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

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Three Methods to Measure the Effects of Cattle Grazing on Plant Populations

by David Matlaga

This article represents the perspective and experiences of NPSO/Institute for Applied Ecology intern David Matlaga. During the summer of 2000, David participated in monitoring and research projects conducted by IAE staff throughout Oregon. The projects were focused primarily on threatened and endangered plant species in eastern Oregon, the Siskiyous, coastal areas, the Cascades, and the Willamette Valley. Internships are jointly funded by NPSO, IAE, and federal dollars. For more information on this internship opportunity, please contact me at kayet@peak.org or 541-753-3099. Thanks again to NPSO for contributing to botanical education and work experience.

Tom Kaye, Institute for Applied Ecology, Corvallis, Oregon

Tattle grazing is a volatile topic. Much of the bad press cattle grazing has received is due to the problems overgrazing has reeked on the ecology of western rangelands over the last 200 years. Research has shown that grazing can be detrimental to plant populations, such as riparian communities (Trimble 1994) and grasslands, but some recent studies have been conducted to determine how cattle grazing can occur without compromising species and genetic diversity. A judicious use of livestock grazing, in some cases, may even be useful as a tool for restoring endangered species (Weiss 1999). More research will, no doubt, show that grazing is rarely an entirely "good" or "bad" practice, but will probably reveal that in certain situations its benefits outweigh the drawbacks, and vice versa. Grazing might be most useful as a tool in ecosystems where disturbance regimes have been compromised for management, such as fire suppression.

In this article I will discuss three studies that display the different methods ecologists use to elucidate the effects of cattle grazing on plant populations. I assisted in two of these projects as an NPSO summer intern at the In-

stitute for Applied Ecology. Although both projects had similar goals, the data each generated answered a specific question by using different methods. The other project was my senior thesis at Reed College.

Bradshaw's lomatium (Lomatium bradshawii) grows in wet open areas of the Willamette Valley and southwestern Washington and is a federally listed endangered species. This summer the Institute for Applied Ecology collected data for the last year of a study investigating the effects of short term cattle grazing on Bradshaw's lomatium at the Oak Creek U.S. Fish and Wildlife Service preserve. Aaron Drew of USFWS instituted this project in 1997 for his Master's degree from the Rangeland Resources Department at Oregon State University. Grazing intensities of low, medium, high, and no grazing were carried out in homogeneous areas that contained Bradshaw's lomatium. Over the next 3 years specific areas inside each treatment were monitored. In each area lomatiums were mapped and demographic data, such as survival and reproduction, were collected. This method allowed for an estimate of how grazing affected characteristics such as

seedling recruitment and mortality. The most exciting results from this study show that the lowest mortality occurred in the grazed treatments. Higher recruitment was also found in the grazed treatments, but there was no difference in mortality or recruitment for different grazing intensities. These results are helpful in demonstrating that short term grazing carefully manipulated on this endangered species may be one useful tool for managing its habitat, especially if prescribed burning is difficult to apply.

continued on page 119

In This Issue

New <i>Kalmiopsis</i> Assistant Editor1	14
Chapter Calendar1	15
Other Events1	18
Highlights of the State Board Meeting1	22



Native Plant Society of Oregon

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New Kalmiopsis Assistant Editor

Linda Vorobik, editor of *Kalmiopsis*, has recruited an assistant editor to learn the system and lend a hand in assuring regular emergence of our journal. Cindy Roché, a member of the Siskiyou Chapter of NPSO, hails from the Rogue Valley of southwestern Oregon. A "newcomer" to Oregon, Cindy is an Idaho native who lived most of her life in eastern Washington. She jokes that the abundance of yellow starthistle in the Rogue Valley prevents homesickness for the Snake River canyon. Her earliest memory of an interest in plants dates back to a five-year-old asking her mother for her own flower garden to plant and tend.

Cindy attended Washington State University, earning a B.S. in Forest Management (Biological Sciences) and a M.S. in Range Management (Weed Ecology, with emphasis on *Centaurea* species). She worked as a Range Conservationist for the Forest Service in northeastern Washington, a position that provided the opportunity for reporting several new sightings of Sensitive Species in the area. After completing her M.S., she worked in range extension at WSU for several years, editing the *Knapweed Newsletter* and writing and illustrating over 35 bulletins. She also developed a monthly column on weeds for the Farmer-Stockman magazines, and conducted and reported field research. Her dissertation, "Developmental biology in common crupina (*Crupina vulgaris* Pers.) and yellow starthistle (*Centaurea solstitialis* L.)", marked the completion of a Ph.D. in Plant Science at the University of Idaho in 1996.

Currently a Post-doctoral Fellow at the University of Idaho, her research focuses on the invasion biology of common crupina. In collaboration with the Molecular Systematics Laboratory in Barcelona, Spain, she hopes to determine the Mediterranean origins of our introduced populations. She is preparing publications on the distribution and ecology of crupina in the Iberian Peninsula, in hopes of supplying missing pieces to the puzzle of invasive species.

In her spare time, Cindy likes to garden (with natives, but also culinary plant life), photograph and identify plants and, depending on the season, hike, cycle, camp, backpack, and x-c ski. Her interests include both our native flora and invasive species.



ANYA HARVE

Amazing variety of plant forms on the forest floor. How many plants can you find?

Salmon River near Mt. Hood.

NPSO CALENDAR

State

January 20, Saturday

Board Meeting: 10:00 am. Salem, exact location to be announced later.

Blue Mountain

For information on the the Blue Mountain chapter call Jerry Baker at 541-566-3381.

Cheahmill

October 26, Thursday

Meeting: the BLM's Area of Critical **Environmental Concern (ACEC)** program. Warren Tausch, Forester with the Bureau of Land Management's Tillamook Field Office will present a talk on the BLM's ACEC program. Warren has held a number of resource positions with the BLM and is currently Staff Administrator in the Tillamook Field Office. His presentation will include a short history of the BLM's special areas programs, and the current management direction for special areas (ACECs and RNAs) on the Salem District. He will also cover the location and description of the various special management areas on the Tillamook Resource Area, provide a brief history of the research conducted on these areas, and indicate what habitat management projects are proposed for the future. 7:00 pm, Carnegie Room, McMinnville Public Library.

November 16, Thursday

(please note this date is different from that printed in last month's *Bulletin*)

Meeting: Wetland Plant Communities of Oregon, is the title of a talk and slide show to be presented by Patricia Farrell and Fred Small. A variety of wetland plant communities and typical species associated with each will be highlighted. The speakers will also explain the Cowardin wetland classification system used in the National Wetlands Inventory and illustrate these

estuarine, palustrine, and riverine systems within Oregon. Patricia and Fred both work as wetland scientists for Pacific Habitat Services, where they conduct wetland delineations, rare, threatened and endangered plant surveys, and create wetland restoration and mitigation plans. 7:00 pm, Carnegie Room, McMinnville Public Library.

Corvallis

November 13, Monday

Meeting: A floristic survey of Bruno Mire in the Central Cascade Range, Oregon a talk by Dick Halse at 7:30 pm at the Avery House, Avery Park, Corvallis. For more information contact Esther McEvoy at 541-754-0893

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. Participation is at your own risk. Please contact the trip leader or chapter representative about difficulty, distance, and terrain to be expected on field trips. Bring water and lunch. All NPSO field trips are open to the public at no charge (other than contribution to carpool driver) and newcomers and visitors are always welcome. National Forests require a Northwest Forest Pass for many field trip locations. Permits can be acquired at forest headquarters and ranger districts.

NOTICE TO FIELD TRIP CHAIRS AND LEADERS

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

December 11, Monday

Event: Holiday Dessert Potluck and Slide Show at 7:30 pm at the Avery House, Avery Park. Bring a dessert and about 20 slides to share. For more information contact Esther McEvoy at 541-754-0893.

Emerald

November 4, Saturday

Field Trip: Lichens and Mushrooms at H.J. Andrews Experimental Forest north of Blue River. Trip will be led by Bill Denison, lichen expert and Professor Emeritus of Botany at OSU. Bill has done a great deal of research on the lichens of the Andrews. Meet at 9:00 am at South Eugene High School or 10:15 am at H.J. Andrews Headquarters. Bring lunch and dress for rain and cold. For more information, call Peggy Robinson, 541-744-0439.

November 27, Monday

Meeting: Forests of Lilliput: Local Mosses and Lichens. 7:30 pm, Room 117, Science Building, LCC main campus. Nature photographer Dave Stone of Touchstone Photography and environmental educator Peggy Robinson (Emerald's field trip chair) take us for a pictorial hike into this tiny, beautiful world. Directions: Construction continues at LCC, so come a little early to find your way. We'll still be meeting in the original Science building, which has just been remodeled and is on the southeast corner of LCC. Best place to park is probably on the east side of campus, near the south end of Eldon Schafer Drive (turn at the stop light on 30th Ave.). Just south of that parking area is a lighted walkway along the north side of the Science trailers, which goes right to the Science building.

December 2, Saturday

Field Trip: Beginner's moss & lichen ID field trip to Fall Creek led by Peggy Robinson. This is a repeat of last year's successful field trip. Meet at South Eugene High School at 10:00 am. Bring lunch and dress for rain and cold. For more information,

December 11, Monday

call Peggy, 541-744-0439.

(note change from the fourth Monday of the month to the second)

Meeting: Annual Holiday Party! Bring 10-12 of your favorite slides, and if you wish, a finger food snack. Your chapter will provide punch, tea, and holiday decorations. See you there! 7:30 pm, Room 117, Science Building, LCC main campus.

January 22, Monday

Meeting: Searching for Driftwood Valley. Rhoda Love will show slides as she presents a combination book review, biographical sketch, and botanical survey of northern British Columbia. She will outline her researches into the fascinating life of female ecologist Theodora Stanwell-Fletcher, author of the nature classic, *Driftwood Valley*. Included will be images of the trip Rhoda and her husband took to the British Columbia wilderness to find the places and plants mentioned in the book. 7:30 pm, Room 117, Science Building, LCC main campus.

High Desert

For information on the High Desert Chapter call Stu Garrett at 541-389-6981.

Klamath Basin

For information on the Klamath Basin Chapter, call David Lebo at 541-883-8393.

Mid-Columbia

November 1, Wednesday

Meeting: Plants and Indians of the Inter-mountain West. 7:30 pm at the Columbia Gorge Discovery Center theatre, first The Dalles exit on I-84 heading east, and follow signs. We are delighted to welcome Lucile Housley, BLM botanist in southeastern Oregon and expert in ethnobotany, who will give us a slide presentation on the Great Basin tribes' use of plants in their everyday life.

North Coast

November 5, Sunday

Field Trip: Mushroom Foray. Leader: Jalen Jones. Due to the dry condition of our forests this trip may be cancelled if there isn't significant mushroom development. If you are interested please phone John Gerke at 503-842-5366 for an update. Meet at 10:00 am at the Tillamook PUD parking lot at 11th and Pacific and bring a sack lunch.



Mushroom season again!

Portland

November 14, Tuesday

Meeting: Fire in Natural Ecosystems. Steve Buttrick of The Nature Conservancy, will give a presentation on the role of fire in natural ecosystems. The meeting will be held in the Fireside Room (#355) of the First United Methodist Church located at 1838 SW Jefferson St., in Portland. The room is open at 6:30 pm for socializing and the meeting will begin at 7:00 pm.

Siskiyou

November 11, Saturday

Field Trip: Joint Fall Fungus Foray, Siskiyou Chapter, NPSO and Mt. Mazama Mushroom Association. Leader: Forest Service Botanist Wayne Rolle. Meet at 9:00 am in Medford at the old K-Mart parking lot. Take the Barnett Road off ramp off I-5 in south Medford, go west on Barnett a short distance until you see a McDonalds on the right (to the north). Behind the McDonalds is the old K-mart building.

November 16, Thursday

Meeting: Condrey Mountain Roadless Area: Contributions to botanical diversity and wilderness along the Siskiyou Crest. Shannon Clery will talk about this remote area's natural history, threats and importance to a wilderness reserve network for the Klamath-Siskiyou ecoregion. 7:30 pm in Room 171 of the SOU Science Building in Ashland. Info: Molly Sullivan, 541-770-7933.

Umpqua Valley

November 2, Thursday

Meeting: Presentation on Fall Fungi by Dr. Dan Luoma. County Courthouse Annex, Roseburg, 7:00 pm. Call Richard Sommer at 541-673-3709 for more information.

November 4, Saturday

Field Trip: Local forests to see fall fungi, led by Dr. Dan Luoma. Meet in the BLM parking lot, 777 NW Garden Valley Blvd., Roseburg at 8:00 am. Call Russ Holmes at 541-672-4635 for more information.

Willamette Valley

November 13, Monday

Meeting: The Oregon Flora Project: Where we are now, and how do you get all those dots on a map? is our presentation by Linda Hardison and Scott Sundberg. Linda is the Chair of the Friends of the Oregon Flora Project Committee of the NPSO, and Scott is a Research Assistant Professor in the OSU Department of Botany and Plant Pathology. Meeting is at 7:00 pm in Room 225 of the United Methodist Church at 600 State St NE in Salem.

William Cusick

for information on the William Cusick Chapter call Frazier Nichol at 541-963-7870.

NPSO Items for Sale

Oregon's Rare Wildflower Poster depicts Punchbowl Falls and three of the Columbia River Gorge's endemic wildflowers. Text on the back describes the natural history of the Gorge and the mission of the NPSO. Available from Stu Garrett, 21663 Paloma Drive, Bend, OR 97701, 541-389-6981. Individuals may order posters at \$12 each, plus \$3 per order for shipping. Posters are mailed in tubes. Chapter treasurers may contact Stu for wholesale prices to chapters.

NPSO's Original Wildflower Poster depicts 13 Oregon wildflowers in a striking artist's rendition. Soon to be a collector's item. Available from Stephanie Schulz, 84603 Bristow Rd., Pleasant Hill, OR 97455, \$5 each, plus \$3 per order for shipping. Posters are mailed in tubes.



Berries of Smilacina racemosa (syn. Maianthemum racemosum).



Friends of the Oregon Flora Project

We are pleased to have recently been awarded a \$2000 grant from the Jackson Foundation. These funds are to complete the checklist of the monocots other than the grasses. However, we requested \$5000 as the amount necessary to accomplish this work. Can YOU please make a contribution to raise the balance needed to produce this major part of the Checklist? As soon as the work is completed, it will be published as a booklet and available upon request. It will also demonstrate to the Jackson Foundation trustees the enthusiastic support we receive from our sponsor, the Native Plant Society of Oregon, and its members.

The Friends committee resumed its monthly meetings in September after a summer hiatus. We focus on developing fundraising strategies and spreading the word about the Oregon Flora Project. Two notable projects we're working on are a slide presentation and a series of workshops to be offered in 2000-2001. If you have ideas or talents you would like to share, please contact Linda Hardison at (541) 745-5770, or at the Friends address. Your input will be heartily welcomed!

Please make checks payable to: Native Plant Society of Oregon

and mail to:

Friends of the Oregon Flora Project P. O. Box 402 Corvallis, OR 97339-0402

OTHER EVENTS

Mount Pisgah Arboretum

Sunday, October 29, 10 am-4 pm Mt. Pisgah Arboretum Annual Mushroom Show & Plant Sale

Huge educational mushroom display, plants, food, music, expert mushroom identification, guided walks, scarecrow contest, children's activities. Cosponsored by the Cascade Mycological Society. Suggested donation: \$3 per person, \$6 per family for non-members. Call 541-747-3817 for more information.

Saturday & Sunday, November 4 & 5, 10 am-4 pm

Mushrooming Workshop with Maggie Rogers, co-founder of *Mushroom*, *The Journal of Wild Mushrooming*. An intensive class for beginners covering the ethics of collecting, recipes, techniques for dyeing, field identification, reference reviews and more! Preregistration required; call 541-747-1504. Fee: \$60 (\$55 Arboretum members).

Sunday, November 12, 1-3 pm Evergreen Wreathmaking Workshop with Ken Gillespie, Florist, at his shop

with Ken Gillespie, Florist, at his shop on 5th Street in Eugene. An annual benefit for the Arboretum's Education Program, this is a fun afternoon of creating your own holiday wreath from natural materials, to take home or give as a gift. Bring your own clippers, all other materials provided. Pre-registration required; call 541-747-1504. Fee: \$30.

Saturday, November 18, 10 am-noon

"Extraordinary Evergreens" Walk with Rolf Anderson, retired Willamette National Forest ranger. Before winter closes in, come out and have a close encounter with the Arboretum's conifers and their associated plant communities. Suggested donation for non-members: \$3. Meet at Mt. Pisgah Arboretum Visitor Center within Buford Park, Eugene.

Sunday, November 19, 1-3 pm Mushroom Walk with Eric Muench and Ron Hamill of OSU. Walk begins with discussion and viewing of live specimens, followed by an easy trek to look for mushrooms and other fungi in the Arboretum. Suggested donation for non-members: \$3. Meet at Mt. Pisgah Arboretum Visitor Center within Buford Park, Eugene.

Thursday, November 23, 10-11:30am

Thanksgiving Day Nature Readings with Daniel Ray, facilitator. Celebrate the holiday by bringing stories, poems or prose to share with and read aloud to fellow nature lovers. Hot cider will be served. Meet at Visitor Center within Buford Park, Eugene. Suggested donation: \$2.

Thursday, November 30, 7-9 pm "Sacred Geography": An Evening Slide show & Lecture by Rick Ahrens, Arboretum Nature Guide and LCC Instructor. Join us for a closer look at the symbology of mountains and trees as we explore both inner and outer landscapes, plus traditional creation stories. Location: Eugene Garden Club (High St. between 16th and 17th.) Suggested donation: \$3.

Upcoming Botany Classes at the Jepson Herbarium in Berkeley, CA

The Jepson Herbarium, a Natural History Museum on the UC Berkeley campus, offers a series of workshops on Botanical and Ecological subjects. The classes are designed to accommodate botanical enthusiasts ranging from beginners to specialists.

Subjects for the 2000-2001 season include Basic Botany, Aquatic Plants, Mushrooms, Basics of Botanical Illustration, Bryophytes, Medicinal Plants of the World, Poaceae, Carex, California Coastal Dune Ecology and Restoration, Pollination Ecology of Spring Wildflowers, Seaweeds, Compositae (Asteraceae, Daisy Family): Especially Tarweeds, Eriogonum: A Weekend of Wooly Knees, Montane Pteridophytes and Angiosperms of Ecuador, as well as a number of field classes on the flora of various parts of California and one on the Flora of the Northern Siskiyou Mountains.

For more information please call Staci Markos or Betsy Ringrose at 510-643-7008 or e-mail smarkos@socrates.berkeley.edu



When most plants are looking weather beaten and are losing their leaves, the Licorice fern (Polypodium glycyrrhiza) is sending up fresh fronds after summer dormancy.

Three Methods to Measure the Effects of Cattle Grazing on Plant Populations

continued form page 113

Snake River goldenweed (Haplopappus radiatus) is an herbaceous perennial endemic to the rolling hills near the Snake River in eastern Oregon and adjacent Idaho. It occurs on dry, rocky, open soil among sagebrush and bunch grasses. Snake River goldenweed is listed by the Oregon Department of Agriculture as endangered, and as a Species of Concern by the Bureau of Land Management. In 1991 ten plots were established in Baker County, and on five of these fences were erected to exclude cattle. The plots were sampled and mapped to track individual goldenweeds through time to evaluate mortality and growth rates of the population. From 1991 until 2000, the plots were sampled twice during the summer, once early in the summer to determine the number of seedlings and once later in the summer to measure the size and mortality of seedlings and mature individuals. Seedheads were also collected and dissected to determine the number of healthy and insect-damaged seeds. The data from this project have made it possible to observe long-term population trends and to develop computer models of population dynamics both with, and without cattle. Most Snake River goldenweed populations monitored since 1991 have slowly and steadily declined over the last ten years, but this has been the case in both grazed and ungrazed areas. In some years, not surprisingly, non-fenced plants had more grazed stems, but overall there have not been major differences between grazed and ungrazed populations. For example, the populations were dominated by young individuals (seedlings and juveniles), regardless of grazing.

One goal of this study was to determine the effect of cattle grazing on the risk of extinction of Snake River goldenweed. Using the demographic data we collected, goldenweed populations were modeled using a transition matrix modeling approach. Demographic data were put into a data

matrix and a computer program used formulas that slightly changed the matrix values in a random fashion to simulate how a population behaves over time. Modeling of this sort uses probabilities that an individual will reach the next stage of its life cycle (e.g., juvenile to reproductive) taken from field data. After compiling these probabilities for all members of the population the program can estimate the population size at a specific time in the future. As artificial as computer programs and mathematical equations sound with respect to natural populations, this type of modeling has proven to be surprisingly accurate (Brook 2000). The probability of Snake River goldenweed dropping below 25 individuals over the next 25 years was high in some of the plots, although this extinction risk was not significantly different for grazed areas. Three plots had over a 90% chance of dropping below 25 individuals while five other plots had under a 10% chance. These preliminary results suggest that this goldenweed population has a complex interaction with its environment, and that cattle grazing is only one factor affecting its population dynamics. In some years and locations, cattle have obvious negative effects on this species, but in other places and times the effects are not so clear.

My senior thesis at Reed College investigated the affects of cattle grazing on the population genetics of Idaho fescue (Festuca idahoensis), under the supervision of Dr. Keith Karoly. I used Inter Simple Sequence Repeat screening, a PCR based method, to determine genetic variation within a grazed and ungrazed population and differentiation between populations. Idaho fescue was sampled at the Northern Great Basin Range USDA research facility in Harney County, 67 km east of Burns. In 1936 the USDA divided a parcel of range into 13 pastures each with its own 250 x 63m cattle exclosure. Every year since, cattle have grazed at relatively the same density and during the same season, making this a prime site to study the effects of long term grazing. I sampled individual Idaho fescue from inside and outside one exclosure where previous research had shown a physiological difference between grazed and ungrazed Idaho fescue (Doescher 1997). Tillers were removed from the individuals in the winter and brought back to the Reed College greenhouse and grown to produce new tissue. DNA was extracted and visualized on agrose gels. What these genetic methods revealed was that genetic variation, measured as mean heterozygosity, was not the same inside and outside this continued on page 120



Botanists and interns from the Institute for Applied Ecology and NPSO monitoring a field plot inside of a fence. Cattle are excluded from some plots to measure the effects of livestock use on Snake River goldenweed.

Three Methods to Measure the Effects of Cattle Grazing on Plant Populations

continued from page 119

exclosure. I found that genetic variation was higher in the grazed population then in the ungrazed population and that the two populations were significantly differentiated. The life cycle of grasses is strongly reliant on wind for dispersal of seeds and pollen. I suspect that the buildup of shrubs and other forbs in the non-grazed area restricts the local flow of seeds and pollen, which results in lower genetic variation. This result helps managers by showing that cattle grazing at this specific density and in this habitat is not eroding genetic variation in Idaho fescue.

I hope that plant ecologists and conservationists eventually view cattle grazing as one of many tools that may be appropriate to some ecosystems and specific management situations. More research will be needed to determine which ecosystems and species it may benefit. Many different ecological methods are employed in order to understand the risks and benefits associated with cattle grazing. From high-tech methods, such as molecular genetics which attempt to follow alleles through populations and matrix modeling that combines the power of long-term data and computers to simulate natural population trends, to more straightforward studies that measure plant densities over time, all of these techniques attempt to broaden our understanding of how cattle affect the plant populations they eat.

Acknowledgements

I would like to foremost thank NPSO for funding my internship. I also want to thank Tom Kaye, Christina Nelson, and Lauren Mathewson of the Institute for Applied Ecology, Aaron Drew for the use of his lomatium data, and Keith Karoly for advising my thesis and help with editing.

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State Board Meeting Highlights

continued from page 122

Michael Hartman of Eugene has volunteered to be the new designer of NPSO's web site. He and Mike McKeag had some good discussions and the transition will now go forward. Welcome Michael!

Dan Luoma and Veva Stansell will again function as our nominating chairs in the search for new officers and board members for the year 2001. Please contact either of them if you are willing to serve your Society at the state level.

We had a delightful visit from David Atkin, a Eugene attorney specializing in non-profit law. He has helped us revise our By-Laws and assisted us in writing new Field Trip Policies. He reassured us that board members of non-profit groups enjoy wide protection from litigation under the laws and policies of both the state and the federal government.

The new "Field Trip Leader Guidelines" along with a liability waiver were reviewed by the board and accepted. Copies of the new policy and waiver form will be sent to each chapter with the Board's recommendation that they adopt these as their own.

David has also helped us update our State NPSO by-laws to make them

conform with new state non-profit laws. The revised by-laws were read at this meeting and will be discussed again in January. They will then be printed in the *Bulletin* after which our membership will vote to accept or reject them. (Chapters at that time will be urged to think about updating their own by-laws if these are old and were originally based on the older state document.)

A committee consisting of Eric Wold, Bruce Newhouse, Esther McEvoy, Kareen Sturgeon and Wilbur Bluhm have produced "Guidelines on the Use of Native Plants for Gardening." The new policy document was sent to all board members via e-mail and was studied by the board. It will be discussed again at the January meeting. In the meantime, please read it carefully and send your comments to Eric Wold before the January meeting. At that time we will finalize the policy, publish it in the *Bulletin* and add it to NPSO's policy statements.

We have a new NPSO flyer! Over a year in the designing, the new flyer is the work of Dan Luoma, Rhoda Love, Esther McEvoy and Judith Manning. A master copy will be sent to each Chapter President. Chapters are asked to add their local information to the front page and run off as many as you need for events, meetings, and field trips.

Sometime in 2001 NPSO will publish a second occasional paper. Rhoda Love has submitted a manuscript on the life of NW botanist Louis F. Henderson. The board voted that Rhoda's essay will be the second in the Society's occasional paper series which started with the *Atlas of Oregon Carex*. A third occasional paper will also follow on the flora of Mary's Peak. The board will discuss marketing and distribution of occasional papers via e-mail before the January meeting. Watch for this discussion.

The next State Board Meeting will be Saturday January 20 in Salem. Please mark this date and place on your calendar and plan to attend. This will be our very important annual budget meeting and it is hoped that we will have a larger percentage of our governing body present than were able to attend the October meeting.

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

Name		DUES include monthly Bulletin and Kalmiopsis when published.						
Address		Membership is for the calendar year. New memberships enrolled after September 1 include the following year.						
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					Is this a change of address? If so, ple	ease write your old address here:	wish to subscribe, but do not want to have full membership	
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		Jean Davis Memorial Scholarship Fund	\$					
City————	- State Zip+4	Leighton Ho Memorial Field Botany Award Fund	\$					
Please make checks for dues and contributions payable to: NATIVE PLANT SOCIETY OF OREGON		Rare and Endangered Plant Fund	\$					
		Friends of the Oregon Flora Project	¢					
Send completed form and full remits	tance to:	rnends of the Olegon riota rioject	Φ					
Jan Dobak, NPSO Membership Ch		Membership in the Native Plant Society of Oregon is	open to all.					
2584 NW Savier St. Portland, OR 97210-2412		Membership applications, renewals and change of address (include old address) should be sent to the Membership Chair.						
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Highlights of the State Board Meeting October 14 in Eugene Board Works its Way through a Weighty Agenda

by Rhoda Love, Secretary

The NPSO Board met on a mild fall day at Lane Community College in Eugene, Saturday, October 14. Only 10 voting members of our 24-member board were able to be present, and they found themselves faced with a complicated and issue-packed agenda, through which they moved efficiently making some historic decisions for our Society.

Linda Hardison of the Friends of the Oregon Flora Committee imparted good news about fund-raising for the Flora. One grant has been received, two are to be re-submitted and several are in the planning stages. A major matching challenge grant has been received through the OSU Foundation. Please see your October *Oregon Flora* Newsletter for details and try to give generously at the end of the year as each dollar will be matched by an anonymous benefactor.

There was also good news from Linda Vorobik, *Kalmiopsis* Editor. Two issues of our journal are almost finished. Thank you, Linda, we look forward to their arrival. Linda has also finally found an assistant (see p. 114).

Our monthly *Bulletin* is now produced and mailed from Eugene. Tanya Harvey was thanked for re-designing the *Bulletin* and upgrading the art work. She requests more articles from the membership. The bulk mailing also now takes place in Eugene. We owe a big thank-you to Rick Momsen and Charlene Simpson and their committee

for assembling and mailing the newsletter in a timely fashion each month.

Under the heading of Environmental Federation of Oregon (EFO), came the board's first major decision of the meeting. Shane Latimer, EFO representative, reported that EFO is considering joining the national fund-raising group EarthShare. Shane forwarded a good deal of background material and asked NPSO, as an EFO member group, to vote on whether we approved the prospective merger. After a good deal of discussion the board voted that we do not wish to merge with the larger group. We are one of 32 EFO member groups and the results of the vote will be made known after November 8.

continued on page 120