



# Bulletin

of the

# Native Plant Society of Oregon

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

VOLUME 35, No. 1

JANUARY 2002

**DON'T FORGET  
TO RENEW YOUR  
MEMBERSHIP!**

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### Summer Intern Report

## *Frasera umpquaensis*: a Rare Plant with an Identity Crisis

by Djibo Zanzot, NPSO/IAE Intern

The following is the third in a series of four articles in which NPSO/Institute for Applied Ecology interns discuss their activities during the 2001 field season. In this article, Djibo Zanzot discusses *Umpqua swertia* population biology and nomenclatural synonymy. Internships are jointly funded by NPSO, IAE, and federal dollars. To learn more about this internship opportunity, contact IAE at [kayer@peak.org](mailto:kayer@peak.org) or 541-753-3099. Thanks again to NPSO for contributing to botanical education and work experience.

Tom Kaye, Institute for Applied Ecology, Corvallis, Oregon

*Who bade the sun  
Clothe you with rainbows?  
Who, with living flowers  
Of loveliest blue, spread garlands at your feet?*  
- Samuel Taylor Coleridge, 'To Chamouni'  
alluding to gentians

Botany is a discipline that, since Linnaeus, has been obsessed with the consistent naming of plant taxa, or so I thought until I met the Umpqua green-gentian, or Umpqua *swertia*. *Frasera umpquaensis* is one of several rare plants being monitored by the Institute for Applied Ecology (IAE) on public land in partnership with various federal agencies. In this, the sixth year of monitoring in the Medford BLM district, some interesting new information about the life history of this species has come to light, which I shall present after a discussion of the plant's background and taxonomy.

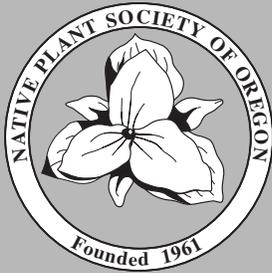
### *Frasera umpquaensis* Status and Background

*Frasera umpquaensis* is currently on the Oregon Department of Agriculture

list of candidate species for protection under the state's Endangered Species Act. The Oregon Natural Heritage Program list puts *F. umpquaensis* in its highest priority category (List 1), as a species that is threatened or endangered throughout its range. Federal agencies recognize the species under various categories, such as Species of Concern (US Fish and Wildlife Service), "sensitive species" (Forest Service), and "special status species" (Bureau of Land Management [BLM]). A conservation strategy has been signed by the latter two agencies, which are monitoring the plant on lands under their purview throughout the range of the species in southwestern Oregon and northern California.

The plant itself is a tap-rooted perennial, attaining a height of over a meter on larger reproductive stalks. Vegetative plants appear as rosettes of oblanceolate leaves, generally under 4 dm long, not unlike a head of lettuce. In reproductive plants, the central stalks will bolt, producing a dense panicle of short-stalked flowers with

*continued on page 8*



## 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](mailto:majordomo@tardigrade.net), with the following in the body of the message: subscribe npsoc

### 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.

### Membership Inquiries Only

Jan Dobak  
2584 NW Savier St.  
Portland, OR 97210-2412

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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.

## IT'S STILL RENEWAL TIME!

The NPSO membership year is January to December. Check your address label on the *Bulletin*. If there's a 01 on the top line, we haven't received your renewal yet.

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.

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 *Kalmiopsis*.

## Advertising Manager Needed for *Kalmiopsis*

**N**ow that *Kalmiopsis* is back on a regular annual schedule, NPSO would like to sell advertising in its pages to help offset some of the journal costs. The Advertising Manager will be a volunteer role, which will entail working with co-editors Cindy Roché and Linda Vorobik and the NPSO state Treasurer to develop standards and prices, then soliciting ads from businesses such as native plant

nurseries and bookstores that feature botany and natural history merchandise. Most of these contacts can be made by mail or e-mail.

If you would like to try your creative skills in public relations and sales, here is a great opportunity to help NPSO. For more information or to volunteer, please contact Cindy Roché at [crupinaqueen@charter.net](mailto:crupinaqueen@charter.net).



*Manzanita branches trace beautiful shadow patterns across the snow near Odell Lake.*

TANYA HARVEY

## State

**January 19, Saturday, 10:00 am**

**Board Meeting:** The next State Board meeting—our all-important budget meeting—will take place in McMinnville, 10:00 am to 2:00 pm. All Board members are urged to attend.

**June 7–9, 2002, Friday, Saturday and Sunday**

**Annual Meeting:** The Siskiyou Chapter will host the meeting at the Green Springs Inn on Highway 66 twenty miles east of Ashland. See the article on the back page and watch for more information and registration materials on our web site and in upcoming issues of the *Bulletin*.

## Blue Mountain

**January 7, Monday, 7:00 pm**

**Meeting: New Year Gathering.** Join us for a “dessert pot-luck”. Bring some goodies, or just come and eat some. Bring some slides of plants you haven’t been able to identify. We’ll have some other slides too, and time to talk about future field trips, etc. 7:00 pm, Small Business Development Center, SE 1st and SE Dorian, Pendleton.

## Cheahmill

**January 24, Thursday, 7:00 pm**

**Meeting: Mid-Winter Social.** Bring your favorite botanical photos, slides, artwork, books, hiking suggestions, propagation advice, etc. and make the acquaintance of people who share your interests! General public welcome. 7:00 pm Carnegie Room, McMinnville Public Library, 225 N. Adams St., McMinnville. For more info contact Susan Williams at 503-538-1865 or helgesusan@attbi.com.

## Corvallis

**January 14, Monday, 7:30 pm**

**Meeting: The Most Fiendish Plant I Know: Botanizing in Corsica.** Loren Russell will give us an exotic slide show on his travels in Corsica at 7:30 pm at the Avery House, Avery Park, Corvallis.

**February 11, Monday, 7:30 pm**

**Meeting: From the Forest to the Sea—The ecology of wood and salmon.** Chris Maser will present a slide show and talk at 7:30 pm at the Avery House, Avery Park, Corvallis. For more information please contact Esther McEvoy at 541-754-0893.

### 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.

## Emerald

**January 26, Saturday, 8:00 am**

**Work Party: OSU Herbarium.** Scott Sundberg needs help at the OSU Herbarium with sorting and mounting of specimens and doing a variety of other tasks. Meet at South Eugene High School at 8:00 am to carpool. Return to Eugene before 4:00 pm. RSVP. For additional information call Dave at 541-345-5531.

**January 28, Monday, 7:30 pm**

**Meeting: Exploring the Jungles of the Yucatan,** by Allen Curtis. The tropical lowlands of southeastern Mexico are experiencing rapid changes as modern man “develops” this area. Our speaker, Alan B. Curtis, has been visiting the Yucatan Peninsula for 20 years. He is a retired forester/botanist who’s been volunteering with a Smithsonian research project in the Yucatan. Get off the tourist route with Alan and visit the land from the coast to swamps to dense forests with their multitude of species—trees, lianas, orchids, bromeliads, wildlife, and Mayan ruins. Room 117, Science Building, LCC main campus (from 30th Ave., go south on Eldon Schafer Drive, park in the parking lot at the top of the hill, and walk down to the Science Building). For more information call Nick Otting at 541-334-4499.

**February 9, Saturday, 9:30 am**

**Workshop: Winter Twigs,** conducted by Rhoda Love and Judith Manning from 9:30 am to 2:30 pm at the Mt. Pisgah Arboretum. The workshop is sponsored by NPSO and the Arboretum. Cost is \$25 for members and \$30 for non-members. Participants are asked to acquire the new *Winter Twigs*, by Gilkey and Packard. Limit of 15 participants. For more information or to register call the Mt. Pisgah Arboretum at 541-747-1504.

## February 25, Monday, 7:30 pm

**Meeting: Gardening with Native Shrubs of the Southern Willamette Valley.** Heiko Koester, a Eugene landscape designer and consultant, will share his knowledge of gardening with shrubs native to the Southern Willamette Valley. He'll give us the nitty-gritty on how to have success with native shrubs and show us his favorite slides of the plants. Room 117, Science Building, LCC main campus. For more info call Nick Otting at 541-334-4499.

## March 9, Saturday, 9:00 am

**Field Trip: Lichen ID.** Learn to identify lichens with Daphne Stone. Meet at South Eugene HS at 9:00 am to pool rides for 18-mile drive to meadow and oak forest near Jasper. Return to Eugene before 2:00 pm. For more information call 541-345-5531.

## March 18, Monday, 7:30 pm

**Meeting: Burning for a Fine and Beautiful Open Country: How and Why the Native People of Southwestern Oregon Burned the Landscape.** Jeff LaLande, archaeologist/historian for the Rogue River National Forest, will discuss the uses of fire by Native American groups for a variety of vegetation and wildlife management purposes. Jeff's focus is south of the Willamette Valley, but some info also

applies to native inhabitants of present-day Lane, Linn and Benton counties.

**Note: 3rd Monday instead of 4th Monday, this meeting only.** 7:30 pm, Room 117, Science Building, LCC main campus. For more information call Nick Otting at 541-334-4499.

## High Desert

For information on the High Desert Chapter, call Stu Garrett at 541-389-6981.

## Klamath Basin

For information on the Klamath Basin Chapter, call David Lebo at 541-883-8393.

## Mid-Columbia

### January 2, Wednesday, 7:30 pm

**Meeting: Scientific Discoveries of the Lewis and Clark Expedition: the Flora and Fauna.** Our own Jerry Igo, Mid-Columbia Chapter president, will show us the final version of the video he has been working on for three years, with many beautiful scenes of the flowers discovered by Lewis and Clark. 7:30 pm at the Columbia Gorge Discovery Center in The Dalles (exit 82 off I-84, and follow signs).

## February 6, Wednesday, 7:30 pm

### Meeting: The "Secrets" Program.

The "Secrets Program" brings the ecology of old-growth forests and shrub-steppe grasslands into 5th grade classrooms, and makes learning science fun, active, and exciting. Join us to hear Kim Burkland, "Secrets" Director, describe the program and give us a demonstration. Even better, call Kim now at 541-387-2274 to volunteer in the classroom or on field trips. (Volunteer training starts January 7 at the Discovery Center.) The meeting is also at the Columbia Gorge Discovery Center. Take exit 82 off I-84 and follow the signs.

## North Coast

For information on the North Coast Chapter call Vivian Starbuck at 503-377-4141.

## Portland

For information on the Portland Chapter, call Dee White at 503-775-2909.

## Siskiyou

### January 17, Thursday, 7:30 pm

**Meeting: Sudden Oak Death.** Sudden Oak Death (SOD) is a disease caused by a recently-discovered pathogen (*Phytophthora ramorum*) that is devastating oaks, tan oaks, and a number of other native trees and shrubs. First detected in California, it has spread to the southwest corner of Oregon. Kim Keirnan works for University of California Cooperative Extension in Marin County doing education and research related to SOD. She will be giving an overview of the disease including its distribution, hosts, symptoms and management. Ellen Michaels Goheen, Plant Pathologist for federal lands in Southwest Oregon, is the USDA Forest Service representative to the Oregon interagency team that is working on SOD. She will cover her work in detection, eradication and monitoring in Southwest Oregon. Room 171, Science Building, Southern Oregon University.



TANYA HARVEY

*Sitka Mountain-ash (Sorbus sitchensis) can be told from Western Mountain-ash (Sorbus scopulina), which overlaps its range, by its duller berries and more rounded, only partially-toothed leaves. Otherwise they are similar with large heads of white flowers followed by bright red berries.*

## Umpqua Valley

January 10, Thursday, 7:00 pm

**Meeting: Survey and Management of Species in the Umpqua National Forest.** At the Douglas County Courthouse Annex. Richard Helliwell, Biologist for the Umpqua National Forest, will present a program on survey and management of species they have found in the forest. He will cover lichens, bryophytes and fungi. They have been photographing, collecting and drying samples. For more information, call Jack Hausotter at 541-863-5347.

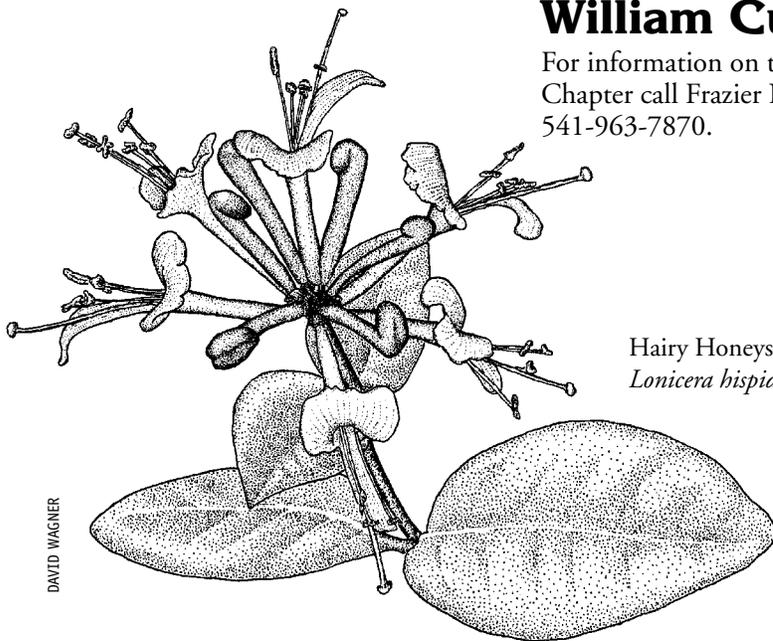
## Willamette Valley

January 14, Monday, 7:00 pm

Note: this is 2nd monday in January  
**Meeting: Bonesteel Park Prairie Restoration.** Susan Morre, Marion County Botanist, will present an update on the Bonesteel Park prairie restoration. She'll report on the results of previous activities, current status, and plans for the future. This project is a focus of our chapter's volunteer efforts, and I'm sure we'll all be pleased with what Susan has to tell us. First United Methodist Church, 600 State St., Salem. Please enter through the State Street door marked "Church Office." For more information, call Karl Anderson at 503-315-7329.

## William Cusick

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



Hairy Honeysuckle  
*Lonicera hispidula*

## Willamette Valley 2002 Nature Calendar Available

**D**ave Wagner, Emerald chapter member and former NPSO president, has once again produced a lovely calendar that every naturalist will enjoy. The calendar is illustrated by Dave with black and white drawings of a number of different Oregon native plants. Lots of valuable information is included such as sunrise & sunset, average temperatures and rainfall, and animal and plant activity for each month.

The calendar is available in Eugene at the Museum of Natural History (University of Oregon campus) and Down to Earth (5th and Olive) or you can send \$15.00 to:

Dave Wagner  
P.O. Box 30064  
Eugene, OR 97403-1064  
541-344-3327

## NPSO Items for Sale

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 is NPSO's second and most recent Occasional Paper, published in 2001. This fascinating, peer-reviewed, 64-page biography includes 56 historic and modern images. It is carefully and exhaustively researched with 133 notes plus chronology, lists of publications and plants named for Henderson. **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.**

**NPSO Membership Directory** lists names, addresses, phone numbers, and e-mail address of NPSO members (April 2001). Available from Jan Dobak, 2584 NW Savier St., Portland OR 97210. **\$3 postpaid.**

**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.

### Mount Pisgah Arboretum Events

Seavey Loop Rd., Eugene

#### January 12, Saturday, 10am-Noon

**Mosses & Lichens Walk** with Daphne Stone. Take a walk in the rain and discover the amazing plants that thrive in Oregon's winter forests. Meet at the Arboretum Visitor Center. Suggested donation \$3.

#### February 2, Saturday, 10am-4pm

**Mosses & Lichens Workshop.** Dive into the miniature world of mosses and lichens with local expert Daphne Stone. Learn ecology, life cycles, and how to identify these unique plants that thrive in Northwestern winters. Fee: \$35 (\$30 MPA members) Pre-registration required at 541-747-1504.

#### February 9, Saturday, 9:30-2:30 pm

**Winter Twig ID Workshop.** Learn how to use Gilkey & Packard's winter key to distinguish our native woody plants from one another all year round with Rhoda Love and Judith Manning. Fee: \$30 (\$25 MPA and NPSO members). Pre-registration required at 541-747-1504.

### Butterfly Talk

#### February 4, Monday, 7:30 pm

**Butterfly Life Cycles and Natural History.** Dr. William Neill, noted photographer, butterfly expert and author of the new book *The Guide To The Butterflies Of Oregon And Washington* (Westcliffe Publishers, 2001) will speak and show slides on the natural history of butterflies and their life cycles at the meeting of the Eugene-Springfield Chapter of the North American Butterfly Association.

The talk will be held in Room 21, Jefferson Middle School, 1650 W. 22nd, Eugene and is free and open to the public. For more information, contact Eric Wold at 541-431-7388.

### Siskiyou Environmental Film Festival

February 8-9

On February 8<sup>th</sup> and 9<sup>th</sup> the Siskiyou Project will host the inaugural Siskiyou Environmental Film Festival in Ashland. The Festival will showcase dozens of films with ecological themes from around the world. Founded on the ethic of environmental responsibility and a spirit of hopefulness, the festival honors film-makers who produce films with ecological themes and activists who work to protect the Earth's environment and to help make our communities sustainable.

The films will be shown in the Meese Auditorium on Southern Oregon University campus and will be followed by discussions led by film-makers and activists. The festival also includes a youth component with films in the Science Building auditorium.

On Friday night the Festival will feature *In The Light of Reverence*, a stunning portrait of land use conflicts over Native American sacred sites on public and private land around the West. Winner of numerous awards, it is directed by Christopher McLeod and narrated by Peter Coyote. According to Robert Redford, "this beautifully crafted film is a wake up call for everyone who cares about the environment and human rights."

Saturday morning will offer workshops by nationally renowned producer John de Graaf who is best known for *Affluenza* and his work with David Brower. Saturday afternoon and evening will feature numerous award winning films such as *Rough & Ready Creek: Mining Threatens an Ancient Landscape* by local activist Barbara Ullian and *Copper Salmon: A Call for Wilderness* produced by Green Fire Productions, the Oregon non-profit media firm founded by international award-winning video and film-makers, Karen Anspacher-Meyer and Ralf Meyer.

The age of armchair citizenship ended in September. The world we want, the world we imagine, won't

come about unless more of us get involved. Come be inspired; come find your passion. Discover what appropriate actions are for many of our ecological problems and how film can aid your cause. Join us for the opening reception on February 8<sup>th</sup> at 6:00 pm in the Meese Auditorium.

Tickets are available in Ashland at the Northwest Nature Shop and the Outdoor Store. For more information or to order tickets, call the Siskiyou Project at 541-592-4459, or e-mail Barry Snitkin, Community Outreach Coordinator, at [barry@siskiyou.org](mailto:barry@siskiyou.org).

### Northwestern California Rare Plant Symposium

February 6-8, 2002

The North Coast Chapter of the California Native Plant Society (CNPS) will present a symposium on The Ecology and Management of Rare Plants in Northwestern California February 6-8 in Arcata.

Topics will include autecology and life history of rare plant species, survey and monitoring techniques, and conservation strategies. The conference will offer perspectives on new research and findings as well as illustrate examples of successful programs, approaches, and case studies. It will also provide an opportunity for biologists, natural resource professionals, planners, and policy-makers in northwestern California and southwestern Oregon to share their knowledge and concerns about rare plant issues.

The North Coast Chapter invites the general public and interested participants of all disciplines to attend.

For more information and a registration form, please visit the North Coast Chapter's website at: [www.northcoast.com/~cnps](http://www.northcoast.com/~cnps).

## Greetings, NPSO Members!

by Bruce Newhouse, President

Happy New Year to native plant lovers everywhere! NPSO is entering our 41st year, after celebrating our 40th at the annual meeting in Corvallis last year. This year's annual meeting will be hosted by the Siskiyou Chapter June 7-9 in and near the new Soda Mountain National Monument in the Cascades of southern Oregon. The scenery and botany are outstanding, and our chapter hosts are as well!

Our state board had some wonderful accomplishments in 2001. One major success is the development and adoption of our new "Guidelines for use of native plants for gardening" (see [NPSOOregon.org](http://NPSOOregon.org)). We hope to produce similar guidelines this year for use of native plants in restoration.

NPSO continues to comment on many issues both locally and at the regional and statewide levels. Several chapters have conservation committees, and our Eastside and Westside Conservation Coordinators lead efforts that are broader in scope, which affect several chapters on either the east or west side of the Cascades. Issues affecting or concerning native plants and habitats statewide are usually dealt with at the state board level, so NPSO's involvement is tiered to the level appropriate for each issue.

There are numerous individuals to thank this year for keeping NPSO running smoothly, including our officers Mike McKeag (VP), Kelli Van Norman (who hit the ground running as our new Secretary), and Eric Wold (Treasurer, resigning to pursue fatherhood). Eric's replacement is Candice Guth, a Portland chapter member with previous experience as treasurer for non-profits. Thank you so very much, Candice!

Our *Bulletin* (Tanya Harvey) and Web Site (Michael Hartman) editors/coordinators continue to improve our quality of service to members and the public. Our web site manager has asked each chapter to work on brief summaries of their chapter activities and local habitats for our state web

page, and consider linking to a web page of their own which could be more elaborate. I hope all chapters will get busy on this, as we have a lot of information out there, and it needs to be shared to a broader audience. E-mail Mike at [webmaster@NPSOOregon.org](mailto:webmaster@NPSOOregon.org).

Our *Kalmiopsis* editors, Cindy Roché and Linda Vorobik, came through for us in a big way this year, producing 2 issues of *Kalmiopsis* to catch us up a bit! Both issues were splendid, and another issue for 2002 is well underway. Their efforts this year on behalf of NPSO were HUGE!

Another outstanding contribution this year came from Rhoda Love, board member-at-large, and member of our new Publications Committee. Rhoda singlehandedly has produced a major fundraising item for NPSO: our second occasional paper, exploring the life of Louis Henderson. Congratulations, and thank you Rhoda for all you have done over the years for NPSO, and are continuing to do! (To purchase this item see page 5 or check the web site.)

Of course, our grants and internship support programs are running along well, as are our chapter field trip and speakers programs. Several chapters have now been involved in working on restoration projects, and some on public native plant gardens—we hope to have these up on the web site soon so that you may visit them!

Every time I visit another chapter I get excited to see all the interest and activity of our members! Regardless, I see so much more we could be doing, especially in the realm of education. As President, I very often am asked for regional lists of native plants and invasive plants. This could be the single most important unfilled need I can identify for NPSO to address for each ecoregion. This kind of information is constantly requested by members and the public alike, and we need to do a better job to pull it together. My challenge to the chapter presidents this year is to coordinate with the other chapters in your

ecoregion, and produce regional native and invasive lists that chapters adopt, and that we can get on our web site. (Ecoregions can be seen on the web site with the native gardening policy.)

Here in Eugene, the Emerald Chapter has an invasives list that has been updated recently, and soon we hope it will get better publicity. A list of native shrubs is underway, and lists of other natives will follow. These native lists are being produced by the Native Gardening Awareness Program, a committee that reports to the chapter board. Although every chapter does not have enough activists for a new committee, there certainly are at least 1 or 2 people with the necessary knowledge (perhaps working with nearby chapters) to put together draft lists for circulation amongst the botanical community. I hope to solicit input and action supporting and/or guiding NGAP (or similar) activities for all chapters at the state board meeting in January. If you have knowledge of native and invasive plants in your area, this would be a great way to assist your local chapter by volunteering!

If you are a new member, or an old member "on the sidelines," NPSO and your chapter need you! Consider offering your time and talents toward our goals of protection/education/enjoyment of Oregon's native flora. As our population continues to burgeon, there will be even greater pressures on the remaining fragments of Oregon's natural heritage. Helping to protect it will bring happiness and satisfaction! (Following our newly-adopted native gardening guidelines is an excellent way to start protecting our native vegetation.)

If you have any suggestions or comments about NPSO and its activities, please feel free to propose them to your chapter president (local ideas) or to me at: [newhouse@efn.org](mailto:newhouse@efn.org) (statewide NPSO issues). I look forward to your comments, and hope you will consider increasing your interest and volunteer involvement with NPSO this year!

## *Frasera umpquaensis*

continued from page 1

generally 4-merous flowers in clusters. The corolla is whitish-green to purplish-green with a small pit in each petal, a fovea, and is nested within a calyx that is cleft, and about the same size as the corolla.

As the name implies, *Frasera umpquaensis* is found in the Umpqua Watershed, with the largest populations found along the Rogue/Umpqua Divide. Populations range from the Shasta-Trinity National Forest in northern California, to Lane County, Oregon, with small populations on Willamette National Forest and Eugene District BLM lands.

"*Frasera umpquaensis*... (is) found within meadows, edge habitats, or small openings within late-successional forest stands..." according to a Late-Successional Reserve Assessment published by the Siskiyou National Forest and available on the web. It prefers elevations of 4000-6000 m, and cool, moist sites that receive winter snow.

### Systematics and taxonomic history

*Frasera umpquaensis* has suffered an identity crisis for many years. To recognize the taxon as *Frasera umpquaensis* is to flout the currently accepted scientific name, *Frasera fastigiata* (Pursh) Heller, according to the Integrated Taxonomic Information System (ITIS). Other synonyms for the species we studied in the Umpqua/Rogue watersheds include *Swertia fastigiata* Pursh, and *Swertia umpquaensis* (Peck and Applegate) St. John. Thus, the student of this beast faces two identity dilemmas: in which genus and which species should it be placed?

*Swertia* is the lumpers' choice for the group. The *Jepson Manual* (1993) does not include *Frasera* as a separate genus, nor does Peck's (1961) *Manual of the Flora of Oregon*. Peck relegated *F. umpquaensis*, a species he described with Elmer Applegate, to *Swertia umpquaensis* (Peck and Applegate) St. John. This was due to a novel treatment of the genus the same year the new species was described (St. John, 1941). In Hitchcock and Cronquist

(1973), the two genera are distinguished based on the style thickness and floral part number; *Swertia* having a thick, short (<1 mm) style and 5-parted flowers, *Frasera* having a slender, long (>2 mm) style, and 4-merous flowers. Unfortunately, gentians (including *Frasera umpquaensis*) can be sloppy accountants, often producing 5-parted flowers within a predominantly 4-merous individual. Either way, whether one prefers *F. umpquaensis* or *S. umpquaensis*, both names are taxonomically valid.

The other issue is whether to recognize *umpquaensis* or lump it with *fastigiata*. *F. fastigiata* is described in Hitchcock and Cronquist as a species of the Blue Mountains in eastern Oregon and Washington, and northeastern Idaho (and, just to add to the confusion, having yet another synonym, *F. thyrsiflora*). But in the *Jepson Manual* (Heckard 1993), James Pringle combines *F. umpquaensis* and *F. fastigiata* as synonyms under *S. fastigiata*. The range of this new interpretation of *S. fastigiata* is considered to be the Klamath Range of California and Oregon, and Idaho, with a big gap in between.



TOM KAYE

*Frasera umpquaensis* (*Umpqua swertia* or green gentian).



TOM KAYE

Flowers of *Frasera umpquaensis* are small (<1 cm across), four-(sometimes five-) petaled, and greenish- to purplish-white with fringed projections.

Thus he combines the plant found in Trinity County CA with the one found in northeastern Oregon and Idaho. Photos of *Frasera fastigiata*, which are also available on the web, show many morphological differences, most notably in the corolla color (which is light purple), but also in the inflorescence, which appears to have longer pedicels than *Frasera umpquaensis*.

While the morphological differences between the taxa may lend credence to the argument that *F. fastigiata* and *F. umpquaensis* should be not be lumped, genetic evidence exists to suggest that the two plants differ. Isozyme analysis, a comparison of the molecular weight of enzymes that perform similar functions, indicates that *F. umpquaensis* and *F. fastigiata* are genetically isolated. Populations within the Klamath range, for example, are much more similar to other populations in that area than they are to those in northeast Oregon and Idaho, at least in the 13 enzymes screened (NFGEL, 1997).

Thus, here I describe *Frasera umpquaensis* as such, contrary to the recommendations of most published floras. While this semantic argument may seem of little importance, it makes a world of difference to those who manage the lands on which the plant occurs. Were the taxon called *Frasera*

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## *Frasera umpquaensis*

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*umpquaensis* lumped definitively with *F. fastigiata*, its management strategy would change dramatically because the latter is more abundant and not threatened. If *F. umpquaensis* was recognized by land managers as only a synonym for *F. fastigiata*, it would probably not receive any protection.

### New observations on pollination and population biology

The populations we monitored were found on lands managed by the Medford BLM district, in the Hobson Horn area. In addition to our census of the plant at three study sites, we made a few other observations about the plant's biology that merit attention.

During our work at one study site, we happened upon a feast of pollination. Bees were present in great numbers, busily servicing *Frasera* flowers, as well as the nearby beargrass (*Xerophyllum tenax*). Here we saw the opportunity to collect more information on the pollination dynamics of *F. umpquaensis*.



TOM KAYE

Inflorescence of *Frasera umpquaensis*.



TOM KAYE

A *Frasera* rhizome showing bud-scale scars that can be counted to estimate plant age.

We collected a representative sample of the bees, and found at least three species of bumblebee (*Bombus* sp.) on *F. umpquaensis*. To determine if these bees were actually moving pollen between *Frasera* flowers and plants, we applied pollen analog dye (PAD) to the flowers on several reproductive stalks. This dye is a dry powder that simulates pollen and comes in several colors that fluoresce under UV light. Bees that come into contact with the dye in flowers can move it from plant to plant the same way they move pollen, even collecting the dye as they would pollen. To track the movement of PAD, we returned to the study site at night with a black light. We observed that the bumblebees had transferred some of the PAD, primarily between flowers on the same plant and also between adjacent plants. Thus, it appears that geitonogamy, the fertilization of female flowers by pollen from a different flower on the same plant, may play a major role in the reproductive biology of this species, but outcrossing to near-by neighbors is also common.

An interesting phenomenon came to light during the census of plants at one of our study sites. We examined the rhizomes of several plants and observed the presence of what appeared to be annual growth rings on the outside of the subterranean stems, appar-

ently arising from bud scars. As the plants produce only one such bud per year, the rings could be counted to give an approximate age of each plant. By carefully excavating the upper portions of the rhizomes, we were able to count these rings on several plants.

Often rings were damaged, difficult to distinguish, or, more commonly, too deep to unearth without harming the plant. Therefore, many of our estimates appeared to be minimum estimates of plant age. Our champion, from a less than exhaustive search, appeared to have at least 89 years to its credit (at the junior end, a small plant had three distinguishable rings). Hence it appears some individuals may be contemporary with the surrounding conifers. The potential for this new area of study, ecologically speaking, seems to bear much promise. Is it possible to deduce what effects historical disturbances have had upon the population? How old can an individual plant live to be? How often do the plants reproduce, and is recruitment tied to major disturbance events?

Observations on the Medford District since 1996 suggest that the plant tends to thrive in disturbed areas. The three sites we surveyed all had evidence of disturbance. One site had been partially logged, and had an abandoned

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## *Frasera umpquaensis*

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skid road running through the heart of the population. At that site, other disjunct plants were found away from the main population along a road, and in a couple of other patches where gaps in the canopy let light through. The second site we surveyed served as an ersatz landfill and munitions dump. The third had experienced a major canopy-clearing fire. Thus information about how the plant reacts to different types of disturbance will inform efforts geared to the management of the species.

I would like to extend a hearty thanks to Dr. Tom Kaye and IAE for providing this invaluable educational experience and to NPSO for providing financial support for this internship. With Tom's help I've greatly depreciated the monetary value of my Hitchcock, broken-in my Jepson, and even sought out a copy of Peck. I've even conquered my fear of keying grasses and DYC's (darned yellow composites, to Bowdlerize).

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Websites with information about *Frasera umpquaensis* can be found along with this article on the website of the Institute for Applied Ecology: <http://www.appliedeco.org>.

## Grant Proposals Requested

The Native Plant Society of Oregon 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.

Persons interested in applying for funding can obtain a copy of the program policy and guidelines from Dan Luoma, Research Grants Committee Chair, 3740 NW Harrison Ave., Corvallis, OR 97330. The material may also be obtained at NPSO's Web site, <http://www.NPSOregon.org>.

Research proposals are due by March 1, 2002.

## Call For Papers

by Cindy Roché, *Kalmiopsis* Co-editor

Two traditional features are returning to *Kalmiopsis*: Plant of the Year and Oregon Plants, Oregon Places.

The plant of the year series, which celebrates an Oregon native species, was begun in volume 2 in 1992 and continued through volume 6 in 1996.

Plant of the year articles discuss identification, biology and ecology, distribution, management, conservation, threats, and include illustrations or photos for a single species and have ranged from one to four pages.

Articles for the Oregon Plants, Oregon Places series are longer, and include descriptions of soils, geology, climate, ecology, plant communities, human history, and species lists.

Because time is relatively short for inclusion in the 2002 issue, prospective authors should contact the editors soon to discuss a submission date. Cindy Roché, 109 Meadow View Drive, Medford, OR 97504, [crupinaqueen@charter.net](mailto:crupinaqueen@charter.net).

## Friends of the Oregon Flora Project



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Contributions to the Oregon Flora Project will help us reach our goal of producing a Checklist, an Atlas of plant distributions, and a new Flora of Oregon. We are grateful for your support—the Flora Project wouldn't exist without it!

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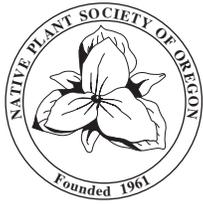
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## NPSO Annual Meeting ~ June 7-9, 2002

**T**his year's annual meeting of the Native Plant Society of Oregon will be hosted by the Siskiyou Chapter. It will be held on Friday, Saturday and Sunday June 7, 8 and 9. Mark your calendar now, and save those days for a grand weekend of botanizing. The focus of this year's meeting will be the new Cascade-Siskiyou National Monument, declared by former President Clinton a year and a half ago. The Monument's continued existence remains problematic as the anti-environmental people in the new Bush administration seek ways to shrink its boundary if not eliminate it altogether. Come and explore this biologically-unique site at the junction of the Siskiyou Mountains and the southern Cascades in the Soda Mountain area of southeastern Jackson County. Discover the diverse and complex collection of

plant species that occur where the floras of the Cascades to the north, California to the south, the high desert to the east and the Siskiyou to the west all converge. Learn why it is so important to continue the fight for the protection of this area.

The annual meeting will be held at Green Springs Inn on Oregon Highway 66 near Green Springs Summit 20 miles east of Ashland. This is where events will occur and meals will be served. Green Springs Inn has some accommodations, and nearby inns, as well as motels in Ashland, can take many more. There is also a good BLM campground nearby for those who choose to camp. There will be further information in the February *Bulletin*, and sign-up forms will be in the March *Bulletin*. Start planning your trip now!

## We Still Need an Eastside Conservation Coordinator!

**T**he Eastside Conservation Coordinator/Chair position is currently vacant, and NPSO needs someone to fill that role. Responsibilities include working with chapters to identify and participate in public input on federal, regional, state, and local conservation-related issues that affect Oregon east of the Cascade crest. Letter writing, research, and occasionally meetings with officials or agency staff are typical duties of the position. A large time commitment is usually not required. If you are interested in serving NPSO in this position, please contact the president at [president@NPSOregon.org](mailto:president@NPSOregon.org).