

• OBJECTIVE •

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

Vol. XV No. 3

MARCH 1982

SPRING GREETINGS! NOTE ENCLOSED BALLOT/QUESTIONNAIRE.
PLEASE FILL UP MY MAILBOX BY FILLING IT OUT AND
RETURNING IT! THANKS, YOUR EDITOR.

NPSO ANNUAL MEETING

The annual meeting of the Native Plant Society of Oregon will be held Saturday, May 29, 1982 (Memorial Day Weekend) at the Malheur Field Station 32 miles southeast of Burns. The Blue Mountain Chapter of the Native Plant Society of Oregon is coordinating the annual meeting and requests that reservations be made prior to April 1, 1982 (see accompanying reservation form).

Not as well known for its botanical richness as for its ornithological opportunities, the Malheur Field Station is nonetheless situated in an area of great botanical diversity and interest. During the Memorial Day weekend visitors usually can find bitterroot (*Lewisia rediviva*), sand lily (*Leucocrinum montanum*), tricolor violet (*Viola trinervata*), inch-high lupine (*Lupinus uncialis*), Nevada onion (*Allium nevadensis*), and the Bruneau mariposa (*Calochortus bruneanus*) blooming in the lowlands around Steens Mountain. Both birding and botanizing should be exceptionally good during the dates of the NPSO meeting.

The agenda for the annual meeting will be as follows. More details will appear in the April and May Bulletins.

Saturday, May 29. On your own during the day. Dinner at 6:00 p.m. in the Field Station Cafeteria. NPSO Annual Meeting at 7:30 p.m. in the Field Station Cafeteria.

Sunday, May 30. Leave the Field Station at 9:00 a.m. for an all day field trip around the base of the Steens Mountain. Stops include Frenchglen, Catlow Valley, Roaring Springs Ranch, Long Hollow Grade, Fields, (Cottonwood Creek), Borax Lake, Serrano Point, Alvord Desert. Ba for dinner.

Monday, May 31. Leave the Field Station at 9:00 a.m. for a morning field trip to Diamond Craters and the Barton Lake (Pete French) Round Barn. Back by noon.

Accommodations at the Field Station are of the dormitory type with beds and showers. Individuals wishing to use the dormitory facilities must furnish their own bedding (sleeping bag) and personal toiletry items (towels, etc.). No tent or motorized home camping is allowed at the Field Station. Because of conflict with the purposes of National Wildlife Refuges, pets are not allowed at the Field Station.

Individuals not wishing to stay at the Field Station are responsible for making their own reservations. Meals may still be taken at the Field Station (simply complete the "meal" section of the reservation form and leave the "lodging" section blank). Hotel or motel reservations are available in Burns (32 miles north) or in Frenchglen (40 miles south). Camping space is available at Page Springs Campground or at the Kamper Korral (hookups) which are both 42 miles south of the Field Station. Idlewild Campground in the Malheur National Forest is about 47 miles north of the Field Station on U.S. 395. Gasoline is available in Burns, Frenchglen, Fields, and Princeton.

Individuals wishing to attend the annual meeting should obtain a reservation form from their local chapters. Return the form plus remittance by April 1, 1982 to: Elaine Urban; P.O. Box 266; Pendleton OR 97801.

HIGHLIGHTS OF THE STATE BOARD MEETING

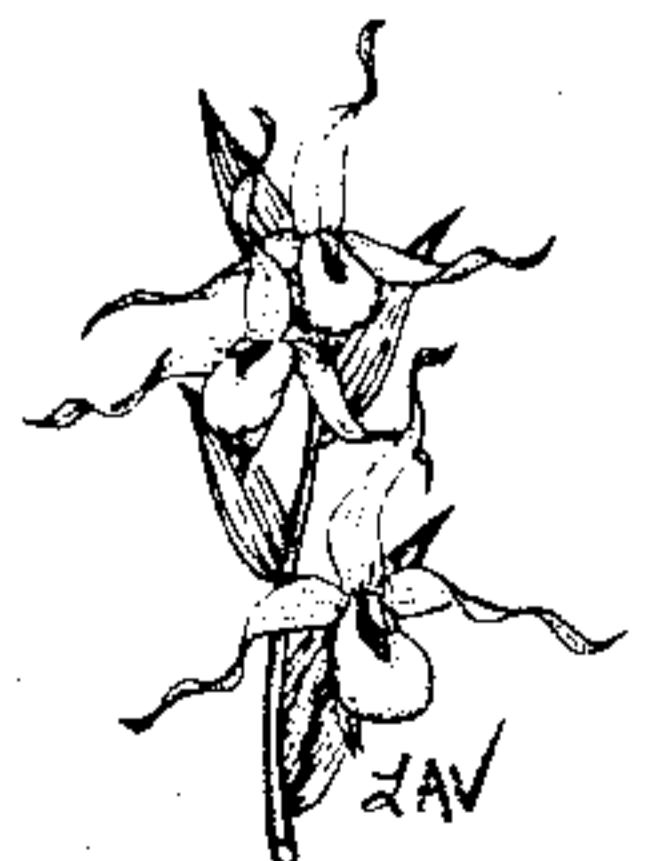
The Board of Directors of NPSO met in Eugene on Saturday, 23 January. A long agenda kept people busy for several hours. Much discussion centered around financial matters; a financial statement will be published in the May Bulletin, just before the Annual Meeting. The critical upshot of our discussions was a decision to place a dues increase before the membership, to be voted on at the Annual Meeting. We will discuss this in the May Bulletin, also, just before the meeting. The basic membership is proposed to go up to \$10.00.

The Board was saddened by the resignation of John Christy as Treasurer. He has a new job as curator of mosses and liverworts at the Milwaukee (Wis.) Public Museum. Since we cannot leave the position of Treasurer vacant, the Board voted to elect Nadine Smith to fill out the rest of John's term. Nadine is on the ballot for officers for 1982-1983. We wish John Christy well in his new venture, thank him for conscientious book-keeping, and welcome Nadine Smith into this position.

Report was given of progress in NPSO's application for tax-exempt status. We all owe a special debt of gratitude to James Conley, Salem lawyer, who saw to it that forms were properly handled.

Why should we worry about preserving species that are of little use?

Humans, too are merely a species, and are as much a part of nature as the lady slipper...



CHAPTER NEWS

EMERALD CHAPTER

Meetings:

Monday, April 5, 7:15 p.m. Rare, Threatened and Endangered Native Plant Species with a Focus on the Willamette Valley. Anne Kowalishen, State NPSO Vice President and botanist for the Portland Park Bureau currently assigned to the Mt. Tabor Wildflower Project, will present a slide show and program. Anne will update us on efforts to gain recognition and protection for species of concern and suggest what we can do in support of the State NPSO's Endangered Plant Committee, which she chairs. Meet at the Eugene City Library.

Monday, May 3, 7:15 p.m. Wildflowers of the Mount Pisgah Arboretum: a slide show as a joint effort by Dave Wagner, Arboretum President, Rhoda Love, NPSO State President nominee, and Charlene Simpson. The Arboretum will be the site of a wildflower show May 2. We'll have a native plant check list on sale. Proceeds go to the Arboretum. Meet at the Eugene City Library.

Monday, June 7, 7:15 p.m. Wildflowers of the South West: Utah, Arizona, California. Harold Dunn, Emerald Chapter member and long time plant lover, will show us slides from his many trips to the Grand Canyon, Joshua Tree National Monument and the Anza-Borego Desert. Meet at the Eugene City Library.

Wildflower Classes:

Beginning April 1, 7-10 p.m., Charlene Simpson, Emerald Chapter President, will teach a Lane Community College adult education class (non-credit) on Northwest Wildflowers. Refer to the LCC Spring Schedule of Classes for details and registration information.

Linda Johnson, Emerald Chapter Vice President, will teach Northwest Wildflowers by field trip in the Thurston area beginning Wednesday, March 31, 7-10 p.m. Watch the LCC Spring Schedule of Classes for further details.

Dr. Rhoda Love, NPSO President Nominee, will teach a field course in Wildflowers of the Eugene Area through the Eugene Parks and Recreation Department. The class will meet Wednesdays, 9-12, at the Amazon Community Center beginning April 14. Watch for the Eugene Parks and Recreation Spring publication for registration information.

Wildflower Walks:

Dr. David Wagner begins his 7th Annual weekly wildflower walk through Alton Baker Park on March 4. Meet at the north end of the footbridge over the Willamette River near Autzen Stadium at 12:30 every Thursday --- rain or shine! Call Dave at 686-3033 for further information.

Linda Johnson again leads a weekly wildflower walk from Hendrick's Bridge Wayside Park beginning April 1 (Thursdays), 5:30 - 6:30 p.m.

Field Trips:

April 18, 1:00 p.m. Harold Dunn's Mohawk Valley/Coburg Hills property. Call Harold Dunn, 746-3063 for details.

April 24, 9:00 a.m. Wild Cat Creek Road (Route F). Meet in large parking lot at Perkins' Peninsula Park, Fern Ridge Reservoir. Charlene Simpson, leader.

Workshops:

Wild Foods Workshop. Saturday, May 15, 9 a.m. to 3 p.m., at St. Paul's Methodist Church in Springfield, Linda Johnson will facilitate this Willamette Parks and Recreation Department sponsored event.

CORVALLIS CHAPTER:

Meeting:

2 March. David Wagner, NPSO President, will be meeting with Corvallis NPSO members to form a Corvallis Chapter. Persons interested in becoming members of this chapter should contact Jacque Greenleaf at the OSU Herbarium, 754-4106. The meeting will be held at 7:30 PM, at Room 208-2, Cordley Hall, OSU campus.

FLORA OF THE MCKENZIE RIVER VALLEY

The Eugene Natural History Society features a meeting and field trip by Dr. Herm Fitz. Friday, 21 May, 8:00 p.m., 123 Science I, U. of O. Campus. A Botanist's Paradise: The McKenzie River Valley. Included in the lecture will be slides of rare plants Silene hookeri and Microcalyx quadrangularis, found on Mount Baldy.

Available at the meeting is Dr. Fitz's McKenzie Drainage Checklist, 24 pp. Cost to offset printing is \$1.00.

Friday, 22 May, 9:00 a.m. - 3:00 p.m. Botanizing Mount Baldy. Meet where McKenzie View Drive goes under I-5, across the McKenzie River from Armitage Park. Bring a sack lunch.

WILLAMETTE VALLEY CHAPTER

Meeting:

Monday, March 15, 7:30 p.m. First Methodist Church, State and Church Streets, Salem. Use Church Street entrance to Carrier Room. Jean L. Siddall, Chairman of the Oregon Rare and Endangered Plant Species Taskforce, will present Updated Information on the Rare and Endangered Species Program.

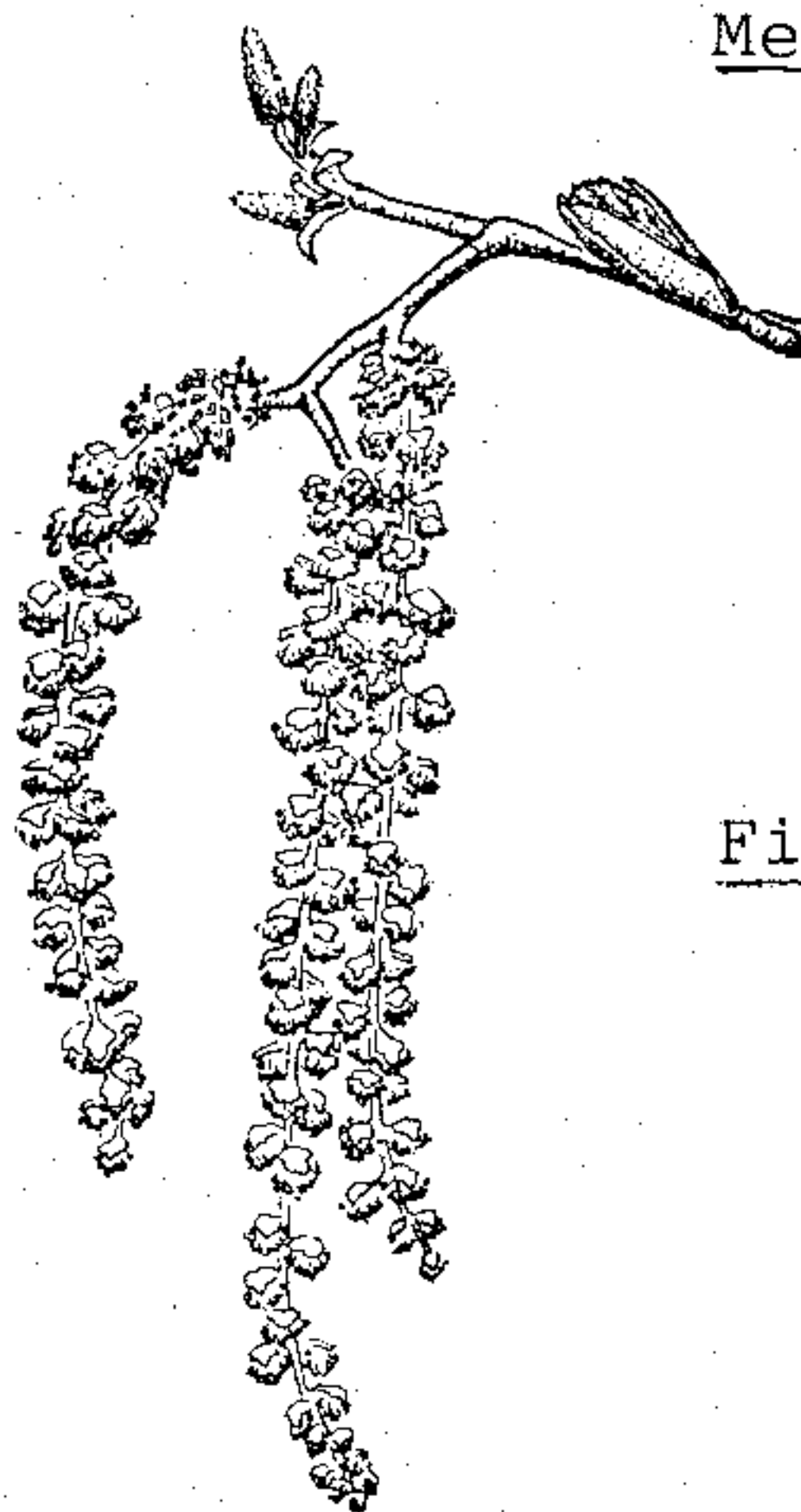
Field Trips:

Sunday, March 28. Search for Scoliopus hallii along Little Luckiamute River. Carpool at south Salem K-Mart at 8:30 a.m., or meet Larry at Falls City at 10:00 a.m. Larry Scofield, leader, phone 787-3833.

Saturday, April 3. Mosier wildflowers with Portland Chapter. Meet at south Salem K-Mart at 7:00 a.m., or be at Mosier Overpass at 10:00 a.m. Keith Chamberlain, leader, phone 478-3314.



Ainus rubra (A. oregana)



HIGH DESERT CHAPTER

Meetings:

March 30, 7:30 p.m., at Cascade Natural Gas. John Schwartz will deliver the second half of his excellent series on Trees of Oregon. He will concern himself with deciduous trees this time.

April 27, 7:30 p.m., at the Far West Federal Savings & Loan Community Meeting Room. Marg Ettinger will share with us some tips for distinguishing plant families and her experience in field identification.

PORTLAND CHAPTER

Meeting:

Wednesday, March 24, 7:00 p.m., Central Library, 801 S.W. 10th, Portland. Wildflowers of 1981 will be presented by a Portland member Mike Fahay. The program will show slides of wildflowers found during hikes in the Columbia River Gorge, around Mount Hood and Saddle Mountain. Mike is a research chemist with Crown Zellerback and an avid photographer of wildflowers.

Field Trips: First outings of our 1982 season!

13 March. Columbia River North Shore, Ruth Hansen, leader. Carpool at Department of Motor Vehicles Parking Lot at NE 60th and Glisan. 8:20 AM. Ruth wants to leave promptly at 8:30. Others may join the group at the north side of the bridge at Cascade Locks at 9:15 AM. Ruth intends to take us into the sunny (hopefully) hills along the old road to Lyle. She plans to find various sisyrinchiums, fritillarias, and Lomatium piperi. This is a car trip with many stops and a variety of possible destinations depending upon the time.

20 March. Mt. Hebo, Ingeborg Day, leader. Meet for carpooling at OMST parking lot (4015 SW Canyon Rd.) at 8:00 AM or meet Ingeborg at the telephone company parking lot on Highway 101 in Nehalem at 10:00 AM. (Take Highway 26 west from Portland to Necanicum junction and then southwest on Highway 53 to Nehalem). This mountain can be ascended by either an easy walk or a drive to the top. If the day is clear we may be able to see Mt. Jefferson and the Three Sisters! Ingeborg will also show us through a Nature Conservancy site in Rockaway, which contains a historic corduroy road and 500 year old western red cedars.

27 March. North Fork Clackamas River, Dr. John Hammond, leader. Carpool at Tri-Met's Handyman Park and Ride lot at 15550 SE McLaughlin Blvd. in Oak Grove. 8:30 AM. Dr. Hammond will take us to several low elevation sites in the North Fork Clackamas and Eagle Creek areas. He will discuss mosses, lichens and whatever flowers that can be found.

3 April. Mosier Area, Keith Chamberlain, leader. Carpool at Department of Motor Vehicles parking lot (address above) at 8:30 AM or meet Keith at Mosier Exit on I-84 at 10:00 AM. Keith will take a similar route (past Wasco Lookout) as his trip for the Annual Meeting last year. This trip is five weeks earlier and should show us a clearer mix of spring and early summer wildflowers. This is a joint trip with the Willamette Chapter.

10 April. Dry Country Flowers, Keith Chamberlain, leader. Carpool at Department of Motor Vehicles parking lot (address above) at 7:45 AM or meet Keith at Willowdale at 10:00 AM. This is a car trip with many stops, likely to cover 100 miles. Keith hopes to find a variety of dry country flowers including several lomatiums, erigerons, and Pediocactus simpsoni. This is a joint trip with the High Desert Chapter from Bend.

FIELD TRIP ON GRANDE RONDE RIVER BEING ORGANIZED

Charlene Holzwarth is making up a party of twelve boating enthusiasts to drift the Grande Ronde River, May 29 or June 5, to inventory the wildflowers. Boats will be beached for 3-4 hours each of the 3 days to allow exploration of gullies in this roadless area of NE Oregon. Interested parties should contact her at 2534 NE 34 Ave; Portland, OR 97212.

PLANT LISTS BEING CURATED BY PORTLAND CHAPTER

As part of the effort in T/E public education, Portland Chapter has been collecting field trip flower lists. These can be made available for the cost of copying and mailing. They would like to have submissions of lists from all corners of the state; mostly they have lists of Portland Chapter trips. The person coordinating this useful exchange is:

Charlene Holzwarth
2534 NE 34 Ave.
Portland, OR 97212



"He is rather enthusiastic about Isoetes isn't he?"

(by Ed Paulton from the Fiddlehead Forum,
Bulletin of the American Fern Society)

SISKIYOU CHAPTER

Meetings:

For further information call Darlene Southworth 482-6341 or 488-1034. All meetings are at 7:30 p.m., in 275 Science Building, SOSC.

March 4. Ron Kranz: Vegetation patterns of Agate Desert and the Table Rocks.

April 1. Joan Seevers, botanist with BLM. Threatened and Endangered Plants.

May 6. Dr. Stephen Cross, Department of Biology, SOSC: Riparian Habitat.

SISKIYOU CHAPTER SURVEY RESULTS

In the closing months of 1981, Siskiyou Chapter officers mailed out 65 Membership Surveys to monitor the chapter's health and happiness. We received 18 responses to our 17-point questionnaire and are pleased at this level of response. Other NPSO chapters may be interested in some of the Survey's results.

We found that our members are generally satisfied with chapter field trips, meetings, and other activities. Members seem to prefer a balance between difficult-overnight-far-away field trips and easy-part-day-nearby field trips. They want some of both kinds. And we were very pleased to receive five offers to lead future field trips.

Attendance at our meetings falls into two groups: those who attend only a few times a year, and those who attend most of our ten meetings. One important limit on attendance is distance; members in Grants Pass and Applegate, for example, have a long drive. Members seem to like our programs. They like a broad range of topics, but they do prefer pretty pictures and educational programs by knowledgeable speakers. We learned that talking botany with friends before and after the program is quite important. The Survey also provided us a long list of suggestions for future programs.

Members told us they would like more workshops, emphasizing "how-to" information. They also clearly feel Siskiyou Chapter should do more -- not less -- native plant conservation. Protection of Southern Oregon habitats heads the list of needed conservation activities. (Our current chapter project in the Agate Desert reflects this need)

Our survey did not ask what kind of cookies are preferred, but one member objected to sugar cookies. And we received many other opinions, big and small. We thank all 18 members who responded -- the information you gave us was much needed, and we hope all other members will give us their opinions at any time.

Vern Crawford

BLUE MOUNTAIN CHAPTER ACTIVITIES:
REVEGETATION IN THE WALLOWAS

Two members of the Blue Mountain Chapter have been involved in an interesting and much needed kind of native plant conservation. During the past two years, Rachel and Roy Sines have provided leadership, and a lot of work, for a lakeshore revegetation program in Eagle Cap Wilderness. Around 100 years of impact by various kinds of camping has severely deteriorated the native vegetation and soil on campsites, as it has at many northwest mountain lakes.

Rachel and Roy work as Forest Service volunteers providing ecological assistance in defining native plant communities and determining stage or climax species best suited for revegetation for each site. After studying available research and reports on revegetation work in other areas, they developed revegetation techniques that appear to work in the Wallowa Mountains.

Most of the campsites within the 200 foot lakeshore camping closure have been revegetated at the five largest lakes in the "Lake Basin" south of Wallowa Lake. The technique usually used is spacing impacted soil and transplanting plugs with selected species. Except for trees and a few shrubs, species transplanted are seral species that reproduce vegetatively and can withstand some trampling. Survival has been above 90 percent after two years. Rachel participated as a Wallowa Mountain representative on the committee that developed the Oregon threatened and endangered plant list. This has been valuable in helping ensure these species are not damaged in the revegetation program. While evaluating the impacted campsites and developing revegetation prescriptions, she is alert for rare and unique species that are endangered by camping.

While years will be required for areas between the plugs to fill in, it appears biologically the project has been successful. However, the social aspect has not been totally successful. Even though the lakeshores are closed to camping and the revegetated sites are signed, several sites are camped on each year. This compacts the loosened soil, buries or kills plants in the plugs, and causes volunteers backaches as they see their hard work damaged.

Hopefully, the program will continue until completed, which may take ten years, or longer. One paid Forest Service employee has been trained to direct the revegetation crew (now called rehabilitation and includes social trails). Crews are volunteers, and members of the Native Plant Society who would like to help a week or two late in August or early September would be welcome. Contact the Eagle Cap Ranger District at Enterprise, Oregon, 97828, if interested.

NATIVE PLANT SOCIETY OF OREGON
JEAN DAVIS MEMORIAL SCHOLARSHIP

Rules for Scholarship Awards

1. Scholarships are available to students in Oregon Colleges, planning their major study in plant systematics or plant ecology.
2. Scholarships are to be awarded in the amount of \$1,000 to worthy students who will be completing at least two years of satisfactory college work by July 1, of the year of receipt of application, and are full time students.
3. Awards will be made in the following manner:
 - (1) A certificate to be presented to the recipient.
 - (2) A check in the amount of the award to be submitted to the school of his or her choice, as set forth in rule number 1, to be used toward tuition within the following academic year.
4. If a recipient of an award fails to enroll, changes his or her major or leaves the school chosen before completing the period for which the award was granted, the full amount or unused portion of the money shall be returned to the Jean Davis Memorial Scholarship Fund of the Native Plant Society of Oregon.
5. Applicants will be required to submit:
 - (1) In their own handwriting, a statement of academic and career intent.
 - (2) Two (2) letters of reference from persons able to judge the student's ability to successfully complete study in the area of plant systematics or plant ecology.
 - (3) Full academic record, including an official transcript.
6. All applications together with items listed in rule number 5 must be received by the Chairman of the Jean Davis Memorial Fund Committee not later than April 1. The award will be made by May 1.
7. Scholarships are not to be granted to members or relatives of any person currently serving on the Scholarship Committee.

For further information, write to Mary Falconer, 1920 Engel Avenue NW, Salem OR 97304.

Recognizing that ESA is gravely threatened, over twenty-five national and international organizations have joined forces to counteract interests opposed to the conservation of endangered and threatened species. Many of these organizations have contributed to the production of this newsletter [ESA Reauth. Bull.].

What you can do. Reauthorization of a strong and effective Endangered Species Act will not be easy and will require the efforts of a large number of individuals and organizations. If you are willing to help, please contact [Annie Kowalishen, NPSO Endangered Species Committee Chairman,] or write: Ken Berlin, Chairman of the Endangered Species Act Reauthorization Coordinating Committee, P.O.Box 50771, Washington, D.C. 20004. We need your help to:

1. Inform friends and associates about the importance of the reauthorization process for the ESA's future; and
2. Write letters and make telephone calls to Administration officials and members of Congress supporting the ESA's reauthorization.

Useful publications on endangered species.

1. Endangered Means There's Still Time, 1981. (\$2.50) Readable, 33 page booklet about the Endangered Species Act. Many beautiful black and white photographs of endangered plants and animals. Write: Government Printing Office, Washington, D.C. 20402. Request number 024-010-005-26-2.
2. Endangered Species: The Road to Recovery, 1981. (free) Shorter description of the ESA, but useful. With photographs. Write: Publications Unit, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.
3. Endangered Species Act Reauthorization Bulletin. 1982 Write: Natural Resources Defense Council, 1725 Eye St. NW, Washington, D.C. 20006.]
4. The Nature Conservancy News. January/February, 1982. Volume 32, Number 1. Write: The Nature Conservancy, National Office, 1800 North Kent St., Arlington, VA, 22209.]

from: Endangered Species Reauthorization Bulletin.

ROCK MESA, THREE SISTERS WILDERNESS AREA

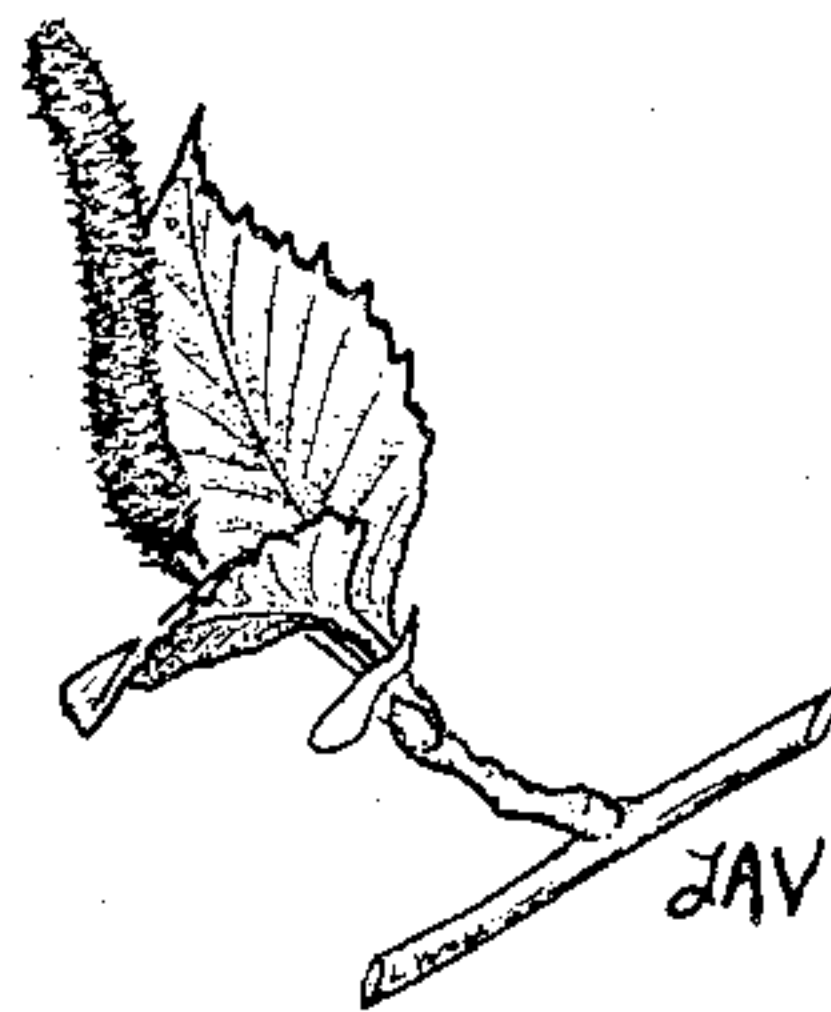
To find an open pit pumice mine near the base of the South Sister seems unthinkable. Yet it is a real possibility, for in 1981 a judicial decision granted that 670 acres of the Three Sisters Wilderness Area contains sufficient quantities of usable pumice to validate 20-year old mining claims held by the U.S. Pumice Co. The decision is currently under appeal to the Interior Land Board. At this time there are 4 alternative outcomes to this 20 year battle:

- *A favorable decision by the Interior Board could prevent the mining.
- *A land trade could be negotiated by concerned agencies to prevent the mining.
- *Future legislation by Congress (a bill concerning specifically this issue) could prevent the mining.
- *The area could be mined as intended.

Moreover, the land would become private property of the U.S. Pumice Co., and real estate development could occur there - in the heart of the Three Sisters Wilderness!

Submitted by Herm Fitz
Board Member
Friends of the Three Sisters
Wilderness

A brochure available from your local chapters contains many more details describing this situation and outlines ways in which each of us might help prevent this desecration.



Betula
papyrifera
♀ catkin



♂ fl.



♂ catkins



♀ fl.

A hearty thanks to Eugene Chapter members who volunteer to help get your Bulletin out. This monthly chore consists of folding, stapling and sorting about 650 NPSO Bulletins!

Suzanne Cicutat
Marjorie Colpitts
Joan Cook
Alan & Mary Ann Curtis
Harold Dunn
Tom Gallagher
Kenneth Hixson
Helen Hughes
Miki Hutchinson
Linda Johnson
Ken Jones

Mike Kaminski
Marie Knudson
Dot Leland
Rhoda Love
Malcolm and
Juanita Manley
Fran Moravesik
Frances Newsom
Charlene Simpson
Nadine Smith
Mary Warner
Margaret Wiese

COASTAL DUNES AND OFF-ROAD VEHICLES

The Umpqua Valley Audubon Society has formally requested the Siuslaw National Forest to protect the natural values of the Berry Creek-Lily Lake to Sutton Creek area (north of Florence on the central Oregon coast) from the adverse impacts of off-road vehicles.

Specifically we are requesting that the Forest Service close vehicle entry at the west end of Baker Beach Road, as this is the primary location where vehicles are leaving the established road and greatly disturbing the critical habitat of the state sensitive Lycopodium inundatum (Bog Club-moss) and the state threatened Snowy Plover. (Coastal Oregon's second largest population of Snowy Plovers occurs here.)

In a September 14, 1981 letter Dr. Anthony B. Walters, Ethnobotanist, wrote that "dune buggy activity in the Berry Creek area will have a most devastating effect on the flora of the deflation plain, and will likely alter the wind-flow pattern with year-round use." (This wind flow pattern is responsible for the dune system's maintenance.)

For more information about what you can do, contact Wendell Wood, Umpqua Valley Audubon Society, Conservation Chairman, P.O. Box 1725, Eugene, Oregon 97440. 485-6022.

WILDERNESS CHANGES PROPOSED

H.R. 5282 introduced mid-December, 1981, to the U.S. House by Phillip Burton (D-CA) will withdraw the entire Wilderness System from operation of mineral leasing and mining laws. In addition, it would withdraw all Congressionally designated wilderness-study areas in National Forests, all Rare II Wilderness and further-planning areas, and all areas identified for wilderness study by Bureau of Land Management. (The March '82 issue of American Forests Magazine will print a detailed look at this situation.) Have you written your Representatives lately? Support this Bill.

The Native Plant Society of Oregon Board took a vote to take a stand opposing pumice mining in the Three Sisters area in February.

Threatened & Endangered Comm.
Annie Kowalishen, Chairman
Native Plant Society of Oregon

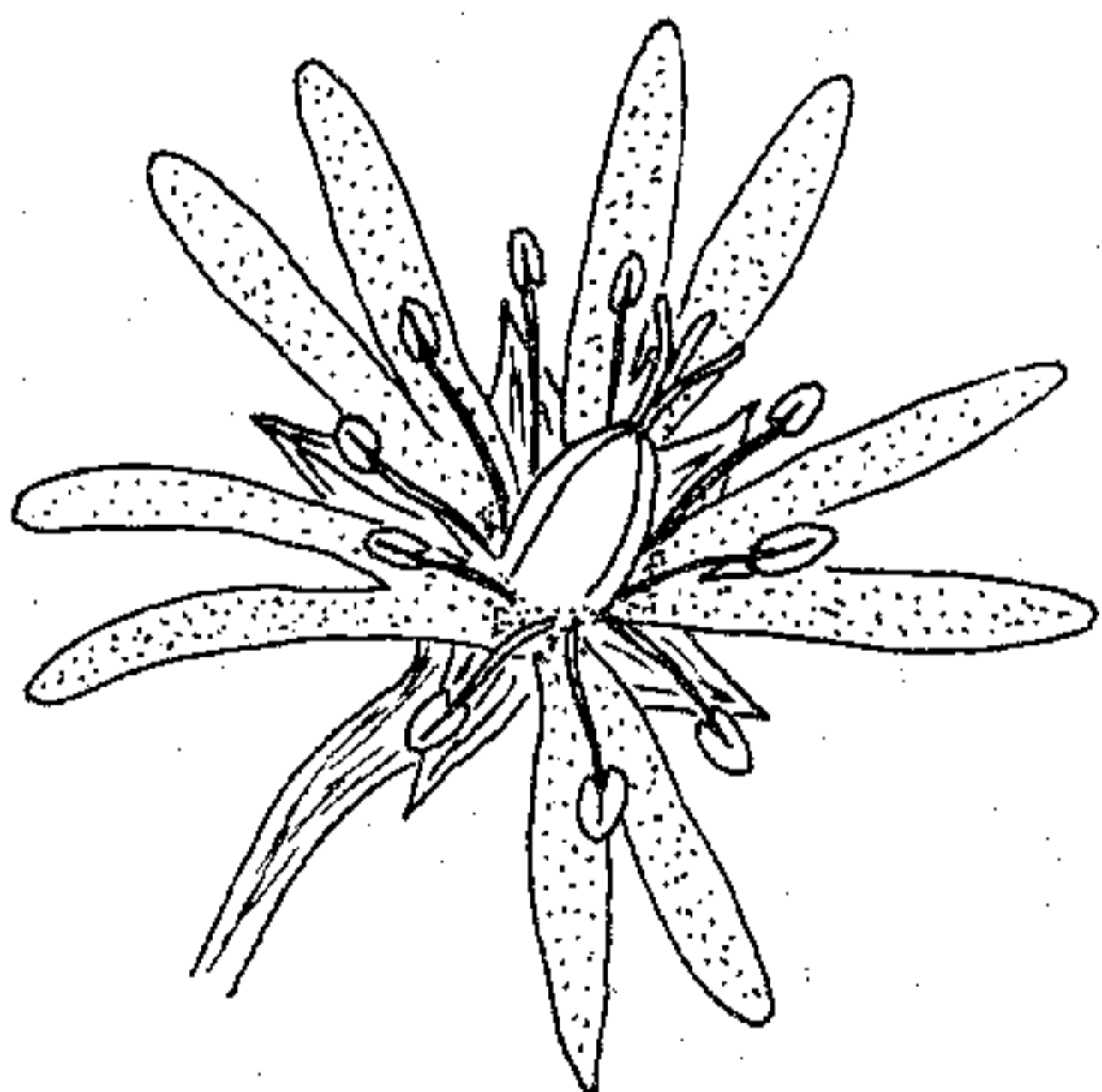
PLANT FAMILY PROFILES

By Herm Fitz

The Caryophyllaceae - CHICKWEED OR PINK FAMILY

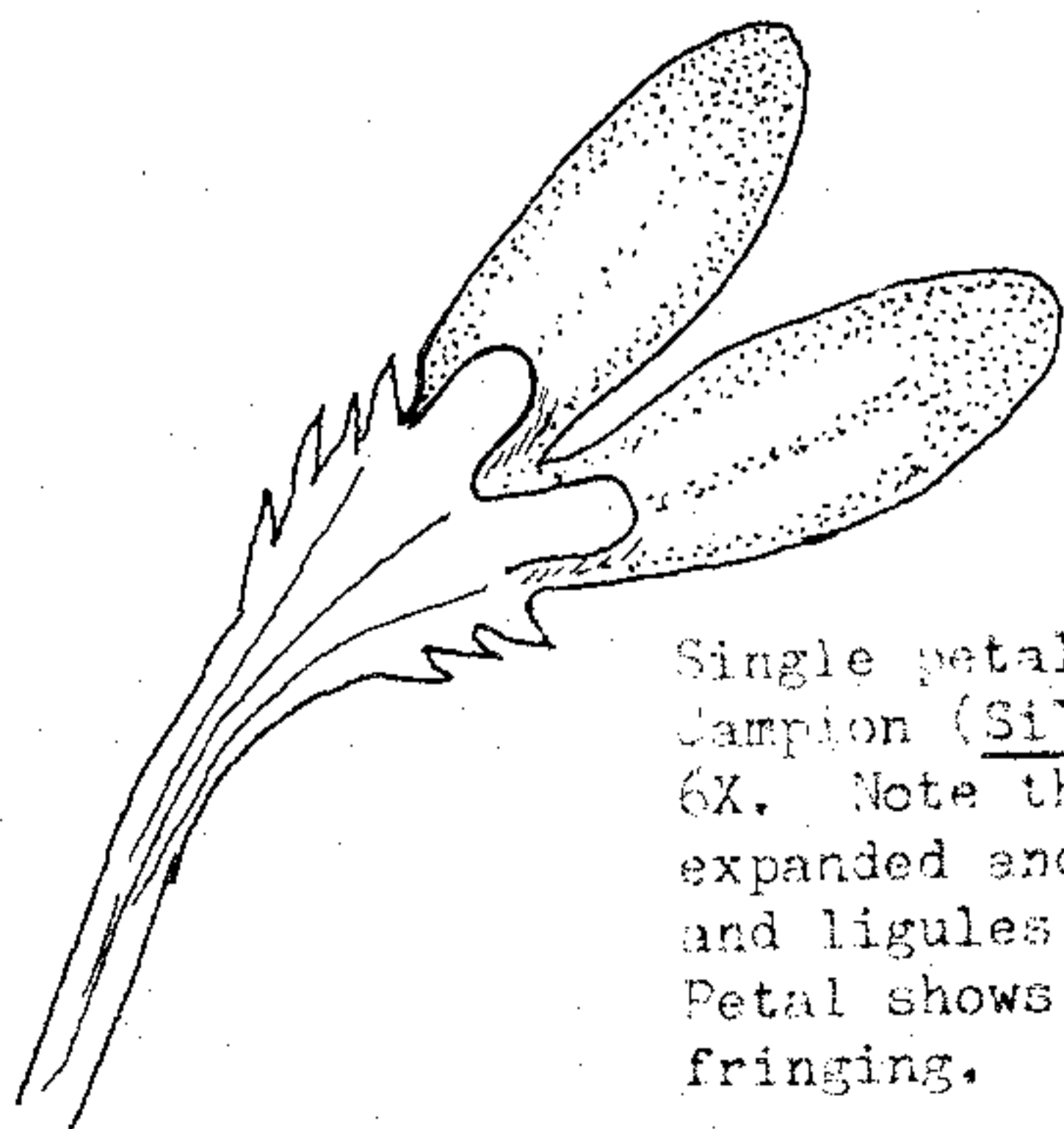
The Chickweed Family, with some 2000+ species in 80 genera, is widespread throughout north temperate regions, having its center of distribution in the Mediterranean area and adjacent parts of Europe and Asia. Members occur sparingly in the south temperate zone and in the higher mountains of the tropics. Of the 22 genera known to occur in the United States, 17 are represented in Oregon by about 85 species. Some of these are European weedy species that have become established: Starwort, Stickwort or Corn Spurrey (*Spergularia arvensis*), mostly west of the Cascades in disturbed areas; Jagged Chickweed (*Holosteum umbellatum*) in northeastern Oregon along the Columbia River; Corn Cackle (*Agrostemma githago*) and Cow-herb (*Vaccaria segetalis*) in wastelands and along roadsides; the escaped ornamentals Bouncing Bet or Soapwort (*Saponaria officinalis*) and Grass Pink and Sweet William (*Dianthus spp.*); Knawel (*Scleranthus annuus*) in dry places; and Corrigiola (*Corrigiola litoralis*) established on ballast dumps near Portland. Sea Purselane or Seabeach Sandwort (*Honkenya peploides*) reaches a southern limit in northern Oregon on coastal beaches; Sandmat (*Cardionema ramosissima*), in the same habitat, ranges from southern Washington south to Mexico and Chile. Several genera are represented by species both native and of European origin: The Catchflies, Campions, or Wild Pinks (*Silene*) of varied habitat with about 24 species, 7 of which are listed as threatened or endangered in Oregon; the Sandworts (*Arenaria*), in habitats from saline swamps to montane rockslides, with about 21 species, 2 being listed as threatened or endangered in Oregon; the chickweeds or starworts (*Stellaria*), also of varied habitat, with 12 species; Sand Spurrey (*Spergularia*), mostly coastal or in other saline to alkaline habitats, and Mouse-ear Chickweed (*Cerastium*), in varied habitats - each with 5 species; Pearlwort (*Sagina*), from the coast to alpine zone, with 4 species; and Campion (*Lychnis*) with 4 species.

Members of this family are relatively uniform and easily recognized. Most are annual or perennial herbs, if perennial, then dying back to the crown in fall. A few are shrubby with persistent woody stocks. The

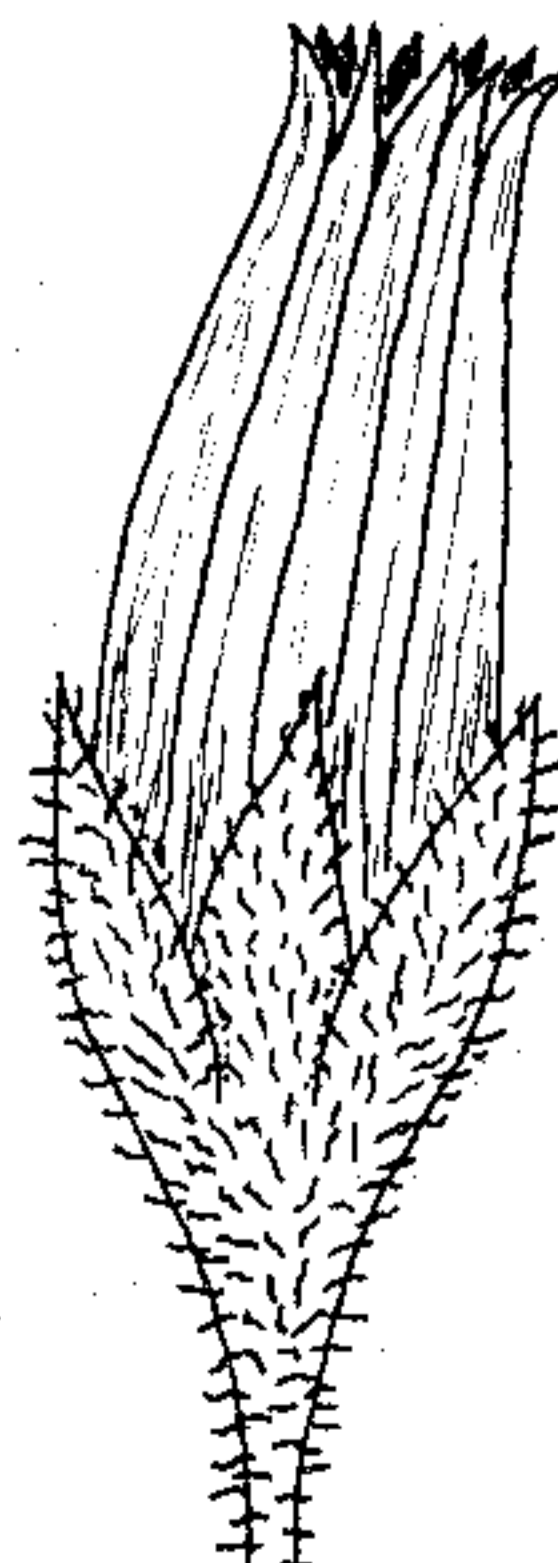


Single flower of Bog Starwort (*Stellaria longipes*) 2 1/2 X. Note the deeply bifid petals, easily mistaken for twice as many.

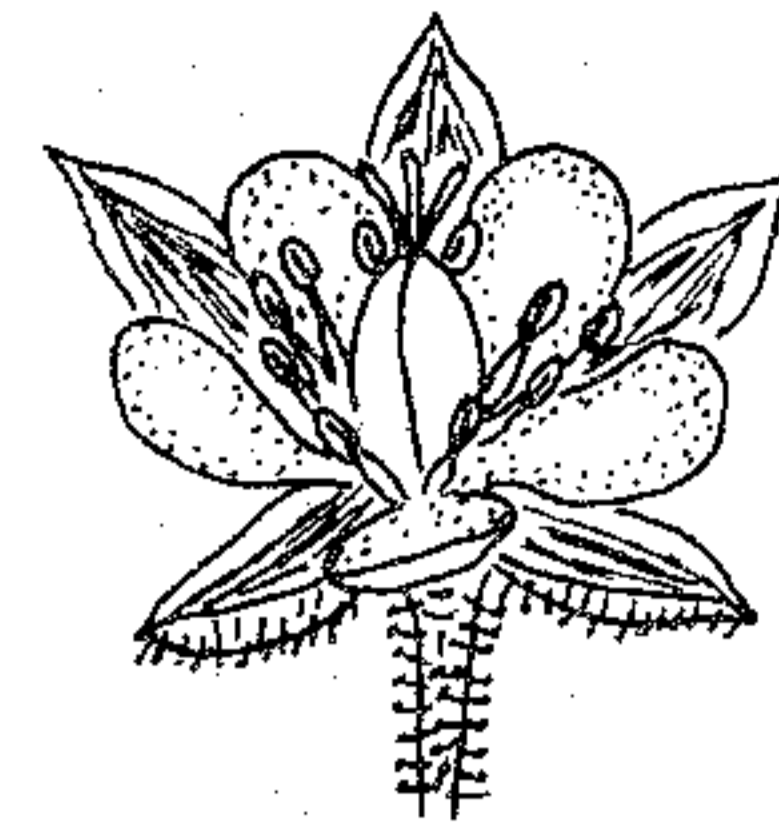
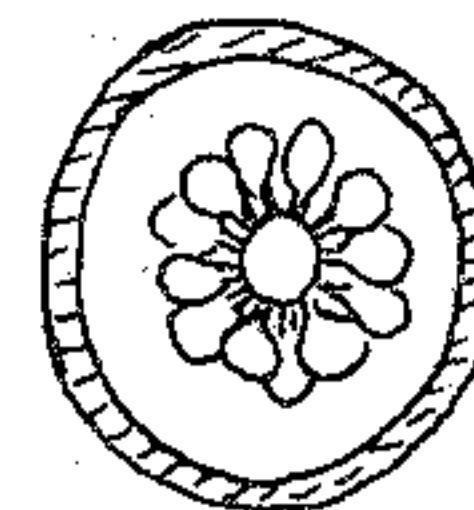
Capsule of Mouse-ear Chickweed (*Cerastium nutans*) 5X. Note the dehiscence by 10 terminal teeth.



Single petal of Suksdorf's Campion (*Silene suksdorfii*) 6X. Note the narrow claw, expanded and bifid limb, and ligules at the junction. Petal shows also lateral fringing.



Pistil of Sand Spurrey (*Spergularia rubra*) 10X. Cutaway longitudinal section, showing uni-locular ovary with free-central placentation. Cross-section, showing same characters.



Flower of Sand Spurrey (*Spergularia rubra*) 3X. Note the superior ovary with styles separate to base.

leaves are simple, entire and opposite (apparently whorled in *Spergularia*), with the base of each pair often joined around a swollen node to form a perfoliate base. Stipules are usually absent; when present, they are scarious. Regular flowers are borne in cymes and are generally bisexual (both sexes present in a single flower); dioecious (some plants with only staminate or male flowers, some plants with only pistillate or female flowers) species occur in *Lychnis*. The calyx consists of 5 sepals (4 in some species of *Sagina* and *Stellaria*), either separate or joined and inflated, occasionally subtended by a number of bracts (notably *Dianthus*). The corolla consists of the same number of petals (lacking in *Scleranthus annuus* and some *Cerastium*), each often sharply differentiated into a narrow claw and an expanded distal limb, with 2 small outgrowths (ligules) at the junction on the inner surface (see drawing). The limb of the petal is often notched, deeply cut (bifid) or even fringed (entire in *Arenaria* and *Spergularia rubra*). Stamens number twice as many, or the same, as the number of sepals, or occasionally fewer (*Spergularia*, *Stellaria* and *Cardionema*). The pistil bears a superior ovary of 2 to 5 carpels with a single locule (chamber), the few-to-numerous ovules being attached by free-central placentation - or basal when only a single ovule is present. Rarely septae (divisions) are present in the basal portion of the ovary (as in some *Silene* and *Lychnis*), in which case the placentation is axile. The styles are free, separate to the base, and as many as the carpels. The ovary develops most often into a capsule which dehisces (splits open) by valves, or by teeth at the apex, either the same number or twice as many as the number of carpels. Occasionally it is circumscissile (splitting around an equator), or more rarely, the fruit is an indehiscent utricle or akene in single-ovuled genera (*Cardionema*, *Corrigiola*, and *Scleranthus*). Seeds bear a strongly curved embryo, a character that is shared with other families in the order Caryophyllales, including also the Purselane Family of last month.

The Caryophyllaceae presents many popular garden ornamentals: The Carnation (*Dianthus caryophyllus*), many pinks (other *Dianthus* species), Campions and Catchflies (*Silene*), Baby's Breath (*Gypsophila*), Corn Cackle (*Agrostemma*), Soapworts (*Lychnis* and *Saponaria*) and the Maltese Cross (*Lychnis*). Others are widespread noxious weeds, notably several species of *Stellaria* and *Cerastium*.

The generalized floral formula for the Chickweed Family is:

$$Ca^{5(4)} Co^{5(0,4)} S^{5 \text{ or } 10(\text{or fewer})} \left(\begin{array}{c} 2 \\ 5 \end{array} \right)$$

with a superior ovary. So, the next time you find an herbaceous plant with simple, opposite leaves, regular 5-parted flowers with separate styles arising from a uni-locular ovary with free-central placentation - later maturing to a 1-chambered capsule dehiscent by valves or teeth - and if the petals show a claw, limb and ligules, and are notched or bifid, then it seems likely that you have found a member of the Caryophyllaceae - the Chickweed Family.

"On one of my trips towards the Bitterroot Mountains, I found one of the handsomest asters known to science and named by Professor Fernald of Harvard: Aster hendersonii [now included in A. foliaceus var. lyallii]. On other trips I found the pretty little montia which I named Montia arenicola, as well as a beautiful phacelia, P. idahoensis, and the aster, A. cordalenus [now A. eatonii]."

Illustrated to the right is Montia arenicola, drawn by J.R. Janish. From Vascular Plants of the Pacific Northwest, C.L. Hitchcock, et. al.



EARLY EXPERIENCES OF A BOTANIST, by L.F. Henderson
continued from February 1982 Bulletin

- Section 6 -

During the summer of 1895 I took the longest botanical trip I have ever taken in my life. This was for the Agricultural Department at Washington, D.C., and included a botanical reconnaissance of all of the central portions of Idaho. As it was to end over in Salmon City, I took with me as assistant one of our students whose home was in Salmon City. This was Charles Kirtley, then a senior in the University, and as clever a handler of horses and other stock as I ever met. Mr. Kirtley, after finishing his course at the University, went to Chicago to study medicine, and became a well-known physician in Eastern Idaho. As we had only \$150 per month appropriated at Washington to cover all expenses, I fitted up at Moscow and determined to ride by horseback or walk the entire distance into south central Idaho, where my real itinerary was to begin. Our special objectives were to be the Salmon River and Lost River Mountains, with their streams and bordering plains, about 600 or 700 miles distant by trails and wagon-roads. I bought three good Indian horses, two of them fine pack animals and one a good riding horse. I determined that even if we had to go at a slower pace, one man must be on the ground all the time, that nothing should be passed en route, either through inability to see everything from horseback or from traveling too fast. So I bought a pedometer and then we both took the pedometer in our pockets in tern, and found to my delight after we had stepped off 100 yards a half a dozen times each, that we did not vary but a few inches for the whole distance. This was very important, for we agreed that each should walk 10 miles, measuring his distance with the pedometer, when the other man should get off the horse and walk ten miles, measuring his distance the same way, while the late walker rode.

Thus we covered about 1,000 miles in the center of Idaho, nowhere beyond or even very near its borders, between the first of June and the last of September. This distance tells you whether our course was sinuous or not. Hardly a rare plant, and not a new one, occurred from Moscow 'till we reached the old mining town of Florence, then containing five residents, but at one time in the sixties having a population between 6,000 and 10,000. At this point we left 6,500 feet and snow banks in June to begin the drop to 2,500 feet above sea in the canyon of the Salmon River, where we found a blistering heat and watermelons half grown! On this eight mile slope I found many plants I had never seen before, and amongst them, perhaps the finest and most beautiful of the nemophilas, a new species which I named Nemophila kirtleyi, for my young companion. It was 14 miles from the waters of Salmon River to the top of the grade, which rose even higher on the south side, and it was late in the evening before we had covered this 22 miles, plus several more on top, and before we came to the log hotel at Warren's Hot Springs, with good provender for horse and man, and a delightful system of bathing pools with the water at almost any degree of heat, from ice-cold to boiling! And how one delights in those conveniences, after a couple of weeks of often dusty roads, 30 to 50 mile walks every day, and the slimmest rations for man and beast!

The second day we came to what had been a bridge over the Payette. Though the river was now running bank-full, it had been much higher and at that stage had stripped off all the 3-inch plank from the stringers, and carried most of them indefinitely down stream, but had left six on the banks within sight. "All the world before us, and no where to do," laughed Kirtley. We both laughed over the predicament, but knew it for no laughing matter. Neither we nor the horses could swim that roaring stream, and at the same time carry our packs. No roads of retreat and circumvention for hundreds of miles. An idea occurred to both of us at about the same time. The stringers were all intact. Our plan was to walk across those beams and 8-inch stringers to their ends, lay the planks down in threes, lead a blind-folded horse onto the far three, take up the three behind, drag them in front, and so gradually get one horse across, and repeat until the three were on the other side. Understand that one man must hold the blind-folded horse to keep him from tumbling over into that current. If he did, it "would be just too bad" for horse and for baggage! The other man must struggle with each of those heavy planks on narrow stringers, where a misstep meant probable death in our clothing and boots, and arrange another temporary bridge for each horse. When one man was dripping with perspiration and exhaustion, the other would take his place and the tired man hold the horse. I think Ceasar's bridge over the Rhine was no more unique, if more celebrated, than ours over the Payette. The stream was probably not over 100 feet across, but we were four hours and a half in completing that job. Needless to say, we found a make-shift camping place and slept the sleep of utter exhaustion.

The next day we passed through a miniature war between farmers with their cattle and sheepmen. Though the combattants were legion, the only casualties we could hear about were of sheep and horses. Through Long Valley and Little Round Valley we proceeded, and then we came to the top of the tremendous grade which dropped into the Lower Payette River, a strange thing met our eyes. Our beautiful forests of Yellow Pine, Pinus ponderosa, stopped right on top of that hill as abruptly as if they had been cut off along a line, and not another tree did we see 'till well across the Payette, and advancing towards the old mining camp of Idaho City. Many buildings were still standing in this famous old placer camp, but as I remember, the only ones tenanted by human beings and not by pack-rats, were the still fine hotel, the post office, and an assay office. But the country about Idaho City I shall never forget, since it was desolation carried to the nth degree! I imagine that gold dredges must have followed in the footsteps of hand mining, as the country was turned topsy-turvy as far as the eye could reach, the largest boulders of course on top, and barren of vegetation even after the lapse of years!

to be continued in April 1982 Bulletin



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The Editor
Native Plant Society of Oregon
Department of Biology
University of Oregon
Eugene, Oregon 97403

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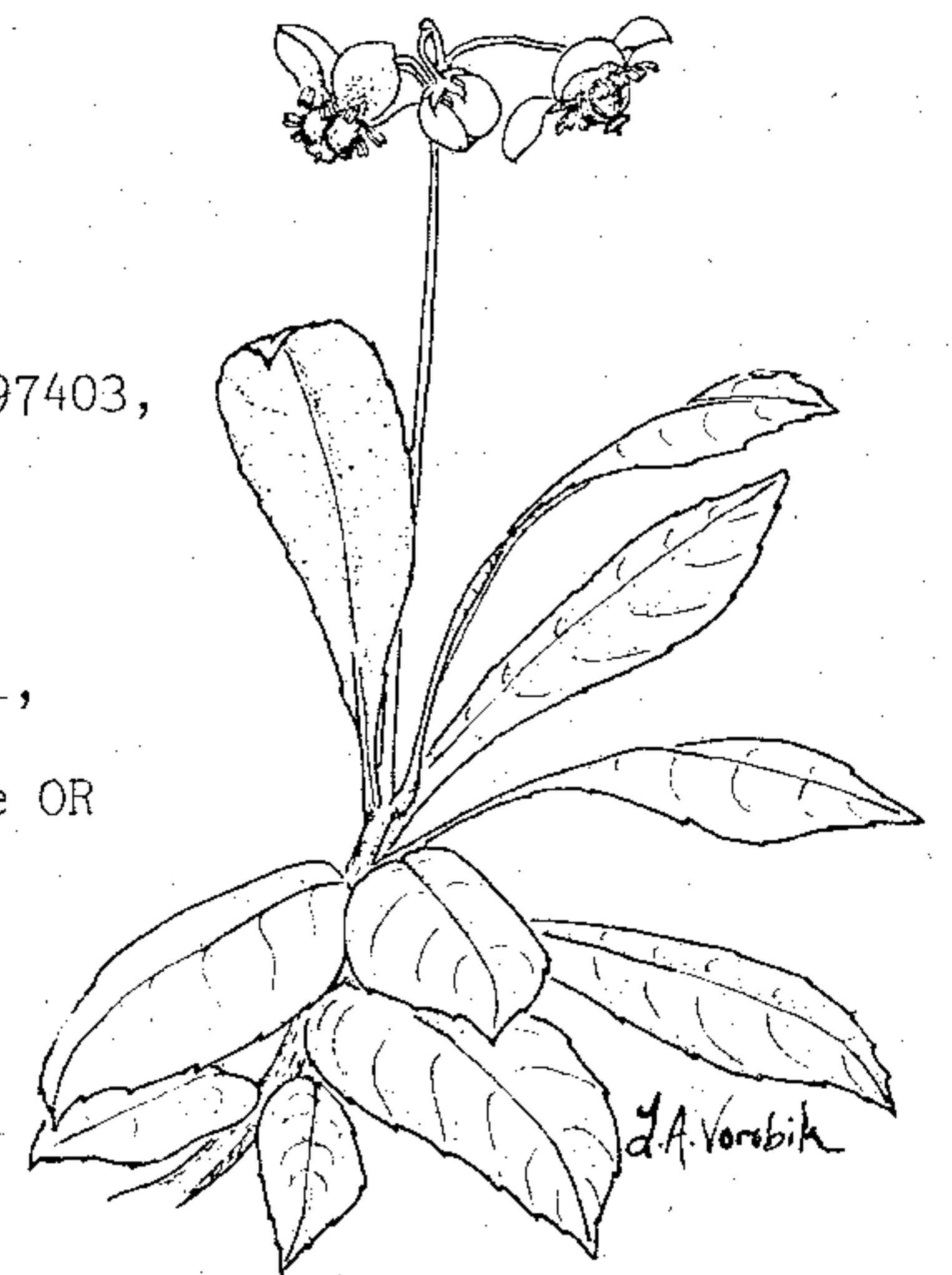
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CHAPTER PRESIDENTS

Blue Mountain: Harry Oswald, Box 459, Pendleton OR 97801, 276-2292.
Emerald: Charlene Simpson, 2455 Alder St., Eugene OR 97405, 686-1094.
High Desert: Stuart Garrett, 361 NE Franklin, Bend OR 97701, 389-6981.
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Willamette Valley: Mariana Bornholdt, 5084 Skyline Road S, Salem OR 97302, 585-2057.



Chimophila
menziesii

little prince's pine