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

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« « VOTE FOR STATE OFFICERS - BALLOT ENCLOSED » »

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CHAPTER NEWS

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS

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

Blue Mountain

21 Mar., Tues. **Meeting.** 7:30 pm at Room 150 Morrow Hall, BMCC. There will be a display of publications available on native plants and wildflowers, and a slide presentation (subject to be announced).

Corvallis

13 Mar., Mon. **Meeting.** 7:30 pm at Rm. 4083 Cordley Hall, OSU, Corvallis. Slide show and talk on "The Central Oregon Landscape, Then and Now," by Stu Garrett.

Emerald

13 Mar., Mon. **Meeting.** 7:45 pm at Amazon Community Center, 2700 Hillyard St., Eugene. "Oregon's Mariposa lilies or Cats' Ears." Nancy Fredericks from Corvallis will discuss her research on southwest Oregon's *Calochortus.*

10 Apr., Mon. **Meeting.** 7:45 pm at Amazon Community Center, 2700 Hillyard St., Eugene. "Wildflowers of Oregon's High Desert." Dr. Stu Garrett will present a slide show of central Oregon plants.

High Desert

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Mid-Columbia

1 Mar., Wed. **Meeting.** 7:30 pm at Rainier (Security Pacific) Bank Building in White Salmon, Washington. First joint meeting of Oregon's Mid-Columbia Chapter and Washington's Suksdorfia Chapter. Program will be "Management of Native Plants and Noxious Weeds in the Columbia River Gorge," presented by Bob Gorman, Klickitat County Weed Control Officer.

5 Apr., Wed. **Meeting.** 7:30 pm at Mosier School. Slide show on "Flowers of the Alps," by Dave and Jan Dobak.

North Coast

2 Mar., Thurs. **Meeting.** 7 pm at State Office Building, 3600 3rd St., Tillamook.

2 Apr., Sun. **Field trip** to Fish Hatchery, Chance Road. Leave at 1:30 pm from Les Schwab Parking Lot in Tillamook.

6 Apr., Thurs. **Meeting.** 7 pm at State Office Building, 3600 3rd St., Tillamook.

For information, contact Clarice Maxwell (842-7023).

Portland

4 Mar., Sat. — **Field trip** to Catherine Creek area in Columbia Gorge. Leave at 9 am from Gateway MAX Park and Ride, or 10 am from north end of Bridge of the Gods. Leader: Charlene Holzwarth (284-3444).

11 Mar., Sat. — **Field trip** to McCord Creek, for mosses and early spring flowers. Leave at 9:20 am from Gateway MAX Park and Ride, or meet the leader at McCord Creek trailhead just off I-84 at 10 am. Leader: John Davis (509-427-5871).

14 Mar., Tues. — **Meeting.** 7 pm at First United Methodist Church, 1838 SW Jefferson St., Portland. Slide show on the North Cascades in Washington, by Steve and Laura Gasaway.

18 Mar., Sat. — **Field trip** to Mosier area. Leave at 9 am from Gateway MAX Park and Ride, or 10 am from Hood River Inn. Leader: Keith Chamberlain (478-3314).

25 Mar., Sat. — **Field trip** to Columbia Hills, by a new route east of Klickitat. Leave at 7:30 am from south end of NE 122d Av. and Sandy Blvd. K-Mart parking lot, or 8:45 am from the Winery in Bingen, Washington. Leader: Elizabeth Handler (244-5320).

1 Apr., Sat. — **Field trip** to Badger Creek west of Dufur. Leave at 8 am from Gateway MAX Park and Ride. Leader: Rick Brown (222-1146).

8 Apr., Sat. — **Field trip** to Mitchell Point in the Columbia Gorge. Leave at 8:30 am from Gateway MAX Park and Ride. Leader: Dave Dobak (248-9242).

15 Apr., Sat. — **Field trip** to Rowena Preserve. Leave at 9 am from Burns Brothers Truck Stop on I-84 in Troutdale. Leader: Barbara Robinson (631-2054).

22 Apr., Sat. — **Field trip** to Mary's Peak near Corvallis. This is a *bus trip* with the Geological Society of Oregon, and *signup is required* by April 1. Cost is $20, payable by check to GSOC, P.O.Box 8579, Portland 97207. You may take your lunch or purchase it on campus at OSU (if bus is fully loaded, lunch is free). Bus leaves at 8 am from Red Lion Hotel at Lloyd Center, and returns by 4 pm. If possible, have someone drop you off at the hotel, because parking is limited. Leaders: Andy Corcoran and Dr. Taylor of OSU. Call Charlene Holzwarth (284-3444) for further details.

29 Apr., Sat. — **Field trip** to Ridgefield Wildlife Refuge. *Tentative:* details in April *Bulletin*. Leader: Shep Wilson.

Siskiyou

9 Mar., Thurs. — **Meeting.** 7:30 pm at Rm. 171, Science Building, SOSC. Program on plant communities of the Shasta Valley and Greene's Mariposa Lily, one of the region's rare species, by Richard Brock, who studied the range, distribution, and ecology of this species with a grant from the Hardmann Foundation.

Willamette Valley

20 Mar., Mon. — **Meeting.** 7:30 pm at First United Methodist Church, corner of SE Church and State Sts., Salem (use the Church St. entrance). Paula Brooks will present "Wetlands of the southern Washington Cascades," with many plant slides from her wetlands ecology research project.

25 Mar., Sat. — **Field trip** with Mid-Columbia Chapter to Dry Creek and Rowena Plateau, near Mosier. Leave at 7:15 am from South Salem K-Mart; 7:30 am from North Salem K-Mart; 10 am from Shell service station in Mosier. Easy to moderate hike. Leader: Jerry Igo of Mid-Columbia Chapter. For information, call Clint Urey (743-2802) or Glenn and Barbara Halliday (371-1025).

1 Apr., Sat. — **Field trip** to Baskett Slough, 10 miles west of Salem. Leave at 8 am from South Salem K-Mart. Easy hike. Leader: Frances Shaeffer (393-7492).

12-14 Apr., Wed.-Fri. — **Field trip** to Table Rocks, north of Medford. Possible side trips to other areas of botanical interest. Leader: Wilbur Bluhm. Contact Wilbur (393-2934) or Barbara Halliday (371-1025) for departure times and additional information.

22 Apr., Sat. — **Field trip** to Fanno Meadows, in Coast Range west of Dallas. Orientation trip for cooperative plant inventory and rare plant monitoring program with The Nature Conservancy.

If you want to be notified about unscheduled mid-week trips, call Clint Urey (743-2802) or Glenn and Barbara Halliday (371-1025).

Wm. Cusick

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

Jean Davis Award

NPSO will award a scholarship to a worthy student in an Oregon college, with his or her major study in plant systematics or plant ecology. The scholarship is in the amount of $1000, and is to be used toward the student's tuition within the following academic year. Deadline of applications is April 1. The award will be made by May 1.

Donations to the scholarship fund are tax deductible and are welcome at any time. All interest earned from the donations is apportioned to as many scholarships as possible in the spring of each year, at $1000 each.

All communications regarding this fund should be addressed to:

Mary Falconer, Scholarship Committee Chair
1920 Engel Avenue NW
Salem, Oregon 97304

Rules for Scholarship Awards

1) Scholarships are available to students in Oregon colleges, planning their major study in plant systematics or ecology.

2) Scholarships are awarded in the amount of $1000 to worthy students who will complete at least two years of satisfactory college work by July 1 of the year of receipt of application and are full time students. Graduate students may be eligible if they meet all qualifications except that of full time student.

3) Awards are made in the following manner:

   a) A certificate is presented to the recipient.

   b) A check in the amount of the award is submitted to the school of choice, as set forth in rule 1, to be used toward tuition within the following academic year.

4) If an award recipient fails to enroll, changes his or her major, or leaves the school before completing the period for which the award was granted, the full amount or unused part of the money shall be returned to the Jean Davis Memorial Scholarship Fund.

5) Applicants are required to submit:

   a) In their own handwriting, a statement of academic and career intent.

   b) Two 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.

6) All applications together with items listed in rule 5 must be received by the Scholarship Committee Chair no later than April 1. The award will be made by May 1.

7) Scholarships are not granted to Scholarship Committee members or their relatives.

1989 Research Grants Available

Three research grants of $400 each are available for 1989. NPSO's grants are intended to stimulate research on Oregon's native plants by defraying travel and other direct project expenses. Research furthering the conservation of native plant species or communities is particularly encouraged.

Grant proposals should include the following:

1) A description of the proposed research project, its method, and objective.

2) A simple budget explaining how the $400 would be spent.

3) A description of the anticipated end product (a publication, a report, a set of annotated maps, etc.)

Proposals should be sent to:

Dan Luoma, NPSO Research Grants Chair
2912 NW Arthur Avenue
Corvallis, Oregon 97330

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, 1989.

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.

Desert Conference -- April 21-23

The eleventh annual Desert Conference will be held April 21-23 at Malheur Field Station. The theme is "Layers of Time in the Great Basin." Workshops will focus on grazing, interim management of identified wildlands, and heap leach mining. There will be slide shows, a banquet, birding, and field trips exploring the geology, archaeology, botany, and wildlife of the area.

Room and Board are at the Field Station. Pre-registration is required. Contact:

Desert Conference XI
P. O. Box 1005
Bend, Oregon 97709

1989 NPSO BUDGET

(January 1 -- December 31)
Adopted by the Board of Directors, January 28, 1989

Estimated Income:

Membership dues	$8,200.
R/E	600.
Posters	400.
Interest	300.
Notecards	150.
Subtotal	9,650.
Balance brought forward	3,630.
TOTAL INCOME	$13,280.

Anticipated Expenses:

Bulletin	$4,500.
Chapters share of dues @ 35%	2,870.
Research Grants (3 @ $400.)	1,200.
Board and other committees	600.
Legislative committee	500.
Conservation committee	450.
Membership chair	400.
R/E committee	400.
President	400.
Secretary	200.
Notecards	200.
Occasional Papers, start up	100.
Brochure	95.
Fees and Taxes	80.
California Native Plant Society (Speaker Travel)	75.
Treasurer	70.
Grant to Berry Botanic Garden Seed Bank	55.
Annual meeting–Banquet speaker	50.
ONRC	50.
Desert Conference XI	50.
Nat. Res. Def. Council	40.
Natural Areas Association	25.
Walker Creek Wetlands	25.
Wildflower Research Center	25.
Sub-total	12,460.
Balance Forwarded (savings)	820.
TOTAL EXPENSES	$13,280.

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

Mt. Pisgah Arboretum Needs Volunteers

Mt. Pisgah Arboretum in Eugene is seeking volunteers for guiding 2000 school children through the arboretum during their annual outdoor education program in May.

For information, call Kathy Giesen at 747-3817.

BIOGRAPHICAL INFORMATION SOUGHT

I have been compiling biographical information on botanists who collected mosses in Oregon between 1800 and 1940. There are a number of names about whom I know nothing other than when or where they collected certain specimens cited in bryological publications. I have already checked records at the Oregon Historical Society and University of Oregon for all names but Slavens. Can you help me? I'd appreciate any references, anecdotes, or tips as to where papers or memorabilia can be found for the following people. Thank you!

Ames - Coast Range, 1886.
Blacker - 1880.
Cameron - Portland, Multnomah Co., 1898.
Duvall, Robert H. - east of Cascades, 1930's.
Eckfeldt - Coast Range, 1878.
Foster, A.S. - Portland vicinity and
Columbia River, 1900-1910.
Harvey (Harvy) - Oakland, Douglas Co., 1874.
Hertzman, J.A. - 1886.
Holzinger, Rev. G.A. - Myrtle Point, Coos
Co., 1892.
Kirkwood - Nehalem Valley, 1901.
Lenocker - Portland, Multonomah Co., 1898.
Mumford - Corvallis, Benton Co., 1892.
Savage - Portland, Multonomah Co., 1898
Slavens, Eldon K. - west of Cascades, 1920's.
Yoder - Seaside, Clatsop Co., 1905.

John A. Christy
Botany Section, Milwaukee Public Museum
800 West Wells St., Milwaukee, WI 53233

Jepson *Manual* Update

The Jepson Manual: Vascular Plants of California, originally published in 1925, is undergoing complete revision, and is scheduled for publication in 1992. Over 40% of the text and 30% of the illustrations are completed. A key to California families, with a sample treatment of one family, has been published.

Willis Linn Jepson was Professor of Botany at University of California at Berkeley during the first half of the 20th century. His *Manual* was the first attempt to document all the wild vascular flora of California. In his will, he endowed the Jepson Herbarium at UCB.

The revised edition is projected to contain 1500 pages, with 3000 plants illustrated in 240 plates. Special attention will be given to rare plants, toxic plants, aggressive weeds, and garden uses of native plants.

Collaborating authors from more than 70 universities, colleges, museums, botanical gardens, government agencies, and the private sector are volunteering their efforts to the revision project, which will take ten years and cost about $6.3 million. About $760,000 of this amount still needs to be raised.

More information is available from:
Friends of the Jepson Herbarium
Botany Department, University of California
Berkeley, California 94720

ENDEMISM AND RARITY IN PLANTS

Thomas Kaye, Corvallis Chapter, NPSO

Mention endemic species to a botanist, and you are likely to receive an enthusiastic response. Mention rare species, and the response may be the same. Embodied in both terms is a horn-of-plenty of potential research topics and fascinating stories of ecology and evolution. Some discussions treat endemism and rarity in the same breath. But they are distinct concepts, overlapping only in certain cases. The recent passage of the Oregon Endangered Species Act provides explicit protection for many rare plants, a percentage of which are endemic to Oregon. This note will discuss the difference between endemism and rarity, then focus on endemism among plants with a few examples from the flora of northwestern North America.

ENDEMISM

An endemic species (or other taxonomic group) is one restricted to a particular region, occurring nowhere else. Among plants, biologists are generally interested in those endemics limited to a small area, the so-called "narrow endemics" (Kruckeberg and Rabinowitz 1985) Such plants may have stringent habitat requirements -- prospering only on limestone or in bogs, for example -- and may maintain large or only small populations where they occur. Narrow endemism is a special form of rarity.

RARITY

Rarity among organisms is blessed with no single, simple definition. While grappling with this concept in her work at the University of Michigan, the late Deborah Rabinowitz delineated at least seven forms of rarity (Rabinowitz 1981). She based her distinctions on geographic range (large vs. small), habitat specificity (wide vs. narrow), and local population size (large, dominant vs. small, non-dominant). If a species is diminutive in any of these traits, it can be considered rare. With this multiplicity of definitions, it seems reasonable that not all rare plants are endemics, nor vice-versa. If narrow endemics are typically locally abundant in a specific habitat and restricted geographically, imagine the opposite extreme: a species constantly sparse but in several habitats over a large range. Prickly phlox (Leptodactylon pungens) has this sort of sparse but broad distribution east of the Cascades in the Pacific Northwest. Such a plant may rightly be considered "rare", but it is difficult to call it a narrow endemic. Now consider a plant that is widespread and locally abundant but occurs also as isolated populations beyond the margin of its central range. Such a species is rare in these peripheral areas only. Black lily (Fritillaria camschatcensis) is most common on Kodiak Island and coastal Alaska. Its range extends southward, but populations are very infrequent by the time it reaches Washington and Oregon. Rare plant lists often include this type of rarity, usually under a heading such as "rare in our area, but common elsewhere." Rabinowitz called plants in this category "pseudo-rare." The types of rarity form a continuum between narrow endemics and sparsely distributed, widespread species. Not all forms will warrant protection as endangered species.

LEVELS OF ENDEMISM

Endemism can be recognized on any spatial or taxonomic scale, and reflect any level of abundance. Douglas fir (Pseudotsuga menziesii) and sword fern (Polystichum munitum) are species endemic to western North America. Note, however, that no one would describe them as rare, nor are they narrow endemics.

Not only may a species be endemic, but endemism may act on the level of family, genus, subspecies and variety as well. For example, the checkermallow genus (Sidalcea) is endemic to northwestern North America. The genus itself is not rare, but some of its constituent taxa may soon be near extinction. In other cases, an entire genus may be endemic and rare. Kalmiopsis, for example, has only one species (K. leachiana) and occurs only in southwestern Oregon in a rather specific habitat.

At the other taxonomic extreme are narrowly restricted (and rare) varieties of widespread species. Olympic milkvetch (Astragalus australis var. olympicus) is known from only a few populations in the northern Olympic Mountains of Washington, but the rest of the species is distributed from the Rocky Mountains, through Alaska, into Eurasia and the Italian Alps! Although one definition of endemism may suffice, the scales we measure endemism with, taxonomic and geographic, vary tremendously.

CAUSES OF ENDEMISM

The causes of endemism are diverse, even idiosyncratic. They encompass all modes of speciation. Any discussion of these mechanisms is in danger of becoming a description of all forms of evolution -- a monumental task rather beyond our scope. But if, artificially, there is to be only one by-word in the evolution of endemics, let it be isolation. Islands are notorious for high levels of endemism in their biotas. In the Northwest, however, our most conspicuous endemic floras occur in mountain ranges. The Siskiyou Mountains are a center of endemism, as are the Olympics, the Wallowas, and the Wenatchee Mountains. Mountains, in a sense, are climatic islands rising above a lowland sea. They are environmentally isolated from their surroundings. Other forms of "islands" in the northwest are odd or contrasting soil substrates that isolate a group of organisms from a more common, more habitable surrounding soil type. Outcrops of serpentine in California, Oregon, and Washington, for example, are known for unusual plants, some of them local endemics, such as species of the mustard genus, Streptanthus (Kruckeberg 1984). One researcher (Ornduff 1965) has even described plants that grow only on bird fecal deposits ("guano endemism")!

Much of the biogeographic isolation encountered in our area is the result of historical factors, such as Pleistocene glaciation. Previously widespread species were wiped out by glaciers in intervening areas leaving only isolated populations in local refugia. After the Pleistocene glaciations, a warm dry period known as the Hypsithermal allowed the northward migration of many species. Subsequently, climatic conditions cooled, and these southern emigrants were eliminated in the north, except for a few populations that persisted in local microhabitats they could tolerate. Some cases of sudden speciation in isolated populations of the genus Clarkia resulting in narrow endemics may have been caused by climatic shifts of this type (Lewis 1972). These sorts of processes, and I have only sketched them to be brief, lead to fragmented distributions and isolation of the remaining populations.

The most common process of evolution may be gradual speciation through natural selection and random genetic drift. Cut off from a stable population network, a group of organisms on an island, mountain, or obscure soil type may continue to evolve according to changing environmental conditions. Or, such a population may simply "go its own way" through accumulation of random mutations, or both. Alas, a plant in this hypothetical population may eventually have the misfortune to be stumbled upon by a human, plucked, and described as a new taxonomic entity.

AGE OF ENDEMICS

Historically, endemics have been divided into two main categories: new and old. Neoendemics are youthful species, only recently evolved from a parent taxon. Their limited distribution

may indicate time has not yet allowed them to expand to their full potential. Alternatively, they may represent unsuccessful evolutionary branches, that, given their present environmental conditions, never will increase in distribution. Malheur skeletonweed (Stephanomeria malheurensis) is a narrow endemic restricted to a single population on a small hill in Harney County. A closely related but more common plant, small skeletonweed (S. exigua var. coronaria), reaches its northern limit at this very place. There is strong evidence that through some recent and rapid genetic changes, "malheurensis" was born from "coronaria" (Gottlieb 1973). This single population has a very tenuous existence, however, shifting yearly between several hundred to only a few, or zero, observed individuals.

Paleoendemics represent very old species that, at one time, were more abundant in a world that has since changed. As climates warm and cool through the millenia, widespread species may be forced to retreat to small refugia. Populations of Kalmiopsis leachiana occur in the Siskiyou Mountains on Oregon's oldest rocks. This unique plant is thought to be a representative of an ancient flora, more common in the Miocene epoch, which has since lost sway.

ENDEMISM, RARITY, AND HUMANS

Rarity and endemism meet again today in what one person (Gentry 1986) has described as "anthropogenic endemism" -- highly restricted distributions due to human intervention and habitat destruction. The golden paintbrush (Castilleja levisecta), once found from Vancouver Island to the Willamette Valley, is now extinct in Oregon and known from pitifully few sites to the north. Snake River goldenweed (Haplopappus radiatus), once, perhaps, much more common in northeastern Oregon and adjacent Idaho, is presently restricted to a handful of degraded populations on overgrazed rangeland. Bradshaw's desert parsley (Lomatium bradshawii), the Willamette Valley's first federally protected endangered species, was once a plant of prairies and open savannah. Today it is a narrow endemic of fence-rows and occasional grassland remnants. Largely because of agricultural practices and rangeland grazing to support a few alien food organisms at the expense of a diversity of native species, anthropogenic endemics are common world wide.

Endemism is a fascinating phenomenon incorporating evolution, genetics, population biology, biogeography, and politics. Not all endemics are rare, and not all forms of rarity constitute endemism, but the two subjects often converge. Today that convergence is acute, and will continue to intensify. Rarity and endemism become synonymous, then dissappear together, through extinction. Hopefully, with federal and state legislation, better conservation practices, and communication, we can stave off this pernicious process.

LITERATURE CITED

Gentry, A. H. 1986. Endemism in tropical versus temperate plant communities. In, Conservation biology: The science of scarcity and diversity (M. E. Soule, ed.) pp. 153-182. Sinauer Associates, Inc., Sunderland, Massachusetts.

Gottlieb, L. 1973. Genetic differentiation, sympatric speciation, and the origin of a diploid species of Stephanomeria. American Journal of Botany. 60:545-553.

Kruckeberg, A. R. 1984. California serpentines. University of California Press, London.

Kruckeberg, A. R. and D. Rabinowitz. 1985. Biological aspects of endemism in higher plants. Annual Review of Ecology and Systematics 16:447-479.

Lewis, H. 1972. The origin of endemics in the California flora. In, Taxonomy, phytogeography, and evolution (D. H. Valentine, ed.), pp. 179-189. Academic Press, London and New York.

Ornduff, R. 1965. Ornithocoprophilous endemism in Pacific Basin Angiosperms. Ecology 46:864-867.

Rabinowitz, D. 1981. Seven forms of rarity. In, The biological aspects of rare plant conservation (H. Synge, ed.), pp. 205-217. Wiley, New York.

Haplopappus radiatus

Castilleja levisecta

(Illustrations from *Threatened and Endangered Vascular Plants of Oregon: An Illustrated Guide.)*

R/E NEWS - Field-checking,

To all NPSO vagabonds and roamers of the plant world who enjoy a good treasure hunt, WE NEED YOU. This season we will be searching for plants which have been recommended for addition to the Oregon R/E list, but for which we have too little information to determine status --the Review List.

Some like Callitriche marginata, the winged water-starwort, are known in Oregon only from "near The Dalles and at Grant's Pass," according to Hitchcock, et al.,VPPNW. The most recent collection we know of for this plant was made in April 1887. Is it now extinct?

There are very few collections for either Erysimum concinnum, the coast wallflower, or Cymopterus purpurescens, the purple cymopterus. Are they really as rare as they seem, or do they bloom so early no one is out there looking?

Is there any Lycopodium obscurum, groundpine, in Oregon? It has been found on the Washington side of the Columbia.

We will also be searching for the sites of old herbarium collections to see whether the plants still grow there. This may be fun to do as a group. The more people looking for the plants, the better the chance of finding them.

So if you want to help, contact your Chapter R/E Chairman for instructions and sighting report forms. Lend NPSO your sharp eyes and knowledge of the country. Join the search.

To help you know when to look for what, I have divided the Review List according to blooming time. This Bulletin has those plants which begin blooming in March and April.

PLANTS BLOOMING IN MARCH-APRIL FOR FIELD-CHECKING

NORTHWEST OREGON

		Blooms	Historically known from:
Meconella oregana	Oregon meconella	March-April	Hood River
Mimulus cardinalis	scarlet monkeyflower	April-Oct.	Lane
Montia diffusa	branching montia	March-July	Lane, Marion, Clackamas, Multnomah
Navarretia leucocephala	white-flowered navarretia	April-July	Lane
Ranunculus lobbii	Lobb's buttercup	March-May	Benton
Scribneria bolanderi	Scribner grass	April-May	Multnomah, Hood River

NORTHEAST OREGON

Asclepias cryptocera	pallid milkweed	April-June	Crook, Grant, Baker
Callitriche marginata	winged water-starwort	March-May	Wasco
Chaenactis douglasii var. glandulosa	dusty maidens	April-July	Baker, Wallowa
Cryptantha rostellata	beaked cryptantha	April-June	Wasco, Jefferson, Wheeler, Umatilla, Baker
Lesquerella douglasii	Douglas' lesquerella	March-July	Wasco, Gilliam, Grant, Morrow
Linanthes bakeri	Baker's linanthes	April-June	Wasco, Baker
Meconella oregana	Oregon meconella	March-April	Wasco
Navarretia leucocephala	white-flowered navarretia	April-July	Crook
Phlox colubrina	Snake River phlox	March-June	Baker, Wallowa
Pinguicula vulgaris	butterwort	April-August	Wallowa
Ranunculus lobbii	Lobb's buttercup	March-May	Wasco
Ribes klamathense	Klamath gooseberry	April-May	Jefferson

SOUTHWEST OREGON

Allium peninsulare	peninsular onion	March-June	s. Jackson
Arabis breweri	Brewer's rockcress	March-July	Curry, Josephine, Jackson, Klamath
Arenaria howellii	Howell's sandwort	April-June	Curry, Josephine
Arnica cernua	serpentine arnica	April-May	Coos, Curry, Josephine
Astragalus accidens var. accidens	thicket milk-vetch	April-July	Douglas, Josephine
Astragalus accidens var. hendersonii	Henderson's milk-vetch	April-July	Josephine, Jackson
Callitriche marginata	winged water-starwort	March-May	Josephine
Camassia howellii	Howell's camas	April-June	Josephine, Curry
Camissonia graciliflora	slender-flowered primrose	March-June	Josephine
Camissonia ovata	golden eggs	March-June	Douglas, ?Josephine
Chorizanthe membranacea (Erigonella membranacea)	spineflower	April-July	Jackson

Cryptantha leicocarpa	seaside cryptantha	April-June	Curry [coastal]
Erysimum concinnum	coast wallflower	March-May	Curry
Eschscholtzia caespitosa var hypecoides	slender California poppy	March-June	s. Klamath
Fritillaria falcata		March-May	Josephine
Lithophragma heterophylla var. campanulata	hillstar	March-July	s. Curry to s. Klamath
Meconella oregana	Oregon meconella	March-April	Douglas, Josephine, Jackson
Mimulus cardinalis	scarlet monkeyflower	April-October	Curry, Josephine Jackson
Montia diffusa	branching montia	April-July	Douglas, Josephine
Navarretia leucocephala	white-flowered navarretia	April-July	Curry, Jackson, Douglas, Klamath
Pinguicula vulgaris	butterwort	April-August	Curry, Josephine
Ranunculus lobbii	Lobb's buttercup	March-May	Douglas
Ribes klamathense	Klamath gooseberry	April-May	Douglas, Jackson, Klamath
Sanicula tuberosa	turkey pea	March-July	Curry, ?Josephine
Scribneria bolanderi	Scribner grass	April-May	Josephine
Sidalcea malvaeflora var. elegans	mallow sidalcea	April-July	Curry, Josephine, ?Jackson
Sisyrhinchium hitchcockii	Hitchcock's sisyrhinchium	April-May	Benton, Douglas

SOUTHEAST OREGON

Asclepias cryptocera	pallid milkweed	April-June	Harney, Malheur
Camissonia palmeri	Palmer's evening primrose	March-May	Malheur
Chaenactis stevioides	Esteve pincushion	March-June	Lake, Malheur
Chaenactis xanthiana	Xanthus' pincushion	April-June	Lake, Harney, Malheur
Cryptantha rostellata	beaked cryptantha	April-June	Harney
Cymopterus purpurescens	purple cymopterus	March-May	Harney
Glyptopleura marginata	carved seed	April-July	Lake, Harney, Malheur
Langloisia punctata	lilac sunbonnet	April-June	Malheur
Malacothrix glabrata	desert dandelion	March-July	Lake, Harney, Malheur
Navarretia leucocephala	white-flowered navarretia	April-July	Harney
Scribneria bolanderi	Scribner grass	April-May	Lake

Jean L. Siddall
State R/E Committee Chairman

Spring Activities at Tom McCall Preserve

Grasswidow Photo Contest
A prize will be awarded for the earliest, most unique, and best photographed *Sisyrinchium douglasii* on the Tom McCall Preserve. Entries must be submitted to The Nature Conservancy by April 30. Call The Conservancy at 228-9561 when you have taken a photograph or slide.

Wildflower Hikes
Saturdays and Sundays March 11 through May 28 naturalists from NPSO Mid-Columbia Chapter and The Nature Conservancy will be on the Preserve from 11 a.m. to 4 p.m. to lead wildflower walks.

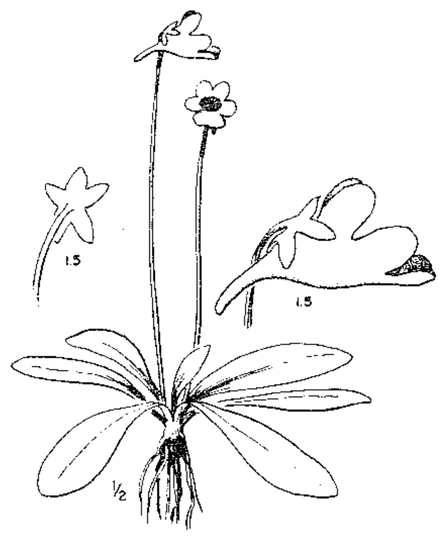
Trail Work Party -- March 18
Meet at the Preserve entrance at 9:30 a.m., for work on the Plateau Trail. The work will include hauling away some soil, and spreading bark mulch or gravel on the trail.

Knapweed Pull -- June 3
Meet at Meyer State Park Overlook at 9:30 a.m., for a day's work pulling the noxious diffuse knapweed (*Centaurea diffusa*).

Marquam Nature Park Addition Sought

The Friends of Marquam Nature Park are raising funds for purchase of two acres near the park entrance. This parcel is the last one needed for completion of the whole system of trails. $60,000 has been raised, and $96,000 more is needed. The park is located in Portland, on the east side of Council Crest. For more information, contact:

James Bode
1313 N. W. 17th Avenue
Portland, Oregon 97209



Pinguicula vulgaris

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

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

Illustrations: Ink drawings or woodcuts are preferred to pictures requiring halftone reproduction. We welcome small illustrations or "doodles" as well as larger works.
Credits: If the item is not original, provide name and date of the source. For original items, identify the author and indicate, for news items, whether a by-line is desired. Include instructions as to whether the item is to be used in its entirety or excerpted at the Editor's discretion.
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