Plant Charisma –
Honoring Dr. Karl E. Holte with a Lifetime Achievement Award

By Wendy Velman

Every one of us has been faced with that situation of someone we care about leaving this world before we get the chance to tell them how much they have influenced our lives. The opportunity to honor Dr. Karl E. Holte was presented to the Native Flora Workshop Committee and it reminded me that Karl has always said we should make sure to tell those in our lives how much we care before the eulogy! We had the opportunity to tell Karl just how we felt about him and his accomplishments.

For those who have not had the opportunity to experience Karl’s plant charisma, unique brand of humor, stick-with-you teaching style and puns, puns, and more puns, then here is a quick glance at his amazing contributions to Idaho’s native flora and those he has taught to love it. Enjoy!

Dr. Karl E. Holte started his higher education at Waldorf Jr. College, Forest City, IA in 1950. He received his B.A. in History from Augustana College, Sioux Falls, SD in 1954. Karl then joined the U.S. Army serving in Arkansas and Germany as a Specialist 3rd class, Chief of Section, Fire Direction Control until 1956. Karl credits the Army with teaching him that the human derrière can only handle 50 minutes of sitting before needing a break, an attribute all of his students are grateful for! Before getting his M.S. in Biology from the University of Northern Iowa, Cedar Falls, in 1961 he taught four years of Language Arts, Math, Science, Social Studies at Patrick Henry Jr. High School, Sioux Falls, SD. Karl earned his Ph.D. in Botany at the University of Iowa, Iowa City, in 1965 and spent many summers (1961-1967) conducting field work in Iowa, Colorado, and at the NASA Summer Institute in Virginia.

In 1965, Dr. Holte moved to Pocatello, Idaho, to take the positions of Professor of Botany and Curator of the now Ray J. Davis Herbarium, following the retirement of Ray J. Davis himself. These two positions matured into a 34 year career followed by 11 years as Emeritus Curator and volunteer botany instructor. Karl can still be found teaching a special topics course on Friday mornings at the Ray J. Davis Herbarium to a handful of dedicated keying students (and anyone else who might show up). Over the years Dr. Holte has advised six Doctor of Arts students, one Doctor of Philosophy student, and sixteen Master of Science Degree students. He has also mentored numerous undergraduate students who have gone on to state and federal government natural resource careers and private sector consultation. Continued on page 5
Letter from the President

Native Plant Enthusiasts,

Happy Native Plant Appreciation Week! Check out the chapter news sections to see what each chapter has planned for activities in your local area.

Congratulations to the Saw-Wah-Be Chapter for a ‘Blooming Success’ in hosting the Native Flora Workshop. Thank You to all the wonderful speakers that traveled to share their knowledge and to all who participated and made the event such a success.

Congratulations to Dr. Karl E. Holte for his INPS Lifetime Membership award for all his dedication to education and the conservation of Idaho’s native flora.

Field trip season is upon us, try to join as many field trips as you can and remember to join us at Heyburn State park for the annual meeting hosted by the White Pine Chapter. Registration and information is detailed in this issue. They have put a lot of hard work into the planning and it would be nice to have record attendance! I am looking forward to the field trips and fellowship.

The chapters will be performing a survey of their membership to ask the members what they think about moving to an electronic version of Sage Notes. The board feels this could be one way of reducing expenses for the printing while still providing our quarterly newsletter. Members who choose to continue receiving a hard copy will have the opportunity to request this service. For those members who prefer the color version offered on the INPS website, they will help save a few trees and have the option of printing a copy for themselves. Past issues are always available and will not disappear from the website.

I would like to thank Paul Shaffer (INPS Website Editor) for all the behind-the-scenes work that he does to keep the website up and running. He is great to work with and promptly helps get information posted to our site. If you have not visited our website in a while, please take a look at http://www.idahonativeplants.org/. We are always in need of current information and suggestions to make our public view stand out to those who are looking. Paul ran a quick statistic for views on our site and I was surprised to see we had around 60,000 hits with about 26,000 being unique visitors. People are looking; let’s give them a great resource to utilize.

Congratulations to Jonalea Tonn of the White Pine Chapter for finding the ‘stamen’ in the last issue. The book being given this time is reflective of the keying workshops that were held at the Native Flora Workshop. Many people attending the workshops had not seen or used the following reference Plant Identification Terminology by James G. Harris. This has been a wonderful reference for anyone learning to key plants or for those of us who need a refresher. So look for the ‘stamen’ and you might be the winner.

Here’s to a great spring botanizing,
Wendy Velman
INPS President
The Vaccinium Mystique

By Emily Poor

(This article appeared previously in the University of Idaho Stillinger Herbarium newsletter)

_Vaccinium membranaceum_ (thin-leafed huckleberry), is revered more often (and more lovingly, it seems) than almost any other state symbol in Idaho. The state berry eludes both huckleberry gatherers and commercial plant propagators because of its taxonomic and ecological complexity. Genetic studies and propagation trials over the last century have yielded important information for huckleberry harvesters of all kinds.

Huckleberry pickers in our region may have noticed variation within huckleberry patches; height differences, taste, and color to name a few. “Those of us that pick huckleberries notice there are two distinct phenotypes within the species; one that has reddish berries and one that has blue glaucous berries, sometimes growing side by side,” says Pam Brunsfeld, Herbarium manager and _Vaccinium membranaceum_ enthusiast. These two “variations” were once considered two separate species, _Vaccinium membranaceum_ (reddish-purple berries) and _Vaccinium globulare_ (bluish-purple berries). However, recent molecular studies show that this split is unnecessary. The original split was based upon extremely variable morphological features; now upon molecular examination, it turns out there is no difference between the two, a fact that could be a relief to some field botanists who struggled with identifying the two “species” and may now call the whole mish-mash _Vaccinium membranaceum_.

As if the species itself was not complicated enough, those who hope to make _Vaccinium membranaceum_ a crop find that its ecology is similarly complex. Because these hopeful huckleberry propagators have not yet recreated the specific conditions that the plant requires, such as ericoid mycorrhizal fungi and fire disturbance, few have been successful. To this day, wildcrafted huckleberries dominate the culinary market as they have long before Europeans entered North America, when the berries were traded and bartered by Native Americans.

This is not to say that commercial farming is off the table. Growers have successfully propagated huckleberry “crops”, but only in coastal plots and not yet on a large scale. Dr. Dan Barney of the University of Idaho is a major proponent of growing the plant commercially. He cites recent studies that tout the berries’ anthocyanins and antioxidants for cancer prevention, as well as the demand for huckleberries that far out-weighs the current supply. The resources are now available for those who wish to test their own huckleberry growing operation. “Seedlings are commercially available to prospective growers and the University of Idaho can provide guidelines on propagating and growing these crops,” says Barney in his article on huckleberry propagation for [www.wildhuckleberry.com](http://www.wildhuckleberry.com).

Some express concern that commercial huckleberry propagation will not only destroy the plant’s mystique as a wild plant, but may even cause the plant to disappear altogether from the wild. Barney says although huckleberry production will certainly change the accessibility of the plant, commercial production would not ruin the plant’s mystique. Blueberries, for example, were also exclusively wild until horticulturists unraveled its ecological requirements and successfully mimicked it in field trials. Although the plant is widely available in grocery stores throughout the country, it still remains a popularly collected wild species in its native range. Perhaps one day (for better or for worse), _Vaccinium membranaceum_ will have a similar status.
Please see the announcement on the INPS website www.idahonativeplants.org for the complete details of the Annual Meeting weekend. Only partial details are included here. Also on the website are a number of links to informative maps, history, etc.

2010 IDAHO NATIVE PLANT SOCIETY ANNUAL STATE MEETING
JUNE 11-13, 2010 HEYBURN STATE PARK, near PLUMMER, IDAHO

You are invited to this summer's 2010 INPS Annual State Gathering / Meeting at Heyburn State Park, at the southern tip of Coeur d'Alene Lake on Highway 5 (5 miles east of Hwy 95). There will be field trips to important floristic, geologic and historic sites; the State Annual Meeting; a catered dinner followed by a keynote speaker; and an opportunity to socialize with native plant enthusiasts from throughout the state. This event will be hosted by the White Pine chapter of Idaho Native Plant Society. If you have questions, please phone Janet Campbell (208-882-6409) or Nancy Miller (208-301-0560).

Heyburn State Park is approximately 40 miles south of Coeur d'Alene. If you prefer not to camp, motels are available in St. Maries, Idaho, a few cabins may be for rent at the park, and the Coeur d'Alene Casino/Hotel is located 12 miles north of Heyburn State Park on Hwy 95.

When: Friday, Saturday, and Sunday, June 11, 12 and 13, 2010.
Where: Heyburn State Park, Hawley's Landing Campground, 5 miles east of Plummer, Idaho. Friday and Saturday campsite fees will be paid by INPS for members. Some campsites will be reserved for Thursday and Sunday night for those who wish to stay longer and pay those nights’ reservation.

FRIDAY, JUNE 11:
Friday afternoon there will be a tour of a local native plant grower operation, Plants of the Wild in Tekoa Washington (or relax and enjoy the park). Dinner Friday is on your own but we will socialize in the evening at the campground.

SATURDAY, JUNE 12, FIELD TRIPS: There are two full-day field trip options. Pam Brunsfeld curator of the UI Stillinger Herbarium will lead some on a field trip to Mary Minerva McCroskey Memorial State Park with its ridgeline views of the Palouse, its deep forests and its Palouse Prairie grasslands. The second field trip option will visit the property of Dr. Bill Rember near Clarkia, Idaho, about 25 miles southeast of Heyburn State Park, to discover the 15 million-year-old Miocene plant fossils found here in the sediment of an ancient lake bed. From Clarkia we will proceed to Hobo Creek Grove for an afternoon walk through the grove.

SATURDAY, JUNE 12, EVENING EVENTS: Dinner will be in the CCC-built stone shelters at the park. The cost of dinner is $20 per person. The State Annual Meeting will follow dinner. This meeting will include the election of 2010-2011 state officers as well as considering other issues important to INPS. Our keynote speaker will be Todd Ott, an ethnobotanist and UI graduate student.

SUNDAY, JUNE 13: Again two field trip options: A shorter trip to Dr. Bill Rember's fossil beds near Clarkia, Idaho. See details above under Saturday field trips. And the second field trip option led by Pam Brunsfeld will take us to Big Creek on the St. Joe River to see a community of coastal disjunct plants.

For those interested in biking part of the 72-mile Trail of the Coeur d'Alene biking trail which passes through the park, please indicate this on the reservation form. Bikers must provide their own bikes and helmets. The paved trail goes through many different habitats and often is along the lake front or through wetlands. Individuals may bike or hike the trail at any time if they wish.
May 2010 ❖ SAGE NOTES ❖ A Publication of the Idaho Native Plant Society Vol. 32 (2)

Please fill out the reservation form and mail it in as soon as possible if you plan to attend the annual meeting.

2010 INPS ANNUAL MEETING RESERVATION FORM
Please mail this form with your check for the dinner ($20 per person) made out to White Pine Chapter, INPS
Mail to: White Pine Chapter, INPS, PO Box 8481, Moscow ID 83843.

PLEASE PRINT

Name(s) __________________________________________________________________________
Address __________________________________________________________________________
Phone ___________________ Cell Phone ___________________ Email Address ____________________________
Chapter affiliation ___________________ Non-member ______

Please check what you will need: Space to park an RV_____ Length ___________________________
Tent site for one tent _____ For 2 tents or more _____ How many? ___________
For which nights Friday ________ Saturday ________ Sunday ________
(if you plan to camp Thursday night please contact Nancy Miller at nmiller at moscow dot com)

Will you attend the event on Friday afternoon (a tour of Plants of the Wild in Tekoa)? _______ Are you interested in attending a Sunday field trip? ____________________________
Are you interested in going on a Sunday bike trip? ____________________________
Number of Saturday dinner reservations @ $20.00 _______ Total enclosed __________________

---------------------------------------------------Cut Line---------------------------------------------------

Continued from page 1

In the past 45 years, Dr. Holte has published or co-authored 36 publications and has given countless talks, statements, and presentations on plants and environmental issues to schools, clubs, organizations, businesses, and governmental and academic entities, meetings, and hearings.

Dr. Holte has also supported many other organizations that have similar goals as the Idaho Native Plant Society. He served on the Board of Directors or as Past President for the Friends of the Idaho Museum of Natural History, Idaho Academy of Science, Idaho Wildlife Federation, The Nature Conservancy, Idaho Orchid Society, Citizens Environmental Council, Idaho Conservation League, and the Great Basin Society Consortium which supports Malheur Field Station.

During his 37 years of field botany courses and Elderhostel classes at Malheur Field Station in Oregon, he was very active in conservation efforts for the Steens Mountain in eliminating livestock grazing in that unique and biologically rich area.

Dr. Holte’s passion for Idaho’s native flora is infectious. It is hard to estimate how many people have come in contact with him over the years and gone on to do great things to conserve, educate, and spread the passion. His “plant charisma” makes people want to learn and do more for Idaho’s native flora.

We were pleased to recognize Karl for all of his achievements at the evening banquet held during the Native Flora Workshop by presenting him with a lifetime membership to Idaho Native Plant Society. Many people shared photos, stories and jokes at Karl’s expense. Karl stated at the banquet “…I was originally going to thank the ‘Superior Kingdom’ for all the joy that my life has had, but this makes me realize, it is all of you who have made the journey worthwhile!”

Thank you, Karl, for all the friendship, jokes, love for botany and the hugs!

May 2010 5
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Native Plant Riparian Buffer Demonstration Site:  
Dover City Park, Dover, ID  
Education, Research, and Inventory Grant Report  
By Gail Bolin

Introduction
In response to the increasing development and concern over declining water quality the Bonner County Planning Commission began the process to update its land use codes in 2006. Though the scope of the code reform was broad, the proposed native plant riparian buffer for new waterfront development was controversial. Some praised it as a way to reduce non-point source pollution, and others called it an infringement on their personal property rights. After two and half years of public debate a compromise was reached. New development will not have to retain existing native vegetation within the forty foot set-back, but they can’t just plant anything that they want. Instead, they will have to use plants that are considered environmental friendly. The acceptable plants consist of mostly native species and a few non-native species that are considered naturalized and non-invasive.

As a way to increase public awareness of native species a demonstration native plant riparian buffer was established along the Pend Oreille River, near Sandpoint, ID. Riparian buffers, or vegetated areas adjacent to streams or lakes, can significantly improve water quality by trapping pollutants before they reach the water. Additionally, native plant buffers provide food and shelter for many species of wildlife. The objective of this project is to provide a visual display to enhance the appreciation, knowledge, and conservation of northern Idaho’s native plants, and to encourage landowners to utilize native plants in their landscapes. The list of acceptable landscape plants that waterfront property owners may choose from can be found in Appendix B of Title 12: Land Use Regulations and can be viewed and downloaded from the County web site: http://www.co.bonner.id.us/planning/index.html.

Bonner County Grows Native
Volunteers from the Kinnikinnick Chapter of the Idaho Native Plant Society (KCNPS) were instrumental in preparing the list of suitable native plants for the Bonner County Planning Department, and Greg Becker of the Natural Resource Conservation Service (NRCS) compiled the list of non-native plants. Since the new codes do not apply to existing waterfront property owners, a campaign began to encourage the use of native plants in home landscapes. The Grow Native movement was a collective effort by the KCNPS, the county planning department, state agencies, environmental groups, and concerned citizens.

In keeping with the Grow Native promotion, in November 2008, I teamed up with the Bonner Soil & Water Conservation District and KCNPS to establish a native plant riparian buffer as a visual means to encourage property owners to utilize native plants in their landscapes. The Dover City Park was chosen because it is easily accessible to the public, and its close proximity to hiking trails, a marina, and numerous homes. The accessibility of the site provides an excellent opportunity for stimulating interest in native plants through interpretive signage, brochures and on-site tours.

Methods and Materials
The planning process involved numerous meetings, site visits, phone calls, and emails. Moreover, the process required collaboration among several organizations and individuals before putting the plants into the ground. During the spring and summer we inventoried the existing vegetation, investigated the condition of the soil, and made a list of plants to add to the site. By the end of August we selected the plants and recruited volunteers to assist with the planting. Additionally, we solicited and received donations from local businesses for compost, mulch, and the use of equipment such as shovels, wheelbarrows, hand tools, water hoses, buckets, motorized carts, an ATV, and a dump truck.

Site Description:  The site chosen for the demonstration buffer in Dover, Idaho, is on the north side of the Pend Oreille River approximately three miles west of Sandpoint. A timber mill once operated at the site, but it was destroyed by fire in 1990. The Dover City Hall and Public Park now occupy the mill site and the land adjoining the
old mill site is an upscale housing development. Prior to the construction of Albeni Falls Dam, this area experienced periodic flooding, but now the water levels are controlled by the dam. Over the years a good deal of the native vegetation has been replaced with turf grass. Along this section of the river, very little riparian vegetation remains, and the river bank has been stabilized to prevent erosion. Because of limited funding, we chose to enhance the existing strip of native riparian plants with additional native plants, rather than ripping out the grass and starting anew (Figure 1).

Figure 1. Existing vegetation in the demonstration site, looking from east to west, April 2009. Photo: Gail Bolin

For planning ease, and to allow for pathways, we divided the demonstration site into sections; the east, middle, and west, and delineated two pathways to allow easy access to the water as well as viewing of the plants. The east section is approximately 88 by 20 feet; the middle measures 43 by 20 feet; and the west section is 53 by 30 feet. The east portion of the buffer is the wettest and has the greatest quantity of native plants. To the west, the land gently slopes upward, is drier, and supports fewer native species. Common tansy (*Tanacetum vulgare*) is growing throughout the site, but is more abundant on the west end. Lodgepole pines (*Pinus contorta*) are scattered along the entire length of the site creating a natural boundary between the riparian area and the Dover Public Park (Figure 2). The list of existing native plants at the site included Scouler willow (*Salix scouleriana*), water birch (*Betula occidentalis*), serviceberry (*Amelanchier alnifolia*), red-osier dogwood (*Cornus sericea*), lodgepole pine, wild strawberry (*Fragaria virginiana*), lupine (*Lupinus* sp.), cattail (*Typha latifolia*), horsetail (*Equisetum* sp.), sedge (*Carex* sp.), bulrush (*Scirpus* sp.), black Hawthorne (*Crataegus douglasii*), and common snowberry (*Symphoricarpos albus*).

Choosing the Plants: In developing the plant list we selected plants appropriate for growing conditions within the site. For example, Douglas spiraea (*Spiraea douglasii*) and quaking aspen (*Populus tremuloides*) were chosen for the wettest areas because both can tolerate wet soils. For drier areas within the buffer, we selected plants that were drought tolerant, such as creeping Oregon grape (*Mahonia repens*), kinnikinnick (*Arctostaphylos uva-ursi*), and
Wood’s Rose (Rosa woodsii). We purchased the plants and seeds from Plants of the Wild in Tekoa, WA. The native species and seeds used in the project are listed in Table 1.

Figure 2. Lodgepole Pine forming a natural boundary between the picnic area and the demonstration site, April 2009. Photo: Gail Bolin

Planting the Buffer: After eleven months of planning and two days of labor the native plant riparian buffer demonstration site became a reality in September, 2009, with the help of volunteers from KCNPS, NRCS, Bonner Soil & Water Conservation District and fifteen Sandpoint High School horticulture students and their instructor (Figure 3). The following day, the same volunteers put down twenty seven yards of thirty-year old cedar mulch donated by a local business. Another local business donated the use of his dump truck to deliver the mulch to the site. Because the mulch is old and decomposed (soil like), we decided to sow the seeds on top of the mulch; thus, allowing the grasses and wildflowers to have an advantage over the weeds. Molly McCahon from the Bonner Soil & Water Conservation District volunteered to broadcast the seeds just before the first snow. She did that in November, 2009.

Conclusion

This project was made possible through the Idaho Native Plant Society’s ERIG grant that we received in the amount of $400.00. The cost of the plants and seeds came to $390.61. The mulch, compost, labor, tools and equipment were graciously donated by local businesses and residents making this a community effort. It was laborious, but also very rewarding, for me, it was indeed a “labor of love.” It could not have been accomplished without the help of the many people who so kindheartedly volunteered materials and time. A positive outcome of so many volunteers is the increased awareness of native plants by those who worked at the site.

We will continue to monitor and maintain the site; additionally, we are planning to put in plant identification markers, interpretative signage, and distribute educational literature as funding becomes available. It is our hope that the native plant demonstration site will provide an opportunity for local residents as well as visitors to the area to gain a better understanding of the importance of native plants and the vital role they play in maintaining ecosystem health. It is our goal that the riparian buffer will serve as a model for waterfront property owners as a way to improve water quality by reducing the potential for nutrients and other pollutants to enter waterways, and to provide food and shelter for numerous species of wildlife. The final product will visually demonstrate the beauty and value of native plants, and will serve as a continuing outreach and educational site to enhance the appreciation, knowledge, and conservation of northern Idaho’s native flora.

Table 1. List of species planted at the Dover site.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Quantity Planted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceanspray</td>
<td><em>Holodiscus discolor</em></td>
<td>1</td>
</tr>
<tr>
<td>Lewis’ mockorange</td>
<td><em>Philadelphus lewisii</em></td>
<td>3</td>
</tr>
<tr>
<td>Quaking aspen</td>
<td><em>Populus tremuloides</em></td>
<td>3</td>
</tr>
<tr>
<td>Golden current</td>
<td><em>Ribes aureum</em></td>
<td>1</td>
</tr>
<tr>
<td>Wood’s rose</td>
<td><em>Rosa woodsii</em></td>
<td>3</td>
</tr>
<tr>
<td>Shiny leaf spiraea</td>
<td><em>Spiraea betulifolia</em></td>
<td>3</td>
</tr>
<tr>
<td>Douglas’ spiraea</td>
<td><em>Spiraea douglasii</em></td>
<td>6</td>
</tr>
<tr>
<td>Kinnikinnick</td>
<td><em>Arctostaphylos uva-ursi</em></td>
<td>40</td>
</tr>
<tr>
<td>Creeping Oregon grape</td>
<td><em>Mahonia repens</em></td>
<td>40</td>
</tr>
<tr>
<td>Rocky Mt. maple</td>
<td><em>Acer glabrum</em></td>
<td>2</td>
</tr>
<tr>
<td>Mallow ninebark</td>
<td><em>Physocarpus malvaceus</em></td>
<td>1</td>
</tr>
<tr>
<td>Mountain ash</td>
<td><em>Sorbus scopulina</em></td>
<td>1</td>
</tr>
<tr>
<td>Heritage wetland seed mix</td>
<td>Blue wild rye, tufted hairgrass, meadow barley, northwestern managrass, American sloughgrass</td>
<td>1 pound</td>
</tr>
<tr>
<td>Lewis &amp; Clark Wildflower mix</td>
<td>Rocky Mt. beeplant, Rocky Mt. iris, blanket flower, balsamroot, purple coneflower, annual sunflower, Lewis blue flax, clarkia, nineleaf biscuitroot, camas, silver lupine, gayfeather, plains coreopsis</td>
<td>0.5 pound</td>
</tr>
<tr>
<td>Red fescue</td>
<td><em>Festuca rubra</em></td>
<td>1 pound</td>
</tr>
<tr>
<td>Streambank wheatgrass</td>
<td><em>Elymus lanceolatus</em></td>
<td>0.5 pound</td>
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</tbody>
</table>
Figure 3. Native Plant Riparian Buffer Demonstration Site after the addition of plants and mulch, September 2009. Photo: Gail Bolin

Woods' rose
Have you ever seen one of Idaho’s rare plants? What did you do when you saw it? Now on the website we have posted the Idaho Natural Heritage Program’s current Rare Plant Observation Form. We are also including a copy in this issue for your reference. The more people with eyes on the ground, the better information INPS, local, state, and federal agencies have for evaluating what the true status of Idaho’s plant diversity really is. Are you willing to help?

### IDAHO RARE PLANT OBSERVATION REPORT 2010

Please fill in as many fields as possible, but don’t worry if you have to leave blanks. Many fields contain check boxes (double click on box, and click ‘checked’). E-mail completed form to plant@idfg.idaho.gov

If you need to mail maps or other materials that can’t be sent electronically, send them to Botany Data Manager, Idaho Department of Fish and Game, PO Box 25, 600 S. Walnut St., Boise, ID 83707.

Thanks for contributing to rare plant conservation in Idaho!

<table>
<thead>
<tr>
<th>Species:</th>
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<tr>
<td>Observer(s):</td>
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<tr>
<td>Agency/Organization/Company:</td>
<td></td>
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<tr>
<td>Address:</td>
<td></td>
</tr>
<tr>
<td>E-mail:</td>
<td>Phone:</td>
</tr>
<tr>
<td>Other knowledgeable individuals:</td>
<td></td>
</tr>
</tbody>
</table>

If this observation is part of a larger study or report, what is it the study/report?  ____

Certainty of identification:  ☐ moderate  ☐ high  ☐ verified by  ____

Is this an addition or update of an existing occurrence?  ☐ yes  ☐ no  ☐ unsure

Element occurrence (EO) #, if known:  ____

EO survey site name (e.g., a particular landmark or location):  ____

Directions (please be specific so population/subpopulations can be relocated years from now by others):  ____

<table>
<thead>
<tr>
<th>Landowner(s):</th>
<th>BLM</th>
<th>USFS</th>
<th>private</th>
<th>other:</th>
</tr>
</thead>
</table>

If all or part of population is on private land, has the landowner provided consent for the data to be exported?  ____

Date of consent by private landowner, their contact info, and other pertinent comments:  ____

General owner comments:  ____

If location data are **GPS data:**

Format of GPS data:  ☐ shapefile  ☐ digital file (.dbf, .xls, .txt, etc.)  ☐ GPS points in subpopulation section

Method used to collect GPS data:  ☐ GPS unit  ☐ estimated on a paper map  ☐ other:  ____

GPS unit was held:  ☐ directly over the plant of interest  ☐ in the general vicinity of the rare plant

Do the GPS points mark the boundary of a plant group?  ☐ yes  ☐ no  ☐ unsure

Accuracy of GPS unit (± m):  ____  Datum:  ☐ NAD27  ☐ NAD83  ☐ WGS84  ☐ unknown

Coordinate system:  ☐ UTM zone 11  ☐ UTM zone 12  ☐ UTM zone unknown  ☐ Idaho Transverse Mercator  ____

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<tr>
<td>☐</td>
<td>Decimal degrees, lat/long</td>
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<tr>
<td>☐</td>
<td>state plane</td>
</tr>
<tr>
<td>☐</td>
<td>township/range/section</td>
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</tbody>
</table>
If location data are from a paper map:

County: _____  Quad: _____

Township: _____  Range: _____  1/4 of _____  1/4 of Section _____

Township: _____  Range: _____  1/4 of _____  1/4 of Section _____

How accurately do you feel you mapped the population compared to its actual location on the ground? _____

Attach a copy of part of a USGS 7.5’ quad (or comparable) and delineate the population and/or subpopulations.

**Population Information** (for entire population; information on subpopulations goes on next page)

Population area (extent of all subpopulations): _____

Do you feel you mapped the full extent of the population?  [ ] yes  [ ] no  [ ] unsure

Is there more potential habitat in the area that hasn’t been surveyed?  [ ] yes  [ ] no  [ ] unsure

Suggestions for other areas to survey: _____

The survey was:  [ ] very thorough  [ ] fairly thorough  [ ] cursory  [ ] incidental observation

Collector/Collection #: _____  Herbarium: _____

Photo attached?  [ ] yes  [ ] no  If photos are located elsewhere, where are they?  _____

Monitoring or research needs for this population: _____

Management needs for this population: _____

Additional population comments:  _____

Native plant community within the population is:

[ ] A. intact with zero to low non-native plant cover and/or minimal anthropogenic disturbance.

[ ] B. intact with low to moderate non-native plant cover and/or low to moderate anthropogenic disturbance.

[ ] C. partially intact with moderate to high non-native plant cover and/or mod. to high anthropogenic disturbance.

[ ] D. almost gone with high non-native plant species cover and/or high anthropogenic disturbance.

Is this rank based on all known subpopulations?  [ ] yes  [ ] no  [ ] unsure

Additional comments on condition of the population: _____

Landscape surrounding the population is:

[ ] A. unfragmented, with ecological and hydrological processes intact.

[ ] B. partially fragmented, with ecological and hydrological processes intact.

[ ] C. moderately fragmented, with ecological and hydrological processes intact.

[ ] D. fragmented, with many ecological and hydrological processes no longer intact.

Is this rank based on all known subpopulations?  [ ] yes  [ ] no  [ ] unsure

Additional comments on landscape surrounding the population: _____
## Subpopulation Information

(copy this section as needed—one for each subpopulation)

Subpopulation #: _____  Date of Observation: _____  Observer(s): _____  
Total number of individuals in subpopulation: _____  □ actual  □ minimum  □ estimated  
What was counted?  □ genets  □ ramets  □ N/A (non-vascular etc.)  □ unknown  
Phenology:  
□ % seedling  □ % vegetative  □ % flowering  □ % fruiting  □ % dormant  □ % unknown  
Subpopulation area: _____  Subpopulation vigor:  □ excellent  □ good  □ fair  □ poor  □ unknown  
Do you feel you mapped the full extent of the subpopulation?  □ yes  □ no  □ unsure  

Dominant species (existing): _____  
Habitat type (potential plant community): _____  
Associated native species: _____  
Associated non-native species: _____  
Look-alike species present: _____  
General habitat (e.g., foothills, wetland, subalpine): _____  
Slope: _____  Aspect: _____  Topoposition: _____  
Minimum Elevation: _____ m or _____ ft  Maximum Elevation: _____ m or _____ ft  
Light regime: _____  Substrate/soil: _____  

Observed disturbances, such as land use, disease, predation, non-native species. Include severity (slight, moderate, serious, or extreme) and scope (>10%, 11-30%, 31-70%, 71-100% of subpopulation affected): _____  

Factors that may be a threat in the future (include severity, scope, and imminency of threat, if known): _____  

Intrinsic vulnerability of subpopulation:  □ high  □ moderate  □ none  

### GPS coordinates

(This section has drop-down menus. No need to fill in if submitting shapefiles or digital files.)

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May 2010
INPS 2010 STATE BOARD OF DIRECTORS ELECTION BALLOT

Officers will be announced at the Annual INPS State Meeting at Heyburn State Park on June 11-13
Please detach, complete, and mail the self-addressed ballot by June 1, 2010.

The officer terms shall be two years. The terms shall be staggered with the President and Secretary being elected one year and the Vice President and Treasurer being elected and Member-at-Large being appointed in the following year. A member may serve a maximum of three (3) consecutive terms in an office including partial terms.

The Nominating Committee offers the following list of candidates for state office.

Candidates’ Résumés

Vice President: No Nominee
Position will be vacant.

Treasurer: Jody Hull
Jody has been an active member of the Pahove Chapter for 15 years. She lives in Boise with her husband Jim and cats Zumi and Tiny Cat. She recently graduated from Boise State University with a bachelor’s degree in Environmental Studies. Her first bachelor’s degree was from Weber State University in Geography with minors in Botany and Zoology. She’s currently working as a Chicago Botanic Garden Intern for Roger Rosentreter at the BLM State Office. She enjoys wildflower walks, photography, gardening, travel, computers, and volunteering with various organizations.

NOMINEES

Please vote for one nominee in each category (check name or write in name):

Vice-President: No Nominee Other (write in name) ____________________

Treasurer: Jody Hull _____ Other (write in name) ____________________

Fold, stamp and return (address on other side)
INPS NEWS

Did you renew your INPS Membership?
Membership renewals are due! Dues run from January 1- December 31 each calendar year. Dues are considered late after April 1st. Dues can be submitted to either your local chapter treasurer or sent to the INPS Treasurer at: P.O. Box 9451 Boise, ID 83707.

Native Plant Appreciation Week
How will you celebrate Native Plant Appreciation Week? May 2-8, 2010 – How about a field trip? Visit a local school or Senior Citizen groups? Take a long peaceful hike by yourself? Please share what you did for NPAW with a short write-up for the summer issue of Sage Notes. See back of issue for submission deadlines.

Paying INPS made easier
We will soon be offering Paypal as an option on the website: www.idahonativeplants.org for membership dues and 2011 calendar sales.

Advertise in Sage Notes
Hear Ye! Hear Ye! We are looking for advertisements to help support Sage Notes. If you would like to reach environmentally minded, native plant loving customers, please consider taking out an ad in our next issue. Prices are: $5 for 1/8 page, $8 for 1/4 page, $15 for 1/2 page, and $25 for full page. Ads should be electronic (JPEG, TIFF, publisher) and sent to the editor. Payment should be sent separately to P.O. Box. 9451, Boise ID, 83707.

Botanical Foray
July 15 – 19, 2010 – This year’s foray will be hosted by Dr. Don Mansfield of College of Idaho. Participants will be collecting plant specimens from the Yankee Fork of the Salmon River area outside of Custer, ID. All plant enthusiasts with an interest in collecting plant specimens are encouraged to attend. No training in plant collection or pressing required. Participants are welcome to come for the entire foray, or just one or two days. Each morning starts out around 9:00 am with a briefing on where to go and how to collect the plants and information for the collection. For more information contact Don Mansfield at DMansfield at collegeofidaho dot edu (208-459-5287).

Thanks to NFW Speakers
Special thanks to all the speakers who took time out of their schedules to help make the Native Flora Workshop a success: Wendy Velman, Rose Lehman, Michael Mancuso, Bonnie Heidel, Walt Fertig, Dr. C.F. (Rick) Williams, Dr. Jim Smith, Dr. Leigh Johnson, Dr. Ron Hartman, Dr. Gary Baird, Dr. Barbara Ertter, H. Wayne Phillips, Lynn Kinter, Rita Dixon, Scott Sayer, and Dr. Karl Holte.

Thanks also to all the Sah-Wah-Be Chapter volunteers that helped behind the scenes: Linda Johnson, Cathy Frischmann, Janet Bala, Barbara Nichols, Mel Nichols, Catalina Steckbauer, Dick Anderson, Marijana Dolsen, Kay Mariam, Chris McCoy, Shirley Rodgers, Ardys Holte, Melinda Walker, and Kaleb Erickson.

CHAPTER NEWS

Calypso Chapter
The Calypso Chapter meets on the first Wednesday of March, April, May and October. Field trips are scheduled during the spring, summer, and fall.

PREVIOUS EVENTS
Calypso has held two meetings this spring, one in March and one in April. At the March meeting Bob Lee, Calypso President, resigned so we are searching for a person to fill the position.

Roland Craft gave a report about the meeting on Tubbs Hill on Saturday, April 3, 2010. Karen Haskew, Coeur d’Alene Urban Forester, talked about the plans for approximately 20 acres on the north side of Tubbs Hill. The project is to get rid of the invasive maple and cherry trees that are crowding out the native trees. The maple and cherry trees will be cut down and the stumps sprayed to prevent resprouting. Larch and white pine will be planted in their place. The Douglas-fir has root rot and is declining badly in that area. Grant funds have been received to carry out this project.
Derek Antonelli gave a presentation on the Pack River Delta. The purpose of this project is to rebuild islands, increase sediment and protect existing islands and plant vegetation. The project partners, Ducks Unlimited, Avista and Idaho Fish and Game received funding from the North American Wetlands Conservation Act. Derek showed slides of the work that was done in order to try to preserve the delta at the mouth of Pack River where it runs into Lake Pend Oreille.

UPCOMING EVENTS

May 2, 2010 – Lost Lake. Meet at Walgreens parking lot at 8:00 am. A new field trip for Calypso, Lost Lake is east of Pocatello, not far from Gamble Lake.

May 16, 2010 – Liberty Lake. Meet at Walgreens at 9:00 am or in the Safeway parking lot in Liberty Lake at 9:30-9:45 am.

June 27, 2010 – Pack River Delta. Meet at Walgreens at 8:00 am. This is a trip to view the area Derek showed in his presentation.

July 25, 2010 – Roman Nose Lake. Meet at Walgreens at 7:30am.

August 15, 2010 – Mickinnick Trail. Meet at Walgreens at 8:00 am. This is a trail near Sandpoint.

Loasa Chapter

All INPS members and the public are welcome to attend Loasa’s events. Meetings are held the third Thursday of each month in room 258 of the Taylor Building at CSI. If interested or for further details, contact Kelvin Jones at (208) 886-7051.

Pahove Chapter

Our monthly meetings / presentations have ended for the season, until the fall kick off Pizza party in September of 2010. We would like to thank all of the speakers for their high quality presentations and we would also like to thank the participants who made them a success.

PREVIOUS EVENTS

INPS (Pahove chapter) had our informational booth up at a Boise Watershed Education Center event in January and again at the Boise Flower and Garden show on March 26th through the 28th. Both venues gave us more visibility in the community and an opportunity to enlist new members and get the word out about the upcoming annual native plant sale.

UPCOMING EVENTS

Wildflower Walks Celebrating Native Plant Week:

May 2, 2010 – Join botanists on a wildflower walk behind the Idaho Botanical Gardens at the Old Penitentiary at 10:00 am. Visit the IBG website for details and to reserve a space. Admission is free.

May 12 and May 19, 2010 – The Foothills Learning Center will be hosting wildflower walks from 6:00-8:00 pm on each of those nights. Admission is free. For more information call 373-4100.

May 8 and 9, 2010 – We will have our informational booth set up again at the Idaho Green Expo. If you would like to staff the booth during the Expo, please call Susan at 867-6188.

July 15 through 18, 2010 – The College of Idaho will host a foray to the Yankee Fork area to collect plants.

August 19 through the 28, 2010 – The Idaho State Fair has invited us to set up a Native Plant display there this year. This is the first time INPS will be represented at the fair.

Sah-Wah-Be Chapter

PREVIOUS EVENTS

March 23-24, 2010 – The Native Flora Workshop was a great success. We had about 95 attendees that enjoyed hearing the botanists from Wyoming, Idaho, Montana, and Utah give presentations. On Tuesday evening, after the banquet, the Sah-Wah-Be chapter surprised Dr. Karl Holte with a lifetime membership to the Idaho Native Plant Society. He has given 45 years of dedicated service to the education and conservation of Southeast Idaho's native flora and its habitat. A slide presentation that was compiled and narrated by INPS President Wendy Velman gave us a personal look into Dr. Holte's field trip life.

April 5, 2010 – Photo share by Sah-Wah-Be members and friends. We enjoyed viewing photo presentations of plants and people by our members.

April 24, 2010 – Pocatello Environmental Fair in Tydeman Park was well attended by the public. Sah-Wah-Be Chapter had an information table, handed
out native seedlings, and helped children put seeds in a cup of soil to grow at home. We had 12 volunteers help with the event.

**PROGRAM SCHEDULE**

All upcoming field trips meet at the Bison at 5th Street and Dillon on the ISU campus to carpool for field trips. Monday evening trips meet at 6:00 pm. Meeting times for Saturday trips vary. Check your email or call 208-716-0218 for more information.

**May 3, 2010** – Kinney Creek, Dr. Karl Holte, Monday evening.

**May 8, 2010** – Hagerman Valley, Dr. Karl Holte, Saturday.

**May 19, 2010** – Hell’s ½ acre with Upper Snake Chapter, Wednesday.

**May 24, 2010** – Hurricane Hill, Linda Johnson, Monday evening.

**June 7, 2010** – West Mink Creek, Dick Anderson, Monday evening.

**July 10, 2010** – Deep Creek, Ruth Moorhead, Saturday.


**June 21, 2010** – McNabb Creek, Cathy Frischmann, Monday evening.

**July 19, 2010** – Gibson Jack, When the service berries are ripe. Monday.

**August 14, 2010** – Big Springs Nature Trail, Mel Nicholls, Saturday.

**August, 2010** – Steens Mountain, Dr. Karl Holte, 3 or 4 days. Dates TBD

**September, 2010** – Camas Wildlife Refuge with Upper Snake Chapter, Saturday.

**September 25, 2010** – Goodenough Canyon, Fall colors & Chili Potluck.

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**Upper Snake Chapter**

**UPCOMING EVENTS**

For all Field Trips:
- Call or email the leader(s) or Rose Lehman (208-390-4744) if you need additional information or have questions. Wendy Velman (208-221-8170) is also a contact for field trips.
- Bring water, sunscreen, food, walking shoes, etc.
- Bring plant identification field books, hand lens, camera and a field journal notebook.
- Carpooling is encouraged and organized on the spot at the meeting place.
- We will post updates for the trips on the Idaho Native Plant Society website for the chapter. Click for link: INPS, Upper Snake Chapter.
- Field trip reminders will be emailed to chapter members about a week before each trip.

**May 1, 2010** – North Menan Butte Hike. The Menan Buttes are two of the world's largest tuff cones—volcanoes formed when basaltic magma boils up through ground water. The trail to the summit of the North Butte offers wonderful opportunities to explore the unique geology and natural history of this area. The trail is a well-maintained trail, but with a strenuous grade before reaching the rim. Website: North Menan Butte. Meet at the Starbucks at Fred Meyers (1555 Northgate Mile, Idaho Falls). Call leaders, Donna and Mark Whitham (208-520-1728), for a meeting time.

**Another trip of interest, but not an INPS Upper Snake trip. May 15, 2010, 8:15am to 6:00 pm** – Archeological Tour of Birch Creek Valley. Tour is limited to 25 participants and RSVP is required. Plan to drive your own four-wheel drive vehicle. Please call BLM Idaho Falls Office to reserve a place on the tour and for additional information: 208-524-7500, ask for BLM Archeologist, Dick Hill.

**May 19, 2010, 6:00 to 9:00 pm** – Join leader Wendy Velman for a walk through Hells ½ acre – South bound rest stop on I-15 south of Idaho Falls. Those coming from Blackfoot and Pocatello will need to get off at Shelley exit and turn around (head south again on I-15 for safety). This trip is like a miniature plant walk through Craters of the Moon. Along the trail, we will see plants unique to lava flow habitats, including fernbush (*Chamaebatiaria millefolium*), hot rock penstemon (*Penstemon deustus*), lichens and
mosses, and ferns (growing in the lava cracks). The most prevalent landscape consists of A’a (ah-ah) and Pahoehoe (pa-hoy-hoy) lava flows. The trail is paved and handicapped accessible. Children are encouraged to attend this trip and the public is welcome. Meet in the north-side parking lot at Walmart near Pharmacy drive-thru (500 S. Utah Ave., off Broadway Ave., Idaho Falls; near I-15).

**June 2, 2010, 6:00 to 8:30 pm** – Join leader Wendy Velman for a hike along Cress Creek Trail, located 20 miles NE of Idaho Falls near the South Fork of the Snake River. We will start the hike on a paved handicapped accessible trail that has a moderate grade until we reach the creek. The loop around the upper reaches of the creek is not accessible for wheelchairs. Expect to see dry land sagebrush habitat interfacing with juniper hillsides and a narrowleaf cottonwood (Populus angustifolia) canopy on the creek. One of Idaho’s rarest species makes its home here among the warmer waters of Cress Creek – chatterbox orchid (Epipactis gigantea). Watch out for poison ivy (Toxicodendron rydbergii) and the occasional snake on the trail. Children are encouraged to attend this trip and the public is welcome. The trail is a National Recreational Trail and has many interpretive signs along the way. Website: Cress Creek Trail. Meet in Idaho Falls at the Starbucks at Fred Meyers.

**June 23, 2010, 6 to 10 pm** – St. Anthony Sand Dunes. The St. Anthony Sand Dunes are about 40 miles north of Idaho Falls, west of St. Anthony, Idaho. We will be on the search for evening primroses (Oenothera spp.), but enjoying the uniqueness of dune ecology along the way. Link to website for additional information: Upper Snake BLM, St. Anthony Sand Dunes. Meet in the north-side parking lot at Walmart near Pharmacy drive-thru (500 S. Utah Ave., off Broadway Ave., Idaho Falls; near I-15). Leader: Alice Crockett.

**June 26, 2010, 8:00 to 6:00 pm (all day)** – Birch Creek Valley/Foothills of the Lemhi Mountains. In this broad valley approximately 80 miles northwest of Idaho Falls, we will have the opportunity to see many rare plants at an alkaline spring-fed area and to hike along the base of the Lemhi Mountains where Indian paintbrushes and numerous other wildflowers dominate in an undeveloped open space setting. We will be stopping at sites close to the highway in the morning and then spending the afternoon hiking near the Charcoal Kilns off of a well-maintain gravel road.

Four-wheel drive vehicles will not be necessary. Meet in the north-side parking lot at Walmart near Pharmacy drive-thru (500 S. Utah Ave., off Broadway Ave., Idaho Falls; near I-15). Leaders: Rose Lehman & Wendy Velman

**July 10, 2010, 8:00 to 6:00 pm (all day)** – Centennial Mountains/Sawtell Peak. We will be driving up to the top of Sawtell Mountain in Island Park with wildflower stops along the way in the morning. On this field trip, we will discuss the many different uses of the native plants found in our area. In the afternoon, we will be hiking through whitebark pine/subalpine fir forests and mountain meadows. This trip will be a combined field trip with Master Gardeners. Link to Website: USFS Celebrating Wildflowers website: Sawtell Mountain. Meeting place TBD. Leaders: Rose Lehman & Shari Sellars Note: Please RSVP by calling or emailing Rose Lehman. There will be a limit of 20 people for this field trip. Carpooling with drivers that are comfortable driving on this well-maintained, but steep grade road is encouraged.

Explore wetlands with the Idaho and Wyoming Native Plant Societies and Teton Regional Land Trust. Visiting two areas, in two states with something uniquely in common…rare fens and peatlands and the plants that inhabit them. Attend the Saturday afternoon outing to Woods Fen or the Sunday field trip to the squirrel meadows area only or attend both with a camp out. We will have use of the Caribou-Targhee NF Squirrel Meadows Cabin Saturday Night, July 24th – there will be room for eight in the cabin (first come, first served) and room for tents/RVs. **July 24, 2010** – Wood's Creek Fen near Driggs, Idaho is a treasure -- a rare calcareous fen that supports dynamic biodiversity and many rare plants. A few of the species we will see are cottongrass, orchids, Kelsey’s phlox, alpine meadow rue, and maybe a simple bog sedge if we are lucky. Meet at 12:45pm at the Land Trust office in Driggs and carpool to Wood’s Creek Fen on the North side of Bates Road. Expect your feet to get wet, bring sandals or boots, bug spray, sunscreen, a hat and water! **If staying at the Squirrel Meadows cabin, meet at the cabin at 7PM for check-in.** **July 25, 2010** – Squirrel Meadows Area (east of Ashton, ID). Klara Varga (local Ashton, ID Botanist) will be leading this trip to some of the best botanizing sites to be found in this part of Idaho and Wyoming. We will be visiting a fen at Loon Lake, enjoying the pond lilies at Indian
Lake and identifying and discussing the wildflowers found in this area. Meeting place for carpoolers is TBD, otherwise meet at the Squirrel Meadows Cabin on Sunday at 11:00am. The cabin is 24 miles east of Ashton, ID, just off of the Ashton-Flagg Ranch Road, last ten miles is a gravel road. Leaders are Natalie Kashi (Woods Fen) and Klara Varga (Squirrel Meadows area); Upper Snake NPS coordinator Rose Lehman. Note: RSVP to Rose Lehman requested.

July 30 – 31, 2010 – Westside of the Tetons. This will be a combined field trip with the Teton Chapter of the Wyoming NPS, and the Sah-Wah-Be Chapter and Upper Snake Chapter of INPS. We will have the use of the Darby Girl’s Camp (near Driggs, ID) Friday night for story-telling (we hope to have an invited speaker) and camping (tent sites and some cabins). Meeting place TBD (need Idaho NPS volunteers to help coordinate this trip). Trip coordinators & co-leaders: Kelley Coburn, Amy Taylor (Teton Chapter, Wyoming NPS) and Rose Lehman (Upper Snake Chapter, Idaho NPS). Note: INPS members, please RSVP by contacting Rose Lehman. Details forthcoming, but the dates are set!

August/September 2010

Trips planned for August/September, 2010 (dates and details TBD).
- Canoe Trip, Below Big Springs to Mack’s Inn.
- Moody Meadows area – Identifying species in the Aster Family in the field with Dr. Gary Baird (BYU-ID professor).
- Stinking Springs/Black Canyon/South Fork of the Snake River.

White Pine Chapter

The members and officers of the INPS White Pine Chapter extend our sincere gratitude to each of the speakers, field trip leaders, and event hosts who so graciously are sharing their knowledge, time, talents, and skills with us this year. For more information about any of the events outlined here, please visit the chapter website at www.whitepineinps.org or contact Helen Yost at helen_yost at hotmail dot com or Elisabeth Brackney at elisabeth dot brackney at gmail dot com.

PREVIOUS EVENTS

A most remarkable spring: David Douglas in Idaho and beyond. On February 14, KRFP Radio Free Moscow broadcast a recording of Jack Nisbet’s January 28 Moscow presentation, now available for listening at http://audio.radiofreemoscow.org/. Over 140 audience members attended this lecture co-sponsored by the White Pine INPS and other organizations, in support of Nisbet’s latest book, The Collector: David Douglas and the Natural History of the Northwest (see http://jacknisbet.com/). In his talk, the Spokane-based teacher, naturalist, and acclaimed author of several books on Northwest history and nature described the adventures of the intrepid, nineteenth-century, Scottish botanist Douglas as he explored the native landscapes and cultures of the Northwest. In 1826, this early naturalist traveled with fur trading brigades throughout the Columbia River basin, seeking knowledge of native plants and animals, observing tribal plant use and landscape maintenance, and collecting specimens for European horticulturists and scientists.

Climate change effects on whitebark pine and other conifer communities. At our monthly meeting of about 45 participants on February 18, we hosted doctoral student Marcus Warwell, who studies the ecological genetics of conifers with the Forest Service’s Rocky Mountain Research Station in Moscow. Warwell’s research predicts the future geographic distribution in the western United States of whitebark pine populations and other native plants responding to global warming. His lecture explained how his studies integrate the contemporary climate profiles of several species with various models of climate change to map the likely ranges of biotic communities in the northern Rockies region over the next century.

Clarkia paleobotany. During his March 11 presentation co-sponsored by the Palouse Prairie Foundation, Dr. Bill Rember showed slides of the 15-million-year-old Miocene fossils unearthed in the St. Marys River basin over the last forty years. Initially deposited in the deep sediment of a cold and narrow, dammed lake, these rapidly preserved plant and animal remains illustrate the diverse biota that once thrived in the area during warmer times. After relaying the geologic history of the region and Clarkia fossil formation to the 55 attendees, Dr. Rember, a University of Idaho Affiliate Assistant Professor of Geological Sciences, noted that many of the fossils still embrace their original tissues, structures, and colors. These relatively unique attributes foster biochemical correlations with contemporary flora and distant fossils. To view this
The paintbrushes (Castilleja) and their relatives in the Orobancheae. At our regular third-Thursday meeting on March 25, Dr. David Tank, Director of the University of Idaho Stillinger Herbarium, talked briefly about the history of plant systematics based on morphology and identifying characteristics. An Assistant Professor of Forest Resources in the College of Natural Resources, Dr. Tank then enthusiastically detailed for the 35 members and guests the more current use of phylogenetics for classifying native plants and understanding their patterns of evolution and diversity. While showing plenty of paintbrush photographs from North and South America, Dave concluded his lecture co-sponsored by the Palouse Prairie Foundation with pictures, descriptions, and ranges of the four most common paintbrush species of the interior Northwest.

Idaho-Washington Stateline Wetlands Community Wildlife Park. On Saturday, March 27, Chris Dixon and Gail Bolin of the Environmental Science Program at the University of Idaho led about 20 participants on the first White Pine chapter field trip of the season. At an eight-acre constructed wetland west of Moscow, we observed the hundreds of native trees and shrubs planted last fall by local students, community volunteers, and conservation organizations, to restore wildlife habitat, enhance ecological diversity, and establish an environmental education and research site close to town. As requested by Stateline Wetlands organizers, chapter members on this tour offered some advice about which native plants could thrive in the hot and dry conditions on the living roof of a newly constructed bird observation deck.

Wenaha River canyon, northeastern Oregon. A few dozen hikers accompanied aquatic ecologist Dr. Fred Rabe, botanists Dr. Pam Brunsfeld and Emily Poor, and conservationist David Mildrexler through a remote and scenic river canyon near Troy, Oregon, on Saturday, April 10. Co-sponsored by Hells Canyon Preservation Council and Friends of the Clearwater, our leisurely hike afforded many pauses to identify and photograph diverse native plants, and learn about wildland issues with the field trip leaders. Due to the warm spring conditions of this low-elevation canyon, we witnessed many early blooms and even saw a few bighorn sheep through binoculars during our trail walk. On the two-hour carpool to the canyon, we also stopped at a cafe along the Grande Ronde River to taste some of the best milkshakes in the region.

Native grasses and forbs in the landscape. Kathy Hutton of Plants of the Wild presented a slide-show program to about 45 people at our April 15 meeting co-sponsored by the Palouse Prairie Foundation. Her talk focused on nurturing those native species that are most readily available and easiest to successfully grow as well as on their behavior in subsequently low-maintenance, water-conserving, naturalized home landscapes. Hutton also discussed the many varieties of container-grown native seedlings that her company propagates, cultivates, and ships all over the world (peruse http://www.plantsofthewild.com/). INPS members who attend the annual statewide meeting hosted by the White Pine chapter at Heyburn State Park can visit the Plants of the Wild facilities on an optional June 11 field tour.

Cricket’s Garden Native Wildflower Nursery. When we arrived in carpool for a tour of Christine “Cricket” Nauman’s yard and backyard nursery in Moscow on Saturday, April 24, she gave us plant lists and a presentation describing the most suitable native plants in the region for landscaping. From an eastern Washington childhood passion for wildflowers through a graduate degree in forest resources, Nauman’s knowledge of area native plants, their germination, and nursery management is extensive. Christine’s garden tour, also co-sponsored by the Palouse Prairie Foundation, explained how to grow wildflowers and showed how she has integrated native plants into her yard. As we departed, some of the 30 participants purchased or ordered native seedlings that we had seen during our visit or on the Cricket’s Garden website (http://cricketsgarden.com/index.htm).

UPCOMING EVENTS
May 13, 2010, 7:00 pm – Marshes and peatlands in northern Idaho. Aquatic ecologist and retired University of Idaho professor Fred Rabe will offer a wetland primer for summer field workshops at Hager Lake on July 10 and 11 and at 49 Meadows on June 26 and 27. Occurring where the water table is near, at, or above the land surface, wetlands encompass both annually dry marshes and deeply drenched
peatlands and provide suitable habitat for hydrophytic plants and rare vascular flora. Co-sponsored by Friends of the Clearwater, Dr. Rabe’s presentation will describe northern Idaho wetlands, the relationships between aquatic invertebrates and peatland plants, and a classification system applicable to both semi-aquatic and aquatic, open-water communities. Please join us at the 1912 Center Fiske Room, 412 East Third Street, Moscow, Idaho.

**May 22, 2010, 8:00 am** – Turnbull National Wildlife Refuge. We will carpool from Rosauers, 411 North Main Street in Moscow, to a 16,000-acre wildlife sanctuary outside Cheney, Washington. At the peak of the spring bloom, biologist Mike Rule will guide our visit to mima mound prairies and vernal pools with rare orchids and water howellia, a federally listed threatened species. Before returning to Moscow at 5 pm, we will explore the abundant native plant and wildlife viewing opportunities on short walking trails and boardwalks along a motorized route through the limited public use area of the refuge. Enveloped by the globally unique channeled scablands ecosystem formed by volcanism, glaciation, and unprecedented ice age floods, the refuge protects productive floral and faunal habitat within an ecological transition mosaic of riparian areas, wetlands, grasslands, and ponderosa pine forests. Please see the White Pine and Turnbull websites for directions and site information. Come prepared with water-resistant clothing and boots, lunch, water, and (optional but recommended) botanical keys or field guides, hand lenses, binoculars, and a camera.

**July 10, 2010, 7:30 am** – Hager Lake and Priest River Experimental Forest. We will depart for this weekend workshop from Rosauers at 411 North Main Street in Moscow and arrive at Hager Lake around noon. This peatland just north of Priest Lake supports an extensive, floating mat of over 75 vascular and bryophyte species. On foot and in rubber rafts with aquatic ecologist Fred Rabe and botanists Juanita Lichthardt and Archie George, we will observe and collect native plants, macroinvertebrates, and zooplankton in the fen and along the lake. After dinner, discussion of our activities, and evening socializing at the nearby Priest River Experimental Forest Station, up to 28 of us can stay in the lodge or cabins or camp overnight for a $20-per-person rate. On Sunday, **July 11**, we may hike the grounds or identify and study collected specimens before a few brief stops to investigate other peatland communities on our journey home by 5 pm. Please reference the White Pine website for further information about the workshop sites and accommodations. Participants should confirm their reservations with payment by July 1 to the White Pine chapter.

**Wood River Chapter**

Future Activities TBD: Contact chapter president Carol Blackburn at [blackburncrl at yahoo dot com](mailto:blackburncrl at yahoo dot com) for updates.

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Sage Notes is published four times a year in February, May, September, and December by the Idaho Native Plant Society, incorporated since 1977, under the laws of the State of Idaho. Editor, Dylan Levy-Boyd. Newsletter ads: personal ads $2; commercial ads $5 for 1/8 page, $8 for 1/4 page, $15 for 1/2 page, and $25 for full page. Ads should be sent with payment. Submissions: members and others are invited to submit material for publication. Articles in any form, even hand-written, are welcome, as is art work. Please provide a phone number in case there are questions. Material will not be returned. Send submissions directly to the editor, Dylan Levy-Boyd, P. O. Box 9451, Boise, ID 83707, or <levyboyd at yahoo dot com>. Submission deadlines are January 8, April 1, August 1, and November 1.

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The Idaho Native Plant Society (INPS) is dedicated to promoting interest in native plants and plant communities and to collecting and sharing information on all phases of the botany of native plants in Idaho, including educating the public to the values of the native flora and its habitats. In keeping with our mission, it is the intent of the INPS to educate its membership and the public about current conservation issues that affect Idaho’s native flora and habitats. Membership is open to anyone interested in our native flora. Dues are payable annually in December. Send dues to Jody Hull, INPS Treasurer, Box 9451, Boise, ID 83707. Website address: IdahoNativePlants.org.

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<tr>
<th>Category</th>
<th>2010 Annual Dues</th>
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<td>Senior Citizen</td>
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Name ________________________________
Address ________________________________
City/State ____________________________
Zip _______ Telephone ________________
E-mail __________________________________

Chapter affiliation? (check one)

- Calypso (Coeur d’Alene; please include $6 newsletter dues)
- Loasa (Twin Falls)
- Sah-Wah-Be (SE Idaho)
- Upper Snake (Idaho Falls)
- White Pine (Moscow)
- Wood River (Ketchum-Sun Valley)
- None. Those who do not live near a chapter are encouraged to join. We can put you in touch with other members in your area, and can coordinate with you on any state level activities you may wish to be involved in.

*Household memberships are allocated two votes.