



Bulletin

of the

Native Plant Society of Oregon

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

VOLUME 38, No. 2

FEBRUARY 2005

Field Research Grant Report

Common Garden Studies to Support Golden Paintbrush Reintroduction in Oregon

by Beth Lawrence

Background

Golden paintbrush (*Castilleja lewisii*) is a federally listed threatened species which has only eleven populations remaining within its historic range. Although populations once extended from the coastal bluffs and islands of British Columbia to the Willamette Valley of Oregon, this species is thought to have been completely extirpated from the state of Oregon and from southwestern Washington. Golden paintbrush has limited

capacity for natural dispersal and colonization of new sites, necessitating a strategic reintroduction plan that has been prepared to support the long-term viability of this beautiful Pacific Northwest endemic (Caplow 2004). Establishment of new populations within the species' historic range, including Oregon, is a top priority for its recovery (USFWS 2000).

This charismatic species is cousin to other members of the genus *Castilleja*, known to many as "Indian paintbrush" and is a member of the figwort family (Scrophulariaceae). There are approximately 200 species of *Castilleja*, many of which live at higher elevations in subalpine environments. Like other members of the genus, golden paintbrush is a hemi-parasite, connecting its roots directly to the root systems of other plants via haustoria (a physical connection between plant roots) allowing it to acquire water and nutrients from other plants. This species is considered to be a hemi-parasite, or half-parasite because it can grow successfully without a host. Greenhouse studies have shown, however, that when provided with a host (such as *Festuca roemerii* and *Eriophyllum lanatum*), the golden paintbrush is more likely to flower and has greater total stem length (Kaye 2001b). As its name implies, golden paintbrush has lovely golden bracts, which envelop less conspicuous greenish flowers. The eleven remaining

golden paintbrush populations are found primarily on sandy soils of glacial origin. Ten of these populations are found on grass dominated coastal bluffs and prairies of islands in British Columbia and Washington State. Only one inland prairie population remains in Thurston County, Washington.

Historically, this species has inhabited the native prairies of the Pacific Northwest, the majority of which have been lost due to agricultural conversion and development. At least six populations are known to have occurred in Oregon's Willamette Valley (in Linn, Marion, and Multnomah Counties). Golden paintbrush has not been seen in the state in over 65 years; the most recent herbarium specimen from Oregon was collected in 1938 from an upland site in Linn County. Unfortunately, the herbarium records do not explicitly state where these historic populations occurred. For instance, one specimen collected by Peck in 1910 denotes the habitat and location as "Damp open ground, Salem." Undoubtedly, the geographic boundaries of Salem today differ from those of 1910, and it is not clear from the habitat description what the vegetation community or soil consisted of.

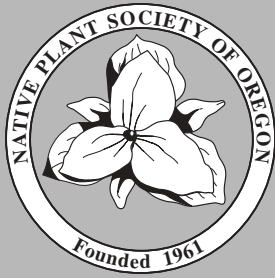
Common garden studies

An important issue in conservation biology is the origin of plant source

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Native Plant Society of Oregon

World Wide Web

<http://www.NPSOregon.org>

E-mail Discussion List

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

General Business Address

P.O. Box 902

Eugene, OR 97440

or correspond directly with Officers and Committee Chairs listed on the inside of the back page.

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

Native Plant Appreciation Week

Planning for Native Plant Appreciation Week (NPAW) is underway. Special activities will be held between May 1 and 8, 2005. What will your organization do to participate? In case you have forgotten, this week is intended to be a celebration of Oregon's great botanical diversity and of the native ecosystems that foster them. At this point I would like to encourage NPSO chapters and other organizations to begin submitting their tentative plans for the event. Our hope is to publicize NPAW as much as possible, so early planning and coordination will be important factors in extending the reach of our programs. Even if you haven't finalized any of the plans, it would still be helpful to know whether your group is interested in participating in NPAW. Following is a list of information that would be helpful if submitted to me as soon as possible.

- Organization Name
- Contact Person
- Contact Phone
- Contact E-mail
- Contact Address
- Organization's Website
- What activities do you plan for the week of May 1st?

Send completed questionnaires to:

Matt Blakeley-Smith

812 SW 10th St.

Corvallis, OR 97333

mattbs@peak.org

If you have any further questions, please contact me by phone at 541-753-1091.



TANYA HARVEY

Sierra wood fern, (*Thelypteris nevadensis*, left and front) and *Lady fern* (*Athyrium filix-femina*, right) are both deciduous ferns of moist shady areas. Despite its name, *Lady fern* has a much more disheveled appearance than the more elegant and much less common *Sierra wood fern*. Crescent Mountain, Linn County.

State

June 24-26, Friday - Sunday

Annual Meeting: The Umpqua Valley chapter will host the Annual Meeting at the Phoenix School on Diamond Lake Blvd. in Roseburg. Look for more information and registration materials in upcoming issues of the *Bulletin*.

Blue Mountain

The Blue Mountain chapter meets during the fall-spring months the first Monday of the month through May, at 7:00 pm, in the Community Meeting Room at the Pendleton City Hall; enter the back door of City Hall at the SE end of the building. Call Bruce Barnes for more information, 541-276-5547.

February 7, Monday, 7:00 pm

Meeting: Wildflowers of the Bar M area, a slide presentation by Jerry Baker.

March 7, Monday, 7:00 pm

Meeting: To be announced.

April 4, Monday, 7:00 pm

Meeting: Plants of the Lewis and Clark expedition. Charlie Johnston of Baker City, recently retired Area Ecologist for USFS, will give this slide presentation.

Cheahmill

February 24, Thursday, 7:00 pm

Meeting: Ice Age Mammals of the Willamette Valley. William Norton Orr, UO Professor and Director of the Condon Museum of Paleontology in Eugene will discuss the latest developments in the emerging picture of the biota that thrived in the Willamette Valley Pleistocene environment. A team of international paleontologists and archaeologists have been gathering many mammalian fossils in the valley which are helping to complete the picture of this fascinating chapter in

Oregon's pre-history. Carnegie Room, McMinnville Library 225 NW Adams St., McMinnville. For more info contact Susan Williams 503-538-1865 or helgesusan@comcast.net

Corvallis

February 14, Monday, 7:30 pm

Meeting: Adaptations of Oregon Native Plants. Tanya Harvey will show slides and talk about some of the many ways our native plants have adapted to deal with such things as the climate, pollinators and reproduction. Tanya is

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. Dogs are not allowed. 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.

an artist and the current editor of the NPSO *Bulletin*. Avery House, Avery Park, Corvallis. For more information contact John Syring at 541-752-0414.

Second Annual Corvallis Chapter Spring Plant Hunt!

Looking for the first flowering perennial native plant of 2005 growing in a natural setting (no parking lots, landscaped yards, etc.) within the confines of the Jackson-Frazier wetland. Photo documentation and correct identification required, please email/get photo no me no later than March 13th, 5pm. Contact: John Syring, syringj@science.oregonstate.edu, 541-752-0414. To the victor the spoils: A gorgeous plant press and a gift certificate to Willamette Gardens!

Emerald

February 6, Sunday, 11:00 am

Field Trip: Winter Twig Walk. Enjoy a brisk winter walk led by Botanist Dr. Rhoda Love in beautiful surroundings and learn to identify deciduous trees and shrubs when leaves and flowers are absent. This event is co-sponsored by Mt. Pisgah Arboretum and NPSO. Free to NPSO members; \$3.00 suggested donation to Arboretum for others. Cider and cookies provided. Bring handlens and illustrated book, *Winter Twigs* by Gilkey and Dennis if you have it. For more information call the Arboretum at 541-747-3817. Meet at 11:00 am at the Mt. Pisgah Arboretum visitors center, return by 1:00 pm.

February 13, Sunday, 10:00 am

Field Trip: Lichen Identification Walk on Blanton Heights. Daphne Stone will teach lichen ID on a 200-acre parcel of undeveloped land on Blanton Heights. Bring hand lens and wear boots. Meet 10:00 am at South Eugene High School. We'll return to Eugene by 2:00 pm. For more information, call Dave Predeck at 541-345-5531.

February 28, Monday, 7:30 pm

Meeting: Pining for Pines. John Syring, a student of *Pinus* phylogenetics, will be giving a presentation covering the important facets of this remarkable genus. The latter half of the hour will be devoted to hands-on identification of West Coast pines. John has undergraduate and masters degrees in Forest Ecology from the University of Michigan. He did plant surveys with the US Forest Service for 4 years before starting the PhD program at OSU. He is working with Aaron Liston and Richard Cronn, and is due to graduate in 2006. Room 115, Science Building, Lane Community College, 4000 30th Avenue East, Eugene. For more info call Dave Predeek at 541-345-5531.



TANYA HARVEY

The puzzle-piece-like bark of the Ponderosa Pine (Pinus ponderosa) is very distinctive.

March 28, Monday, 7:30 pm

Meeting: Forests, Fire, and Politics: Lessons from the Wild Siskiyou.

Rolf Skar of the Siskiyou Regional Education Project has recently returned from Washington DC, where he and others successfully lobbied Congress to modify harmful salvage plans for the Bisquit Fire region. He will discuss special qualities of the wild Siskiyou, current political issues and fire ecology. For more info call Dave Predeek at 541-345-5531. Room 115, Science Building, Lane Community College, 4000 30th Avenue East, Eugene.

High Desert

For information on the High Desert Chapter contact Berta Youtie at 541-447-8166.

Klamath Basin

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

Mid-Columbia.

Jerry Igo is currently recuperating from bypass surgery and looking forward to enjoying the spring wildflowers.

February 2, Wednesday, 7:30 pm

Meeting: Believe it or not the first wild flowers are blooming. Learn about the bloom progression throughout February, what and where. Also we'll work through our spring field trip schedule. The Dalles Chronicle Meeting Room, 317 E. 3rd St, The Dalles.

March 2, Wednesday, 7:30 pm

Meeting: Winter Twigs or Spring Buds. Learn to identify most of our trees, shrubs and some woody forbs when they bare their souls to the winter winds. Mystery plants welcome. Mike Igo speaker. The Dalles Chronicle Meeting Room, 317 E. 3rd Street, The Dalles.

North Coast

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

Portland

Portland Chapter has a new meeting night: second Thursday of each month!

February 10, Thursday, 7:00 pm

Meeting: Springtime in South Africa. Jan and Dave Dobak will show and tell about a month amid South Africa's springtime botanical wonders. Fireside Room, First United Methodist Church, 1938 SW Jefferson St., Portland.

February 12, Saturday, 9:00 am

March 12, Saturday, 9:00 am

Work Party: Bridal Veil, Columbia Gorge, Old Hwy, with Friends of Columbia Gorge from 9:00 am to 1:00 pm. Meet at Gateway/NE 99th Ave Park and Ride, SE corner of parking lot at 8:30 am or at Bridal Veil at 9:00 am.

March 5, Saturday, 8:30 am

Field Trip: Catherine Creek. The premiere early flower spot in the Gorge, with *Olsynium douglasii* in profusion, *Fritillaria pudica*, *Lithophragma glabra*, several Lomatiums, and many others. Leave at 8:30 am, Gateway/NE 99th Ave. Park and Ride, southeast corner of parking lot. Second meeting place at 9:45 am at Bingen Post Office on SR-14. 120 miles round-trip drive; easy walking 3 to 4 miles, with 500 ft. elevation gain. Call Jan and Dave Dobak at 503-248-9242 for more info.

Siskiyou

February 17, Thursday, 7:30 pm

Meeting: Whitebark Pine in the Eastern Siskiyou. A discussion of whitebark pine on Mt. Ashland, its discovery, identification and natural history. Evidence will be presented that indicates that *Pinus albicaulis* was not officially reported on Mt. Ashland until the summer of 2003, in spite of earlier reports to the contrary by John Leiberg and George Sudworth at the turn of the 20th Century. Speaker, Dr. Frank Lang, is Professor Emeritus of Biology at Southern Oregon University and long time leader in the NPSO. Room 171, Science Building, Southern Oregon University in Ashland. For more information call Cynthia MacLaren at 541-482-0899.

Umpqua Valley

February 10, Thursday, 7:00 pm

Meeting: Wildflowers of Death Valley. Dana York of the US Forest Service was employed in Death Valley before coming to Oregon and will give a presentation on the wildflowers of

Candidates for NPSO Board Positions

The NPSO Nominating Committee offers the following list of candidates for the State offices. Additional candidates' names may be submitted (with their permission) by any group of five (5) or more members. The Ballot will be mailed with the April Bulletin and must be returned to the Ballot Counting Committee postmarked by May 1, 2005. Newly elected individuals assume office during the Annual Meeting.

President:

Kelli Van Norman (Portland) grew up in the mountains of south-western Oregon hiking and learning the native flora through 4-H Forestry. She enjoys botanizing throughout Oregon. Kelli earned a B.S. in Geography from the University of Oregon, an M.S. in Forest Science from Oregon State University, and currently works for the Bureau of Land Management in Portland. Kelli was NPSO Secretary for three years prior to being elected NPSO President last year. She serves on the budget and strategic planning committees and is active in the local Portland Chapter.

Vice-President:

Rhoda Love (Eugene) has been a member of NPSO since 1973. In the past she has been both State President and State Secretary. She is retired from botany teaching after 30 years at Lane Community College in Eugene, and volunteers for the Oregon Flora Project at OSU. She is Editor of the *Oregon Flora Newsletter*, on the editorial board

of *Kalmiopsis*, and the author of NPSO Occasional Paper #2 on the life of L.F. Henderson. She works hard for the conservation of plants and ecosystems, and her motto is "Flowers Forever."

Secretary:

Leslie Rossmell (Portland) served as NPSO Secretary in 2004 and is a Masters student in Environmental Science at WSU Vancouver (WSUV). Leslie is working under Professor Cheryl Schultz on a prairie restoration project for the endangered Fender's blue butterfly and threatened Kincaid's lupine at The Nature Conservancy's Willow Creek Preserve in Eugene.

Treasurer:

Candice Guth (Portland) is the Finance Director for Oregon Natural Resources Council. She is a CPA in Oregon and has worked for non-profits since 1990. Candice has been State Treasurer of NPSO for three years. Studying native plants and birds are her hobbies.

Directors-at-large:

Jan Dobak (Portland) has been a member of NPSO since about 1982. She served as the *Bulletin* Editor for about 5 years (starting when it was still typed by hand and ending after it was computerized); membership chair for 12 years; and now serves on the membership and budget committees. Botany has been her favorite hobby since taking a field botany class in college.

Darlene Southworth (Ashland) received her B.S. and M.S. in botany from the University of Michigan and her Ph.D. in Botany from the University of California, Berkeley. She taught biology at Southern Oregon University for 22 years and is now retired and continuing research on mycorrhizas of Oregon white oaks. Darlene has been a member of the Siskiyou chapter since 1979, was chapter president a long time ago, and more recently served as conservation chair. She is currently West-side conservation chair for NPSO.

Kareen Sturgeon (McMinnville) is in her 24th year as Professor of Biology at Linfield College where she teaches Systematics of Flowering Plants, Plant Diversity & Ecology, Plants & Society, and Evolution. She received her Ph.D. in Biology from the University of Colorado, Boulder and has done research in arctic Alaska and in forest ecosystems throughout the western US. Most recently, she and her students have been monitoring changes in native and introduced vegetation following prescribed burns at Deer Creek Park, a 23-acre prairie that harbors remnant populations of Willamette Valley endemics, including Kincaid's lupine. She has taught numerous field-based courses and regularly leads hiking/botanizing tours to Switzerland through Linfield College's alumni travel program.

NPSO Calendar

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Death Valley. Mercy Education Bldg., 2459 Stewart Parkway, Roseburg. The committee for the 2005 NPSO Annual Meeting will meet at 6:00 pm prior to our regular meeting. For more information call Ron Hatt or Judy Kent at 541-863-7024.

Willamette Valley

February 24, Thursday, 7:00 pm

Meeting: Oregon Native Plants In the Heath family. Wilbur Bluhm, Professor Emeritus of the Oregon State University Extension Service and horti-

culture expert on plant species native to Oregon, will show slides and discuss plants in the Ericaceae or heath family—one of nature's most widespread and interesting plant families. Members of the Ericaceae include manzanita, salal, rhododendron, laurel and huckleberry. 7:00pm to 8:30 pm at the Straub Environmental Learning Center, 1320 A Street NE, Salem (right next to Olinger Pool). The program is free and open to the public. For more information, contact 503-399-8615.

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. For more information or to register call 541-747-1504.

Lichen Walk

February 5, Saturday, 10am – noon

Come explore these unique organisms with local expert Daphne Stone on an informative walk for all levels of expertise. Discuss the ecological importance of lichens in Oregon forests and woodlands. Suggested donation: \$3 non-members/Members free.

Winter Twig Walk

February 6, Sunday, 11am – 1pm

Ever wonder what plants you're looking at in winter? Join Dr. Rhoda Love and learn to identify trees and shrubs without their characteristic leaves. Hand lenses and warm drinks provided. Bring a snack/lunch and *Winter Twigs* by Gilkey and Packard (recommended, not required.) This event is co-sponsored by the Native Plant Society of Oregon and is free for NPSO members. Suggested donation \$3. Free for MPA and NPSO members.

Winter Watercolors

February 12 & 19, Saturdays, 1:30 – 3:30 both days

Create close-up landscape compositions with a personal touch! Join local painter and teacher Merit Ferrell and learn to see and depict details in the beautiful scenery here at the Arboretum. Pre-registration required. Fee: \$35 non-members/\$30 members. Half price for one day only.

Sketchbooks: Documenting Travels

February 27, Sunday, 1 – 4 pm

Join Kris Kirkeby and learn to use subtle hints and color to depict the special places you have visited. Pre-registration required. Fee: \$20 non-members/ \$15 MPA members

Marion SWCD Native Plant & Tree Sale

February 11, Friday, 10 am – 6 pm
February 12, Saturday, 9 am – 3 pm
1550 Market St. NE, Salem

The Marion Soil and Water Conservation District will hold its Third Annual Native Plant & Tree Sale. Due to the popularity of our 2004 sale, the location has been moved to the Salem First Church of the Nazarene at 1550 Market St. NE on the corner of Market and 16th. Native plants help to enhance property value and provide food and shelter for birds and other wildlife. Also, once established, they require less water and maintenance since they are already adapted to our climate and soils! At the sale, we will feature great prices on bareroot plants and trees including Douglas Spirea, Nootka Rose, Pacific Madrone, Red & White Alder, Vine Maple, and Red-Flowering Currant. Plants will be sold on a first come, first serve basis. For questions and a list of the available plants, please call the Marion SWCD office at 503-391-9927 or check our website: www.open.org/marಿಸwcd.

4th Annual Siskiyou Environmental Film Festival

February 18 – 20 (Friday-Sunday)
Havurah Sanctuary
185 Mountain St., Ashland

"Bringing award-winning films from around the region and around the world"

The Siskiyou Environmental Film Festival, sponsored by the Siskiyou Project is proud to present over 20 documentary and animated films showing people making a difference. There is hardly anywhere else in Oregon you can go to see these films which, generally speaking, do not get aired on PBS or other major networks. Most corporate-sponsored media will not cover these issues in depth, if at all.

For a glance at films from last year's film festival go to http://siskiyou.org/get_involved/happenings/seff.cfm We are accepting film submissions in DVD and miniDV, contact justin@siskiyou.org For all other inquiries, contact lisa@siskiyou.org Mail submissions to: Siskiyou Project 9335 Takilma Rd., Cave Junction, OR 97523. For more information contact Justin or Lisa of the Siskiyou Project at 541-592-4459.

ONRC Events

Oregon's Threatened Wildlands

March 2, Wednesday, 7:00 – 8:30 pm
100 Willamette Hall, University of Oregon, Eugene

Oregon Natural Resources Council and the University of Oregon's Outdoor School will host a slideshow and book signing with author Andy Kerr.

His new book, entitled *Oregon Wild: Endangered Forest Wilderness*, explores our state's beautiful and threatened wild lands. Kerr, a veteran in the fight to protect Oregon's wild lands, will be joined by ONRC's Executive Director Regna Merritt and other conservationists. Stop by this free event with your friends to enjoy an educational and entertaining evening. Oregon's wild lands provide our communities with clean water to drink and outstanding opportunities to hike, camp, hunt and fish. More importantly, our state's remaining wild lands are a living legacy for future generations. For more information, please contact Chandra LeGue at ONRC's Eugene office (541-344-0675 or cl@onrc.org). Copies of the book will be available for purchase at the event, and online at www.oregonwild.org/OregonWildBook

North Mountain Park Nature Center Events

For more information please call the North Mountain Park Nature Center at 541-488-6606, or register online at <http://ashlandparks.recware.com>.

Permaculture: Designing Garden and Home for Sustainability **February 5, Saturday, 10 am – 1 pm**

This workshop will include lecture, slide show, group exercises, and demonstrations. Beginning with an introduction to permaculture ethics and principles. Participants will explore the core design concepts. You will have the opportunity to see how permaculture has been applied in other settings, practice your skills at reading the landscape and plan ways to apply permaculture in your home and landscape. Handouts will be made for you to take home and books will be available for your perusal. Limit: 22. Age: 16 and up. \$5/person. Registration required.

Volunteer Orientation & Open House **February 8, Tuesday, 2 – 3 pm**

Have fun and meet people with similar interests while providing a service to the community. This orientation will introduce you ways that you, your family or organization can help out at N MT Park. We have long-term, short-term or pick-up projects in all facets of the Nature Center operations, from gardening to administration. Volunteers make amazing things happen at N MT Park—come be a part of the team! Refreshments provided. Registration required.

Bulletin Mailing Coordinator Needed

Our present mailing coordinator, Mike Hartman, has served well in this position ever since the *Bulletin* printing moved to Eugene in 2000. Mike wears many other volunteer hats for NPSO including webmaster so we need to find a volunteer to take over this position. We are looking for someone who lives in the Eugene-Springfield area and is willing to put in one day a month (during the next-to-last week of each month) organizing the mailing of the *Bulletin*. To find out more information about the position contact Mike Hartman at 541-485-5202 or webmaster@NPSOregon.org.

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 2005). 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 Marilyn 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 Muir-like western character. Included: 56 pictures, 133 notes, chronology, list of plants named for Henderson. Fourth printing, February, 2004. **Price \$10.00.**

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.

Golden Paintbrush

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material used in establishing new populations. Ideally, plant materials should be collected from the site most ecologically and genetically similar to the reintroduction site as populations may be genetically divergent due to differences in ecological zones (Guerrant 1996, Kaye 2001a). However, the existing populations of golden paintbrush are relatively distant, both geographically and ecologically, from potential restoration sites in the Willamette Valley. In order to facilitate *C. levisecta* reintroduction attempts in Oregon, we are conducting common garden experiments to evaluate the success of various seed sources in field conditions similar to those of potential future reintroduction sites.

Nine golden paintbrush experimental populations or “common gardens” were established in remnant prairies and restoration sites in spring 2004 throughout the Willamette Valley. Each common garden is composed of plants grown from seed from six of

the remaining populations. Plants were grown in a greenhouse for three months prior to outplanting which occurred during two planting events in March and November, 2004. With the help of friends and volunteers, over 2000 golden paintbrush individuals have been planted in Oregon in 2004! These plants were carefully planted into grids at each of the common garden sites. Transplants will likely form haustorial connections with whatever root system they encounter, as this species is not particularly picky about what kind of plant it parasitizes. Each golden paintbrush is monitored periodically, and information about its size and fecundity is recorded. In addition to information about each transplant, I am characterizing each site by examining the soil and vegetation community. Unfortunately, golden paintbrush is not only appealing to the human eye, but also to the palate of many wildlife species, including deer, elk, voles and other rodents. Consequently, the majority of the common gardens have been fenced to keep out large herbivores.



BETH LAWRENCE

Individual flowers are subtended by showy yellow bracts. Golden paintbrush is protogynous—the stigma is receptive before the anthers release pollen.

Initial Results

Field mortality was overall very low during the first growing season—an exciting result in itself! Data from the 2004 growing season indicates that the total stem length produced per plant differs among source population and common garden site. Plants from two particular source populations in Washington produce significantly larger plants and are more likely to flower than plants from other populations. It is not clear at this point why these populations are doing better in Oregon, but it may be related to the high genetic diversity of these populations. Likewise, several common garden sites stand out as initial “winners.” These sites have larger golden paintbrush individuals that were more likely to flower in 2004. The plant communities of these successful sites are largely composed of native prairie species and are found on relatively well-drained soils, while the sites that had lower transplant success are dominated by exotic grasses. The size of the plant at the time of planting is important too. Larger ‘starts’ become larger plants after several months of growth in the field. By following the fates of these plants in the 2005 growing season we hope to determine how the success of golden paintbrush transplants relates to where they came from and how similar the environmental variables of the common garden site are to the source population.

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MATT BLAKELEY-SMITH

Beth Lawrence, a 2004 recipient of a field grant from NPSO, measures golden paintbrush individuals in the greenhouse before transplanting them to common garden sites in remnant prairies of the Willamette Valley.

Thanks!

As a Master's student at Oregon State University, I consider myself very fortunate to be working on such an exciting and satisfying project that provides opportunities for both theoretical and practical applications. Many thanks to my advisor, Thomas N. Kaye, The Institute of Applied Ecology, NRCS Plant Materials Center, Jock Beall (USFWS), and the many volunteers who have helped along the way. This research is partly funded by a National Science Foundation Graduate Research Fellowship and the Bonnie Templeton Award to Beth Lawrence, and a grant from the USFWS to Tom Kaye. A special thanks to the Corvallis Chapter of the Native Plant Society of Oregon for providing a \$750 field grant that has facilitated this research and allowed me to travel down many a dusty road to get to those precious pieces of remnant prairie!



THOMAS N. KAYE

Only 11 populations of golden paintbrush remain in upland and coastal prairies in the Pacific Northwest. Although extinct in Oregon, experimental populations have been established with hopes of reintroducing it to the state.

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Do you love NPSO? Do you live or work near the Portland area? NPSO is looking for someone to serve as our NPSO representative at EarthShare. What is EarthShare? EarthShare is a federation of leading non-profit environmental and conservation organizations that work to promote environmental education and charitable giving through workplace giving campaigns. NPSO receives a large proportion of its annual income from EarthShare. We need a representative that will attend EarthShare meetings (in Portland) every month. For more information about this opportunity, please contact Shane Latimer at slatimer@jsanet.com.

Scott Sundberg, Oregon Botanist, 1954-2004

by Aaron Liston

Scott Sundberg, director of the Oregon Flora Project, died December 30, 2004 of cancer. He had struggled for many years, most of them privately, with the symptoms of multiple sclerosis. Yet it was cancer, only diagnosed in September 2004, which led to his passing.

Scott Donald Sundberg was born on February 10, 1954 in Eugene, Oregon. Scott began his botanical career as an undergraduate at the University of Oregon. Among Scott's early scientific mentors were Prof. George Carroll and his wife, Fannie. Scott was involved in studies at the H.J. Andrews Experimental Forest, where he collected the type specimen of a rare lichen, *Nephroma occultum*. Scott became fascinated with plant taxonomy, and soon was conducting independent study projects in the University of Oregon Herbarium. Scott benefited from working with two herbarium curators: recently-retired Georgia Mason, and newly-hired David Wagner. Scott graduated from the University of Oregon in 1978 with a B.Sc.(Honors) in Biology. From 1978 to 1980, Scott was employed as a botanist for the Bureau of Land Management, Coos Bay District. During that period, he gained considerable experience with the flora of southwestern Oregon. He made numerous noteworthy collections, and discovered new localities for many rare plant species.

In 1981, Scott moved to Austin, Texas, to begin graduate studies at the University of Texas. He worked under the supervision of Prof. Billie Turner, and, like almost of all of Turner's students, Scott turned his attention to the composite family. Scott's taxonomic research in the Asteraceae continued throughout his career. Scott received his Ph.D. in Botany in 1986. His dissertation was entitled "The Systematics of Aster Subg. *Oxytripolium* (Compositae) and Historically Allied Species."

Scott met his wife, Linda Hardison, in Austin. They married in Jakarta, Indonesia on August 13, 1986. In

1986, Scott began a one-year post-doctoral position at Ohio State University, working with Prof. Tod Stuessy. The following year, Scott returned to the Pacific Northwest as Linda began her Ph.D. studies at the University of Washington. Over the next several years, Scott taught courses and conducted plant systematics research in the Department of Botany. From 1991-1994, Scott was a Botanical Consultant for Ebasco Environmental, Inc. in Bellevue, Washington. During that time he conducted rare plant surveys throughout Oregon and Washington.

Scott moved to Corvallis, Oregon in early 1994, and Linda joined him in 1996 after completing her dissertation. Scott was hired to oversee the integration of the University of Oregon and Oregon State University Herbaria. Soon after, Scott initiated the Oregon Flora Project. In 1999, Scott was promoted to a Research Assistant Professor. The same year, Scott and Linda's son Matthew was born.

Scott's 29 scientific publications include taxonomic papers (descriptions of new species, nomenclatural changes, and new classifications), laboratory-based investigations in plant systematics, and treatments for checklists, field guides, and floras. The majority of his publications concern the composite family. In addition, Scott has contributed numerous articles to the *Oregon Flora Newsletter*. A complete list of his scientific publications will appear in that publication.

Scott devoted the last decade of his life to the Oregon Flora Project. As Coordinator, he directed over 230 volunteers and supervised over 60 student and several professional

employees. He established the *Oregon Flora Newsletter*, the Oregon Vascular Plant Checklist, and the Oregon Plant Atlas. It is tragic that Scott did not live to see the completion of his dream, a comprehensive Flora for the approximately 4,500 Oregon plant species. However, his activities created an extremely strong foundation for the continued growth of the Oregon Flora Project. The Flora will serve as an enduring legacy to Scott's commitment to botanical education, and the documentation and conservation of Oregon's unique and diverse flora.

A memorial service celebrating Scott's life was held January 16, 2005 in Corvallis, OR. Memorial gifts in his honor can be made to NPSO-Oregon Flora Project, and mailed to P.O. Box 402, Corvallis, OR 97339.



DENNIS WOLVERTON, THE OREGON STATIST

Scott Sundberg in the OSU Herbarium, 2001

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The NPSO membership year is January to December. If you haven't already renewed for 2005, please look at your address label on a recent *Bulletin*. If it shows 2004 along the top line, we haven't received your renewal yet. Your membership and donations make it possible to carry out more of the many projects that are needed to pursue the goals of NPSO. In return, NPSO brings you field trips, programs, classes, the monthly *Bulletin*, and annual *Kalmiopsis*.

It's also a good time to consider a tax-deductible contribution to our special funds. The Leighton Ho Memorial Award is used for research projects in western Oregon. The Rare and Endangered Plant Fund supports work with our most threatened plants. The Jean Davis Memorial Scholarship is awarded annually to a botany student at an Oregon college or university. You can also include a contribution to the Oregon Flora Project along with your dues.

MEMBERSHIP DIRECTORY TO BE PUBLISHED

The 2005 edition of the *NPSO Membership Directory* will be published in April. If you wish to receive a copy, add two dollars to your renewal payment.

If you wish to be excluded from the Directory or have your address, telephone number or email address withheld from publication in the Directory, please include a prominent note with your renewal form.

Last Chance for Grant Proposals

NPSO will continue to sponsor small field research grants. The objectives of the program are: 1) to stimulate basic field research into the biology and distribution of Oregon's native and naturalized flora and vegetation, particularly in the more remote areas of the state, and 2) to promote native plant conservation through better understanding of Oregon's flora and vegetation and the factors affecting their survival.

For a copy of the program policy and guidelines contact Dan Luoma, Field Research Grants Committee Chair, 3740 NW Harrison Ave., Corvallis, OR 97330, 541-752-8860 or visit NPSO's website, www.npsoregon.org/comm/FRGC.htm. Research proposals are due by March 1.