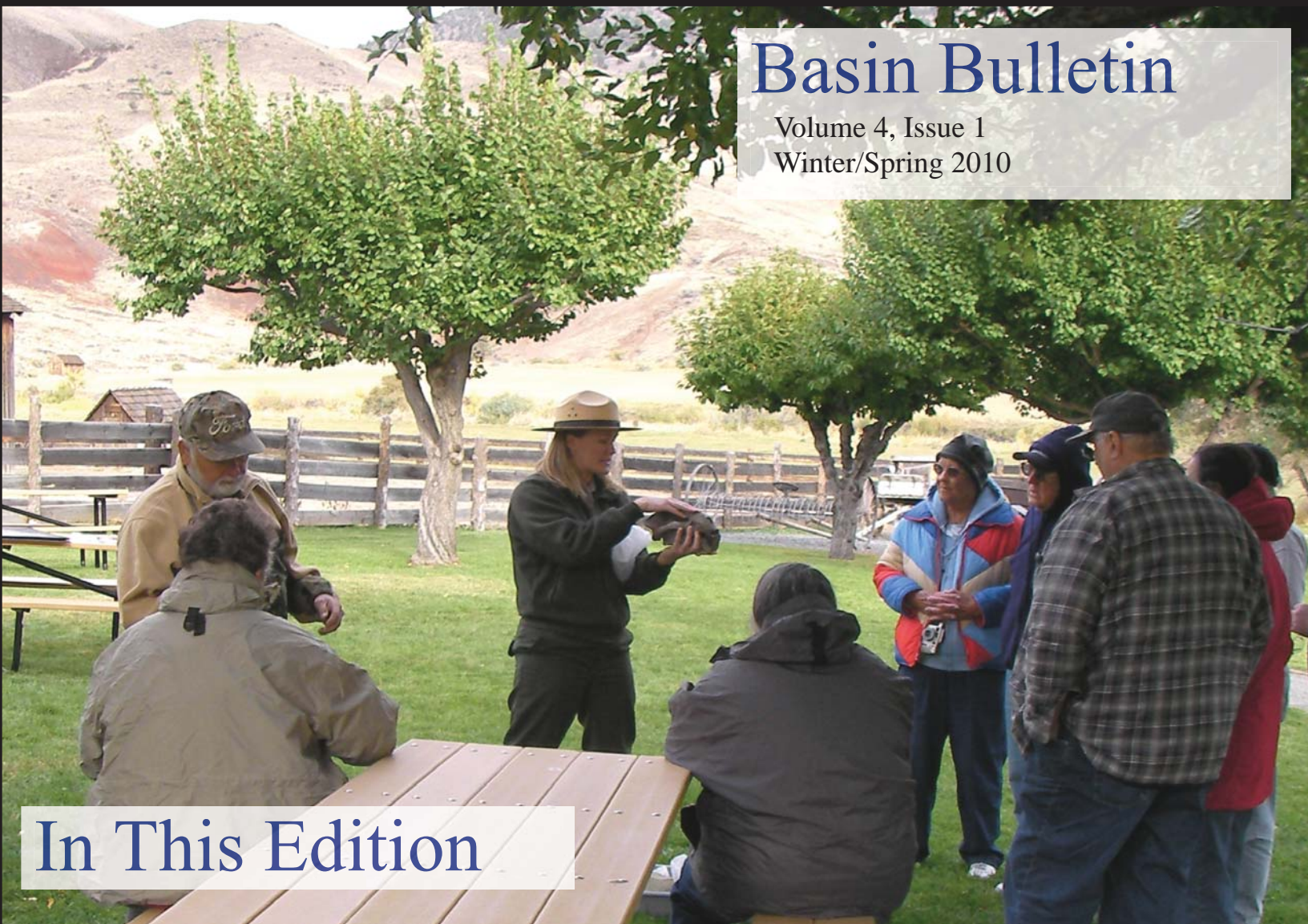




## Basin Bulletin

Volume 4, Issue 1  
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### In This Edition

**Cover Story:** Perspective of a new employee, pg. 4

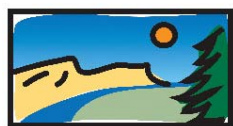
Amy Poff, Education and Volunteer Coordinator at John Day Fossil Beds NM, shares her point of view about the UCBN.

A new superintendent in our network, pg. 6

Steve Black talks about how UCBN data has helped him as a new superintendent at Big Hole NB.

Meet our GIS Analyst, pg. 7

Meghan Lonneker tells us about the projects she has been involved with and her experience with GIS.



UPPER COLUMBIA  
BASIN NETWORK  
**UCBN**

## PLUS!

- Find out what the UCBN field monitoring crews are studying this year on pg. 3.
- Check out our Osprey NestWatch Program on pg. 5.
- Read about the experiences of an SCA intern at Lake Roosevelt NRA on pg. 6.
- Learn about macroinvertebrate diversity in our parks on pg. 7.
- Test your knowledge of our “**Featured Creature.**”







National Park Service  
U.S. Department of Interior  
Upper Columbia Basin Network



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 Coordinator's Corner

We wrapped up a busy fall season with writing and editing several annual reports, organizing the annual Science Day, and producing the Network annual report and work plan. The Network is looking forward to drafting new protocols for limber pine, riparian vegetation, and stream channel characteristics in 2010. We have submitted protocols for osprey and American pika for peer-review and will be implementing these protocols in the summer 2010.

Many thanks to Doug Neighbor, John Apel, Steven Bekedam and their staff for making the 6th annual Science Day in Hailey, Idaho in October 2009 such a huge success. We thank the interpretive staff from UCBN parks for their participation this year and look forward to more collaboration with these folks in the future. We also would like to acknowledge the wonderful fieldtrip that was hosted at Craters of the Moon NM & PRES. We were able to tour many of the monitoring sites at the park and thoroughly enjoyed interacting with the staff and learning more about the park and its natural resources.



We would like to extend our gratitude to the parks of the Upper Columbia Basin Network for their continued staff and financial support in 2009. All of the parks contributed staff time to assist our program in various monitoring activities. We would like to especially thank: Big Hole NB staff for the housing they provided for UCBN field crews and the field assistance with camas, water quality monitoring and the 2009 inventory of Lemhi penstemon; City of Rocks NRES staff for their assistance in obtaining campsites for the UCBN field crews; Craters of the Moon NM & Preserve staff for the purchase of a pop-up camper for field crews and providing SCA assistance with limber pine monitoring; John Day Fossil Beds NM staff for the purchase of 4-Trimble Juno handhelds and the park support of radios and building and phone access for field crews; Lake Roosevelt NRA staff for providing SCA assistance for osprey monitoring, the use of a YSI probe for water quality monitoring, and crew housing; Nez Perce NHP staff for their administrative and contracting support, storage for the UCBN pop-up camper, and crew assistance for camas monitoring; and Roger Trick, at Whitman Mission NHS, who continues to collect water quality data in support of the UCBN water quality program. THANKS EVERYONE!!

We are launching several new initiatives this year that we hope will engage the parks in partnering with the Network to provide additional interpretive opportunities using inventory and monitoring information. The first project is Osprey NestWatch at Lake Roosevelt NRA. Paulina Starkey is taking the lead on this project. Paulina is the UCBN Volunteer-In-Parks Coordinator and will be working with area schools, birdwatchers, and park staff to recruit volunteers to report their nest observations on eagle or osprey nest sites along the lakeshore through an online database. We are also updating the UCBN brochure, which should be available for distribution this winter.

The field season will be upon us before you know it; although, judging by the snow banks on my driveway it's hard to imagine. Network field crews will be collecting aspen, camas, limber pine, osprey, pika, sagebrush-steppe, and water quality monitoring data in parks this season. We look forward to another ambitious and productive year of monitoring natural resources in Upper Columbia Basin Network parks in 2010.

Lisa Garrett - UCBN Coordinator

# UCBN Inventory and Monitoring Program Update - January 2010

| Project  | Parks Included               | Status  |
|--|------------------------------|---|
| <b>Inventories</b>                                   |                              |   |
| Lemhi penstemon                                      | BIHO                         | A 2 <sup>nd</sup> year of inventory data will be collected for Lemhi penstemon at BIHO in June 2010.  |
| Vegetation Mapping                                   | CIRO, CRMO, HAFO, JODA, LARO | BIHO – Scoping meeting October 2009<br>CIRO – Accuracy assessment April-July 2010<br>CRMO – Final report complete<br>HAFO – Final report complete<br>JODA – Preliminary maps in progress<br>LARO – Preliminary maps in progress<br>NEPE – Scoping meeting October 2009<br>WHMI - Scoping meeting October 2009 |
| <b>Monitoring</b>                                    |                              |   |
| Aspen  | CRMO                         | Final protocol approved August 2009.<br>Data collection scheduled for CRMO in June 2010.<br>Reporting scheduled for completion in October 2010.   |
| Camas  | BIHO, NEPE                   | Data collection scheduled for May 2010 (NEPE) and June 2010 (BIHO). Reporting scheduled for completion October 2010.  |
| Limber Pine  | CRMO                         | Protocol scheduled for submission in August 2010.   |
| Osprey   | LARO                         | Protocol submitted for review September 2009. Osprey monitoring data collection scheduled at LARO from May to July 2010.  |
| Photomonitoring (targeted projects)                  | WHMI                         | Doan Creek photomonitoring May 2010 (WHMI).   |
| Pika   | CRLA, LAVO                   | Protocol submitted in December 2009.<br>Fieldwork scheduled at CRLA and LAVO in June 2010.  |
| Riparian Vegetation & Stream Channel Characteristics | BIHO, CIRO, JODA, NEPE, WHMI | Protocols scheduled for submission in August 2010.  |
| Sagebrush-steppe Vegetation Monitoring               | BIHO, CIRO, JODA, NEPE, WHMI | Final protocol approved in September 2009.<br>Data collection scheduled for CIRO and CRMO, May-July 2010. Reporting scheduled for completion in October 2010.   |
| Water Quality Monitoring                             | CRMO, JODA                   | Water chemistry and macroinvertebrate data collection at JODA and CRMO. Field work begins in late May-early June 2010.  |
| <b>Science Communication and Science Support</b>     |                              |   |
| Science Communication Strategy                       | All UCBN Parks               | Publish updated UCBN brochure, develop VIP program for osprey NestWatch, develop osprey poster, and update photo database.  |
| Natural Resource Condition Assessment                | All UCBN Parks               | Final reports scheduled for BIHO, CIRO, CRMO, HAFO, NEPE, and WHMI in 2010.   |



# Perspective of a New Employee

**Amy Poff** - Education and Volunteer Coordinator, John Day Fossil Beds National Monument

Greetings from John Day Fossil Beds National Monument (JODA)! As the newest member of JODA's interpretive team, I have been asked to share some of my impressions of the UCBN, based upon my participation in October's Science Day Meeting in Hailey, ID. Admittedly, I knew very little about the UCBN's role and function, and equally little of its relationship with the NPS prior to the meeting in Hailey. Being relatively new to the NPS (I have been at JODA for one year, following a year and a half at Lava Beds NM), I was previously not aware that such a network system existed to assess and monitor the health of parks within similar ecozones, irrespective of NPS regional distinctions.

Though unaware of it at the time, my introduction to the UCBN really came many years ago, when I was employed as an Outdoor Science Instructor for the Oregon Museum of Science and Industry's Hancock Field Station, located within JODA's Clarno Unit. It was in this capacity that I had the pleasure of meeting Network Ecologist Tom Rodhouse, who was surveying bat communities on the monument. Six years following my OMSI employment, I find myself back in the colorful landscapes of John Day country, reconnecting with the place where I first embarked on the path toward becoming a park ranger with the National Park Service.

I confess that what initially excited me about the meeting in Hailey, aside from the opportunity to enjoy some



Painted Hills at John Day Fossil Beds National Monument.

really good sushi, was the field trip to Craters of the Moon. However, I returned to JODA with much more than a head full of volcanic wonderland memories and a belly full of Hailey's gustatory delights. I met many exceptional people at the meetings, and the science sessions have better equipped me to convey to the public many of the I&M strategies being employed in our park, and throughout the network. The juxtaposition of current UCBN I&M findings atop JODA's rich paleontological record – which represents 45 million years of evolutionary and ecosystem change – reveals a relevant and compelling story of regional climatic flux. Connecting people to that story – its trends and anomalies, its evidence and implications, its reflection of a dynamic global climate – is one of the most rewarding facets of interpretation at John Day Fossil Beds.

## News for Interpreters

How can park staff communicate UCBN findings to visitors?



Park Ranger guiding an interpretive talk at Craters of the Moon National Monument and Preserve (Photo provided by CRMO staff).

Last October was the first time that interpretive staff joined the Upper Columbia Basin Network and park resource managers in the Annual Science Day in Hailey, ID. It was great to share information on current projects the network is working on in each park, and obtain interpreters' perspective on this meeting.

During one of our sessions, superintendents, natural resource managers and interpreters had the opportunity to exchange ideas about how Inventory and Monitoring data can be incorporated into visitor resources. The brainstorming of ideas that came up during this session is summarized on the following page, and we hope they are helpful to further enrich your interpretive opportunities.

- Get involved in data collection efforts. This will provide you hands-on experience in the field that you can later share with visitors.
- Integrate monitoring information into your interpretive programs. Talk about natural resources and UCBN monitoring activities while you are giving interpretive talks.
- Incorporate ethnobotany in your talks, link people and history with natural resources.
- Highlight positive aspects instead of focusing on negative ones. Explain to visitors how the UCBN is working with the park to help wildlife species or improve habitat.
- Every park has a main attraction that draws people to visit them --either history, recreation, geology, etc. Mention natural resources! Visitors may not be aware of the natural resources present at their parks and might enjoy learning about it.
- Connect people to science. Create a message that visitors can take home and emphasize why monitoring is important and why it matters.



## Keep Your Eyes Open...Our NestWatch Program is Coming Up!

Gordon Dicus - UCBN Data Manager

Osprey NestWatch is a web-based program that will allow volunteers to record nest observations in support of the Upper Columbia Basin Network's long-term monitoring of osprey at Lake Roosevelt National Recreation Area. As Osprey NestWatch develops, background information, guidelines for observing nests and other resources, and nest observation data entry forms will be available through the UCBN website on the osprey monitoring page (<http://science.nature.nps.gov/im/units/ucbn/monitor/osprey/osprey.cfm>). Observation data from spring, when osprey initiate nesting and egg incubation, and from late summer, when young osprey "fledge" from the nest, will assist the UCBN in determining status and trend in osprey nest occupancy and productivity (number of successful fledglings per nest).

The Osprey NestWatch program will allow observers to select a nest, either by zooming-in on a map of Lake Roosevelt NRA and clicking on the appropriate nest label or nest photo, or by clicking the nest label from a list of all nests. Nest labels consist of a nest number and a letter designating the stretch of reservoir – C for the southern (Coulee dam) stretch, G for the middle (Gifford) stretch, and K for the northern (Kettle Falls) stretch. A photo of each nest tree will also be displayed on the appropriate "zoomed-in" map. After selecting a nest, the observer will be able to view past observations of that nest and to enter a new observation. First, the observer enters the observation date and the method (observed from a boat, from a vehicle, or by foot), then enters the number of adults seen at or near the nest and the number of nestlings, if any, observed in the nest. If nestlings are observed, the observer enters the age of

those nestlings (downy or feathered). Next, the observer uses a set of selection lists to enter the nest structure (dead tree, live tree, platform on pole, powerline pole, or other), the weather conditions (clear, cloudy, foggy, rain, or snow), and the behavior of the osprey (adults in area but not on nest, adults on nest, adult on nest in incubation posture, adult on nest feeding young, adult bringing food to nest, or other). If the observer selects "other," then a brief description of behavior can be entered. Finally, the observer may enter comments about his/her nest observation.

Anyone desiring more information about the UCBN osprey monitoring and/or assisting the program as a nest monitor can contact the network volunteer coordinator, Paulina Starkey, at [pstarkey@vandals.uidaho.edu](mailto:pstarkey@vandals.uidaho.edu) or (208) 885-3015.

(Left) Example of a zoomed-in map showing detailed section of reservoir, nest labels and nest photos. (Below) Online data entry form.



## A Summer at the Lake

**Jeffrey Joh** - SCA Intern at Lake Roosevelt NRA

Hello readers! My name is Jeffrey Joh and I spent ten weeks of my summer at Lake Roosevelt National Recreation Area in eastern Washington. Along with two other SCA interns, we spent the first few weeks restoring native Bitterbrush vegetation. Through long hours in the sun removing guards off plants, digging up the dead, and replanting, we learned about the importance of native plants to the local ecosystem, and also about the legal conflicts between the park and adjacent landowners.

Later on, I had the opportunity to help monitor osprey nests. For two weeks, UCBN network coordinator, Lisa Garrett, other SCAs and I, scoured the woods with a camera and a GPS for forty Osprey and Bald Eagle nests. Because we were given only the GPS coordinates to nests, it was our responsibility to find the hidden roads and hike rough terrain to reach these nests. We drove on dirt roads, hiked through bitterbrush, and ran into both friendly and unfriendly neighbors on our trek to these hidden nests. Afterwards, I spent a week at the network office in Moscow, ID helping process the data and writing the Osprey monitoring resource brief.

This park was certainly a hidden treasure. It wasn't a park like Yosemite, which is known throughout the world. Yet these lesser-known parks have just as much to offer.



Jeffrey with other SCAs at Lake Roosevelt National Recreation Area.

Being at a smaller park, we were given more freedom to explore different fields, such as interpretation and wildlife research. Additionally, living in the small town of Coulee Dam, the interns and staff became a tight-knit community. We enjoyed touring the largest dam in the U.S., going to the nearby Indian Powwows, and experiencing deep dark skies at night.

It has been nearly five months since I returned home from Lake Roosevelt NRA. I finished up the first semester of my sophomore year at U.C. Berkeley. I do not yet know where my career will lead, but I know the knowledge and experience I gained while working as a SCA will help me in any path I choose. Perhaps the most important lesson I learned was to control the spread of invasive species, and always check your socks for cheatgrass!

## Impressions from our New Superintendent

**Steve Black** - Big Hole NB and Paulina Starkey



Dawn at the Encampment site in Big Hole National Battlefield.

In May of 2009, the Upper Columbia Basin Network (UCBN) welcomed a new superintendent to Big Hole National Battlefield (BIHO) and to the UCBN Board of Directors. Steve Black, comes from Pea Ridge National Military Park where he served as Chief Park Ranger. I recently asked Superintendent Black about his experience with the inventory and monitoring program and its relationship with BIHO, specifically.

As with anybody's first days on the job, Superintendent Black tried to learn as much as possible on every aspect of the Battlefield by reading history books on the park and conversing with park staff. He said that "it wasn't until [he] got here and started interacting with the staff of the UCBN Inventory and Monitoring program, that [he] started to see the whole picture and realize how much more there was to learn." Conversations with UCBN staff, annual reports given to him for review, and involvement of BIHO staff in monitoring field activities have allowed Superintendent Black to understand more about the culturally significant camas lily (*Camassia quamash*), the state-listed sensitive species Lemhi penstemon (*Penstemon lemhiensis*), and the status of water quality and macroinvertebrates. In Superintendent Black's words, based on all these data, he now "can make decisions on how to best manage the park."

Superintendent Black is "looking forward to working with the UCBN I&M program for years to come" and appreciates all the products they have developed in benefit of the park, its staff and its visitors.

# Meet our GIS Wiz: Meghan Lonneker

UCBN GIS Analyst

The newest addition to the UCBN Moscow office is Meghan Lonneker. Meghan grew up in northern Washington State near the Canadian border. In 2002 she completed her undergraduate degree in Natural Resources, with an emphasis in Forestry, from Washington State University. From there, she went on to fight wildland fire for both federal and state agencies across the northwest.

In 2008 Meghan completed a M.S. degree in Geography at the University of Idaho. Her graduate work focused on estimating forest canopy attributes using Light Detection and Ranging (LIDAR) and multispectral satellite

imagery. Prior to receiving a full time appointment with the UCBN, Meghan had been working half-time for the UCBN and half-time for Idaho Department of Lands as a Geographic Information System (GIS) Analyst. Her previous work with the UCBN involved the use of GIS and imagery to update the fence line and land ownership maps within City of Rocks National Reserve.

In her time away from work, Meghan enjoys camping and river rafting. Meghan is also an avid traveler. Over the last few years she has managed to spend time in West Africa, Mexico, and Europe.



## Hidden Biological Diversity of BIHO, CIRO, NEPE, and WHMI

Eric Starkey - UCBN Aquatic Biologist

When we think of biological diversity in each park it is easy to forget about some of the less charismatic fauna such as aquatic invertebrates, yet they serve an important role in aquatic ecosystems. Since aquatic invertebrates are sensitive to pollution and other impairments to water quality, they are an excellent indicator of stream conditions.

As part of the UCBN water quality monitoring protocol, we collect samples of aquatic invertebrates. In 2008 we collected samples from Nez Perce National Historical Park (NEPE) and Whitman Mission National Historic Site (WHMI), and in 2009 from Big Hole National Battlefield (BIHO) and City of Rocks National Reserve (CIRO).

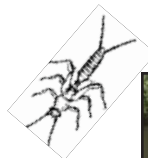
The number of species encountered in each park might come as a surprise: 57 species in Lapwai Creek (NEPE), 46 in Mill Creek (WHMI), 95 in the North Fork of the Big Hole River (BIHO), and 51 in North Fork of Circle Creek (CIRO). Of these species, many are types of Mayflies, Stoneflies or Caddisflies (aka. Ephemeroptera, Plecoptera, Trichoptera [EPT]).

EPT richness and associated values are a good indicator of water quality. One important point to remember is that

not all streams are created equal; differences in substrate, natural water temperatures, etc. can lead to different EPT richness. The number of EPT species found in each stream was: 8 in Lapwai Creek (NEPE), 9 in Mill Creek (WHMI), 33 in the North Fork of the Big Hole River (BIHO), and 19 in North Fork of Circle Creek (CIRO). So the next time you pass a stream, don't forget about the wide variety of critters lurking below the surface. There is more to biological diversity in your park than meets the eye.



Ephemeroptera



Plecoptera



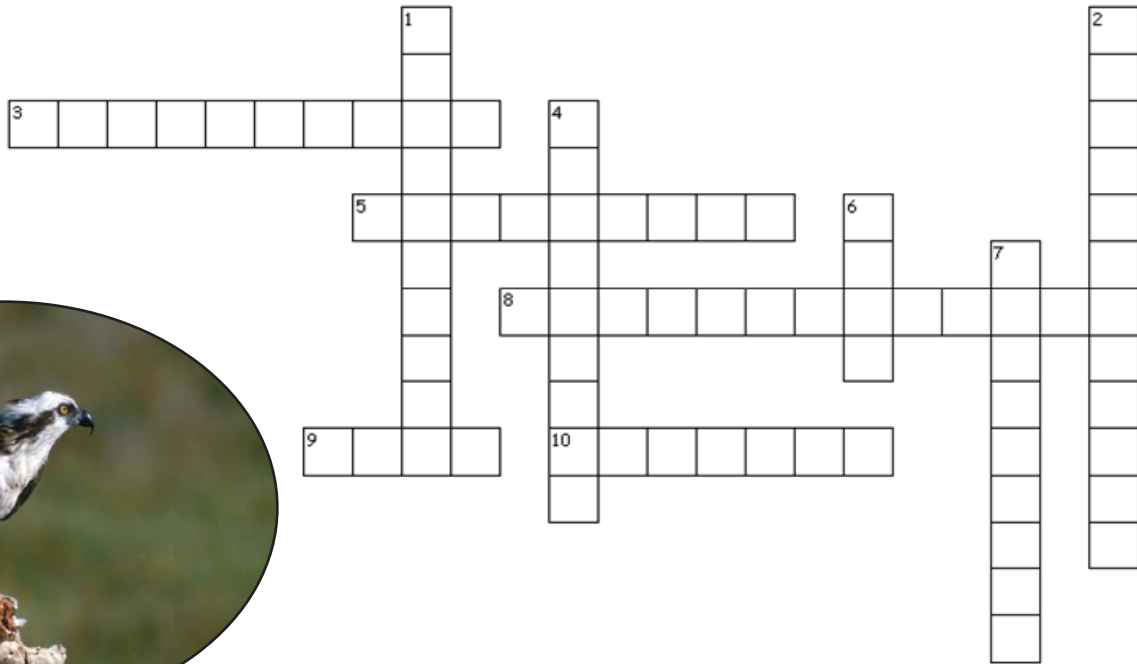
UCBN Aquatic Biologist collecting macroinvertebrates in the North Fork of the Big Hole River (BIHO).



Trichoptera

# #6 Featured Creature 9\*

Test your osprey knowledge in this crossword puzzle!



## Down

1. Osprey represents 1 of the 14 \_\_\_\_\_ monitored by scientists of the Upper Columbia Basin Network.
2. Increased human \_\_\_\_\_ activity, such as boating, constitutes an stressor on osprey populations.
4. Ospreys are \_\_\_\_\_ birds and travel to southern Mexico every year.
6. Ospreys' diet primarily consists of \_\_\_\_\_.
7. Starting this year, the UCBN will incorporate the Osprey \_\_\_\_\_ Program, allowing volunteers and park staff to enter nest observations into an online database.

## Across

3. \_\_\_\_\_ in the water, such as PCBs, are the primary cause of osprey decline.
5. A "successful" nest includes at least one \_\_\_\_\_. (Synonym of young birds that just acquired flight feathers).
8. Ospreys are present at \_\_\_\_\_.
9. Ospreys usually return to the same \_\_\_\_\_ every year.
10. Ospreys are \_\_\_\_\_. (Synonym of birds of prey).