

Bulletin

of the

Native Plant Society of Oregon

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

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Monitoring Long-Term Reintroduction Plots of Cook's Desert Parsley (*Lomatium cookii*)

by Sarai Carter, Ari Freitag, and Liza Holtz; 2016 IAE/NPSO Conservation Research Interns

Lomatium cookii, commonly known as Cook's desert parsley, is a member of the Apiaceae (parsley family) that is listed as endangered by the U.S. Fish and Wildlife Service and the state of Oregon. With its small size and rosette of narrow leaflets, the plants are often hard to spot amidst surrounding vegetation, except when in bloom. During spring months, cream to yellow flowers appear atop leafless stems in compound umbels (Figure 1). As with some other *Lomatium* species, the earliest umbels are typically staminate

(all male), while later umbels have both staminate and hermaphroditic flowers.

L. cookii is endemic to southwestern Oregon, with two population centers: the Illinois Valley in Josephine County and the Agate Desert of the Medford Plains in Jackson County. *L. cookii* occurs in serpentine and non-serpentine soils of meadows with vernal pools and mounds, inhabiting the seasonally wet zones along the edges of the vernal pools. This habitat supports annual and perennial herbaceous plants, and is often surrounded by shrubs and trees, predominantly pines or oaks.

L. cookii, like many other endangered native plant species, has been affected by development (residential,

industrial, and commercial), construction and maintenance of infrastructure, agricultural activity (livestock grazing, conversion of habitat to cropland, and mowing), competition from invasive plants (particularly annual grasses), and roadside spraying (USFWS 2002). The Institute for Applied Ecology (IAE) has assisted with long-term (over two decades) monitoring of the species, collecting population data in partnership with the Medford Bureau of Land Management (BLM) District. The *L. cookii* populations monitored by IAE are also threatened by resource extraction such as logging and mining, fire suppression, and off-road-vehicle use. Although populations naturally experience positive and negative fluctuations in numbers from year to year as a result of

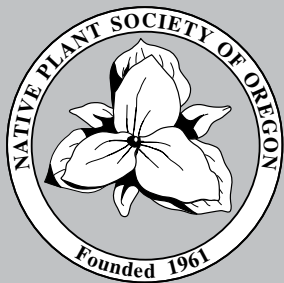
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Figure 1: *Lomatium cookii* (Cook's desert parsley). Can you spot its leaves? Hint: Their shape appears fern or feather-like within the surrounding vegetation!

In This Issue

Remembering Veva Stansell ..2	
NPSO Calendar.....	3
Other Events.....	6
Seeds Book	8
Membership Chair Needed..	8
National Monument Review..	8
State Board Highlights	8
NPSO Contacts	9
Friends of OFP.....	10



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tion are those of the authors of the
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opinions of the Native Plant Society
of Oregon, unless so stated.

Remembering Veva Stansell

As many of you know, Veva Stansell joined NPSO in the 1970s and held many roles in our organization, including director at large, vice president, and secretary. Read more about her on pages 27–28 of Kalmiopsis Volume 9, available online at npsoregon.org/kalmiopsis/kalmiopsis_v09.pdf. Visit the Coast Range where she botanized; June 24 with the Kalmiopsis Audubon Society. See the Other Events section for details. Ed.

Veva Stansell passed away on April 26, 2017 at Sea View in Brookings.

A life-long Curry County resident and retired U.S. Forest Service botanist, Veva was widely known and respected for her contributions to understanding and conserving the extraordinary botanical resources of the Siskiyou Mountains. Born in 1929, Veva grew up in Pistol River, where her family, the Ismerts, had owned the Sundown Ranch for many decades. She spent much of her youth on horseback, chasing livestock, enjoying family camping trips, and riding to swimming holes. She loved the outdoors.

In 1948, she married her husband, Bob Stansell, and went on to have 3 sons. In the 1960s, when Veva's sons were young, she began studying botany as a hobby. As her self-taught expertise grew, Veva volunteered for the Forest Service from 1975 to 1989, helping with surveys of native plants unique to the Siskiyou Mountain backcountry.

Family camping trips on horseback became botanical expeditions. She regularly sent plant specimens to the OSU herbarium, corresponded with academic botanists about unusual finds, and provided plant lists for the Oregon Flora Atlas as a regional coordinator. Veva also worked on the botanical studies that led to designation of the Bureau of Land Management's Hunter Creek Bog and North Fork Hunter Creek Areas of Critical Environmental Concern. Eventually, Veva held a botany position with the Forest Service's Gold Beach Ranger District, where she helped to prepare a rare plant field guide and aided academic botanists in locating and learning about the region's unusual plants.

In 1992, Veva received a national volunteer award for her years of service, presented by the Forest Service Chief in Washington, D.C. In 1994, she received a state and national conservation award from the Daughters of the American Revolution. Veva was a Fellow of the Native Plant Society of Oregon and also served on the board. She was a founding member of the local Kalmiopsis Audubon Society, where she instilled in her fellow members an appreciation for the unique native plants of our region.

In 2011, Veva received the highest honor a botanist can receive when a small and lovely daisy, endemic to the Signal Butte and Red Flat areas in the Coast Range east of Gold Beach, was named *Erigeron stanselliae*, Veva's erigeron, in recognition of her many contributions.

Those who knew Veva understood her driving force was not to receive awards. It was all about her love of the wild flowers. Veva held firm to the belief that we need to preserve the natural environment for the wellbeing of all future generations. She will also be remembered for bringing awareness to the diverse and delicate ecosystems found in the Siskiyou Mountain range and inspiring many people to learn more and care more about nature.

Veva is survived by her brother, Larry Ismert, and his wife Roseann; by her three sons: David Stansell and his wife Piney, Cliff Stansell and his partner Lisa Christie, and Les Stansell and his wife Mary; and by numerous grandchildren and great-grandchildren.

A memorial service was held on Saturday, May 13. Contributions in Veva's honor can be made to the following organizations: the Pistol River Friendship Hall (24252 Carpenterville Rd., Pistol River, OR 97444) and Kalmiopsis Audubon Society (P.O. Box 1265, Port Orford OR 97465), which seeks to designate a local botanical area to carry forward Veva's legacy in native plant education and conservation (vevasbotanicalarea.blogspot.com).

NPSO CALENDAR

State Notes

NPSO Annual Meeting 2017

June 9-11 2017, Friday-Sunday

Corvallis and Umpqua Valley Chapters will jointly host the NPSO Annual Meeting 2017 in Roseburg, with the meeting location at Phoenix School. A State Board meeting will be held on Sunday. Field trip descriptions, student stipend information, and registration form are in the March *Bulletin*. For additional information and updates, visit annualmeeting.npsoregon.org.

Blue Mountain

For information on Blue Mountain Chapter call Jerry Baker, 541-566-2244. To get on our email list, contact flora.id@wtechlink.us.

June 17, Saturday

Field Trip: Umatilla Forks. Matt Campbell will be leading us on a butterfly quest in the Umatilla Forks area up past the Bar M. There will be ample opportunity to check out the plants of course, and I suspect we will learn what butterflies prefer what plants, and the interactions between the two. Contact Bruce Barnes, 541-377-2634, for carpooling details, times, meeting place, etc.

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@NPSOOregon.org.

Meeting and work party location:

Carnegie Room, McMinnville Public Library, 225 NW Adams St. (corner of Highway 99W and SW Second St.), McMinnville. Parking lot entrances on Adams and Second Streets.

No chapter programs are scheduled during the summer. Our next meeting will be Thursday, September 28.

June 24, Saturday, 10 am-noon

July 29, Saturday, 10 am-noon

Work Party: Native Plant Garden.

Join the NPSO Garden Crew working around the Carnegie Building. This mature native plant garden needs only a couple hours of crew work each month, as long as there are enough volunteers! Everyone learns how to identify local native plants vs. weeds. Bring gloves,

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 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. A trip leader checklist and sample waiver form are available at: <http://npsoregon.org/calendar.html>

bucket and gardening tools if you have them. Location: McMinnville Public Library, see above for details. For more information, contact Catie Anderson at catie.fishback@gmail.com or 503-435-2401.

Corvallis

For questions, information on upcoming events, or to be on the Corvallis chapter e-mail list, contact co_president@NPSOOregon.org.

June 4, Sunday, 10 am-noon

Work Party: Native Plant Garden.

Join us for spring cleanup including weeding and general maintenance. Location: Avery House at Avery Park, Corvallis. Contact Esther for more information at 541-754-0893 or estherco@peak.org.

June 25, Sunday, 9 am

Field Trip: Marys Peak hike in memory of Bob Frenkel. We hope to hike from Connors Camp to the summit of Marys Peak. The trail is 3.4 miles up with a good elevation gain and 2.7 miles back. We can have cars at the top for those who wish to hike one way. There has been a lot of blow down of trees on the trail this winter so we may need to change our route at the last minute. Location: meet at the parking lot across from the OSU campus Beanery on Monroe to carpool. Bring a lunch, water and appropriate hiking gear. Contact Esther for more information at 541-754-0893 or estherco@peak.org.

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.

June 3, 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, 19th and Patterson. For more information, email Alan at abcwoods1@gmail.com.

June 17, Saturday, 9 am-1 pm

Field Trip: Siuslaw Falls County Park. Ed Alverson takes us on a tour of this scenic 79-acre park located on the upper Siuslaw River in the Coast Range west of Lorane. We will work on adding to the plant list and explore forest, riparian, and wetland habitats. Location: Meet at 19th and Patterson in the South Eugene High School parking lot. For more information, contact Ed at 541-461-1958.

July 8, Saturday, 9 am-4 pm

Field Trip: Upper Elk Meadows. Alan Curtis leads this hike about 30 miles from Cottage Grove at 4,000 feet elevation. Over 200 species of vascular plants have been identified here. We expect to see *Frasera umpquaensis* and several orchid species. Surrounding the meadow is an old growth forest of *Abies amabilis*, *Abies grandis*, and *Pseudotsuga menziesii*. We will walk 1.5 miles through moist meadow. Wear boots and bring lunch and water. Location: meet at South Eugene High School, 19th and Patterson. For more information, email Alan at abcwoods1@gmail.com.

July 15, Saturday, 9 am

Field Trip: Gordon Meadows. Join John Koenig, Tanya Harvey, and Dave Stone for an exploration of Gordon Meadows, a beautiful complex of wetlands at the end of the proposed Douglas-fir National Monument, east of Sweet Home. Colorful wildflowers as well as unusual species can be found on this 3.5 mile round-trip trail with only 300 ft. of elevation change. Co-sponsored by Emerald Chapter NPSO and Friends of Douglas-fir National Monument. Location: meet at Campbell's Senior Center by Skinners Butte Park to carpool for this all day trip. Limited to 10 participants. For more information and to register, contact Dave Stone at 541-729-8787 or dns@efn.org. For information on Gordon Meadows, visit westerncascades.com/sites/linn-county/gordon-meadows; for monument info, visit douglasfirnationalmonument.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, colecara@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 highdesertnps@gmail.com.

Klamath Basin

For information on the Klamath Basin Chapter, visit <http://klamathbasinnps.com> or contact the chapter president, kb_president@NPSOregon.org.

Mid-Columbia

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

June, Details TBA

Picnic. We are planning a picnic for the end of June. Contact Sara Wu at 509-773-7127 if interested.

Portland

If you would like to receive the chapter's semi-official email newsletter, The Calochortus, email Don Jacobson at donjphoto@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.

The Portland Chapter meets the second Thursday of most months. Meetings and programs begin at 7:00 pm. **MEETING PLACE: TaborSpace at Mt. Tabor Presbyterian Church, 5441 SE Belmont St., Portland.** We will meet in **Copeland Commons**; enter the church through the main door off Belmont and turn right to enter the room. Parking is available in the church lot on the NW corner of SE 54th and Belmont.

June 13, Tuesday

Field Trip: Tamanawas Falls. This is a nice alternative to the steeper waterfall hikes in the Columbia Gorge, with an opportunity to climb to a niche in the rock behind the falls. An in-and-out trail of three miles round trip gently ascends 480 feet. A side trail leads behind the falls and there is a good mix of wildflowers not found on the west side of Mount Hood. The trail has gotten very popular in the last few years. A Northwest Forest Pass is required for parking. Please pre-register for this hike by contacting Don Hardin at donhardin2@gmail.com.

June 17-18, Saturday-Sunday

Field Trip: Black Wolf Meadows/Anvil Lake/High Rock. We will first view bog and marsh wildflowers at Black Wolf and Anvil. We are hoping for shooting stars, bog orchids, camas, *Caltha*, *Kalmia*, marsh violets, monkshood, elephant's head, and sundews. Bring waterproof footwear. High Rock is just a short drive up the road and is filled with rock and cliff loving plants including several penstemons, saxifrages, lilies, and paintbrushes. Each of these hikes is less than three miles with minimal elevation change. There is an optional Saturday night camp-out at Black Wolf Meadows trailhead, with further exploration of areas nearby on Sunday. Location: about a two hour drive from Portland through Estacada and Ripplebrook on Highway 224. Co-leaders: Beth Magnus and Jason Clinch. To sign up for the hike, contact Beth Magnus at 503-706-5108 or magnuselizabeth@gmail.com. For plant lists and camping details, contact Jason Clinch at 503-706-2404 or jason.clinch@gmail.com.

July 9, Sunday, 9 am-5 pm

Field Trip: Mt. Hood Plants and their Pollinators on Mt Hood. Zak Weinstein of NPSO-PDX is partnering with Kim Hack of Bark to co-lead this trip. We will hike at high elevation in the Zig Zag district of Mt Hood, where we've seen woodland species such as *Rhododendron macrophyllum*, *R. albiflorum*, and *Erythronium montanum*. We'll likely also encounter some

of the earlier blooming flowers on the open rocky slope. Limited to 20 participants, split into two groups, RSVP to michael@bark-out.org. For carpool information, visit bark-out.org/event/july-bark-about-hike-0.

July 15, Saturday, 8:30 am-5:30 pm

Field Trip: Lookout Mountain.

Join co-leaders Don Hardin and Ron Klump on this trip east of Hood River Valley. We'll hike the loop from High Prairie to the top of Lookout Mountain and down to Gumjuwac Saddle. A variety of forest, meadow, and rocky outcrops with lots of good plants. The hike is seven miles with 2,000 ft. elevation gain. Round trip drive is 150 miles paved, 12 miles gravel. NW Forest Pass required. To sign up for the hike or for more information, contact Ron Klump at ronklump55@comcast.net.

Save the Dates!

July 22, Saturday

Field Trip: Observation Peak Trail & Sister Rocks at Trapper Creek Wilderness

July 28, Friday

Field Trip: Silver Star Mountain

July 29, Saturday

Field Trip: Saddle Mountain

August 12, Saturday

Tentative date depending on blooms

Field Trip: Mount Hood Meadows

August 19, Saturday

Field Trip: Umbrella Falls

August 26, Saturday

Field Trip: Young's Creek

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 2017, 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.

June 15, Thursday, 2:30-6 pm

Volunteer: 3rd Annual Star Thistle Pull, Cascade Siskiyou National Monument.

A collaboration of Siskiyou Chapter NPSO, CSNM, BLM Medford, and Klamath-Siskiyou Wildlands Center. Join Julie Spelletich (NPSO), Jeanine Moy (KS Wild), Charles Shelz and Christine Beekman (Medford BLM), for an invasive weed pull at the Mariposa Preserve south of Ashland. We will continue to clear yellow star thistle in the habitat of the rare Greene's mariposa lily and observe wildflowers along the way. Celebrate afterwards (6:30 pm) with dinner at Caldera Brewery. Location: Meet at 2:30 to carpool from Clover Lane, Ashland (in front of El Paraiso Restaurant). For more information and to register contact Julie Spelletich at 541-951-1744 or jspelletich@gmail.com.

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.

June 7, Wednesday, 9 am-1 pm

Field Trip: Restored Upland/Wetland Prairie and Oak Savanna Tour.

Lynda Boyer, restoration biologist and native seed manager for Heritage Seedlings, will lead a tour of one of their farms just south of Salem with 200 acres of habitat restored to its former savanna glory. Multiple stops will be made to discuss a variety of restoration techniques to remove invasive species and prepare the site for native seed and plants, then learn about follow-up management techniques to help the plant community thrive. Bring your camera, field guide, binoculars and lunch (outhouses, drinking water, and fruit provided). For directions and

to register, please contact: lboyer@heritageseedlings.com.

June 8, Thursday, 6 pm-7 pm

Program: Prairie 101—Saving the Willamette Valley.

Botanist Lynda Boyer of Heritage Seedlings will offer critical information about our threatened Willamette Valley habitats and explain how we can save them. To register, email info@straubenvironmentalcenter.org. The event is open to the public. Cost: \$5 suggested donation at the door. Location: EcoHub, 1313 Mill Street SE, Salem. For more information, contact John Savage at 503-779-5414.

June 25, Sunday 8 am-5 pm

Field Trip: Passport to Nature—Hikes at Iron Mountain.

Iron Mountain (near Sweet Home) has over 300 different plant species amid stands of trees and meadows. A Straub Environmental Center educator will lead a four to five mile hike for adults to view the flowers along the Cone Peak trail. A second, shorter hike tailored for families will be held on the Tombstone Prairie trail. Participants will have the ability to carpool to the site. Bring food and water. Cost is \$5 per person (includes a field notebook). Children five and under are free. Open to the public; pre-registration is required. To register and request carpool and other information, call 503-779-5414 or email info@straubenvironmentalcenter.org.

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

Kalmiopsis Audubon Society

June 24, Saturday, 8 am

Field Trip: Auto Tour—Botanizing Game Lake Road.

Join trip leader Al Collinet to see unique wildflowers that grow in serpentine soils along the road from Hunter Creek to Game Lake. There will be many stops along the way and we may take a few short walks from the road. No prior flower knowledge is needed, both novices and experts are welcome. At 3 pm, we'll turn around and drive about 2 hours back to Gold Beach. (You may return earlier if you let the trip leader know.) Bring lunch and water. Note there are no restroom facilities along this road. Location: meet at 8 am at the Gold Beach Visitor Center (central parking section), or at 7:15 am at Dr. Larsson's office, 414 Alder Street in Brookings, to carpool. For more information, contact Al at 541-412-8444

or dewbobal@charter.net, or visit kalmiopsisaudubon.org/events.

Siskiyou Field Institute

July 16, Sunday

Course: Botany 101 on Dutchman

Peak. We will use the spectacular subalpine meadows, rock gardens and forests of the Dutchman Peak area on the Siskiyou Crest as a laboratory to begin exploring plant morphology, evolution, family characteristics and both scientific and common names. You'll meet flowering plants and conifers head on—and even take a peek at nonvascular plants like mosses and lichens—in this fascinating introduction to our local botanical universe. Instructor: Kristi Mergenthaler. Tuition: \$60. Location: Meet at the Ruch Country Store. For more information and to register, visit thesfi.org or call 541-597-8530.

Lomatium cookii, *cont'd*

changes in temperature, precipitation, and pollination, the overall trend has been one of population decline due to gradual loss of habitat and disturbance from human activity (Pfingsten *et al.* 2014). To help reverse this decline, IAE has experimented with cultivation of *L. cookii* in its natural habitat. With this background, a variety of reintroduction techniques have been tested to support the recovery of the species.

In 2006, IAE established experiments considering the effect of different factors on reintroduction of *L. cookii* at four sites in the Illinois Valley and Agate Desert (Figure 2). First, IAE directly seeded and transplanted greenhouse-grown plants to compare the seedling emergence, survivorship, and growth rates to wild *L. cookii*. Within the directly seeded category, variables included seed source, light exposure, and litter removal at the planting site. Within the transplanted category, plants varied in seed source, age, soil composition, and fertilizer supplementation.

Every spring, when *L. cookii* is flowering and readily visible, IAE's Conservation Research (CR) crew visits study sites across Josephine County to monitor plants in the reintroduction plots. In April 2016, the CR crew spent two weeks monitoring *L. cookii*. We counted and mapped every *L. cookii* present in each long-term study plot, recording the number of reproductive stems (if any), number of leaves, length of longest leaf, and presence of herbivory (often by voles). By tracking individual plants over time, we are able to determine if certain plants have died or gone missing or if any new seedlings have emerged.

From all the *L. cookii* seeds planted at each site from 2006 to 2009, seeds grown in their native habitat were more successful than seeds collected at other sites, suggesting that there may be some adaptation to local conditions among *L. cookii* populations, especially those found in nutrient-poor serpentine soils. Litter removal significantly boosted both seedling establishment and survival, which

continued on page 7



INSTITUTE FOR APPLIED ECOLOGY

Figure 2: IAE's Conservation Research crew at the BLM's French Flat Area of Critical Environmental Concern (ACEC) in the Illinois Valley. Note the tire tracks through the vernal pool; off-road vehicle use can damage these fragile habitats and threaten *L. cookii* populations.

Lomatium cookii, cont'd

suggests that clearing litter in forested *L. cookii* habitat prior to direct seeding is one way to boost seedling success.

Transplants experienced high mortality due to transplant shock in the first month after being outplanted, but had higher survival and growth rates than neighboring wild *L. cookii* in following years. Transplants became reproductive more quickly and in greater numbers than seeded plants, and began to produce seedlings within two years. Overall, analysis up to 2014 found that the longer plants were kept in cultivation before planting in the wild, the higher their survival rates. Additionally, plants cultivated in native soils had higher survival rates than those grown in other soil types, except in sites with nutrient-poor serpentine soils (Kaye *et al.* 2014).

These findings suggest that for best results, reintroduction sites should contain appropriate habitat, be protected from major disturbances, have low litter cover (or have the litter removed prior to seeding), and have soil with serpentine levels similar to the seed source of reintroduced *L. cookii*. Because survivorship was so variable across sites, it is recommended that reintroduced plants be distributed among multiple sites. An ideal reintroduction strategy could incorporate both direct seeding, for its economical advantage, and transplanting to establish a mix of high density small plants and a few larger plants that will more quickly start producing seed and recruits. Locally sourced seeds should be used, especially when planting in serpentine soils, and it may be best to cultivate transplants in either potting mix or native non-serpentine soils with fertilizer. The observed survival rates of seeded plants and transplants will inform future reintroduction projects as well as seeding and planting densities so that reintroduced *L. cookii* population dynamics resemble that of wild populations.

We are interested to see if the data we collected this spring adheres to the trends observed in the past. The work



Figure 3: IAE/NPSO Conservation Research interns Sarai Carter (left), Ari Freitag (behind), and Liza Holtz (right) are excited to see black bear tracks while hiking to a *L. cookii* site.

described here is just part of the work IAE has done on the species; other projects include effects of herbicide on the surrounding plant community (particularly annual invasive grasses), monitoring of natural *L. cookii* populations, and effects of prescribed fire. Continued monitoring of natural and reintroduced populations will provide insight into future recovery efforts. As interns at IAE, being involved with this and other impactful studies throughout the state has been an invaluable opportunity for educational growth and professional experience as environmental leaders of tomorrow (Figure 3). We are grateful to the Native Plant Society of Oregon and individual members for their continued support of IAE's Conservation

Research Internship program.

For more information on this and other projects, please visit the Conservation Research page at appliedeco.org/programs/research/. For information on IAE/NPSO internship opportunities, please contact Matt Bahm at mattab@appliedeco.org or visit appliedeco.org.

For further insight into the history of IAE's *Lomatium cookii* monitoring project, please see the article by IAE-NPSO intern Beth Lawrence: "Cook's Desert-parsley at French Flat Area of Environmental Concern" in the October 2003 NPSO *Bulletin*.

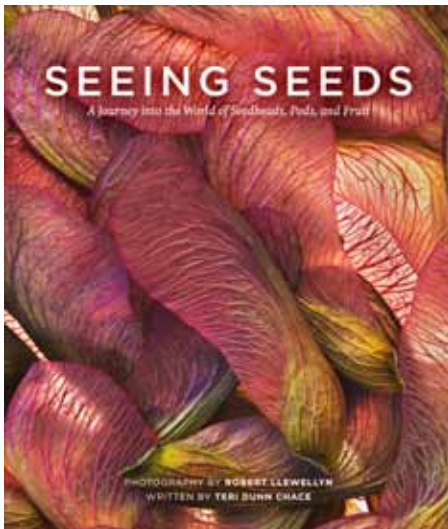
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- United States Fish and Wildlife Service. November 7, 2002. Endangered Status for the Plants *Lomatium cookii* (Cook's Lomatium) and *Limnanthes floccosa* ssp. *grandiflora* (Large-Flowered Woolly Meadowfoam) in Oregon. Final Rule. Federal Register 67, No. 216.
- Pfingsten, I.A., D.E.L. Giles-Johnson, and T.N. Kaye. 2014. *Lomatium cookii* population monitoring in the Illinois Valley, Josephine County, Oregon. Institute for Applied Ecology, Corvallis, Oregon and USDI Bureau of Land Management, Medford District. xii+53 pp.
- Kaye, T.N., I.A. Pfingsten, D.E.L. Giles-Johnson, and I.S. Silvernail. 2014. Developing reintroduction techniques for *Lomatium cookii*. Institute for Applied Ecology, Corvallis, Oregon and USDI Bureau of Land Management, Medford District. ix+66 pp.

Keep close to Nature's heart... and break clear away, once in a while, and climb a mountain or spend a week in the woods. Wash your spirit clean. -John Muir

Seeing Seeds

Leave your magnifier behind with *Seeing Seeds: A Journey into the World of Seedheads, Pods, and Fruit*. Published by Timber Press in 2015, this book is filled with 145 color photos of seeds and their containers, many in close-up. Text by Teri Dunn Chace accompanies Robert Llewellyn's photos. Rather than focusing on native species for various regions, chapter topics include "Weeds and Wildflowers," "Herbs, Spices, Fibers, and Medicine," and "Shrubs and Trees." The press release notes that readers will "gain an understanding of how seeds are formed and dispersed, why they look the way they do, and how they fit into the environment. *Seeing Seeds* will take you to strange and wonderful places." To view sample pages and buy the book, visit timberpress.com/blog/2015/09/seeds-up-close-hellebore. And if this does not satiate your eyes, *Seeing Flowers* and *Seeing Trees* are also available from Timber Press.



NPSO Needs a New Membership Chair

NPSO needs a new Membership Chair! If you are looking for a way to make a significant contribution to the Society, have a few hours a week of spare time, and enjoy working with computers, then please let the out-going Chair, Matt Morales (membership@npsoregon.org) know you are interested. A general description of the duties and responsibilities can be found in the NPSO Board Handbook (<http://npsoregon.org/documents/NPSOBoardHandbook.pdf>). Matt will be happy to provide additional details, answer any questions you might have, and train you.

Support the Cascade-Siskiyou National Monument

In 2000, the 86,774-acre Cascade-Siskiyou National Monument (CSNM), located east of Ashland, Oregon was the first national monument ever designated to conserve biodiversity. Last winter, the Obama administration expanded the monument by 48,000 acres, providing a protected corridor to higher elevations such as Grizzly Peak. Because biodiversity and watersheds do not stop at state boundaries, the CSNM expansion included 5,000 acres extending into lower elevations in California. Many rare and endemic plants are protected here such as the federally listed Gentner's fritillary (*Fritillaria gentneri*), and state listed Greene's mariposa-lily (*Calochortus greenii*). Numerous local groups, such as the Siskiyou Chapter NPSO, the cities of Ashland and Talent, and private landowners supported the expansion. Currently, the Department of the Interior is reviewing the CSNM as well as 27 other national monuments that have been designated or expanded since 1996. Please consider commenting on this review before the due date of July 10. Let's not roll back conservation and the protection of exceptional plant communities: For more information and to comment, visit <https://www.regulations.gov/document?D=DOI-2017-0002-0001>.

April 2017 State Board Meeting Highlights

by Lisa Blackburn, State President

The 2018 Annual Meeting, hosted by the Portland Chapter, will take place in Prineville June 15–17.

There has been no progress on replacement for the Membership Chair, Matt Morales. An article went out in the April *Bulletin* and will be repeated.

Dan Luoma reported the Nominations Committee has candidates for all elected positions. The Board discussed the possibility for online elections with the upcoming new website.

Jan Wilson, executive director of EarthShare Oregon, outlined their recently updated strategic plan which includes a shift in their fundraising model. EarthShare is moving away from the point system and will shift to advertising organizations by promoting events. Jan encouraged NPSO chapters to send promotional material for upcoming hikes, programs, and events to EarthShare to publicize.

The Website Committee needs more time to sort out choosing a website developer. The committee is planning on acquiring another round of bids by the June Board meeting. The goal is to hire a company by October 2017.

There has not been a West Side Conservation Chair in more than a decade. Billy Don Robinson has been serving as East Side Conservation Chair and has volunteered to take on the West Side. The chair will now be referred to as just Conservation Chair.

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 _____

☐ Check to receive electronic *Bulletin*, sent by email in lieu of paper.

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 Fund \$ _____

Augusta Rockafellar Memorial Scholarship \$ _____

Rare and Endangered Plant Conservation 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..... Mary Beth Averill, Susan Berger, Billy Don Robinson (to 6/2017); Thea Cook Jaster, Michael McKeag, Zak Weinstein (to 6/2018)
PRESIDENT Lisa Blackburn president@NPSOregon.org; 503-538-3976
IMMEDIATE PAST PRESIDENT..... Kelli Van Norman..... past_president@NPSOregon.org
VICE PRESIDENT..... Dan Luoma vice-president@NPSOregon.org; 541-752-8860
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TREASURER..... Cyndi Dion treasurer@NPSOregon.org

CHAPTER PRESIDENTS

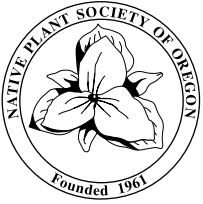
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The Oregon Flora Project is developing a comprehensive reference about the plants of Oregon that includes distribution maps, images of live plants and herbarium specimens, descriptions, and identification tools. The information is available to the public via our website, www.oregonflora.org. Funding for the Oregon Flora Project comes exclusively from competitive grants and donations from organizations and individuals. The contributions people give of their time and financial resources are a critical part of our operating budget. If you would like to be a part of the team that keeps the OFP progressing, please contact us at ofpflora@oregonflora.org, or phone 541-737-4338.

Contributions can be made online (www.oregonflora.org/supportOFP.php) or mailed directly to: Agricultural Research Foundation, 1600 SW Western Blvd. Ste. 320, Corvallis, OR 97333. Please make checks payable to the Agricultural Research Foundation and include "OFP" on the memo line.