



Basin Bulletin

Volume 6, Issue 1
Winter/Spring 2012

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National, Network and Park staff join forces to complete the first “State of the Park” report.

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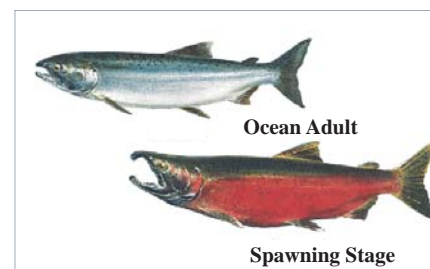
Welcome Todd Stefanic to the Upper Columbia Basin Network! He is the new Wildlife Biologist at Craters of the Moon National Monument and Preserve.



UPPER COLUMBIA
BASIN NETWORK
UCBN

PLUS!

- Check out the UCBN field schedule on pg. 4.
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<http://cybersalmon.fws.gov/coho.htm>



National Park Service
U.S. Department of Interior



The National Park Service has implemented natural resource inventory and monitoring on a servicerwide 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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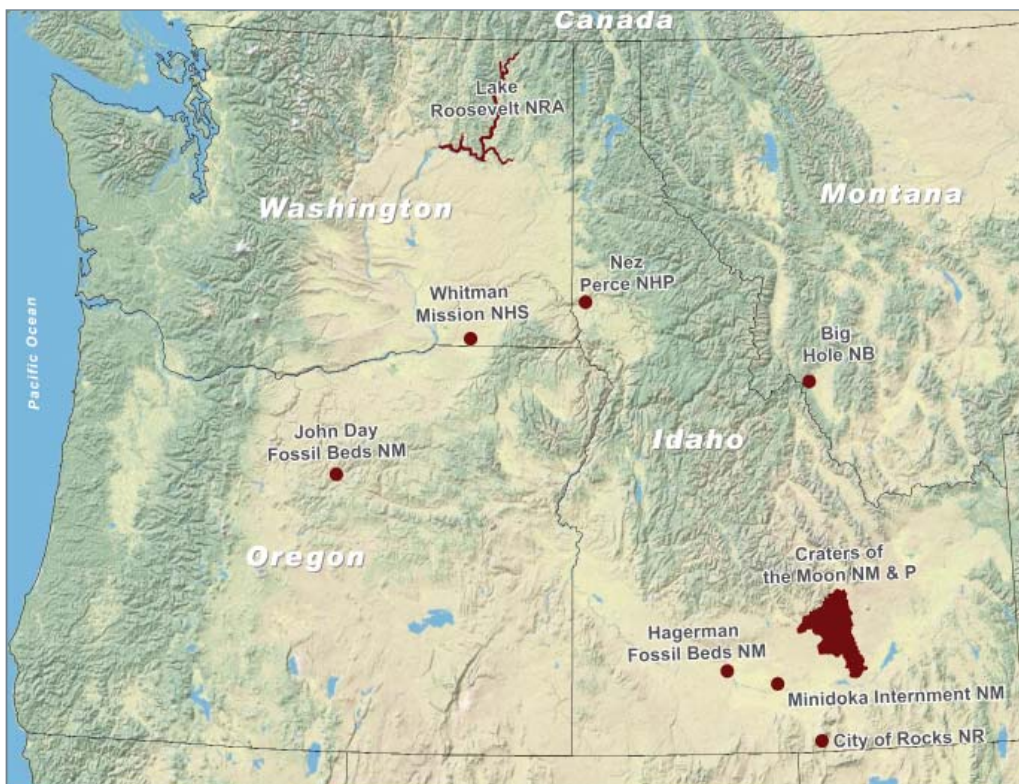
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Distribution
Please distribute this newsletter on to
any person or group who is interested!

Questions about the newsletter?
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Upper Columbia Basin Network Inventory and Monitoring Program



PARKS IN THE NETWORK

Big Hole National Battlefield (BIHO)

City of Rocks National Reserve (CIRO)

Craters of the Moon National Monument and Preserve (CRMO)

Hagerman Fossil Beds National Monument (HAFO)

John Day Fossil Beds National Monument (JODA)

Lake Roosevelt National Recreation Area (LARO)

Nez Perce National Historical Park (NEPE)

Whitman Mission National Historic Site (WHMI)

<http://science.nature.nps.gov/im/units/ucbn/>

Taking the pulse of the National Parks

The Program Manager's Corner

"It is a fact that in the right formation, the lifting power of many wings can achieve twice the distance of any bird flying alone."

~ Author Unknown

I'm sitting at my desk in Moscow, while the snow swirls by my window, reflecting on UCBN 2011 accomplishments while developing the Network 2012 workplan. This past year brought significant accolades for this Network that are a testament to how hard our team works everyday for the UCBN parks to accomplish the goals of the monitoring program. In February we were rewarded for our efforts by being named the #1 Network in customer satisfaction by the Superintendents and Resource Managers at our 3-year review! In October, we held our 8th annual science meeting in Walla Walla, WA hosted by Whitman Mission National Historic Site. We achieved our highest attendance to date with thirty-eight attendees and representatives from every park attending. Thanks to all of the participants and presenters who made this meeting so successful. We finished up a great year by teaming up with the National I & M program in early December to assist park staff at Big Hole National Battlefield in becoming the first park to complete a "State of the Park" report. It is these Network staff efforts, plus the amazing support of our parks, that make my job as program manager so rewarding!!

I was given the privilege in August to be the Acting Superintendent at Craters of the Moon National Monument and Preserve for four months after Doug Neighbor accepted a new position at Big Thicket National Preserve. On a personal level, I achieved my goal of exploring much of the park by foot. I was also afforded the opportunity to spend time fly fishing Silver Creek, one of the great trout streams of Idaho, and spending a picture perfect fall weekend at Yellowstone and Grand Teton National Parks. On a professional level, I worked alongside a dedicated staff who assisted me in learning about park operations including maintenance, administration, visitor services, interpretation, natural resources, and bookstore operations. I was humbled by their willingness to teach me the ropes as well as their spirit in accepting me as part of their park family. I will always treasure my time spent at Craters and look forward to visiting all of my new friends when time allows. Thank you to everyone at Craters for their guidance and support!!

In 2012 you can expect to see work on the development of new monitoring protocols for bats and sage grouse. We will also be collecting monitoring data for nine protocols including aspen, camas, limber pine, osprey, pika, riparian vegetation, sagebrush-steppe vegetation, stream channel characteristics, and water quality.

Thanks to all of the Network and park staff for a successful year in 2011! Look for the monitoring teams to be in your park in 2012! The teams enjoy spending time with park staff so please let them know if you are available to ride along and learn about our monitoring efforts.

~ Lisa Garrett - UCBN Program Manager



Craters of the Moon staff posing with their new cross-country snow groomer that arrived in early December 2011.



Annual Science Meeting Participants, October 2011.



UCBN Network Staff

UCBN Inventory and Monitoring Program Update - January 2012

Project	Parks Included	Status
2012		
Inventories		
Vegetation Mapping	BIHO, NEPE, WHMI	BIHO, NEPE, WHMI - Completion of final maps and reports scheduled in 2012.
Monitoring		
Aspen	CIRO	Protocol approved August 2009. Data collection scheduled for CIRO in August 2012. Annual reporting scheduled for October 2012.
Camas	BIHO, NEPE	Protocol approved October 2007. Data collection scheduled for May 2012 (NEPE) and June 2012 (BIHO). Annual reporting scheduled for October 2012.
Limber Pine	CRMO	Protocol in revision, due for submission in January 2012. Data collection scheduled for CRMO in June 2012. Annual reporting scheduled for October 2012.
Osprey	LARO	Protocol in revision, due for submission in February 2012. Data collection scheduled for LARO in May and July 2012. Annual reporting scheduled for October 2012.
Pika	CRMO	Protocol approved February 2011. Data collection scheduled for CRMO in July-September 2012. Annual reporting scheduled for November 2012.
Sagebrush-steppe Vegetation Monitoring	CIRO, HAFO	Protocol approved September 2009. Data collections scheduled for CIRO and HAFO in May-July 2012. Annual reporting scheduled for October 2012.
Stream Channel Characteristics	BIHO, CIRO	Protocol approved December 2010. USFS data collection scheduled for BIHO and CIRO in 2012. Annual reporting scheduled for August 2013
Riparian Vegetation	BIHO, CIRO	Protocol approved October 2011. USFS data collection scheduled for BIHO and CIRO in 2012. Annual reporting scheduled for August 2013.
Water Quality Monitoring	BIHO, CIRO, WHMI	Protocol approved February 2009. Data collection scheduled for BIHO, CIRO and WHMI in 2012. Annual reporting scheduled for February 2013.
Science Communication		
Science Communication Strategy	All UCBN Parks	Implement various components of science communication strategy with UCBN parks. Products will include the UCBN newsletter, resource briefs, annual reports, and informational posters.
Science Support		
Natural Resource Condition Assessment	BIHO, CIRO, CRMO, HAFO	Final reports scheduled for BIHO, CIRO, CRMO, and HAFO in 2012.
Lemhi penstemon	BIHO	Data will be collected by park staff for Lemhi penstemon at BIHO in June 2012.

Big Hole National Battlefield - State of the Park Report

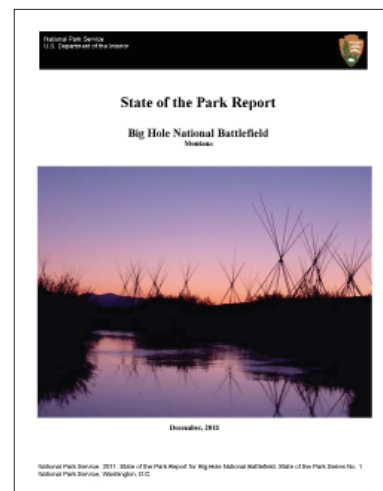
Lisa Garrett - Program Manager

The National Inventory and Monitoring Team from Ft. Collins, along with park and Network staff, joined efforts in early December 2011 to develop and write the first “State of the Park” report for Big Hole National Battlefield. The purpose of this State of the Park report is to:

- Provide a snapshot of the status and trend in the condition of key park resources and values to visitors and the American public;
- Highlight park stewardship activities and accomplishments that maintain or improve the state of the park; and
- Identify key issues and challenges facing and affecting park management.

The final draft of this report can be seen by NPS employees at:

<http://www1.nrintra.nps.gov/im/stateoftheparks/biho/>.



Hats off to all the Big Hole National Battlefield staff along with National I & M Program and Network staff who dedicated themselves to the completion of this project in a short time frame. The park will use the information contained in this report to improve park priority setting and to synthesize and communicate complex park condition information to the public in a clear and simple way. I invite everyone to take a moment to read through this report and see if you think it might be worthwhile to complete for your park. Please contact the UCBN program manager if you are interested in developing a “State of the Park” report for your park.

Geodatabase in Development for Craters of the Moon NM and Preserve

Meghan Lonneker - GIS Specialist

Hello readers, my name is Meghan Lonneker, UCBN GIS Specialist, and I’m working on a Geodatabase project with Craters of the Moon National Monument and Preserve (CRMO). John Apel and Steven Bekedam, CRMO natural resource managers, recognized a need for more efficient management and use of their kipuka inventory data, and sought technical assistance from the UCBN.

Kipukas are isolated islands of relatively undisturbed vegetation surrounded by lava flows. Their isolation often results in very little impact from noxious weeds and other invasive species, making kipukas important areas of native biodiversity. A geodatabase combines spatial data with a relational database for easy access to a variety of data types -- tabular data, digital photos, aerial imagery, and spatial information such as the line and polygon data familiar to GIS users. This collaborative effort meets important CRMO natural resource management needs and fits well in the UCBN mission. Lisa Garrett, UCBN Program Manager, commented that “integrating natural resource inventory and monitor-

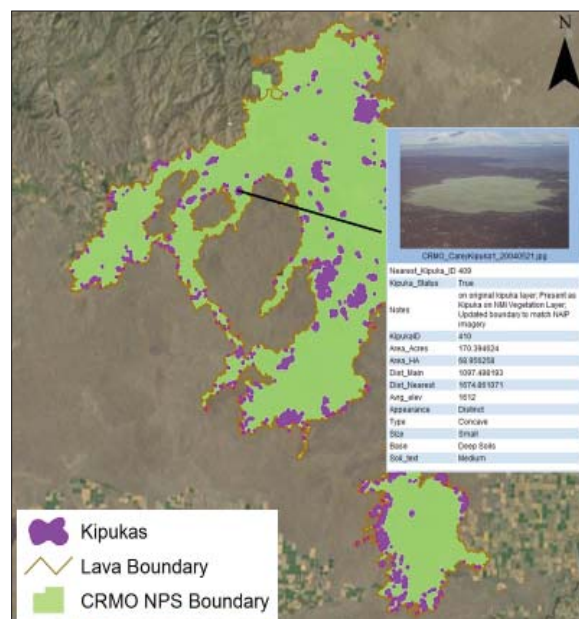
ing information into National Park Service planning, management, and decision making is one of the primary goals of the Inventory and Monitoring Program. And assisting in the development of a geodatabase for Craters of the Moon is certainly an important contribution from our Network staff to help the park achieve better access to their kipuka information.”

There are approximately 250 kipukas for which baseline natural resource data have been collected. Other natural resource inventory data incorporated into the geodatabase are: lava flow delineations, aerial imagery, vegetation plot data, fire and fuels data, soils data, topography layers, digital photos, and documents such as inventory and research reports. In addition, the geodatabase provides a set of tools and program scripts that allow the user to link a kipuka to photos and documents, input new kipuka data, edit current kipuka data, and query important data relationships such as those kipukas that contain a particular species of interest or those kipukas that have experienced a recent fire.

Geodatabase at Craters of the Moon NM and Preserve (continued)

The kipuka geodatabase will provide a familiar ArcMap application allowing users to select an individual kipuka, then view the suite of natural resource information associated with that kipuka. The spatial layers and tabular data in the geodatabase are updatable so seasonal and permanent staff can be trained to keep the information current. In addition to spatial layers and data tables, the geodatabase provides printable map layouts and reports, and a toolbar from which users can run the various tools and queries. For example, the user can select a kipuka from the main map, query the vegetation cover and fuel type, and then export a report and customized map for use in a planning document.

The functionality and flexibility of this geodatabase will make the kipuka data more accessible to park staff, thereby allowing the data to be incorporated more readily into park planning efforts. The kipuka geodatabase is a good example of how the UCBN works with Network park resource managers to improve access to, and application of, inventory and monitoring datasets.



Map detailing key characteristics and a photo from one of the many kipukas found at Craters of the Moon National Monument and Preserve (CRMO).

Meet new faces in our network

Todd Stefanie

New Wildlife Biologist at Craters of the Moon National Monument and Preserve, Idaho

Todd grew up in Wisconsin and attended University of Wisconsin at Eau Claire and Stevens Point, where he obtained a B.S. in Wildlife Management. He started as a GS-4 (Seasonal) Biological Science Technician at Arapaho National Wildlife Refuge in Walden, Colorado. He worked there from 1996 to 2002, and had a brief break in the summer of 1998 when he worked at Benton Lake National Wildlife Refuge in Great Falls, Montana.

After that, from 2002 to 2005 he was the Wildlife Biologist at the Salton Sea National Wildlife Refuge in Calipatria, California. Most recently from 2005 to this past December, he served as the Wildlife Biologist/Assistant Ranger at the LaCroix Ranger District of the Superior National Forest in Cook, Minnesota. He just moved to Arco, Idaho before the holidays with his wife Toni, with whom he has been married for 17 years, and their two kids; Ethan (6 yrs.) and Ember (3 yrs.). His hobbies include painting (landscape and wildlife), hiking, hunting and fishing.



Todd and his family.



1. New videos: In case you haven't seen our new videos, learn more about sagebrush steppe monitoring and cave management at Craters of the Moon National Monument and Preserve:

http://science.nature.nps.gov/im/units/ucbn/mon_videos.cfm

2. Date set for 2012 Science Meeting! The next UCBN Annual Science Meeting will be held on October 9-12, 2012 at Big Hole National Battlefield, Montana.

Updating park records to meet IRMA standards

Steven Bekedam - CRMO Vegetation Ecologist

A new version of the Integrated Resource Management Applications (IRMA) was unveiled to parks in August of 2011. IRMA consolidates earlier NPS data management applications such as NatureBib, NPSpecies, and the NPS Data Store, and helps parks meet the challenge of quick and immediate access to critical sources of information. IRMA provides a “one-stop shop” to enter, manage, discover, and share information on a park’s natural and cultural resources. IRMA allows users to easily search, view, download, and print this information from multiple sources and systems, all from a consistent user interface.

The Upper Columbia Basin Inventory & Monitoring Network (UCBN) has been collecting and managing park resource data to a rigorous standard and they continue to update and digitally link all their monitoring protocols, annual reports, and geospatial layers into the IRMA system. However, because most historic park records were brought in from IRMA’s predecessors, many of them have yet to be examined for accuracy and receive updates. Also, a recent search found that fewer than 25% of any parks’ IRMA records are in a digital form. Further, there are likely backlogs of new entries for most parks.

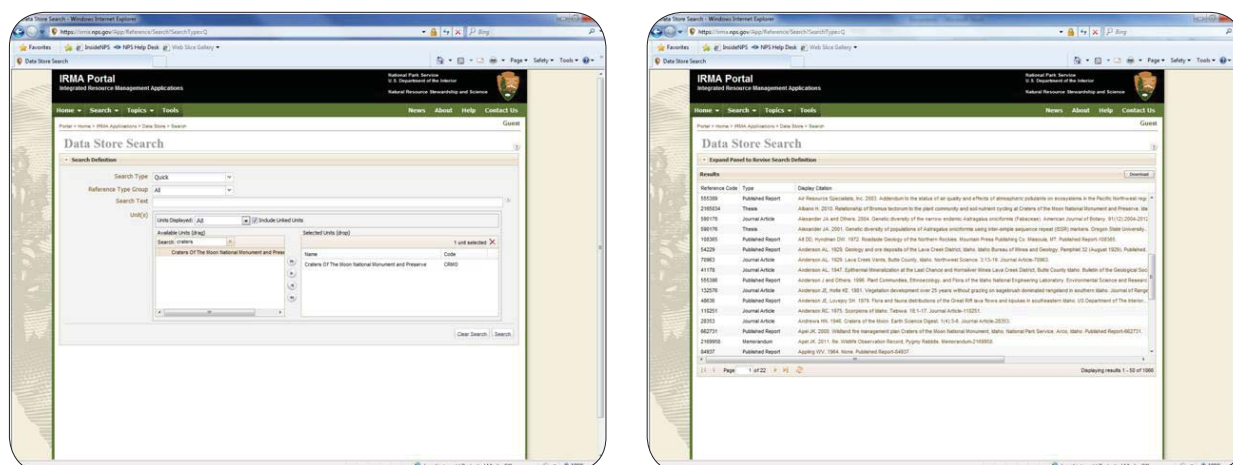
Last October I submitted several requests to begin addressing this need here at Craters of the Moon National Monument and Preserve (CRMO), a small PWR regional funding proposal and a technical assistance request to the Natural Resource Program Center (NRPC) in Fort Collins. With IRMA just released, there is a growing commitment from the WASO to address these efforts.

Funding and assistance requests have been approved for 2012 and last December, Brent Frakes with the NPS National I&M Program offered immediate assistance. Brent’s student interns are working to scan and digitize 30 CRMO documents. Brent is tracking the costs associated with this effort so that other parks can estimate their costs for such an undertaking. At a salary of \$20/hour, he estimated it would cost \$5 to update each reference already in IRMA and about \$10 to create, scan, and upload a new 50-page reference into IRMA. These estimates do not, however, factor in time required to physically locate references.

This year CRMO plans to continue our work with the NRPC, develop a work plan, employ two interns for IRMA updates, and develop a protocol for future entries. While large scale efforts are required for large backlogs of documents needing to be scanned, more modest efforts by park staff can reduce the backlog over time or even prevent a backlog from developing.

More information on IRMA at:

<http://science.nature.nps.gov/im/datamgmt/IRMA.cfm>



Screen captures of the IRMA Data Search page and results obtained from a search.

6 Featured Creature 9

by Jannis Jocius

Coho Salmon in Lapwai Creek

Coho salmon (*Oncorhynchus kisutch*) is a species of anadromous fish that live in freshwater from 1 to 3 years, migrate to the ocean, and then return to the streams in which they were born to spawn and die. Female Coho salmon produce between 1,500 to 5,700 eggs. These eggs are deposited in redds (a gravel depression scoured out by females) and usually hatch in six to seven weeks. Newly hatched salmon are called 'alevin,' which look like tiny fish with a big yolk sac that provides all the nutrition they need. They remain in the redd until the yolk sac is absorbed, then they emerge as 'fry' and must find food for themselves. These small fish hide and learn to school together to survive. As they prepare to migrate to the sea, fish 'smolt,' which is a physiological change that, when completed, enables fish to live in salt water.

Coho salmon then migrate to the ocean and during this stage they grow and gain weight for 1-3 years. Eventually, an instinctive trigger tells mature salmon that it is time to return to their home rivers and streams and reproduce. During this migration, salmon live off of stored fat and stop occasionally to rest. All energy gained in the ocean is put towards their long migration and reproduction. In Lapwai Creek, fish return between October and December. Once they spawn they die, allowing this cycle to start anew and providing a nutrient-rich environment for the soon-to-be hatched salmon.



Adult coho return to their stream of origin to spawn and die, usually at around three years old. Spawning males develop a strongly hooked snout and large teeth.



Nez Perce Tribal Fisheries staff built a temporary weir on Lapwai Creek in order to collect and rear over 100,000 coho salmon fish eggs.

Unsustainable fishing practices, hydro-electric dams, and environmental change have had disastrous effects on fish populations. In 1986, approximately ten years after the last dam on the Columbia River system was built, Coho populations officially went extinct in the Clearwater River. Today, nearly all of Idaho's native anadromous salmon and steelhead are listed as threatened or endangered under the Endangered Species Act, and are protected in order to conserve critically low populations.

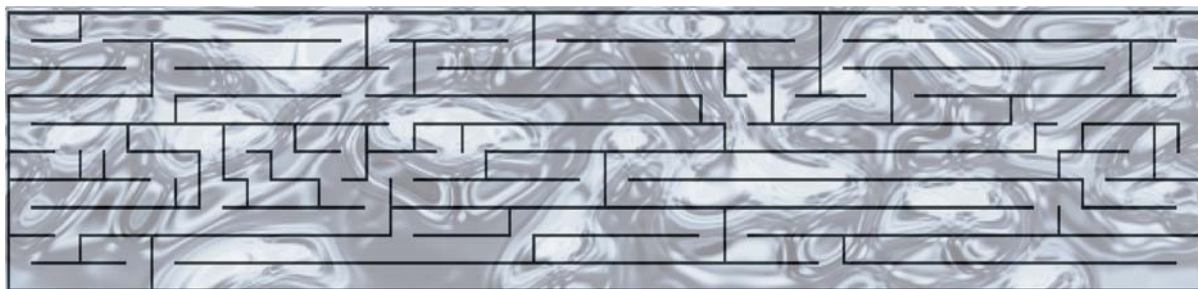
In an effort to restore local coho broodstock in the Clearwater River and its tributaries, the Nez Perce Tribe developed the Clearwater Coho Restoration Program (CCRP) in 1994 as a result of an agreement between tribes, states and the federal government. In 1997, the first adult Coho returned over Lower Granite Dam, just northwest of Lewiston, ID. As part of this program, in the fall of 2010 and 2011, Tribal fisheries technicians installed a temporary fish weir in Lapwai Creek at Nez Perce

National Historical Park's Spalding site. The fish that were collected from the creek were transported to fish hatcheries in Idaho and Oregon, hatched, reared, and now contribute to the Columbia Basin and coastal ocean fisheries. The program reached an important milestone last year with the release of 550,000 hatchery reared juvenile fish that are the offspring of adults that returned to the basin in 2009.

Help this Coho Salmon return to Lapwai Creek



Pacific
Ocean



Lapwai
Creek

