floppy

disks are *not* yet acceptable.

Illustrations: Ink drawings or woodcuts are preferred to pictures requiring halftone reproduction. We welcome small illustrations as well as larger works.

Credits: If the item is not original, provide name and date of the source. For original items, identify the author and indicate, for news items, whether a by-line is desired. Include instructions as to whether the item is to be used in its entirety or excerpted at the Editor's discretion.

Scientific Names: Nomenclature should follow *Flora of the Pacific Northwest* by Hitchcock, et al., where appropriate. Use of both scientific and common names is encouraged. Genus and species are italicized (underlined if italic is not available).

Return of Originals: Manuscripts and illustrations will not be returned unless expressly requested.

Membership in the Native Plant Society of Oregon is open to all.

Membership applications, renewals, and changes of address (including old address and zip code) should be sent to the MEMBERSHIP CHAIR.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

Name _____ Chapter (if known) _____
 Address _____ **Is this a change of address?**
 If so, please write your *Old Address* here: _____
 City _____ State _____ Zip+4 _____
 Phone (Home) _____ (Work) _____ City _____ State _____ Zip _____

* **DUES** include monthly NPSO *Bulletin*. Full membership is for a calendar year, January through December. New memberships enrolled during September through December are charged a reduced "Quarter Membership" rate.

- () New () Renewal () Quarter Membership (Sep.-Dec.) \$2.50 () *Bulletin* Subscription only \$10.00
 () Student..... \$ 7.50 () Sustaining..... \$ 25.00
 () Regular..... 10.00 () Patron..... 100.00
 () Family Membership..... 15.00 () Life Member..... 500.00

* **CONTRIBUTIONS:**
 Jean Davis Memorial Award Fund..... \$ _____
 Leighton Ho Memorial Award Fund..... \$ _____
 Rare and Endangered Plant Fund..... \$ _____

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Mary Falconer, NPSO Membership Chair, 1920 Engel Avenue NW, Salem, Oregon 97304.

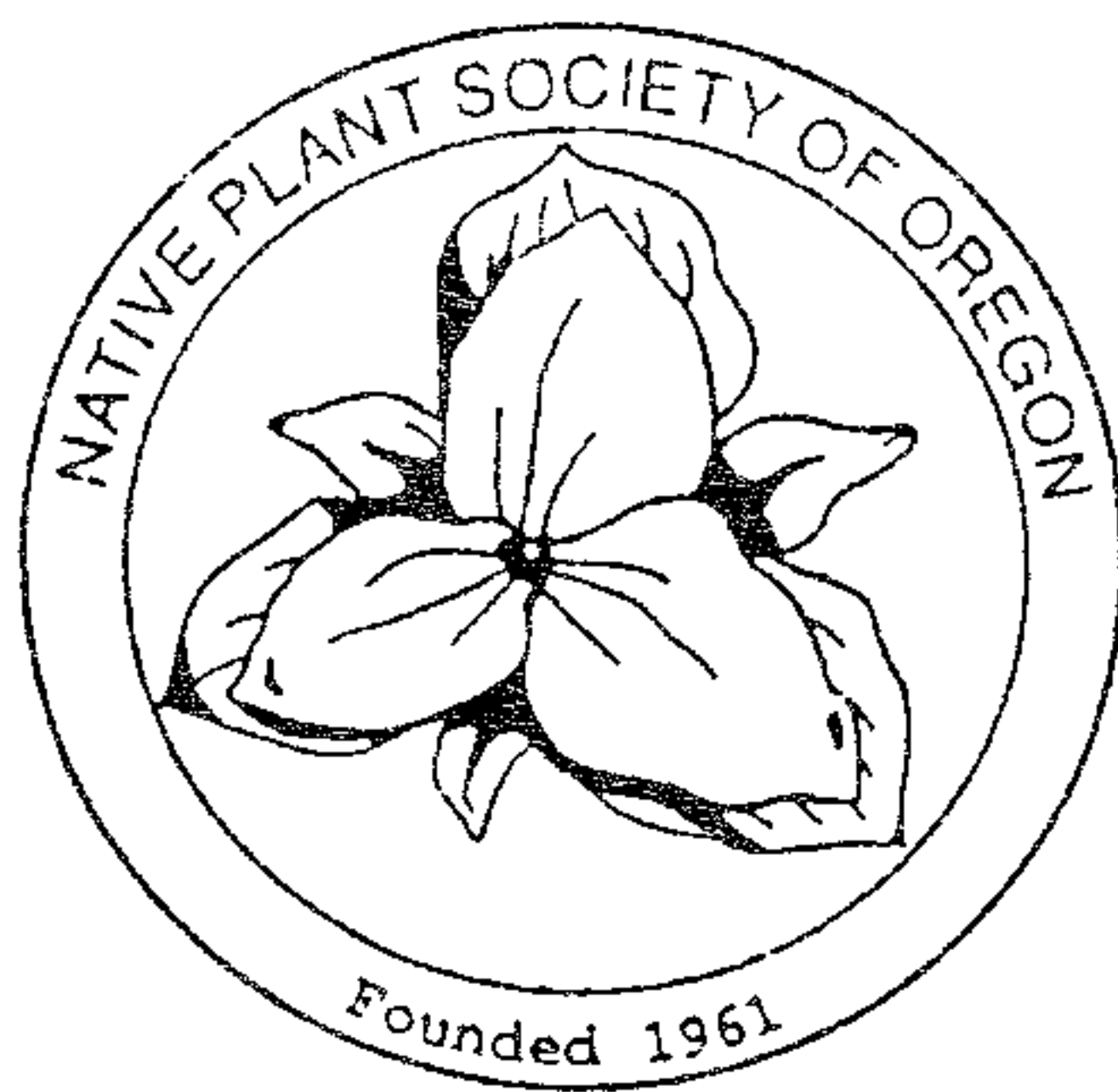
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Please send change of address notices to:

Mary Falconer, NPSO Membership Chair; 1920 Engel Avenue NW; Salem, Oregon 97304.

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