

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

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1987 The Year of the Oregon Endangered Species Act

CHAPTER NEWS

Blue Mountain

- 2 May, Sat. Field Trip to UMATILLA FORKS. Meet at BMCC Greenhouse at 8:30am (bring a lunch).
Leader: Bruce Barnes (276-5547).
- 24 May, Sun. Field Trip to MORGAN LAKE, near LaGrande. Meet at 8:00am at BMCC Greenhouse or
at 9:15am at the Safeway parking lot in LaGrande (bring a lunch). Leader: Ruth Rouse.
- 30 May, Sat. Field Trip to LOGAN VALLEY near Prairie City. Meet at 7:00am at BMCC Greenhouse or
at 10:00am at Clyde Holliday Wayside between Mt. Vernon and John Day (bring a lunch).
Leader: Karl Urban.
- 20 June, Sat. Field Trip to BALD MOUNTAIN. Meet at 8:30am at BMCC Greenhouse or at 9:45am at
the intersection by Langdon Lake in Tollgate. Leader: Ruth Rouse.

Corvallis

- 11 May, Mon. Meeting, 7:30pm. Room 205, Withycombe Hall, OSU Campus. Tom Kaye of the OSU
Botany Dept. will give a slide show and talk on the LANDSCAPE AND VEGETATION OF THE
OLYMPIC MOUNTAINS.
- 16 May, Sat. Field Trip to SAND LAKE led by Dick Vander Schaaf of The Nature Conservancy. For
more information contact Dan Luoma (758-8063).

Emerald

- 11 May, Mon. Meeting, 8:00pm. Amazon Community Center, 2700 Hilyard, Eugene. A multimedia
slide presentation from the Berry Botanic Garden in Portland, "A Garland of
Generations", will be shown in conjunction with an information session about
Oregon's Rare and Endangered Species Bill, SB533.
- 17 May, Sun. Mt. Pisgah Flower Show, Eugene.
- 6 June, Sat. Field Trip to BIG RIVER OLD GROWTH PRESERVE, south of Cottage Grove. Meet at
10:00am at the Lane Community College south parking lot, adjacent to the Science
Building or at the intersection of Big River Road and Stennett Butte Road near the
site at 10:45am. Directions to Big River are printed in the April issue of the
Bulletin.

High Desert

- All field trips leave from the parking lot behind MacDonald's Restaurant, 2048
NE 3rd, Bend, at 9:00am. Carpools are encouraged. Bring a backpack lunch.
Non-members are welcome. For more information call Stu Garrett (382-2681).
- 2 May, Sat. Field Trip to The Nature Conservancy's METOLIUS RIVER PRESERVE. Very short hike
($\frac{1}{2}$ mile). Four ecological zones -- Fen, Riparian, Humid Coniferous Forest, and
Dry Ponderosa Pine. Leader: Ken Robinson (382-1452).

6 June, Sat. Field Trip to POWELL BUTTE. A moderate 4 mile hike with great views in BLM administered area. Leader: Stu Garrett (382-2681).

27 June Sat. Field Trip to OCHOCO BIG SUMMIT PRAIRIE. Emphasis on riparian areas with an expert from USFS. Leader: Bud Kovalchik.

Mid Columbia

6 May, Wed. Meeting, 7:30pm, Mosier School. Program will be slideshow "Wildflowers of the Columbia River Gorge" by Nancy Russell of the Friends of the Columbia River Gorge. It will include habitats, blooming times, and information about early botanical explorers.

16 May, Sat. Knapweed Pull. Meet at 9:30am at the Rowena Plateau, Tom McCall Nature Conservancy Preserve for a knapweed pull in the morning. Bring your own bag lunch. Then either a leisurely ramble over the plateau or a hike to the hilltop viewpoint. Everyone invited then for late afternoon refreshments at Susan Kofahl's home, 2050 Mosier Creek Road. (478-3576).

North Coast

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For information, contact Roy Peters (842-9284).

Portland

2 May, Sat. Field Trip to STARVATION CREEK in Columbia Gorge. Leave at 9:00am from the K-Mart on NE 122nd and Sandy Blvd., south end of parking lot, or meet at Starvation Creek Rest area at 10:00am. Leader: Shep Wilson (228-7823).

9 May, Sat. NPSO ANNUAL MEETING FIELD TRIPS:

ANGEL'S REST. Easy 5 mile trail through woods and across talus slopes to a rocky outcrop 1,600' above the Columbia River. Spectacular wildflowers, waterfall and view. Meet at Woman's Forum State Park at 9:00am (see driving directions below) or at Wahkeena Falls parking area at 9:15am. Leaders: Dave Dobak (643-2213/home or 627-3072/work) and Jan Anderson (248-9242).

HAMILTON MOUNTAIN (Wash.). Hike through timber, passing Pool of the Winds at Rodney Falls, to open slopes, rocky ridges and cliffs. Variety of plant habitats and excellent view of Columbia Gorge. Meet at Woman's Forum State Park at 9:00am (see driving directions below) or at north end of Bridge of the Gods at 9:45am. Leader: Lois Kemp (760-4998).

Directions to reach Woman's Forum State Park from Portland: take Corbett Exit off of Highway I-84. At Corbett, go east about 2 miles. Woman's Forum State Park is a prominent viewpoint on the north side of the road. From Menucha it is a short drive east.

12 May, Tues. Meeting, 7:00pm. First United Methodist Church, 1838 SW Jefferson St., Portland. Molly Grothaus will talk and show slides on GROWING PLANTS IN YOUR GARDEN.

16 May, Sat. KNAPWEED CAPER, Rowena Plateau. Pull knapweed (Centaurea diffusa and C. maculosa) from 9:30am until noon. After lunch ramble over the plateau or hike to the hilltop. Finish the afternoon with refreshments at Susan Kofahl's home near Mosier. Leave from K-Mart at 8:00am or meet leader at Rowena Plateau (Mayer State Park viewpoint) at 9:30am. Leader: Susan Kofahl (478-3576).

23-25 May
(Memorial Day
Weekend) Field Trip to SOUTHERN OREGON out of Cave Junction. Meet leader at Cave Junction Inn on Sat. at noon or 8:00am on Sunday. Contact leader if further information is needed. Leader: George Lewis (292-0415).

30 May, Sat. Field Trip to NEW DOG MOUNTAIN TRAIL. See new places and views - about half of the trail has been re-located. Flowers should be at their prime. Leave from K-Mart at 8:00am or meet at trailhead at 9:30am. Leader: Elizabeth Handler (244-5320).

Siskiyou

- 14 May, Thur. Meeting, 7:30pm. Room 118, Science Building, SOSOC. Dr. Bastiaan Meeuse, Professor of Botany at the University of Washington, will show the Oxford Scientific Film SEXUAL ENCOUNTERS OF THE FLORAL KIND. For more information, contact Jan Larson (482-4513).
- 16 May, Sat. Field Trip. Dr. Bastiaan Meusse will accompany us on a field trip to the Illinois Valley, where we will visit the Darlingtonia bogs. Meet at the Ashland Bi-Mart at 8:00am or the Medford K-Mart at 8:30am to carpool. Bring a lunch. Leader: Frank Lang (482-6341 or 482-5235).
- 30 May, Sat. Field Trip to JUNIPER RIDGE. Unusual habitat in the Western Cascades (oak, juniper and mountain mahogany with meadows and scablands). Some scrambling in rugged terrain, no trails. Meet at Ashland Bi-Mart at 8:00am or at Medford K-Mart at 8:30am. Leader: Wayne Rolle (482-0093).
- 7 June, Sun. Field Trip to SODA MOUNTAIN PROPOSED WILDERNESS AREA. Explore the Pacific Crest Trail and Lone Pine Ridge; great views and wildflowers. Meet at Ashland Bi-Mart 9:00am. Leader: Juniper Brock (482-4357).
- 13 June, Sat. Field Trip to GREENSPRINGS TO HOBART BLUFF. A real mosaic of plant habitats, some in the Soda Mtn. Wilderness Proposal. Eight miles of hiking with grades, shorter options. Meet at Ashland Bi-Mart at 9:00am. Leader: Diane Meyer (482-2263).

Willamette Valley

- 2 May, Sat. Field Trip to MILL CREEK. Meet at 8:00am at South Salem K-Mart parking lot to carpool. Easy hiking. Leader: Clint Urey (743-2802).
- 16 May, Sat. Field Trip to CAMASSIA. Meet at 8:00am at South Salem K-Mart parking lot to carpool. Easy hiking. Leader: Dr. Susan Kephart (371-7161).
- 27-28 May Field Trip to OCHOCO MOUNTAINS, overnight trip. Wed. (5-27) near Prineville. Christy Steck leader for Thurs. (5-28) all-day trip. Camping available. Prineville Motel list Available. For sign-up and additional information, contact Clint Urey (743-2802) after April 16th.

Wm. Cusick

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For information, contact Rachel Sines (963-0674).

NPSO STATE ELECTION RESULTS ARE IN

The ballots are counted; the new officers for 1987-88 will be:

President:	Dan Luoma
Vice-President:	Marjorie Willis
Treasurer:	Marjorie Ettinger
Secretary:	Charlene Holzwarth
Board of Directors:	David Gross
	Russ Holmes
	Esther McEvoy

A DIFFERENT ROSE (AND ITS RELATIVES)

Rose Festival events will be ending in Portland on the weekend of June 13 and 14, the dates for Portland Chapter's display of wildflowers in World Forestry Center.

So the rose, and some members of the rose family, will be featured in the display case that WFC has made available for promotion of the show during the preceding month. A watercolor, ink drawing, field sketches and photographs will suggest ways to collect native plants (other than picking!) If you are near WFC, main hall at upper end of Zoo-OMSI-WFC parking lot, anytime after May 15, check out our display.

And keep those dates, Saturday and Sunday, June 13 and 14 on your calendar to see the "Flowers in the Forest" display. This is a reminder for non-Portlanders, says Jeanne Huffstutter, show chairman, because local members surely have those dates circled, and nearly 50 are signed up in work parties.

FIELD TRIP FORMALITIES

Some hints for newcomers to our field trips...most important — come! We're headed for some great flower places this spring.

- Be on time, "meet" and "depart" are often synonymous.
- Bring lunch, including water.
- Dress appropriately, with warm layers to add or remove and, almost always, rain gear. Umbrellas are popular.
- Bring hand lens if you have one, a small notebook and pencil.
- Carpool expenses are not prescribed but be sure to contribute to the driver's cost.
- If you need to know estimated time of return, or hiking difficulty or other details, call the trip leader.

Dear Fellow NPSOers,

Have you written to your Senator or Representative yet asking him/her to support SB 533, our Endangered Species Bill? That letter, of course, should be on an NPSO notecard! By now you have received the yellow flyer mailed by our Legislative Committee, and so you have lots of arguments to make about the importance of saving members of Oregon's natural heritage from extinction. In case you need a few more facts, here is a copy of a statement that I will be reading April 3 at the first hearing on SB 533:

Statement to the Senate Committee on Agriculture and Natural Resources, Oregon State Senate Hearing on Senate Bill SB-533. Friday, April 3, 1987, 1:00 pm, Salem, Oregon.

From: Dr. Rhoda M. Love, Visiting Professor of Botany, Oregon State University; Member, Natural Heritage Advisory Council; President, Native Plant Society of Oregon.

MEDICINAL USES OF PLANTS

Plants are very important sources of medicines. ONE QUARTER OF ALL THE PRESCRIPTION MEDICINES DISPENSED IN THE UNITED STATES CONTAIN PRODUCTS DERIVED FROM PLANTS. For millennia, humans have used plants for medicinal purposes; but I am definitely not talking about folk medicine here. Medicines from plants are big business and the ability of plant products to relieve human suffering cannot be overemphasized. Plant medicines are effective against some of our most devastating illnesses.

The reason plant products are so important for medicines is that many medicinal substances are very complicated molecules which are difficult and expensive to synthesize in the laboratory. Plants produce these compounds naturally and cheaply.

Here is a small sample of the hundreds of important medicines produced by plants:

(1) Cortisone, used to treat arthritis, skin diseases, allergies and other debilitating conditions, is extracted from wild yams (genus Dioscorea) from Mexico.

(2) It has recently been discovered that cortisone and other important steroids can be extracted also from a wild potato (genus Solanum) from Central America.

(3) Ephedrine, used to treat allergies, hay fevers, circulatory impairment and various diseases of the arteries, is extracted from Ephedra or Mormon tea, a relatively rare plant found in the Steens Mountains area of eastern Oregon.

(4) It is just now being discovered that certain kinds of sage brush (genus Artemisia) are going to be a source of important medicinal substances.

(5) Ergotine, from a fungus, saves literally thousands of new mothers every year from fatal uterine hemorrhage.

(6) In the 1960's a search for anti-cancer substances led to the discovery that the pink periwinkle (Catharanthus roseus) contains vinblastine which is very effective against Hodgkin's disease and vincristine which can alleviate acute leukemia. Before the development of these "miracle" plant medicines, sufferers of Hodgkin's disease had only a one-in-five chance of survival; the odds have now risen to nine in ten!

We desperately need to stop the galloping extinction of plants in our country and in the rest of the world. Plants that might contain important medicinal substances are becoming extinct before they can even be tested! I'm sure everyone in this committee room has lost a friend or relative to some "incurable" ailment. Perhaps the cure was only waiting to be discovered in a wildflower field! Please pass SB 533 to help save Oregon's wild plants from extinction.

Thank you for your kind attention,
Rhoda Love



Legislative Notes

On Friday April 3rd we had our first hearing on SB 533, the Endangered Species Act for Oregon. Our hearing was delayed by an hour and a half, yet we still almost filled the hearing room with supporters of the bill. Senator Bradbury, chairman of the Senate Agriculture and Natural Resources Committee was impressed with the large turnout and with the testimony. Our first hearing was a success! Thank you one and all for making the special effort to come to the hearing.

This is the first hearing I have ever attended at the capitol. I did not realize that everyone should sign up right before the hearing in order to testify. Apparently there is usually an announcement in the beginning of the hearing to inform the public how to testify. For our next hearing, make sure to sign up for testifying or talk to the recording clerk when you arrive at the hearing. One can always submit written testimony whether you testify or not.

Since our hearing had such a large number of people who testified, the state agencies were not able to testify. So, on April 15, there will be a special work session to finalize the amendments to the bill. We hope that after the work session the committee will vote on the bill favorably and pass it to the Senate floor. We will be keeping the key contact people for each chapter informed as to the progress of the bill.

The letters and phone calls to your senators and representatives have been making a difference! Senator Hannon and Senator Brockman have mentioned they are receiving alot of mail on the bill.

Keep those letters and phone calls coming to your senators and representatives!

Thank you.

Sincerely,

Esther
Esther Gruber McEvoy
State Legislative Chair

NOTECARDS FOR SALE

The Central Puget Sound Chapter of the Washington Native Plant Society has produced a set of five notecards, all showing illustrations of threatened or sensitive plants within the state of Washington. The 5 3/8 by 4 1/4 inch cards are on attractive linen textured card stock with matching envelopes. Used for the illustrations were lovely pen and ink drawings by Mildred Arnot and Libby Mills, both WNPS members.

The notecards would make great gifts for birthdays or holidays, hostess gifts, etc. Or buy some for your own personal use. The notecards are being sold for \$3.25 for a packet of five cards with envelopes. They may be ordered from:

Lee Ellis
5231 NE 184th Street
Seattle, Washington 98155

The cards may be picked up at that address or at any Central Puget Sound function, or may be mailed.

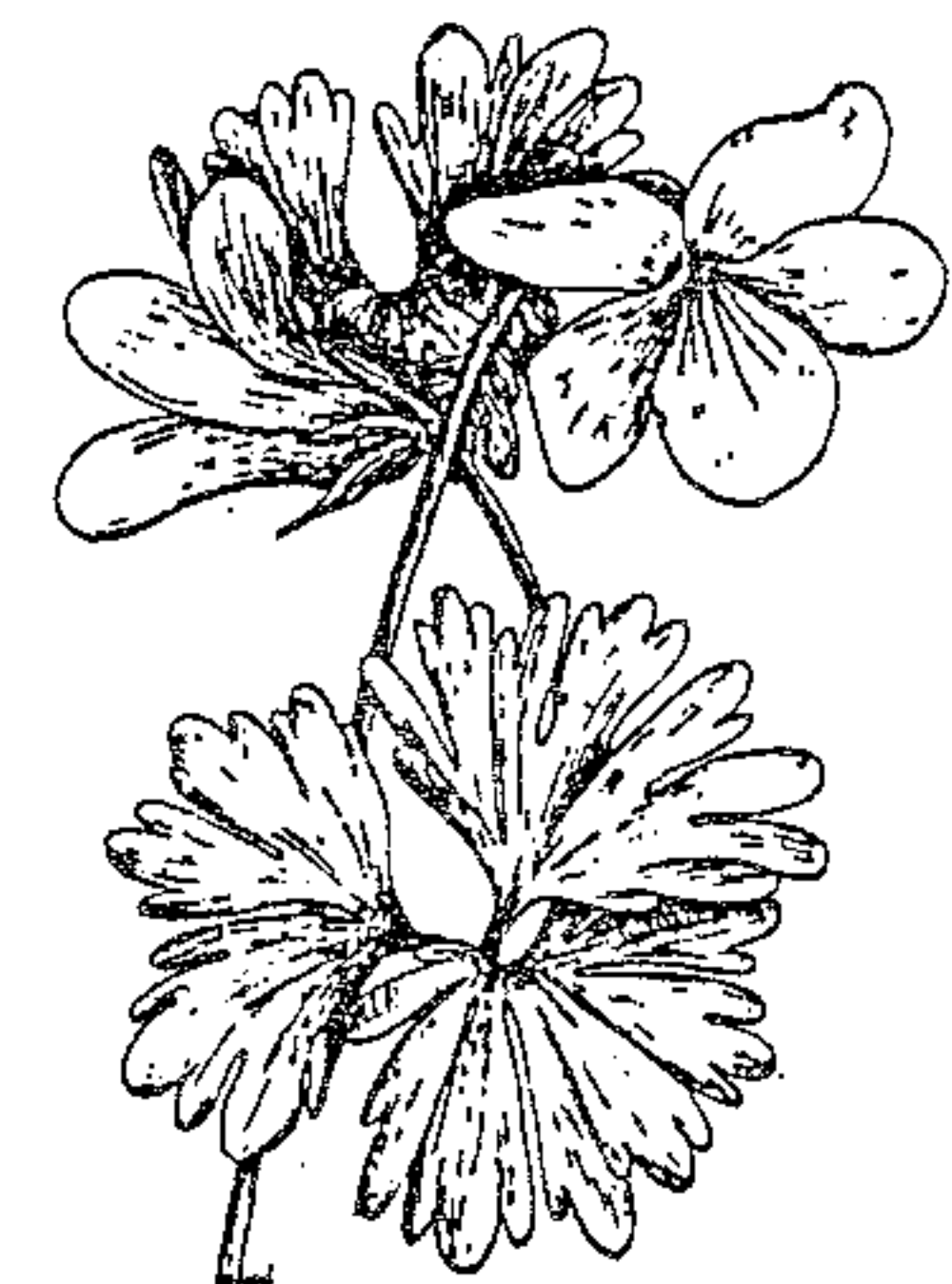
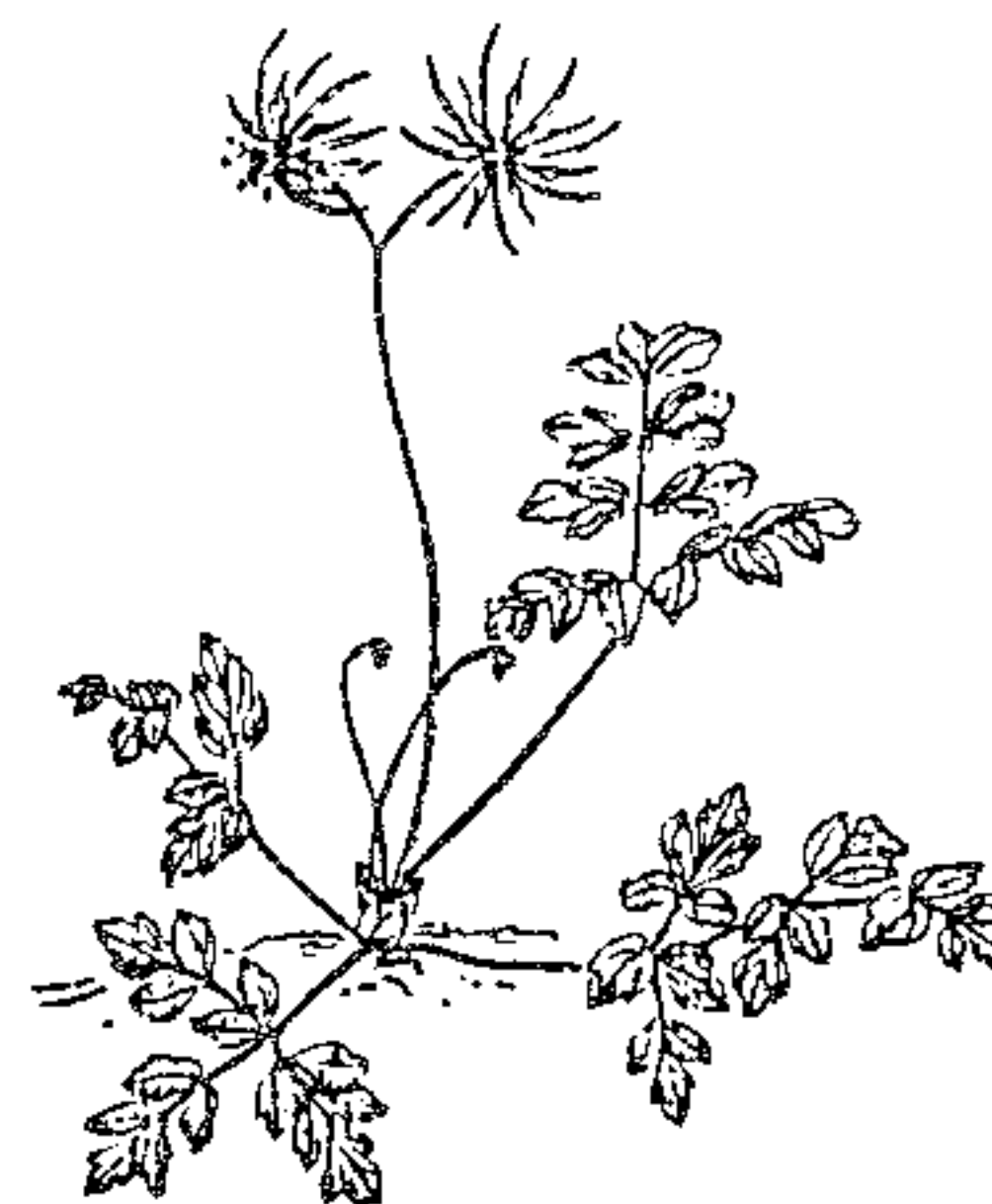
We will have to charge postage/packaging for cards to be mailed. Current costs are:

\$.64 for one pkg cards
.98 for two
1.32 for three
1.66 for four

(Rates for larger quantities on request)

Thus, if you wish to order three packets of notecards, the cost would be 3 x \$3.25 plus \$1.32, or a total of \$11.07. Mailing costs are high, therefore it would be best if a number of people ordered together so that a parcel could mail at a cheaper parcel post rate. Small quantities cannot be mailed parcel post.

Below are reduced illustrations of the notecard drawings.



By now you should have received a packet of information about the annual meeting if you registered and sent a check. It will include a banquet ticket (if you signed up for this), a name tag, and any up-to-date change in plans for field trips. If you haven't signed up for the banquet yet, you can do so up to May 2nd--call Virginia Diegel, 645-1344, or if you have not received your ticket, also call her or write to 16415 N.W.Brugger Rd.,Portland 97229.

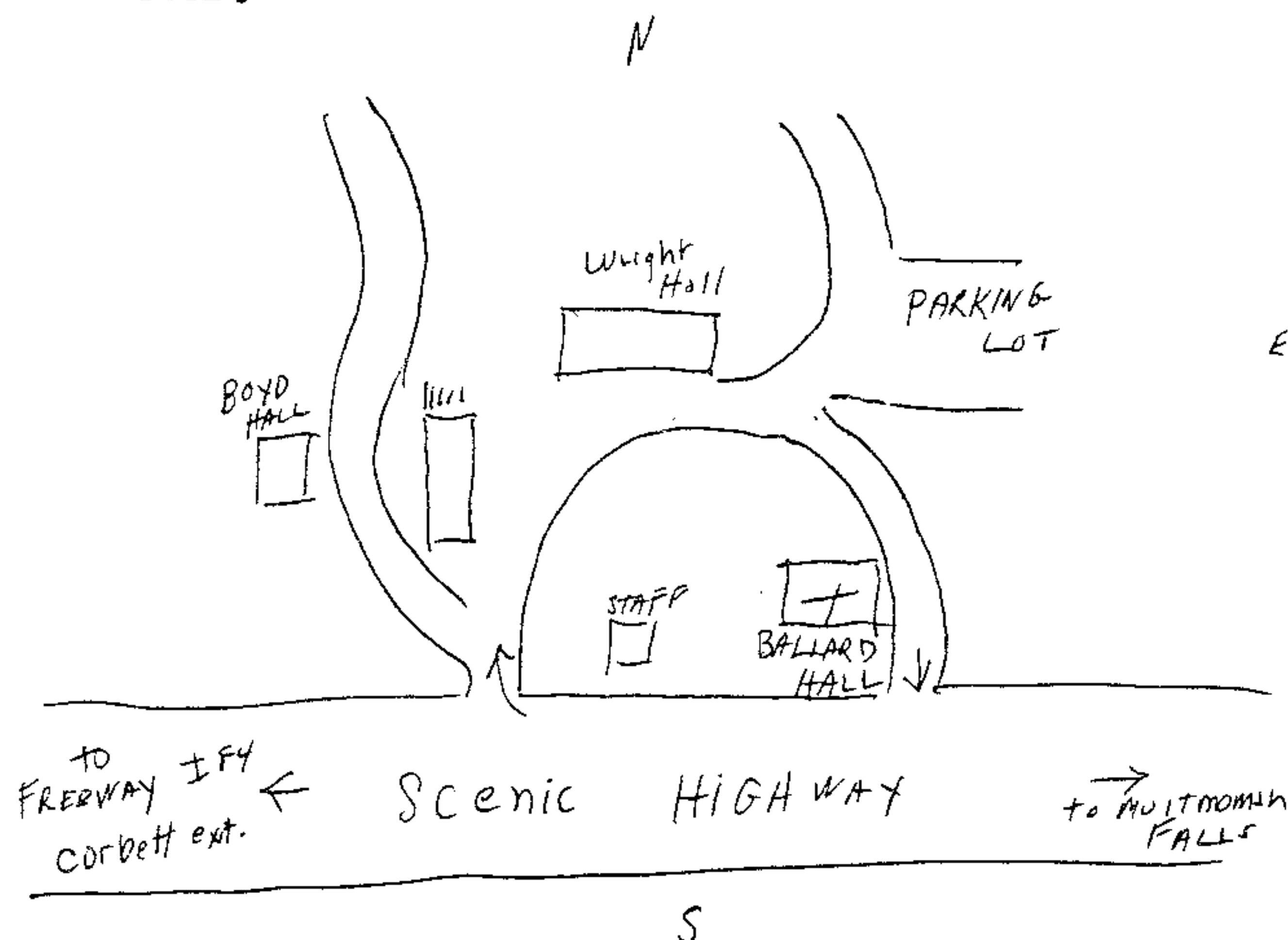
Friday overnights at Menucha may sign in there after 5:00 p.m. Friday; Saturday overnights may sign in anytime after 11:00 a.m. Saturday and/or after field trip late afternoon. Breakfasts are at 8:00 a.m. Maps were in April bulletin. Detailed one of Menucha layout was upside down (whoops!--Jane Armentrout caught that one). The Center is to the North of the Scenic Highway.

Lois Kemp announces that meeting time for field trips will be 9:00 a.m. Saturday at the Women's Forum State Park on the old Scenic Highway just west of Crown Point and a few miles East of Menucha.

Two field trips scheduled for Saturday are: Angel's Rest, 4 miles round trip, 1,500 elevation gain, but not steep and will be led by Dave Dobak and Jan Anderson. Slightly longer but with the same elevation gain will be on the Washington side to Hamilton Mt. and is a 6-mile round trip, led by Lois. Second meeting place for this trip will be at 9:45 a.m. at the North end of the Bridge of the Gods.

Lois has volunteered to lead a Sunday trip to the East end of the Gorge if there is enough interest. Announcement of this will be at the banquet Saturday evening.

DON'T FORGET TO BRING YOUR OWN BEDDING, BANQUET TICKET AND NAME TAGS WHEN YOU LEAVE HOME.



Dear Board Members, Chapter Presidents, Committee Chairs, Newly-Elected Officers, and NPSO Members,

First let me express my thanks to those NPSO members who ran for offices and board positions this year. I have not yet heard the results of our elections, however, I want personally to thank each person who was willing to serve our Society in a state position.

Also, I wish sincerely to thank those who are retiring from Board positions and officerships. No one knows better than I how much volunteer time goes into keeping our society running smoothly, and I very much appreciate the splendid help I have had from all of you this year.

The Board Meeting in connection with our Annual Meeting will take place Sunday morning, May 10, 9:30 am at the Menucha Retreat Center, Ballard Hall, Columbia Gorge. (Please refer to the map in your Bulletin to find the Lodge.) New officers and board members will be installed the evening before at the Annual Meeting Dinner at Multnomah Falls Lodge. Our newly-elected President will preside at the Sunday morning board meeting, however, I plan to mail agendas to all board members a week before the meeting.

If you have important agenda items that you think I may have overlooked, please GIVE ME A CALL AS SOON AS YOU READ THIS BULLETIN. I will need to have the agenda typed and copied and hope to have copies in the mail to you by May 4.

I look forward to seeing as many of you as possible in the Gorge the weekend of May 9 and 10. Please show support for our new officers by attending the Sunday morning board meeting. My number for those agenda items is 345-6241. Rhoda Love, retiring President.

W E L C O M E N E W M E M B E R S

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|--|--|
| BLUE MOUNTAIN
Julie Goldman | PORTLAND
Lorraine Newall
Kimberly St.Hilaire |
| CORVALLIS
Robert Meinke | Marsha Takayanagi
Jim & June Vahey |
| EMERALD
Mary Jane Moffat | SISKIYOU
Beth Hoffman
Al & Bonnie Mercer |
| MID COLUMBIA
Robin Dobson
Laurie Smith | W.D. Patterson
Dorie Perkins |
| NORTH COAST
Clara Fairfield
Candice Guth | WILLAMETTE VALLEY
Bill Dukes
Kay Hanville
Dale Shank
Mary Ann Westfall |

The above title does not refer to a magic act nor to an extinction event. It was chosen as a novel heading under which to discuss a botanical "disappearance" that may result from some recent taxonomic research on a pair of familiar Oregon plants of the family Liliaceae--*Smilacina* and *Maianthemum*. As a rule, research activity in taxonomy is aimed at improving our knowledge of the relationships among plant species. It frequently involves reexamining long-held ideas and assumptions, using new data based on nontraditional methods of analysis. In the case of *Smilacina* and *Maianthemum*, what is being reexamined is the presently accepted classification that makes them two separate genera.

In every reference book for the Pacific Coast flora, you will find the genus *Smilacina* (False Solomon's Seal) with two species in Oregon, and the genus *Maianthemum* (False Lily-of-the-Valley) with one species. Why should this classification be questioned? Like a lawyer reopening an old court case, a botanist at Harvard University recently took a new look at these plants and said, in effect, "I disagree; in my view, the facts argue in favor of a merger. These two genera should be combined into a single genus, *Maianthemum*." To judge the merits of the case, we need to review the evidence and determine for ourselves whether to make the genus *Smilacina* "disappear."

Maianthemum has a widespread distribution in North America, Europe, and eastern Asia; *Smilacina* is in eastern Asia, North America, and the mountains of Central America. In the Pacific Northwest the two "genera" display their most extreme differences. *Maianthemum* has only a few leaves per plant and these are deeply cordate; its flowers have four perianth parts, four stamens, and a two-chambered ovary. *Smilacina* has more numerous leaves which are sessile on the stem; its flowers have six tepals, six stamens, and a three-chambered ovary. Dr. James LaFrankie, the taxonomist who is

proposing to merge these genera, points out that the eastern North American species *Smilacina trifolia* (see illustration) has only 2-4 leaves per stem. The leaves of *Maianthemum canadense* are shallowly cordate at best and are nearly sessile. When the two genera are viewed together over their total geographical range, it seems that the only consistent difference between them is the 2-merous versus 3-merous flowers.

Dr. LaFrankie goes further in his analysis by listing a series of traits that are shared by *Maianthemum* and *Smilacina*, which differentiate them from other related genera of Liliaceae. For example, they have unbranched stems, rather than the branching stems of *Disporum* and *Streptopus*. They have nectaries on the pistil instead of on the tepals, as in these latter two genera. Their immature fruits are spotted with red instead of being solid green as in *Polygonatum*, *Clintonia*, and other genera. Finally, he gives particularly strong weight to a genetic similarity between *Maianthemum* and *Smilacina*, which is that their chromosomes are the same number and shape, but are different in these respects from all other Lily Family genera.

In the future, if the proposal to unite these two genera comes to be widely accepted, the names of our two Oregon *Smilacina* species will change to *Maianthemum racemosum* (L.) Link. and *Maianthemum stellatum* (L.) Link. Both these species were first described by Carl Linnaeus ("L." in the above abbreviation), and placed in *Maianthemum* by the German botanist Johann Link in 1821. From the date of Link's work, you can see that LaFrankie's suggestion is not a new one. Perhaps sometimes science can advance by taking a new look at some old ideas, to see whether our predecessors might have been right after all.

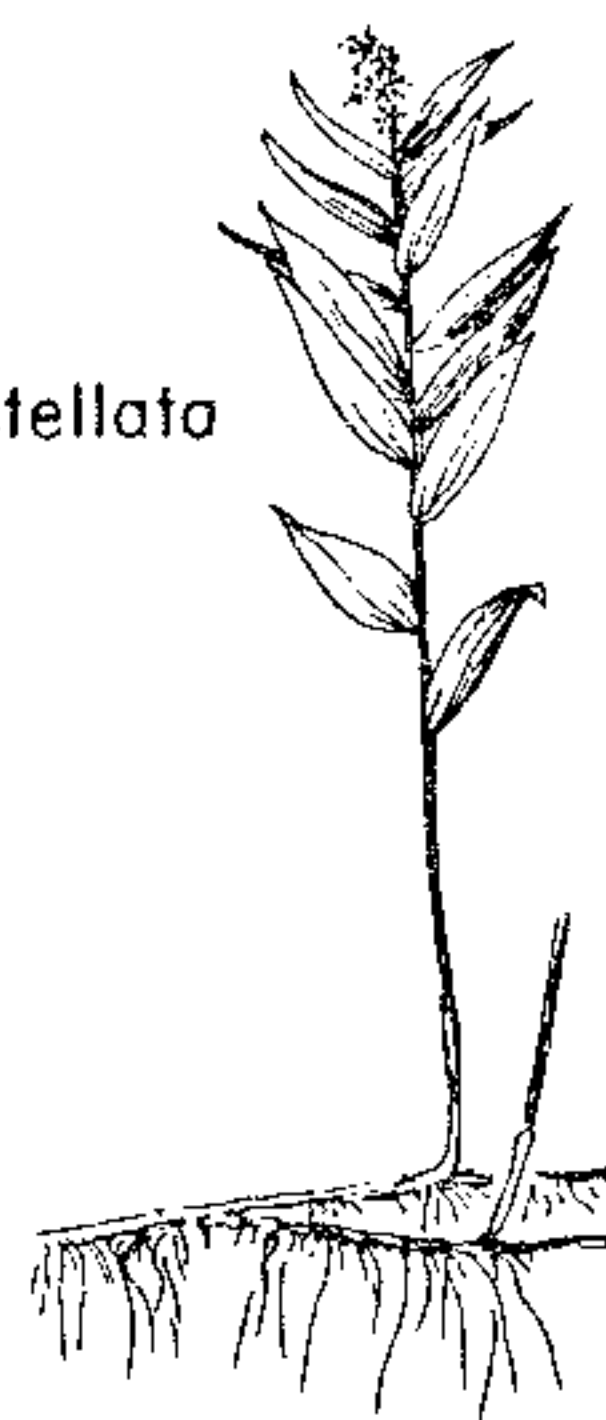
Kenton L. Chambers
Oregon State University



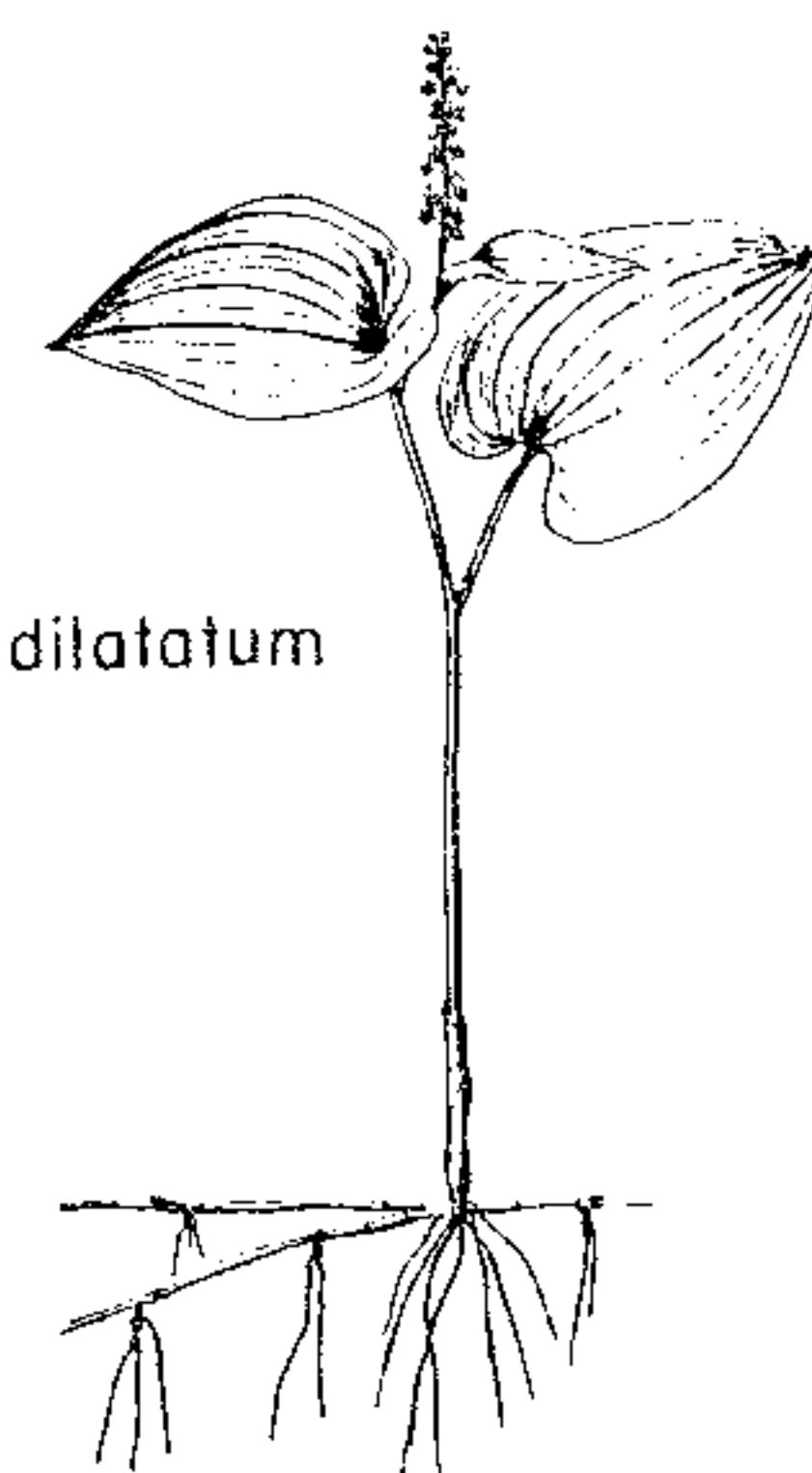
Smilacina trifolia,
courtesy of New
York Botanical Garden



Smilacina racemosa



Smilacina stellata



Maianthemum dilatatum

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

JOHN STRONG NEWBERRY

by Stuart Garrett, High Desert Chapter

Professor John S. Newberry left his mark on Oregon. The largest volcano in the state is named for this 19th century physician-naturalist. His ideas on glaciers, mountain ranges, plant geography and erosion were groundbreaking ones. But in spite of this, he seems to be a forgotten man in Oregon history.

Born in Connecticut in 1822, he moved to northern Ohio at an early age. The son of a coal mine owner, Newberry became interested in fossils in his youth. As a teenager he became acquainted with Professor James Hall, a prominent geologist, who was also a family friend. Hall was later to assist him in his scientific career. Newberry graduated from Case Western Reserve University and attended the Cleveland Medical College. He spent 2 years studying medicine in Paris. After returning to the United States, he began medical practice in Ohio; but after 5 years he apparently decided to change careers.

The United States had become fascinated with the idea of a transcontinental railroad. Congress authorized a series of railroad surveys to be conducted by the Topographical Corps of the Army. These were meant to determine the best route to the West Coast. It was through his mentor, Professor Hall, that Newberry was named the scientist on the Williamson-Abbott Survey in 1855. This group of the Topographical Corps traveled from the San Francisco area to the Columbia River surveying routes both east and west of the Cascade Mountains. Newberry served as geologist and botanist for the 28 man party.

Oregon was not yet a state and the area was little known to the rest of the country in any scientific sense. The expedition was a hard and dangerous one. The country that they traveled was unmapped. The co-leader, Lt. Williamson, had seen his own commander, Capt. Warner, killed by Paiute Indians on an 1849 trip in Northern California. Only 2 years before, Lt. Gunnison had been slain by Indians under similar circumstances. Indeed, a general Indian war broke out during the latter part of the expedition. The party included Lt. Crook and Lt. Sheridan, both of whom later went on to prominence in the Army during the Civil War.

The group left the Bay area in May 1855 and entered Oregon south of Klamath Falls in August. They proceeded north along the Klamath Lake into the upper Deschutes River drainage by September. Along the route the 33 year old Dr. Newberry made many geologic, botanical and zoologic observations.

As the expedition traveled north, their course took them through the Metolius River area. The first descriptions of Black Butte and the Hoodoos on the Metolius River were from this portion of the survey. The group then traveled to the area of Cove Palisades and on to what is now the Warm Springs Reservation. They crossed the Cascades just south of Mt. Hood via a new route. In a little-recognized act of heroism, an Indian youth guided the party over the mountains through a previously untravelled route. This occurred during the middle of an Indian



JOHN STRONG NEWBERRY

uprising, and he took his life in his hands to accompany the expedition. The party then made their way south through the Willamette Valley and returned to the Bay area in January of 1856.

During this expedition Newberry was the first scientist to link the coast ranges of California and Oregon in a geologic and geographic sense. His were the first observations of glacial actions in the Cascade Mountains and he noted the "drowned forest" in the Columbia River Gorge, first seen by Lewis and Clark. Newberry sent his botanical specimens to Harvard University where Dr. Asa Gray named Newberry's gentian (Gentiana newberryi) and Newberry's figwort (Penstemon newberryi) for the explorer. Some consider these to be two of the prettiest wildflowers of the Cascade Range.

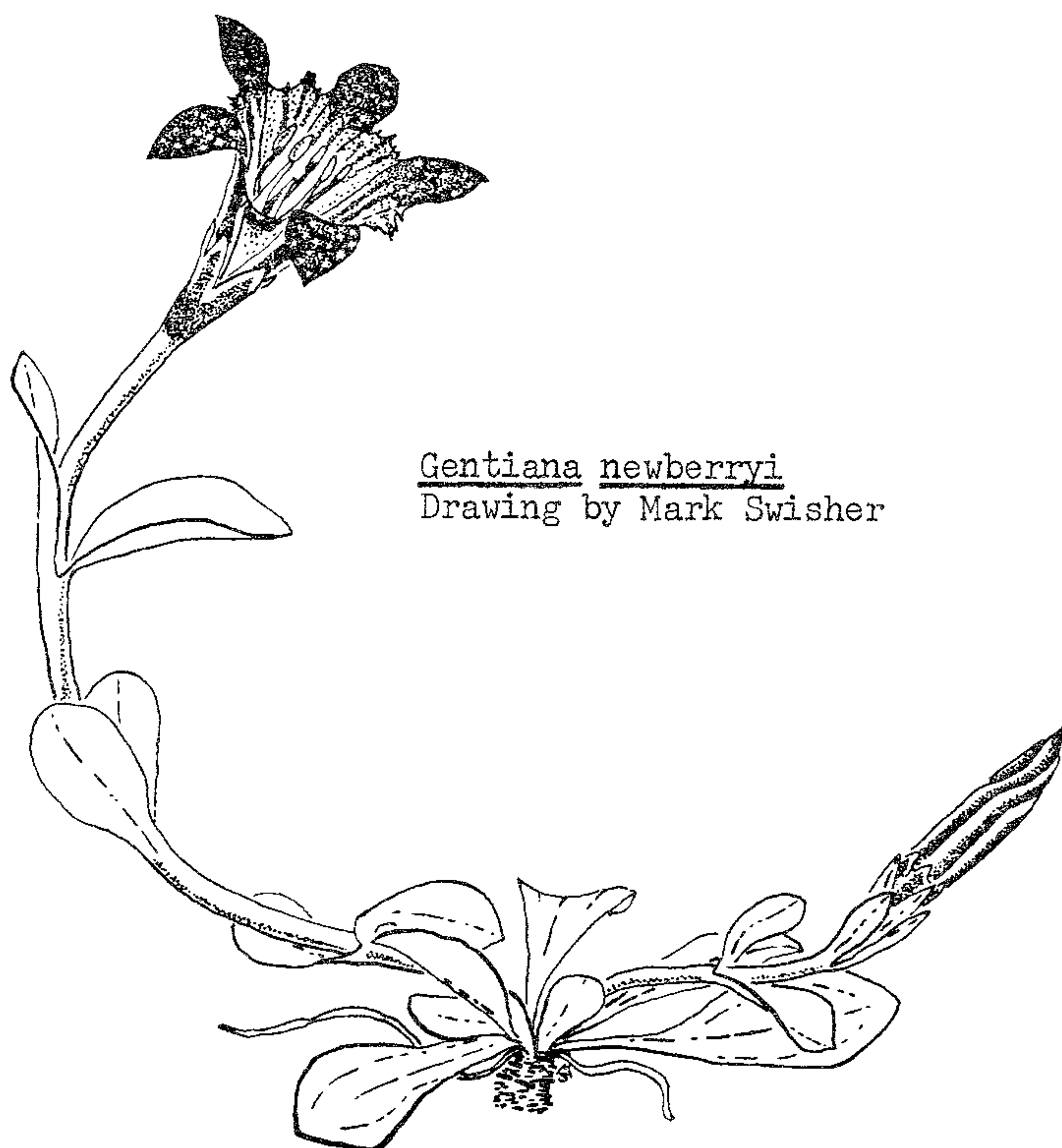
Newberry wrote the botanical, geologic and zoologic parts of Volume 6 of the Pacific Railroad Reports. They are well written and continue to be worthwhile reading. The 1855 Williamson-Abbott Survey was part of the final phase of the Pacific Railroad Survey. It strengthened the position of San Francisco as the western terminus for the Trans-continental Railroad.

Two years later Newberry participated in the Ives Expedition in the Southwest. This was partly an effort by the U.S. Government to map routes into the Mormon country in preparation for a possible war against Brigham Young and his followers. This trip made Newberry the first geologist to see and describe the Grand Canyon.

In 1866 he accepted a full professorship of geology at Columbia University. He served as president of the American Association for Advancement of Science in 1867, helped establish the U.S. Geologic Survey, served as president of the Geological Society of America, was chief of the Ohio Geologic Survey, and had numerous other honors. He died in 1892 in New Haven, Connecticut. As Goetzmann has pointed out, "Of Newberry it might be said that more than any other scientist since Fremont, he had opened up the new and unknown country to the civilized world".

Although there is no biography of John Strong Newberry, recommended further reading is the Army Exploration of the American West by William Goetzmann, University of Nebraska Press, and the Pacific Railroad Survey, Volume 6, published in 1857, U.S. Government Printing Office.

(This article was previously published in the December, 1985, issue of The Oregonian.)



Gentiana newberryi
Drawing by Mark Swisher

ALERT TO GARDENERS

Spring is glorious - - especially the bulbs that bloom in our gardens. However, a cloud hangs over the splendid display - - the threat of extinction. Preliminary information indicates that some of the original, wild species of tulips, daffodils and many other bulbs could, under current market pressures, disappear forever.

Americans plant over a billion bulbs each year. Most of these are hybrids produced in nurseries, especially by that amazing country, The Netherlands. If the flowers that attract you have such popular common names as Baby Moon or Shot Silk, or are identified as hybrids, you should feel free to buy them. However, please be careful about bulbs labelled as "wild", "species", or "botanicals", and many of the small, early-blooming types. These may have been collected from the wild in Turkey, Spain, South Africa, Central Asia, or even the United States.

Surprising as it seems, some of the bulbs most commonly offered for sale may have been wild-collected, despite the availability of propagated plants. Snowdrops (Galanthus spp.) is one such type; Turkey exported 28 million of them in 1983, France another 10 million. Turkey also exported between 10 and 13 million winter aconite (Eranthis hymenalis) and unknown numbers of grape hyacinth (Muscari spp.) and Crocus species. In 1986, Turkey exported at least 1 million Cyclamen tubers.

Even the crown imperial, Fritillaria imperialis, is still collected in Turkey, despite its widespread availability from propagation.

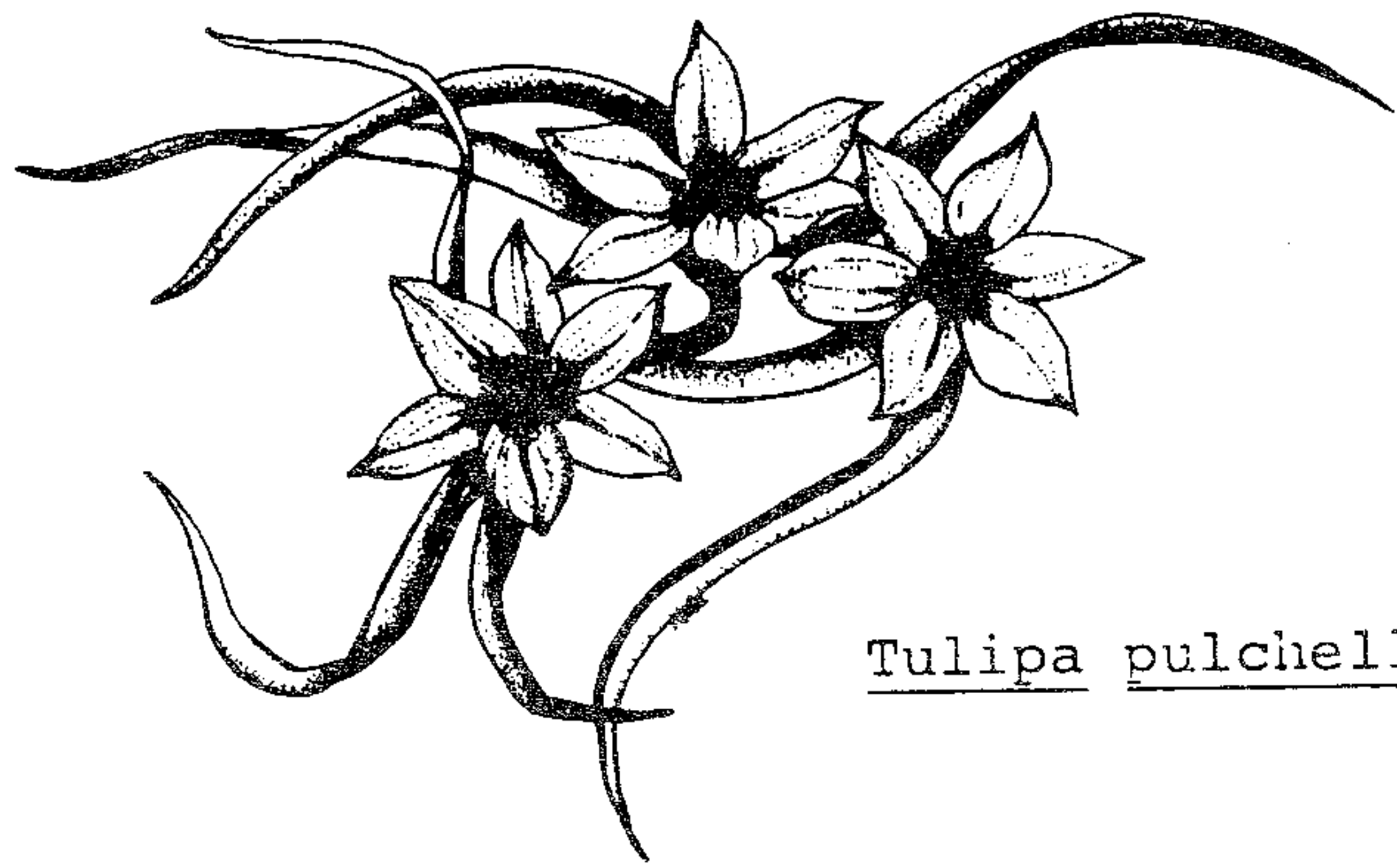
Other types of bulbs that are collected from the wild formerly were sought primarily by specialists, but now are entering the general market. Old favorites, such as Narcissus species triandrus albus, 'Angel's Tears', endangered now through over-collection, are still sold. Unknown numbers of Narcissus are being collected in Spain and Portugal; Turkey exports perhaps 500,000 bulbs each year.

Collecting is not limited to the Mediterranean region. The trout lily, or dog-tooth violet, Erythronium americanum, is collected from its habitat in eastern North America, then offered for sale "direct from the (Dutch) grower"!

We do not yet know which species are being forced to the brink of extinction by this trade. However, botanists in Turkey have expressed concern about the trade in snowdrops, giant summer snowflake (Leucojum aestivum), the sea daffodil (Pancratium maritimum), two species of Sternbergia, crown imperial, Lilium candidum, and Tulipa pulchella humilis. British botanists are concerned about these and several other species, including Cyclamen and the winter aconite.

Several species of tulip are threatened in their native habitats in Central Asia and the Caucasus Mountains. Included are Tulipa dasystemon, T. tarda, and T. schrenkii. We do not know whether the specimens of these and other tulip species

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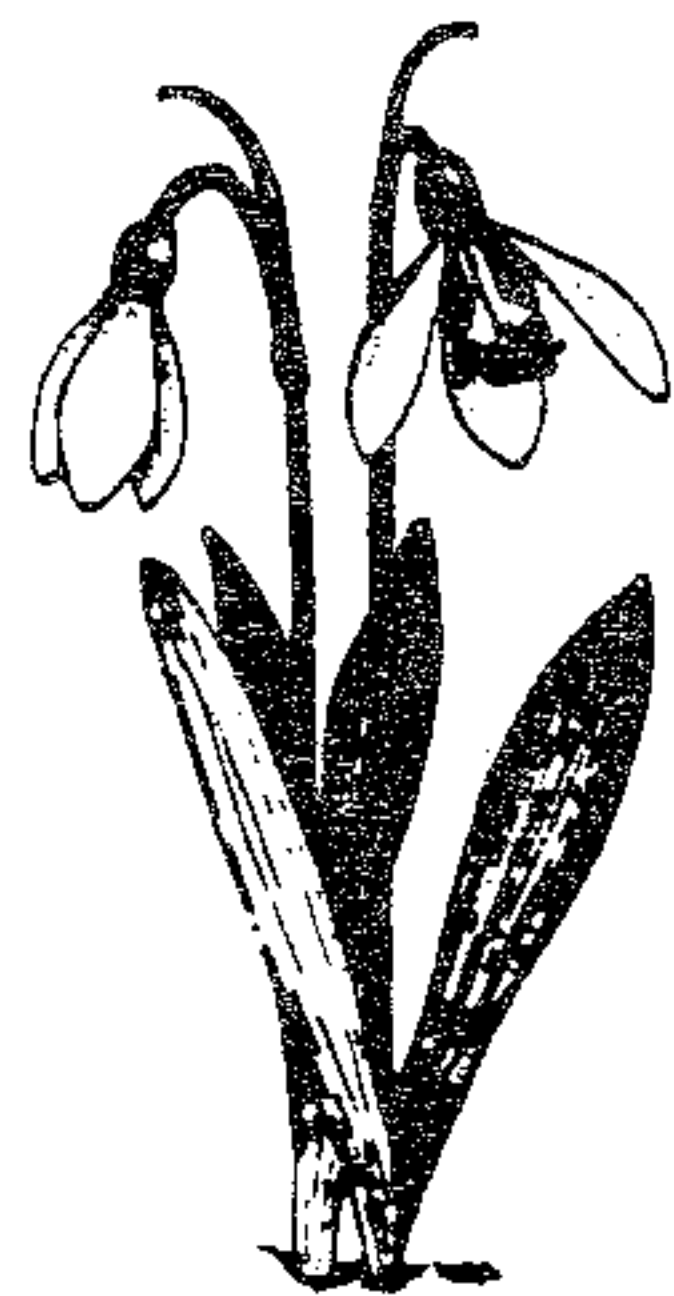
Tulipa pulchella humilis

sold in the United States are of wild or propagated origin.

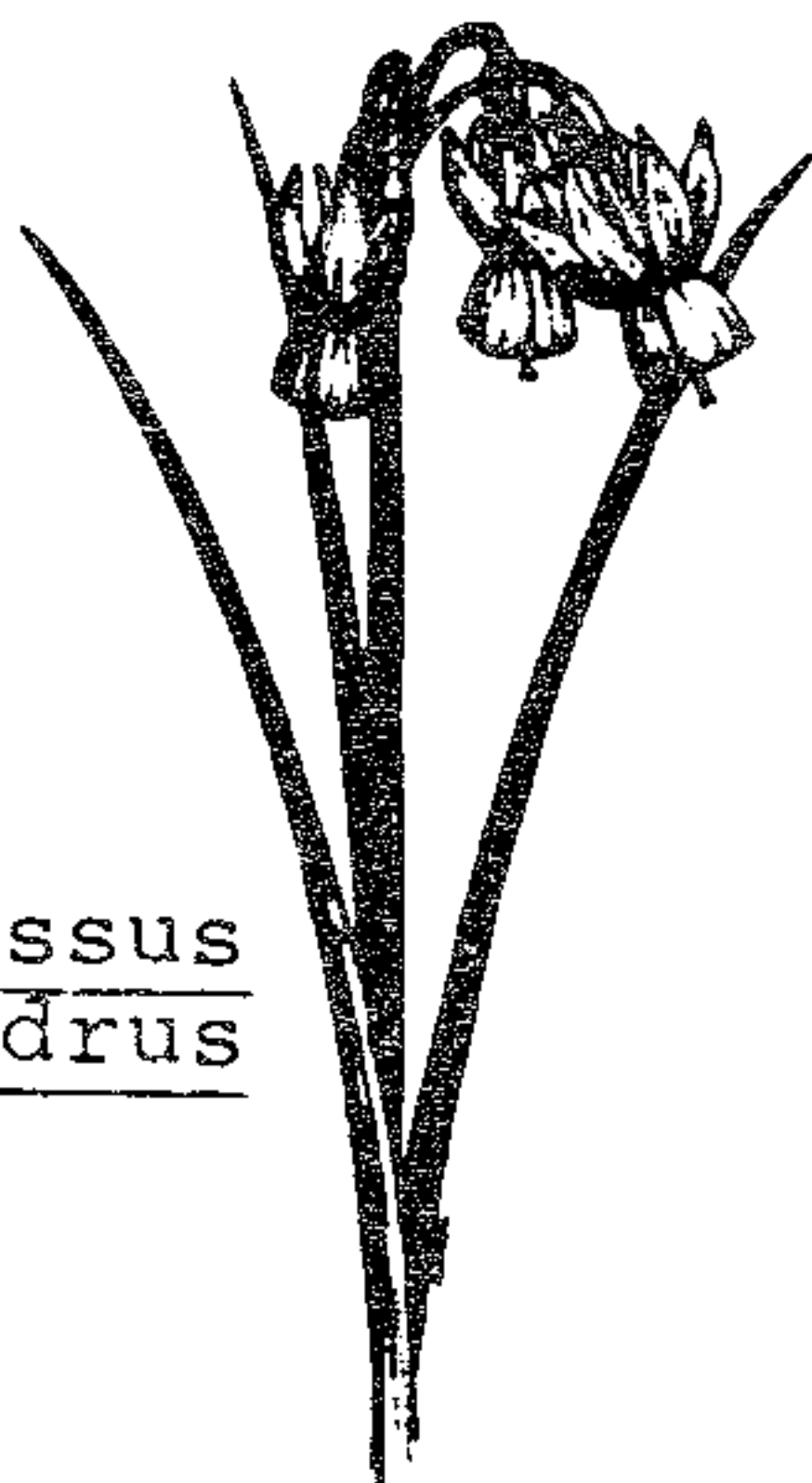
Gardeners who wish to avoid purchasing wild-dug plants face a challenge. Virtually none of the catalogs identifies whether the bulbs offered for sale are of wild or propagated origin. Statements that bulbs are "Direct from Holland" are no guarantee of propagation, for that country re-exports wild-dug plants as well as propagates. The cautious buyer must inquire about the origin of each type of bulb that he or she is considering. We suggest that you ask, "Did you propagate these bulbs in your nursery from seeds or offshoots? If you obtained these bulbs from a supplier, do you know that the supplier propagated them?" If the dealer evades the question or cannot answer to your satisfaction, you may wish to avoid purchasing that species from that dealer.

Natural Resources Defense Council continues to study the trade in wild bulbs. Your comments are welcome. NRDC is a non-profit membership organization dedicated to securing a safer and healthier environment through scientific research and legal action.

Prepared by Faith T. Campbell
 Plant Conservation Project
 Natural Resources Defense Council
 1350 New York Avenue, N.W.
 Washington, D.C. 20005



Galanthus elwesii



Narcissus triandrus

A SUGGESTION FROM A MEMBER

Your County Extension Office is an excellent source of information of interest or use to NPSO members. There is a Publications list available printed by Oregon State University Extension Service and the Agricultural Experiment Station. The pamphlets are free or available at minimal charge. The following are some samples from the 33 - page Publication List:

EC 1123 Endangered and Threatened Species: The What, Where, and Why (50¢) is a comprehensive 3 page bulletin which explains the process of how species attain federal listing.

EC 801 Poisonous Plants Encountered in Oregon (25¢), a 4 page bulletin listing common and botanical names, degree of toxicity, part of the plant that is toxic.

TB 147 Ecology and Plant Communities of the Riparian Area Associated with Catherine Creek in Northeastern Oregon (free).

EB 785 Ferns to Know in Oregon (50¢).

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 Washington, D.C. 20510

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NATURAL HISTORY & LLAMA TREK IN OREGON'S HIGH DESERT

The Oregon Natural Resources Council is sponsoring a llama trek and natural history tour of Malheur Wildlife Refuge and nearby Steens Mountain, June 16-20, 1987.

The cost of the five day trip is \$375. All meals and lodgings are included. Proceeds from the Llama Trek will benefit ONRC's Southeast Field Coordinator, Don Tryon. For more information and reservations contact ONRC's Main Office at 1161 Lincoln Street, Eugene, OR 97401 (503) 344-0675.

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NPSO Wildflower Poster & Pins Susan Kofahl
 P.O. Box 151, Mosier, OR, 97040; 478-3576
 Notecards George Lewis
 8230 SW Cashimur Lane, Portland, OR, 97225; 292-0415
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 4135 Alder St., Eugene, OR, 97405; 345-1746

STATE OFFICERS

President Rhoda Love
 393 Ful Vue Drive, Eugene, OR, 97405; 345-6241
 Vice President Susan Kofahl
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 7725 SW 82nd Ave., Portland, OR, 97223; 244-4122
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 Desert Wilderness Coordinator Julie Kierstead
 11505 SW Summerville, Portland, OR, 97219; 636-4112

CHAPTER PRESIDENTS

Blue Mountain (NE Oregon) Bruce Barnes
 731 NW 5th, Pendleton, OR, 97801; 276-5547
 Corvallis Angie Evenden
 PO Box 1838, Corvallis, OR, 97339; 757-2806
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BULLETIN

Editor Jan Anderson
 1960 Lovejoy #2, Portland, OR, 97209; 248-9242

The NPSO Bulletin is published monthly. Copy is due by
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 News, articles, photos, drawings, & non-copyrighted
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 efforts. Please give source & date, if not
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SCIENTIFIC NAMES should follow Hitchcock &
 Cronquist's Flora of the Pacific Northwest
 where possible. Use of both scientific &
 common names is encouraged. Genus & species
 names are underlined or italicized.

RETURN OF ORIGINALS: Manuscripts & illustra-
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The Bulletin is published as a service to
 NPSO members & the public. Your suggestions
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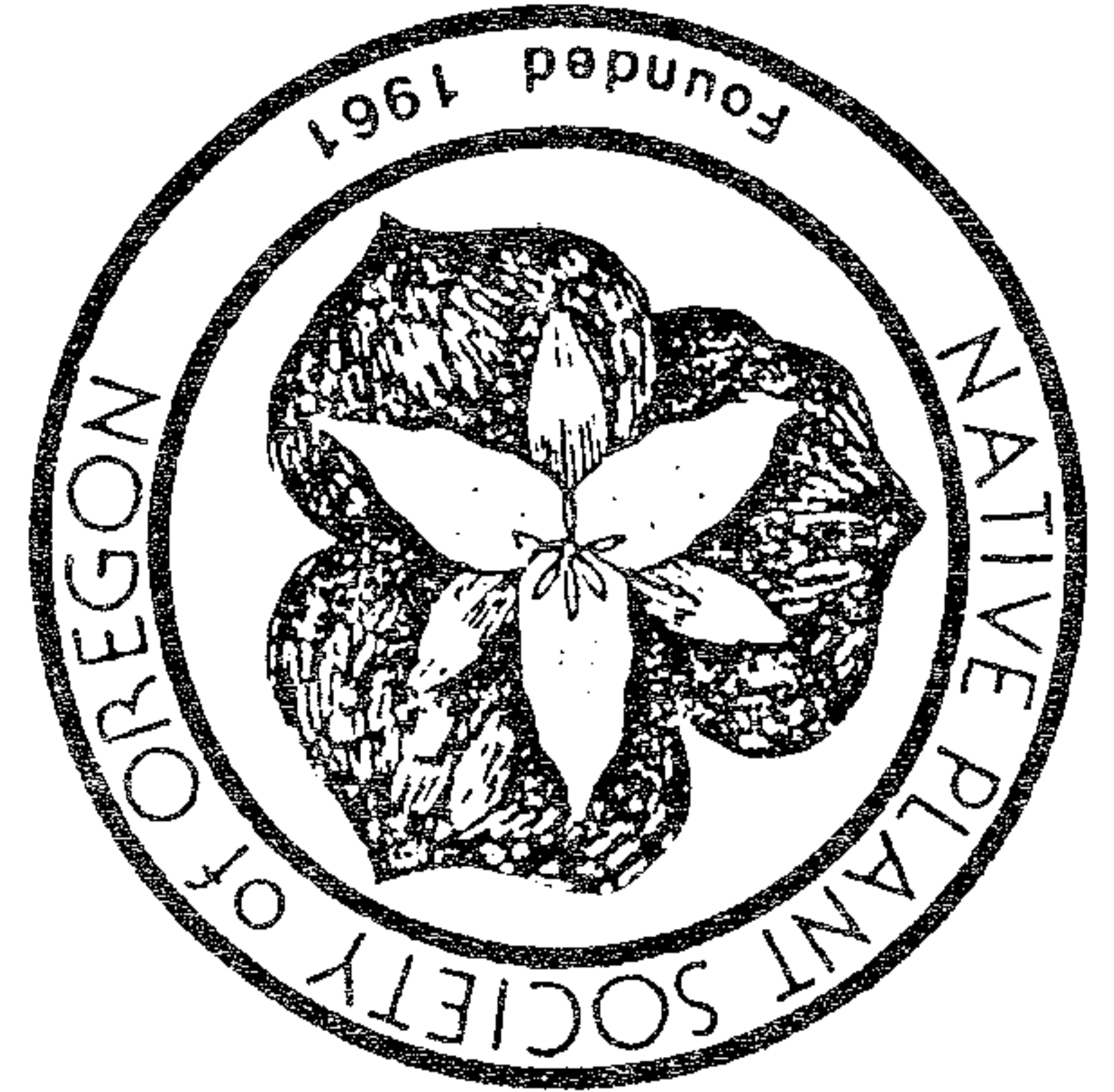
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