

RIPPLES IN THE GRANDE RONDE



RIVERS UNITING NEIGHBORS • QUARTERLY NEWS FROM THE GRANDE RONDE MODEL WATERSHED

For the Love of Rivers, Fish, and Fishing

by Winston Morton, Oregon Department of Fish and Wildlife

Ruth Bowman and Pete Barlow

While retired in Milton-Freewater, Oregon, Ruth Bowman and her partner, Everette “Pete” Barlow, absolutely cherished going to the family cabin on the banks of the Grande Ronde River near Starkey, Oregon. From the upland meadows to the Ponderosa pine forests and the cottonwood galleries along the river, her property is a special family place. Ruth’s passion for rivers and the fish that occupy them came from her childhood. Ruth grew



Ruth Bowman and Pete Barlow after a successful day of trout fishing. (courtesy of the Bowman family)

up on the banks of the Snake River, in a former town called Robinette, Oregon, that was located just below the mouth of the Powder River before it was submerged by the backwaters of the Brownlee Reservoir. Moving upstream on the Powder River, rivers and fishing continued to be a daily part of her young life. As Ruth recalled, “I grew up on the river, and fishing was one of my favorite things to do.”

As a young fish habitat biologist working for the Oregon Department of Fish and Wildlife (ODFW), I first met Ruth and Pete in 2004 when I was conducting riparian fence maintenance on her property. Although no longer in the days of their youth, they said while talking

about the cabin that they highly valued the tranquility and the fish and wildlife that inhabited the property. Even though she didn’t get a line in the water very often anymore, Ruth wanted the Grande Ronde River on her place to provide needed habitat for fish. She recognized that her property offered habitat for Snake River spring/summer Chinook salmon and Snake River summer steelhead, two iconic species that have declined in numbers to the point that both are listed as threatened under the

Endangered Species Act.

Ruth’s Early Habitat Restoration Efforts: Riparian Fencing

In the late 1980s and early 1990s, Ruth was one of the first private landowners to work with the ODFW’s Grande Ronde Fish Habitat Program. Fish biologists have long recognized the importance of the riparian area, which is the plant community on the banks of rivers and streams. The riparian area provides shade that helps keep water temperature cooler, which is needed by our native salmonids, the family of fish that includes salmon and trout.

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Ruth Bowman fishing with her grandchildren on the Grande Ronde River on her property near Starkey, OR. (courtesy of the Bowman family)

... continued from front page, **BOWMAN**

The roots of riparian plants also prevent excessive erosion, and the leaf litter and wood that find their way into the stream offer food for the many insects that salmonids eat.

During that time, riparian exclusion fencing was a primary tool for ODFW restoration practitioners. Ruth and ODFW agreed to work together on a riparian fence constructed and maintained by ODFW under a conservation easement. Removing livestock from the riparian area allowed willows, cottonwoods, dogwoods, and other native riparian species to regenerate, ultimately creating shade and bank stability. Furthermore, the improved riparian area was regularly used by deer, elk and other species, such as migratory songbirds.

Addressing Limiting Factors: Floodplain Connectivity and Habitat Complexity

Although the riparian fencing led to enhancements in the streamside vegetation, it was apparent to ODFW restoration practitioners that there were still limiting factors (things that directly impact fish survival, such as the water temperatures mentioned above) that could be improved to further benefit salmonids. These limiting factors were floodplain connectivity and channel/habitat complexity.

The floodplain, or the area that gets inundated by annual high stream flows, helps juvenile salmonids during periods of high water as they use them for refuge. They also act as water storage areas, recharging groundwater that ultimately finds its way back to the stream and later provides the cool water that salmonids need. Floodplains also can buffer against flood events as they slow down the water and spread it out, reducing the energy available to cause damage. Although Ruth's property had an extensive floodplain, it was rarely activated.



Ruth fishing the Grande Ronde River on the family property. (courtesy of the Bowman family)

This limiting factor was a result of years of channel modification that began in the 1800s with the splash dams that were used to transport timber to the mills downriver, then to the rail yard and roundhouse for trains transporting timber. Channel modification was followed by periodic channel maintenance with equipment, limiting floodplain connectivity to the present day.

The modifications that disconnected the floodplain also decreased channel complexity. As a result of these past actions, pools were almost non-existent, gravels needed for spawning were very limited, and in-stream wood, which helps create pools, sort spawning gravels, and give cover for salmonid from predators, was not present. Other features, such as side channels and backwater alcoves favored as rearing areas for juvenile salmonids, were also missing.

In conversation with Ruth about floodplain connectivity and channel complexity, she understood that the river on her property could use some help. She recognized that changes in land management would need to happen in order to improve the habitat for fish.

2017

On-farm Improvements

Part of what fish habitat biologists do is look for ways that our efforts benefit both landowners and fish habitat. Working with private landowners, we understand that their land can have many purposes and uses for them. We recognize that changes in land management, such as a restoration project, can have an impact on what were their regular operations.

When beginning a stream restoration project, we look for ways to offset impacts that a project may have on a producer and, in many cases, assist with on-farm improvements. For



1996



Twenty-plus years (1996-2017) of riparian restoration using riparian exclusion fencing on the Bowman property. (courtesy of ODFW)

many landowners in northeastern Oregon like Ruth, the land is often used for cattle grazing. Working together with Ruth on the Bowman property, we determined that cattle grazing could be enhanced with better livestock watering and pasture management strategies. Furthermore, an aging livestock corral that had been located next to the river was identified to be relocated out of the floodplain. With these changes, Ruth felt comfortable with the idea of a large restoration project. Although experienced in livestock watering and fencing, ODFW partnered with the Natural Resources Conservation Service (NRCS) and the Grande Ronde Model Watershed (GRMW) to design and implement off-site watering, keeping the cattle where the forage is located and installing fencing for better pasture management through rotational grazing.

The Upper Grande Ronde River-Bowman Habitat Enhancement Project

While completing the off-site watering and fencing project, ODFW began working with Ruth to design a large restoration project encompassing the entire 1.5-mile length of the property along the Grande Ronde River. Two regional engineering firms, Interfluve and RIO ASE, were hired to assist in the design. Areas for improved floodplain connectivity were identified, allowing for seasonal inundation. Side channel networks, alcoves, and mainstem large wood accumulations were designed to improve in-stream channel and habitat complexity. Working together, we aimed to further improve the fish habitat.



On the left, Northwest Watershed Restoration, the contractor hired to assist with implementation, constructing a side channel. On the right, ODFW Fish Habitat Biologist Nick Smith planning the next wood structure layout. (courtesy of ODFW)

A hard loss: Carrying on Ruth's legacy

Just after the New Year in 2021, I reached out to Ruth to talk about the restoration project design and was saddened to learn that Pete had passed due to illness. It was even more devastating to hear from her daughter, Debbie MacLean, just a short time later that Ruth had also succumbed to illness. Shortly after Ruth's passing, Debbie reached out to let me know that she and her sister, Barbara Davis, wanted their mother's restoration project to move forward. The project was in the final phases of design, and Debbie and her husband, Rod, eagerly jumped in with both feet. With the designs completed, ODFW applied for and received funding from GRMW and Oregon Watershed Enhancement Board (OWEB) to implement the project. The GRMW



Debbie and Rod MacLean looking at the design plan for the restoration project while discussing project objectives with the fish habitat biologist. (courtesy of ODFW)

funds restoration projects with mitigation dollars from Bonneville Power Administration's operation of the federal Columbia River power system.

In June and July of this year, ODFW with assistance from Northwest Watershed Restoration and Columbia Helicopter implemented the project as designed. The limiting factors mentioned above were addressed with multiple project elements. Large whole trees were placed by helicopter into the channel in large wood accumulations simulating natural wood loading after a disturbance, such as a fire. Multiple side channels were constructed that will be activated at different flows. Constraining levees were removed, and constructed high-flow inlets now connect the mainstem Grande Ronde River to existing old relic channels and the floodplain. Gravels from the areas of excavation were placed into the stream to seed the wood accumulations, with the idea that the river will sort them and provide complexity, including increased spawning gravels.

While Ruth wasn't able to see her project come to fruition, I believe that with the assistance of her family, we were able to implement a high-quality project to address the limiting factors that impact the fish Ruth cared about. Ruth, wherever you may be, I hope you are fishing by a river with loved ones and know that you have given back to a river and the fish that brought you joy. Thank you.■



Ruth after a successful day of sturgeon fishing. (courtesy of the Bowman family)

How Was Your Summer?

An Interview with the 2023 GRMW High School Interns

GRMW: Please tell us about yourselves!

Griffin: My name is Griffin McIlmoil. I am a senior at La Grande High School. I love the outdoors, spending time in the mountains, and participating in team sports. My favorite sports are baseball and football.

Talin: My name is Talin Hayden, and I am a senior at La Grande High School. Ever since I started walking, being outdoors has been a major part of who I am. I am a very passionate hunter and fisherman, and I love camping, backpacking, and trapping. I also participate in sports, such as basketball, track and field, and trapshooting.

GRMW: Why did you decide to apply for the 2023 summer internship?

Griffin: One of the main reasons why I decided to apply for this internship is because I wanted to explore other possibilities as a career. I also love being outdoors and hunting, fishing, and hiking. I learned about this internship from my mom, and she influenced and encouraged me to make the decision. I am so grateful I applied for the internship because I've learned so many valuable lessons from this experience.

Talin: The main reason I decided to do this internship was because fisheries management is one of my main options as a career. I spend the majority of my time outside of school sports hunting and fishing, so I figured this was a good opportunity to learn something new. I learned about this internship from Griffin. He said he was planning on doing it but didn't have anyone to do it with, so I decided to sign up. I am very glad he asked me to sign up because I came away from this experience with a full toolbox of skills that I will be able to use down the road.

GRMW: What skills did you learn during the internship?

Talin: One of the main skills we learned during the internship is how to communicate better with adults. We had the opportunity to meet and work with many people, oftentimes new people each week. We learned how to act professionally and respectfully in a job setting, which we both know will surely benefit us somewhere down the road. A big takeaway from this experience was that we learned many trades in the field of fisheries. We learned how to use a seine net for netting fish and how to net electro-shocked fish. We loved working with each new person in their professional settings. They were all so kind and respectful, and they treated the two of us like adults. We are so thankful that all the agencies we worked with were willing to have us tag along with them throughout their tasks and jobs. Some of the agencies were the Columbia River Inter-tribal Fish Commission, the Confederated Tribes of the Umatilla Indian Reservation, the Oregon Department of Fish and Wildlife, Trout Unlimited, the U.S. Forest Service, the Bureau of Land Management, project engineers, and construction contractors, among other fisheries specialists. Everyone we worked with was so passionate about their particular fields. It really puts into perspective how important it is to choose a career that you enjoy doing because you get so much more out of the experience.

GRMW: What kinds of projects did you get to be involved with?

Talin: We learned not only about the processes of electrofishing, fish salvage, and mark and recapture but also about Passive Integrated Transponder (PIT) tagging and radio tracking fish. PIT tags consist



Talin (left) and Griffin (right) are at the ready to net stunned fish during a day of fish salvage. (courtesy of Kayla Morinaga)



Talin and Griffin snorkel to assess what species of fish are present in Catherine Creek. (courtesy of Kayla Morinaga)

of an integrated circuit chip, capacitor, and antenna coil encased in glass that serve as reliable and individualized lifetime “barcodes” for fish and animals. PIT tagging was such a cool thing to learn about, as I have always wondered how you could keep track of fish and their whereabouts. Through learning how to track the fish, we also found out about their ecosystems and where to start the next project.

One of the highlights of this experience was that we got the opportunity to snorkel. Snorkeling was an experience like no other! A few of the fish species we got to see were rainbow trout, Chinook salmon, mountain whitefish, and sculpin. During a few of our snorkeling projects, our goal was to find mussels to help with salvage before construction of a restoration project began. It is so cool to see what is hidden to you when you are above the water. There is so much down in the water to explore and learn about. When you first put your face under, it feels like you are entering a different world.

Another job we really enjoyed was duck banding with ODFW biologists and graduate students. We drove around the marsh and checked duck traps to band juvenile and adult ducks and geese. We banded various types of ducks, such as mallards, redheads, wood ducks, teal, and shovelers as well as a single Canadian goose. This job was really enjoyable for the two of us because of our passion for duck hunting.

GRMW: What are your biggest takeaways from the internship experience?

Griffin: This internship has helped me to better my knowledge of multiple different career paths that I could take. The opportunities

and experiences that this internship provided me with were really enjoyable, and I would highly recommend it to any high school student. I really enjoyed everyone I worked with, all the different jobs, and the unique experiences I had while working outdoors. I am so grateful that I was given this opportunity to do jobs that were fascinating and in a location that I love.

Talin: This internship has brought to my attention all the different options and opportunities the fisheries industry has to offer, and after this experience, I am definitely considering this field as a career. There are some types of work in this field that, and I can speak for both Griffin and myself, we would not consider, but on the other hand, I believe the good outweighs the bad. I would recommend this internship to anyone who loves the outdoors or has interest in it. As a matter of fact, I have already recommended it to a couple of my friends, and they are planning on applying next summer. I want to thank everyone we worked with, especially Kayla, for helping the two of us get to where we needed to be on time and for laying out the whole thing for us. It was truly a life-changing experience.

GRMW: This experience was made possible by the Training & Employment Consortium (TEC) and the Eastern Oregon Workforce Board based in La Grande, OR. They oversaw the application process, hired, and paid the wages of our interns. This internship would not have been possible without their great programs. For more information visit tecteam.org and eowb.org. ■



The interns use underwater viewing tubes to determine if freshwater mussels are present. (courtesy of Kayla Morinaga)

Future Stewards of the Land and Waters

The HAWK Interns

by Lily Rhoades,
Wallowa Resources



Isabel Mcguire, a junior at Wallowa High School, dumps a bucket of mud collected from the river bank on top of the beaver dam analog. (courtesy of Avery Stanton)

This summer, the Wallowa Resources' high school-aged HAWK Interns were given multiple opportunities to roll up their sleeves, put on their waders, and dive into watershed restoration and management work. Alongside partners like Ian Wilson of the Grande Ronde Model Watershed (GRMW), water masters David Bates and Marcy Osborne, and Mike Lance of the Oregon Department of Fish and Wildlife (ODFW), the interns were able to partake in several different facets of watershed restoration and management.

The HAWK Internship is a paid, eight-week introduction to natural resources careers. This year, the interns comprised eight local high school students who learned about and participated in projects like trail maintenance, range management, forest monitoring, and watershed restoration and management. The interns were given the opportunity to meet and work with several natural resources professionals who offered their specialized knowledge as well as some insight into the paths they took that resulted in their natural resources careers in the county. This internship is a wonderful way

to introduce students to the natural world around them and get them excited about future opportunities to be stewards of the land.

The interns spent two days at the Wilson Haun river restoration site in Lostine, Oregon. On the first day, they worked with the ODFW's Mike Lance to catch juvenile fish, identify their species, and measure, tag, and release them. They splashed through the stream with Lance and his team, learning techniques to catch the juveniles while trying to avoid filling their waders. On their second day at the restoration site, they worked with the GRMW's Ian Wilson layering mud, sod, and brush to create a beaver dam analog (BDA). As the dam grew and the water rose, they were able to see some of the direct results of their work, and many expressed interest in returning to the site in the future



Dylan Rogers, a sophomore at Joseph Charter School, collects sod to add to the beaver dam analog. (courtesy of Avery Stanton)

to see the completed project. All the interns agreed that, aside from learning about native fish and their habitats and all of the ecological benefits of building a BDA, spending time at the Wilson Haun river restoration site was a great way to cool off during the hot summer months of field work.

Continued on page 8, HAWK



The HAWK Interns stand at the top of a water monitoring site on their day with water masters David Bates and Marcy Osborne. Pictured from left to right: Gabriel Stansell, junior at the Alternative Education High School; Nick Watts, junior at Joseph Charter School; Dylan Rogers, sophomore at Joseph Charter School; Isabel Mcguire, junior at Wallowa High School; Jace Kassahn, junior at Enterprise High School; Logan Teters, junior at Enterprise High School; Aleigh Weaver, senior at the Alternative Education High School.(courtesy of Lily Rhoades)

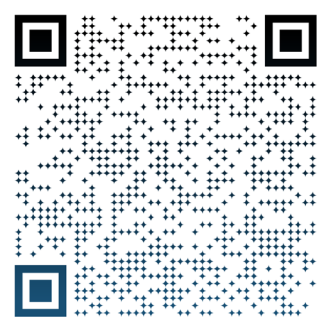
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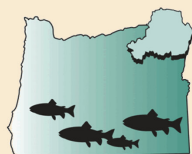


Artwork by Shar Tuiaso

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RIVERS are LIFE



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ODFW's Mike Lance shows Jace Kassahn, Enterprise High School junior, and Nick Watts, Joseph Charter School senior, how to scan a juvenile white fish for a tag and measure its length. (courtesy of Lily Rhoades)

In addition to the work at the restoration site, the HAWK interns were able to accompany water masters David Bates and Marcy Osborne on a tour of water monitoring sites throughout Wallowa County. As they went from site to site, Bates and Osborne spoke to them about the challenges of water management and gave the interns a new appreciation for this amazing resource that we sometimes take for granted.

The Wallowa Resources HAWK Summer Internship is a paid eight-week program for local high school students over 15 years of age. If you or someone you know would be interested in joining next year's crew,

then please visit our website at wallowainstitute.org/hawkprogram. Experiences like this are only made possible with the collaboration of community partners and sponsors like the Grey Family Foundation, the Oregon Youth Corps, and many more. ■

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Grande Ronde Model Watershed UPCOMING BOARD MEETINGS

Tuesday, November 28, 2023

5:00 p.m.

Wallowa Community Center
204 E 2nd St.
Wallowa OR 97885

Tuesday, February 27, 2024

5:00 p.m.

Elgin Community Center
260 N 10th St.
Elgin OR 97827

The public is welcome to attend.

Meeting dates are subject to change.
Please call (541) 663 - 0570 to confirm.

Thank you!

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