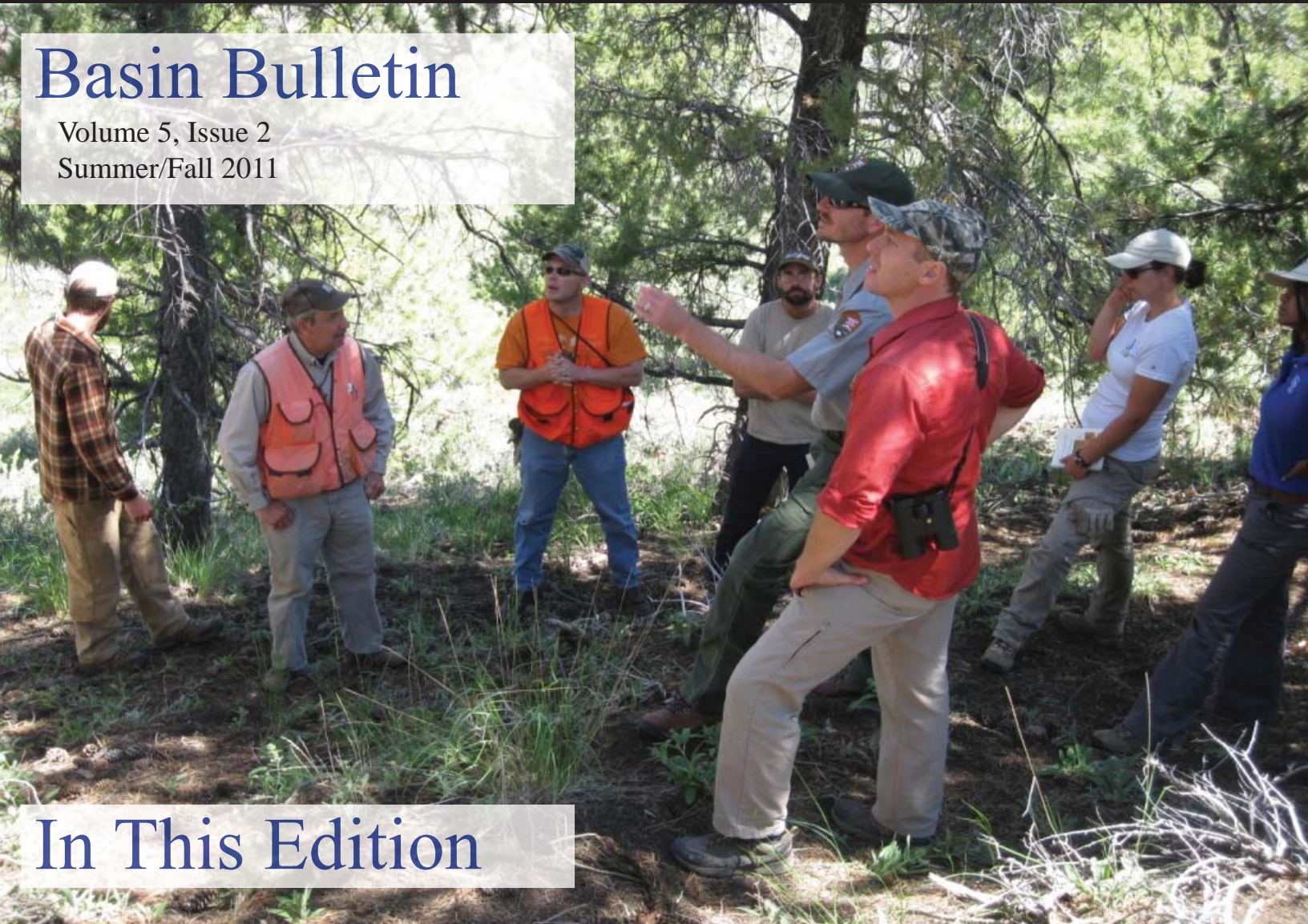




## Basin Bulletin

Volume 5, Issue 2  
Summer/Fall 2011



## In This Edition

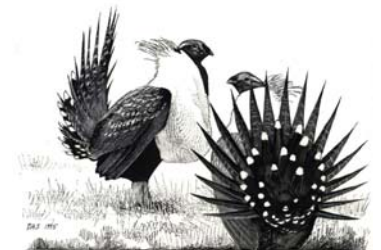
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| <p><b>Cover Story:</b> Training for limber pine monitoring, pg. 4</p> <p>Ecologists from the Inventory and Monitoring Program share their plans for limber pine monitoring this summer.</p> | <p>A look inside US Forest Service PIBO Program, pg. 5</p> <p>Eric Starkey, Aquatic Biologist, and US Forest Service cooperators team-up to monitor riparian and stream channel characteristics in selected network streams.</p> | <p>Upper Columbia Basin Network 3-Year review, a look back, pg. 6</p> <p>Lisa Garrett, Program Manager, shares the successful results of the UCBN 3-year review meeting.</p> |
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UPPER COLUMBIA  
BASIN NETWORK  
**UCBN**

## PLUS!

- Check out where our field crews will be working this summer on pg. 3.
- Review highlights of this season on pg. 5
- What do you know about the Greater sage grouse? Check out our “Featured Creature” on pg. 6



[www.sibleyguides.com/art-gallery](http://www.sibleyguides.com/art-gallery)





National Park Service  
U.S. Department of Interior



The National Park Service has implemented natural resource inventory and monitoring on a servicewide basis to ensure all park units possess the resource information needed for effective, science-based managerial decision-making, and resource protection.

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## The Program Manager's Corner

"If a window of opportunity appears, don't pull down the shade."  
~ Tom Peters

Data collection efforts are in full swing for the Upper Columbia Basin Network (UCBN) Inventory & Monitoring Program this summer. We welcome our seasonal employees Devin Stucki and Dan Esposito to our "boots on the ground" monitoring efforts this year! Most of you know Devin from previous summers, but Dan Esposito is new to our ranks. Dan is currently an undergraduate student pursuing a B.S. in Natural Resources at the Forest Science Department at Oregon State University. Both Dan and Devin are stationed at Craters of the Moon National Monument and Preserve.

Camas data collection efforts at Nez Perce National Historical Park (NEPE) were another huge success this year with three high schools participating in the camas monitoring program. Thanks again to the NEPE staff for all of their support. Michael Durham produced a video of our monitoring efforts that can be viewed on the UCBN webpage.



Lemhi penstemon monitoring crew at Big Hole National Battlefield, MT.

with the Sierra Nevada Network (SIEN) this summer so Devin and Dan will also collect five needle pine data at Yosemite and Sequoia-Kings Canyon National Parks this year.

I will be detailing as Acting Superintendent at Craters of the Moon National Monument and Preserve (CRMO) starting on August 15, 2011 for up to 120 days. I am very excited to have been offered this opportunity! I look forward to learning more about the duties of a Superintendent and also spending more time on the ground in one of our Network parks. Gordon Dicus will serve as acting program manager while I am duty-stationed at CRMO.

The UCBN crews and their cooperators have also collected monitoring data at Big Hole NB (camas, Lemhi penstemon), City of Rocks NR (aspen), Craters of the Moon NM & P (limber pine), John Day Fossil Beds NM (sagebrush-steppe), Lake Roosevelt NRA (osprey, sagebrush-steppe), and Nez Perce NHP (camas, water quality). We are crew-sharing

Our Network Annual Science meeting is scheduled for October 12-13, 2011 in Walla Walla, Washington. Roger Trick, resource manager at Whitman Mission NHS, along with myself are making preparations for this meeting and we hope everyone is able to attend!

Have a safe summer! I hope to see you in October!

Lisa Garrett - UCBN Program Manager

# UCBN Inventory and Monitoring Program Update - July 2011

| Project   | Parks Included               | Status  |
|---|------------------------------|---|
| <b>Inventories</b>                                  | <b>2011</b>                  |   |
| Lemhi penstemon                                     | BIHO                         | Lemhi penstemon inventory data collected at BIHO in June 2011.  |
| Vegetation Mapping                                  | CIRO, CRMO, HAFO, JODA, LARO | BIHO – Accuracy assessment completed in 2011<br>CIRO – Final maps completed<br>CRMO – Final report complete<br>HAFO – Final report complete<br>JODA – Final report complete<br>LARO – Draft map available<br>NEPE – Accuracy assessment completed in 2011<br>WHMI - Accuracy assessment completed in 2011 |
| <b>Monitoring</b>                                   |                              |   |
| Aspen   | CIRO                         | Protocol approved August 2009.<br>Data collected at CIRO in July 2011.<br>Reporting scheduled for completion in October 2011.   |
| Camas   | BIHO, NEPE                   | Protocol approved October 2007.<br>Data collected in May 2011 (NEPE) and June 2011 (BIHO).<br>Annual reporting scheduled for completion October 2011.   |
| Limber Pine   | CRMO                         | Protocol scheduled for final submission in August 2011.<br>Data collected at CRMO in June and July 2011.<br>Reporting scheduled for completion October 2011.  |
| Osprey  | LARO                         | Protocol approved November 2010.<br>Osprey surveys conducted at LARO in May and July 2011.<br>Reporting scheduled for completion October 2011.  |
| Pika  | CRMO<br>(CRLA, LABE, LAVO)   | Protocol approved February 2011.<br>Data collected at CRMO (CRLA, LABE, and LAVO) July-Sept. 2011.<br>Reporting scheduled for completion November 2011.   |
| Riparian Condition & Stream Channel Characteristics | NEPE, WHMI                   | <i>Riparian Condition</i> : Protocol scheduled for final submission in August 2011.<br><i>Stream Channel Ch.:</i> Protocol approved December 2010.<br>Data collected at NEPE and WHMI between June and Nov. 2011.<br>Reporting scheduled for completion August 2012.                                      |
| Sagebrush-steppe Vegetation Monitoring              | JODA, LARO                   | Protocol approved September 2009.<br>Data collected at JODA and LARO between May and June 2011.<br>Reporting scheduled for completion in October 2011.  |
| Water Quality Monitoring                            | NEPE, WHMI                   | Protocol approved February 2009.<br>Water chemistry and macroinvertebrate data collected at NEPE and WHMI between June and November 2011.<br>Reporting scheduled for completion November 2011.  |
| <b>Science Communication and Science Support</b>    |                              |   |
| Science Communication Strategy                      | All UCBN Parks               | Implement various components of science communication strategy with UCBN parks.   |
| Natural Resource Condition Assessment               | BIHO, CIRO, CRMO, HAFO       | Final reports scheduled for BIHO, CIRO, CRMO, and HAFO in 2011/2012.  |



# Results of the Upper Columbia Basin I&M Network 3-Year Review

Lisa Garrett - Program Manager



The Upper Columbia Basin Network (UCBN) 3 year review was held in Moscow, ID Feb. 15-16, 2011. All of our preparations paid off as we were recognized with a “team award.” This award was presented to the Network employees for exceptional contributions to natural resource stewardship and service to the network parks and to the national I&M program. The Network staff was recognized as having completed a great amount of work given the relatively small amount of funding and staffing available and the logistical challenges involved with inventory and monitoring of natural resources in 9 parks distributed across 4 western states. In the anonymous survey sent out prior to the review meeting, the UCBN had the highest “customer satisfaction” feedback among the 24 I&M networks that have been reviewed to date.

During the review meeting, park managers spoke about the dedication and productivity of the UCBN staff, and expressed appreciation for the excellent scientific and technical support that they receive. A number of examples were provided of how data and information provided by the network are already being used to inform various management actions including natural resource restoration projects, General Management Plans and other planning, and park interpretation. Excellent progress has been made in establishing the infrastructure and procedures for effective data management, data analysis, reporting, and delivery of results to parks. In addition, there has been excellent collaboration between scientists, managers, and interpreters to provide scientific information to educators and the general public, and to involve students and others through citizen science projects.

Our challenge is to have the same “glowing report” at the next Network Review! Thanks to the UCBN staff, superintendents, resource managers, interpreters, regional and national program leaders, and others who made this review a great success!

## US Forest Service-PIBO Field Crew Training in North Idaho

Eric Starkey - Aquatic Biologist

The Upper Columbia Basin Network (UCBN) is working with the United States Forest Service- PACFISH/IN-FISH Biological Opinion (PIBO) program to monitor stream channel characteristics and riparian condition in selected streams across the UCBN. Each year, PIBO samples approximately 500 streams on public lands across the inland northwest and has sampled well over 5,000 sites since the program’s inception. As with any monitoring, data quality depends on accurate repeatable measurements of each parameter. To ensure data quality, the PIBO program uses several weeks each summer to train their field crews. Some of the topics covered include: hazard analysis, first aid, navigation, reach set up, bankfull measurements, macroinvertebrate collection, vegetation identification and measurements, among others. In addition to the hands on training, the field crews have the opportunity to work as a crew to sample several practice reaches.

In May, I was able to spend a day at PIBO’s training camp in Idaho (they also spend a week in Oregon near John Day). This was a great chance to meet the permanent staff who administer the program. I participated in the half day session focused exclusively on the



Field technicians from the US Forest Service - PIBO Program during a training exercise held near Potlach, ID.

identification of bankfull height. The simplest definition of bankfull is the elevation at which stream discharge spills out of the channel and spreads out horizontally (i.e., floods). This measure along with gradient are critical to our understanding of a stream and gives context to all other measures. Bankfull measures were discussed on the first day and are a reoccurring theme throughout the 2-week training. In addition to this half day session, I was able to observe how the PIBO staff prepares 40+ field technicians to deal with the potential hazards of work in remote locations.

After seeing PIBO’s training process in action, and reading their literature, I have no doubt that PIBO crews will be collecting the highest quality data in and along our streams. PIBO field crews are expected to be working in streams in NEPE and WHMI at different times throughout the summer.

# Monitoring limber pine at Craters of the Moon: The 2011 kick-off

Tom Rodhouse and Shawn McKinney - Ecologists



Limber pine crew training at Craters of the Moon National Monument and Preserve (CRMO).

Monitoring teams from the Upper Columbia Basin Network (UCBN) and Sierra Nevada Network (SIEN) convened at Craters of the Moon National Monument and Preserve (CRMO) at the end of June to launch collaborative monitoring of the park's limber pine population, as well as high-elevation whitebark pine and foxtail pine populations in Yosemite and Sequoia-Kings Canyon later in the summer. This partnership formed during the protocol development process in 2010, when it became clear that the two networks would benefit by sharing crews and conducting joint trainings together. This is an exciting development and it represents quite a step forward for NPS as a whole, as one of the goals for the I&M Program has always been to facilitate more collaboration and leveraging of resources within the agency. With Shawn's expertise positioned squarely in these high-elevation pine ecosystems, the UCBN benefitted tremendously from his

time spent in CRMO looking over this unique population. The UCBN returned the favor by hosting a week-long training and providing additional programmatic support.

One of the highlights of the week was the field day we all spent with Jim Hoffman and Carl Jorgensen of the US Forest Service Forest Health Protection Team. These experts were able to provide additional training to the field crew on recognizing the signs and symptoms of mountain pine beetle infestation and white-pine blister rust infection, both of which are established in the park and are a clear and present danger to long-term persistence of the limber pine population.

Limber pine is one of several high-elevation white pine species that are characterized by having 5 needles per bundle, or fascicle. This 5-needle characteristic is tied in to these species' vascular systems and predisposes them to infection by the blister rust, an invasive fungus of Eurasian origin. From conversations with Jim and Carl, it became evident that the population at Craters is truly unique, as many of us have long suspected. Many limber pine populations that they have been studying in southern Idaho have already been wiped out by rust, and the incidence of beetle infestation is also on the rise. Furthermore, although limber pine is quite hardy, it is clearly growing on the edge of its tolerance at CRMO, and we can gain insights into the relationships between climate and disease dynamics by studying this population. They strongly emphasized that by monitoring the long-term dynamics of disease, mortality, and regeneration, we will be able to make an important contribution not only to effective management of the park population but also to the broader questions surrounding the health of these fragile high elevation systems.



Active blister rust canker at CRMO.



1. **You are always welcome to join us in the field:** Participating in data collection will give you a glimpse into the biologists' role in the inventory and monitoring program.
2. **New monitoring video:** Click on the link below to access our most recent video on camas monitoring and citizen science efforts: [http://science.nature.nps.gov/im/units/ucbn/mon\\_videos.cfm](http://science.nature.nps.gov/im/units/ucbn/mon_videos.cfm)
3. **Save the date!** The Network Annual Science meeting will be held at Walla Walla, WA on Oct. 12-13, 2011.



# #6 Featured Creature 9\*

by Mackenzie Jeffress

## Greater sage-grouse

The greater sage-grouse (*Centrocercus urophasianus*) is the largest grouse in North America. Many recognize it in pictures of its courtship ritual of “lekking” where the males put on an elaborate display, inflating and deflating air sacs to make a popping sound, in order to attract females.

Sage-grouse have been decreasing in numbers and range throughout much of the western United States with researchers estimating population declines of 45% to 80% rangewide. The sage-grouse is a sagebrush obligate species and has unique seasonal habitat requirements. The loss or conversion of these habitats due to fire, invasive species, grazing, urbanization, etc., is believed to be a primary cause of the declines.

These declines have led to several petitions to list certain populations, subspecies, or species of sage-grouse as endangered or threatened under the Endangered Species Act (ESA). In 2010, the US Fish and Wildlife Service announced that listing was warranted but precluded by higher priorities for listing under the ESA. This essentially means that the species has been put on a waiting list and annual reviews of its status will determine whether listing is necessary in the future.

In the meantime, sage-grouse will be monitored in 2 UCBN parks: Craters of the Moon NM&P and City of Rocks NR. Idaho Department of Fish and Game (IDFG) is currently monitoring sage-grouse populations in southern Idaho by using lek counts. Given these efforts and the expansive habitat used by the species, the UCBN plans to collaborate with the IDFG for mutual benefits and understanding of the species.

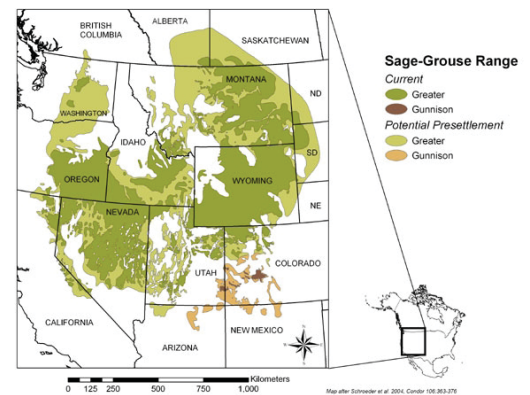
The UCBN plans to submit a sage-grouse monitoring protocol for peer-review in 2012.



Greater sage-grouse lek.



Greater sage-grouse nest.



Sage-grouse distribution. USGS map (adapted from Schroeder et al. 2004)

### Connect these sentences and show what you know about the National Park Service efforts to monitor greater sage-grouse in Upper Columbia Basin Network parks

- Sage-grouse habitat is characterized by the presence of... - 2012
- A gathering of male birds that engage in courtship displays is a... - fire and inv. species
- A sage-grouse monitoring protocol developed by the UCBN will be ready in... - sagebrush
- Two threats to sage-grouse habitat are... - Craters of the Moon NM&P and City of Rocks NR
- Sage-grouse will be monitored in the UCBN at... - lek