



Bulletin

of the

Native Plant Society of Oregon

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

VOLUME 45, No. 8

OCTOBER 2012

The Effects of Climate Change on Kincaid's Lupine

by Charlotte Trowbridge and Guy Banner, 2012 IAE/NPSO Interns

For more information about research projects at the Institute for Applied Ecology (IAE), visit their conservation research blog at <http://research.appliedeco.org>.

Native plant communities throughout the Pacific Northwest are faced with increasing population pressures as the effects of ongoing climate change are evidenced. Smaller populations have less genetic diversity and a lessened ability to respond and adapt to climatic changes. For many species, the negative impacts of climate change will be experienced in addition to the current stresses of habitat degradation and fragmentation. Although many species have the ability to adapt to new environments, it has been projected that climate change will occur at a faster rate than plant species' adaptation

rates. Due to the difficulty of predicting species' responses to the changing climate, research organizations are now conducting climate manipulation experiments to determine effective recovery and restoration methods.

The ability of Kincaid's lupine (*Lupinus oregonus*), a federally threatened species, to adapt to a changing climate could serve as an indicator of how other strategy species in the region will respond. In cooperation with the US Fish & Wildlife Service (USFWS), the Oregon Department of Fish & Wildlife (ODFW), and the Native Plant Society of Oregon, the Institute for Applied

Ecology (IAE) has designed a common garden climate manipulation experiment to test for genetic adaptation to climate. By collecting seed from individuals throughout the extent of Kincaid's lupine's range, it will be possible to observe whether populations differ in their response to variable climatic conditions. Using plants from a variety of populations enables researchers to

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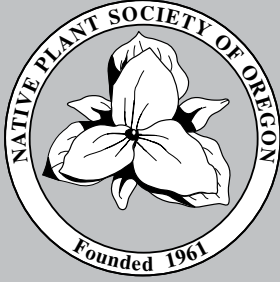


ERIN GRAY

IAE staff (left to right: Charlotte Trowbridge, Denise Giles-Johnson, Lisa VanTieghem and Guy Banner) planting Kincaid's lupine in common garden plots.

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Native Plant Society of Oregon

World Wide Web

<http://www.NPSOregon.org>

E-mail Discussion List

To join, send a message to majordomo@tardigrade.net, with the following in the body of the message: subscribe npsos

General Business Address

P.O. Box 902
Eugene, OR 97440
or correspond directly with Officers and Committee Chairs listed on the inside of the back page.

Membership Inquiries Only

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The submission date is the 10th of each month for the following month's issue except for the Aug/Sept issue which is July 24 and the Dec/Jan issue which is November 24. Send submissions by e-mail to bulletin@NPSOregon.org.

Opinions expressed in this publication are those of the authors of the articles. They do not represent the opinions of the Native Plant Society of Oregon, unless so stated.

Greetings From Your New *Bulletin* Editors

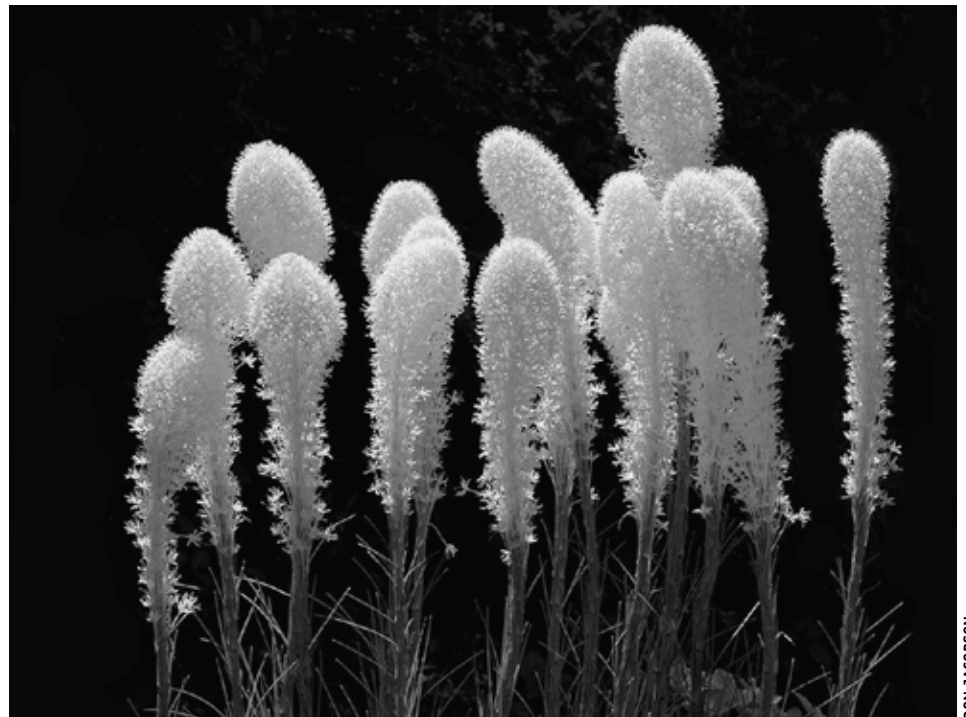
Many thanks to Taya MacLean for her guidance with our first issue and her mentorship over the past years. Thank you, as well, to everyone who submitted content for this issue and was patient and understanding if the process was not as smooth as usual! We don't have big plans to change the *Bulletin*, but we do want to hear from you if there are particular types of articles, notices, etc. that you would like to see more often, less often, or even not at all. Send your comments, corrections, and, as always, submissions to bulletin@NPSOregon.org.



Portland Chapter Fundraiser

Don Jacobson is currently giving 15% of the sale price of any of his photographs at www.donjacobsonphoto.com to the Portland Chapter NPSO. Also included are images taken at the 2011 and 2012 NPSO annual meetings. This offer is good through November 2012 for all NPSO and e-mail discussion list members. For more information contact Don directly at donjphoto@gmail.com.

This year the Portland Chapter sponsored two botany students to attend the Annual Meeting and hope to continue the practice in future years. The students said they loved the experience.



DON JACOBSON

Bear Grass (Xerophyllum tenax) is found in western North America, from British Columbia south to California and east to Wyoming. This evergreen perennial prefers dry sunny hills and open woods. X. tenax is an important part of the fire ecology of regions where it is native. It has rhizomes that can survive ground-clearing fires. Bear Grass does not necessarily flower every year, but when one plant does flower, any nearby plants usually follow suit.

NPSO CALENDAR

State Notes

NPSO Board Meeting. The next NPSO Board meeting will be at the Hood River Library Meeting Room, from 10 am to 2:00 pm on Saturday, October 20. The local chapter will supply snacks but you should bring your own lunch or any items related to special needs.

Blue Mountain

For information on Blue Mountain Chapter call Jerry Baker, 541-566-2244.

Cheahmill

For more information, visit the chapter Web site, www.oregon-nativeplants.com. To be added to the e-mail list for upcoming programs and events, please contact cheahmillchapternpsoc@comcast.net.

October 25, Thursday, 7 - 8:45 pm

Meeting: Reintroducing the endangered golden paintbrush to Oregon's prairies. Tom Kaye, from the Institute for Applied Ecology, will speak on re-establishing populations of golden paintbrush to prairies in the Willamette Valley. This species was last documented in Oregon in 1938, but is now on the rise again, thanks to the efforts of conservationists partnering with government agencies, private landowners, and volunteers. Location: Carnegie Room, McMinnville Public Library, 225 N.W. Adams St. (corner of HWY 99W and SW 2nd St). Information: Bonnie Laux, 503-925-4960 or bonlaux@gmail.com.

Corvallis

For questions, information on upcoming events, or to be on the Corvallis chapter e-mail list, contact Alexis Brickner and Kevin Weitmier at co_president@NPSOregon.org or 208-921-0827.

October 8, Monday, 7:30 pm

Talk: Bee All You Can Bee! Bruce Newhouse from the Emerald Chapter will discuss how loss of habitat and native plant diversity has affected honeybees

as well as native bees and other pollinators. Learn about pollination and its importance, pollination biology, some of our fascinating pollinators, and how you can "bee" helpful in keeping our local pollinators thriving. Location: Avery House in Avery Park, Corvallis. Park to the south of the Avery House in the park's parking lot. For more information contact Kevin at 208-921-0827 or Alexis at 860-878-2049.

October 21, Sunday, 1-5:00 pm

Avery House Work Party. Come help with a fall clean up at the native plant garden around the Avery House in

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS

Field trips take place rain or shine, so proper dress and footwear are essential. **BRING WATER AND LUNCH.** Trips may be strenuous and/or hazardous. Participation is at your own risk. Be prepared to sign a release form indicating this. For a sample copy check out the NPSO website. Please contact the trip leader or chapter representative about difficulty, distance, and terrain to be expected on field trips. Dogs are not allowed. 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. You must pre-register for all events. National Forests require a Northwest Forest Pass for some 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.

Corvallis. Bring gloves, a trowel, bucket, clippers and dress for the weather. We will be weeding, pruning and getting plants together for the spring garden sale. Contact Esther McEvoy for more information at 541-753-0893.

November 3, Saturday, 8 am

Field Trip: Mushroom Hike. Dan Luoma will lead mushroom hunters on a hike—itinerary to be determined by the weather and fungus availability—to identify and gather the succulent fungi. This will be an all-day outing, so please bring rain gear, stout boots, a basket, waxed paper or bags, and lunch, water, etc. Meet at the OSU parking lot southwest of The Beanery, 26th and Monroe a bit before 8 am. For more information, call Dan at 541-752-8860.

November 12, 7:30 pm

Talk: Tips and Tricks from the Oregon Flora Project Website. Linda Hardison, Oregon Flora Project (OFP) Director, will present the current activities at the OFP and demonstrate how its web tools and resources can inform your plant data needs. Also, get a sneak peek at the significant updates coming to the website next year! Location: Avery House in Avery Park, Corvallis. Park to the south of the Avery House in the park's parking lot. For more information contact Kevin at 208-921-0827 or Alexis at 860-878-2049.

Emerald

Visit the Emerald Chapter Web site at <http://emerald.npsoregon.org> to learn more about the latest chapter events, plant lists and botanical information about Lane County plants and the people who love them.

October 15, Monday, 7:30 pm and 9:30 pm

Meeting: Owyhee Canyonlands.

Chris Hansen of the Oregon Natural Desert Association (ONDA) speaks on Oregon's Owyhee Canyonlands—the largest stretch of unprotected desert wilderness left in the United States. ONDA has been working to

permanently protect the Owyhee, and we'll gather to see some amazing images of this Wild place and share stories about Wild and Scenic River trips, sage grouse counts, and inland redband trout. Then we'll talk about how to fill the Oregon desert wilderness gap. Location: EWEB Training Room, 500 E. 4th Avenue, Eugene. At 9:30 pm, Chris will continue his presentation in a more informal manner at COZMIC at 199 W. 8th in Eugene. Information: 541-345-5531.

November 19, Monday, 7:30 pm

Meeting: Little Shops of Horror: Carnivorous Plants of Oregon. Charlene Simpson presents a slide show featuring the lures and traps of flesh-eating plants. Starring the Cobra Lily and featuring sundews, bladderworts and butterworts in Oregon's bogs and fens. Location: EWEB Training Room, 500 E. 4th Avenue, Eugene. Information: 541-349-9999

Klamath Basin

For information on the Klamath Basin Chapter, contact Sarah Malaby at 541-884-5703 or smalaby@cs.com.

Mid-Columbia

For information on the Mid-Columbia Chapter, contact Sara Wu at wusara96@yahoo.com.

October 18, Thursday, 7:00 p.m.

Meeting: Speakers: Jan and Dave Dobak, members of the Portland Chapter, NPSO Fellows for 2012, inveterate hike leaders and botanical travelers. The Dobaks will share their photos and botanical experiences in Nevada, particularly in the Ruby Mountains and Great Basin National Park. Boardroom, Building 1, Columbia Gorge Community College, The Dalles.

November 15, Thursday, 7:00 p.m.

Meeting: Speaker: Linda Hardison, Dept of Botany and Plant Pathology at Oregon State University, Corvallis. Hardison is Director of the Oregon Flora Project, which provides access to comprehensive information about the vascular plants of Oregon via the

Oregon Plant Atlas, the Rare Plant Guide, the Vascular Plant checklist, and the Oregon Flora. Hardison will introduce these resources and share the latest news of their development. Boardroom, Building 1, Columbia Gorge Community College, The Dalles.

Portland

If you would like to receive the chapter's semi-official e-mail newsletter, The Calochortus, e-mail Don Jacobson at donj-photo@gmail.com.

Facebook: Take a look at our Facebook page. Native Plant Society of Oregon-Portland-Chapter. It will have the most up-to-date information on hike and other events as well as great plant pictures.

October 6, Saturday, 8:30 am

Field Trip: *Abies* ("True" Firs) Hike. A little known botanical quirk creates a unique learning opportunity near Portland. All the species of "true" fir (*Abies*) in the Northwest grow around Government Camp, on the southwest slope of Mt. Hood. Come learn about this important genus of conifers, how to distinguish the various species, and how to tell them apart from other genera of trees. Leave at 8:30 am, from near Gateway MAX station, NW corner of NE Pacific Street and NE 99th Avenue. Or meet at Government Camp at 10:00 am. Round-trip from downtown Portland, about 120 miles. Contact Rick Shory at rickshory@gmail.com or 503-253-8100 to sign up for the hike and for the exact location.

October 10, Wednesday, 9:30 AM

Mushroom Hike. Melanie Bjorge, a mushroom enthusiast, will lead this mushroom appreciation field trip. No permit will be required as we will not be collecting. Trip is limited to 12 participants. We will be leaving from the Gateway MAX area at 9:30 AM and returning around 4:00 PM. To sign up for the hike or for more information, contact Melanie at 503-697-3748 or mbjorge2@gmail.com.

October 11, Thursday, 7 pm

Program meeting: Conifers of the

Pacific Northwest. Martin Nicholson, curator of the Hoyt Arboretum in Portland, will talk about conifers of the Pacific Northwest. Metro building at 600 NE Grand Avenue, Portland, Oregon. Enter the building at the south end of the upper plaza on Irving St, (not the door on 600 NE Grand Ave). Informal meeting starts at 7 pm. Formal meeting begins at 7:15 p.m. Contact: Angie Moore at mlm@teleport.com or 503-292-2093.

November 8, Thursday

Meeting: Lichens of the Pacific Northwest and the Effect of Climate. Linda Geiser of the USFS will use studies done at high elevations in OR and WA to present lichens as indicators of climate change. She will weave together local natural history, past climate change, and predictions for the future, and connect this to our daily lives and the need to reduce fossil fuel use. Metro building, 600 NE Grand Avenue, Portland. Enter the building at the south end of the upper plaza on Irving St, (not the door on 600 NE Grand Ave). Informal meeting starts at 7 pm. Formal meeting begins at 7:15 p.m. Contact: Roger Brewer at rogerbrewer@comcast.net or 503-789-5027.

Siskiyou

To join the Siskiyou Chapter email list: Send an email, from the address at which you want to receive announcements, to announce-join@siskiyou.npsoregon.org. No subject or message is required. You will get a confirmation email. If you would like to volunteer to lead a hike in 2012, make a suggestion, or provide feedback regarding the field trip program please contact Sasha Joachims at: sasharain71@gmail.com.

October 18, Thursday, 7:15 pm

Program: TBA. Southern Oregon University, Science Bldg., RM 171. Refreshments at 7:15 pm, meeting and program at 7:30. Contact Kristi: 541-941-3744.

October 28, Sunday, 10 am

Hike to McDonald Basin. Join Wayne Rolle on this cross-country hike to McDonald Basin via the Siskiyou Crest and McDonald Peak. As always on an

NPSO excursion, the emphasis is on the flora. There will be some interesting grasslands and hillslope wetlands along the way. Less than 4 miles, roundtrip. Meet 10:00 am behind the Oil Stop on Ashland St, about 1/4 mi west of I-5, exit 14. For more information call Wayne at 541-482-0093.

Umpqua Valley

Visit www.umpquavalley.npsoregon.org for more information on chapter activities.

Willamette Valley

For program information, contact John Savage at 503-399-8615 or Alexandra Ninneman at 503-391-4145.

William Cusick

Visit our Web site at <http://williamcusick.npsoregon.org> or contact Laurie Allen at 541-805-0499 for updates and general information.

“A man has made at least a start on discovering the meaning of human life when he plants shade trees under which he knows full well he will never sit.”

Elton Trueblood
(1900-1994)



OTHER EVENTS

Siskiyou Field Institute

November 3rd, Saturday

Edible Mushrooms of Southern Oregon and Northern California. Search the woods and learn how to safely identify and collect the edible mushrooms of southern Oregon. Discover key characteristics for identifying many of the following: morels, boletes, corals, oysters, chanterelles and matsutakes. Poisonous mushrooms known to occur in the area will also be reviewed. Cost \$50, advance registration required. Contact: (541) 597-8530, www.thesfi.org

November 9th - 11th, Fri - Sun

Mushrooms with David Lebo. Learn about the biology, ecology, and field identification of mushrooms in this perennial favorite SFI class. On Friday, we'll prowl the Illinois Valley for fungi. On Saturday, we'll drive the scenic Smith River Gorge and scout for mushrooms on the Six Rivers National Forest

and along the Oregon coast. Sunday, we'll continue 'shrooming along the northern California coast. Cost \$140, advance registration required. Contact: (541) 597-8530, www.thesfi.org

Willamette Valley Hardy Plant Group

October 9, Tuesday, 7 p.m.

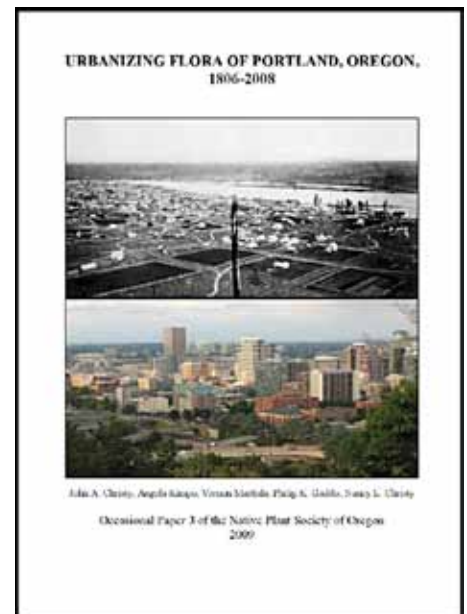
Presentation: Carolyn Colb of Wind Dancer Garden Nursery. Carolyn will bring live grasses to display their merits. Fall is the best time to see ornamental grasses in the garden, and Carolyn is one of the best advocates of grasses. Doors open at 6:30 for book sales and viewing botanical samples. Admission is \$5 for non-members and free for members. Campbell Community Center, 155 High St., Eugene, OR. For more information, visit www.thehardyplantgroup.org or call 541-344-0896.

Now Available: NPSO Occasional Paper 3

Urbanizing Flora of Portland, Oregon, 1806-2008

NPSO Occasional Paper 3: 1-315.
by John A. Christy, Angela Kimpo, Vernon Marttala, Philip K. Gaddis, and Nancy L. Christy (2009)

This compilation of the vascular plants of the Portland-Vancouver area analyzes changes in the region's vegetation since 1806. A total of 1,556 taxa in 125 families are represented. Based on herbarium specimens, publications, and unpublished manuscripts, it tracks the changing fortunes of native and exotic species shaped by an expanding urban environment. It includes a history of botany in Portland, a gazetteer of historical and modern place names, botanical miscellanea from 19th and early 20th century Portland, and lists of rare species for use by planners and land managers.



Price: \$15 postpaid, checks payable to Native Plant Society of Oregon.
Orders: Prepaid only
Contact: John Christy
7050 SW Canyon Crest Drive
Portland, OR 97225-3623
john.christy@oregonstate.edu
Please remember to include your mailing address and telephone number.

Effects of Climate Change, cont. from page 1
examine interactions between genotypes and microclimate response.

Kincaid's lupine is a perennial forb in the legume family (Fabaceae) that is native to prairies and oak savannas in the Pacific Northwest ecoregion.



ERIN GRAY

Lupinus oregonus seedlings in the greenhouse.

It has many unbranched stems, and basal leaves that are persistent until after flowering. It can be seen flowering between April and June. Both the USFWS and the Oregon Department of Agriculture (ODA) list it as a threatened species. Protection of this species is complicated by the fact that over 90% of individuals are located on private land. Kincaid's lupine plays a vital ecological role as the primary larval host plant to an endangered species, Fender's blue butterfly (*Icaricia icarioides fenderi*). Fender's blue butterfly is endemic to the Willamette Valley's native prairies, but over 99% of its native habitat has been converted for agricultural purposes and urban development. Habitat loss, paired with the negative effects of invasive species on Kincaid's lupine survival, has created challenges for Fender's blue butterfly recovery.

Temperatures throughout the Pacific Northwest are predicted to increase by 1-2° C in the next 30 years, with an additional 3-4° C increase by 2080. Effects of this change will include reduced precipitation during the growing season, higher winds and the

increased capability for spread of invasive species. Current restoration efforts for Kincaid's lupine have focused on its historic habitat, but these habitats may become unsuitable as temperatures increase. Results from the common garden experiment will inform how projected climate changes will affect establishment and survival of introduced populations. With this knowledge, restoration specialists can mitigate for climate-driven shifts within a geographic range by using appropriate seed sources.

Seed was collected from seven populations within Kincaid's lupine's range, with the southernmost sites located in Douglas County and the northernmost located in Yamhill County. In 2013, seed from an 8th population in Washington State will be incorporated into the garden. Seed was scarified and put in cold stratification for one month to induce germination, and was then grown out in greenhouses. Kincaid's lupine can be a challenge to propagate in the greenhouse because it requires an inoculum of rhizobium bacteria to effectively establish and fix nitrogen. Our staff was successful in producing an abundant crop of healthy plants for initial outplanting, as well as an additional crop to provide replacements for mortality in the early stages of the experiment.

To reproduce climatic variation in

the experiment, the common garden was established at the OSU Hyslop Farm, near Corvallis. Thirty plots were arranged in a grid consisting of 10 replicates of three treatment types: ambient, cooling, and warming. The ambient plots were left open to the surrounding environment. Both cooling and warming plots were made of 10'x10'x3' PVC frames; the cooling plots were covered with highly permeable shade cloth and the warming plots were equipped with clear plastic sheeting with holes to allow precipitation to pass through. These plots were created and maintained through the combined efforts of IAE staff and numerous volunteers. Each plot was planted with at least 4 individuals from each of the 8 populations. During the installation phase, volunteers and staff weeded and watered the plots to ensure establishment and survival of seedlings. Each of the plots was equipped with a rain gauge to measure precipitation and data loggers that collect air temperature, relative humidity, and soil temperature at regular intervals. IAE staff and volunteers monitor each plant by counting the number of leaves and measuring the foliar cover, along with recording mortality of any plants during the study. Results from this study will provide much-needed guidance for appropriate genotypes for population augmentation and introduction for



ERIN GRAY

Warming and cooling structures in common garden at OSU Research Farm.

Kincaid's lupine, and thus aid in the conservation of Fender's blue butterfly habitat.

Using common garden experiments to identify and test genetic variation and climatic adaptation in seed sources for ecological restoration is a powerful tool for informing management decisions. Conclusions drawn from this common garden climate manipulation experiment can potentially be applied to other sensitive species and priority habitats throughout the ecoregion.



New Membership Chair

Please welcome Matt Morales, who has volunteered to replace Clayton Gautier as the NPSO Membership Chair. And a big Thank You to Clayton for all his work! Membership dues and inquiries should now be sent to:

Native Plant Society of Oregon
P.O. Box 80714
Portland, OR 97280

Welcome New NPSO Members

NPSO would like to extend a slightly belated welcome to the following new members who have joined over the course of the past year:

Cheahmill

Dee Goldman
Sharon Rose

Corvallis

OSU-Hatfield Marine Science Center
Maureen Beezhold
Laura E. Benton
Rosalie Bienek
Laura Brophy
Jennifer Combs
Erin Gray
Matthew Gray
Christopher Janousek
Susan Syed
Ellen Tappan

Emerald

Julie Aukstkalnis
Sarah Brown
Lynn Cantrell
Joseph Davis
Karin Edla
Jody Fairchild
Cassandra Jackson
Rick & Chris Johnson
Marianna Monaco
Jared Pruch
Philip Richardson
Ward Ricker
Patrick Selman
Lillian Shoupe
Genealle Visagorskis
Herb Weaver
Karen L. Yoerger

Mid-Columbia

C. Theo Anderson

Don Hardin
Beverly Linde
Ralph T. Rogers

Portland

Birds & Bees Nursery
Shannah Anderson
Kathryn Axelrod
Amy Balint
Priscilla Butler
Jim De Staebler
John Dolese
Carol Edwards
Miranda Geller
Corbin Gentzler
Matthew Hammond
Marcy Krass
Sherry A. Larson
Bob Lebens
Lois Leonard
Jennifer Lovell
Kirk & Amy Markovitz
Julie McWhorter
Matt Morales
Marianne & Tom Nelson
Daniel Papkin
Delores Porch
Elizabeth Price
Jeff Ramsey
Sharon Schlentner
Susan Schradle
Ellen Simmons
Caroline Skinner
Eileen Stark
Goldie Wasncke
Jim Weber
Jan Weisgerber

Rose R. White
Jennifer C. Wilson

Siskiyou

Stella Copeland
Christine P. Gardiner
Pete Gonzalves
Nancy Hemstreet
Catherine Kizer
Judith Lang
Judith Maxwell
Kathy Mechling
Diane Meyer
Jill Pade
Linda S. Park
Jarid Simons
Jeffrey Tufts
Linda Zercher

Umpqua Valley

Matthew G. Hunter

Willamette Valley

Mark Akimoff
Dann Barnard
Mark Leppin

William Cusick

Emelie McNett
Sabine Mellmann-Brown
Laura Osinga
Danae Yurgel

Members at Large

Lyle Anderson
James Duemmel
Michael J. Fitzgerald
Marie Hitchman
Michael Keown
Brian Ort
Dan Post

The Flower Song

Nancy and Mike Fahey write: *After reading the last NPSO Bulletin, we were reminded of this song. It was taught to us by Herm Fitz at an Annual Meeting in the 1980's.*

(Sing to the tune: She'll Be Comin' Round the Mountain)

Question:

What are the parts of a flower?

Answer:

There are four important sections to a flower,
There are four important sections to a flower,
Oh, the calyx and corolla, the stamen and the pistil,
There are four important sections to a flower.

Oh, the calyx is the section of the flower,
It's the outer leaf protection of the flower,
Yes, the calyx is the section, whose function is protection,
Oh, the calyx gives protection to the flower.

The corolla is the blossom of the flower,
It provides the scent and color to the flower,
And the color and the scent do exactly as they're meant to:
They attract the birds and insects to the flower.

There's a pollen bearing organ in a flower,
There's a pollen bearing organ in a flower,
And it's time we were explainin' the purpose of the stamen,
It's the pollen bearing organ of the flower.

Now the pistil has the ovule for the seed,
And the stamen has the pollen it will need,
The calyx and corolla, the stamen and the pistil,
Every section has a function yes indeed.



Bolander's lily (Lilium bolanderi) flowers in summer, is primarily pollinated by Allen's and rufous hummingbirds and associates with bear-grass.

NPSO Items for Sale

Booklets on Gardening with Native Plants. Emerald Chapter's three booklets about native plants of the southern Willamette Valley are "Native Herbaceous Plants in Our Gardens," "Native Shrubs in Our Gardens," and "Native Trees in Our Gardens." \$9.35/set of three, mail order. Individual booklets sold from the NGAP booth at Down-To-Earth, or by check made out to "Emerald Chapter NPSO" with "NGAP Gardening Guides" in the memo line to P.O. Box 902, Eugene OR 97440-0902. Also see online in PDF format at www.emeraldnpso.org Click on "Gardening with Native Plants."

Field Guide to Shrubs of Southwest Oregon. An 80-page, pocket-sized field guide identifies 56 of the most frequently-encountered shrubs in SW Oregon, and describes each species in detail with words and photos, including habitat, leaves, twigs, fruit, and flowers. Dichotomous keys, illustrations of common plant parts and glossary included. Janet Walker, NPSO Siskiyou chapter member, and Max Bennet, Forestry Agent with Jackson/Josephine Counties. \$7/copy; checks payable to "OSU Extension Service." Mail to Shrub Guide, Jackson County Extension, 569 Hanley Rd., Central Point, OR 97502.

Poseidon's Necklace. Don Begnoche, Siskiyou chapter, has issued an Oregon field guide covering the coastal section, mile by mile, from Astoria to Brookings. Genesis of the coastal landscape and flora found on dunes, headlands and montane slopes; over 500 landscape and floral photographs as well as geologic maps and illustrations. PDF format on a CD. \$19.95 + \$2.50 s/h. Mail checks to Don Begnoche, 439 Herbert St., Ashland, OR 97520

NATIVE PLANT SOCIETY OF OREGON MEMBERSHIP FORM

Name _____

Address _____

City _____ State _____ Zip+4 _____

Phone _____ E-Mail _____

Chapter (if known) _____

Is this a change of address? If so, please write your old address here:

Address _____

City _____ State _____ Zip+4 _____

Please make checks for dues and contributions payable to:

NATIVE PLANT SOCIETY OF OREGON

Send completed form and full remittance to:

Native Plant Society of Oregon

P.O. Box 80714

Portland, OR 97280

DUES include monthly *Bulletin* and *Kalmiopsis* when published.

Membership is for the calendar year. New memberships enrolled after July 1 include the following year.

New Renewal

Student – \$12 Regular – \$25 Family – \$35

Sustaining – \$60 Patron – \$125 Life Membership – \$500

Subscription Only (*Bulletin* and *Kalmiopsis*) – \$25 *Only for those who wish to subscribe, but do not want to have full membership status.*

CONTRIBUTIONS to NPSO are tax deductible.

Jean Davis Memorial Scholarship Fund \$ _____

Leighton Ho Memorial Field Botany Award Fund \$ _____

Augusta Rockefeller Memorial Scholarship \$ _____

Rare and Endangered Plant Fund \$ _____

Friends of the Oregon Flora Project \$ _____

Membership in the Native Plant Society of Oregon is open to all.

Membership applications, renewals and changes of address (include old address) should be sent to the Membership Chair. Changes of address may also be e-mailed to Membership@NPSOregon.org.

OFFICERS & COMMITTEE CHAIRS

STATE OFFICERS

DIRECTORS (to 6/2012)..... Esther McEvoy, Kareen B. Sturgeon, Rhoda Love (to 6/2013) Linda Hardison, Frances Stilwell, Bruce Waugh
PRESIDENT Judi Sanders president@NPSOregon.org; 541-738-6674
IMMEDIATE PAST PRESIDENT..... David Lebo past_president@NPSOregon.org; 503-622-2008
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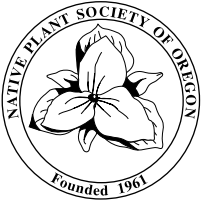
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