Summer Intern Report

VOLUME 36, No. 6

Conservation Biology of Kincaid's Lupine and Fender's Blue Butterfly in the Willamette Valley

by Melissa Carr

The following is the first in a series of articles in which NPSO/Institute for Applied Ecology interns discuss their activities during the 2002 field season. Interns participated in monitoring, restoration and other research projects conducted by IAE staff throughout Oregon during the summer of 2002. The projects were focused primarily on threatened and endangered plant species in eastern Oregon, the Siskiyous, coastal areas, the Cascades, and the Willamette Valley. In this article, Melissa Carr discusses the biology and conservation of Kincaid's lupine and Fender's blue. Internships are jointly funded by NPSO, IAE, and federal agencies. For more information on this internship opportunity, please contact IAE at kayet@peak.org, 541-753-3099 or visit www.appliedeco.org. Thanks again to NPSO for contributing to botanical education and work experience.

Tom Kaye, Institute for Applied Ecology, Corvallis, Oregon

F or centuries, human activities have ' dramatically influenced the vegetation of the Willamette Valley. Prior to European settlement, grassland prairies and oak savannas dominated the landscape. The Kalapuya Indians played a key role in maintaining these open conditions by annually burning vast expanses of the valley floor to promote hunting and gathering (Franklin and Dyrness, 1973; U.S. Fish and Wildlife Service, 2000). This long-established fire regime abruptly changed in the mid-nineteenth century when European settlers began fire suppression. This practice, coupled with the widescale conversion of native prairie to agricultural use over the past 140 years, has changed the Valley landscape into what it is today, characterized largely by cropped monocultures, dense oak and fir forest, and urban development.

As a result of this habitat shift, many native prairie species that remain are rare and confined to small habitat remnants. Two such native upland prairie species that share a unique relationship are Kincaid's lupine (*Lupinus*

sulphureus ssp. kincaidii) and Fender's blue butterfly (Icaricia icarioides fenderi). Only one-tenth of one percent of the original upland prairie habitat that supports these two species remains today (U.S. Fish and Wildlife Service, 2000).

Kincaid's lupine is an herbaceous perennial legume that produces clumps of basal leaves. Its flowers vary in color from light to dark blue or purple and are borne on unbranched stems. The plant reproduces by seed and can also spread vegetatively. It occurs predominantly in upland prairie of the Willamette Valley, but is also found in southwestern Washington and on balds in Douglas County, Oregon. Kincaid's lupine is the primary host plant of Fender's blue butterfly, which lays its eggs on the underside of the lupine leaves (Kaye, 2002 – see photo).

Fender's blue is a small butterfly, with a wingspan of only 2.5 cm. Males have silvery blue dorsal wing coloration, while females have brown dorsal wings. The life cycle of Fender's blue

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Bulletin of the Native Plant Society of Oregon

Editor: Tanya Harvey

ISSN 0884-599. Published 11 times per year. Subscription price \$18/year. Date and issue number on page 1.

The submission date is the 10th of each month for the following month's issue. 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.

Editor's Note

Submission Information for Summer Issues

The following issue of the *Bulletin*, however, will cover both August and September. The submission date will be pushed back two weeks to **July 24**. You should receive this issue the second week of August. The next issue will return to the usual schedule with a submission date of September 10th and should arrive by October 1st. If you have any notices about events happening during the first couple of weeks of August please send them in time for July *Bulletin*.

Participate in NPSO Strategic Planning

At the NPSO Board meeting held April 5th, the Board members, committee chairs, and Chapter presidents began a strategic planning process for the organization. We hope that the result of this effort will be a clearly defined mission, short and long term goals, and a set of tasks to achieve those goals.

Current Mission: The preservation, conservation, and study of native plants and vegetation of Oregon and the education of the public to the values of native flora and its habitat

Possible New Mission: Work to conserve native plants and habitats

What we do to achieve the mission?

Educate · Advocate · Enjoy

Cooperate · Study/research

Discover/explore · Act

If you have ideas or suggestions on the mission of NPSO, goals, or where you would like to see the organization go in the future, please send your comments to Kelli Van Norman at kellivn@peak.org or 913 SE 27th Ave., Portland, OR 97214.



The bright yellow flowers of Glacier Lilies (Erythronium grandiflorum) are one of the earliest signs of spring. Where they bloom in the mountains, you often have to cross melting snow to see them as I did to photograph these on Patterson Mountain in Lane County where they were blooming at 4400' in mid-May.

NPSO CALENDAR

State

June 20-22, 2003

Annual Meeting: The Portland Chapter will host this year's meeting in John Day. Registration and field trip and lodging information were included as an insert in the March issue of the *Bulletin*. For more information go to http://ghs.gresham.k12.or.us/science/ps/nature/bloomtime/centralo/trips/jday/johnday.htm.

Blue Mountain

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

Cheahmill

June 7, Saturday, 10:00 am
Field Trip & Picnic: Deer Creek
County Park. This annual event is
scheduled in conjunction with the
Yamhill County Park District. Come
take a tour of the park's wet prairie—
one of the few such ecosystems remaining in the Willamette Valley. Bring a
picnic lunch and join in discussions
planning for the continuing restoration
and improvement of Deer Creek
County Park. For more information
call Dave Hanson at 503-843-4338.

June 14, Saturday, 8:30 am

Field Trip: Marys Peak. Joint Outing with the Corvallis Chapter. Meet at the McMinnville Bi-Mart parking lot at 8:30 am. We shall have two options for the participants. There will be a loop hike from the campground to the summit and back down through the woods. There is a less strenuous hike from the upper parking lot to the rock garden and back if there is an interest. Please wear hiking boots, be prepared for any weather and bring a lunch. For questions and to register for the field trip please call or e-mail Erin Rainey cell phone: 503-435-8589 email: erin.rainey@baileynursery.com.

June 28, Saturday, 8:30 am

Field Trip: Mt. Hebo. Carol Bickford, a retired BLM wildlife biologist, will lead this moderate hike. Expect to see grassy meadows, rocky outcrops, a sphagnum bog, and spruce-fir forests. On sunny days this hike offers panoramic views of the Pacific Ocean, Coast Range and high peaks of the Cascades. We'll pass through meadows that are home to the largest known population of Oregon's endangered Silverspot butterflies. Meet at the Linfield Ave. entrance to Murdock Hall on the Linfield College campus in McMinnville. For more info or to pre-register call Kareen Sturgeon at 503-472-0866.

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS

Field trips take place rain or shine, so proper dress and footwear are essential. Trips may be strenuous and/or hazardous. Participation is at your own risk. Be prepared to sign a release form indicating this. For a sample copy check out the NPSO website. Please contact the trip leader or chapter representative about difficulty, distance, and terrain to be expected on field trips. Bring water and lunch. All NPSO field trips are open to the public at no charge (other than contribution to carpool driver) and newcomers and visitors are always welcome. National Forests require a Northwest Forest Pass for many field trip locations. Permits can be acquired at forest headquarters and ranger districts.

NOTICE TO FIELD TRIP CHAIRS AND LEADERS

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

Corvallis

June 1, Sunday, 1:00 pm

Field Trip: Butterfly Meadows to look at the invasion of false-brome (*Brachypodium sylvaticum*). Meet at the Oak Creek entrance to McDonald's Forest at 1:00 pm for hike to the site. For information and to register please contact Esther McEvoy at 541-754-0893.

June 9, Monday 7:00 pm

Work Party: Yard cleanup and dinner potluck. Bring gloves, a trowel and a bucket. We will weed the native plant garden and then take a break for a potluck dinner on the deck of the Nature Center, Avery House, Avery Park. Everyone welcome! For more information please call Esther McEvoy at 541-754-0893.

June 14, Saturday, 9:30 am

Field Trip: Marys Peak. Joint outing of Corvallis and Cheahmill Chapters. Meet at the parking lot across from the Monroe Beanery at 9:30 am to carpool to Marys Peak. We shall have two options for the participants. There will be a loop hike from the campground to the summit and back down through the woods. There is a less strenuous hike from the upper parking lot to the rock garden and back if there is an interest. Please wear hiking boots, be prepared for any weather conditions and bring a lunch. Contact Esther McEvoy for more information and to register 541-754-0893.

Emerald

June 29, Sunday, 9:00 am

Field Trip: Elk Meadows. Nate France will take us to see *Mimulus cardinalis*, knobcone pine and other special plants of the Kalapuya Divide. *Frasera umpquaensis* should be in bloom at Elk Meadows. Then there will be a short off-trail hike with little elevation gain. Be prepared for walking through brush. Meet 9:00 am at South Eugene

High School or 9:45 am at Lakeside Park on Cottage Grove Reservoir. Return to Eugene by 6:00 pm. For more info call Nate at 541-942-0483.

July 20, Sunday, 9:00 am
Field Trip: Lowder Mountain in the
Three Sisters Wilderness. Tanya Harvey will take us to see summer flower displays on Lowder Mountain. If there's time we'll also check out nearby Quaking Aspen Swamp. 5.6 miles round trip with 900 feet elevation gain. Meet 9:00 am at South Eugene High School or 9:15 am at front corner of Albertsons parking lot at 58th and Main in Springfield. Return to Eugene by 6:30 pm. Wilderness status limits attendance to 12. For more info or to register call Tanya at 541-937-1401.

August 2, Saturday, 8:00 am Field Trip: Bear Mountain Trail in the Diamond Peak Wilderness. Barbro McCree will lead us up the Bear Mountain Trail to see wildflowers and great views from 6000 feet elevation. 4 miles round trip. Meet 8:00 am at South Eugene High School or 9:00 am at the Middle Fork Ranger Station. Return to Eugene by 6:30 pm. Wilderness status limits attendance to 12. For more information or to register call Barbro at 541-782-3919.

High Desert

Unless otherwise noted (and please be sure you check!) all trips will depart from the north end of the main parking lot on the east side of Pilot Butte State Park off of Hwy 20 (Greenwood St.) in Bend at 8:30 am sharp. Please arrive a few minutes early to form carpools. On one-day trips we will normally return to the parking lot by 5:30 pm.

June 7, Saturday, 8:30 am Field Trip: The Island Research Nat**ural Area** is a remnant example of our native grasslands. Much of the local high desert probably looked like this before grazing, farming, and urbanization took over. Unfortunately, even in this barely-grazed area, exotic weeds are a problem. NPSO will assist the BLM in removing medusahead from several small infested areas. This is a unique opportunity to visit the area since the Island Research Natural Area is closed to casual hiking. The trail up is steep and requires handholds to climb. Best for experienced hikers. We may see rattlesnakes so long pants and boots are encouraged. Meet at north end of the main parking lot on the east side of Pilot Butte State Park off of Hwy 20 (Greenwood St.) in Bend at 8:30 am **sharp**. Call trip leader Stu Garrett for details: 541-389-6981 eves.



Anemone lyallii is another early spring bloomer, often found soon after the snow melts.

June 8, Sunday, 8:30 am

Field Trip: Big Summit Prairie. Big Summit Prairie has been a favorite wildflower foraging area (by people!) for years. Come along and visit one of the premier plant sites in central Oregon. Make sure to bring lunch, water, sun screen, bug dope and whatever else suites you. We'll be taking numerous short walks on the easy, all-day outing. This will be a jointly-sponsored trip between the local chapters of Audubon and NPSO. Call trip leaders Reid Schuller 541-317-0199 (days), 317-1901 (evenings); or Dave Ledder 541-383-7646 for more information.

July 12, Saturday, 8:30 am Field Trip: Canyon Creek Meadows.

Flowing off the north face of Three Fingered Jack, this montane/subalpine forest/meadow mosaic is a favorite wilderness destination for hikers and wildflower enthusiasts alike. Join us for this 7 mile (round trip) easy-to-moderate hike in the Mt. Jefferson Wilderness. Group size is limited to 12 people and priority will be given to NPSO members. Pre-registration is required! Call trip leader Reid Schuller for signup: 541-317-0199 (days), 317-1901 (evenings) or Dave Ledder 541-383-7646 for more information.

August 2, Saturday, 8:30 am Field Trip: Gold Lake Bog/Waldo

Lake. We'll visit a variety of montane habitats, including a classic bog ecosystem, upper elevation mixed conifer forests, and recently burned areas. Be prepared to do some easy hiking through Gold Lake Bog Research Natural Area, and around portions of Waldo Lake. Be sure to bring a sack lunch, water, sun screen and bug dope. Mountain weather can change quickly, so bring rain gear and warm clothing as the weather dictates. This will be a jointly sponsored trip between the local Audubon chapter and the local NPSO chapter. Call trip leaders Reid Schuller 541-317-0199 (days), 317-1901 (evenings); or Dave Ledder 541-383-7646 for more information. The sooner the better!!

August 23, Saturday, 8:30 am Field Trip: Broken Top Volcano. This is our annual trek to view the spectacular glaciated scenery and alpine wildflowers in the High Cascades west of Bend. This is a six-mile round trip, moderate-to-strenuous hike with a 1,700 foot elevation gain. We will do mostly off-trail hiking through the Three Sisters Wilderness, so hiker numbers are limited to 12. Meet at Pilot Butte Lot at 8:30 am. If we can't go to Broken Top we will hike Black Crater. Pre-registration is required! trip leader Stu Garrett for sign-up: 541-389-6981 eves. The sooner the better!!

Klamath Basin

For information on the Klamath Basin Chapter, contact Sarah Malaby, 541-884-5703, smalaby@cs.com; or Mike Cutler, 541-850-9012, cutler@cvc.net.

Mid-Columbia

June 4, Wednesday, 7:30 pm Meeting: Workshop to Study Leaves, Flowers, Stems Roots, Fruits, and Seeds of plants growing in the Columbia River area. We will hold a workshop to help us to know better their entire life cycles. Columbia Gorge Discovery Center. Exit 82 off I-84 in The Dalles and follow the signs.

July 2, Wednesday, 6:30 pm (Note earlier meeting time)

Event: Potluck Dinner on picnic tables outside at the Discovery Center. Afterwards we can go for a walk and look at native plants on the site. Columbia Gorge Discovery Center. Exit 82 off I-84 in The Dalles and follow the signs.

North Coast

For information on the North Coast Chapter, contact Janet Stahl at 503-842-8708 or jjs@oregoncoast.com or John Gerke at 503-842-5366 or johnroyal@juno.com.

Portland

June 1, Sunday, 8:30 am
Field Trip: Augspurger Mountain.
Russ Jolley will lead a trip to see Hydrophyllum fendleri, Thlaspi fendleri, Viola adunca, Mitella trifida, Erythronium grandiflorum, and many more. Four miles round trip, 1200 ft. elevation gain. Leave 8:30 am Gateway/NE 99th Ave. Park and Ride parking lot southeast corner. Second meeting place is Milepost 56.3 right after Dog Creek Falls on SR 14 at 10:00 am. For more info call Russ at 503-286-2350.

June 7, Saturday, 8:30 am Field Trip: Grassy Knoll. Located about ten miles north of Wyeth and Wind Mt. in the Columbia Gorge, this premier botanical natural area is at the convergence of three bioregions and has a stunning diversity of plants. The terrain ranges from hemlock forest to grassy meadows and rocky outcrops. The hike is about 4.5 miles and climbs about 1000'. Leave Gateway/NE 99th Ave. Park and Ride, southeast corner of parking lot, at 8:30 am. Second meeting place: Cascade Locks Charburger parking lot at 9:10 am. Call Paul Slichter, 503-661-3292, for details.

June 10, Tuesday, 7:00 pm Meeting: Gardening with Native Plants. Wilbur Bluhm, of the Willamette Valley Chapter, will show us native plants that are good garden subjects and also present us with his knowledge of planting and caring for native plants in our gardens. Since most of us won't be able to plant until June (special thanks to the rain goddess), this should be a timely and very informative meeting. Fireside Room (#355) of the First United Methodist Church located at 1838 SW Jefferson St. in Portland. For more information contact Dee White, 503-775-2909.

July 6, Sunday, 10:30 am
Field Trip: South Prairie Bog. Visit a unique natural cranberry bog west of Troutlake, WA and see what is blooming. We will also stop at the ice cave and the lava arches on the way. Meet at the Troutlake Ranger Station in Trout-

lake, Wa. at 10:30am. Call Barbara Robinson for more information at 541-296-5334.

Siskiyou

June 7, Saturday, 9:00 am Field Trip: Oregon Gulch Research Natural Ārea, Cascades-Siskiyou National Monument. Meet at east side of Ashland BiMart parking lot next to Tolman Creek Road (at the intersection of Ashland St and Tolman Creek Rd, 1/4 mi west of I-5 exit 14). Leader: Frank Lang 541-482-5235, frlang@charter.net. Reservations required; call or e-mail Frank by June 1. Car pool over logging roads to the RNA; return by 5:00 pm. A moderateto-difficult 3-5 mile hike through Cascade-Siskiyou National Monument's Oregon Gulch Research Natural Area on a search for Limnanthes bellingeriana and other botanical wonders. Bring lunch, water, and perseverance; be in good shape for cross-country hiking.

June 14, Saturday, 10:00 am Field Trip: Natural History of Serpentine Point, Onion Mountain, and Onion Creek (replaces Pilot Rock **trip).** Meet at US Forest Service Bldg, 200 NE Greenfield Rd, Grants Pass, just north of Exit 58 on I-5. Leader: Maria Ulloa, Forest Botanist, Siskiyou NF 541-471-6528. A driving and walking loop following Forest Service Road # 25 from Hayes Hill to Onion Mountain from high elevation serpentine ridges to old growth Port Orford Cedar and lush creek side vegetation of yew trees and maples. See rare plants like Sophora, seven species of orchids (with phantom orchid and clustered lady's slipper stealing the show), stonecrops, lilies, and big pines. Explore Serpentine Point where Lewisia leana should be in bloom. This is an all day trip with something for everyone. We will be driving on a low maintenance road, so high-clearance vehicles are advised. We might have to ford a creek; if it is not safe we will not hike the orchid portion of the trip. Easy-tomoderate 4 mile hike; bring lots of water, a lunch, and extra snacks.

June 28, Saturday, 9:00am Field Trip: Babyfoot Lake Botanical Area. Meet at Illinois Valley Visitor Center, Cave Junction, half a block from Hwy 199 on Hwy 46 on the way to Oregon Caves National Monument. Leader: Cecile Shohet, District Botanist, Siskiyou NF 541-592-4052. Babyfoot Lake Botanical Area protects the largest stand of old growth Brewer's Spruce on the Siskiyou National Forest and other rare plants including Calochortus howellii, Fritillaria glauca, Lewisia cotyledon ssp. purdyi, Lewisia oppositifolia, and Lupinus tracyi. The Lake lies within a glacial cirque; the area has a complicated rock structure with metavolcanics: diorite, greenstone, and layered tuffs. Some serpentine is present. Vegetation is semi-alpine. The 2002 Biscuit fire was a stand-replacing event of high and medium severity for the Babyfoot Lake Botanical Area. See the area less than a year post-fire; note which species have returned. Moderate 3-4 mile hike; bring water and lunch.

July 5, Saturday, 9:00 am Field Trip: Grouse Gap (Mt. Ashland). Meet at east side of Ashland Bi-Mart parking lot next to Tolman Creek Road (intersection of Ashland St. and Tolman Creek Rd., 1/4 mi west of I-5 exit 14). Leader: Alex Maksymowicz 541-482-1964. This field trip is a follow-up to the July 4 NPSO flower show in Ashland. Walk through flowerfilled alpine meadows and identify common wildflowers, including several native orchids, in both dry and wet habitats on decomposed granite. Easy 2-mile walk along the Pacific Crest Trail.

July 12, Saturday, 9:00 am Field Trip: Mt. Ashland Summit and NW Ridge. Meet at east side of Ashland BiMart parking lot next to Tolman Creek Road (intersection of Ashland St. and Tolman Creek Rd. about 1/4 mile west of I-5 exit 14). Leaders: Noelle Jordan 541-201-0115 and Jamie O'Donnell 541-552-1872. Walk the upper limits of the Ashland Watershed to look for rare or special plants, such as *Lupinus aridus* ssp. *ashlandensis*,

Horkelia hendersonii, Eriogonum diclinum, Kalmia polifolia, and Saussurea americana. We will see an abundance of beautiful plants typical of upper elevation eastern Siskiyous—Eriogonum umbellatum, Castilleja arachnoidea, Erysimum capitatum, and Polygonum bistortoides. Easy to moderate 2-3 mile hike with one steep climb.

July 13, Sunday, 9:45 am Field Trip: Fish Creek Valley (Rogue-**Umpqua Divide).** Meet at 9:45 am at the Union Creek Store on Hwy 62 between Prospect and Crater Lake; alternative meeting place: 10:00 am at the intersection of Hwy 230 and forest road 6560, on the way to Diamond Lake. Leader: Clint Emerson, District Botanist, Umpqua NF 541-498-2531, ext 389. We will drive about 10 miles to the Fish Creek Valley trailhead. Two hundred feet off the road the trail enters the Rogue-Umpqua Divide Wilderness, where we will see lush wet meadows bordering Fish Creek. Within the meadows are many species of the Asteraceae family, Sidalcea spp., Hypericum alsinoides, Oxypolis occidentalis and several other common wet meadow species of the area. The next stop will be a population of *Hazardia* whitneyi ssp. discoidea that is being impacted by off road use. At this site are other interesting rocky opening species like Chaenactis douglasii, Hieracium greenei and Sedum spp. We will do some hiking in the wilderness and stop at Hummingbird Meadows on the way back to the highway. Easy

Umpqua Valley

to moderate 3-4 mile hike.

May 31, Saturday, 8:00 am
Field Trip: King Mountain, a serpentine ridge. We will be going to see two rare lilies, the Siskiyou Fritillary, Fritillaria glauca and the Scarlet Fritillary, Fritillaria recurva. Assemble for caravan or carpool at BLM parking lot 777 Garden Valley Blvd, Roseburg prior to 8:00 am departure. For more information please call 541-673-3709.

June 12, Thursday 7:00 pm Meeting: Video of Wildflowers of the Upper Rogue. Bring specimens for identification. 7:00 pm at the Mercy Medical Center Community Education Building 2459 Stewart Parkway, Roseburg. Call Ron Hatt 541-863-7024

June 21, Saturday, 8:00am
Field Trip: View *Calochortus coxii* in the Boomer Hill area south of Roseburg. Assemble for caravan or carpool at BLM parking lot 777 Garden Valley Blvd, Roseburg prior to 8:00 am departure. For more information call Jack 541-863-5347.

June 28, Saturday 11:00am Event: Pot Luck at Jack and Katherine Hausotter's place on 4925 North Myrtle Road, Myrtle Creek. View *Lilium occidentale*. For more information call Jack at 541-863-5347.

Willamette Valley

June 14, Saturday, 9:00 am
Field Trip: Finley Wildlife Refuge.
We will view the native plants in the untouched Research Natural Area of Finley Wildlife Refuge near Corvallis.
Uneven walking. Dress for the weather, and bring your lunch. Meet at 9:00 am at the Holman State Park parking lot on Doaks Ferry Road just off of Highway 22. The parking lot is across the highway from the Eola Inn Restaurant, two to three miles from Salem's Marion Street Bridge. For more information or to register, call Jennifer Goodridge at 503-371-1078.

June 21, Saturday, 8:00 am Field Trip: Jefferson Park. Dana Field will leak a hike to view the wildflowers in the Jefferson Wilderness. For more information or to register, call Dana Field at 503-581-6073.

William Cusick

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

OTHER EVENTS

Mount Pisgah Arboretum Events

Seavey Loop Rd., Eugene, call 541-747-1504 for information or to register.

Medicinal Herbs Workshop June 7, Saturday, 1-4 pm

Explore the world of healing plants with Master Gardener and Naturopathic Physician Jan Gagnon. Discuss how to grow, harvest, store, and use medicinals. Learn to identify various herbs with the help of a slide show, and take a walk to find these herbs in the wild. Fee: \$15. Pre-registration required.

Discovering Bugs: for kids! June 22, Sunday, 2-4 pm

Learn about the creepy-crawlers that populate the Arboretum's many habitats in this class with educator and entomologist Sharon Blick. Whether you're leery of or fascinated by spiders, centipedes, worms, and insects, you're sure to learn a lot about their life cycles, behavior, and special adaptations that help them be so successful. Kids aged 5-10 are welcome to attend and should be prepared for a hands-on experience with bugs of all kinds! Ages 5-7 need to bring a parent, and ages 8-10 can come by themselves. Taught both in a classroom and out in the field. Fee: \$10 per child, parents \$5. Pre-registration required.

Techniques in Field Sketching Workshop June 29, Sunday, 1-4 pm

Are you ready to get outside and draw? Join Kris Kirkeby, popular art teacher and natural science illustrator, for this outdoor sketching class. Bring your favorite drawing tools for instruction in an informal setting and improve your skills in drawing the natural world. Fee: \$20. Pre-registration required.

Siskiyou Field Institute Starting Soon

As summer heats up, the Siskiyou Field Institute's (SFI) annual programs are going full steam, offering natural history field programs for students aged 6-80. Participants can learn about the Klamath-Siskiyous through botanizing, birding, hiking, backpacking, rafting... with expert naturalists eager to share their knowledge and passion for this uniquely diverse mountain system.

Our Eastern Siskiyou session, based out of Ashland, is from June 27-29. Single and multi-day courses teach about the birds of the Cascade-Siskiyou National Monument, bird monitoring techniques, eastern Siskiyou peaks, Siskiyou plants that travel along with us humans, the unique Siskiyou butterflies... to name just a few of this year's offerings.

Other programs throughout the summer are bountiful and spread throughout the region. The Family Naturalist Rafting trip down the Klamath River will take families playing nature games with SFI guides as they explore the river; Birding and Redwood

4th of July Butterfly Count: Eugene-Springfield

June 28, Saturday, 9 am

The first of our two annual butterfly counts will again be organized by veteran count organizer Sharon Blick. On a beautiful warm day last year, three teams tallied 21 species and 644 individual butterflies. The count takes in, Mt. Pisgah, West Eugene Wetlands, Spencer Butte and more. We'll meet at the Campbell Senior Center parking lot (155 High Street, Eugene) at 9:00 am. Pre-registration is required and there is a \$3 fee for participants. To pre-register, please call Sharon Blick at 541-683-4635, or e-mail her at blick@epud.net.

Ecology will take people into the grand redwood ecosystem to go birding and botanizing at the coast; Three Mountains of the eastern Siskiyou Crest will introduce the novice to the birds, unique geology and botany of the Siskiyou crest; Baldface Creek backpacking trip will take participants off-trail into remote wildlands to explore the effects of the Biscuit Fire on the remarkable geologic and botanical diversity found just south of the Kalmiopsis Wilderness. These are just a small sampling of the many adventures planned this summer.

To learn more about our courses or register for a class, please contact us at institute@siskiyou.org, or by phone at 541-592-4459 or 482-1417. The course list can also be viewed and a registration form downloaded online at www.siskiyou.org.

Berry Botanic Garden Events

Portland's Berry Botanic Garden has a number of native plant oriented events. To register or to get more information on these and other events at the garden call Kris at 503-636-4112x22 or visit their website at http://www.berrybot.org.

Saddle Mountain Wildflower Hike June 19, Thursday, 9 am - 5 pm

Some of the best vistas in the Coast Range can be seen from Saddle Mountain, including views of four Cascade Range volcanoes and the ocean at the mouth of the Columbia River. This botanically rich area supports plants such as goatsbeard, false Solomon's seal, cinquefoil and nodding onion. In particular, Carolyn hopes to see a favorite, the Sitka mistmaiden. The hike is 6 miles round trip and gains 1600 feet. Plan for a full day of hiking and botanizing—we'll be stopping to look at plants but have some distance to cover too. \$10.

Conservation Biology of Kincaid's Lupine and Fender's Blue Butterfly

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butterfly is presumed to be similar to that of other subspecies of *Icaricia icarioides*. Adults lay their eggs in May and June, and hatched larvae feed on the leaves of the lupine host plants until reaching their second instar phase in early summer. They then drop to the leaf litter near the base of the host where they remain in extended diapause until March or April of the following year. At that point, they resume feeding, continue growth through additional phases, pupate, and emerge as adult butterflies in April and May (U.S. Fish and Wildlife Service, 2000).

The distribution of Fender's blue butterfly is entirely restricted to the Willamette Valley. It was once considered extinct, as no observations of the species were made for over 50 years, from the last recorded sighting in 1937 until its rediscovery in 1989 at McDonald Forest in Benton County,

TOM KAYE

Kincaid's lupine, threatened host plant of Fender's blue, an endangered butterfly.

Oregon (Hammond and Wilson, 1993). In January of 2000, the U.S. Fish and Wildlife Service officially conferred endangered status to Fender's blue butterfly and listed Kincaid's lupine as a threatened species (U.S. Fish and Wildlife Service, 2000).

The Bureau of Land Management and the Institute for Applied Ecology have been active in efforts to preserve Kincaid's lupine, work that translates into habitat conservation for Fender's blue butterfly. I was able to participate in a number of these long-term projects and became well acquainted with both Kincaid's lupine and Fender's blue over the course of my IAE/NPSO internship.

Early in the season, I helped plant greenhouse-grown starts of Kincaid's lupine in a prairie restoration site in the West Eugene wetlands as part of an experiment designed to measure the effects of different treatments on the success of lupine seedlings. Treatments included fertilizer application and competitor exclusion (weeding). As the

season progressed, I also participated in a number of Kincaid's lupine monitoring projects throughout the Eugene wetlands. For all projects I collected data on leaf number and inflorescence number that were used to assess lupine abundance. In addition, I recorded the number of Fender's blue eggs observed on the lupine leaves as a measure of butterfly utilization and reproduction. By the end of the summer, I had counted many thousands of lupine leaves and hundreds of butterfly eggs. These data are used to track the success of lupine starts transplanted in previous years, assess changes in natural populations of Kincaid's lupine and Fender's blue butterflies over time, establish a baseline for future management treatments of natural populations such as mowing to control invasive weeds, and measure the effects of planting methods on lupine survivorship in experimental populations.

Although the work in which I participated is ongoing and



Fender's blue butterflies lay their eggs on the undersides of Kincaid's lupine leaves.

involves the analysis of data collected over a period of several years, important information has already been gained from these and similar studies. Data from natural populations indicate that Fender's blue egg numbers are highly correlated with Kincaid's lupine leaf density and inflorescence number. Additional data from a natural population of Kincaid's lupine indicate a positive response in the lupine population to mowing efforts to control the invasive Himalayan blackberry (Rubus discolor) (Kaye, 2002). Germination assays performed on Kincaid's lupine indicate that a combination of scarification and cold stratification of seeds produces optimal germination rates (Kaye and Kuykendall, 2001), important information for propagation of the species that can be implemented in restoration programs.

One exciting new discovery in which I participated this season was the colonization of recently-established Kincaid's lupines at a restoration site by Fender's blue butterfly. The closest known population of the butterfly from which the colonists may have migrated was approximately 2 km away. Conservation biologists are excited about this finding because it provides support for the hypothesis that new colonies of the lupine can successfully attract butterflies and therefore bolster populations of both species.

Much work remains to be done as continued on next page

Conservation Biology of Kincaid's Lupine and Fender's Blue Butterfly

continued from page 68

both of these rare species face continuing threats from habitat loss due to human activities, encroachment of habitat by invasive non-native plants, and change in community structure due to natural plant succession from grassland to forest in the absence of disturbance such as fire (U.S. Fish and Wildlife Service, 2000). Hopefully, continued conservation and management efforts can restore populations of Kincaid's lupine and Fender's blue butterfly to stable, sustainable levels and will preserve these unique vestiges of native Willamette Valley grasslands.

I'd like to acknowledge the BLM for their support of research performed this summer on Kincaid's lupine and other rare plant species, with special thanks to Jean Battle of the Eugene District BLM for the time and resources she contributed to our efforts.

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NPSO Items for Sale

Vascular Plants of Lane County, Oregon: An Annotated Checklist by C. Simpson, J. Koenig, J. Lippert, R. Love, B. Newhouse, N. Otting, S. Sundberg, D. Wagner, and P. Warner. Emerald Chapter, NPSO. This new county checklist includes more than 1,740 species and varieties representing 39 percent of the 4,460 plants currently recognized by the Oregon Flora Project at Oregon State University. It also includes a color map of Lane County's five major ecoregions; and information about rare and endangered species, noxious weeds, and escaped cultivated plants. Information is included for every species on habitat, ecoregion, occurrence frequency, and native or non-native origin. To order, send \$15 payable to Emerald Chapter, NPSO to Lane County Checklist, Emerald Chapter, NPSO, PO Box 902, Eugene, OR 97440-0902.

NPSO Membership Directory lists names, addresses, phone numbers, and e-mail address of NPSO members (April 2003). Available from Jan Dobak, 2921 NE 25th Avenue, Portland, OR 97212-3460. **\$3 postpaid.**

Camas Tee Shirt from Cheahmill Chapter. Beautiful moss green or tan tee shirts with botanical drawing in color of *Camassia quamash* by Carlton, OR artist and Cheahmill chapter member Marilynn Karbonski. Short sleeve, high quality, **\$15 plus shipping**. For ordering information call 503-852-7230, or send order to PO Box 291, Carlton, OR 97111.

The "Atlas of Oregon Carex" was NPSO's first Occasional Paper. The Atlas has 128 location maps, one for each Carex taxon in the state of Oregon. Also included are a synonymy, fun facts about sedges, a history of the project, and Oregon geography maps. **Price: \$5.**

"Louis F. Henderson (1853-1942): The Grand Old Man of Northwest Botany" by Rhoda M. Love. NPSO's second Occasional Paper is the only existing publication with detailed coverage of the long and fascinating life of this John Muirlike western character. Included: 56 pictures,133 notes, chronology, list of plants named for Henderson. Third printing nearly sold out. Order your copy today! Price: \$10.

To order either or both Occasional Papers, send check for the appropriate amount (made payable to NPSO) to: Occasional Papers, Native Plant Society of Oregon, PO Box 902, Eugene, OR 97440-0902.

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

Discover the Beauty and Mystery of Imperiled Native Plants

New web site provides photos and profiles of more than 600 rare plants

The Center for Plant Conservation has launched a new Web site that provides comprehensive information about the country's native, imperiled plants.

The plant profiles, available at www.centerforplantconservation.org, include photos of plants in the National Collection of Endangered Plants. Each profile contains a description of the plant, its distribution and conservation status. A complete bibliography follows each plant profile, and the pages contain more than 5,000 references.

"We are delighted to maintain such a vast educational resource on our Web site," said Kathryn L. Kennedy, Ph.D., president and executive director of the Center. "The Web site gives people throughout the world the opportunity to learn about the imperiled plant resources in the United States."

Each plant profiled is included in the Center's National Collection of Endangered Plants. The Collection, one of the largest of its kind in the world, contains plant material for more than

Tanya harvey

The deep red flowers of Ribes lobbii, Gummy Gooseberry, resemble little fuchsias.

600 of the country's most imperiled native plants. An important conservation resource, the Collection is a backup in case a species becomes extinct or no longer reproduces in the wild. It's also an important resource for the scientific study of plant rarity, rare plant life cycles and rare plant storage and germination requirements. The Center offers donors the opportunity to make a personal investment in plant conservation by sponsoring a plant in the National Collection.

Chicago Botanic Garden, partnering with the University of Illinois – Chicago, coordinated the project. The Center's participating institutions, located across the country, supplied

content and photographs for the profiles. Funding for this project came from the Institute of Museum and Library Services.

The Center for Plant Conservation is dedicated solely to preventing the extinction of America's imperiled, native flora. The center is a network of more than 30 of America's leading botanical institutions. By conducting conservation programs in horticulture, research, awareness and information exchange, the center is striving to save America's rarest plants from being lost forever.

For more information about the Center for Plant Conservation, please visit the Web site at www.centerforplantconservation.org.

Plants of the Lewis and Clark Expedition Lecture and Book

June 7, Saturday, 10:30 am, Fort Clatsop National Memorial near Astoria

Retired U.S. Forest Service ecologist and past president of the Montana Native Plant Society, H. Wayne Phillips will present a slide program, The Plants of the Lewis and Clark Expedition. Attendees will trace the route of the 1804-1806 expedition, through the six ecoregions through which Lewis and Clark passed: the Eastern Deciduous Forest, the Tallgrass Prairie, the High Plains, the Rocky Mountains, the Columbia Plains, and the Pacific Forest Region. Mr. Phillip's presentation will include photos of the landscape along the Lewis and Clark Trail and a sampling of the wildflowers and other plants Meriwether Lewis collected or described in his journals. He will be available to sign copies of his newly released book, *Plants of the Lewis and Clark Expedition*, following the program. For more information contact Nancy Eid at 503-861-2471 x 445.

Plants of the Lewis and Clark Expedition

ISBN 0-87842-477-6, \$20.00 paperback, Mountain Press, 800-234-5308.

In his book Phillips has painstakingly traced the path of Lewis and Clark, searching for and photographing the plants the expedition members collected as they explored the American West. With excerpts from the journals and nontechnical descriptions, *Plants of the Lewis and Clark Expedition* mixes history with botany and invites readers to see the wildflowers, shrubs, and trees as the explorers first saw them, from indigo bush in Missouri to feather boa kelp at the mouth of the Columbia River. Phillips has organized the plants into six ecological and geographical regions: Eastern Deciduous Forest, Tallgrass Prairie, High Plains, Rocky Mountains, Columbia Plains, and Pacific Forest. The book includes 315 color photographs, 10 nineteenth-century sketches of Lewis and Clark's plant specimens, an overview of how the specimens were preserved and their two-hundred-year post-expedition history, an appendix summarizing each specimen's history, a map of each region showing the section of trail where Lewis and Clark found each plant, a glossary, bibliography and index.

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It's wildflower season—a time to discover the botanical treats that are now flowering throughout the state. The Oregon Flora Project is working to provide you with accurate names, descriptions, maps, and photos of Oregon's plants—information that will contribute to your understanding and appreciation of our flora. Your help in this effort, whether through contributions of species lists, photographs, or monetary donations, makes a big difference! For more information on how to participate, contact Linda Hardison

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If you need a ride to the annual meeting or have extra space in your car, please contact one of the following people:

Northern Willamette Valley Skip Haak 503-460-3198 skip@nrs-net.com

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