

WATER WATCH

Fall-Winter 2017-2018

HIGHLIGHTS

Upcoming Events

Meet the Spring Interns!

Crayfish of the Inland NW

Watercraft Inspection Info

Sagebrush Ecosystem Info

March 13, 2018

Hello Master Water Stewards!

It has been quite the roller coaster this fall and winter. We had very early snow up north, then a lack of snow in January through mid February, especially in southern Idaho, then lots of snow all over the state through the rest of Feb and into March. Time will tell what the snowpack has in store for our streams and lakes. It's time to start thinking about monitoring again, and of course, enjoying your favorite waterside place.

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This newsletter comes to you in the midst of a lot of multiyear projects coming to a close. It includes a list of IDAH2O and Project WET workshops, plus a few tidbits from some of IDAH2O's community partners. I am also embarking on a study of Idaho crayfish, and I have included lots of information to help us gain knowledge as citizen scientists.

A few reminders as we progress into spring: be sure to check your kits for expired or broken equipment. Check out your thermometers to be sure there's not a bubble in the fluid (thump it gently to move the bubble upward), and that your kit is organized and ready to go. **Let me know if you need monitoring supplies!** Remember that anyone who has completed the IDAH2O workshop is always invited to any future workshop for no cost to you. We all need a refresher from time to time. Finally, I enjoy visiting monitoring sites, but I need a prompt from you! If you'd like me to visit yours, simply drop me a line! This newsletter will include a brief list of when I am traveling to distant parts of the state, in case I can connect with you to check out your site. :)

Happy monitoring!

Sincerely,

Jim Ekins



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UPCOMING EVENTS



The River Mile Academy



Monday, April 23

<https://therivermile.org/blog/event/trm-academy-2018/>

Join us for The River Mile Academy in conjunction with the Lake Roosevelt Forum Conference. Breakout sessions and training for Watershed Facilitators and STEM Champions and training for educators new to FieldSTEM. One of the premier authorities on crayfish will be presenting at this event! Dr. Eric Larson, University of Illinois, has been studying crayfish here for years.

Lake Roosevelt Forum

Historic Davenport Hotel, Spokane, WA

Tuesday and Wednesday, April 24 and 25

<http://www.lrf.org/conference>

Tuesday, April 24th, 9:00 a.m. - 6:30 p.m.
Modernizing the Columbia River Treaty

Wednesday, April 25th, 8:30 a.m. - 4:30 p.m.
Examining Upper Columbia Salmon Reintroduction
Upper Columbia Fish Passage and Reintroduction

Get SEEP Certified in Erosion Control!

2018 SEEP Basic Courses

Coeur d'Alene: March 20-21

Sandpoint: April 10-11

Kellogg: April 24-25

Plummer: May 1-2

Coeur d'Alene: May 8-9

Seep classes include a full day of classroom training and half day in the field for hands-on practice installing erosion- and sediment-control BMPs. Topics: site planning, regulations, water quality. Cost: \$250.

Register now: www.panhandleSEEP.org

Contact Marie Schmidt: 208-292-2540, mschmidt@uidaho.edu



IDAH2O and Project WET Workshops

Saturday, April 21, 2018: IDAH2O, Lewiston

Saturday, May 12, 2018: IDAH2O, Sandpoint

Saturday, May 19, 2018: IDAH2O, Coeur d'Alene

Saturday, June 9, 2018: Project WET McCall, ID

Saturday, July 28th (Tentative): IDAH2O S.E. Idaho

Saturday, July 21, 2018: IDAH2O near Newport, WA

Saturday, July 28, 2018: IDAH2O, Ashton, ID

July 26-ish (Tentative): Project WET in Pocatello

Also, a new partnership with Idaho State Parks and Recreation and the Friends of Idaho State Parks to teach a workshop for K-12 teachers and nonformal educators about using Hells Gate State Park as an outdoor classroom on **Saturday, March 24, 2018**.



Historic Davenport Hotel, Spokane, WA

Wednesday, May 9, 7:15 am - 9:15 am

Join us for a breakfast where cultural, economic and environmental perspectives come together for thought provoking, robust discussions about using water wisely in our region.

Keynote: Sandra Poster, founder of The Global Water Policy Project, lead expert for National Geographic's Freshwater Initiative, and author of "Replenish: The Virtuous Cycle of Water and Prosperity."

Contact info@spokaneriver.net for more information

Meet the Spring 2018 INTERNS!



Meet Ali (Alexandria) Chavez, Undergraduate Water Outreach Intern

My name is Ali Chavez, I'm a native of Boise Idaho and I currently study at the University of Idaho. My major is Environmental Science with an emphasis in water and management. In my free time I love to hike, bike, and go camping! I'm working under Jim in a Water Outreach internship to gain more knowledge about water resources. Since I'm based in Moscow, I am also working with the City of Moscow Water Department to deliver clean water education to students around the Palouse, and with the Palouse-Clearwater Environmental Institute (PCEI) on various environmental education and nature center projects.

Mercedes Rennison returns! Undergraduate Graphic Design Intern



Mercedes Rennison is an undergraduate student at the University of Idaho studying Studio Art & Design. She is continuing with the UI Water Outreach Team and IDAH2O on several graphic design projects focusing on communicating information about water. This winter, she helped finish a brochure informing Idaho landowners about the benefits of growing and maintaining riparian barriers, and creating illustrations of crayfish for an upcoming Extension publication. Mercedes is passionate about art and has enjoyed learning about water quality while helping the team communicate water information through design! She's about to graduate, and will display her collection of creative and scholarly work at the University of Idaho. Her show opening is on Friday, March 23rd from 4-6 pm and it'll be up for about a week in the Ridenbaugh Gallery on the Moscow campus.

Summer 2018 Undergraduate Water Outreach Internships

If you are an undergraduate student at University of Idaho (or, any of Idaho's public colleges and universities), you may be eligible and qualified for a paid internship through the University of Idaho Extension's Water Outreach Program. Position is expected to start 5/14/18 and end 8/10/18. Maximum of 400 hours (10 weeks), 40 hours per week. Some evening and weekend hours may be required. No work will be performed on the following holidays – May 28 and July 4. 50% Direct assistance with educational events in the greater Coeur d'Alene area; 20% Indirect assistance with program planning and event logistics; 20% assisting other outreach projects related to Extension Water Outreach and CALS Water Resources Program; 10%: other duties as necessary, as related to watershed science, water resources management, or other related Extension programming.

Go to the UI job postings site for more information: <https://uidaho.peopleadmin.com/postings/20704>

Water Program Updates around Idaho

Sagebrush Ecosystem Information

Curricular expert and writer, Rick Reynolds worked with the U.S. Fish and Wildlife Service, BLM, and other partners to develop some interesting and informative K-12 and adult lessons about the Sagebrush ecosystem and the animals and plants found within. <https://www.fws.gov/greatersagegrouse/education.php>.

Much of Idaho is a sagebrush ecosystem, even if this isn't the case up here in N Idaho. I have learned a lot by reading through these resources. And remember that streams and ponds are particularly important and vulnerable in these sagebrush ecosystem areas. Monitoring sage brush ecosystem streams can be rewarding and provide important data.

Invasive Species Inspection Stations for Watercraft are opening for 2018!

Introducing yet another team of “masterful” local water stewards... Idaho's watercraft inspectors help keep our lakes and rivers free of new invasive species by inspecting boats at roadside stations along major transportation corridors (e.g. I-90, Hwy 53, Hwy 93) and also educating the public about the importance of aquatic invasive species spread prevention techniques, such as “clean drain dry”. Invasive species, like zebra and quagga mussels that hitchhike by boat, harm the environment, economy, human health and recreational opportunities. This year marks a decade of state-funded watercraft inspection stations, which is a primary reason that Idaho and neighboring western states and providences remain invasive mussel free. Thank you to our watercraft inspectors for 10 years of steadfast water stewardship!



Photos: Kim Holzer, ISDA 2017

Crayfish Fun Facts!

- These crustaceans have good eyesight and, like other related species (lobsters, prawns), they can move their eyes independently from one another.
- Crayfish molt at the end of June, often eating the old exoskeleton to recover the calcium and phosphates.
- These crustaceans eat plant material and algae, snails, clams, insect larvae, small fish, and carrion.
- Crayfish walk forward; they move backward only when swimming, a common way to escape predators.
- Crayfish are most active at night. They reach adult size in 2 - 4 years. They can live for over 20 years.
- Males may lose a leg or claw during breeding season mating competitions. The lost limb will slowly grow back.
- Females lay 200 to 400 eggs and attach them under their tail. They carry them until they hatch.
- In North America there are over 330 different species. Washington has 1 native species; Idaho has three native species: Signal (*Pacifastacus leniusculus*), Pilose (*P. Gambelii*), and Snake River Pilose (*P. connectens*).
- There have been recorded fossils found of crayfish that are 30 million years old!

Crayfish of the Inland NW

By Janice Elvidge
Executive Director, The River Mile Academy

Students in eastern Washington have been ready to collect data about crayfish for nearly 2 years. And now Idaho Master Water Stewards can join in with development of a Guide to Idaho Crayfish, and with documenting where you catch crayfish.

Recently there have been several developments on the crayfish front. First, we decided to move forward with creating a more extensive educator's guide. Next we met Jim Ekins, University of Idaho, and Dr. Kim Holzer, Agriculture Program Specialist — North Idaho Invasive Species and Noxious Weeds, Idaho State Department of Agriculture, who are working on a crayfish field guide for Idaho. Kim then connected us with Dr. Eric Larson, University of Illinois, who has been studying crayfish in the Pacific Northwest for many years now. We have now formed a group to collaboratively develop materials and programs.

Our group had our first conference call on March 28, 2018. Each participant shared what they were doing with crayfish, what they were developing

and what they could share with the group. Dr. Larson shared that there are some undescribed oddball Signal crayfish near Soap Lake and up in the Okanogan area and it would be helpful to get photographs and descriptions of them. He shared some current research about crayfish habits and migration AND told the group that we really only need to collect crayfish between June and November. He said it would not be worth it to obtain a permit as the winter months won't get any good information.

So, the Crayfish project is moving forward. We will have a specific Crayfish Study Period of September and October and will begin this coming fall. Of course any crayfish information is valuable, so if you get data at any time during the year please submit it! We have new forms for submitting data. These forms are easy to use, and submit the data directly to a publicly shared ArcGIS Online Map. The data will also be available on therivermile.org. IDAH2O Master Water Stewards already collect data about aquatic macro-invertebrates in the Biological Assessment, and we will figure out how Master Water Stewards can participate in the larger project.

We will have a variety of ways you can learn about participating in the study. We plan to prepare a webinar or two and maybe an online e-learning opportunity. As the methodology for collecting crayfish is not the emphasis this coming fall you do not have to participate in any formal in-person training. You will need to sign up and learn how to obtain and use the data collection form before September. You will also need to check your state's fishing regulations as all states are a little different. In Washington State you must have a fishing permit. You can find the data submission forms on The River Mile's website on the data collection and submission page.

To learn more about crayfish register for The River Mile Network Academy on Monday April 23rd. Dr. Larson will be a presenter!

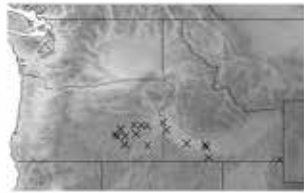
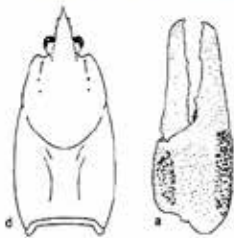


Signal Crayfish, a native species. Photo: The River Mile.

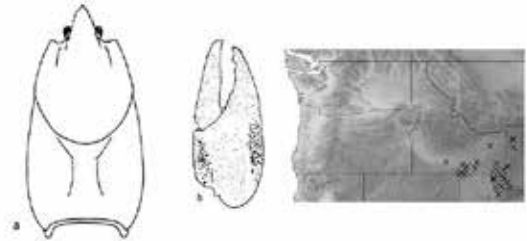
More about Idaho Crayfish

The following images and information about Idaho's three native crayfish are from: Larson, E. R., & Olden, J. D. 2010. *Crayfishes in the Intermountain Region: A guide for identification, known distributions, and sampling protocols.* U.S. Forest Service, Intermountain Region, Ogden, UT.

Snake River Pilose Crayfish (*Pacifastacus connectens*) a native species in parts of Idaho.



Pilose Crayfish (*P. gambelii*) a native species in parts of Idaho.

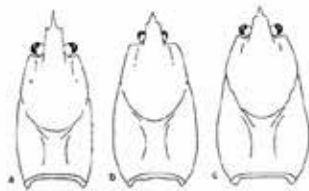


Additional sources of information about crayfish:

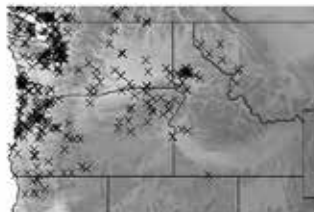
Larson, E.R., C.A. Busack, J.D. Anderson, and J.D. Olden. 2010. Widespread distribution of the non-native northern crayfish (*Orconectes virilis*) in the Columbia River basin. *Northwest Science* 84:109-112.

The State of Crayfish in the Pacific Northwest:
https://invasivespecies.wa.gov/documents/Fisheries_2011a_Cray.pdf

Signal Crayfish (*P. leniusculus*), a native species in Idaho.



- a) leniusculus
- b) trowbridgii
- c) klamathensis
- e) leniusculus



A Few Friendly Reminders!

Remember to contact us if you need any replacement supplies for your IDAH2O kits.

If you are no longer using your kit on a regular basis, I can re-assign it to another Master Water Steward!

I would love to visit your stream or lake monitoring site. Simply send me an email and I'll work with you to schedule in a visit.