# Bulletin

of the

# Native Plant Society of Oregon

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

VOLUME 48, No. 8

OCTOBER 2015

# Adaptive Restoration in Oregon's Coastal Prairies, Clatsop Plains California. Today. only about 1% of its and will continue to be an import

by Sara Newman, Cecilia Welch, and Connor Whitaker, 2015 IAE/NPSO Interns

Adaptive management is a framework for making decisions based on the assessed impacts of treatments, the results of which are formed into a flexible management plan with modifications as the plan progresses. Adaptive habitat restoration requires novel approaches and all-encompassing solutions to improve the integrity of ecosystems and their surrounding environments. Coastal prairie ecosystems are a prime target for restoration since they have lost the majority of their original range over the past 150 years. The Clatsop Plains study is a collaborative effort testing adaptive management methods for restoring coastal prairie habitat, conducted by the Institute for Applied Ecology (IAE), the North Coast Land Conservancy (NCLC), the National Park Service (NPS) and the U.S. Fish & Wildlife Service (USFWS). Dune ecosystems and coastal prairies historically extended from northwest Washington to northern

California. Today, only about 1% of its historic range remains and much of the coexisting flora and fauna have consequently declined.

Several factors have contributed to the reduction of coastal prairie habitats including increased anthropogenic influence, the introduction of exotic species, and climate change. Coastal prairie communities have experienced rapid habitat loss due to conversion to housing developments and areas for recreational use. Agriculture has introduced many exotic species to coastal prairies such as tall fescue (Schedonorus arundinaceus), sweet vernal grass (Anthoxanthum odoratum), and orchard grass (Dactylis glomerata). Scotch broom (Cytisus scoparius) was initially brought to the western U.S. as a decorative garden shrub and is now a widespread introduced species in coastal prairies, outcompeting native plants. While human impacts may be detrimental to the survival of coastal prairie communities, human influence can be incorporated into the conservation of surrounding ecosystems.

A rapidly changing climate is another obstacle coastal prairies face

and will continue to be an important consideration for future restoration. This ecosystem relies on a maritime climate and increased unpredictability of precipitation and temperature cycles make it difficult for sensitive plant communities to adjust. Shoreline erosion and coastal flooding from rising sea levels may also play a role in the future status of coastal prairies. The Fifth Assessment Report from the Intergovernmental Panel on Climate Change suggests that the global mean sea level could rise by between approximately 0.5 to 1 meters (IPCC 2013), which could have profound implications for coastal ecosystems.

A major consequence of habitat fragmentation is loss of regional biodiversity. Oregon coastal prairie sub-habitats include salt-spray meadows and stabilized dunes; both are critically important to the endangered continued on page 8

#### In This Issue



Figure 1. Oregon silverspot butterfly.



## Native Plant Society of Oregon

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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.

## Scholarship Awards Given to Outstanding Oregon Students

by Thomas Jenkins, Willamette Valley Chapter Scholarship Chairman

The Willamette Valley Chapter is pleased to announce the scholarship award winners for 2015. Each will receive \$1,000 toward their fall term tuition.

Sebastian Mortimer has been chosen to receive the Augusta Rockafellar Memorial Scholarship. Sebastian is a graduate student at Willamette University. He has been working on NSF-funded research on phenological monitoring of *Camassia* and its associated pollinators. He co-authored a presentation given at the Botany Conference in Edmonton, Canada. Sebastian is pursuing a Ph.D., hoping to contribute to research that weds evolutionary biology, systematics and geography, with an eye toward both conservation and agriculture. He received very strong recommendations ("terrific, talented, highly motivated, and amazing") from his mentors and we are happy to help this outstanding student in achieving his academic goals.

Kevin Mason has been chosen to receive the Jean Davis Memorial Scholarship. Kevin is a Botany major at Oregon State University, with a focus on ecology, evolution, and conservation. He is working for the *Carex* Working Group on two projects: one dealing with *Castilleja* for the Flora of North America and the other involving preparation for a grass identification workshop in northern California. During the school year, he also works at the OSU Herbarium and is considered a leader in the OSU Organic Growers Club. His other interests include restoration of native habitat, lichenology, and ethnobotany. He was described by his mentors as "enthusiastic, a first-rate student, and a model intern." Kevin is an outstanding individual who is very deserving of this award.

Congratulations to both of our winners! Also, "Thank you very much!" to those who have donated money in support of these scholarships.



#### **Farewells**

Oregon lost two native plant advocates unexpectedly in August.

Jerry Igo passed away in his sleep on August 28. Jerry held many positions at NPSO, from Mid-Columbia Chapter President, to Director-at-large, to Education Chair. He became an NPSO Fellow in 2002. Outside of NPSO, he taught botany classes, surveyed roadsides for rare plants, and was a regional coordinator for the Oregon Plant Atlas. Jerry is remembered as a "great weed warrior" and an "enthusiastic, knowledgeable and humorous" trip leader. Read more about his life in *Kalmiopsis*, Volume 9, available online at npsoregon.org/kalmiopsis/kalmiopsis\_v09.pdf.

Wendell Wood died August 11 after collapsing on a hike in the Redwoods. A veteran of Oregon Wild, he spent over 30 years working to protect Oregon's environment. His recent native plant activities included supporting the designation of a Veva Stansell Botanical Area and updating a native plant list for the Rough and Ready creek watershed. The list, along with his overview of this area, is available online at http://www.oregonwild.org/about/blog/oregons-red-rock-rainforest-documenting-biodiversity-kalmiopsis. For more information about Wendell's life, visit wendellwood.org.

### **NPSO CALENDAR**

#### **State Notes**

State Board Meeting
October 17 Saturday 10 an

October 17, Saturday, 10 am-2 pm

The next meeting of the NPSO State Board will be hosted by the High Desert Chapter. Location: Environmental Center, 16 NW Kansas Ave., downtown Bend, 541-385-6908.

#### 2016 Annual Meeting July 15-17, Friday-Sunday

The Emerald Chapter will host the 2016 NPSO Annual Meeting on a private forested 46 acre property near the majestic McKenzie River, a fifty-minute drive from Eugene. Location: McKenzie River Conference Center, Rainbow, Oregon.

#### **Blue Mountain**

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

#### Cheahmill

For questions, or to be added to the Cheahmill Chapter's email list for reminders of upcoming programs and events, please contact the Cheahmill Chapter President at ch\_president@NPSOregon.org.

#### October 22, Thursday, 7 pm

Program: A Tale of Two Lilies. Jordan Brown will be speaking about native plant conservation in the state of Oregon, specifically showcasing two spectacular endangered lilies: the western lily and Gentner's fritillary. The ongoing work with these two species exemplifies how our efforts can help conserve and recover imperiled plants as we gain more knowledge about them and the threats they face. Doors open at 6:45 pm for socializing, Meeting/Program starts at 7:00. Location: Carnegie Room, McMinnville Public Library, 225 NW Adams St. (corner of Hwy 99W and SW 2nd St.). Parking lot

entrances on Adams and 2nd Streets. For more information, contact Lisa Blackburn, 503-538-3976 or blackburnlisag@gmail.com.

November 19, Thursday, 7 pm

**Program: Oregon Season Trackers.** Amy Grotta with Oregon State University Extension Service will discuss a new OSU program. Oregon Season Tracker is a localized application of the

# 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. A sample waiver form is available at http://npsoregon.org/ documents/NPSO\_waiver.pdf. 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 preregister 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. A trip leader checklist and sample waiver form are available at: http://npsoregon.org/calendar.html

citizen scientist concept, focused on seasonal rainfall and plant monitoring. Oregon Season Tracker participates in the National Phenology Network, in which volunteers monitor selected native plants over the growing season. Doors open at 6:45 pm for socializing, Meeting/Program starts at 7:00. Location: Carnegie Room, McMinnville Public Library, 225 NW Adams St. (corner of Hwy 99W and SW 2nd St.). Parking lot entrances on Adams and 2nd Streets. For more information, contact Lisa Blackburn, 503-538-3976 or blackburnlisag@gmail.com.

#### **Corvallis**

For questions, information on upcoming events, or to be on the Corvallis chapter e-mail list, contact Jordan Brown at co\_president@NPSOregon.org or 253-820-3934.

October 12, Monday, 7:30 pm

Talk: Acorns, Buntings and Cabernet — Grassland Birds in our Changing Rural Landscapes. How changes in land use, farm crops, farming methods, and residential landscaping have affected grassland birds in the Willamette Valley. Our speaker, Joel Geier, is a hydrogeologist who works seasonally on grassland bird research. His enduring passion, ever since encountering a patch of virgin prairie on the family farm, has been grassland ecology. Location: Avery House in Avery Park. For information, contact Jordan Brown at 253-820-3934 or brownj@science.oregonstate.edu.

#### **Emerald**

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

Meeting Location: Conference Room at Lane County Mental Health, 2411 Martin Luther King Blvd. Turn off MLK Blvd. onto Scout Access Rd. across from Autzen and take the first left into the parking lot. The meeting room is on the right side as you face the building.

#### October 15, Thursday, 7 pm

**Program: The Stunning Flowers and Landscapes of South Africa.** Bitty Roy and Michael Wherley will show us why South Africa is where plant people go on pilgrimage. There are expanses of desert blooms, savannah and grasslands, odd forests, and the fynbos, a Mediterranean shrubland with about 10,000 species, a large fraction of which are endemic. We will illustrate the flowers within the context of their landscapes, as well as some of their pollinators and herbivores. Location: Conference Room at Lane County Mental Health, see above for directions. For more information call 541-521-3964.

#### November 19, Thursday, 7 pm

Program: Conserving Pollination Services in Tropical Forest Landscapes. Pollinators and the services they provide are in decline worldwide, but the causes remain cryptic, particularly in tropical forest. Dr. Matthew Betts, associate professor of landscape ecology at Oregon State University, will summarize eight years of research designed to understand pollination dynamics in the montane tropical forests of Costa Rica. Topics include limitations to hummingbird movement, pollinator recognition by *Heliconia tortuosa*, and implications for coevolution and conservation. Location: Conference Room at Lane County Mental Health, see above for directions. For more information call Steven at 541-521-3964 or see http://emerald. npsoregon.org.

## **Filipendula**

This is a newly formed chapter for the northern Oregon coast area. For more information, visit our Facebook page: NPSO-Filipendula Chapter, or contact Field Trip Chair Carla Cole, colecarla@yahoo.com.

### **High Desert**

For information, visit the High Desert Chapter website: www.highdesertnpsoregon.org and Facebook page: Native Plant Society of Oregon: High Desert Chapter, or email highdesertnpso@gmail.com.

#### Klamath Basin

For information on the Klamath Basin Chapter, visit http://klamathbasinnps.com or contact the chapter president, Kim Elliott, kb\_president@NPSOregon.org.

# October 1, Thursday, 6:30-7:30 pm

Meeting/Program: First Chapter Meeting of the Fall! Help us elect new officers and decide on program topics for the upcoming academic year. Location: Oregon Institute of Technology campus, DOW Center for Health Professions Room 252.

# November 5, Thursday, 6:30-8 pm

Meeting/Program: Speaker and Topic TBA. Location: Oregon Institute of Technology campus, DOW Center for Health Professions Room 252.

#### Mid-Columbia

For information on the Mid-Columbia Chapter, contact Sara Wu at mc\_president@NPSOregon.org.

#### October 23, Friday, 7 pm

Program: How Soils Influence Our **Native Plants.** This event is on a Friday and does not meet at the usual location. James Cassidy will take us on a virtual tour of nearby Columbia Gorge sites to see what connections can be made between native plants and the soil they grow in. Cassidy is a soil scientist in the OSU Department of Horticulture. He often compares teaching to performing music. Location: Rockford Grange, 4250 Barrett Rd., Hood River. For information, contact Billy Don Robinson at 503-515-1708 or bdmeme@ gmail.com. Directions from Hwy 84: Take the West Hood River exit #62 and turn south (away from the river). Immediately turn right on Country Club Rd. Drive 3 miles to the "T" intersection with Barrett Rd. and turn left. The Grange is on your left in 0.2 miles, a large white building with blue trim next to the Westside Firehouse.

#### **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.

Meeting location: The Portland Chapter meets the second Thursday of most months in the Metro Building at 600 NE Grand Ave., Portland. Enter from NE Irving St. on the north side of the building and walk across the upper plaza to the entrance (not the door on 600 NE Grand Ave.). An attendant will let you in and direct you to the meeting room upstairs. Meetings and programs begin at 7 pm.

# October 3, Saturday, 9 am Field Trip: *Abies* ("True" Firs)

Hike. Leader Rick Shory has worked throughout the West as a Forest Service botanist. 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 tell them apart from other genera of trees. Location: Leave at 9:00 am from NW corner of NE Pacific St. and NE 99th Ave., near Gateway MAX station. Or meet near Government Camp at 10:30 am. Round-trip from downtown Portland, about 140 miles. Contact Rick Shory, rickshory@gmail.com or 503-253-8100 to sign up and for location details.

#### October 8, Thursday, 7 pm

**Program: Volume 1 of the** *Flora of Oregon Is Here!* The first volume of the three-volume *Flora of Oregon* is now available, reflecting the work of dedicated staff and hundreds of volunteers over twenty years. Hear the stories of how Volume 1 developed, explore applications of the information from the introductory chapters, and discover how you can join in the exciting and

meaningful work of the Oregon Flora Project with Director Linda Hardison. Meeting location: Metro Building, Portland, see above for details. Contact: Mary at alphiesmith@comcast.net or 503-288-4340.

November 12, Thursday, 7 pm **Program: Portland Area Meadows** and Pollinators. Can we all do more to bring back Oregon's natural habitats? Join Mark Griswold Wilson, restoration ecologist and landscape designer, as he discusses the cultural history of the Willamette Valley's prairie savannah landscape and a potential urban analog - the native plant meadow garden. He will present the idea of planting urban meadows as turf alternatives for: conserving water, improving water quality, providing habitat for pollinators, and introducing an interested gardening public to our native prairie plants. He will also identify some commonly seen urban bees and recommend native meadow plant communities to use in your own yard to provide a microhabitat for them. Meeting location: Metro Building, Portland, see above for details. Contact: Mary at alphiesmith@ comcast.net or 503-288-4340.

## 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 2015, make a suggestion, or provide feedback regarding the field trip program, please contact Julie Spelletich at: jspelletich@gmail.com. Join us on Facebook at: facebook.com/SiskiyouChapterNativePlantSocietyOfOregon.

#### October 15, Thursday, 7 pm

**Program: Oregon Rivers.** Author and photographer Tim Palmer will present a slide show based on his new book, *Field Guide to Oregon Rivers.* "This rare gem of a book is an excellent combination of art and science. Descriptions of ecology and natural history are accurately and eloquently written."--Stan Gregory, distinguished professor of fisheries, Oregon State University. "Here is an

essential tool for anyone who paddles, fishes, explores, or wants to understand the natural history of our rivers and the challenges they face.--John DeVoe, executive director of Oregon Water-Watch. Refreshments at 6:45 pm, meeting and program at 7:00. Location: Southern Oregon University Campus (exact location TBA). Free and open to the public. For information contact Dave at davegarcia@charter.net.

#### **South Coast**

This is a newly formed chapter. For more information, contact the chapter president, Alexis Brickner, sc\_president@NPSOregon.org.

## **Umpqua Valley**

Visit umpquavalleynativeplants.com for more information on chapter activities or to be added to our email list. Check out our Facebook page, www.facebook.com/UmpquaValleyNPSO. Not online - call Donna Rawson 541-459-2821.

## 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 Susan Geer at 541-963-0477 or Emelie Montgomery-Jones at 541-963-3339 for updates and general information. Chapter notices and communications are done primarily through a Google group. Members are reminded to contact Susan or Emelie if they want to be added to the Google group, or if they do not have internet access and want to be contacted by phone for events.



### **OTHER EVENTS**

#### North American Butterfly Association

October 12, Monday, 7 pm Seminar: Biology and Conservation of Monarch Butterflies in the Pacific **Northwest.** David James, associate professor of entomology at Washington State University, will discuss current research on monarch butterflies in the Pacific Northwest, including recent findings on summer breeding populations and migration routes. Also highlighted will be the West Coast monarch tagging program. Location: The Eugene Garden Club, 1645 High St., Eugene. Refreshments at 7:00; presentation at 7:30. Free, all are welcome. For more information, visit naba.org/chapters/ nabaes/index.html.

#### **KS Wild**

October 15, Thursday, 6:30-8 pm Science Works Taphouse Talk: Nature's Phoenix: The Science of Wildfire. Dominick DellaSala will give a presentation on his new book about wildfire, *Ecological Importance of Mixed-Severity Fires: Nature's Phoenix.* This event is free to the public. Location: Howie's, 16 N Front St, Medford. For more information, visit http://kswild.org/get-involved/Events or call Morgan Lindsay at 541-488-5789.

#### **ORBIC**

October 16, Friday, 9 am

Meeting: Plant and Fungi Species Updates. The Oregon Biodiversity Information Center will be releasing a new version of their "Rare, Threatened and Endangered Species of Oregon" publication (http://orbic.pdx.edu/documents/2013-rte-book.pdf) in 2016. In preparation, this meeting will discuss recommended revisions to the plant and fungi section. Location: Peavy Lodge in the Peavy Arboretum north of

continued on page 6

Other Events, cont'd

Corvallis. For more information, visit http://orbic.pdx.edu/index.html.

#### Scappoose Bay Watershed Council

October 17, Saturday, 9 am-1 pm

Fall Sale: Native Plants. The SBWC Native Plant Center has one of the region's largest selections of native trees, shrubs, wildflowers, ferns and sedges. Plants are propagated by volunteers for the SBWC's habitat restoration projects, given to landowners to enhance their properties, and sold during their native plant sale. For more information or to view the list of natives plants for sale, visit scappoosebay-wc.org/native-plant-nursery. Location: off Hwy 30 in the greenhouse behind Scappoose High School, 33589 SE High School Way, Scappoose.

#### Mount Pisgah Arboretum

October 25, Sunday

**Mushroom Festival.** Location: Mount Pisgah Arboretum, 34901 Frank Parrish Rd., Eugene. Details online at mountpisgaharboretum.com/festivalsevents/mushroom-festival or call 541-747-3817.

# October 31-November 7, Saturday-Saturday

Estacada Festival of the Fungus.

Enjoy the fabulous fungi in the form of an art show, food, and education. The festival offers several related events starting October 31, ending with the big day November 7. Get up close to wild mushrooms, eat edible mushrooms, and meet vendors displaying their fungus fun artwork. Get the dirt on poisonous mushrooms and check out other wild fungi, from the wonderfully medicinal to the really strange. For more information, visit estacadafungusfest.com.

## Straub Environmental Learning Center

October 31, Saturday, 9 am-4 pm

Class/Field Trip: Lichen Identification. Noted lichenologist Daphne Stone will teach an introductory class, followed by a field trip to identify lichen. Location: Straub Environmental Learning Center, 1320 A Street NE, next to Olinger Pool, near North Salem High. Participants will carpool to the field trip site from the Straub Center parking lot. Bring lunch. Cost is \$10 per person. Registration is required. Call or email Nichole at 503-391-4145 or nichole@straubenvironmentalcenter.org.

## National Seed Strategy

The Department of the Interior has released a National Seed Strategy for Rehabilitation and Restoration 2015–2020. This Strategy was developed by the Plant Conservation Alliance and its scope is not limited to federal agencies. the BLM explains on the National Seed Strategy webpage "it is designed to provide a more coordinated approach among tribal, state, federal, local and private entities, including commercial growers, to restoring plant communities."

There are four main goals, all focused on genetically appropriate, locally adapted seed: assess seed needs and increase seed availability; conduct research to improve seed production and storage as well as restoration and monitoring techniques; develop tools to help managers make restoration seeding decisions; and develop strategies for communication, including education and outreach. The National Seed Strategy does not change current federal law or agency policies. Rather, it is envisioned as a guide and aims to create a national network of existing public and private entities to achieve its goals. For more information and to download the 56-page Strategy, visit blm.gov/seedstrategy.

# **Your Employer May Double Your Donation**

Thinking of contributing to NPSO? If you donate through EarthShare Oregon, your employer may pitch in too! Your employer may match your donation dollar-for-dollar! That's what these great companies have pledged to do:

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Norm Thompson Outfitters
NW Natural
Moda Health
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By giving through payroll contribution with EarthShare, you can spread your donation out over a year's time. No personal checks to write or credit card numbers to give out — the money is automatically donated from your regular paycheck.

To learn more about EarthShare Oregon and workplace giving campaigns, visit earthshare-oregon.org.

#### New Milkweed Seed Source Near Clarno

NPSO members who attended the 2010 NPSO Annual Meeting hosted by the High Desert Chapter may remember driving past the USFS Clarno Hardwood Propagation Facility on their way to the BLM campground, along the John Day River north of Clarno. Now the Clarno Facility is home to a new source of native milkweed seed for central Oregon. Last year, the USFS established a plantation of Asclepias speciosa and A. fascicularis at the Clarno Facility. Seed from 18 separate populations is planted together to promote crossing of genotypes and genetically diverse seed. The goal is to produce large quantities of locally adapted seed for habitat restoration.

There are already signs of success just one year into the project. This past June, USFS Geneticist Matt Horning sent an email update that two monarchs and dozens of other pollinator species were seen on a portion of the Clarno Facility milkweed plantation. Horning noted "These plants were not even in the ground at this location at this time last year. And now, the very first year...the very first spring, we have monarchs utilizing this plantation." Indeed, as the Clarno Facility is located along a monarch migration route, the plantation is intended as a waystation and breeding habitat in addition to a seed source.

#### References

USFS. 2014. Creating a seed source of native milkweeds for restoration of critical Monarch habitat. Accessed September 14, 2015. http://www.fs.fed.us/wildflowers/Native\_Plant\_Materials/documents/npmreports/fy2014/PNW-ClarnoMilkweedSeedProduction.pdf

USFS. 2015. Sanctuary in the high desert: Partnering to restore Monarch butterflies and their habitat in central Oregon. Accessed September 14, 2015. http://nativeseed.info/wp-content/uploads/NativeSeed2015-Horning-Monarch.pdf

# **NPSO 2016 Annual Meeting**

The Emerald Chapter will host the NPSO 2016 Annual Meeting July 15–17, 2016 along the beautiful McKenzie River, 47 miles east of Eugene-Springfield.

The venue is the McKenzie River Conference Center, owned and operated by the U.S. Basketball Academy, which explains why the beds in dorms and lodges are extra-long. The Center is located in a private forested 46-acre property off Hwy 126 (the McKenzie Highway) at Rainbow (milepost 47).

The Emerald Chapter will have an annual meeting website online in November. Watch for the URL in the November 2015 *Bulletin*. Information about the annual meeting will be in monthly NPSO *Bulletins*, however the Emerald Chapter encourages you to check the website regularly for the most comprehensive and up-to-date information.

Registration will be handled by the Emerald Chapter. Do not register directly with the U.S. Basketball Academy. Forms with lodging, meal, and field trip options will be available on the annual meeting website and in the March 2016 *Bulletin*. We will provide information about nearby motels, cabins, and camp sites on the website.

Field trips will be in the Western

and High Cascades. In addition to wildflower trips there will be specialty trips: pollinator-focused, bryophytes, ferns, and ethnobotany. Herm Fitz (Fitz 1983), long time McKenzie River resident, ecologist, and former NPSO State President, has said, "This area is a meeting place of plants more typical of adjacent regions to the north, south, east, and west. Many are disjunct from their main populations."

Saturday's keynote speaker will be Mark Egger, research associate at the Burke Museum of Natural History in Seattle. His expertise is in paintbrushes (*Castilleja*), which are well represented in the flora of the Western and High Cascades.

The Emerald Chapter is excited about hosting the NPSO 2016 Annual Meeting. People will be a lot of fun and the wildflowers will be outrageous! We'd love to see you up the McKenzie River next July!

#### Reference

Fitz, Herm. May 14, 1983. "The McKenzie River Valley: A floral ecotone punctuated with a relict archipelago of xeric islands in a sea of coniferous forest." NPSO Annual Meeting keynote presentation. Eugene, Oregon.

#### A Seed

byWilliam Allingham

See how a Seed, which Autumn flung down, And through the Winter neglected lay, Uncoils two little green leaves and two brown, With tiny root taking hold on the clay As, lifting and strengthening day by day, It pushes red branchless, sprouts new leaves, And cell after cell the Power in it weaves Out of the storehouse of soil and clime, To fashion a Tree in due course of time; Tree with rough bark and boughs' expansion, Where the Crow can build his mansion, Or a Man, in some new May, Lie under whispering leaves and say, "Are the ills of one's life so very bad When a Green Tree makes me deliciously glad?" As I do now. But where shall I be When this little Seed is a tall green Tree?

Adaptive Restoration, cont'd

Oregon silverspot butterfly (Figure 1; Speyeria zerene hippolyta). The Oregon silverspot's life cycle relies on the hooked spur violet (*Viola adunca*), a small violet that predominantly exists in coastal prairies. Their historic range is from northern Washington south to northern California (U.S. Fish & Wildlife Service 2013). The current distribution of the Oregon silverspot in Oregon is shown in Figure 2. Now mostly extirpated because of fragmented habitat, a multi-agency collaborative effort has formed to restore the Oregon silverspot back to portions of its historic range. For example, the adaptive restoration in the Clatsop Plains region actively engages many partners including the NCLC, NPS, USFWS, Natural Resource Conservation Service and the Nature Conservancy.

Restoration of coastal areas requires consideration of the historical disturbance regimes at work in a functioning grassland ecosystem. Coastal prairies rely partly on disturbance to ensure growth of native grasses and limit encroaching shrubs. Historic disturbance included fire and shifting sands from coastal winds (Heady et al. 1977). Now, since these processes no longer occur at the same intervals, land management strategies could incorporate mimicking disturbance into their restoration objectives.

In the Clatsop Plains study, three different treatments and a control were used to evaluate the effectiveness of each method on prairie restoration

(Figure 3). The treatments included herbicide application, topsoil inversion, and topsoil removal. No treatments were applied to control plots, but they were exposed to the same environmental conditions as all other treatments (weather, climate, herbivory, etc.) to create a basis for comparison. Glyphosate and Imazapyr, both broad spectrum herbicides typically used for weed control, were alternately applied to the herbicide plots to assess the impact of exotic species in competition with native plants. For topsoil inversion, vegetation and soil were turned over to mimic dune-soil conditions where nutrient rich soil layers move under or over nutrient poor layers. Previous studies in central California and northwest Wales, U.K., show that mimicking natural disturbance regimes of blowing sand and dune creation can be effective in increasing establishment of coastal prairie species (Jones et al. 2010, Boisson et al. 2006). Topsoil removal excavates nutrient rich topsoil and leaves behind a sandy, nutrient poor layer; this encourages colonization through reseeding post soil removal.

In the Clatsop Plains study, several acres have been treated and an adaptive management decision-making framework will guide the remainder of the restoration process, where combinations of treatments will be implemented over a larger scale. Conducting more experiments that factor in a rapidly changing climate and attempt to mimic natural disturbance regimes allows land managers and researchers to

gain a more expansive knowledge base and tool set to conserve biodiversity and reduce habitat fragmentation. Ultimately, restoring the integrity of coastal ecosystems improves upon the services these ecosystems provide in a way that benefits the natural and humaninfluenced ecology as a whole.

#### References

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Figure 2. Current populations of the Oregon silverspot butterfly (dark) compared with historic populations (light) in Oregon.

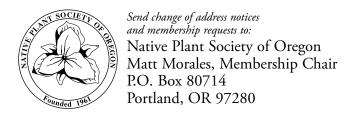


Figure 3. Surf Pines; one study site where all the various treatments can be seen. Foreground to back left: soil inversion, herbicide, soil removal. Control plots are interspersed.



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14 November 2015, 4–8 pm Save The Date! Flora of Oregon Volume 1 Celebration

Please join us in Corvallis for a celebratory evening to acknowledge and honor the many individuals that have helped to make Volume 1 of our *Flora of Oregon* a reality.

Enjoy a reception, brief program, buffet dinner, and book signing.

You won't want to miss this opportunity to share in the festivities! Details will be posted in the November *Bulletin*, and on the Oregon Flora Project and NPSO websites.

Hope to see you there!