

the REEDD



THE NEWSLETTER OF THE SKAGIT FISHERIES ENHANCEMENT GROUP

Dedicated to Restoring Wild Salmon for the Future Generations

Celebrating Earth Day by Restoring Habitat

These past few months we've had amazing volunteers engaged in helping to get our new nursery up and running, and planting thousands of native plants at restoration projects.

At our nursery work days volunteers have been helping to spread mulch and get new plants into pots. Several thousand are now situated neatly in the new nursery space located on Samish Indian Nation land on Kelleher Road. In addition to our Saturday planting parties, about 680 students planted trees at different restoration sites throughout Skagit and Samish

watersheds as part of the Junior Stream Stewards and Kids in Creeks programs.

Many of our volunteers helped us celebrate Earth Day this year. Earth Day began over 40 years ago in response to the need for greater civic engagement in cleaning our nation's water and air resources. In the decade following the first Earth Day stricter federal laws were created to help protect our precious resources through the Clean Water Act, Clean Air Act and the Endangered Species Act. Today, we recognize that it takes

more than good laws to protect and restore our environment and we continue to celebrate

the need for everyone to be involved in keeping our rivers, oceans and air clean with an annual Earth Day celebration that promotes volunteer involvement.

SFEG continued our tradition of celebrating Earth Day by engaging volunteers in habitat restoration projects at local parks. This year, we were fortunate enough to host two Earth Day celebrations with two parks, in two counties, in two different watersheds. The first event was held in cooperation with Mount Vernon Parks Department at Edgewater Park along the Skagit River. Nearly 60 volunteers planted 1,200 native plants, removed a dumpster load of invasive ivy and picked up all kinds of trash to improve this tremendous park. This riparian effort aids the restoration of

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ABOVE: Cascade Middle School students learned how to plant trees and install tree protectors at Hansen Creek

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Wild Bleeding Heart

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 build partnerships that educate and engage the community in habitat restoration and watershed stewardship in order to enhance salmonid populations.

BOARD OF DIRECTORS

Chris Kowitz, *President*
Robin LaRue, *Vice President*
Ned Currence, *Secretary*
Patrick O'Hearn, *Treasurer*
Kurt Buchanan
Bruce Freet
Jim Fukuyama
Jim Johnson
Boshie Morris
Mike Olis
Jim Somers
Sheila Tomas

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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Andrew Beckman,
Restoration Technician
Kyle Koch, *Restoration Technician*
Bengt Miller, *Restoration Technician*
Cory Fakkema, *Restoration Technician*
Ali Andrews, *WA Service Corps*
Outreach Assistant
Tristan Weiss, *WA Conservation Corps*
Restoration Assistant

CONTACT US

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sfeg@skagitfisheries.org
P.O. Box 2497
Mount Vernon, WA 98273

{ FROM THE DIRECTOR }



Welcome New Board Members

By ALISON STUDLEY

Spring is a busy time around SFEG. Most Saturdays are filled with volunteer events, while our weekdays are spent with students in the field, and our own field technicians are planting, planting and more planting before the weather warms up. We accomplish the hard work we do thanks to our 10 dedicated staff members and hundreds of volunteers. Some of the most critical volunteers are the 12 board members who oversee the direction of the organization. We are fortunate this year to welcome two new additions to our Board of Directors, Sheila Tomas and Jim Fukuyama. Both Sheila and Jim have volunteered with SFEG in a variety of capacities over the last several years and now we are very pleased to welcome them as board members. Each of our board members brings a unique background and a diversity of expertise that provides leadership for SFEG. Our new board members will complement the backgrounds of our existing board members and add new depth to our organization.

Sheila resides in Anacortes and is an active volunteer with WSU Skagit County

Beach Watchers. In addition to being passionate about salmon, Sheila has been nursing for over 23 years and has her own nursing business in Skagit and Whatcom Counties. When she isn't nursing or volunteering in Skagit County, Sheila also accompanies her husband on extended foreign business trips, where Sheila identifies more volunteer opportunities in which she can participate.

Jim is a chemist and patent lawyer from New York who has chosen to retire in the beautiful Pacific Northwest. He is an avid biker and hiker and enjoys volunteering with several conservation and trail related organizations including the Pacific Northwest Trail Association and the Skagit-Whatcom-Island Trail Maintaining Organization.

You are likely to run into our board members at any number of our volunteer events. Jim is a regular at our planting parties and Sheila is a dedicated spawner survey and education volunteer. Be sure to say hello and thank them for all they do for SFEG.



CHRISTINE FARROW

Earth Day

CONTINUED FROM PAGE 1

a 1,200 foot long side channel which was reconstructed in 2005 to provide juvenile salmon habitat in the lower Skagit River. The current project is funded by the FishAmerica Foundation.

The second event was held at Cornet Bay in cooperation with Deception Pass State Park with funding from the Northwest Straits Foundation and Island County Marine Resources Committee. Sixty volunteers planted 180 potted trees and shrubs in addition to 5,000 starts of beach grass along the shoreline and nearshore areas. This native plant restoration effort is being done as part of the Foundation's larger effort to restore shoreline along Cornet Bay through the removal of approximately 850 feet of bulkhead and returning the area to natural shoreline and nearshore habitats.

Many thanks to volunteers and also to event donors: Starbucks, Food Pavilion, Skagit Food Co-op, Burlington Haggen, Calico Cupboard, Breadfarm, Lafen's Donuts, Puget Sound Energy, and Skagit River Brewery. While Earth Day is officially just one day per year, we hope all of you are incorporating actions into your every day lives that protect our waterways and conserve our natural resources. Make every day Earth Day.



CHRISTINE FARROW

ABOVE: Congresswoman Suzan Del Bene plants a tree along the Skagit River at the Edgewater Park Earth Day event. (Above, right) Deception Pass State Park employee Sam Wotipka planting beach grasses at Cornet Bay. (Left) Edgewater Park Earth Day volunteers.



LEFT: Lincoln students dropping eggs into their tank.

Volunteer tour guide John Patton photographed this bald eagle at the hatchery

Marblemount Hatchery Provides Educational Opportunities for All

By **ALI ANDREWS**

December and January were busy this year with Marblemount Hatchery tours for visitors and students along with working with students in the Salmon in the Classroom program. The first week of December a Hatchery Tour Guide Workshop was held for 20 new and returning tour guides. Hatchery Tours are offered every Saturday and Sunday in December and January at the Marblemount Hatchery during Eagle Watching season. Eagles fly down from Canada and feed on salmon carcasses along the Skagit River. This brings visitors from all over Washington to view eagles and salmon at the hatchery. During this season alone there were over 1,100 visitors that toured the hatchery. Thank you tour guides! We hope you can come back next year.

In the beginning of December 2012 our Salmon in the Classroom program started up. Fish tanks are set up in two classrooms at two different Mount Vernon Elementary schools. We brought the 5th and 6th grade classes to the Marblemount Hatchery for a tour of the facility and to see where their salmon eggs were coming

from. In January 500 eyed coho eggs were picked up from the hatchery and placed in classroom tanks by students. Since then students have been able to watch their coho salmon grow up from eggs, to alevin, to fry



ABOVE: Lincoln students holding a frozen Chinook salmon at the hatchery

stage. In May students will go on a field trip to their school's nearby stream to release the fry and wish them well on their journey in the wild. Salmon in the Classroom is an opportunity for kids to better understand the salmon life cycle, and to become stewards of their neighborhood streams.

Save the Date



Volunteer Appreciation Picnic

June 29 (Saturday), 12pm-2pm

Norway Park, Lake McMurray, Mount Vernon, WA

All SFEG volunteers are welcome to come and lunch will be provided. Please RSVP by calling Ali Andrews at **360-336-0172 ext: 304** or email us at education@skagitfisheries.org

Pink Salmon

By **DAVID BEATTY**

It is 2013, a year ending in an odd number in the life cycle of pink salmon (aka the humpy or humpback), *Oncorhynchus gorbuscha*. The significance is the predominant run of pink salmon into Puget Sound and local rivers occurs in odd years. Pink salmon have a precise two year life cycle, whereas Chinook, coho, chum and sockeye reach sexual maturity usually at ages greater than two years. Consequently, the pinks of an odd year class never interbreed with pinks of an even year class and each year class is genetically separated. For each of the other four species, different year

classes can interbreed. The adult pinks that will enter the Skagit River in late summer/early fall of 2013 are the progeny of pinks that spawned in 2011 and have spent two summers and one winter in the ocean. In any even year, e.g., 2012, there is often a significant run of even year pinks entering the Snohomish River. However for all other Washington rivers, the numbers are very small if any. Among the Pacific salmon species, pinks have the highest rates of straying from their natal stream, consequently even year pinks may be found in any Puget Sound river even if no progeny was produced in that river two years earlier. Pink salmon have a historical spawning

distribution from the Sacramento River northward to arctic North America as far East as Canada's MacKenzie River (especially in warmer years) and from arctic Siberia (especially in warmer years) southward to Kamchatka, Sakhalin Island and the mainland's Anadyr and Amur Rivers. Today, pinks are extinct south of the Columbia River and in any year only very small numbers (rarely more than 100) of odd year or even year pinks are counted at Bonneville Dam. However, it is believed these fish may be strays from Puget Sound rivers and the Fraser River rather than from self sustaining Columbia River populations. Although most Puget Sound rivers and the Fraser





Rivers have only odd year runs of pinks, significant even year runs also occur in rivers of the mid to northern coast of British Columbia. In Alaska, both even and odd year runs return to the same river. However, the numbers of pinks is usually much greater in either the odd year or the even year run. Pink salmon are the smallest (average of 3.5 to 5 pounds) of the Pacific salmon when mature. Even so, they have a rapid growth rate to achieve their adult size within two ocean years. It is the most abundant of the Pacific salmon and second to the chum in total biomass. Pinks develop a prominent sexual dimorphism when becoming sexually mature. Males develop a distinct dorsal hump (the “humpy”) and a hooked upper jaw (kype), the latter also common in males of the other four species. Adult pinks can be distinguished from the other species by the presence of large oval spots on the tail and upper body and small scales. Unlike juveniles of the other four species, juvenile pinks lack parr marks and the body above the lateral line is greenish and below is silvery. Pinks usually do not make extensive spawning migrations in rivers, especially if there are high velocity impediments. They spawn closer to the ocean than the other species and may spawn just above tidewater if water and gravel conditions are appropriate. Within a few weeks of emerging from the gravel, pink fry migrate to estuaries and nearshore and are physiologically adapted to live in salt water at an early age. By July, juvenile pinks migrate away from the nearshore and begin their extensive migration in the North Pacific. They continue to feed heavily on increasingly larger zooplankton and even larger prey including small fish, squid and pteropods. The pattern of ocean migration often takes them far enough west and north that they intermingle with pinks of Asian stocks. After two ocean summers and one ocean winter,

the adults return to the natal stream to spawn. Pinks have the highest rate of straying among Pacific salmon; an advantage for a species with a precise two year life cycle. A catastrophic loss of production of juveniles in a stream can be offset two years later by adults straying from their normal “home” streams. For example, the Elwha River’s population of pinks likely became extinct after construction of the lower dam. Because of their proclivity to stray, pinks may establish a natural population in the Elwha after the removal of the two dams.

For 2013, the estimated run of pinks into Puget Sound’s rivers is 6.2 million fish with 1.1 million estimated to enter the Skagit. The majority of Puget Sound pinks are produced in the Nooksack, Skagit, Stillaguamish, Snohomish, Green, Puyallup and Nisqually Rivers. These numbers should provide for a robust ocean and river recreational fishery. Even though Pacific salmon stop feeding in fresh water, pinks are attracted to a variety of slow moving and small, bright lures, especially with some pink coloration. To retain quality, pinks must be bled (cut at the gills), gutted and iced as soon as possible. This year, 10 million pinks are forecast for the Fraser River. Alaska has the largest runs of Eastern Pacific pinks with the total number in the tens of millions. The annual commercial harvest of pinks from Prince William Sound to Southeast Alaska can exceed 100 million fish indicating the massive size of the runs in both even and odd years. These enormous pink runs are sustained through an extensive hatchery program, initiated in the early 1970s, to augment the natural production that declined in earlier years. Hatcheries in the Prince William Sound area release up to 500 million pink fry annually. British Columbia has a limited hatchery program for odd year pinks. Washington also produces odd year pinks in a few hatcheries. Starting with Nooksack River pinks, a hatchery

program is operated by the Bellingham Technical College at Whatcom Creek. Russia and Japan produce pinks in hatcheries in numbers exceeding those in Alaska. There has been a concern over the enormous numbers of pinks from hatcheries flooding the northern Pacific Ocean beyond its carrying capacity.

There have been numerous attempts to establish even year runs of pinks in Puget Sound using even year Alaska stocks. From 1910 to 1932, the then Washington Department of Fisheries imported over 82 million eyed eggs from Alaska and subsequently released over 75 million fry among numerous rivers including the Skagit and the Samish. Using Skeena River (BC) even year eggs, the WDF repeated the release of fry from 1944 to 1956. None of these attempts were successful and the presence of even year pinks in Puget Sound is likely the result of straying by northern stocks. In early 1956, 800,000 eyed eggs from Skeena River pinks were shipped to a hatchery at Thunder Bay, Ontario. The resulting fry were destined for Hudson Bay but a few hundred were accidentally released into Lake Superior. Hatchery personnel, believing they would not survive in the lake, flushed 21,000 surplus fry into an outflow entering the lake. In 1959, a few adult pinks were caught in Minnesota tributaries of Lake Superior. By 1979, resident populations of odd year pinks became established throughout the Great Lakes. Today, only Lakes Superior and Huron have significant populations. Planned attempts, including Hudson Bay, to establish pinks outside their natural range have been failures. Unlike Chinook, coho, chum and sockeye, there is no pink salmon Evolutionarily Significant Unit in Washington that is listed as endangered or threatened under the Endangered Species Act. Of the five species of Pacific salmon, pink populations have the lowest risk for extinction.



2012-13

Spawner Surveys

By **JOE GEORGE**

This season started out as a very dry season for spawner surveys. Most volunteers walked through a dry creek bed or just a trickle for the first couple weeks of surveys, waiting for the rains to come. When the rains finally came so did the fish, and we had really good returns on coho. As for Chinook, that's a different story.

Since Chinook are earlier than coho, and very dependent on rain to get up the side tributaries, this can explain why we saw just a couple this year. Though chum counts were down overall, counts on our survey creeks were much better than last year, which was only ten. Since 2009 kokanee numbers have declined because WDFW has switched from stocking Lake Samish with kokanee smolt to kokanee fry, which have a higher mortality rate.

So the numbers on kokanee should start

leveling out in the coming years.




I had a chance this season to walk Upper Hansen with Heidi Nichols. Towards the end of the season, we did see a couple coho. Upper Hansen is a beautiful creek; by the top of the survey reach the rocks become larger in size, with boulders here and there and the creek becomes steeper and swifter. Upper Brickyard was surveyed by Bob Mottram and Adam Bahr who counted 36 coho, the most counted on that creek in over ten years.

At the end of the spawning season we had our pot luck dinner. The food was fabulous and the pictures and stories were great. Since Jack Middleton was not there his survey partner Pete Haase took the opportunity to poke fun at him during his slide presentation of Mud and Finnegan Creeks.

Next season we will need a few volunteers to start in August and help with Chinook surveys on a couple of creeks. If you're interested contact please contact me at 360-770-5677. All 23 creeks surveyed this year were done by volunteers. I want to thank everyone who has helped with the 2012 spawner surveys; without you we could not survey as many creeks as we do. To view the fish counts from 2003-2012, go to <http://www.skagitfisheries.org/habitat-restoration/monitoring/spawner-surveys> and click the link for spawner survey totals.

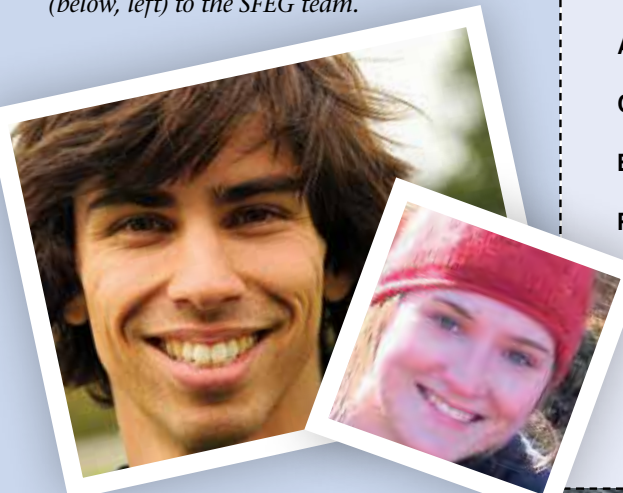


LEFT: Intern Anna Petrie measuring a coho carcass on Jones Creek

	LIVE	CARCASS	REDDS
 Chinook	2	3	7
 Coho	2105	428	317
 Chum	121	51	18
 Kokanee	133	0	10

Welcome New AmeriCorps Volunteer Tristan Weiss

Recently we said farewell to Washington Conservation Corps volunteer **KRISTIN RINE** (below, right) so that she could accept a research internship at University of Alaska in Fairbanks. We miss her very much, but in her place have welcomed **TRISTAN WEISS** (below, left) to the SFEG team.



A lifelong citizen of the Pacific Northwest, my passion for local watershed and restoration ecology has led me to achieve my B.Sc. in conservation biology from the Evergreen State College last winter. While pursuing my B.Sc., I worked as a horticultural assistant at Sound Native Plants in the south Puget Sound; practicing local seed collection, riparian restoration and native plant propagation. In the fall of 2011, I left Washington briefly to participate in the National Tropical Botanical Garden's horticultural internship in Kalaheo, HI. Beginning in the summer of 2012, I worked as an organic urban farmer with the Seattle Urban Farm Company building commercial and residential organic gardens, implementing water-wise and native gardening practices. This spring I have joined the Skagit Fisheries Enhancement Group where I will be working towards the betterment of the community and environment where I was raised.



{ MEMBERSHIP INFORMATION }

NAME _____

ADDRESS _____

CITY / STATE / ZIP _____

EMAIL _____

PHONE _____

{ MEMBERSHIP LEVEL }

- ☐ \$20 - INDIVIDUAL
- ☐ \$35 - FAMILY/HOUSEHOLD
- ☐ \$100 - SUPPORTER
- ☐ \$500 - BENEFACTOR
- ☐ OTHER \$ _____

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Saturday, Sept. 7, 2013 • 10am-6pm
Edgewater Park • Mount Vernon

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Events Calendar *AND* Volunteer Opportunities

SFEG Vegetation Monitoring Workshop

June 1 (Saturday)

Help us survey vegetation at restoration sites. This workshop will be an introduction to identifying native and invasive plants, assessing plant health, and estimating coverage in riparian planting projects. Updates on the status of these plants help us determine the most effective practices for riparian revegetation projects.

SFEG Volunteer Appreciation Picnic

June 29 (Saturday), Noon-2pm
Lake McMurray

If you're a volunteer, then watch your email or mailbox or your invitation!

4% Friday at the Skagit Food Co-op

July 26 (Friday)

Shop the Co-op this day and SFEG receives 4% of all proceeds from the grocery and deli. What better way to support Skagit salmon than by shopping at your local community co-op? For more info go to http://skagitfoodcoop.com/?page_id=5237

Skagit River Salmon Festival

September 7 (Saturday), 10am-5pm
Edgewater Park

Join us for a FREE fun-filled experience for families featuring: Youth Activities and Crafts, Recreational and Educational Booths, Live Music and Cultural Opportunities, Great Food and Salmon BBQ, Beer & Wine Garden, Commercial Arts & Craft Vendors, And much, much more! This year's festival is held in conjunction with the Ray Reep Salmon Derby. Go to www.skagitriverfest.org for more information.

SFEG Spawner Survey workshop

October 5

Check our website in September for details.

