

In the Flow



OCTOBER 2013 / Issue 67



Sitkum River, tributary to the Calawah, close to Forks

(Produced with Volunteer Help) www.clallam.net/streamkeepers streamkeepers@co.clallam.wa.us 360-417-2281

! IN THIS ISSUE !

**Program Planning for 2014—
Advisory Meeting Nov. 15**

**Lower Elwha Klallam Tribe Helps
Keep Us in the Water**

**Bug Collecting Expands, Thanks to
Partnership with Quileute Tribe**

New Volunteers

**Thank You, Rebekkah Curtin,
our Terrific Summer Intern!**

**Looking for a Desk Job?
Bug Sorters unite!**

Stormwater Data Trickling Up

**Expanded Curriculum for Natural
Resources Class at NOPSC**

Congratulations, Steve Rankin

Identifying Juvenile Fish

Program Planning for 2014!

Dear Streamkeeper volunteers, partners, and advisors,

Now that the long days of summer are behind us, it's time for our annual program-planning process, starting with our...

Annual advisory meeting:

Friday, Nov. 15, 10-12, HHS Conference Room

(Courthouse basement, room 042, behind the staff break room)

The following draft 2014 planning documents are attached:

[Work plan](#)

[Water-Quality sampling plan](#)

[Grab-Sampling plan](#)

The agenda is open; feel free to suggest items to discuss. General questions are:

What's working and what's not?

How can we best accomplish our Program Goals, Work Plan, and Priorities?

After synthesizing suggestions made at this meeting, we'll have a program-adoption meeting/potluck in December to celebrate the past year and finalize our plan for the next. We have an exciting plan in the works for outside speakers—stay tuned!

Grant from Lower Elwha Klallam Helped Streamkeepers Stay "In the Water"

This grant for \$6000, which ran through September 30, enabled us to:

- Get basic equipment repaired and supplies purchased.
- Improve documentation of our benthic macroinvertebrate (stream bug) taxonomic procedures.
- Improve archiving of our 15-year bug collection, thanks to **Art Frost** and **Elton and Esther Homan**.
- Prepare our database for the soon-to-be-arriving improved B-IBI metrics thanks to database gurus **Walt Johnson** and **Steve Belcher**, with help from **Ed Chadd**, program coordinator.

Meet Our New Volunteers/Trainees



Kirk Lang



Sarah Miller



Stephen Lowe



Harriet Reyenga



Steve Richter



Jim & Judy Gordon



Mary James

• Thank you to **Jane and Peter Vanderhoof**, owners of West Wind Farm, for welcoming us to once again have our Streamkeeper Field Training at their farm on Salt Creek. Our Streamkeeper community wishes them a full recovery from their car accident in September.



Suzette Williams (Rt) Assisting **Marilyn Harbaugh** and **Donna Spence** with data entry



Training Stations

- * Gradient & Camera use
- * Instruments (meters) to measure Flow, Water Chemistry
- * Wildlife, Plants, Vegetation
- * Bug Collecting



Thank You, **Coleman Byrnes** for setting Smolt Traps so we could see some of the juvenile species of fish in Salt Creek.

(BTW, all fish were returned to the stream unharmed.) Identifying these juvenile fish is not that easy. For a quiz, see pg. 5, and for answers, see pg. 6.

Training began in June with an introductory session with program coordinator, **Ed Chadd**, assisted by **Jinx Bryant**. Presentations were also made by **Cathy Lear** on Stream Ecology and **Cathy Lucero** on Noxious Weeds. Field Trainers were **Coleman Byrnes, Wade Raynes, Zack Hovis, Bob Dunlap, Adar Feller, Sue Nattinger, Bob Lake, and Ed Chadd**.

BUGS! BUGS! BUGS!

This was a Big Year for Bug Collecting! With part of our WDFW Grant and a new partnership with the Quileute Tribe, we collected 22 macroinvertebrate samples (16 for Quileute and 6 for SK), located on these streams: Bear, Sol Duc, Beaver, Clallam, Colby, Dickey, Elk, Calawah, Hoko, Lake, Lees, Mill, Bogachiel, Siebert, Sitkum, and Thunder. Collecting was done by **Nicole Rasmussen**, Water Quality Biologist for the Quileute Tribe; **Ed Chadd**, SK Coordinator; **Rebekkah Curtin**, summer intern for SK; **Susannah Spock**, TFW (Timber, Fish, & Wildlife) Biologist for the Hoh Tribe; and Streamkeeper volunteers **Katie McLean**, **Nancy Messmer**, **Roy Morris**, **Keith Peters**, **Mary James**, **Lisa Unger**, **Karen Westwood**, **Peter Jepsen**, **Elton and Esther Homan**, **Jean Sigmar**, **Randall Walz**, **Brian Phillips**, **Marcos Grimsditch**, **Judy and Jim Gordon**, **Robert Buck**, **Coleman Byrnes**, **Sue Nattinger**, **Larry O'Keefe**, **Dan Lieberman** and **Jamie Valadez** and their **NOPSC students**.



Scouting the riffles. Marking the 8 locations. Digging! Carefully placing rocks in the dishpan. Rinsing the Surber Sampler. Picking bugs first from rocks and then the sieve. Separating the organics from the inorganics. Placing bugs into the alcohol jar. From: Detailed Instructions of Field Protocol for Benthic Macroinvertebrates, beginning on pg. 67 of Field Procedures on the SK website.

Nicole Rasmussen, Ed Chadd

Nicole Rasmussen with Improvised Stadia Rod



Susannah Spock, Katie McLean Nicole Rasmussen, Ed Chadd



Rebekkah Curtin, Nicole Rasmussen

Ed Chadd



Katie, Nicole, Rebekkah

Collecting Bugs by Debbie Ross-Preston

Like raccoons washing their food, volunteers and biologists are washing rocks to collect insects in streams of the Quillayute River system as part of surveying aquatic insect populations as an indicator of stream health. Good water quality means the insects important to juvenile salmon thrive.

The Quileute Tribe, with renewed funding from the Environmental Protection Agency, (EPA) is re-visiting this important indicator almost 15 years after the first pilot surveys. "While there have been a few surveys by other entities since that first project, also funded by EPA, in the late 1990s, there hasn't been a consistent look at all the sites and it's one of the best indicators of stream health," said Nicole Rasmussen, water quality biologist for the Quileute Tribe.

The Quileute Tribe is partnering with Streamkeepers of Clallam County, a citizen-based watershed monitoring program with an approved methodology for monitoring aquatic insect populations and training volunteers. "It is the perfect partner and means we don't have to provide training or located volunteers or taxonomists to identify the insects we collect," Rasmussen said.

At each of 15 sites, the volunteers sift through material from eight different locations in the stream, separating the organic from the inorganic matter. Streamkeeper volunteers then work under microscopes to separate the invertebrates from the plant detritus, turning the sorted specimens over to a paid contractor who then identifies and counts the type of invertebrates collected. Each site will be examined once this year and once in 2014.

"In order for the state department of Ecology to accept the results, the site has to be done at least twice within five years," said Ed Chadd, Clallam County Streamkeeper coordinator. Outside of that requirement, agencies choose to do the studies at intervals that make sense, such as before and after a habitat restoration project or land use change in the watershed.

While taking samples, volunteers and biologists also note any types of wildlife or their tracks in the area along with any invasive weeds. Taken as a whole, the results can provide an early warning that water quality might become impaired.

"Partnerships like the ones we're doing with the Quileute, Lower Elwha Klallam, and Jamestown S'Klallam tribes in different watersheds help both us and them get more work done in less time and help keep the skills of our volunteers sharp with consistent work," Chadd said.

For the Quileute Tribe, a diversity of the right kinds of insects means the water supports the vital resource of salmon. "If the water is low in oxygen, for example, we don't find the same kinds of insects that indicate good water quality for fish. It is an additional way to learn if a stream can support young salmon," said Katie Krueger, policy analyst and staff attorney for the Quileute Tribe. "That is the priority – keeping these streams healthy for fish."

[Debbie Preston](#), Coastal Information Officer, [Northwest Indian Fisheries Commission](#) (360)374-5501 Cell - (360)780-1295

Calling all bug sorters or any volunteer who wants a nice, warm, dry, inside job!

We're always looking for new bug-sorters and offer one-on-one training at any time. Now that sample collection is complete, we're hard at it, picking out crazy critters under the microscope. For more information, call the SK office.

—Cheers, Sue Nattinger and Coleman Byrnes, Bug-Sorters Supreme



We can't talk about "Bug Collecting" without recognizing **Art Frost**, our resident macroinvertebrate taxonomist, along with the help of **Elton and Esther Homan**, who set up a work space in the basement of the Courthouse to oversee the inspection, safety, and preservation of our specimens. It is detailed and tedious work.

ID'd bugs returned from the taxonomy lab are stored in tiny tubes according to taxon. Elton and Esther carefully check each one, making sure they're labeled, organized, and filled properly. We have about a million bugs in our collection!





Thanks from Your Summer intern! by Rebekkah Curtin

Dear awesome Streamkeeper volunteers: The first week or two of my internship with Streamkeepers was a little overwhelming. I never would have guessed the amount of time and work required in maintaining this program. During my introduction, I learned the different sampling techniques and how to properly use and calibrate the equipment. I also experienced what went into keeping the office and volunteer teams running efficiently, as well as quality-control procedures. Eventually, I had the opportunity to roam around Sequim and Port Angeles on several grab samplings.

Most of my last month was spent assisting the Quileute Tribe with bug sampling in the Forks area. I would have to say that this was the highlight of my time with Streamkeepers. Sampling the various streams allowed me to visit many locations around Forks that I would have otherwise never known about. Being a hands-on person, I was happy to put my training to use. Ultimately, I have to give credit to the awesome team that made this experience so great. As it turned out, even the weather cooperated, and we were fortunate enough to avoid the rain.

I am extremely impressed at what Streamkeepers has been able to accomplish with the support of its dedicated volunteers. Being able to work with many of these people is what made my internship enjoyable, as well as informative. I hope to use the skills and experiences I gained with Streamkeepers in future endeavors, wherever they may lead. A special thank you goes out to Ed Chadd for his guidance and patience.

I recently returned to the University of Washington where, over the next two quarters, I will complete my Capstone Project on Lynx immigration and finish my studies in Environmental Science and Resource Management, hopefully graduating after winter quarter (keep those fingers crossed!).
—Cheers, Rebekkah



Congratulations to Steve Rankin!

Steve Rankin is one of our SK volunteers who was elected Chair of the Hood Canal Lead Entity for Salmon Citizens Committee. In the words of **Cheryl Baumann**, North Olympic Lead Entity for Salmon: *This says a lot about Steve and the dedication & expertise he brings and it also says something about how far Hood Canal & North Olympic have come in our joint endeavors on behalf of salmon recovery. Steve is a very hardworking and dedicated member of both the North Olympic & Hood Canal Lead Entity Citizens Committee. He rarely misses a meeting and is especially busy during the spring & summer grant rounds where he attends project sponsor presentations, technical team meetings and two days of site visits in North Olympic & three or more in Hood Canal! He is proof that dedicated & involved citizens can and do make a difference.* Thanks for all you do, Steve!!

BE ON THE LOOKOUT FOR THESE CHARACTERS IN LOCAL WATERS:

FISH IDENTIFICATION..... Juvenile? Fingerling? Smolt?Can you name that fish?

Turns out it isn't that easy. As they grow, each species changes significantly.

Healthy young fish can indicate a healthy stream. Can you identify the pair of: Steelhead Fingerling and Juvenile; Coho Fingerling and Smolt; Sockeye Fingerling and Smolt?

Thanks to Earl Steele for the photos and descriptions. Earl is an instructor in the Fisheries and Aquaculture Program at Bellingham Technical College and manages the Whatcom Creek Hatchery.



Find answers on pg. 6

Looking for a project?

The City of Port Angeles is providing financial assistance of between \$100 and \$1,000 to environmental organizations for stewardship opportunities. Eligible projects include: Creek restoration, Riparian native vegetation and habitat enhancement, Storm drain marking, and Other creek enhancement projects.

Contact: **Jonathan Boehme, P.E.**, City of Port Angeles Public Works, 321 East Fifth Street, P.O. Box 1150, Port Angeles, WA 98362 Phone: 360-417-4811 Cell: 360-460-3456 Email: jboehme@cityofpa.us

New Cultural and Natural Resources 1 class at North Olympic Peninsula Skills Center

This hands-on class combines environmental service learning projects with human history of this region and is team-taught by **Jamie Valadez** and **Dan Lieberman**. This year-long class runs in the early afternoon daily and offers 3 high school credits for the year (already approved: 0.5 English, 1.0 lab science, and 1.5 CTE; pending: 0.5 WA St. History social studies) and 4 college credits (Central WA University's UNIV 109) plus an option for 4 more college credits (Peninsula College's Introduction to GIS). The class meets daily at the Skills Center in Port Angeles (905 W. 9th St.) and does field trips weekly (Mondays) working with professionals in real-job settings. Eligible students are anyone up to age 21 without a high school diploma. Successful students will be eligible for Natural Resources 2 internships, which often pay scholarships while offering more high school and college credits.

Here is the class website with units, lessons, pictures, student work and much more (note, cultural projects/activities are still being added to each unit): <http://nopsc.esd114.wednet.edu/course/view.php?id=12>

Contact with questions or to enroll: Daniel Lieberman, Natural Resources Instructor:

voice: 360-565-1892, fax: 360-417-9068, Web: www.nopsc.org/naturalresources ; dlieberman@portangelesschools.org



Doing field work; from left: Stefanie Colliton, Streamkeeper **Brian Phillips**, Conan McCarty, Streamkeeper **Coleman Byrnes**, Angel Shaw



More field work: **Jamie Valadez** in the middle and from left are students: Josh Watson, Maurice Raub, Stephen Huiskens, Cheyenne Sprouffske Chyla Greene.

Stormwater Data Being Uploaded

Finally! Stormwater data we gathered from 2008-2011 is about to be uploaded to the database. A big **THANK YOU** to **Ron Sidwell** and **Randy Washburne** for their help.

They've been called everything from Smolt, Fingerlings, Juvenile, to "Little Squirmers"!

They're those young fish in the streams we love to see, as they indicate a healthy stream. We can safely trap them in smolt traps to get a closer look. Identifying them can be more difficult. Here's some help.

COHO



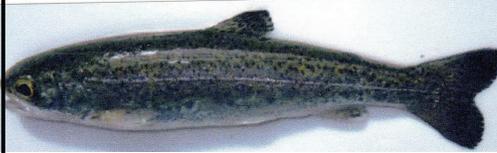
Fingerling Coho: Length 3-4 cm; dorsal and anal fin have conspicuous white leading edge followed by dark stripe; parr marks above and below lateral line, but with rounded dark areas above lateral line; reddish tail.



Coho Smolt: Length 8-13 cm; dorsal surface brown or green; parr marks small, faint, or absent when bright silver; vertical surface silver; tail and dorsal fin have black tips with few spots.

STEELHEAD

Fingerling Steelhead: Length 1-4 cm; forward dorsal surface has parr-like marks; parr marks are prominent; marks are longer than are wide at lateral line; dorsal fin is spotted and has white tip on six rays; adipose fin with continuous dark edge; white leading edges on anal and pelvic fins.



Juvenile Steelhead: Length 7-15 cm.; body spots abundant; dorsal fins are spotted with white tip over six rays; caudal fin is spotted; anal and pelvic fins with white tips; pink or red strip on side of body; parr marks may be present.



A "Photarium" allows for better viewing to measure and identify the species.

SOCKEYE



Fingerling Sockeye: Length 2-3 cm.; green back; parr marks short, oval and mainly above the lateral line.



Sockeye Smolt: Length 8-13 cm; dorsal surface brown or green; parr marks small, faint or absent when bright silver, ventral surface silver.