

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 21 No. 3

March 1988

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CHAPTER NEWS

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« « VOTE FOR STATE OFFICERS - BALLOT ENCLOSED » »

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 * NEW NAME FOR THE EDITOR! *
 * * * * *
 * The Bulletin Editor is now Jan Dobak, owing to *
 * her recent marriage. *
 * * * * *
 * Her address is: 2584 N. W. Savier Street *
 * Portland, Oregon 97210 *
 * * * * *
 * Her phone number is: 503-248-9242 *
 * * * * *

IMPORTANT NOTICE TO FIELD TRIP PARTICIPANTS

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

Blue Mountain

15 March, Tues. Meeting, 7:30pm. Blue Mountain Community College, Morrow Hall, Room 105. Dr. Bill Rickard, botanist with Batelle Northwest, will give a presentation on the Ecology Preserve on the Hanford Reservation.

Corvallis

14 March, Mon. Meeting, 7:30pm. Room 4083, Cordley Hall, OSU. Wayne Rolle will present a slideshow and talk on "Botanizing in the Red Buttes Wilderness Area".

26 March, Sat. Field trip to McDowell Creek Park (east of Lebanon) to view riparian flora and waterfalls. Leader: Phil Hays (753-1065).

Emerald

12 March, Sat. Field trip to view the unusual streamside lily, the Oregon Fetid Adder's Tongue, Siuslaw River between Lorane and Mapleton. Depart So. Eugene High School parking lot corner of Patterson & 19th at 10am. Leader: Charlene Simpson (w: 686-3221;h: 465-1059).

14 March, Mon. Meeting, 8pm. Amazon Community Center, 2700 Hilyard St., Eugene. Botanist Charlene Simpson will show her colorful slides and share information about the ecology of "Lane County's Rare and Endangered Plant Species".

High Desert

- 29 March, Tues. Meeting, 7:30 pm. Bend Senior Center, 1036 NE 5th Street, Bend. For more information contact Joyce Bork (389-5579).
- 23 April, Sat. Field trip to The Island. This is a moderate 3 mile hike to a low elevation peninsula in the Cove Palisades State Park which has been essentially ungrazed. Meadow and sage steppe are predominate. The trail is rocky and steep in some areas and snakes have been seen. Leader: Stu Garrett (389-6981).

Mid Columbia

- 2 March, Wed. Meeting, 7:30 pm. Mosier School. Program will highlight the unique WARE Collection of Blaschka Glass Models of Plants. Mike and Nancy Fahey will present slides of the Harvard University exhibit along with some of their own northwest botanical favorites.
- 6 April, Wed. Meeting, 7:30pm. at Pietro's Pizza Place, 3320 W. 6th St., The Dalles, will have Cheryl McCaffrey, BLM Botanist from Burns, as our guest. There will be slides and an update of Eastern Oregon botanical issues. More specifics in next month's Bulletin.

North Coast

- 3 March, Thurs. Meeting, 7:00pm in the Library of Tillamook County Pioneer Museum. Election of officers.
- 13 March, Sun. Field trip to Nestucca Spit. Meet at the Tillamook PUD parking lot at 1:45pm. For information contact Clarice Maxwell (842-7023).

Portland

- 5 March, Sat. Seminar by The Nature Conservancy at 10:00 am at the First United Methodist Church, 18th and S.W. Jefferson, Room 204. Following the workshop, Katherine Snouffer will lead us for a short hike on a part of the Partridge Tract not seen last fall. A short drive So. of Troutdale, carpooling from the Methodist Church parking lot. For more information call 246-6572 or 284-3444.
- 8 March, Tues. Meeting, 7:00pm. First United Methodist Church, 1838 SW. Jefferson St., Portland. Carol Savonen, science writer, and Peter Zika, BLM Botanist in Eugene, will present "Climbing Kilimanjaro", featuring the natural history of the thorn savanna, rainforest, alpine desert and glaciers on Africa's highest mountain.
- 12 March, Sat. Field trip. John Davis will lead a Mosses field trip on the North side of the Columbia River. Leave the K-Mart, 122nd and Sandy (south end of lot) at 8:30 am. Location will depend on the weather. Bring identification books, 10x lens, and clothing appropriate to the weather (boots). For more information contact John Davis (509-427-5871) or Charlene (284-3444).
- 19 March, Sat. George Lewis will lead a full day trip to Tillamook area, possibly the Trask River. Meet for carpooling at OMSI at 8:30 am. Bring lunch, water, boots, rain gear. For more information contact George (292-0415) or Charlene (284-3444).
- 26 March, Sat. Keith Chamberlain will show us flowers in the Mosier area. Meet for carpooling at K-Mart (south end of parking lot) on 122nd & Sandy at 8:30am or meet the leader at the Hood River Inn at 9:30am. This will be a drive with short hikes. For more information contact Keith (1-478-3314) or Charlene (284-3444).
- 2 April, Sat. Dave Dobak will lead hikes on two trails, McCord Creek and Tanner Creek. Meet at the K-Mart on 122nd & Sandy at 8:30am. For more information contact Dave (248-9242) or Charlene (284-3444).
- 28-30 May
Memorial Day
Weekend Float trip on the North Fork of the John Day River from Dale to Monument. Call Charlene Holzwarth to reserve your space: 284-3444.

Siskiyou

- 10 March, Thurs. Meeting, 7:30pm. Room 171, Science Building, SOSOC. Richard Brock will present the Biology of Lomatium crookii.

Willamette Valley

21 March, Mon.

Meeting, 7:30pm. First United Methodist Church, corner of SE Church and State Streets, Salem (Use the Church St. entrance.) Bob Meinke, new director of the State Threatened and Endangered Plant Species Program and 2 time recipient of the NPSO Jean Davis Scholarship, will give a slide show on Native Plants of Eastern Oregon.

Wm. Cusick

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

ANNUAL MEETING AT SILVER FALLS -- JUNE 24-26

NPSO's 1988 Annual Meeting will be held the fourth weekend of June at Silver Falls, the largest of Oregon's State Parks. It is 25 miles east of Salem on Highway 214.

Saturday, June 25, Wilbur Bluhm, an expert on the flora of Silver Falls, will lead a field trip in the park. NPSO's new state Conservation Chair, Ed Alverson, will lead a trip to little-known natural grassland remnants and vernal pools between Salem and Silverton.

At the Saturday night banquet, the keynote address will be on the implementation of California's endangered plant species law.

Sunday, June 26, at the State Board meeting, Bob Meinke, the new director of the Oregon Rare Plant Program with the Department of Agriculture, will give an informal report on Oregon's program.

We have reserved the Conference Center, which is situated in a valley surrounded by a fir-hemlock forest with some old growth. The Conference Center is beautiful and the cuisine, exquisite. We are working on reserving additional space for group camping, and hope to offer quality daycare.

Silver Falls State Park is geologically, as well as botanically, interesting. There are ten spectacular waterfalls, some with "caves" behind them, and lava casts of trees. The falls are accessible via a seven-mile loop trail system, with several shorter loops. Another trail system adjoins the Conference Center.

More information will appear in the April Bulletin.

-- Marjorie Willis
581-6073 (Salem)

BLM BOTANY WORK IN EUGENE

The Bureau of Land Management in Eugene is seeking a qualified botanist to survey forestlands for endangered, threatened and sensitive plants. This will be a botanical contract, awarded in early April for work between late April and early July, 1988.

If you like to hike in old Douglas-fir forests, and have a nose for finding rare plants, contact Peter Zika, District Botanist, at (503) 683-6495 in early March, or write him at: Bureau of Land Management, Eugene District Office, P. O. Box 10226, Eugene, Oregon 97440.

ENDANGERED SPECIES ACT RE-AUTHORIZATION

The Endangered Species Act is now awaiting floor action by the U. S. Senate.

On December 17, the House of Representatives passed HR 1467 by a 399-16 vote. The House bill included higher levels of funding and several strengthening amendments, including increased protection for plants on non-federal lands and candidate species awaiting listing.

Letters or phone calls will be influential in the final decision made by the Senate. When contacting your Senators, the following points may be helpful:

Support the 5-year Re-authorization of the Endangered Species Act, as passed by the Senate Committee on Environment and Public Works -- with no amendments.

Ask your Senators to contact Senators Robert Byrd and Robert Dole, requesting early floor action on S675, the Endangered Species Act.

Ask your Senators to co-sponsor the re-authorization bill if they have not yet done so.

LEIGHTON HO MEMORIAL FUND ESTABLISHED

The NPSO Board, at its January meeting, established a special fund in memory of LEIGHTON HO, former Emerald Chapter President, who drowned in Hawaii December 20 (see NPSO Bulletin, Feb, '88, p. 13).

Monies have already been coming in to this memorial fund from Leighton's many friends. Approximately \$200 has been received thus far. When the fund grows to approximately \$400, it will be used for one of NPSO's annual summer research grants. The grant will be named the Leighton Ho Memorial NPSO Grant, and the recipient will receive the award in a brief ceremony at our Annual Meeting at Silver Falls, June 25.

If Bulletin readers wish to contribute to the Leighton Ho fund, please send your check, made out to NPSO, to:

Leighton Ho Fund
c/o Daphne Stone
Native Plant Society of Oregon
1934 Cleveland St.
Eugene, Oregon 97405

BOARD OF DIRECTORS MEETING HIGHLIGHTS

January 30, 1988

Reports were received from the Corvallis, Emerald, Portland, Siskiyou, and Willamette Chapters. Review of the National Forest Plans was a common concern. Mary's Peak has been the focus of much of the Corvallis Chapter's attention. Further commercial development at the summit has been averted, and the long delayed formal designation of the summit as a Scenic Botanical Area is imminent. Protection of a large stand of old-growth Douglas-fir in the Mary's Peak Watershed is now a concern. The Emerald Chapter participated in a process which led to the delay of Lane County's roadside herbicide spraying plan. One of this year's research grants will be dedicated to the memory of Leighton Ho. Donations are being collected by the Emerald Chapter. Lane Community College will offer 1 hr. of college credit to students who participate in chapter field trips and programs this spring. Other chapters are hoping for positive results from this new offering. The Portland Chapter will assist with the labeling of plants in the Leach Garden in preparation for a benefit walk about for osteoporosis. A group of chapter members has been invited by the Mt. Hood National Forest to observe the timber sale process from start to finish. This is an effort by the Forest to demonstrate the steps taken towards responsible multiple use management of the forest's diverse resources. Russ Jolley's Draft Position Paper for Protection of Native Plants in the Columbia Gorge was well received. Wayne Rolle has resigned as president of the Siskiyou Chapter. Frank Lang and Joan Seever are filling in. The Willamette Chapter will sponsor a Mother's Day wildflower show and the June 25-26 Annual Meeting at Silver Creek Falls State Park. Participation at the State Fair is still under study. The William Cusick Chapter was rumored to be reorganizing.

Membership Chair Mary Falconer reported 442 memberships paid to date. She asked for and received authorization to purchase a computer program to manage the membership list. A new subscription only category was created for organizations which wish to receive the Bulletin but do not want membership affiliation. Bulletin Editor Jan Anderson reminded people of the need for more botanical articles in the Bulletin. Rhoda Love agreed to be appointed as Proposal Chair in an effort to obtain funds towards the purchase of a Macintosh computer for publication of the Bulletin. Rhoda will also organize preparation of a new membership roster which will be available by the annual meeting. Dan Luoma pointed out that the Board voted at the last annual meeting that the membership list would not be sold or provided to others. No other group or organization is authorized to use our roster as a mailing list.

Conservation Chair Ed Alverson has jump into his new position with a big splash. He is trying to keep up with issues and meetings concerning: grazing on the Alvord Desert, reactivation of the Hells Canyon Preservation Council, the Oregon Rivers Initiative, Desert Conference X, Mary's Peak old-growth, post fire management in southwest Oregon, and Oregon State Parks management plans. The Oregon Rivers Initiative was discussed at length. The initiative was endorsed but with reservations because the ultimate outcome of the process could be less rather than more protection for Oregon's rivers, making this a risky proposition.

Jean Siddall, R/E Plant Project Chair, will have a committee meeting in early March to plan for the coming field season. Julie Kierstead will take over the Research Grants program from Barbara Fox, who resigned. Three \$400. grants will be awarded this year. Julie will also coordinate the effort to design new wildflower greeting cards. New safety procedures are being implemented for fieldtrips.

The Budget Committee reported an estimated income of \$8,250 and savings of \$6,900. The amount in savings was attributed to several beneficial factors: increased membership, increased donations and lower than anticipated expenses, particularly for the Bulletin. Funds expended for the passage of the Endangered Species Bill were covered by donations. Expenditures for 1988 are estimated at \$13,540. This amount greatly exceeds income but includes one time expenses meant to reduce the amount in savings. Baring unforeseen income, the 1989 budget will need to be greatly reduced in scope to balance and restore savings.
January 30, 1988 CMH/DL

1988 NPSO BUDGET (January 1 – December 31)

Estimated Income:

Membership dues	\$6,500.
Posters	650.
R/E	400.
Interest	300.
Leighton Ho Memorial	200.
Notecards	200.
Sub-total	8,250.
Balance brought forward	6,900.
TOTAL INCOME	\$15,150.

Anticipated Expenses:

Bulletin (including \$3,000. for computer)	\$6,000.
Chapters share of dues @ 35%	2,275.
Research Grants (3 @ \$400.)	1,200.
Board and other committees	600.
Potential Legal Fees (Jackson-Frazier, \$300.; Walker Creek, \$250.)	550.
Grant to Berry Botanic Garden Seed Bank	495.
Conservation committee	450.
R/E committee	400.
Membership chair	300.
Legislative committee	250.
President	240.
Secretary	200.
Annual meeting--Banquet speaker	150.
ONRC annual contribution	100.
Fees and Taxes	80.
Nominating committee	50.
Treasurer	50.
Natural Areas Association	50.
Walker Creek Wetlands	50.
Desert Conference X	50.
Sub-total	13,540.
Balance Forwarded (savings)	1,610.
TOTAL EXPENSES	\$15,150.

State board members and committee chairs attending state board meetings are reimbursed for mileage over 100 miles per meeting (non-cumulative) @ 21¢/mile.

Adopted by the Board of Directors, January 30, 1988.

NATIONAL FOREST PLANS NEED INPUT

The forest planning process is now in full swing, with comment periods currently open for seven of Oregon's National Forests. Each Forest has prepared a detailed account of management issues and alternatives, in order to set objectives for multiple use management for the next 10 to 15 years.

Every acre of National Forest land will be allocated to a specific management designation. Each plan has a preferred alternative, which can tell you how your favorite places in the mountains will look in ten years from now if the Forest Service has their way. A number of additional alternatives are also provided, giving interested citizens the opportunity to express support for a variety of approaches spanning the entire spectrum, from strong protection to industrial forestry.

Members of NPSO can play a unique role in the forest planning process. Under multiple use management, each National Forest is required to protect and maintain the natural diversity that it harbors. This includes botanical values, such as sensitive plant species, representative examples of native plant communities, and interesting or unusual habitats. Yet, some forests have not even fully inventoried their botanical resources, and even when the significant areas are known, botanical values may not be given a high priority. Thus it is important for NPSO members to remind the National Forests of the significance of and public concern for botanical values.

Each National Forest has developed a set of planning documents, consisting of the Proposed Management Plan, a Draft Environmental Impact Statement, Appendices, Reviewer's Guide, and maps. These documents are available, at no cost, from each Forest Supervisor's office. In addition to supporting a particular management alternative, it is helpful to address specific issues. It is especially important to express support for areas proposed as Research Natural Areas and Special Interest Botanical Areas, as well as strong management guidelines for endangered, threatened, and sensitive plant species; and give reasons why you support these management issues.

If you know of a particular area that has botanical values that are not recognized in the plan, submit a detailed description of the area, explain why you think it should be preserved, and ask for a specific response to your comments. Your input can make a difference!

Many chapters of NPSO are preparing detailed responses to plans for local forests, and this provides another avenue for NPSO members to get involved. Contact your Chapter President or Conservation Officer if you would like to participate. And as state NPSO Conservation Chair I will be happy to field any queries concerning the Forest Planning process.

Ed Alverson
Conservation Chair

The following National Forests currently have Plans that are open for public comment. Write to these addresses for further information, or to submit your prepared response. Comment deadlines are listed as they currently stand.

Fremont National Forest
P.O. Box 551
Lakeview, OR 97630
comments due by 15 March

Umatilla National Forest
2517 S.W. Hailey Avenue
Pendelton, OR 97801
comments due by 28 March

Winema National Forest
P.O. Box 1390
Klamath Falls, OR 97601
comments due by 15 April

Rogue River National Forest
P.O. Box 520
Medford, OR 97501
comments due by 2 May

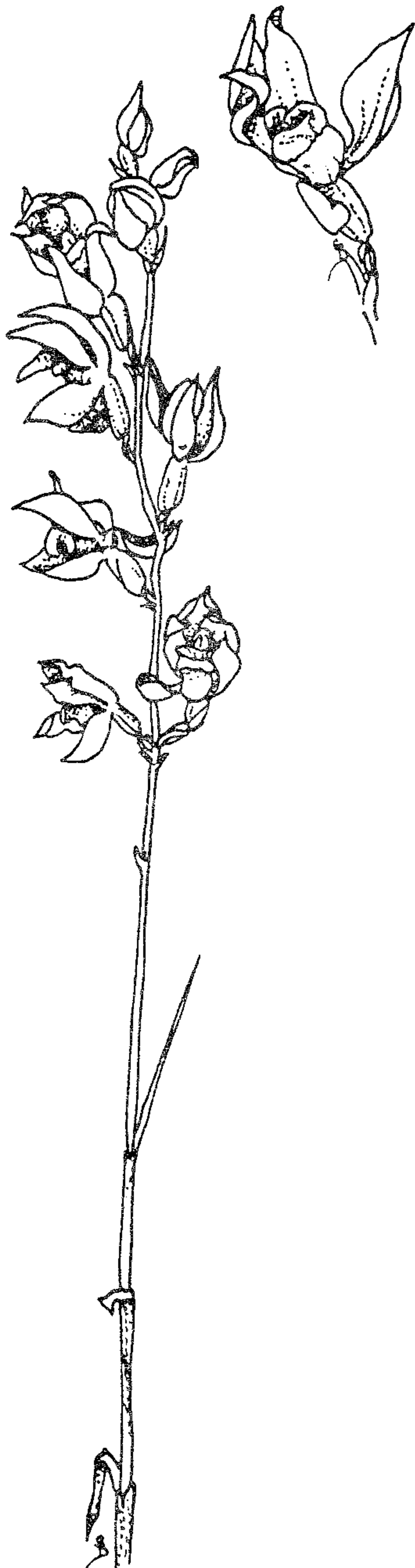
Umpqua National Forest
P.O. Box 1008
Roseburg, OR 97470
comments due by 16 May

Willamette National Forest
P.O. Box 10607
Eugene, OR 97440
comments due by 16 May

Mt. Hood National Forest
2955 NW Division Street
Gresham, OR 97030
comments due by 31 May

Eborophyton austiniae (Phantom Orchid)

Drawing by Susan G. Baker,
Siskiyou Chapter.



Conservation Alert

MT. HOOD DRAFT FOREST PLAN PROPOSES LOGGING IN COLUMBIA GORGE NATIONAL SCENIC AREA

The Mt. Hood National Forest recently released its draft Forest Plan, to cover the next 10-15 years. Unfortunately, the alternative preferred by the Forest Service would not be good for the new National Scenic Area. While the part of the Gorge directly facing the Columbia River would be kept in Special Interest category, with no timber harvest, an important area near Larch Mountain would have its current Special Interest protection removed, allowing logging for the first time.

Over 50 years ago, in 1937, the area seen from the viewpoint at Larch Mtn was set aside by the Secretary of Agriculture as the Columbia Gorge Park Division. This protection was confirmed by the Eagle Creek Plan of 1975, and in 1986 the area was included in the Columbia River Gorge National Scenic Area. Last year, the interim guidelines for the National Scenic Area identified Larch Mtn as a "Key Viewing Area", i.e., "an area from which large numbers of people view the National Scenic Area portions of the Gorge". Despite this long history of protection and public concern, however, the Mt. Hood National Forest now proposes so-called "Viewshed Management" (with logging) for the area below the Larch Mtn Viewpoint, usually called the Multnomah Basin. For the area which slopes up to Nesmith Point, also viewed from Larch Mtn, the proposal calls for Intensive Timber Management!!

Not only do the Multnomah Basin and Nesmith Point areas have great scenic value as seen from Larch Mtn, but they also have precious natural and recreational values which would be damaged or destroyed by logging:

Old Growth Forest - This is scarce in the Columbia Gorge, and by far the largest block of old growth forest in the Gorge, some 2000 acres, is in the Multnomah Basin. Here there are plenty of big firs, hemlocks and cedars, tall snags (homes for woodpeckers and other wildlife), spotted owls (confirmed by Forest Service wildlife biologists), and many deep woods plants, such as Pinesap, Spotted Coral Root, Mertens' Coral Root, Pyrolas, Coolwort, etc. This is the closest old growth forest to the Portland-Vancouver Area and is traversed by 6 excellent trails. It would be a sad day if the chainsaws come to this forest.

Wetlands - The basins near the headwaters of Multnomah, Oneonta, Horsetail, and McCord creeks contain some splendid and pristine marshes. In the area which the Forest Service now proposes for logging, there are 13 marshes ranging from 3 to 13 acres in size, and many other smaller ones. One of the marshes is in plain view from the viewpoint at Larch Mtn. In addition, there are at least a dozen tiny

ponds, many of them marsh-girded. These precious wetlands are important for a variety of wildlife, and for native plants such as Grass-of-Parnassus, Staff Gentian, Marsh Violet, Tall Shooting Star, Bog-orchids, and others.

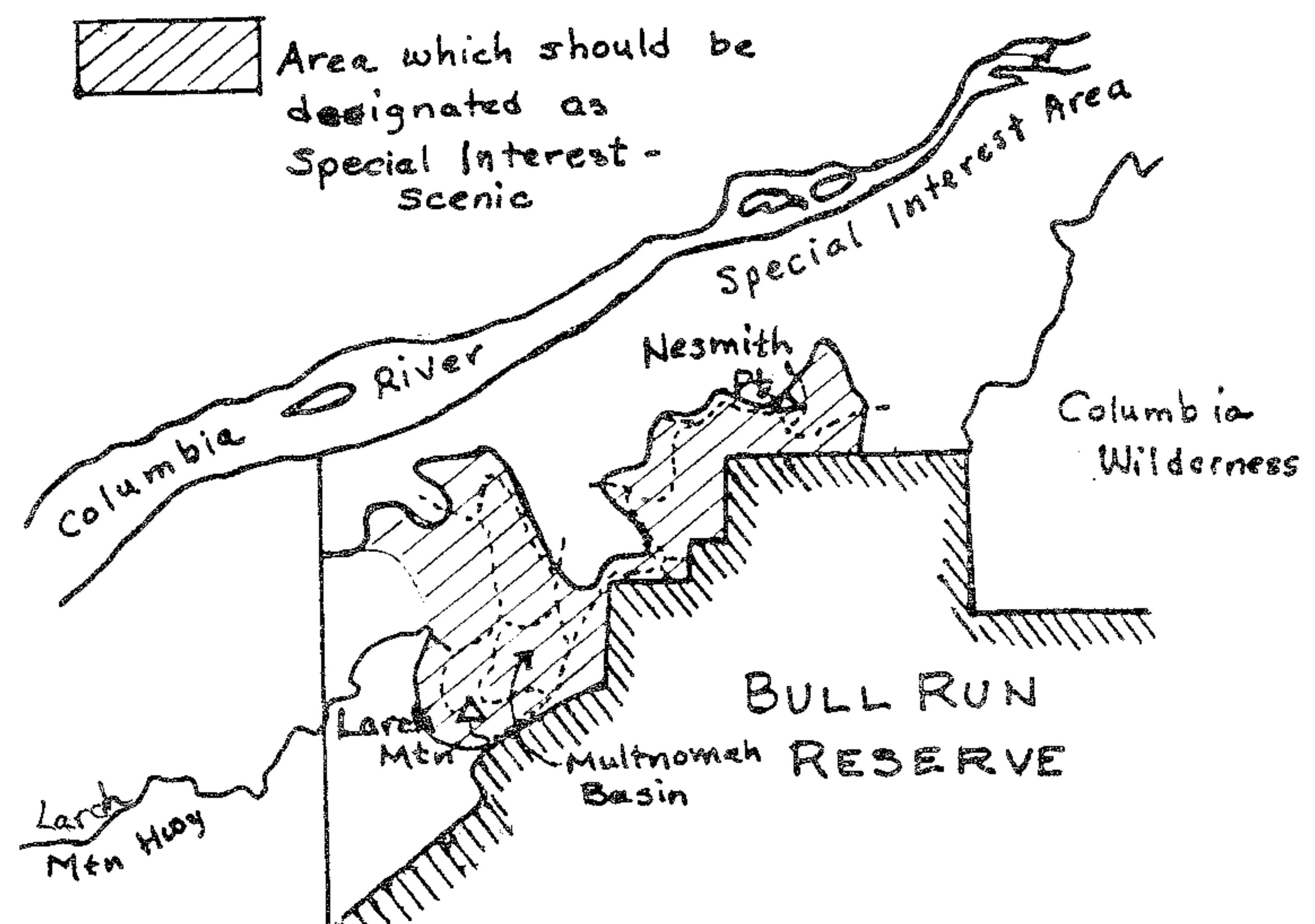
Trails - The Multnomah Basin/Nesmith Point area is accessible from trailheads along the Larch Mtn Highway, less than 40 miles from downtown Portland. A network of 10 easy trails covers the area, among them the popular Larch Mtn Trail.

Finally, it was not just by coincidence that this area, with its remarkable esthetic, natural, and recreational features, was included by Congress in the National Scenic Area. The idea that roads or logging could occur here without damaging the old growth forest, the many wetlands, the trail network, or the scenery, simply defies common sense.

Please write the Forest Service. Ask that the long history of protection for the Larch Mountain/Nesmith Point area be continued in the new Forest Plan by designation as a Special Interest Area (with no timber harvest). Make the point that logging would be inconsistent with the goals of the National Scenic Area, especially where so many important natural and esthetic values are involved, and so close to a large metropolitan area.

Write: David G. Mohla, Forst Supervisor
Mt. Hood National Forest
2955 N.W. Division St.
Gresham, OR 97030

Deadline for comments is April 15, 1988



PRELIMINARY ANNOUNCEMENT: CONFERENCE ON THE FUTURE OF STUDIES ON ENDANGERED SPECIES OF PLANTS IN THE PACIFIC NORTHWEST.

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, PACIFIC DIVISION

JUNE 19, 1988 -- OREGON STATE UNIVERSITY-- CORVALLIS--OREGON

AS PART OF THE PROGRAM OF THE ANNUAL MEETINGS OF THE AAAS, PACIFIC DIVISION, TO BE HELD ON THE CAMPUS OF OREGON STATE UNIVERSITY, THERE WILL BE A HALF-DAY CONFERENCE DEALING WITH THE FUTURE OF STUDIES ON THE ENDANGERED AND THREATENED PLANT SPECIES OF THE NORTHWEST REGION. ORGANIZERS OF THE CONFERENCE ARE DR. KENTON L. CHAMBERS AND MR. ROBERT MEINKE. A PROGRAM OF TALKS BY INVITED SPEAKERS, TOGETHER WITH ROUND-TABLE DISCUSSIONS IS PLANNED, WHICH SHOULD BE OF INTEREST TO MANY PERSONS WHO ARE INVOLVED IN THE STATE AND REGIONAL EFFORTS ON BEHALF OF ENDANGERED PLANTS.

THIS PRELIMINARY ANNOUNCEMENT IS INTENDED TO CALL THE MEETING TO THE ATTENTION OF THE MEMBERSHIP OF THE NATIVE PLANT SOCIETY OF OREGON. ANYONE WISHING TO ATTEND THE CONFERENCE CAN GET FURTHER INFORMATION BY WRITING TO DR. CHAMBERS, C/O DEPARTMENT OF BOTANY, OSU, CORVALLIS, OR 97331. SUGGESTIONS CONCERNING THE PROGRAM ARE WELCOME, AS WELL. PERSONS WHO ATTEND THE CONFERENCE AND WHO REGISTER FOR THE AAAS MEETINGS (FOR THE SET FEE OF \$32) MAY TAKE PART IN ALL THE ACTIVITIES OF THE MEETINGS, INCLUDING SCIENTIFIC SYMPOSIA, SESSIONS OF CONTRIBUTED PAPERS, FIELD TRIPS (TRANSPORTATION COSTS SEPARATE), AND VARIOUS SPECIAL EVENTS DURING THE PERIOD OF JUNE 18TH - JUNE 22ND.

DEATH VALLEY AND MOJAVE DESERT TRIP - MARCH 18-27

Malheur Field Station sponsors a spring desert course (2 credits) and trip for amateur botanists, professional botanists and biologists, students, and people who just love Death Valley. Because winter rains have been just right, this promises to be an excellent year for spring wildflowers.

Instructor is Dr. Linda Ann Vorobik. The class is limited to 24 students, and enrollment closes March 10. The \$470 fee includes tuition, room, board, travel in the field. A \$70 deposit is required at application time.

For additional information, contact:

Lucile A. Housley, Director
Malheur Field Station
HC 72 Box 260
Princeton, OR 97721
503-472-2629

MT. HOOD NATIONAL FOREST PLAN RELEASED

The public comment period for the Mt. Hood National Forest plan closes April 15.

The timber industry is very concerned about this plan. The preferred alternative, E, would result in an overall reduction in harvesting through the next 15 to 20 years. All of us have a responsibility to provide a balanced input in view of the strong lobbying effort the loggers will muster.

NPSO members who have reviewed the plan have found little or no reference to native plant and mushroom foraging. Foraging activity, growing constantly, raises concerns which must be dealt with in a comprehensive plan for the forest's next 10 to 15 years.

Send your comments, or request the information package from:

Mt. Hood National Forest - Planning
2955 NW Division St.
Gresham, OR 97030 503-666-0700

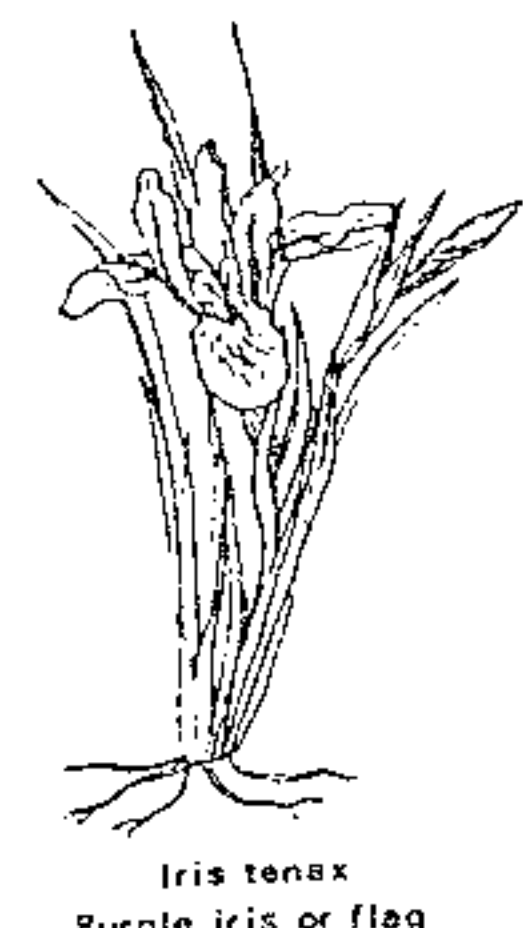
DISCOVER LOCAL FLORA

Go for Success Lane Community College

SPRING TERM 1988

GS 199 - 1 CREDIT

OPEN TO EVERYONE INTERESTED IN THE WILD PLANTS AND DIVERSE HABITAT OF LANE COUNTY.



TOURS: BOTANICAL AREAS & U OF O HERBARIUM

TALKS: WILDFLOWER ENTHUSIASTS SHARE THEIR EXPERTISE

IDENTIFY: SIMPLE WILDFLOWER IDENTIFICATION



MONDAYS, 7-9 PM*

*SOME SATURDAY FIELD TRIPS WILL BE OFFERED

INSTRUCTOR: GAIL BAKER

EMERALD CHAPTER OFFERS WILDFLOWER PROGRAM

NPSO Emerald Chapter is offering a one-credit class, "Discover Local Flora", in cooperation with Lane Community College this spring. The course is based on the Chapter's regular monthly meetings and field trips, with additional classroom work. The objectives are to increase local botanical education, and promote NPSO and NPSO membership. The course focuses on the variety of botanical opportunities available within 15 miles of Lane Community College.

THROW-AWAY MALES AND MATING TYPES IN THE BIGLEAF MAPLE

by David Wagner

Most flowering plants have a uniform arrangement inside the flower: a pistil containing ovules that develop into seeds in the center of the flower and a ring of stamens that produce pollen around the pistil. The typical situation is for all flowers on a plant to be the same. Sometimes a plant will have special arrangements, e. g., to provide for better exchange of pollen from plant to plant or to provide an excess of pollen to insure all the ovules are fertilized and will develop into seeds. Such special arrangements improve the chances for reproductive success of that particular species.

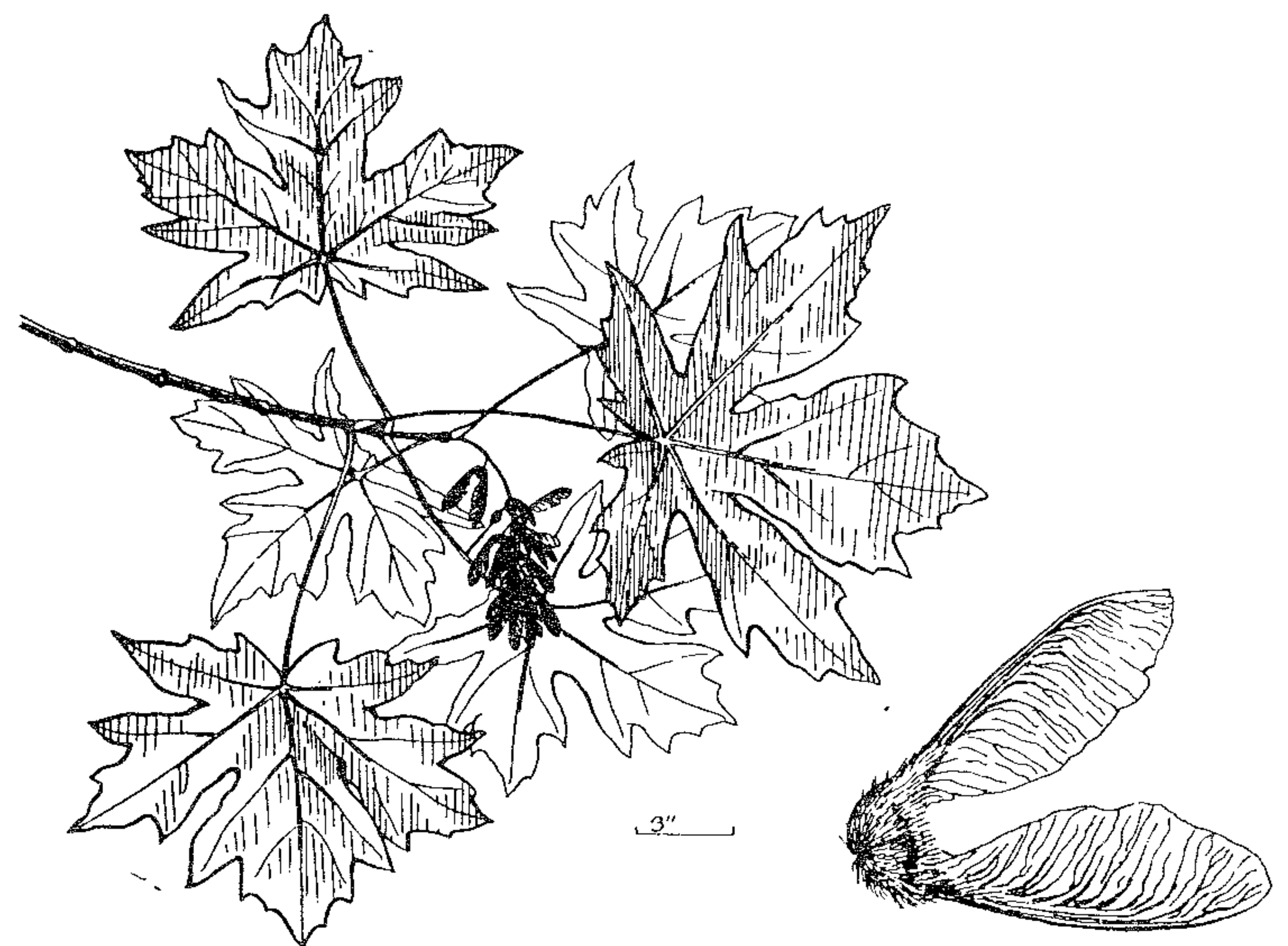
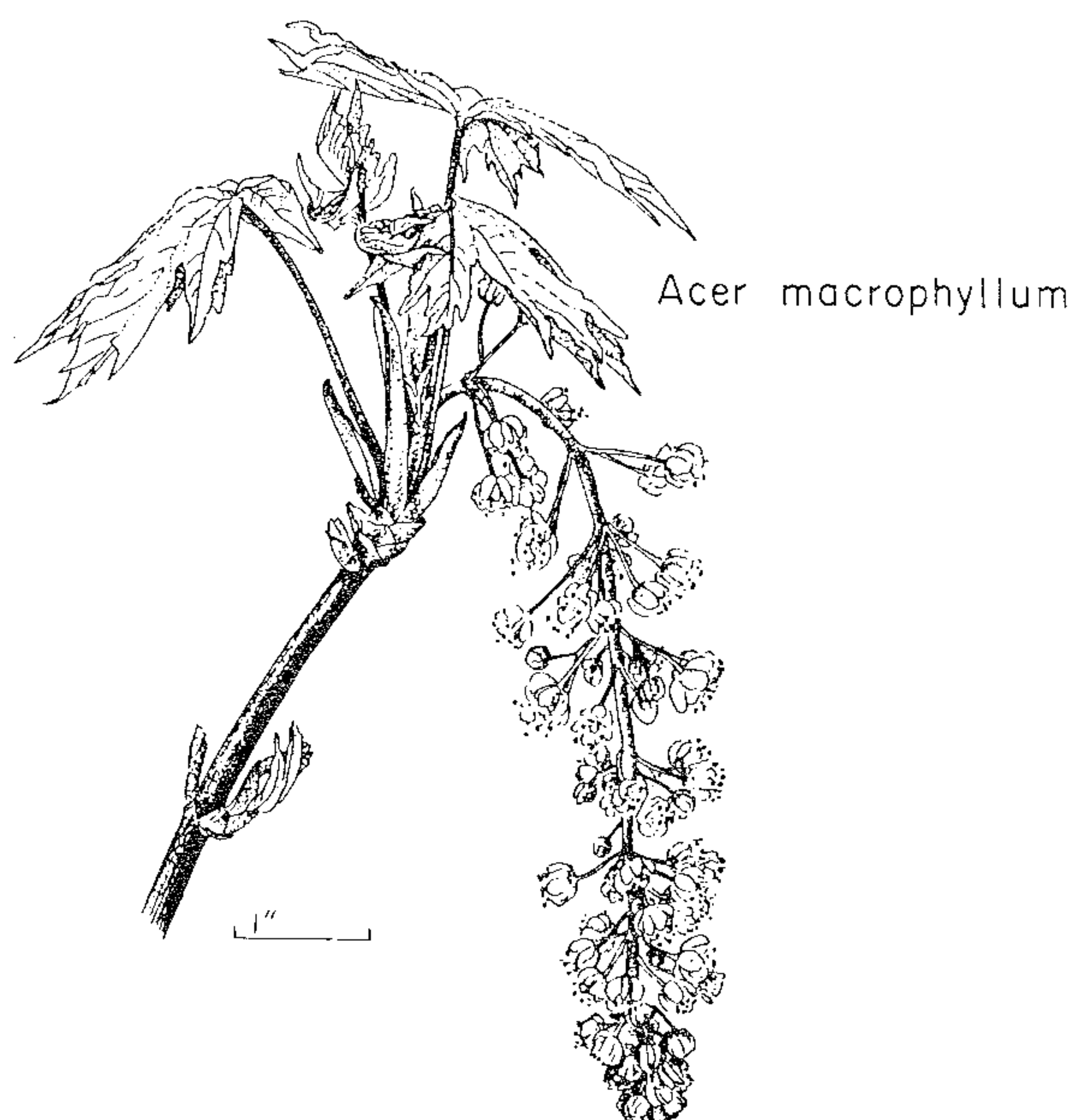
The bigleaf maple (*Acer macrophyllum*), prominent in western Oregon, is a plant that has several "special arrangements." As you know, this tree has long clusters of yellowish flowers in April and May. If you look closely at the flowers, you will find that only a few of them are complete, that is, have both female and male parts. The complete flowers have pistils in the center with a forked stigma — the stigma is the part that receives the pollen — and there is a ring of ten stamens around the pistil. Other maple flowers, however, do not have a pistil, but only a vestigial bump indicating an aborted pistil. They have only stamens, and so are called male flowers. The complete flowers with both pistils and stamens are called bisexual.

A little more investigation will show you that male and bisexual flowers are not evenly distributed in maple inflorescences. On many of the trees, the male flowers are mostly at the tip of the inflorescence, with the bisexual flowers concentrated at the base. Since the inflorescences are pendent, this means the male flowers are mostly below the bisexual. Some trees have some of their inflorescences with male flowers only. This leads to interesting consequences later in the season.

When the bigleaf maples are in the middle of pollination, bees and other pollinators are busily sipping nectar and doing their duty transporting pollen from one flower to another. When they visit the male flowers they pick up pollen; when visiting bisexual flowers they deposit pollen on the stigmas. After pollination, the petals will wither and the pistils will start growing long wings to produce the winged fruits (samaras) we all enjoy. Male flowers, of course, won't produce seeds and are no longer needed.

At this point, an amazing thing happens: an abscission (cutting-off) zone develops in the central axis of the inflorescence. (The development of an abscission zone is the same mechanism maples and other deciduous trees use to drop their leaves in the fall.) Here, the abscission zone occurs just beyond the last of the bisexual flowers. The end of the inflorescence, with male-only flowers, is cut off and dropped from the tree. Watch for this! Some time in late April or early May, many of the bigleaf maples will have a litter of the tips of inflorescences beneath them. These are the "throw-away" male flowers, dropped from the tree because they are no longer of any use and the tree will not need to spend any more energy maintaining them. So far as I am aware, this is the only plant in the world with throw-away male flowers AT THE TIP OF AN INFLORESCENCE that has bisexual flowers on it. On other trees, male-only inflorescences are dropped in the same way.

This is an interesting enough tale already, but it is only half of the story! I noticed, soon after recognizing the throw-away male phenomenon, that only some of the trees seemed to be doing it. What I and my students have found is that there are two types of bigleaf maples which we have named "Type I" and "Type II." Only the Type I trees have the throw-away



Drawing by Ramona Hammerly in Northwest Trees.

males at the tips of the inflorescences. Type II trees have some inflorescences that are male-only and some mixed inflorescences. The two types are part of a system to insure that pollen moves from tree to tree for cross-pollination.

As mentioned above, extra male flowers are developed to produce an excess of pollen. However, that in itself does not prevent self-pollination. A different mechanism comes into play here. The Type I and Type II trees represent two mating types with overlapping flowering times. At the beginning of the maple flowering season, the Type I trees stick out the stigmas of their bisexual flowers and are ready to receive pollen. Their male flowers are not yet open at this time. At the same time the Type II trees are shedding pollen (from their all-male inflorescences and the male flowers in their mixed inflorescences), and their bisexual flowers are not open. Midway through the maple flowering season, the two mating types reverse roles with the Type I trees shedding pollen and the Type II trees sticking out their receptive stigmas. Once all the pollen has been shed, Type I trees drop the male end of the inflorescence and Type II trees drop male-only inflorescences and individual male flowers.

All of this seems deliciously complicated to the student of breeding systems in flowering plants. I have to confess that our observations indicate the situation is even more complicated than I have described here. The essential outline for the bigleaf maple has been presented, however. Actually, in the light of the ideals of reproduction:

First - trees need to be sure that there is enough pollen to fertilize all the pistils. This is achieved by having most (over 80%) of the flowers being male.

Second - trees want to be sure that pollen is moved from tree to tree. This is nicely done by dividing up sex roles for the first half of the flowering season and then switching roles in the second half. Type I trees are being pollinated during the first half of the season and Type II trees in the second half. A special benefit of this role-switching is that all trees will produce seeds, a distinct advantage when compared to our cottonwoods and willows which insure that pollen moves from tree to tree by having separate male and female trees but suffering from the result that only half the trees of a population can produce seeds.

Third - trees are best off when they spend a minimal amount of energy on structures which are no longer necessary, as here, male flowers past pollen production. The bigleaf maple handles this by having throw-away male inflorescence tips (Type I trees) or early dropped male-only inflorescences (Type II trees).

I believe there is no other plant in the world that has a more efficient and effective breeding system than our humble bigleaf maple. I contend that there are few organisms that have a more elegant system. I share all this with you because it is all easily verified by casual observation. All you have to do is take weekly walks during the months of April and May, and peer closely into the flower clusters of the bigleaf maple. For the benefit of readers in the Eugene-Springfield area, I will make a point of marking Type I and Type II trees in the Mount Pisgah Arboretum along the Nature Trail loop and the Water Garden trails.

From Tree Time, January-February, 1988, the newsletter of the Mount Pisgah Arboretum, Eugene-Springfield, Oregon. Used with permission of the editor.



A NEW CASCADE WILDFLOWER BOOK

Timber Press (9999 SW Wilshire, Portland, OR 97225) has just released "Wildflowers of the Western Cascades" by Robert A. Ross and Henrietta L. Chambers. The authors are both members of the biology faculty at Linn-Benton Community College in Albany. Books should be available at local bookstores by March 1st. The book has a softcover, 182 color plates, 102 line drawings and descriptions of 42 families and 272 species. There is a map of the Iron Mountain trail system and descriptions of 18 habitats and some of the plants commonly found there. The book sells for \$19.95. If ordered from Timber Press, include \$3.00 for postage and handling.

Henrietta Chambers
Bob Ross
Corvallis Chapter

THE OTHER 'THE BOOK' IS DUE SHORTLY

Terrestrial Vegetation of California; New, Expanded Edition 1988, edited by Michael G. Barbour and Jack Major, will be off press no later than January 1988. This 1036 page revision includes updates by chapter and new literature citations.

The California Native Plant Society clothbound edition is limited to 500 copies and is priced at \$50 (half the cost of the Wiley edition at the time it went out of print).

Order from CNPS, 909 Twelfth St., Suite 116, Sacramento, CA 95814. Add \$1.75 for shipping for the first copy, and \$.75 per copy after the first.

WELCOME NEW MEMBERS

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HELLS CANYON PRESERVATION COUNCIL RE-FORMING

The Hells Canyon Preservation Council, which was instrumental in obtaining National Recreation Area status for this diverse and scenic part of NE Oregon and adjacent Idaho, is coming back to life. This is in response to a growing perception among conservationists that management of the NRA is not being conducted in accordance with the provisions of the legislation that created the NRA.

The major problem at present seems to be with timber sales in non-wilderness portions of the NRA, which are allowed only when they don't conflict with the scenic, recreational, and natural values for which the NRA was created. However, conservationists have documented a number of instances in which these values have been damaged as a result of logging, and associated roadbuilding and quarrying.

NPSO should designate a member as a liason with the Hells Canyon Preservation Council. Ideally it would be someone who lives in NE Oregon or has a strong interest in the area. The role I envision this person playing is to conduct some background research into the sensitive plants and natural plant communities of the NRA, and perhaps also organize or conduct field surveys of critical areas. The idea is to gather sufficient knowledge so that NPSO can provide informed comments in response to specific Forest Service management actions, such as timber sales.

Please feel free to contact me if you have any interest in participating in this effort, or if you have further questions.

Ed Alverson
Conservation Chair

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MORE KNAPWEED PULLING!

The Nature Conservancy has set Saturday June 4 for the next knapweed pull on the Tom McCall Preserve at Rowena. The project is a joint venture of the Mid-Columbia Chapter of NPSO and The Nature Conservancy. Details will be in future issues of the Bulletin.

The Mid-Columbia Chapter has been contributing help to the McCall Preserve in the form of funds for construction and installation of a bulletin board on the site, and volunteers to lead hikes there Sundays this Spring.

DESERT CONFERENCE TO FOCUS ON WATER

"Water in the Desert" is the theme of the 10th annual desert conference at Malheur Field Station April 15-17. The keynote speaker will be Dr. Bernard Shanks, author of This Land is Your Land. The program will feature speakers and field trips on riparian and marsh ecosystems, water law, wildlife refuges, watershed enhancement projects, and whitewater recreation.

More information is available from Linda Craig, at 503-224-6240 or Audubon Society of Portland at 503-292-6588.

ENVIRONMENTAL BULLETIN BOARD IN OPERATION

An electronic bulletin board system dedicated to environmental conservation is now operating. Use of the system is free. The phone number to call is 503-222-5240.

Members with personal computers may wish to use this service. For further information, call Bob Nisbet at 221-3422 or 274-1086.

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BULLETIN

Editor Jan Dobak
 2584 NW Savier St., Portland, OR 97210; 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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- * for long articles, double space between paragraphs, but do not indent the first word of the paragraph
 - * for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead
- Type your own headline, centered, all caps.
 In case of special formats, e.g. plant keys,
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ILLUSTRATIONS: black & white prints, ink drawings, woodcuts, halftones, et al. We welcome small doodles as well as larger efforts. Please give source & date, if not original.

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 & illustrations will not be returned unless it is requested.

The Bulletin is published as a service to NPSO members & the public. Your suggestions & comments are always welcome.

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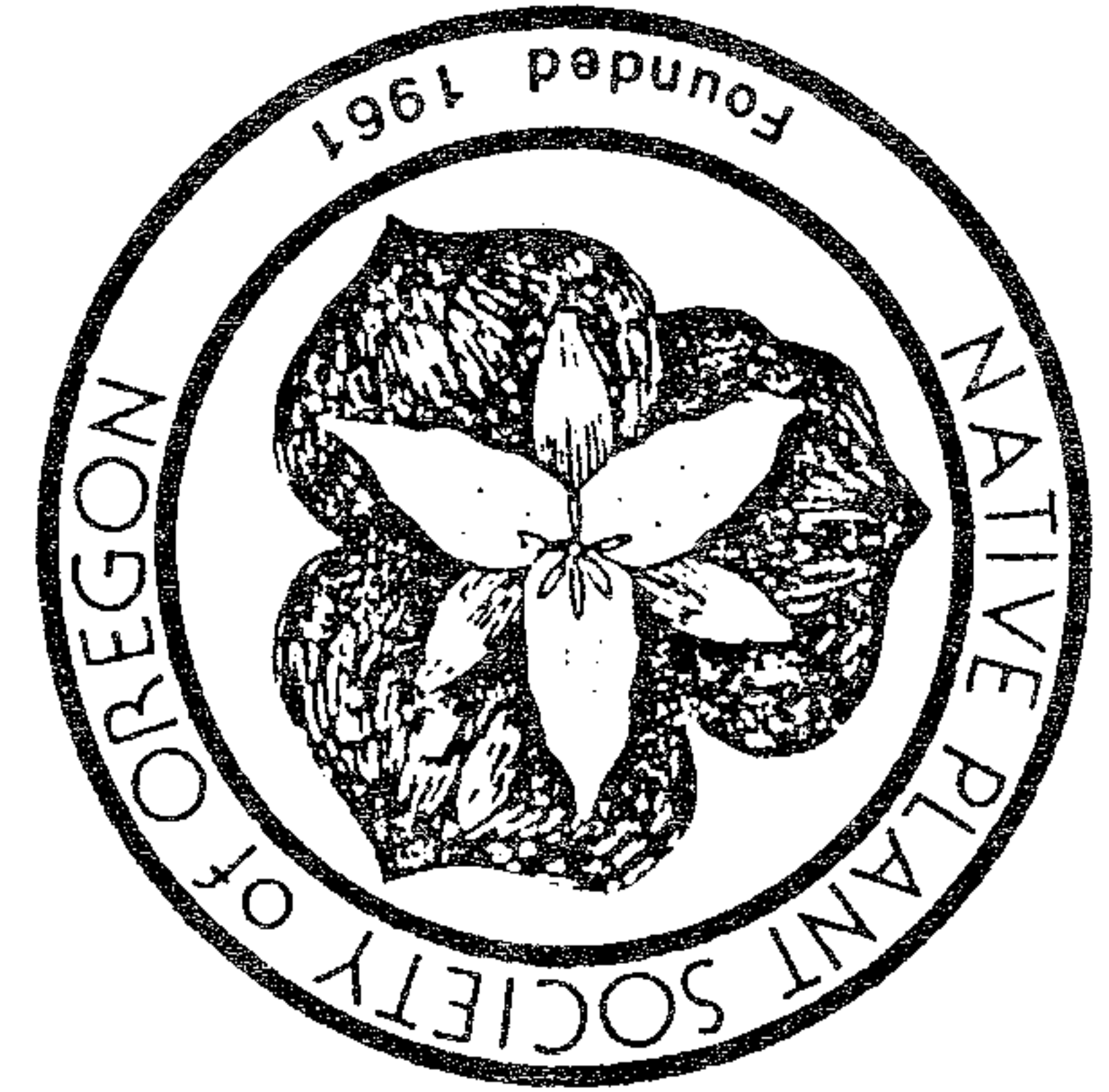
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