

the REED



THE NEWSLETTER OF THE SKAGIT FISHERIES ENHANCEMENT GROUP

Dedicated to Restoring Wild Salmon for Future Generations

Back to Basics

By **SUE MADSEN**

When the Skagit Fisheries Enhancement Group was formed more than 20 years ago, salmon restoration was a somewhat simpler business. As in the present, all of our work was done with willing landowners interested improving fish habitat on their properties. However, back in those days before grant funding was readily available most work was done by volunteers who had a desire to make a differenceand a strong back!

This summer we got back to those basics, working with volunteers from the Wildcat Steelhead Club and Skagit Land Trust to remove a barrier culvert from a side channel to the Cascade River. This truly was a grass-roots community effort. SFEG Board member (and Professional Engineer) Gabe Ng worked with Aaron Minsk, a student in the Bellingham Technical College's engineering program to develop designs and help obtain permits. David Radosevich of the Wildcat Steelhead Club worked with SFEG staff member Cory

Fakkema to run the excavator, and remove/recycle the old culvert. The Skagit Land Trust hired local contractor D.G. Buchanan Inc., to haul away excess fill removed from the crossing. Volunteer Dick Raisler documented the process photographically, while former WDFW Habitat Biologist (and former SFEG Board Member) Kurt Buchanan worked with Regina Wandler of SLT to take down fencing and assist with other tasks as

needed. Because of the dedication of these volunteers, funding requirements for this project were minimal; however, we greatly appreciate WDFW's ALEA Program for covering the costs of the excavator, and the Skagit Watershed Council for supporting SFEG staff.

Culvert removal and repair projects are one of the most rewarding ways of restoring fish habitat. Taking out this single barrier improves access to almost a mile of rearing habitat, including both floodplain side channels utilized by juvenile Chinook, steelhead, coho and other salmonids, as well as almost ½ mile of coho spawning habitat in the tributary. Such projects also allow us to engage community members with specialized skills. We hope this sets the stage for similar collaborations in the future.

LEFT: Removing the old culvert from Cascade River tributary



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the REDD

REDD: A female salmon uses her tail to dig a nest in the gravel. After she deposits her eggs the male fertilizes them. The female then covers the fertilized eggs and the resulting nest is called a redd.

MISSION

Our mission is to educate and engage the community in habitat restoration and watershed stewardship to enhance wild salmonids.

BOARD OF DIRECTORS

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BOARD MEETINGS

The SFEG Board meets the 4th Tuesday of each month. The public is welcome to attend.

STAFF

Alison Studley, *Executive Director*
Susan Madsen, *Restoration Ecologist*
Debbie Denton, *Finance Manager*
Michelle Murphy, *Stewardship Manager*
Lucy DeGrace, *Outreach Coordinator*
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Kelly Sykes, *WA Service Corps*
Outreach Associate
Shannon Jones, *WA Conservation*
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Tickets on sale now at <http://www.tinyurl.com/wild-scenic>



LEFT: Collin and Sarah finally find a fish in Alder Creek!

Departure

By COLLIN MCAVINCHY

It was a chum salmon, dismantled and decaying, on the west bank of Alder Creek. The fish had probably been lying there a couple of days, moldering gently in the humid November air, before its torn and mottled flesh caught my probing gaze. I inhaled sharply with excitement and threw myself into the mud beside the fragrant cadaver. It was literally breathtaking.

My unseemly rejoicing stemmed from the previous six weeks' complete and utter lack of visible piscine activity. October 4th, 2014 dawned cool and bright; my first day on the job as the Skagit Fisheries Enhancement Group Washington Conservation Corps Individual Placement (SFEGWCCIP for short, incidentally both the longest title and longest acronym yet devised by mankind). The morning saw me arriving hapless at the Job Corps campus to attend volunteer spawner survey training. Joe George described colorfully the life history of Washington's salmon and gave an animated reenactment of fish digging redds in Hansen Creek. I emerged from the training expecting to see hundreds of colorful fish streaming through the creeks and rivers of the Skagit watershed.

The next week I, along with volunteer Sarah Wheatley, enthusiastically gallivanted the 3.2 mile round trip from the mouth of Alder Creek at the Skagit River. Armed with Joe's sage training, we anticipated fat chum, brilliant coho, and monstrous chinook to be roiling out of every trout hole and root cavity of the entire reach. Contrary to my naïve expectations, there wasn't a fish to be seen.

My optimism waxed over the following three weeks as my eyes grew accustomed to the fleeting flashes of color that my mind, if not the fish themselves,

generated beneath the gentle ripples of Alder Creek. But as the month drew on, not a single fish was seen. Again and again, we'd march with hopes held high from the mouth of the creek up through the adjacent restoration site, under the dank and dripping bridges through the stand of alder trees the creek was named for, and finally to the beaver dam at the end of the reach.

Towards the end of October, Restoration Ecologist Sue Madsen took pity on me. We visited a culvert replacement site on Silver Creek near Alger after work one day, where Sue assured me we'd be able to see some salmon up close and personal. Sure enough, there beneath the recently-installed culvert-replacing bridge were about a dozen bright coho splashing in the shallow water. I'd seen hatchery chum in Whatcom Creek before, but these flashing coho gems were the first wild salmon I'd ever laid eyes on. I was transfixed.

Eventually, fish began appearing in Alder Creek as well. The first several *Oncorhynchus* to return to Alder Creek that year were met with excited exclamations and frenzied sawing motions as we hurried to take measurements, photos, and the ends of the dead fish's tails. Over the course of the season, we spotted 42 fish. Those 42 rotting, stinky, spawned out fish were some of the most spectacular creatures I've had the pleasure of smelling in my 23 years.

I've heard those oldtime stories of salmon runs so thick that one could walk right across the river on their backs. There's a photo of an Elwha woman holding up a chinook as large as she that I've thought of often during my year with SFEG.

The spawner survey season ended in February, and since then I've seen a few more fish. Not many more though, considering I've spent at least three days a week for the last year within a stone's throw of salmon-bearing streams.

I know it's not peer-reviewable-scientific to say that my experiences with only one watershed during only one year was typical. It's not hard science, but I believe it's a powerful anecdote. My experience highlights the importance and urgency of the work done by Skagit Fisheries and related restoration groups. If we don't continue to donate time and funds to our precariously-funded non-profit environmental groups, SFEGWCCIPs in fifty or one hundred years might not have a single fish left to blow their minds as they trudge up a stream somewhere way out in the country.

It's up to us, right now, before we lose the rest of what few salmon remain to us, to get out there and plant some native trees and teach our children about salmon in the hopes of bringing back some of those epic salmon runs of days past. If we don't, my story of spotting a couple dozen chum will seem as much a fantasy as those fishermen's tales of salmon runs thick enough to walk upon. Let's change that story and make today's imperiled salmon returns really nothing more than a temporary dip in a general upward trend.

Thanks to everyone at Skagit Fisheries for teaching me how to see the natural world around me that I'd never properly looked at before. Thanks also to all the community members who've humbled me with their tireless devotion to salmon restoration, and an extra special thanks for those tasty, colorful, and sometimes stinky fish.

Welcome **Kelly Sykes,** new Washington Service Corps Member!

Hello! My name is Kelly and I am the new Washington Service Corps IP for this upcoming year. Ironically I was born in Bellingham, WA but I spent most of my childhood days in a small rural town just north of Spokane. It was there that I developed my love for the outdoors, but I missed the beautiful west side of the Cascades. I ended up coming back to Bellingham and received by Bachelor of Arts in Environmental Education from Huxley College at WWU. My educational background ranges from tropical Central American rainforests to Pacific Northwest botany, and a lot in-between. I am a very social person and I have worked with people of all ages. I am excited to put my passion for the beautiful world and my "people-person" personality to good use in the coming year and create a lifelong connection with the people, places, and creatures along the Skagit River.



How We Spent Our



ABOVE: Volunteers practice their native plant identification skills at the SFEG Vegetation Monitoring workshop in June

While our field technicians get down and dirty with in-stream projects during the summer "fish window," our outreach staff spend the summer representing SFEG at local fairs and festivals.

Summer kicked off with our Vegetation Monitoring workshop. SFEG Restoration Technician Andy Beckman helped volunteers brush up on plant identification, the proper way to measure tree height, and how to fill out data sheets. Led by interns Christie Turner and John Di Nicola, volunteers gathered data at several restoration sites throughout Skagit County this summer.

In July and August we worked with hundreds of youngsters at several

events around the watershed. Thanks to a new activity from former WSC Member Katie Bunge, we taught kids about eelgrass habitat and its importance in the salmon life cycle.

On August 6th we joined The Nature Conservancy, American Rivers, and American Whitewater for a float trip down the Skagit River to celebrate of the Wild and Scenic designation of Illabot Creek in Marblemount. Illabot Creek was added to the Skagit River Wild and Scenic River System in December 2014. The bill to protect this important tributary was introduced to Congress by Representatives Suzan DelBene and Rick Larsen and



ABOVE: SFEG Outreach Coordinator Lucy DeGrace and Board Member Gabe Ng with Congresswoman Suzan Del Bene

RIGHT: Ranger Rick, Francis Fish, and Sammy Salmon at the Salmon Festival



Summer



ABOVE: Volunteer Tatum Kenn shows a youngster how to make an eelgrass mobile at the Salmon Festival.

Senators Patty Murray and Maria Cantwell. The Wild and Scenic designation for Illabot Creek will protect crucial spawning habitat for salmon, steelhead and bull trout, and roosting habitat for bald eagles, for generations to come.

Our busy summer culminated in the 4th Annual Skagit River Salmon Festival on September 12. About 6,000 visitors enjoyed the expanded hours and activities this year, and perfect weather and great musical performances made this the best Salmon Festival yet!



Thank You INTERNS!

Late summer/early fall is a time of transition for us, as we say goodbye to volunteers and interns from Washington Conservation Corps, Earth Corps, and individuals earning school credit for their efforts with us this summer.

We'd like to extend a big THANK YOU to the four interns we've had the pleasure of working with this summer.



Christie
Turner and
John Di

Nicola spent the summer leading the charge on our vegetation monitoring program. Both John and Christie volunteered more than 300 hours collecting data in the field and entering it into our database. This info will help guide future riparian restoration efforts.

Derrick Brillhart has spent more than 300 hours working alongside other volunteers to keep our native plant nursery healthy and happy



during this drought summer. His duties also included assisting with our knotweed program and occasional stream surveys with field technicians.

Julia Traylor spent the summer helping us get the Salmon Festival organized and running smoothly, and is currently assisting with the Wild & Scenic Film Festival, scheduled for Saturday, October 17. She also spent time teaching kids how to make eelgrass mobiles at a few summer events as well.



Thanks also go to the crews from Washington Conservation Corps and Earth Corps, which have helped throughout the past 12 months on restoration projects. We're grateful to these individuals and crews, and wish them well as they transition

back to school or on to work in their chosen fields.

Bull Trout AND Dolly Varden

By DAVID BEATTY

Bull Trout, *Salvelinus confluentus*, and Dolly Varden, *S. malma*, are the only chars native to Washington. Other North American chars are the Arctic char, *S. alpinus*, the lake trout, *S. namaycush* and the brook trout, *S. fontinalis*. Lake trout and Arctic char are the most broadly distributed native salmonids of North America. Bull trout, lake trout and brook trout are native only in North America. All five members of this genus differ from salmonids in the genera *Salmo* (Atlantic salmon and brown trout) and *Oncorhynchus* (Pacific salmon; rainbow and steelhead; and cutthroat and sea-run cutthroat) by not having black spots on the body. Chars have numerous red, pink, orange or cream-colored spots on their darker hued upper body. Chars have the smallest scales among these salmonids and have teeth only on the anterior part of the vomerine bone (roof of the mouth) whereas salmon and other trout have vomerine teeth anteriorly and posteriorly on this bone. All char species are iteroparous (can spawn in succeeding years) and are fall spawners when daylight is shortening and water temperature is declining.

Until 1978, bull trout were “lumped in” with Dolly Varden, however

morphological characteristics indicated it is a separate species. Subsequent genetic analyses demonstrated the distinction between the two. An adult bull trout has a large, flattened head with large jaws and small white or yellowish spots mixed in with pink or red spots on a grayish body but usually none on the dorsal fin. An adult Dolly Varden has a more rounded head, numerous white to red spots and often some on the dorsal fin. When spawning, the intensity of spotting color and body color increases especially in the Dolly Varden whose common name was derived from a brightly dressed character in a Charles Dickens’ novel and thus is capitalized. Depending on the life history stage, salmonid taxonomists, other fish biologists and experienced fishers can have difficulty clearly identifying whether it is a bull trout or a Dolly Varden where they coexist. The same difficulty occurs between Dolly Varden and Arctic char in the far northern waters of Alaska. Dolly Varden and Arctic char are more closely related than either is to bull trout.

Bull trout historically ranged from southeast Alaska/northern British Columbia southward in coastal watersheds to northern California and eastward to inland Washington, Oregon, Idaho, Nevada, Montana, British Columbia and Alberta. Habitat degradation and fragmentation, barriers to upstream and downstream migration, poor water quality (it is a prime indicator species for water quality) and the introduction of non-native salmonids, e.g., brook trout, has severely restricted its current distribution. It has been extirpated in much of its range including northern California and in upwards of 50% of the inland Pacific Northwest. Anadromous bull trout occur only in coastal drainages. Dolly Varden occur from northern Alaska along coastal drainages to Puget Sound and do not occur farther eastward in the Pacific Northwest where only bull trout may exist. Where the natural distribution of Dolly Varden and bull trout overlaps, hybridization is kept to a minimum by the spatial and temporal separation when spawning. Both the bull trout and the Dolly Varden occur in the Skagit River Watershed.



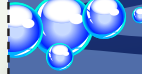
ABOVE: Bull trout courtesy of WA Dept of Fish and Wildlife

Of all the native Washington salmonids, bull trout likely require the most highly specific habitat conditions of cold, clean water and stream, lake and ocean habitats that connect for migration to headwater streams containing riffles, pools, large woody debris for cover and clean gravel for spawning.

There are four life history forms or ecotypes among bull trout and Dolly Varden populations, 1) strictly stream resident in quite isolated headwaters and often above migratory barriers; 2) fluvial (small streams for spawning and early rearing and migrate to rivers for foraging and growth); 3) adfluvial (tributary streams for spawning and early rearing and migrate to lakes for foraging and growth); and 4) anadromous (sea-run). Fluvial, adfluvial and anadromous ecotypes are migratory fish that spend one to four years in the natal stream before migrating to the river, lake or ocean. Fully adult migratory bull trout are generally much larger (24 inches or more) than adult residents (six to twelve inches). Bull trout normally become sexually mature at age four to seven years and can live to age twelve years. Skagit River bull trout exhibit all four life history patterns. Dolly Varden in what are considered the southern populations, including Puget Sound, are less likely to be anadromous than Dolly Varden of northern populations (north of Alaska's Kenai Peninsula).

Information on the migration, biology and abundance of Skagit River bull trout has been derived from fish trapped near Mount Vernon. Marine habitat use and migrating distances have been studied using fish tagged for acoustic telemetry. Anadromous bull trout migrate to the estuary/nearshore in March/April for intensive feeding. They normally do not have extensive offshore migrations but prefer shallow, nearshore habitats but may migrate several kilometers along the shoreline. After a few months of growth, they return to their natal river although they may migrate into a nearby river if it is not a spawning year and return to the ocean the following spring.

Bull trout are predators (piscivorous) on juvenile salmonids as well as other fish and this feature led to harvesting practices to reduce their numbers. In comparison, although Dolly Varden



**SKAGIT FISHERIES
ENHANCEMENT GROUP**

SFEG IS A MEMBERSHIP BASED ORGANIZATION

If you are enjoying reading this newsletter, perhaps it's time that you became a member! Your membership dollars are critical to support the operation of SFEG (including producing this newsletter), allowing us to develop new projects with landowners, providing education programs to kids throughout our watersheds, and collecting monitoring data regarding restoration project sites to document successes.

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do feed on juvenile fish, they often feed heavily on macroinvertebrates.

In 1999, bull trout throughout its range in Washington, Oregon, Idaho, Montana and Nevada were listed as threatened under the Endangered Species Act. Skagit River bull trout (represent 26 of the 57 local populations in Puget Sound) are in the threatened Coastal/Puget Sound Distinct Population Segment (DPS). In 2004, Draft Recovery Plans for the Coastal/Puget Sound bull trout were developed but never finalized. In 2010, the Critical Habitat for bull trout throughout its range in the United States was designated. During 2014 and 2015, revised Implementation Plans for Bull Trout Recovery were being established. In all areas of Washington, retention of bull trout and Dolly Varden is prohibited unless permitted under special rules issued by the Washington Department of Fish & Wildlife.



WANTED: New or Used Truck

SFEG is looking for a truck to replace our 1998 GMC to move our staff, volunteers, and interns to and from project sites located throughout the Skagit and Whidbey Island watersheds.

A truck that fulfills our needs must be 4 wheel drive and have the ability to tow a trailer filled with potted plants.

Ideally, we'd like a truck that has a crew cab, but any sort of extra cab is really helpful.

Donations are gladly accepted, however we are definitely willing to pay for a truck that has a longer life span and is in reasonable shape with a reasonable amount of miles on it.



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Events Calendar *AND* Volunteer Opportunities

Salmon Sightings

October 10 (Saturday) 11am-2pm;
Marblemount Boat Launch

Join us at the Marblemount Boat Launch for an opportunity to view and learn about salmon of the Skagit and Cascade rivers. Experts will be on hand to talk about salmon habitat and local restoration efforts. Directions: Take Highway 20 east to Marblemount. At the sharp curve in the road, continue straight and cross the Skagit River Bridge. The boat launch will be directly on the right after crossing the bridge. Park in gravel lot and follow signs for salmon viewing.

Wild & Scenic Film Festival

October 17 (Saturday) 7:30pm
Lincoln Theatre, Mount Vernon

The Wild and Scenic Film Festival will show at the Lincoln Theatre for one night only on Saturday October 17th. This unique Film Festival event will begin with a 6:30 pm reception, with films beginning at 7:30 pm. This event uses film to inspire conservation within our community. The Festival will feature two hours of environmentally themed films that together represent the work of over 100 film artists and directors.

Fall Planting Parties

October 31, November 7, 14, and 21,
(Saturdays) 10am-1pm

Help restore native riparian plants in the Skagit and Samish watersheds! These plants will help restore salmon homes by providing shade and cover for salmon and leaf litter for aquatic insects, which in turn provide food for salmon. These riparian zones also improve water quality by controlling erosion and filtering pollutants.