Bulletin

of the

Native Plant Society of Oregon

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

VOLUME 47, No. 4

MAY 2014

Back from the Brink: Reintroducing Golden Paintbrush to the Willamette Valley

by Isaac Sandlin, 2013 IAE Intern

Learn more about golden paintbrush at the Corvallis Chapter meeting on Monday, May 12. For more information about research projects at the Institute for Applied Ecology (IAE), visit their conservation research blog, 'Adventures in Conservation Research,' at http://research.appliedeco.org. For information on internship opportunities, please contact Denise Giles-Johnson at Denise@appliedeco.org, 541-753-3099, or visit www.appliedeco.org.

Cavvy wildflower enthusiasts in the Willamette Valley might have spotted an exciting re-addition to the flora in recent years - golden paintbrush (Castilleja levisecta). This sun-loving prairie wildflower, not seen in the Beaver State since 1938, has enjoyed a renaissance since its listing as "Threatened" by the U.S. Fish and Wildlife Service and subsequent reintroduction efforts by IAE and other partners. Considered extirpated from the state of Oregon, golden paintbrush now exists in a handful of planted populations on protected land throughout the Willamette Valley, as attempts to reintroduce the species gain traction.

Golden paintbrush is a short-lived perennial herb in the figwort family (Scrophulariaceae), and can be most easily recognized by its showy, golden yellow bracts, which hide inconspicuous flowers. It has anywhere from 1-30 unbranched stems that can grow to over 30cm tall.

Like other species in the genus *Castilleja*, Golden paintbrush is

hemi-parasitic, taking nutrients directly from the soil or the root systems of surrounding grasses and forbs through root appendages known as haustoria. Golden paintbrush is known only to reproduce from seed resulting from cross-pollination. Plants start to bloom as early as April in the Willamette Valley, with peak flowering in May and June.

The remaining wild populations of golden paintbrush primarily occur in grass-dominated coastal bluffs on the islands of Puget Sound and lower Vancouver Island, with the lone mainland population occurring at Rocky Prairie, a glacial outwash prairie in Thurston County, Washington. Golden paintbrush's southern range is documented in the Willamette Valley from at least



Golden paintbrush (Castilleja levisecta) is a threatened plant of prairies that until recently has been extinct from western Oregon prairies.

six locations in Linn, Marion, and Multnomah counties, but because the species was extirpated from Oregon so early, its precise historic distribution is poorly understood.

The decline of golden paintbrush reads like an epitaph for the Willamette Valley prairie itself. Prior to 1850, an estimated one million acres of native grassland existed in a mosaic of oak woodlands, gallery forests, and wet prairies of the Willamette Valley. These open prairies were set ablaze at the summer's end by the Kalapuya peoples for the purpose of food production, making them a managed feature of the landscape prior to European settlement. Native species currently under threat of extinction such as Kincaid's lupine and Fender's blue butterfly were once widely distributed throughout

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Bulletin of the Native Plant Society of Oregon

Editor: Erika Wedenoja Layout Artist: Cat Mead

ISSN 0884-599. Published 10 times per year. Subscription price specified in Membership Form printed on inside back cover page of this issue. Date and issue number on page 1.

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.

2014 NPSO Annual Meeting

June 6 – 8 in Cannon Beach

Registration deadline is June 1!

Information in February *Bulletin* and online at www.npsoregon.org/2014mtg



Kalmiopsis Seeking New Editor

If the experience of being the editor of a classy botany journal is on your bucket list, then you should jump at this chance. Due to unforeseen circumstances, the current editor is unable to continue, so a new editor is needed for the 2015 issue. Although the new editor will no doubt make a number of changes, he/she will find that all the infrastructure is in place for moving ahead seamlessly. There is an experienced editorial board, a pagesetter who has done the layout since the first issue, a printer who reliably gives an excellent product at a fair price, and a mail service that adds labels and deals with the bulk mail without a glitch. Information about the editorial responsibilities is on page 7 of the NPSO Board Handbook (www. npsoregon.org/documents/NPSOBoardHandbook.pdf). If you are interested and have some experience in botany and editing, contact Judi Sanders at president@ npsoregon.org.



2014 Wildflower Festival Calendar for Oregon

The Festival calendar presented here was initiated last year. If your region of Oregon has a wildflower festival that is not listed, please send your festival information in the format seen in the calendar to Gail Baker: bakerg@lanecc.edu.

Disclaimer/Caveat: All the information here was provided by individuals associated with the festivals or gleaned from internet sites. However, when planning your wildflower trips please double-check directly with the event contact to confirm dates and details.

May 3 - 4, Saturday – Sunday 10 am - 4 pm

Shady Cove & Trail Wildflower Association Show. Location: Shady Cove School multipurpose room, Cleveland St., Shady Cove, Jackson County. Information: www.shadycovewildflowershow.com.

May 10, Saturday, 10 am – 4 pm

Mother's Day Birding and Wildflower Festival. Location: Silver Falls State Park. Information: call 503-874-0201, visit www.oregonstateparks.org/park_211. php and click on the Events link or see the listing in the Willamette Valley Chapter Calendar.

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NPSO CALENDAR

State Notes

NPSO Annual Meeting 2014

June 6 - 8, Friday - Sunday

The Cheahmill Chapter will be hosting the 2014 Annual Meeting of the Native Plant Society of Oregon in Cannon Beach. The State Board meeting will be held on Sunday. Information is in the February *Bulletin* and online at www.npsoregon.org/2014mtg. **You must register by June 1 to attend the banquet.**

Blue Mountain

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

May 21, Wednesday, 7 pm

Meeting/Talk: Native Vegetation of Meacham Creek. Join us for a chapter meeting and talk by Olin Anderson, assistant habitat biologist with the tribal fisheries. Olin will talk about native vegetation and habitat research on Meacham Creek. Location: meet in the theater room at the Prodigal Son Brewery and Pub, 230 SE Court Ave., Pendleton.

June 14, Saturday, 9 am

Field Trip: Emigrant Springs. There will be a joint NPSO and Oregon State Parks Foundation field trip to Emigrant Springs State Park, about 20 miles east of Pendleton on Interstate 84. Bring lunch. Location: meet at 9 am in the County Health Department parking lot across from the Prodigal Son in Pendleton, or at 9:30 in the parking lot to the left inside the state park entrance.

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 cheahmillchapternpso@comcast.net.

May 22, Thursday, 7 pm
Talk: Growing Hardy Bulbs. An en-

gaging presentation by Mark Akimoff, owner of Illahe Rare Bulbs Nursery and a natural area specialist with the City of Salem, about the evolution and adaptations of bulbous plants. Lots of northwest natives like *Fritillaria*, *Allium*, *Calochortus*, *Erythronium*, and *Brodiaea* will be discussed. Mark will also present on bulb cultivation, soils, predators, and pests. Doors open at 6:45 pm for socializing, Meeting/program starts

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

at 7 pm. 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. Information: Luke Westphal, 971-388-9200 or lukeowestphal@gmail.com..

Corvallis

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

May 4, Sunday, 9 am - 4 pm Event Booth: Spring Garden Festival.

We will again have a booth set up at this festival. Stop by to purchase some native plants for your garden, and maybe pick up some tips for a green thumb. We will also need volunteers to set up, take down, and run the booth. For information about the festival, visit http://madisonavenuetaskforce.org/springgardenfest.html. If you would like to volunteer, contact Esther at 541-754-0893.

May 12, Monday, 7:30 pm

Talk: Golden Paintbrush in the Willamette Valley. Caitlin Lawrence has been studying how best to reintroduce this species, once lost from the Willamette Valley. Location: Avery House in Avery Park. Contact: Kevin, 208-921-0827.

May 17, Saturday, 9 am - 1 pm Field Trip: Horseshoe Lake. This is a rare opportunity to visit private property on the banks of the Willamette River between Corvallis and Albany. Participants will see western pond turtles, a diversity of native riparian wildflowers, and a floodplain forest gallery. Wet, muddy areas are guaranteed, so wear boots. Bring a bag lunch and water. Moderate bushwhacking is involved across bumpy terrain. Direct questions to Matt@Greenbeltlandtrust.org.

June 9, Monday, 7:30 pm (tentative)

The Corvallis chapter generally does

not hold a meeting in June, but we are considering holding one this year to make up for the February meeting that was cancelled. Check the June edition of the Bulletin for final details. You can also watch the NPSO events calendar at www.npsoregon.org/calendar.html, or check the chapter message board at https://groups.google.com/group/corvallis-npso.

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.

May 8, Thursday, 9 am - 1 pm Field Tour: Coyote Spencer Wet-

lands. Tour leaders are Dave Predeek of NPSO and Ryan Ruggiero of the McKenzie River Trust (MRT). The reserve is several miles southwest of Eugene. MRT acquired 2 parcels totaling nearly 200 acres to protect rare plants and unique wetland habitat. For more information and to sign up, go to the MRT website at http://mckenzieriver.org/events/ or call 541-345-2799. (Note: This tour will be repeated June 22.)

May 10, Saturday, 9 am

Wildflower Tour: Bikes to Blooms. This bike-based wildflower tour will visit three sites on the Row River Training.

visit three sites on the Row River Trail along scenic Dorena Lake. Regional plant experts will lead participants through natural areas with native prairie plants in bloom. Bring a helmet, water, picnic lunch, and bike in order to ride the 5 miles between the three sites. All sites will be accessible by car, but riding is encouraged. Pre-registration is required and space is limited. See www.coastfork.org for more information. Volunteers needed: contact Pam Reber of Coast Fork Willamette Watershed Council at 541-767-9717 or

coordinator@coastfork.org.

May 17, Saturday, 9 am

Event: Volunteers Needed! If you would like to help collect flowers for the Mt. Pisgah Arboretum Wildflower and Music Festival, please contact Kate Shapiro: katshap@gmail.com. To help set up displays, come to the Arboretum at 9 am on Saturday.

May 18, Sunday, 10 am - 5 pm Event: Mt. Pisgah Arboretum Wildflower and Music Festival. A plant sale and hundreds of native wildflowers will be on display. There will be live music, information booths of many local organizations, and food! Sponsored by the Mt. Pisgah Arboretum, Lane Community College's Botany Department, and NPSO Emerald Chapter. Location: map and directions at www.mountpisgaharboretum.com/visit-mpa/direction. Information: 541-747-3817.

May 22, Thursday, 7:30 pm

Meeting/Talk: Determining the Environmental Factors that Drive the Distribution of a River Ecosystem Engineer, Carex nudata. Researcher Matthew Goslin of the University of Oregon, Department of Geography, is an NPSO grant recipient. Location: Conference Room at Lane County Mental Health, 2411 MLK Blvd. See above for directions. For more information, contact goslin@uoregon.edu or 503-383-7560.

June 14, Saturday, 9 am

Field Trip: Horse Rock Ridge. Alan Curtis leads a 3-mile hike to a steep, rocky meadow high in the Coburg Hills north of Springfield. Enjoy wonderful views of the surrounding countryside and great botanical diversity. Bring water and lunch. Location: meet at South Eugene High School. Contact: Alan Curtis, 541-345-2571.

June 29, Sunday, 8:30 am
Field Trip: Elk Camp Shelter and
Nevergo Meadow. We will explore a
complex of three wetlands north of
Westfir. This is the northernmost site
for the rare *Frasera umpquaensis*. Just a
short ways from the trailhead, there's
a historic shelter in magnificent old

growth forest next to the Elk Camp Meadow. The other two meadows are along the road nearby, so this trip should be suitable for all ages with easy walking of no more than a level mile round trip. Contact trip leader Tanya Harvey at tanya@westerncascades.com or 541-937-1401 to register. For more info about the area, visit http://westerncascades.com/tag/elk-camp-shelter.

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.

May 4, Sunday, Time TBA

Field Trip: Painted Hills in the John Day. Details will be posted on the chapter website when available.

May 24, Saturday, Time TBA

Field Trip: Alder Springs. Details will be posted on the chapter website when available.

June 20-21, Friday-Saturday

Event: Central Oregon Wildflower Show. The High Desert Chapter is working on this wildflower show, to be held at the Sunriver Nature Center (www.sunrivernaturecenter.org). Volunteers will be needed to "harvest" specimens, help ID, and be on hand to answer questions during the two-day show. To help, please contact chapter vice president Susan Berger at suzyfishn@gmail.com.

Klamath Basin

This chapter has recently become active. For information, visit the Klamath Basin Chapter website: http://klamathbasinnps.com or contact the chapter president, Melissa Schroeder meljschroeder@gmail.com.

Mid-Columbia

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

May 15, Thursday, 7 pm
Chapter Meeting: Annual Meeting

Planning Session. We will be settling on details and task assignments for the 2015 Annual Meeting. All chapter members are urged to attend (PLEASE!). Bring photos and plant lists for hiking areas you're fond of. Informational packets will be distributed in advance and a light supper will be served – so, please RSVP to Dell Rhodes: rhodes@reed.edu or 509-493-3572. Location: Room 1.366, 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.

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.

May 3, Saturday, 10 am - 3 pm Field Class: Penstemon Keying Workshop. Learn to key Penstemon from close up photos projected to a large-screen TV and a tour of garden specimens. Focus on the four major subgenera as well as a selection of species. Bring a hand lens and any Penstemon keys you might have available (e.g., Strickler, Lodewick, Hitchcock); some handouts will be provided. Bring a sack lunch; beverages will be available. A fee of \$20 required. Location: this workshop will be held at the home of the instructor. For more information or to sign up for the class, contact Nancy Chapman at chapmanni@comcast.net.

May 8, Thursday, 7 pm

Program: Rock Stars of the Western Cascades. Emerald Chapter member Tanya Harvey will show photos of rock-loving plants that grow in Oregon's Western Cascades. She will talk about the different types of rocky habitats where they can be found and share some good locations to look for them. For information about her plant explorations, visit her website, www. westerncascades.com. Tanya will bring her art, photo cards, and bird ornaments for sale (see www.tanyaharveydesign.com). Meeting location: Metro Building, see above for details. Contact: Mary at alphiesmith@comcast.net or 503-288-4340.

May 10 and 17, Saturdays, 8:30 am - 4 pm

Field Class: Learn to Use a Botanical **Key.** This two-day, highly interactive class at Tryon Creek State Park, taught by Brent Miller, will teach you how to use a key to identify live or pressed plants. The first day will be with plants in a classroom, learning how to read a key and getting familiar with basic technical vocabulary. The second day you'll take your knowledge into the field, keying out plants in their native habitats. Fee of \$40 and book (Hitchcock & Cronquist) required. We will have a few copies of the book to loan. For more information or to sign up for the class, contact Nancy Chapman at chapmannj@comcast.net.

May 18, Sunday, 11 am - 2 pm

Field Trip: Local Grasses. We will ID local grasses at Rocky Butte State Park with Rick Shory, who has worked botanically with grasses since 1993. If this is your first time with grasses, you should choose one single species to learn; we hold these sessions on an ongoing basis. We will go more by recognition than keying. Physical difficulty: Low. It is open and breezy on top so dress in enough layers to stay comfortable. Location: meet at Rocky Butte State Park in NE Portland. Parking is along the ring road around the "castle" at the top (GPS: 45.546753, -122.565912). Please RSVP, as space is limited: rickshory@gmail.com,

or 503-253-8100. Helpful to bring: Strong reading glasses (These serve as hands-free, binocular hand lenses). Your preferred plant key, if you wish. Tweezers and/or probes. A portable surface to work on, to pick apart tiny structures. Lunch!

June 12, Thursday, 7 pm

Program: On the Origins of New Plant Species: Pollination, Natural Selection, and Flower Color Evolu**tion.** Matt Streisfeld, assistant professor at the University of Oregon's Institute of Ecology and Evolution, will address the biological process of plant species formation (speciation), what we have learned (or not) since Darwin. He will describe his research, which studies the factors responsible for divergence of California bush monkeyflowers (Mimulus aurantiacus), a group of wildflowers which are at an early stage of speciation. Meeting location: Metro Building, 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 2014, make a suggestion, or provide feedback regarding the field trip program please contact Sasha Joachims at: sasharain71@gmail.com.

May 10, Saturday, 9 am

Hike: Flounce Rock and Baker Cypress ACEC. Easy 1/4 mile hike to the grove of Baker Cypress trees, rocky scablands, vernally wet meadows, and conifer stands. We MAY see Paeonia brownii, Fritillaria pudica, and what I think is Lewisia pygmaea. We may also tally the surviving Baker Cypress seedlings the BLM planted. Then we'll drive about 1/3 mile to the top of Flounce Rock. This is a good spot for a lunch break with lovely views. WARNING - Flounce Rock is at the top of steep cliffs, although there is ample flat area to park and walk around. There are also

several telecommunication towers there. We'll return to Medford by early afternoon. Location: meet at the Medford Interagency (BLM/Forest Service) office at 3040 Biddle Rd, Medford. Contact: Marcia Wineteer at mwineteer@q.com or 541-535-3081.

May 15, Thursday, 7 pm

Rescheduled Program: Propagating Milkweed for Monarch Butterflies.

This will be the last chapter talk until September. Join Tom Landis, a local monarch and milkweed expert, to learn about monarch butterflies and the plants they need to survive, native milkweeds. Tom will discuss how to propagate milkweeds to assist this beautiful declining butterfly. Location: Southern Oregon University, Science Building, RM 171. Refreshments at 6:45 pm, meeting and program at 7 pm. Free. Contact Kristi: 541-941-3744.

June 14, Saturday, 9 am

Hike: Hunter Creek Bog ACEC. The local hiking group Muscle Busters is sponsoring hikes to this unique treasure that is now threatened by the proposed nickel mining operation. This trip will be more of a meander than a hike as we poke around the bog looking for flowers. There are some rocks that need to be negotiated on the hike in and some wet spots in the bog to avoid. We will return to Gold Beach by lunchtime. Participants will be provided with flora and fauna lists. Wear waterproof hiking shoes, bring snacks and water, and be prepared for the weather. Location: meet at 9 am at the Event Center in Gold Beach or 8:15 am at Dr. Larsson's office, 414 Alder Street in Brookings, to car pool. Heavy rain will cancel. For more information contact Al Collinet at 541-412-8444.

June 22, Saturday, 9 am

Hike: Pilot Rock Proposed Trail Reroute. The BLM is proposing a trail reroute to ease the steep grade and minimize the "braided" impacts to the scree slope areas. Join Armand Rebischke, Ashland resource area botanist, to identify species and habitats of concern. We will discuss potential issues and ideas to minimize impacts from trail

construction. This is an opportunity to learn what is there prior to trail building and discover if there are "pockets of interest" to avoid. Wear sturdy hiking shoes and bring sun protection, plenty of water, and snacks or lunch. Hiking will be moderate to difficult, with some off trail sections. Round trip mileage is 3-5 miles with 500-1000' elevation change. Location: meet at 9 am at the Pilot Rock Quarry trailhead. Contact Armand at 541-944-6621 or arebisch@blm.gov for more information.

Umpqua Valley

Visit www.umpquavalleynativeplants.com for more information on chapter activities or to be added to our e-mail list.

Willamette Valley

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

May 10 - 11, Saturday - Sunday, 10 am - 4 pm

Program: Silver Falls State Park Mother's Day Birding and Wildflower Weekend. NPSO members and park volunteers will lead wildflower walks (beginning at 11 am) throughout the two days. The event also includes bird walks, presentations, and photo hikes. Starting point for the walks is the Historic South Falls Lodge. For a full schedule of activities, registration forms, and overnight options, contact park staff at 503-874-0201 or visit www.oregonstateparks.org/park_211.php and click on the Events link.

May 15, Thursday, 6 pm

Field Trip: Bush Park Wildflower Walk. John Savage will lead a walk to view wildflowers in Bush Park and Deepwood Estate. Nearly two dozen native wildflowers should be in bloom. Location: meet at the bottom of the Soap Box Derby Track in Bush Park, Salem. Free and open to the public.

May 31, Saturday, 6:30 am - 5 pm

Field Trip: Dog Mountain. John Savage will lead an all-day hike to view

wildflowers located in the Columbia Gorge on the Washington side. This is a difficult hike. Bring food and water. Free and open to the public. For more information and to register, please call 503-399-8615 after 7 pm.

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.



Wildflower Festival, continued from page 2

May 18, Sunday, 10 am – 5 pm Mt. Pisgah Arboretum Wildflower & Music Festival. Co-sponsored by the Emerald Chapter of NPSO. Location: Mt. Pisgah Arboretum, Eugene. Information: call 541-747-3817, visit www.mountpisgaharboretum.com/festivals-events/wildflower-festival or see the listing in the Emerald Chapter Calendar.

June 20 - 21, Friday – Saturday, 9 am – 5 pm

Central Oregon Wildflower Show. Co-sponsored by the High Desert Chapter of NPSO. Location: Sunriver Nature Center. Information: www. highdesertnpsoregon.org/central-oregon-wildflower-show.html.

July 4, Friday, 10 am – 4 pm Irene Hollenbeck Memorial Wildflower Show. Hosted by the Siskiyou Chapter of NPSO. Location: Ashland Community Center in Lithia Park. For more information, call Jim Duncan, 541-482-7629.

Early Bloomer in Northeast Oregon

by Mary Cooke

In April 1993, my son Sam (11 years old) scrambled far up the west face of our Mt. Fanny (Union County) with a friend. He had been learning native wildflowers with me since he was a baby and counted on me identifying a plant with only a verbal description. "It's bright blue and shaped like grape hyacinth. It was growing way high up on the mountain." I was stumped and amazed at anything blooming so early in the spring between 5000 and 6000 feet. I had four children to raise, one under two. The rugged terrain kept me from checking out Sam's find.

In April 2013, Sam was home for a few days. He took a "run" from our home at 3000 feet to the top of the rocky ridge far above Warm Creek. I hiked as far as I dared on the steep face of Mt. Fanny. Turning back, I detoured into Warm Creek canyon, inching down the north-facing slope. Suddenly I was surrounded by bright blue blossoms peeking out under a blanket of snow. In that deep cold shade, I had finally found Sam's mystery flower.

At home I searched out the *Veronica* genus as it is often bright blue and an early bloomer. Before *Veronica* (in the Plantaginaceae family) I found *Synthyris* with one species (*missurica*) for our region. The description fit. On April 18, after waiting two days for the snow to melt, I went back to Warm Creek canyon at 1 pm. The flowers were in full sun and I was able to photograph them in their brilliant blue. A

tall snag helps me to locate them again in that vast wild country.



Mountain kittentails, Synthyris missurica, is one of the first plants to flower in its high elevation habitat.

OTHER EVENTS

Deschutes Land Trust

May 23, Friday, 9 am - noon Wildflower Hike: Whychus Canyon Preserve. Join Carol Moorehead for a moderate 3 mile hike. Soak up late spring as you explore ancient juniper groves and wildflower-studded slopes on your way to a scenic boulder overlook. Take in the bright green aspen groves along Whychus Creek and panoramic views of mountain peaks while enjoying this dramatic canyon. Bring snacks/lunch, water, and sturdy hiking shoes. Dress for the weather. This hike is also offered on May 31 and June 6. Registration is required; call 541-330-0017 or visit www.deschuteslandtrust. org/events.

Siskiyou Field Institute

May 29 - June 1, Thursday - Sunday

Course: Field Sketching. This

two-part workshop, taught by Linda Ann Vorobik, will give you several visual tools for learning plant identification. Part I: Habits and Leaves, is May 29-30 and Part II: Flowers and Fruits, is May 31-June 1. You'll have opportunities to master basic field sketching techniques while studying plant form in daily lab sessions and on field trips. Observing plants in habitat, you'll create a botanical journal filled with sketches and notes and end up with your own illustrated glossary from field-collected materials. Tuition: \$150 per class, \$250 for both Parts I and II. Location: Deer Creek Center, Selma. For registration or more information, call 541-597-8530 or visit thesfi.org.

Greenbelt Land Trust

May 24, Saturday, 9 am - 1 pm Tour: Shrub/Tree Identification. Ed Jensen, noted tree expert will lead this interactive outing as participants learn to identify the trees and shrubs of the Willamette Valley. We will start with a workshop component, and transition into a field identification walk at Bald Hill Farm in Corvallis. Fun for all ages! RSVP for this free outing to Jessica: jessica@greenbeltlandtrust.org. For more information, visit greenbeltlandtrust.org.

Oregon Wild

May 26, Monday, 9 am - 4 pm Wildflower & Plant ID Hike: Wahclella Falls/Tanner Creek. Wendell Wood will lead an extremely slowgoing hike of two miles to identify and discuss area wildflowers. Hike through old-growth trees and mossy cliffs in a deep basalt side canyon in the Columbia Gorge Wilderness. Location: carpools depart from NE Portland on E. Burnside. To register, contact Marielle Cowdin, mc@oregonwild. org or 503-283-6343 ext. 213. For more information about Oregon Wild hikes, visit www.oregonwild.org/about/ hikes_events.



Golden Paintbrush, continued from page 1 this fire-adapted landscape in upland prairies.

Willamette Valley upland prairie is now one of the most endangered ecosystems in the United States, and it is little wonder. The Willamette Valley is the largest inland river valley in the Pacific Northwest, gathering water from 11,000 miles of waterways as it flows to the Columbia. The rich, alluvial soils of the valley bottomland and ample rainfall provide our region with a prosperous, agriculturally productive landscape, and the Oregon Department of Fish and Wildlife currently estimates that over 41% of land area in the Willamette Valley is dedicated to agricultural production. The Willamette Valley also has 9 of the state's 10 largest cities, and is home to about 70% of the state's population. The prairie ecosystems of the Willamette Valley have suffered terribly at the hands of urban and agricultural development with, according to most estimates, less than 1% of prairie remaining.

Habitat destruction and land development, however, are only part of the reason behind golden paintbrush's disappearance from Oregon prairies. The late summer fires that once blanketed the countryside from the Cascades to the Coast Range were crucial for the suppression of woody trees and shrubs that threaten to deprive remnant native prairie grasses and forbs of the full sun they need to thrive. Nonnative grasses, forbs, and shrubs have highly altered the prairie ecosystem by outcompeting native species, permanently altering habitat, and decreasing overall biodiversity.



Golden paintbrush's haustoria can be seen as dark spherical structures about 1 mm across connected to the larger roots of its host plant.

Considering that over 96% of land in the Willamette Valley is in private ownership with little priority placed on habitat restoration, the challenges to reintroducing a rare native plant in such a hostile environment can seem overwhelming. However, the U.S. Fish and Wildlife Service's mandate to establish new populations or augment existing populations of golden paintbrush has presented an opportunity for researchers and land managers to advance the field of restoration ecology and to help this species in particular.

Following the release of the Reintroduction Plan for Golden Paintbrush in 2004, a battery of common garden experiments was used to determine the success of various seed sources in a variety of field conditions. The lessons from those experiments helped determine that the most successful reintroduced golden paintbrush populations resulted from seed sources with an ecologically similar habitat to the recovery site, and that site selection and preparation prior to reintroduction can be just as important as seed sources (Lawrence and Kaye, 2009).

Armed with this information, IAE launched a full-fledged golden paintbrush reintroduction effort in 2010 on protected lands throughout the Willamette Valley, and the results so far have been encouraging. Currently, about 32,000 golden paintbrush plants are established in the Willamette Valley through a combination of seeding and plug planting. The benefits of this regimen are three fold. First, it is fulfilling the federal mandate to establish 20 stable populations throughout the species' historic distribution (to be deemed stable, a population must maintain a 5-year running average population size of at least 1,000 individuals). Second, field experiments are determining what factors contribute to the overall successful establishment of a stable population, helping land managers and policy makers craft informed decisions with regards to native flora conservation and restoration. And finally, golden paintbrush is a host plant for the endangered Taylor's checkerspot butterfly, and some of the plantings in Oregon could one day provide habitat

for this species.

In autumn 2013, seeds from growout facilities at the Natural Resources Conservation Service Plant Materials Center in Corvallis and Oregon State Correctional Institution in Salem were used to establish the most recent round of potential new populations on sites owned by Portland Metro and Benton County. Existing populations on sites managed by U.S. Fish and Wildlife were also augmented with seed from these nurseries. Seeding has its advantages, as a large amount of potential plants can be distributed over a wide area in a short amount of time. However, large, robust plants have resulted from growing golden paintbrush in plugs with native host plants like Roemer's fescue (Festuca roemeri) in a greenhouse, then outplanting in the spring. Plug planting also allows researchers to study golden paintbrush's interaction with a variety of host plants, while tracking success of individuals over time.

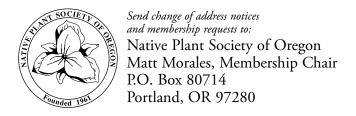
With the help of friends and volunteers, and funding from the U.S. Fish and Wildlife Service and Willamette Habitat Restoration, IAE is gearing up for a banner year for golden paintbrush reintroduction in the Willamette Valley. The momentum of this effort could carry the species to full recovery by the end of this decade, if not sooner. IAE executive director Tom Kaye, who personally spearheads the project, expects to plant about 2000 plugs in April and May before beginning the monitoring process – which can take up to three months to complete. Interested volunteers can send a message to info@appliedeco.org to participate. Good places to see golden paintbrush in Oregon include Baskett Slough and Finley National Wildlife Refuges, and the peak viewing time is in May.

Reference

Lawrence, B.A. and T.N. Kaye. 2009. Reintroduction of *Castilleja levisecta*: Effects of ecological similarity, source population genetics, and habitat quality. Restoration Ecology. doi: 10.1111/j.1526-100X.2009.00549.x

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We have been enjoying the OFP's new wildflower identification app to help identify plants this spring—have you? The app is an attractive and easy-to-use subset of the information the Flora Project is assembling about all the plants of the state. It is one way we are fulfilling our mission to share botanical knowledge with a wide audience. We welcome your feedback about this new tool (see our website for purchase information) and how effectively it serves your needs.

A new version of the Checklist, Version 1.4, is now available on our website. The Atlas, Photo Gallery, and the mobile app reflect this nomenclature. As always, a table summarizing the changes between versions is posted on the Checklist webpage.

We are moving forward with preparations for publishing the first volume of the Flora of Oregon with OSU Press. Twenty years of OFP effort are crystallizing as we resolve design issues, finalize floristic manuscripts, and prepare introductory material for this much-needed reference. Your financial support to see the first volume to completion is needed, and is greatly appreciated.

Checks can be made payable to Agricultural Research Foundation, with "OFP" on the memo line. Please note the new address: Agricultural Research Foundation, 1600 SW Western Blvd Ste. 320, Corvallis, OR 97333.