Bulletin of the

Native Plant Society of Oregon

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

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State News

June 4th-6th Fri.-Sun. **The NPSO 1993 Annual Meeting** will be held in Corvallis this weekend. More details inside!

Chapter News

Blue Mountain

For information, contact Chapter President Jerry Baker at (503) 566-3381.

Corvallis

The Corvallis Chapter is busy organizing the annual meeting this month.

Emerald

Directions to meetings: From downtown Eugene, take Willamette Street south to Crest Dr., (right thru "Y" for Donald, between 32nd & 33rd Ave. E.) Turn Right (W) on Crest and proceed about 4 blocks. Turn right into Morse Ranch Park parking lot. Walk east to the white farmhouse.

June 19th, Sat. **Meeting:** 2 pm at Morse Ranch. Meet at the picnic area north of the parking lot. Potluck picnic and planning for fall volunteer work parties in the park. Bring a dish and your ideas about creating exotic vegetation removal demo plots.

June 26th, Sat. **Field Trip:** Grassy Glade and Rigdon Horsepasture Cave. Evelyn Everett will be combining fantastic botany and unique cave archeology stories on a full day trip—bring lunch, water, boots and rain gear. Leave from South Eugene High School parking lot, across from the YMCA on 20th and Hilyard at 8:30 am.

June 27th, Sun. **Field Trip:** A tour of Balan ce Restoration Nursery. Get the scoop on available native restoration plants! Leave from South Eugene High School parking lot, across from the YMCA on 20th and Hilyard at 8:30 am.

More information? Call Bruce Newhouse (President) at 342-2364 or Ethan Perkins (programs) at 345-3944.

IMPORTANT NOTES FOR 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 or chapter representative about difficulty, mileage and terrain to be expected on field trips. Bring water and lunch. Participation is at your own risk. All NPSO field trips are open to the public at no charge (other than carpool mileage), and newcomers and visitors are always welcome.

NOTICE TO FIELD TRIPS CHAIRS AND LEADERS:

The Forest Service and other agencies have set policies limiting group size in many wilderness areas to 12. The reason for this is to limit human impacts on these often fragile areas. Each group using wilderness areas should be no larger than 12.

High Desert

June 11th-13th Fri.–Sun. **Field Trip:** The Nature Conservancy have invited us to visit this magnificent Clear Lake Preserve in northeastern Oregon. We will spend Friday night camping at Wallowa Lake and Saturday night camping near the preserve. Conservancy staff member Berta Youtie will be our guide for this moderate hike to see plants and birds. Contact trip coordinator Stu Garrett for details at 389–6981.

Mid–Columbia

June 2nd, Wed. **Meeting:** 7:30 pm at the Mosier School. Caitlin Cray, who received her degree at Reed College under Bert Brahm, will give us a show on rare plants at Fort Lewis and the Yakima Firing Range.

July 7th, Wed. **Meeting:** 7:30 pm at the Mosier School. We are pleased to welcome Mr. Scott McDonald of the Columbia Gorge Discovery Center. Scott will bring us up to date on this year's activities and the long range plants to dovetail with the Forest Service Interpretive Center at The Dalles.

Aug. 4th, Wed. **Barbecue Potluck** at the Igo Acres. If you don't know the way, meet at the Mosier School at 7 pm.

North Coast

June 12th, Sat. **Field Trip:** Call Jim Winslow at 842–4131 for details.

June 29th, Tue. **Meeting:** Meet at 7 pm in the Carl Rawe Meeting Room, Tillamook PUD, 1115 Pacific, Tillamook. Jim Winslow will discuss landscaping with native plants. For more information, call Jim Winslow at 842–4131.

Portland

June 6th, Sun. **Field Trip** to Opal Creek to experience old growth forest. Leave 8:30 am from the Tualatin K–Mart parking lot, Exit 289 off I–5. For more information call Sara Barnum at 639–3353.

June 8th, Tue. **Meeting:** 7 pm at the First United Methodist Church, 1838 SW Jefferson Street, Portland. Jerry Asher, Research Co-Ordinator for the BLM, will talk on his hobby of weed study with "Alien Invasions: Noxious Weeds on Public Land".

June 12th, Sat. **Field Trip:** Grassy Knoll in Gifford Pinchot National Forest. Leave from Lewis and Clark State Park off I–84 east of the Sandy River at 8 am. Second meeting place at the north end of the Bridge of the Gods at 9 am. Leader is Carroll Dubuar (234-4135).

June 19th, Sat. **Field Trip** to Conboy Refuge in Washington to see *Calochortus longibarbatus* and other rare flowers. Leave from Lewis and Clark State Park off I–84 east of the Sandy River at 8 am.

June 19th, Sat. **Field Trip** in conjunction with the Friends of the Columbia Gorge, with a hike of 6.5 miles along the Pacific Crest Trail, passing Gillette Lake to Greenleaf Basin overlook. Leave 8:30 am from the DOT parking lot near 60th and Glisan in Portland, or at 9:30 am from the trailhead across from Bonneville Dam on Washington State Highway 14 (2 miles west of the north end of the Bridge of the Gods). Leader is Carroll Dubuar (234–4135).

June 26th, Sat. **Field Trip:** Cone Peak / Iron Mountain. A joint trip with the Willamette Valley Chapter to be led by Wilbur Bluhm. Call Sara Barnum for late information on meeting place at 639–3353.

Siskiyou

No meeting in June.

June 12th, Sat. **Working Field Trip** to inventory the "rare" *Plagiobothrys figuratus* spp. *corallicarpus*. Leave from the Ashland BiMart at 8:30 am or the Medford Food 4 Less at 9 am. For more information call Richard Brock at 482–4111.

July 4th, Sun. **Wildflower Show** at Lithia Park. Call Beth Whitman at 488–3955 or Dave Kennedy at 535–6383.

South Coast

June 19th, Sat. **Field Trip:** A moderate 2 mile trip to Iron Mountain to see *Picea breweriana*, *Darlingtonia* bogs and other interesting serpentine vegetation. Leader is Veva Stansell. Leave at 9 am from Powers Ranger Station (for those coming from the north) or from Agness (for those coming from the south). We will meet at Agness Pass and continue to Iron Mountain trailhead. For information call Bruce Rittenhouse at 756–0100 (w) or 888–9328 (h).

Umpqua Valley

June 10th, Thu. **Meeting:** 7 pm in Room 311 of the Douglas County Courthouse. Ken Carloni will speak on "Fire Ecology of Douglas County". Call Ted Schattenkerk at 679–6953 for more information.

June 19th, Sat. **Field Trip** to walk The Wildlife Safari nature Trail. Leave at 8 am from the BLM parking lot, 777 Garden Valley Blvd. For information call Russ Holmes at 672–4635.

Willamette Valley

June 21st, Mon. **Meeting / Field Trip:** We're off to tour a native prairie just outside of Sublimity with Don Roberts. Leave from the south Salem K–Mart shopping center parking lot (located at Mission and 25th Streets; let's meet in the lot near Mission Street) at 6:30 pm for carpooling to the site. For additional information call Kathy at 327–1212 or Wilbur Bluhm at 393–2934.

July 19th, Sat. **Meeting / Field Trip:** We plan to tour the Gaylor property in West Salem. This land has recently been granted to the Salem Audubon Society (SAS). We will have Mark Wigg (President of SAS) on hand to discuss history and our potential involvement in this exciting project. Please meet at 7 pm at the West Salem Roth's IGA grocery store parking lot (just off Wallace Road—lets meet in the lot near Wallace Road) to get directions to the site. For additional information call Kathy at 327–1212.

William Cusick

June 5th, Sat. The Cusicks Chapter will be participating in the first field day for the Rebarrow Project south of LaGrande. Pat Lichen Bill Oberteuffer and others will help various groups chose sites they will develop management plans for. Call Pat Lichen at 963–8362 (H) or 963–8025 (W).

Welcoming Our New Members....

Corvallis
Nancy A. Morrissey
Carolyn VerLinden
Barbara L. Wilson

Emerald
Linda Brackett

High Desert
Mary & Rich Barber
Melanie Florence
Pete & Ruth Peterson
Anthony & Mary Walters

Mid–Columbia
Caitlin Cray

North Coast
Patrick Temple & Peggy Maack

Portland
Leslie Anderson
Gretchen Baller
Wendy Batchelor
Elizabeth N. Boyd
Cedar Hills Garden Club
Christine Charneski
Staci Crowley
Alan & Becky Johnston
Jim Hohnson & Carol Rogers
Patricia L. Justice
Jim Kramer
David McAllister
Wilma McNulty
Christopher S. Morris
Colleen Nevins
Gretchen O'Brien
Portland Habilitation Center Nursery
John Robotham & Mary Johnson
Rob Stockhouse
Leslie J. Swope
Sharol Tilgner

Siskiyou
Doug Foster
Rachel Winters

Umpqua Valley
Stanley Wilson

Willamette Valley
Clifford Curry & H. Delight Stone
Thomas J. Galli
Glenna Green & Megan Koster
Edward & Marilynn Karbonski
Grace Ledford
Peggy Palazzo

William Cusick
Jerold Hustafa

At Large
Nancy & Dale Denson
Susan Stepniewski

Election Results

State Election Results

The nominating committee is pleased to announce the results of the recent State Board elections. Re-elected to President is Lisa Croft and to Secretary is Bruce Rittenhouse. Elected to Vice President is Rhoda Love, to Treasurer is Kari Yanskey, and to Directors-at-large are Jenny Dimling, Veva Stansell and Nancy Wogen. Many thanks to all of our candidates!

State Officers will be installed at the Annual Meeting this June.

Portland Chapter Results

The following Officers for the Portland Chapter will begin their terms with the June Chapter meeting:
President: Laura and Steve Gassaway
Vice-President, programs: Katharine Diack
Vice-President, field trips: Sara Barnum
Secretary: Marvel Gillespie
Treasurer: Jean Marie France

Port Orford Cedar: A Unique Tree That Needs Special Attention

Port Orford Cedar is a unique tree species found only in northwestern California and southwestern Oregon. This species of cedar is most often found in streamside areas and on serpentine soils of higher elevations. It is distinguishable from western redcedar and incense cedar by the thin, white-lined "X" pattern on the underside of the foliage. The foliage sprays are also flat, finer, denser, and more lacy than those of the other native cedars. Western redcedar most closely resembles Port Orford cedar but has a broader stomatal pattern on the underside of the foliage that resembles a butterfly's wings.

Port Orford cedar is very valuable for both economic and non-economic uses. It is a valuable member of the forest ecosystem, particularly in riparian areas. It can be the dominant tree of harsh serpentine sites, with medium-sized trees reaching ages of 3-400 years. The clear, fine-grained old-growth wood from this tree is highly valuable in Japan as a substitute for their native hinoki, which is in short supply. Boughs of Port Orford cedar have value as a mix with floral arrangements, especially in the winter holiday season. There is also a small domestic market for Port Orford cedar products such as arrowshafts and pet bedding.

In 1923 a disease was reported on ornamental plantings of Port Orford cedar near Seattle. In 1942, the cause of this disease from a root-rot fungus was discovered and named after study of ornamental planting losses in the Willamette Valley. Losses became so severe in Oregon and Washington that production was largely abandoned. However, this could not prevent the spread of the deadly root disease, *Phytophthora lateralis,* into the natural range of Port Orford cedar.

In 1952, the disease was found in southwestern Oregon near Coos Bay. By 1954, dead and dying Port Orford cedars were conspicuous in the area's towns and along major roads. Aerial photographs taken in 1956 showed a network of dying trees along watercourses, around lakes and sloughs, and along rural roads, livestock trails, and farmsteads. Spread of the disease into the mountains has been slower but progressive. The spores of the root fungus spread by movement of soil and water. The disease is most commonly spread by mud attached to vehicles and equipment. It then travels downstream from new infection points with water flow. Mortality from the disease has been variable. In no stands has the disease yet been observed to have eliminated over half of the Port Orford cedar.

On the Chetco Ranger District the range of Port Orford cedar extends from the Pistol River watershed south along the eastern edge of the district. Most of the infected areas occur on the northern end of the district.

Efforts to control the spread of the root disease have included:

- restricting operations in areas of Port Orford cedar to the drier months (generally June through September);
- winter closure of roads in areas with substantial amounts of Port Orford cedar; requirements for washing vehicles before entering uninfected areas in wet weather;
- minimizing grazing and road construction in areas with Port Orford cedar;
- identifying significant stands which are unlikely to become infected over time;
- planting the tree in isolated blocks in harvested units so as to minimize chance of disease spread by root grafts;
- and educating forest users about the conditions which spread the disease.

You can help minimize the spread of Port Orford cedar root disease by taking the following measures:

- voluntarily restrict your wet weather travel in the forest to main routes;
- take interest in management of Port Orford cedar in projects involving public input;
- be aware of infected and uninfected areas on your local ranger district and forest.

Further information involving management of Port Orford cedar is available from the Chetco Ranger District office at 555 Fifth Avenue in Brookings (behind Sentry Market), between the hours of 7:30 and 4:30, Monday through Friday (503–469–2196). Questions may be directed to Bill Forbes, District Port Orford cedar Coordinator. Or you may contact the Interregional Port Orford cedar Program Manager, Mel Greenup, at the Siskiyou National Forest, PO Box 440, Grants Pass, OR 97526 (503–479–6905).

—Bill Forbes, Forester,
Chetco Ranger District

Botanical Explorations and Collections of The Pacific Northwest

Plans are now well along towards writing the text for a book on the history of botanical exploration and plant collectors of the Pacific Northwest. The scope of the book will reach back to the late 18th Century (Monzino, Menzies, etc..) and end in the 1950's; it will include the broad biogeographic region of the Pacific Northwest (Oregon, Washington, Idaho, Montana and British Columbia). The intent is to produce a book that is accurate, inclusive and informative, written in an engaging style suitable for the general reader. Besides the essential facts surrounding the lives and activities of the plant hunters, we intend to enliven the text with much anecdotal material. Major collectors (such as Menzies, Douglas, Lewis & Clark, Henderson, Thompson, Howell, Suksdorf, etc.) will be given the featured attention; as well, minor collectors will be covered. Illustrations will include portraits of the collectors, historically important collecting localities, and representative plant specimens. "Back–matter" of the book will include appendices (chronologies, itineraries, herbaria housing Northwest collectors's specimens including types?), published floras local and regional, and annotated lists of lesser collectors as well as botanists in related fields); bibliographies of general references as well as specific references of published and unpublished sources; and index.

To date, we have had two planning sessions (December 1991 and February 1993, both in Eugene). At the 1993 meeting future plans were drafted, a detailed list of collectors was reviewed, and a tentative Editorial Board drawn up.

With this Prospectus, we hope to reach potential authors, resource persons, etc., as well as contacting Pacific Northwest native plant societies and kindred organizations. The Prospectus will also reach potential sources of financial support. We especially encourage the native plant societies and like groups in the Pacific Northwest to publicize this project.

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The Plant Puzzle

Sponsored by the Siskiyou Chapter

Dorothy Barr of Lake Oswego was the first to solve the April puzzle: *Populus tremuloides*, quaking aspen. No one has yet solved the May puzzle, which is repeated below.

Name three vascular plants native to the waterways of both Brazil and Oregon. They must be in different plant families. One example is *Najas guadalupensis*, which is found in ponds on the Oregon Coast as well as backwaters of the Brazilian Amazon. The first person to give the correct scientific name will win a prize. Send your guess on a postcard to:

Peter Zika
4230 NW Clubhouse Place, #1
Corvallis OR 97330

NPSO Window Stickers

The NPSO window stickers are decals with our trillium logo in green over an opaque white background. They can go on the inside of your car or other windows.

Order them from the High Desert Chapter NPSO, c/o Stu Garrett, at 21663 Paloma Drive, Bend OR 97701. They are $1 each and minimum order is 5.

New Field Research on Estes' Artemisia

Estes' artemisia (*Artemisia ludoviciana* spp.*estesii*) is a plant in the sunflower family (*Compositae*) related to our common sagebrush (Artemisia tridentata), wormwood (*A. absinthium*), and mugwort (herbacious artemisia spp.). It is listed by the US Fish and Wildlife Service as a C2 Candidate, and is on the Oregon Natural Heritage Program's List 1 (taxa threatened or endangered throughout their range). Previously known only from Dr. Kenton Chambers' small siting near a falls on the Deschutes River east of Redmond, it has not yet been formally named. Unpublished plants are ineligible for state or Federal protection. It seemed reasonable that the seeds of this plant could be spread by water, so since 1990 I have been ground checking the Deschutes River area for additional stands. I found significant numbers of this local endemic.

After counting more than a million stems of spp. *estesii* over 20.5 miles of riverbank, I can come to some fairly reliable generalizations, especially about habitat. At the original site, the habitat description is gravelly area adjacent to streams above the high water mark. I have seen this habitat described for this subspecies in a number of sources. Although I have often noticed small subpopulations around falls and on isolated rock outcrops at the river's edge, I consider this the fringe of its habitat. No more than five percent of the plants grow in this habitat. The largest, densest stands (which can be 20 or more feet in length) always occur on planar to slightly undulating moist riverbanks below high water mark. Plants at these sites often form thick rhizomatous mats which interconnect the numerous stems.

The plants associated with Estes' artemisia are very consistent. The herb layer generally consists of bittersweet (*Solanum dulcamara*), yellow iris (*Iris pseudacorus*), and often cat-tail (*Typha latifolia*) if the stand is not solid artemisia, which occasionally is the case. The shrub layer consists of spirea and willow. These shrubs are not usually in the stand of artemisia itself, but often are found between it and the high water mark. This can make locating and counting the artemisia very difficult at times, since these shrubs often form a thick barrier. The easy way to get an accurate count of the plants is by boat from the river.

Identifying herbacious artemisias can require careful work. The different species and subspecies are extremely variable and interbreed freely. Individuals exhibit leaf shape and size, plant height, and pubescence of other species. New spring and fall growth is often atypical, like that of another species. The key to deciphering these problems is to look at the many mature plants in a stand and generalize from the common characteristics.

When I originally keyed this plant out in Hitchcock's flora of the Pacific Northwest, it appeared to be a cross between *A. douglasiana*, the common species west of the Cascades, and *A. ludoviciana*, common to the east. Hitchcock mentions that these species pass from one into the other. Later, after determining the true name of the plant, I realized that *A. ludoviciana* spp. *estesii* had more characteristics that matched *A. douglasiana*. I assumed that these two must be closely related. In reality these two are the farthest apart of all the species in their chromsomal makeup. The subspecies estesii is more closely related chromosomally to the coastal mugwort *A. suksdorfii*! This shows once again that our plant classification system is artificial and only approximates reality. Just because two species are close to each other in a key does not necessarily reflect the true biological or evolutionary relationship.

The genetic makeup of subspecies *estesii* and its relationship to other species was studied extensively by James Estes for his doctoral thesis at OSU. It appears that both *A. suksdorfii* and*estesii* are diploid, with two sets of chromosomes. *A. ludoviciana* is tetraploid with four sets of chromosomes, and *A. douglasiana* is hexaploid with six sets. It was once believed that douglasiana (6n) was a hybrid of *ludoviciana* (4n) and *suksdorfii* (2n). Unfortunately, since all species of artemisia have compatible chromosomes that pair up regularly, this can neither be confirmed or disproved by chromosomal analysis.

With the easy interchange of chromosomes, it is biologically significant to find a diploid subspecies in an area where all the other races are tetraploid. Should other diploid races similar to this one be found in drainages not necessarily connected to the Deschutes, it would raise interesting evolutionary questions. The stage is set for further research concerning artemisias in central Oregon.

Now that subspecies *estesii* has been shown to be more than a genetic freak from one location, Dr. Chambers has agreed to formally publish its name. The description of its features will be a difficult task with its extreme variability of easily seen characteristics. This is not a problem on the Deschutes, but will become very important when identifying artemisias in other parts of central Oregon. Unfortunately, a chromosome count is the most accurate means of identification.

Voucher specimens for this research are on file at OSU, and the plant siting reports are on file with the Natural Heritage Program's database. I would like to thank my students Kim Kamaiccia, John Reuter, Dennis Pierce, and Jeff Payne for their invaluable help in the field; Dr. Dave Wagner for his support and encouragement, and Dr. Kenton Chambers for the genetic and taxonomic information. For further information I can be contacted at PO Box 1553, Sisters OR 97759 or (503) 389–6348.

—Howie Brounstein
High Desert Chapter

New NPSO Bulletin Editor Needed

After four years editing your monthly *Bulletin,* your current editor is ready to step down and pass on the position to another volunteer. The position gives an opportunity for valuable experience for someone wanting to benefit from experience at desktop publishing. The NPSO will provide a MacIntosh computer along with the position. I will provide all assistance needed to familiarize anyone with the system, which is easy to use.

Production, printing and mailing of the Bulletin currently involves the editor, a separate mailing committee, a proofreader, a printer, and a bulk mailing permit. The newsletter can be produced anywhere that these can be found. Most submissions are by mail, with a few of them arriving via modem, fax or phone. Computerization has provided several time-saving shortcuts in production, and little or no paste-up is required. The NPSO has not yet purchased a Postscript-compatible laser printer, so access to one by the new editor is needed (many Kinko's stores have them available for rent). All costs of the position are provided by the Society.

Interested parties can contact the present editor for more information at the numbers below:

Bryan D. Boyce
13285 S. Clackamas River Drive
Oregon City OR 97045
(503) 655-4457 or 692-1448

The 1993 NPSO Annual Meeting Schedule

The 1993 NPSO Annual Meeting will be the 4th, 5th and 6th of June. Registrations have been closed, but this updated schedule is included for your information.

Schedule of Events:

Friday, June 4th
Registration and check–in to OSU housing between 6 & 8 pm at Hawley Hall. The Friday night Social will take place from 6:30 to 9:30 pm at the OSU Center for the Humanities at 811 SW Jefferson. Come join us!

Saturday, June 5th
All day field trips will meet at 8:45 am at the parking lot across from the Monroe Beanery. Half day field trips will meet at 1 pm at the same location. Please bring lunch, water and proper attire. If you need a lunch there is a grocery store next to the Beanery Coffee Shop on Monroe Street.

The Annual Banquet will be at 6:30 pm in the Memorial Union Building. The speaker will be Duncan Thomas, who will present "Plants and People: African Botany in the Spotlight".

Sunday, June 6th
The State Board Breakfast Meeting will take place from 9 am to 12 noon at Sadies Bar & Grill at 777 NW 9th Street. Sadies features a brunch buffet as well as a breakfast menu and plenty of Allan Brothers coffee! For those not going to the Board Meeting, there will be a sign–up sheet at the Banquet for a morning local field trip.

Saturday Field trips for the 1993 NPSO Annual Meeting

All scheduled field trips will take place on Saturday, June 5th. We will carpool. Bring a lunch if you are going on an all day field trip. Come prepared for varying weather conditions, including warm clothes, raingear, good walking boots and a hat. Choose from the following list of fieldtrips; state first, second and third preference on your preregistration form. Remember, some of the field trips will be limited in the number of participants. Sign up early for best selection!

Horse Rock Ridge Research Natural Area
In the Coburg Hills, Horse Rock Ridge overlooks the Willamette Valley. A one hour drive with moderate hiking. High diversity of wildflowers, in a mixture of meadow and forest. Field trip leader will be Dan Luoma.

Delphinium Field Trip
A visit to the local rare *Delphinium pavonaceum* sites around the Corvallis area. Gaylee Goodrich will lead a small group to remnant sites. A half day field trip will easy walking.

Findley Wildlife Refuge
A visit to a variety of remnant valley habitats at Findley Wildlife Refuge. Moderate walking to see the different habitats at the refuge. Field trip leader is Ed Alvorson.

Low Elevation Forest
Phil Hayes will lead us through a remnant low elevation old growth forest with easy walking on a one and a half mile loop. The area is a short distance from Corvallis. This is a half day field trip.

Mount Hebo
This Coast Range site has subalpine grasslands with a rich diversity of flora and fauna including orchids, penstemons and lilies. Driving time 2 hours one way, with moderate walking. Leader is Paul Hammond.

Mary's Peak
A June wildflower mecca in the Coast Range, with a moderate 2 mile hike through forest, meadow and rock garden. Driving time on hour each way. Leader is bob Frenkel.

Purple Loosestrife Research Site
A visit to research sites investigating the use of insects to control the spread of purple loosestrife (*Lythrum salicaria*), an European perennial invading wetlands throughout North America. This is a half–day field trip with easy walking. Leader is Manuela Huso.