

Bulletin of the

NATIVE PLANT SOCIETY OF OREGON

Dedicated to the enjoyment, conservation, and study of Oregon's native vegetation

Volume 25 Number 9

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Native Plant Society of Oregon PO Box 902, Eugene OR 97402 Membership inquiries: Jan Dobak, Membership, 2584 NW Savier St., Portland OR 97210-2412 For more society information, see the inside back cover.

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS:

Field trips 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. Participation is at your own risk. Bring water and lunch. All NPSO activities are open to the public at no charge (other than carpool mileage), and friends, newcomers and visitors are always welcome.

Notice to field trip chairs and leaders: The Forest Service and other Federal agencies have set policies limiting group size in wilderness areas to 12. The reason for this is to limit the human impact on these fragile areas. Each group using wilderness must be no larger than 12.

STATE NEWS

26 Sept., Sat.

STATE BOARD MEETING at the Oregon State University Botany Department (Cordley Hall), in the 2nd floor Botany Conference Room at 10 am. Directions: follow Harrison Blvd. (off Hwy 34) west to Street; turn left (south) and follow 30th 4 blocks to Orchard; turn left (east) on Orchard; entrance to Cordley Hall is on the right (south) side of Orchard near 27th St. Bring lunch.

CHAPTER NEWS

Blue Mountain

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For information call Jerry Baker (566-2244).

Corvallis

8 Sept., Tues.

MEETING. 7:30 pm at 3290 SW Willamette Ave. This meeting is to discuss conservation issues and the fall program. There will not be a speaker. Call Duncan Thomas (752-6529) for information.

Emerald

For information call Bruce Newhouse (343-2364).

High Desert

22 Sept., Tues.

MEETING. The first fall meeting will be a potluck social at Stu Garrett's house at 7pm (21663 Palama Drive) in northeast Bend. Call Stu (389-6981, eves.) if unsure of directions. Bring a main dish, salad, appetizer, or dessert and your own place setting. We will discuss chapter activities and meetings.

Mid-Columbia

2 Sept., Wed.

MEETING. 7:30pm at the Mosier School. A presentation on the "Ethics and Issues of Reintroducing

Rare Plants" by Tom Kaye of the Corvallis NPSO Chapter.

North Coast

19 Sept., Sat.

FIELD TRIP: Bill Miles will lead a tour of Bear Creek Artichoke Nursery. Meet at the Nursery at

10am. Call Jim Winslow (842-2246) for more information.

29 Sept., Tues.

MEETING. 7pm at the Carl Rawe Meeting Room in the Tillamook PUD, 1115 Pacific, Tillamook.

Program to be announced.

Date to be announced.

FIELD TRIP: Dr. Craig Roberts will lead a birding field trip. Date, time, and place to be announced.

For information call Jim Winslow (842-2246).

Portland

5 Sept., Sat.

FIELD TRIP: Mirror Lake & Tom, Dick & Harry Mountain. For more information contact George

Lewis (760-2316). Moderate hiking.

8 Sept., Tues.

MEETING. 7 pm at First United Methodist Church, 1838 SW Jefferson St., Portland. Charlene

Simpson will present a slide program on the rare and endangered plants of Lane County that are of

concern to the Emerald Chapter NPSO. Charlene is known for her beautiful photography.

19 Sept., Sat.

FIELD TRIP: Mount Hood Meadows. For more information contact George Lewis (760-2316).

Moderate hiking.

Siskiyou

17 Sept., Thurs.

MEETING: Potluck in Glenwood Park, corner of Ashland St. & Glenwood Dr., 6:30pm, followed by

meeting at 7:30pm in Room 171 of the Science Building of Southern Oregon State College. Bring five slides of your summer activities. The public is invited. For information call David Kennedy (535-

6383).

19 Sept., Sat.

FIELD TRIP. David Steinfield, Assistant Manager of the USFS J. Herbert Stone Nursery, 2606 Old

State Road, Central Point, will lead a tour of the nursery at 10 am. We will discuss new perspectives in

biodiversity and yew regeneration. For information call Ginny Post (779-4102)

South Coast

For information on the pending formation of this chapter, contact Bruce Rittenhouse (888-9328).

Umpqua Valley

10 Sept., Thurs.

MEETING: 7pm in Room 311 of the Douglas County Courthouse.

12 Sept., Sat.

FIELD TRIP: To see Aster vialis. Leave at 7:45am from the BLM parking lot, 777 Garden Valley Rd.

For information, call Russ Holmes (672-4635).

Willamette Valley

12 Sept., Sat.

FIELD TRIP: Breitenbush Lake—in the Cascades east of Detroit Lake. Beautiful area for fall colors.

Leave from Dallas Safeway parking lot at 9am. Call Leader Wilbur Bluhm (393-2934) for details.

21 Sept., Mon.

MEETING: 7pm in Room 225 of the First United Methodist Church at 600 State Street (corner of

Church & State), Salem. Jim Crane will present a program entitled "Meadowfoam – from wildflower

to commercial crop" He has been researching meadowfoam for 23 years through OSU.

William Cusick

25 25 25 25 25

For information, call Bob Ottersberg (742-6200).

BOOK REVIEW: HERE IS AN OUTSTANDING NEW BOOK ON FOREST ECOLOGY

The Olympic Rainforest: An Ecological Web, by Ruth Kirk with Jerry Franklin, University of Washington Press, Seattle, 1992. 128 pp., line drawings, 146 photos, maps, bibliography, glossary, index, 8.5" X 11". Price: \$35.00 (cloth); \$17.50 (paper).

I am delighted with <u>The Olympic Rainforest</u>: <u>An Ecological Web</u>, an outstanding new book on Northwest coniferous rainforest ecology, by Ruth Kirk with Jerry Franklin.

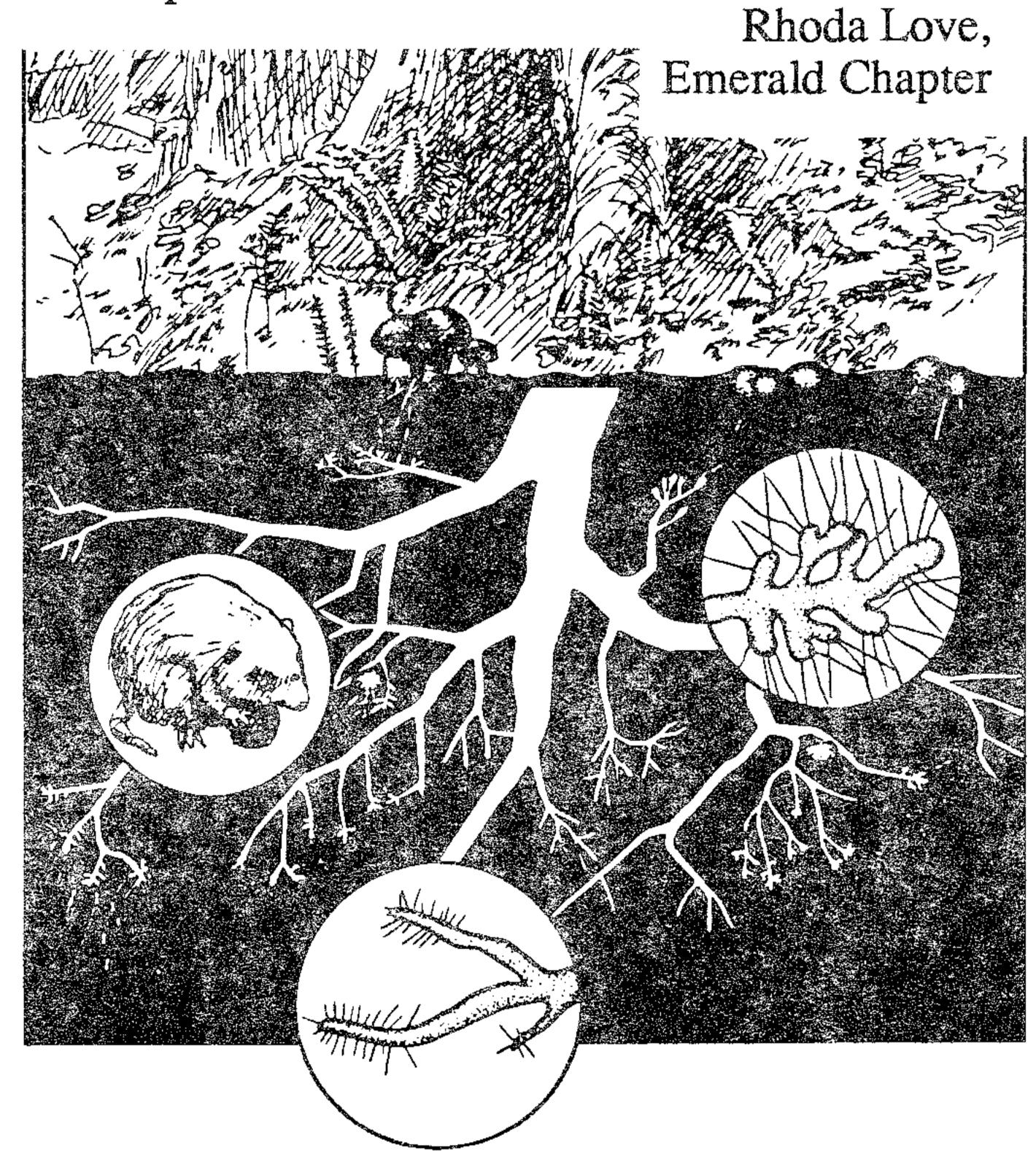
As an example of nature writing, the book is at the top of its class. Ruth Kirk's knowledge of the Northwest is impressive and her prose is eminently readable. The stunning color photos of the rain forest by the author and her husband, Louis Kirk, a former ranger-naturalist for Olympic National Park, are heart-wrenchingly beautiful. Beyond this, however, what takes The Olympic Rainforest beyond the realm of nature writing and makes it an important reference work, are its upto-date and scientifically correct descriptions and explanations of forest ecosystems, presumably contributed in large part by the University of Washington's Jerry Franklin, whom we in NPSO know as the world leader in old growth research.

If you want a single volume which summarizes and synthesizes the recent decades of work on old growth ecology which have taken place in Oregon's H. J. Andrews Experimental Forest and on the Olympic Peninsula by Franklin and his associates, here is the reference you are looking for. Franklin's own research as well as that of Chris Maser, Bill Denison, Fred Swanson, Jim Trappe, Nalini Nadkarni and others who have added to our understanding of the old growth forest is all summarized here. These are our new foresters who have explained the complicated and essential roles of fungi, lichens, mosses, and animals such as insects, birds, and rodents in the structure and health of our ancient and magnificent west-side coniferous forests.

Have you wondered what important role is played by truffles in the old growth forest ecosystem? Wondered why and how mice and voles inoculate the soil with spores of essential mycorrhizal fungi? Perhaps you would like to know how the slow-growing *Lobaria*, the lung lichen, enriches the soil beneath its host tree. Do you know why

downed wood is essential to a regenerating forest? Have you ever heard of scuzz? What is the hyporheic zone of a stream and what lives there? Can you imagine how a Hawaiian chief could own a Douglas fir outrigger canoe? Or, on a lighter note, do you know what happens when a bull elk falls in love with a dairy cow? The answers to these questions and many more can be found here.

Last year (NPSO Bulletin, December, 1991), I reviewed that superb new book on Northwest ecology, Arthur R. Kruckeberg's The Natural History of Puget Sound Country. Now here, fast on its heels, is yet another outstanding volume from the same publisher. Bravo, University of Washington Press! I'm very proud of my old school press's obvious commitment to print the finest in Northwest ecological writing. I heartily recommend The Olympic Rainforest: An Ecological Web, by Ruth Kirk and Jerry Franklin to all readers who care about and wish to know more about our beautiful and unique Northwest forests.



This drawing from The Olympic Rainforest:

An Ecological Web "shows fungal hyphae...contacting roots; the resulting mycorrhizae (right Circle); a non-mycorrhizal root with roothairs (bottom circle); and a red-backed vole eating a truffle (left circle)."

September 1992

BLM SPONSORING RARE PLANT SPECIES

To safeguard against the extinction of plants native to the Northwest, the U.S. Bureau of Land Management (BLM) has joined efforts to sponsor rare plant species through the national Center for Plant Conservation (CPC). The Center maintains a comprehensive program of plant conservation, research, and education through cooperating regional centers.

In a June 9 ceremony, the CPC presented BLM with a pair of original watercolors in recognition of the Vale District's sponsorship of two endangered eastern Oregon plant species.

Don Falk, Director for the CPC, presented the paintings to BLM's Oregon / Washington State Director D. Dean Bibles, and to Vale Associate District Manager Geoffrey Middaugh and district botanist Jean Findley. The event took place in Portland at the Berry Botanic Garden, responsible for CPC's regional seed bank. The seed bank now contains more than 200 species, subspecies, and varieties of the region's rarest plants.

"The efforts of dedicated botanists like Jean set a good example for other districts and other agen-cies to get involved in protecting and preserving rare plants throughout the region," said Bibles. "Only by ensuring their survival can we maintain the full variety within native ecosystems."

The watercolors, created by botanical artist Bobbi Angell, depict smooth blazing star and Biddle's lupine, both species sponsored by BLM. The agency is also a sponsor of Mulford's milkvetch and Malheur wire-lettuce. "These paintings take the plants out of the background and focus on their beauty and uniqueness," said Dr. Linda McMahon, Executive Director of the Berry Botanic Garden.

Smooth blazing star, a small annual with bright yellow flowers, grows only on fragile ash outcrops in the desert of southeastern Oregon, northern Nevada and southwestern Idaho. The plant was petitioned as a threatened species in 1991 because of its extreme rarity, its narrow range and specific habitat, and because of its vulnerability to disturbance.

Biddle's lupine, which grows primarily on the border of Malheur and Harney counties, is a perennial lupine with light yellow flowers that bloom in early spring. The species, vulnerable to both rodents and human activities, grows only in Oregon.

BLM's Vale District became a sponsor of the rare plants in 1990 by contributing \$5,000 per plant, an amount matched by the Mellon Foundation. Sponsorship contributions are used to maintain permanent seed banks kept at sub-zero temperatures, as well as a living collection of endangered flora under protective cultivation. This strategy will prevent the total extinction of rare species and provide plants for reintroduction or studies as necessary.

"The willingness of the BLM and others to sponsor rare plants provides continuing opportunities for scientists and biotechnicians to study them," explained McMahon. "From the core collection, plants can be propagated for research that the wild populations are too fragile to endure. Conservationists managing these species in the wild can learn from horticultural experiments how to strengthen and increase those populations, helping them persist."

--Leslie Robinette

A HYBRID FERN NEW TO OREGON

Ferns of an unusual shade of green....Last fall that clue triggered the discovery of a hybrid fern never seen before in Oregon. The parents of this new hybrid are the familiar sword fern (*Polystichum munitum*), and the Anderson shield fern (*P. andersonii*). Both parents are dark green in color, while the hybrid plants are brighter, more of a lime-green shade.

The plants were found last summer on the Bureau of Land Management's (BLM) Salem District by Clackamas Resource Area's Botanist, Mike Woodbridge. The finding of the new hybrid plants came about as Woodbridge, on an Area of Critical Environmental Concern monitoring assignment, caught a glimpse of the striking color, and investigated. Climbing a 15-foot roadbank (overgrown with devil's club) he counted a colony of about 200 ferns. Not quite half of these were Anderson shield fern, while more than 100 plants were the hybrids, intermediate in morphology between sword fern and Anderson shield fern.

Hybridization between these two fern species is quite rare, according to Dr. David Wagner, University of Oregon botanist, who later visited the site with Woodbridge, and confirmed the identification. Progeny of this cross had never been reported previously from Oregon, and only three times from the Northwest, in Washington and Alaska.

Several features are significant about the hybrid site. Dr. Wagner considers the size of the colony and the vigorous growth of the offspring particularly striking. He and Woodbridge believe that habitat disturbance may be involved in the successful establishment of the progeny. In general, fern hybrids are "between a rock and a moist, bare substrate" in terms of opportunity for establishment.

In our region, most species of plants in the same genus occupy slightly different habitats. Hybridization is most likely to take place when the different habitats are contiguous (right next to one another) and the parent species are found in close proximity. In this case, however, both polystichums grow naturally in the same type of habitat. (Co-occurrence of these two species is rare because Anderson shield fern is so uncommon. This locality is significant even for the abundance of both parent species growing together!) The hybrids will originate and persist in the ecotone between the habitats. Disturbance often creates such a "hybrid habitat" as well as creating numerous microsites offering many chances for new individual ferns to become established.

In their natural habitat the obstacles to hybridization are the general ones limiting reproduction of the parent species: very few sites are available for spore germination and subsequent fertilization of gametophytes to establish a new individual.

Fern spores need moist, bare mineral soil to germinate and thrive. Such microsites are rare in an undisturbed forest. The disturbance caused by logging on this site facilitated hybridization not because it created hybrid habitat but because it opened up many suitable microsites for reproduction. Bare soil was turned up and the seepy hillside kept it moist. With so many opportunities for gametophytes to grow, the chances of gametophytes from the two different species growing next to each other and exchanging gametes was greatly enhanced.

Another favorable feature of the hybrid progeny appears to be an intriguing and extremely advantageous reproductive mechanism. We're all familiar with the sporangia producing stage in ferns, when the fronds bear clusters of small brown sori (sometimes called "fruit dots") on the lower sides. However, in hybrids spore formation usually is poor and even vigorous plants are almost always sterile. But ferns and many other vascular plants often take "reproductive shortcuts", involving various means of asexual or vegetative reproduction. A common example is bracken, which forms large clones (genetically identical individuals) as underground stems spread. In the Northeast, the "walking fern" (Camptosaurus rhizophyllus) produces arching leaves which root at the tips, sprouting new plants. Here in the Northwest, the fronds of the Anderson shield fern form vegetative buds on the upper pinnae. As the fronds droop, these buds begin to take root, forming plantlets identical to the original fern.

Fortunately for the new Oregon hybrid, the progeny displays the same capability to form buds on the fronds as does Anderson shield fern. The offspring are not dependent on sexual reproduction for new individuals to spread out and colonize the available habitat; the ability of the hybrid to "clone" may explain the vigor and size of the BLM Clackamas Resource Area colony. Dr. Wagner and Woodbridge are continuing observations on the growth and life cycle of the unusual hybrids. This double advantage of vegetative reproduction and local habitat availability seems to have given this unusual hybrid a ticket to establish residency in Oregon.

—Claire Johnson, BLM Botanical Volunteer and David Wagner, University of Oregon

KALMIOPSIS

By now you should have the 1992 issue of *Kalmiopsis*. My thanks to my fellow editors, Stu Garrett, Rhoda Love and Susan Kephart, and the authors for making it possible. Due to many unforeseen "incidents:, the issue was delayed several months. I hope you like this issue of *Kalmiopsis* as much as I appreciated the handsome wood box that Barbara Mumblo so graciously accepted on my behalf at the annual meeting.

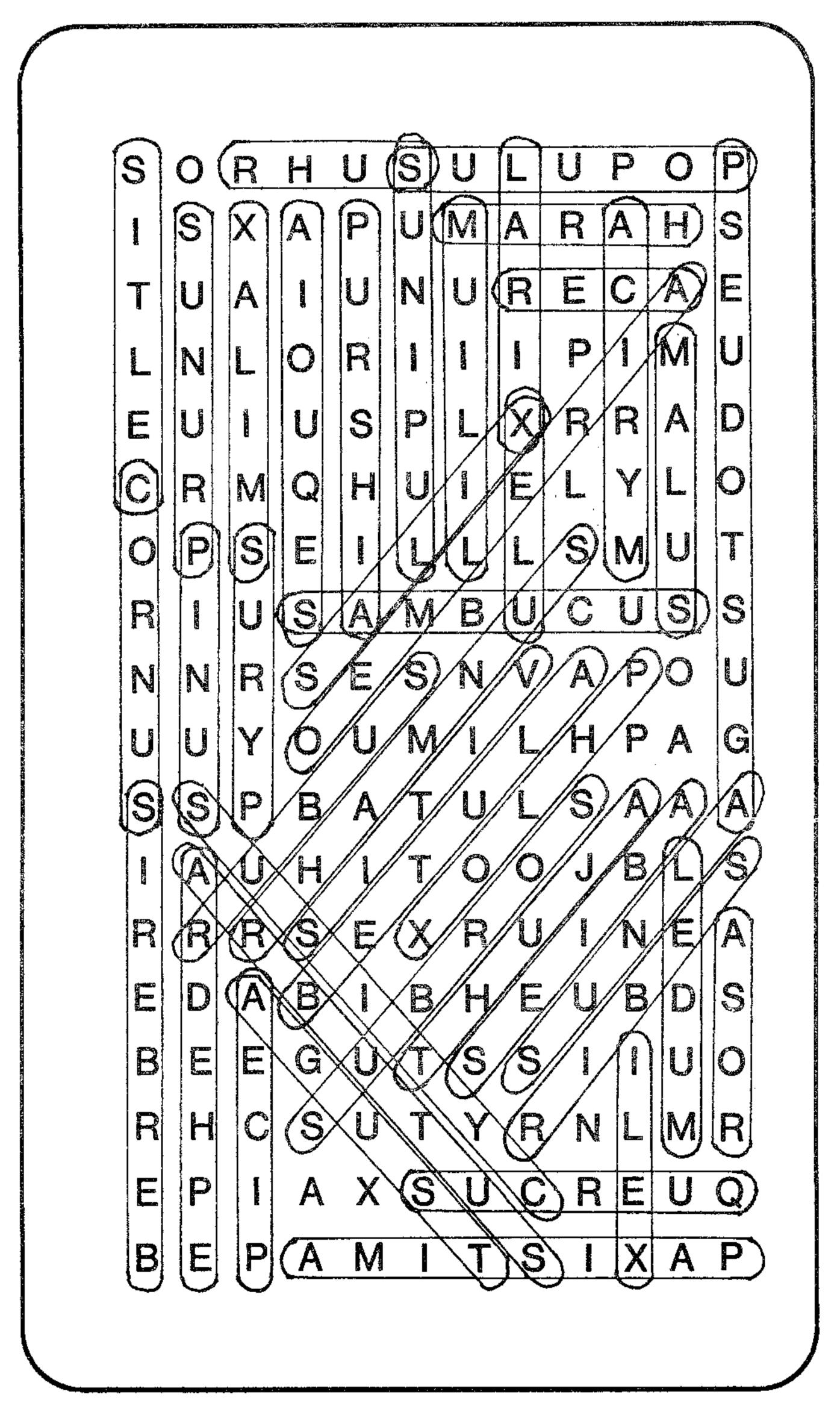
--Frank A. Lang Kalmiopsis Editor

September 1992

EFO—WORKPLACE GIVING FOR THE ENVIRONMENT

The Environmental Federation of Oregon (EFO), which the NPSO joined two years ago, offers an easy, convenient way for you to support the Native Plant Society of Oregon. By taking advantage of workplace giving, employees of EFO-participating companies can choose to help 23 of Oregon's leading environmental organizations.

If your company is listed below, watch for EFO campaign materials this fall. If you decide to give you'll receive all the membership benefits of direct donation, without the hassle of licking a stamp or finding a mailbox. If you designate your donation to go to the Native Plant Society of Oregon, then 100% of your donation will go directly to the NPSO, with no deductions, service charges or administrative fees.



EFO doesn't have a big staff with high salaries or fancy perks. Working out of a small downtown Portland office, a 3 person staff (top salary \$28,000) coordinates workplace giving campaigns that have raised over half a million dollars to benefit Oregon's environmental organizations. Members like NPSO have been contributing 50 to 100 hours of service yearly to help run EFO.

For more information on setting up an EFO workplace giving program where you work, contact the NPSO EFO board representative, Jimmy Kagan (233-1048) or Louise Tippens of EFO (223-9015).

The EFO will host a kick off for this fall's campaign at noon, Thursday Sept. 17th, in Terry Schrunk Plaza at 4th & Madison in downtown Portland. Live music will be performed by the Latin American group Condor. This event will be a good opportunity to show support for Oregon's conservation community.

The NPSO and EFO would like to thank the following organizations for their participation in this convenient and effective means of supporting Oregon's environmental community:

Combined Federal Campaigns: Benton Deschutes, Jackson, Lane, and Marion Counties, and Portland Tri-County Area.

1000 Friends of Oregon • Avia Shoes •
City of Ashland • City of Corvallis •
City of Portland • Colonial Pacific Leasing •
Dynagraphics • Emerald People's Utility District •
Graphics Arts Center • Kettle Foods •
Linfield College • Metropolitan Service District •
Multnomah County • Nike •
Oregon Research Institute • Pacific University •
Port of Portland • Premier Press • Reed College •
Recreational Equipment, Inc. • State of Oregon.

SOLUTION TO LAST MONTH'S WORD PUZZLE

The plant name that can be made from the unused letters is Oplopanax, the devil's club.

Rate your results according to how many genus names you found by the following scorecard:

40-43	Genius level	27 or below — I said
36-39 32-35	Very sharp No slouch	the puzzle was devilish! —Ken Chambers
28–31	Passable	Corvallis Chapter

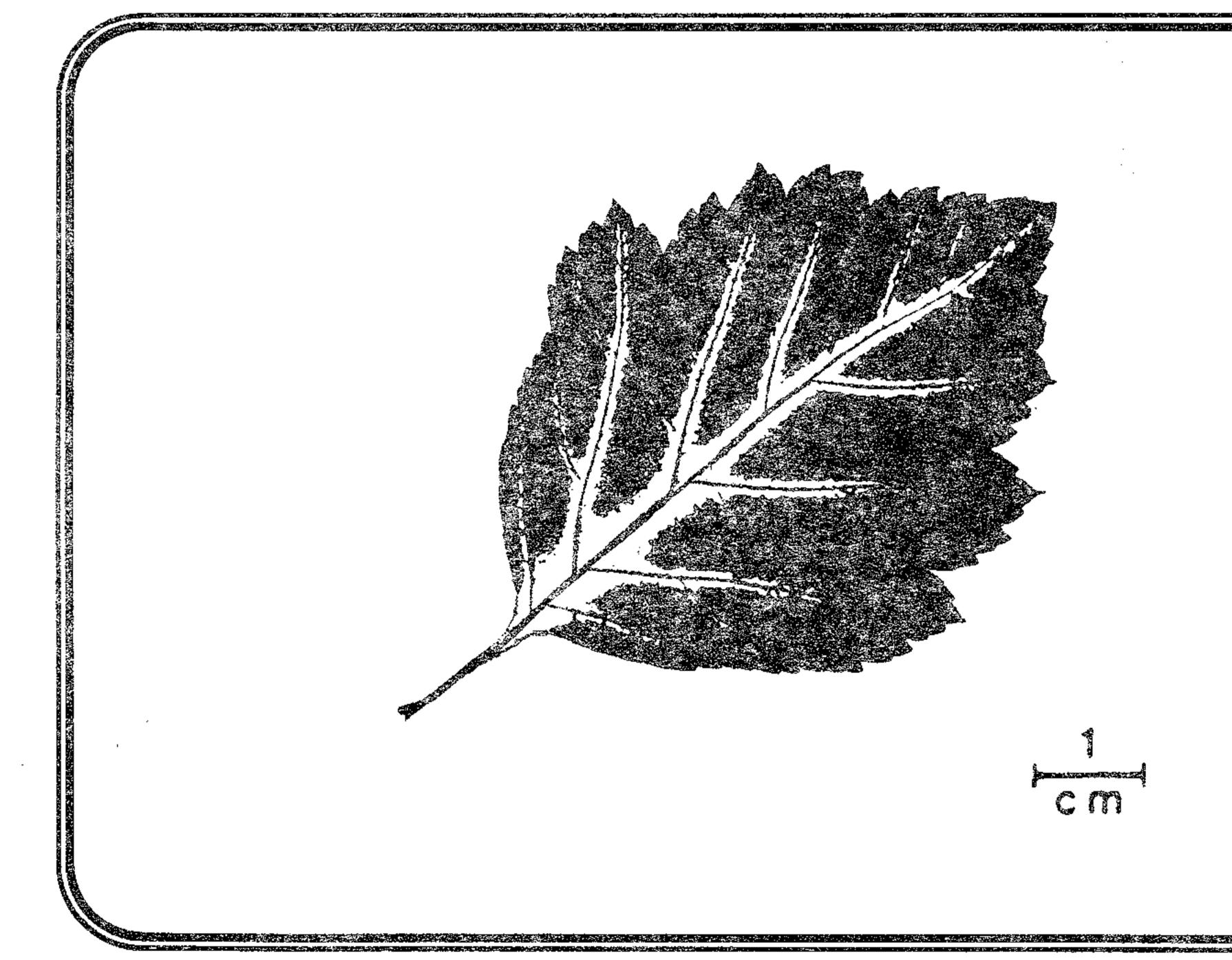
METROPOLITAN GREENSPACES

The Portland metropolitan area has been the scene of some extraordinary regional cooperative planning. The Metropolitan Service District (MSD) has spearheaded efforts by local governments, citizen's groups, and environmental organizations to identify local wild areas and to develop a comprehensive regional plan—Metro Greenspaces—to protect the most important greenspaces surviving in this rapidly developing urban region. Already experiencing continuous expansion, the Portland metro four-county area is predicted to add 480,000 people in the next 20 years. This potential growth makes it imperative that adequate park and open space be set aside now in order to preserve our quality of life and the shrinking remnants of the natural landscape. Only 9% of the greenspaces around us are in public ownership—the remainder is in private hands and subject to possible future development. Continually rising land values and the shrinking availability of significant open spaces make it impossible to wait for later.

We tend to take the still large expanses of open space in the Portland area for granted. They are an important aspect of the livability of our region. Yet each time another favorite forest or field suddenly sprouts structures, we are outraged. 91% of all the fields and forests in this urban area actually have nothing between them and the bulldozers but time.

The many local parks districts of our area have been falling behind in park acquisition compared to what was accomplished earlier in this century. Portland itself has a good amount of parks only in the older parts of the city. The Metro Greenspaces proposal would not put all acquisitions in the hands of MSD, but would cooperate with local parks districts to finance new open space.

The proposed Metro Greenspaces bond measure would produce \$150-200 million for the purpose of preserving the livability of the Portland area. Because the bond issue will cover the entire metro area, the financial impact on the individual would be small. The increase in property taxes would average \$18 to \$24 for a \$100,000 house yearly over thirty years—a cost of no more than 10¢ a day for the average homeowner. This is a small cost for what is to be gained. The MSD priority list for protection includes lands with old growth, wetlands, heron rookeries, volcanic buttes, a region-wide network of trails, creeks, greenways along the Columbia, Willamette, and Clackamas Rivers, and much else. Please help by voting YES November 3rd. The effort to pass the measure needs volunteers and financial contributions. Call 241-7159 for information or to volunteer to help pass the measure. Or write: CITIZEN'S CAMPAIGN FOR GREENSPACES 1101 NW HOYT ST. PORTLAND OR 97209



THE PLANT PUZZLE

Sponsored by the Siskiyou Chapter

Do you recognize this plant? The first person to give the correct scientific name will win a prize. The illustrated leaf is from a native woody species.

Send your guess on a postcard to:

Peter Zika

4230 NW Clubhouse Pl. #1

Corvallis, OR 97330

Carolyn Wright of Dufer solved the August puzzle, with Juniperus communis (common juniper),

Prunus virginiana (choke cherry), and Rhus radicans (poison ivy.

BITSAND PIECES

--NEWS AND INFORMATION FROM ALL OVER

FIRST ANNUAL HIGH DESERT CONFERENCE ANNOUNCED

This promising conference will be at Malheur Field Station Thursday, September 24th through Saturday the 26th, 1992. With "Striving for the Future: Sustainable Development for Southeastern Oregon", the organizers wish to interest "all people interested in discussing the future of Oregon's High Desert".

The future of growth management and preservation in southeastern Oregon is based on actions that take place in a legal, economic, political, biological and historical complex. If the area is to develop and survive into the next century, planning must take place soon. The Great Basin Society, Inc., (which also runs Malheur Field Station) has invited speakers, workshop / discussion coordinators, and field trip leaders from different sides of many fences to share a broad range of opinions on the region's future. They include local ranchers, government officials, Sierra Club people, paleo— and regular botanists, and an economist. A country music social and entertainment wraps things up Friday, with field trips Saturday.

Malheur Field Station is near Malheur National Wildlife Refuge and is a world-renowned birding area. It is within sight of Steens Mountain. The Station is about seven hours from Portland. The trip to it should feature good mountain fall color at this time. It was the site of this year's NPSO Annual Meeting.

The Field Station folks advise that space is limited so early registrations are advised. Conference fee will be \$35. Lodging at Malheur Field Station is a bargain at \$11 per night. Meals are also reasonable, or you can bring your own. The Field Station is asking for a \$50 deposit to reserve your space, with the balance due at the door (or obtain their form and figure the exact amount with lodging and meals). Cutoff for ordering meals will be Sept. 17th. You can register at the door if space is still available, but call ahead. Contact Malheur Field Station at:

MALHEUR FIELD STATION

HC 72 BOX 260

HISTORIC HIGHWAY SCENIC CORRIDOR PROTECTION EFFORT UNDERWAY

The Friends of the Columbia Gorge has initiated an effort to create a 5.9 mile long "Historic Highway Scenic Corridor" between Hood River and Mosier. The Old Columbia River Highway, built here in the 1920's, hangs in this area virtually on the face of the cliffs. Twin tunnels 260 ft. and 60 ft. long are perched 500 above the River. This is a most spectacular section of the old highway. The Old Columbia River highway is listed on the National Register of Historic Places and is a candidate for National Landmark status. The American Society of Civil Engineers has recognized it as a National Engineering Landmark. In 1924 much of the area was set aside as a Scenic Wayside.

The area has old growth Douglas fir and Oak woodlands, with old ponderosa pine mixed in. The proposed park is in a transitional zone changing from Western Oregon forests to oak—pine woodlands. It includes such rare plants as the Gorge endemics Barrett's penstemon (*Penstemon barrettiae*) and bunchgrasses.

The area is in mixed ownership, with the Forest Service, Hood River County, and private interests being the largest holders. Hood River County is threatening to clearcut some of its holdings, though there is the potential of a Forest Service land exchange to prevent this. Current uses of land along the old road include target ranges, an apple dump, and a large gravel quarry.

Despite being built on very steep land, the road surface is flat enough to allow wheelchair access. No vehicular traffic would be allowed in most of the area. Biking and hiking, picnicking and wildlife and wildflower viewing would be ideal uses. Some of the area, bounded by high cliffs and accessible only by the now-closed highway, have never seen any alteration other than the roadway.

For more information about the proposed Scenic Corridor, contact the Friends of the Columbia Gorge at:
FRIENDS OF THE COLUMBIA GORGE
PO BOX 40820
PORTLAND OR 97240-0820
241-3762

PRINCETON OR 97721

(503) 493-2629

STATE	DIRECTORS	Bill Hopkins, Je	rry Igo, Warren Pa	vlat, Margie Willis	, Carolyn Wright, I	Peter Zika - 97704 · 447-5276		
OFFICERS	IMMEDIATE PAST PRESIDENT	. Stephanie Schul	Z	652 W.	10th St. #1, Eugene	e 97402; 485-186		
	VICE PRESIDENT							
	TREASURER				•			
~~	RARE AND ENDANGERED	. Stephanie Schul	Z	652 W.	10th St. #1, Eugene	e 97402; 485-186		
STATE	CONSERVATION, East Side	. Stu Garrett		21663 F	Paloma Drive, Bend	197701; 389-698		
COMMITTEE	CONSERVATION, West Side.			•	•	*		
	LEGISLATIVE							
	WILDFLOWER POSTERS	Jennifer Dimling	g	P	O Box 920, Eugen	e 97402; 343-324		
	NOTECARDS	. Nancy Fredricks	Š	Box 127, North Box	nneville, WA 9863	9; (509)-427-877		
CHAPTER	BLUE MOUNTAIN (Pendleton)	Jerry Baker		Rt. 1, Box	263, Adams, 9781	0-9704; 566-2244		
	CORVALLIS EMERALD (Eugene)							
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	UMPQUA VALLEY (Roseburg)	Ted Schattenker	k	3805 Hwy	#42, Winston 9749	6-9546; 679-695		
	UMPQUA VALLEY (Roseburg) Ted Schattenkerk							
PUBLICATIONS	BULLETIN EDITOR	. Bryan Boyce132 . Frank Lang	285 S. Clackamas I	River Dr, Oregon C 35 Taylor St., Ashla	ity 97045;W-691-1 and 97520; W-552-	394; H-655-4457 6341; H-482-523		
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Jan Dobak, NPSO Membership Chair, 2584 NW Savier St., Portland OR 97210-2412.

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Send change of address notices and membership requests to: Native Plant Society of Oregon Jan Dobak, Membership Chair, 2584 NW Savier St., Portland, Oregon 97210-2412

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