

# CURRENT NEWS

The Newsletter of the Clackamas River Basin Council

## **A Working Tree Farm Improves Fish Habitat and Water Quality: Bargefeld Creek Stream Enhancement Project**

Roger Daugherty is a logger, a tree farmer, and the proud owner of a new bridge. He also enjoys coho salmon spawning in his creek.

In 2002, the Clackamas River Basin Council (CRBC) conducted a comprehensive investigation of fish passage barriers in Clear Creek and its tributary streams. The fish passage study identified two culverts on Bargefeld creek at Roger's tree farm as significant fish passage barriers. Bargefeld Creek, a key tributary of Clear Creek, has important habitat for late-fall coho salmon and winter steelhead. Roger found that the culvert under his driveway could be washed out by a flood and threaten access to his tree farm and to his neighbor's house. CRBC found that the culvert hindered fish passage. The CRBC and the Oregon Department of Fish and Wildlife (ODFW) proposed to work together to replace the narrow culvert with a bridge, if Roger agreed.



## **A Win-Win for Forestry and Fish**

Roger agreed to a partnership to replace the culvert, so the CRBC and ODFW teamed up to find funding for the project. Through grants and generous support from Oregon Wildlife Heritage Foundation and the Fish America Foundation, the project was funded. Roger, his son and a local contractor did the heavy equipment work to replace the culverts. ODFW biologists

supervised the project, and Roger soon had a new bridge and more secure access for his working tree farm. The winter after the project was completed Roger's neighbor spotted two coho spawning below the new bridge. The second culvert was replaced in 2005.

## **Trees to Cool and Protect the Creek**

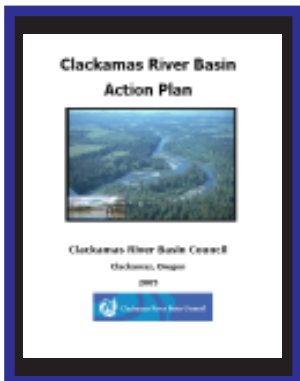
Roger also agreed that an upstream wetland could be planted with trees in order to lower stream temperatures and reduce sediment delivery to the stream. CRBC staff, Clackamas high school students, ODFW staff and AmeriCorps volunteers have planted, maintained and monitored hundreds of native trees and shrubs along the streambanks and wetland areas of Bargefeld Creek upstream of the new bridge and the culvert placements.

Roger was recently awarded the 2005 Fish and Wildlife Steward Award for Forest Lands, which is a joint award from ODFW and Oregon Department of Forestry for outstanding forest stewardship efforts that promote fish and wildlife resources. The partnership continues as Roger, the CRBC and ODFW look for other ways to work together to improve the creek, the wetland and his tree farm.

## **Thank You To Project Supporters**

This project was made possible through generous donations of materials, volunteer hours and funding from the following organizations: Clackamas High School, Clackamas River Basin Council, Clackamas County, DHL Logging, Fish America Foundation, NW Service Academy, Oregon Department of Fish and Wildlife, Oregon Wildlife Heritage Foundation, Portland General Electric and Sleepy Hollow Tree Farm.

### Clackamas River Basin Action Plan Completed!



Thank you to all of our collaborators and partners in the watershed who supported the efforts to conduct watershed assessments and develop an Action Plan. Once the Action Plan was completed, our board went through a strategic planning

process, which will guide the council's actions over the next few years. To view the watershed assessments and the Clackamas Basin Action Plan go to [www.clackamasriver.org](http://www.clackamasriver.org) and see Project and Programs section. Or view information by entering through the clickable map on the home page.

The completion of the plan fuels our ongoing commitment and enthusiasm to work for clean water, a healthy river and streams and an abundant fishery in the Clackamas.



Last September the council partnered once again with eNRG

Kayaking and PSU Outdoor Recreation Program to organize and stage the 3rd Annual **Down the River Clean Up on the Clackamas**. Over 250 community volunteers joined a flotilla that removed over two tons of refuse from the river between Barton and Clackamette Park. After the clean up participants celebrated at Carver Park with a barbecue cooked by Deek and Brian's Next Adventure, old time music by Jackstraw and a silent auction organized by eNRG kayaking. The auction raised several hundred dollars

which were donated to Mercy Corps to fund hurricane relief efforts and to The River Network's Gulf Coast Watershed Recovery Fund. Save the date for this fall's clean up, to be held on Sept. 10th.

### Supporting Healthy Streams

Recognizing that the nutrients that spawning salmon return to streams



are important to the stream ecosystem, we've been working with ODFW, the USFS and other partners to place the carcasses of salmon, collected from ODFW hatcheries, in some of the waters of the Clackamas. Student volunteers from Clackamas and Grant High Schools helped us place salmon carcasses in Clear Creek last November.

In April we worked with Clackamas Community College and OSU Extension to co-organize a two day **Get WET in the Clackamas** elementary teachers workshop. Participants spent day one exploring water and watershed related classroom activities and day two on a field trip in the watershed. Twenty teachers learned how to make watershed models, test water quality parameters, and conduct hands-on water

related activities.

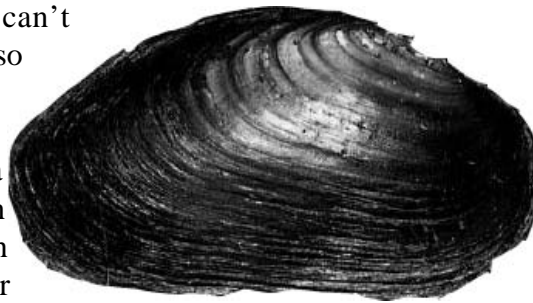


**Teachers look at water quality in Eagle Creek**

## One-Footed Century Old Creature Lives in the Clackamas

Nestled into the sediments of Oregon's streams, rivers and lakes live many mysterious creatures that we often overlook. One of the largest is an animal that can live up to a hundred years, travel through gravel and sediment on one foot or move upstream by hitchhiking a ride with a fish. What could this be? Freshwater mussels, a mollusk related to the familiar marine mussels and clams! About half a dozen freshwater mussel species are native to our Oregon creeks.

Mussels have a variety of habitat and water quality needs, though most prefer cool, clean, gently flowing water. If conditions stay favorable, a mussel will remain in the same place its entire adult life. Mussels breathe with gills, and can't survive long out of water, so drought conditions may require them to relocate. Freshwater mussels have a single "foot" with which they can slowly push themselves. When water levels drop, look for mussel trails in the sediment, that show where the animal crept along following the receding water line.



### A Helpful Species: "Good Mussel"

Mussels filter microscopic food particles like plankton, from the water using their gills. By acting as filters, they help to maintain water quality (and provide us with a way to test for pollutants, which accumulate in their bodies). Mussels stir and aerate sediments, enhancing stream and lake-bottom habitat for a variety of other invertebrates. A healthy population of native mussels can indicate good stream conditions for salmon, trout and other animals.

### Some Mussels Live Longer Than Most People

A mussel lays down layers of nacre (also called "mother of pearl") much like tree growth rings as it grows. When a cross-section of a polished shell is viewed under a microscope, the rings can be counted to determine its age. Oregon's beautiful native Western Pearl Shell lives to be over 100 years old! Other thin-shelled species like the Oregon Floater may only live about 15 years.

### How Do Mussels Move Upstream?

Mussels have developed some unique survival strategies. Mussels can't swim or move well, however they're found in many high-elevation streams. How do they get there? Freshwater mussel larvae travel by

attaching to a fish! Fertilized eggs develop inside the female mollusk into a larva, called a "glochidium," which has paired shells like a miniature adult. When a host fish approaches, the mother mussel releases the glochidia, which clamp their tiny shells onto the fish's fins or gills. The mussel larvae hang on to the fish for a few days to a couple of months, traveling wherever it takes them. When the juvenile mussels are mature enough, they fall to the stream or lake bed, and burrow into the sediment where they will begin their adult lives.

### Food for Otters and Others

Many animals eat freshwater mussels. Otters and sturgeons unearth them from river and lake beds. Skunks, raccoons and birds reach them when water levels are low enough. Freshwater mussels are a favorite food of muskrats. Historically, Native Americans made tools and ornaments from freshwater mussel shells.

### A Note About Non-Natives

Not all freshwater mussels are welcome in Oregon's watersheds. A bivalve to watch out for is the Zebra Mussel, a small European species accidentally released in the Eastern U.S. in the 1980's through the release of ship ballast water. Zebra mussels have spread to 20 states and become an ecological disaster, costing billions of dollars. (next page)

## Freshwater Mussels (continued)

Zebra mussels multiply rapidly, accumulating in masses that can clog municipal water intakes, hydroelectric, fire fighting, recreational and irrigation equipment. They quickly consume plankton that native mussels and fish depend on. They can attach firmly to any underwater surface.

### Don't Transport Hitchhikers !

These highly-destructive pests have not yet invaded western waterways, but are certainly able to if allowed. Zebra mussels attach to boats (and their microscopic larvae travel in bilge water and live wells). To prevent zebra mussels from spreading to the West, boats that may have been exposed to them must be cleaned and all water drained. Water from bait containers should never be emptied into local waterways, as it may contain the larvae (or other pests or diseases).

### Help Prevent the Alien Invasion: "Bad Mussel"

Zebra mussels (photo at right) look like small clams with a yellowish or brownish "D"-shaped shell, usually with dark or light colored stripes (hence the name "zebra"). They usually grow in clusters and can be up to two inches long, but most are under an inch long. If you find zebra mussels report them to a local fish and wildlife agency right away. Once zebra mussels are established in a new location, it may be impossible to get rid of them, so prevention is critical.



The Asian clam (*Corbicula fluminea*), is a case of an intentionally introduced species of clam that became invasive and is now very common in shallow, sandy areas along the lower Columbia River and in estuaries throughout Oregon. Unlike zebra mussels, the Asian clam does not seem to pose such a serious threat to local waterways.

### Field Guide to Freshwater Mussels

To find out more about native freshwater mussels, read *Freshwater Mussels of the Pacific Northwest*, an excellent short field guide filled with color photographs. You can view the guide at [www.fws.gov/columbiariver/musselwg.htm](http://www.fws.gov/columbiariver/musselwg.htm)

### What to Do if You See Zebra Mussels in Oregon.....

## Your Clackamas River Watershed Reflections

We invite folks to share their thoughts, words and musings about the river and landscape of the Clackamas River Basin.

*"Rafts, kayaks, jet boat  
salmon jumps near fisherman  
It takes a river."  
-Michael Carlson*

*"My thoughts eddy in  
like flotsam, spinning my  
dreams downriver"  
-Jo Anne Dolan*

To submit your Clackamas Reflection for possible posting in future newsletters or on our website send to:  
[info@clackamasriver.org](mailto:info@clackamasriver.org)

*"Between earth and earth's  
atmosphere, the amount of water  
remains constant;  
there is never a drop more,  
never a drop less. This is a story  
of circular infinity, of a planet  
birthing itself."*

Linda Hogan, *Northern Lights*, Autumn 1990

**Report sightings** of suspected invasive species like the zebra mussel immediately to the State's invasive species hotline 1-866-invader. Or for help in identification call OSU extension staff at 503.655.8631



Japanese Knotweed  
*Polygonum cuspidatum*

### **Don't Let this Noxious Plant Spread!!!**

Japanese Knotweed is relatively new to our watershed, and we want to stop it before it spreads further.

Knotweed has a large root system and a strong ability to resprout after cutting, so care must be taken to successfully control it - especially around water. Cutting it is not recommended. To avoid spreading Knotweed be careful working around it, as small fragments can easily resprout if it gets into machinery or slash piles or are left in moist places.

#### **Check Your Property.**

If you have Knotweed you may contact us for free advice or assistance in eradicating this noxious plant from your property. 503.558.0550 or email [info@clackamasriver.org](mailto:info@clackamasriver.org) for more information.



### **Many Thanks to Our Partners and Donors of 2005:**

Alder Creek Kayak & Canoe, All Star Rafting, Backyard Bird Shop, Alton L. Collins Retreat Center, Blue Sky Rafting Company, City of Estacada, City of Lake Oswego, City of Milwaukie, Clackamas County Board of Commissioners, Clackamas County Department of Transportation and Development, Clackamas County Marine Sheriff, Clackamas County Parks, Clackamas County Soil and Water Conservation District, Clackamas High School, CM Meyers, Columbia Slough Watershed Council, Concordia University, Dave and Jan Albrecht, Damascus Civic Club, Dave Harmon, Eagle Creek Barton CPO, Earlean Marsh, eNRG Kayaking, Estacada High School, Friends of Clyde Rice, Friends of Tickle Creek, Goddess Gallery, Higgins Restaurant, Jackknife Zion Horse Heaven Historical Society, Jan Lee, Jacqueline Tommas, John Inskeep Learning Center-Clackamas Community College, Johnson Creek Watershed Council, Kristin Dahl, Lowell Hanna Studios, Oak Lodge Water District, Oregon Business Forms, Inc., Oregon Department of Environmental Quality, Oregon Department of Fish and Game, Oregon Kayak and Canoe Club, Oregon Trout, Oregon Wildlife Heritage Foundation, OSU Extension, Oregon Watershed Enhancement Board, METRO, NOAA, NW Service Academy-AmeriCorps, Northwest Rafters Association, Northwest Steelheaders, Patterson Nursery, The Philip Foster Farm, Pittock Mansion, PGE, Portland State University Outdoor Program, River Network, Sam Drevo, Sandy Watershed Council, Sleepy Hollow Tree Farm, SOLV, South Fork Water Board, Stone Cliff Inn, Student Watershed Research Project, Sunrise Water Authority, Three Rivers Land Conservancy, Tualatin Watershed Council, Traeger Industries, Trout Unlimited, USGS, USDA Forest Service, Water Environment Services.



## Clackamas River Basin Council Watershed Calendar



- **May 20-21- Explore and Restore the Upper Clackamas Watershed!**

**Saturday 20th and Sunday 21st - Explore The 23rd Annual Upper Clackamas Whitewater Festival.** The festival includes a whitewater rodeo, music, a dutch oven cook off and more. For a festival schedule go to: <http://www.nwrafters.org/fest/html/Schedule.htm>

- **Saturday May 20th- Help Restore the Watershed at the Down By the Riverside Clean Up**

From 10 a.m. to 1 p.m. Join the volunteer effort to clean up sections of the Upper Clackamas. Volunteers will meet at the Estacada Ranger Station at 9 a.m. Carpooling will be available if needed. Volunteers will get to visit Austin Hot Springs for a free volunteer lunch. For more information please contact: Michael Rysavy, Northwest Forest Conservancy 503-860-4705, [www.nwforests.org](http://www.nwforests.org)

### Natural History of the Clackamas Watershed Naturalist Led Hikes

Meet at 9 A.M.. at the Clackamas Ranger Station on Hwy 224 in Estacada:

- **June 10th - Cache Meadows Natural History Hike**

Explore geology, vernal pools and early season wildflowers on this easy three mile loop hike. An optional hike addition to this loop is to add a short climb to Mt. Mitchell, which has spectacular views in this part of the watershed.

- **June 24- Pansy Basin Hike**

This glacial valley hosts old growth trees, waterfalls, wildflowers and a mysterious disappearing stream. A short but steep side trip leads to an interesting old mine shaft. This easy to moderate hike or @ 2.5 miles has a high point of @ 4300 feet with an elevation gain of @ 700 feet.

- **July 15- Bull of the Woods Wildflower Hike**

Expect wildflowers and views on this 6.5 mile long round trip hike. We will explore wildflowers as we stroll up to the shoulder of Dickey and South Dickey Peak to overlook the watershed.



- **Clackamas River Basin Council Meeting**

Third Thursday of the month, 6-9 P.M.. Public is welcome. Sunnyside Service Center, Room 436, 9101 SE Sunnybrook Blvd. Clackamas, OR.

- **Save the Date! Fourth Annual Down the River Clean Up on the Clackamas- Sunday, Sept. 10th**

Join the Clackamas River Basin Council, eNRG Kayaking, Portland State University Outdoor Program, the Oregon Kayak and Canoe Club, Northwest Rafters Association and others to clean up our river! Bring your own boat, or sign up to help on shore or float in a raft provided by our sponsors. Check our website for more details in August.



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