Central Region, 2012
Volume 18, Issue 2

Tributary Tribune

Stories and art by the
AmeriCorps Watershed Stewards Project

The Watershed Stewards Project's (WSP) mission is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high quality scientific practices.

A project of the California Conservation Corps, WSP is administered by CaliforniaVolunteers and sponsored by the Corporation for National and Community Service.

THE TRIBUTARY TRIBUNE SHOWCASES THE ADVENTURES, INSIGHTS, AND ART OF MEMBERS OF THE AMERICORPS WATERSHED STEWARDS PROJECT. FOR EIGHTEEN YEARS THE WSP HAS BEEN SERVING COMMUNITIES THROUGHOUT CALIFORNIA'S COASTAL WATERSHEDS. THIS ISSUE FEATURES STORIES AND ART BY MEMBERS FROM OUR CENTRAL REGION, IN HUMBOLDT, MENDOCINO, SONOMA AND MARIN COUNTIES.

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Co-Editor - Bonnie Stewart
Co-Editor, Submission Supervisor - Molly Schnur
Editor-in-chief, Layout Designer - Emily Hirschman
Cover Image - Alexa Andis, placed with DFG Arcata, HFAC

In-seine Winter Conditions at the Mad River Hatchery

By Todd Carlin, placed at DFG Coastal Restoration Monitoring and Evaluation Program

Each year the Mad River Hatchery, operated by the California Department of Fish and Game (DFG), spawns about 80 male and 80 female hatchery-raised steelhead to produce roughly 395,000 eggs while also pairing about 30 wild and 30 hatchery-raised steelhead to produce an additional 145,000 eggs (DFG). Unfortunately, Humboldt County experienced unusually low early-winter flow conditions this year. According to the National Weather Services' data records, precipitation in the Humboldt Bay region during the months of November and December was 70 percent and 35 percent below average, respectively. January saw much of the same with the cumulative rainfall totaling just an inch as of the 17th of the month. This data highlighted a major concern for operations at the hatchery, creating a flow too low for the returning steelhead to be able to swim up the fish ladder. With this concern in mind and spawning already three weeks behind schedule, biologists were able to get approval to preemptively seine steelhead in the pool unit just below the fish ladder and transport them to the holding tanks, a measure that has not been needed since the late 70s. For those who don't know what seining is, it is a method of fishing that employs a long, vertically hanging net with buoys on the top edge (float line) and weights on the bottom edge (lead line) to encircle the target species.

Photos courtesy of California DFG

I took advantage of the opportunity to assist in the hatchery's effort and break away from data entry work in the office, enticed by the prospect of handling big steelhead. My site partner, Matt Bray, and I showed up at the hatchery in Blue Lake in mid-January not knowing exactly what to expect, but we soon found out that due to our height advantages we would be playing an integral role in the seining operation. We would be tasked with working the deepest part of the pool.

I brought a wetsuit, but decided to wear my waders, a choice that I would regret shortly thereafter. After some preliminary surveying, we located where the fish were holding and began to unfurl the three seine nets. On our first attempt not yet knowing the best approach, we set the downstream block net and walked to the top of the pool with one of the other nets in hand. We spread the upstream net across the channel and began walking downstream anticipating that once the nets met like a steelhead sandwich, we could take the left-bank end of the net to the right bank and haul it in. Much to our chagrin, every fish outsmarted us and swam back upstream, leaving us to try a different approach.

On the second attempt, we set a block net on the upstream end and began walking down the left bank with the third net, this time with the crew on the right bank remaining stationary. Once we reached the downstream net, Matt walked to the right bank paralleling the downstream block net and began hauling in the line to inspect the catch. As the frustration level was high after the first, failed set and knowing we had fish in the net, I stayed in the water to ensure that the lead line was maintaining contact with the channel bed and that no fish were escaping.

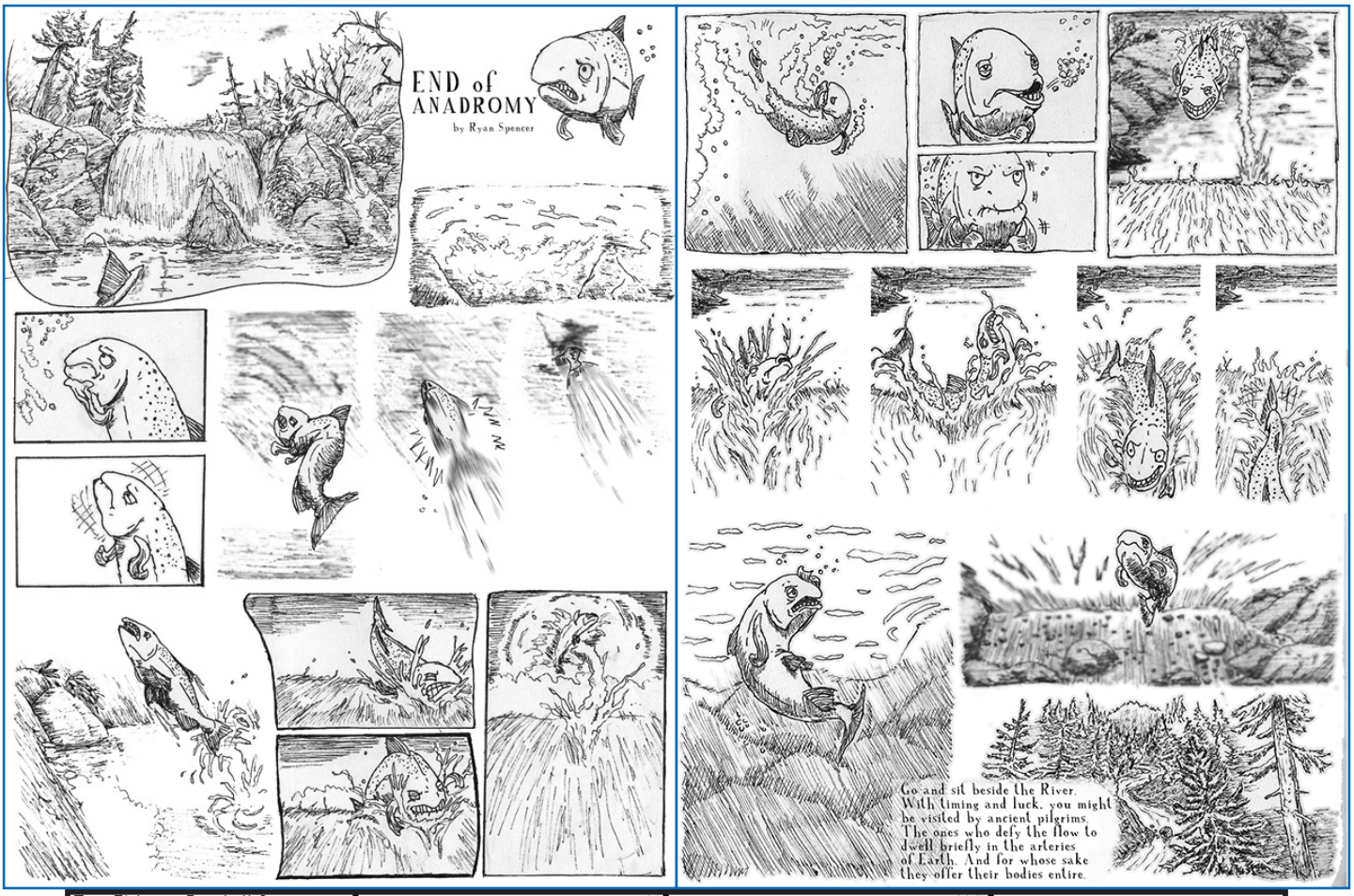
Unknown to me at the time, the lace hook on my gaiters had managed to get entangled in the net being dragged to shore. I submerged myself up to the neck in order to frantically release the gaiter from the net and in a matter of seconds, my hindsight became very clear as the waders began to fill, "I knew I should have worn the wetsuit."

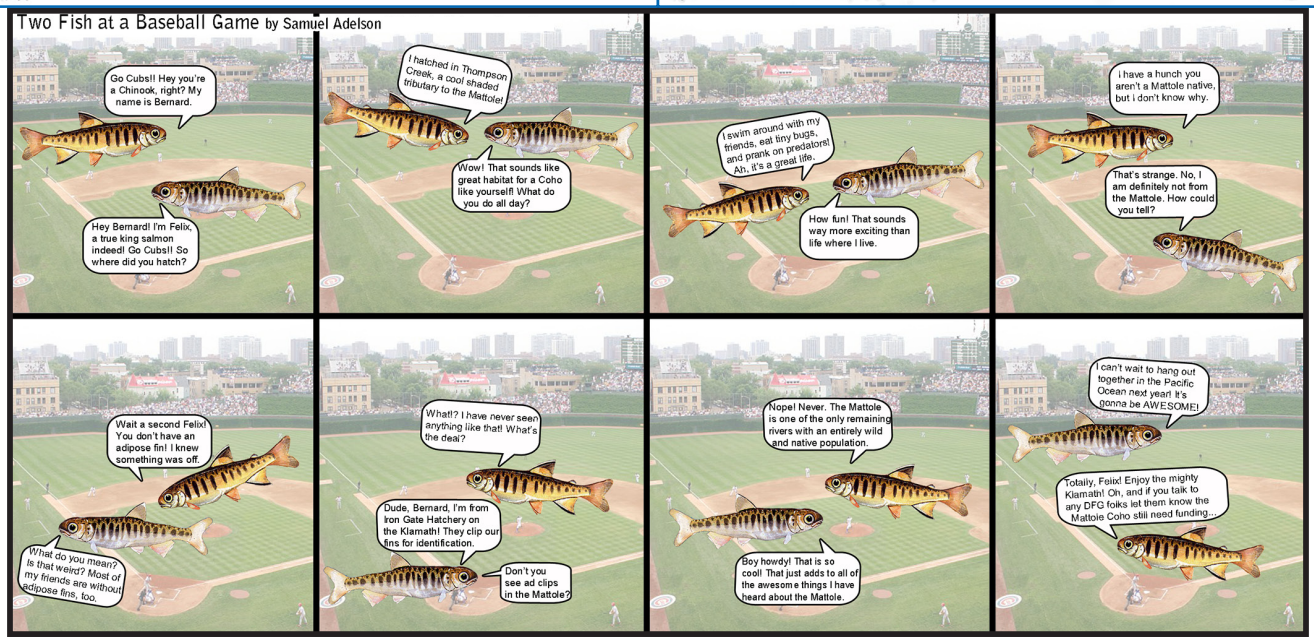
At any rate, our plan had worked this time around and it seemed as though we had a decent quantity of fish in the net.

In a rectangular floating net, I began transporting the steelhead about ten at a time (depending on size) across the channel to the line of DFG staff eagerly waiting to fill the truck. About 80 fish and two hours later, I was finally able to empty the reservoir that was my waders while the truck offloaded the first batch.

I took advantage of the respite to put on the wetsuit before getting back into the water, this time in relative comfort. We moved another ten loads or so to the truck and at the end of the day with just one set of the seine net were able to get about 160 steelhead into the hatchery for spawning, enough of a selection to put the biologists back on schedule until mother nature cooperated and fish could get up the ladder as intended. The majority were hatchery raised but about ten were wild, essential to maintaining genetic diversity in the progeny. Of the 160 we seined, only about 25 were to be spawned. At the end of the day for as cold as we were, I was happy we got to see so many big steelhead in one spot, some of which were up to 20 pounds. Just another day's work for the Watershed Stewards Project.

SALMON FUNNIES





Salmon Date

Quotes from Real Science

By Andrea Garcia, placed at DFG Fortuna

Teaching kids new things about science and nature can be a lot of fun. Hearing what they say while you're trying to teach them is even more fun.

"The salmon are their own predators, because they don't eat and then they die."

"You know how there are dog years... are there fish years?"

"It's like a life cycle but with water."

"Estupation!" or "Epation?" (The answer I was looking for was 'estuary')

"That's not dirt! That's coffee!" (For the Enviroscape)

"Is it littering if my dad throws cans out of his truck while he's driving?"

Top Left: "End of Anadromy," by Ryan Spencer, placed at Dept. of Fish & Game (DFG) Fortuna.
Bottom Left: "Two Fish and a Baseball Game," by Sam Adelson, placed at Mattole Salmon Group.
Above: "Salmon Date," by Joshua Karnowski, placed at DFG Fort Bragg.
Right: "No More Adipose Stew," by Chris Tiffany, placed at DFG Fortuna.

The Anthropocene

By Michelle Dow, placed at Redwood Science Lab

Disclaimer: This is a work of science fiction and does not represent the ideas or opinions of the author or the Watershed Stewards Project

The Anthropocene was a geologic epoch that occurred 7.20 billion years ago (based on radiometric dating of 87Rb /87Sr) in the Quaternary Period. It was sandwiched between the Holocene and the nothingpocene epochs. The climate at the end of the Holocene and into the early Anthropocene was thought to be mild with an average global temperature of 12C (53.6 Fahrenheit) and highly suitable for life. An abundance of flora and fauna fossils are found in the lower Anthropocene in the plastica formation (aged at 7.0 billion years). This era is most notable for the presence of Homo sapien sapiens. These were upright walking creatures that were thought to be highly intelligent and communicative. This particular species built an array of infrastructure and advanced technology. For example, large metal structures have been found accreted inside the plastica formation, these structures are believed to be the remnants of ancient cities. Homo sapiens sapiens was thought to be the most complex species since the beginning of Earth's formation around 11.74 billion years ago. Perhaps the most interesting paradox of this species is their quick extinction. The fossil record shows a progressive linear die-off that is directly correlated to the onset of surrounding flora and fauna becoming extinct(R^2 of .98 see figure 1). In particular, the die off of Homo sapiens sapiens is thought to be directly linked to the extinction of the Salmonidae family (an aquatic gill bearing creature, see figure 2). It is believed in high regard that Homo sapiens sapiens were responsible for the Great Carbon Accumulation (GCA) that caused a drastic climate shift around 6.5 billion years ago. The carbon record shows an increase in carbon (based on $\delta^{13}C$) at the Holocene terminus and into the whole of the Anthropocene. This carbon caused a 'smoking gun' response and shifted Earth into a hot house. It is believed that weather patterns became stronger and more erratic into the mid Anthropocene. The average temperature in the mid Anthropocene was 40 C (104 Fahrenheit).

The research that my colleagues and I are conducting at Earth Restoration foundation is correlating the extinction of the bizarre species Homo sapiens sapiens to the die off of the entire Salmonidae family. It is believed that humans farmed and fished these aquatic creatures for food substance. We believe that the extinction of the Salmonidae (which preceded the humans by 1000 years) was an accumulation of over fishing and impediment to flow. The geologic unit Concretus (mid Anthropocene) contains remnants of human made structures made of (Ca3SiO5 + H2O) (CaO)•(SiO2)•(H2O)(gel) + Ca(OH)2, commonly known as concrete, that are found inside of fluvial sediments. It is believed that these structures detoured the entire Salmonidae family to travel upstream to spawn and in conjunction with over fishing caused their demise. The die off of Salmonidae caused a decrease in nutrient recruitment into fluvial systems, thus accelerating the terminus of aquatic habitat. It is believed that these habitats were the first to deteriorate and initially caused all aquatic based life to die, triggering the extinction of terrestrial species, including Homo sapiens sapiens.

The end of the Anthropocene remained a hot house until the oceans secreted the majority of the air born carbon. Evidence of this is found in the abundance of calcium carbonate shells that are now the chalk cliffs of Noyo. It is unknown how many specimens survived the Great Carbon Accumulation but evidence points to sulphur reducing bacteria and an isolated population of ferns (as found in paleo-pollen in the bactalife formation). It is unknown how and why complex life and habitat evolved twice but we at Earth Restoration foundation believe that more research and understanding is needed in regards to the first die off of intelligent life in order to better understand how our own speices, Homo Sapien Superious, has evolved.

Figure 1

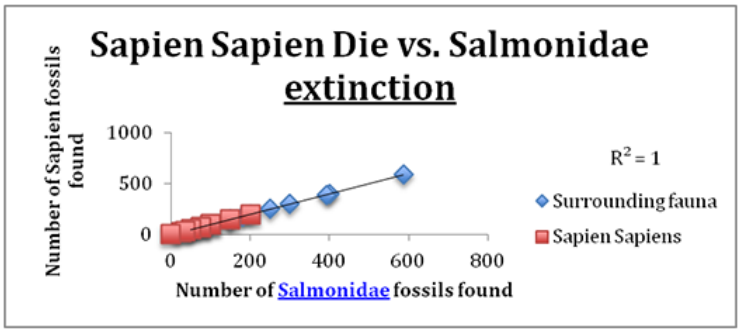


Figure 2

The River Moves Me

By Shanna Atherton, placed at CCC, Eel River Watershed Improvement Group

I step carefully,
Feeling the power of the water
Pushing against my calves.
One wrong step and
I could be swept away, my body
Carried on the rapids
To an unknown end.

The river moves me;
It lifts up my foot and places it far from where I intended to go.

I step carefully,
Still wondering at how I
Ended up here, away
From my desk and my books.
Trees tower above me and
Water courses below me, and
I learn as I never have before.

The river moves me;
It lifts up my mind and carries me places I never thought I'd go.

I step carefully,
Allowing the water to guide me.
With time, the river mends itself,
Repairs the damage we've wrought,
But I cannot stand by and
Do nothing now,
Knowing what I know.

The river moves me;
It lifts up my heart and places me exactly where I always wanted to go.

I step carefully,
And the voice of the river is
With me. I am but one person
Allowing the water to guide me,
Following as it carves me
A new life path.
I will learn to heal the river,

As the river heals me.
Because it lifts up my soul and carries me to the place I was always meant to go.

Photo by Shanna Atherton

Investigation of the Illusive Pacific Lamprey

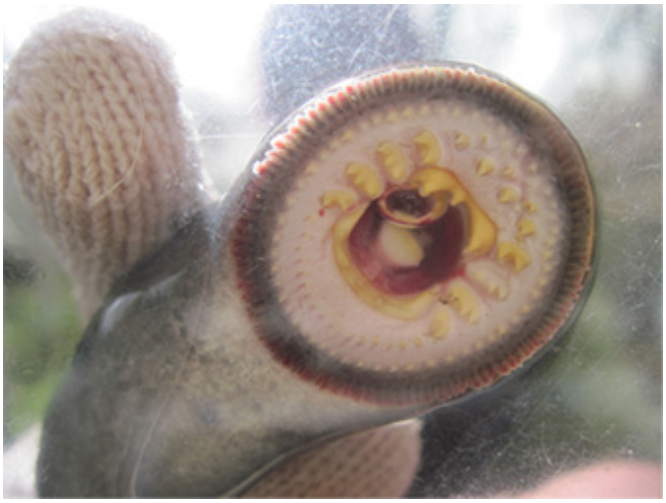
By Jemma Williams, placed at DFG Arcata, Humboldt Fish Action Council

Did you know that salmonids are not the only anadromous species inhabiting our streams here on the west coast? The Pacific lamprey *Lampetra tridentata* is an important indicator species for aquatic ecosystem health. Pacific lampreys are an anadromous, parasitic species with migratory behavior similar to that of salmonids.

Pacific lampreys face many of the same challenges as the Pacific Salmon and numbers are declining. Because Pacific lampreys spawn later than salmonid species their decomposing carcasses provide important nutrient input for macroinvertebrates and salmonid smolts.

Juvenile lampreys are called ammocetes and are the earth worms of the aquatic environment in the sense that they filter nutrients and improve water quality. Ammocetes live in the freshwater environment for 5-8 years before smolting and migrating to the ocean where they adopt a parasitic lifestyle feeding on whales and other large fish species. In 1-2 years mature lamprey return to freshwater to spawn.

Historically Pacific lampreys have not been a priority for fisheries monitoring and very little research has been done in California on their life history and populations. In response to this mysterious species' declining populations and unknown life history, the DFG Arcata is performing a breakthrough study! We aim to discover what the time span is between freshwater entry to spawning and the locations in which they are choosing to spawn. We are also performing a mark and recapture study to estimate the adult population in Freshwater Creek and its tributaries.



Above: The mounth of the Pacific Lamprey, *Lampetra tridentata*. Photo by Colin Anderson

Below: Pacific Lamprey are anadramous and face many of the same detriments of salmonid species, resulting in dwindling numbers. Photo courtesy of Oregon Dept. of Fish and Wildlife.

Our methodology includes migrant trapping via the Freshwater weir. Upstream adult spawners are captured and a PIT tag (passive integrative transponder tag) is inserted in the body cavity allowing scientists to track movement with stream width antenna stations. These antennas are set up in staggered pairs in order to determine the direction that the tagged individual is traveling in the stream. Each section of the stream is comprised of different habitats, varying gradients, and an array of navigational corridors. Some sections are free of barriers and others have culverts that can inhibit lamprey passage (they can't migrate over 90°angles, a detail that has not been considered in past fish ladder construction). Multiple antenna stations have been placed in the lower main stem, middle, upper, and south fork of Freshwater Creek in order to record which habitat is most favored and accessible to spawners.

So far this year we have trapped and tagged 32 individuals and have detections on the lower stem, Cloney gulch, and the upper and middle main stem. There have also been a few un-spawned downstream migrants trapped. Walking observational surveys will be performed during their spawning season which usually runs from March to June.

By filling in gaps in our overall understanding of the Pacific lamprey's life history and behavior we can attempt to bring more awareness to this illusive and long overlooked species. So watershed stewards near and far, be sure to look out for circular lamprey redds when surveying streams and feel free to use your newfound lamprey knowledge to strike up riveting, nerdy conversation wherever possible. It is only with your help that this unique, declining species will be able to get the credit and attention it deserves!

"Why is water heavy?"

The little girl in front interrupted my explanation of infiltration.

Hydrogen bonding. The structure of the hydrogen and oxygen atoms promotes tight bonds that allow the molecules to pack more densely into a given space.

But can a fourth grader, who hasn't yet progressed from fractions to percentages, understand hydrogen bonding? Does she know what an atom even is?

How does one teach science to kids?

Does each lesson begin with a caveat, "You'll learn how this actually works when you're older?"

How does one walk the line between simplifying and oversimplifying ?

Walking a stream isn't so complicated: boulder-hopping, pressing against a torrent of flow, and distinguishing between salmon redd and scour in spiraling whitewater near an undercut bank.

Out on the creek, explanations are laid bare: water and rock; gradient and substrate. Follow the fish. Walk the creek until waterfalls and fallen logs prevent fish passage, and walk further still, just to make sure.

Because once in a while, the fish appear where you least expect them. And then it comes back to hydrogen bonding: those scientific details we'll learn once we're a little older.

Story by Diana Baetscher placed at DFG Eureka

Photos from Spawner surveys on the Smith River, by Tim Sandborn placed at DFG Eureka

Tree Fish
By Brian James, placed at DFG Fortuna

It was a cold, brisk, winter morning on the 5th day of January. Year, 2012. The apocalypse that was bound to take place in December made me want to seize everyday because we may never have a January 5th again. With that in mind, myself and one other WSP member hastily went on our way to survey Lawrence Creek, a tributary to the Van Duzen River in Humboldt County. This survey was set to take several hours. At 0900 hours we began what would be one of my most memorable days.

A week or so before the survey, a large storm had come through and made it impossible to survey through unless we were in a canoe or and had nerves of steel. We decided to wait until this day, when the water was much lower and safer to meander through. The air was a pleasant 45 degrees Fahrenheit and the water was frigidly cold, at 39 degrees. It was sunny and clear, and the temperature was increasing as the day went forward.

Upon first arriving, I noticed a strong scent in the air. I dismissed it, hoping it would go away sooner than later because it was making it hard for me to concentrate. Nevertheless we started to walk down the stream and see a few old, smelly, Chinook salmon carcasses. They were in good enough shape to identify, so we checked the sex and length, cut a horizontal line up their stomachs to make sure we didn't count these fish again., We punched 3 holes in each operculum and continued on.

The foul smell was still in the air, even when we ventured away from the decaying fish. I took a quick break from my usual routine of looking at the ground to watch my step, and looked up to see something quite peculiar. Six feet off the ground in front of me, there was a fish in the tree. This was the first tree fish that I have ever seen. Curious, I went to investigate the dead fish to get some idea of what had happened.

Being the smart person that I am, I pondered about how a fish could have somehow made its way into a tree and stayed suspended for my eyes to witness it. Did a bear leave it behind? Was someone messing with my mind? Then I remembered the previous storm, when the water had risen 10 feet in some places on this stream, most likely flushing out the fish from somewhere upstream. This must have led to it being left hanging from this tree.

Old growth redwoods in the Tall Trees Area of Rockefeller Forest, Humboldt Redwoods State Park.
Photo by Shanna Atherton, placed with CCC, ERWIG

I chuckled for a few moments and then carried on with the survey. As I continued, the foul odor that had once made it hard for me to think was getting more and more displeasing as we walked the stream. That is when I noticed more tree fish, and parts of tree fish. It had been getting warmer as the survey progressed, pushing the mercury into the 50s. The UV rays were shinning down on us and the surrounding areas. With the sunshine and the tree fish parts askew in the trees; they were getting baked at a steady pace everyday. This was the origin of the smell that would happen to disrupt my thinking for the next 6 hours.

The day ended and we headed home. The scent of tree fish was fresh on my mind because it reminded me of a smell from childhood that I found displeasing back then too. But I learned a valuable lesson from tree fish: although you may not like where you are because of something unfortunate, that shouldn't take away from the beauty of nature. Lawrence Creek is one of the most beautiful streams I have surveyed all year long, with wide beds, large banks to walk on, deep pools, and plenty of live fish.

A few months back, on the same survey reach, I was lucky enough to witness 200 live Chinook, spawning, fighting, making redds and being wild. That day will always be with me and a good reminder that life comes and goes in the rivers, nothing is permanent. And although tree fish are smelly, the beauty of the wilderness was there on that day.

Quick tip: How to clone plants

By Matt Kissman, placed at Sonoma Ecology Center

1. Choose a healthy specimen (these will be large, robust, and free from disease). Stems should be at least pencil thick.

2. Trim all lateral branches smaller than pencil thickness giving you a straight stem (no seeds, no tiny stems).

3. Make a 45° cut ¼" below the bottom node.

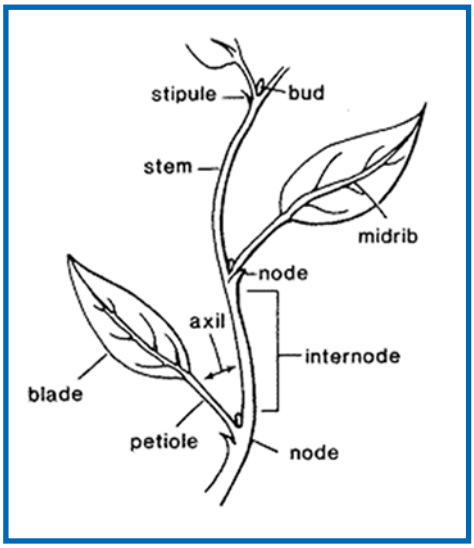
4. Count up 3 nodes and make a flat cut just above the 3rd node.

5. Place cutting in tray of 5% bleach solution for 3-5 seconds, rinse in fresh water for at least 10 seconds.

6. Dip basal end (angled cut end) into diluted Dip 'N Grow or some other suitable rooting hormone (desired concentration based on specimen type) for 3-5 seconds.

7. Gently stick specimen into growing medium allowing space between the base of the cutting and the growing container is crucial and will allow for adventitious roots to form.

8. Wait and watch with wide eyes as all the new specimens with your desired traits grow in front of you.



Celebrating 18 years

of the Watershed Stewards Project

Design by Jake Salimbene, placed at US Forest Service Supervisor's Office, Eureka

Plant Ponderings

By Sarah Olsen, placed at Sonoma Ecology Center

Left: Snow berry, *Symphoricarpos albus,* fruits in fall and throughout winter. Photo courtesy of Calflora.
Right: Snowberry beginning to bloom in early summer. Photo courtesy of Fiddlehead Creek.

All you fish people may get your kicks seeing rare Coho salmon (at Yreka DFG they call them unicorns), but here at the Sonoma Ecology Center I revel in my favorite plants, rare and otherwise. Though there are many I like, there are a few I especially love, and the snowberry is one of them. With small, scattered leaves, this native deciduous shrub has an enchanting quality. Its pink blossoms turn into white berries throughout fall and winter, and they hang effortlessly in small bunches, giving the plant its genus name– Symphoricarpos, meaning "fruit bearing together".

There are about 15 species in the Symphoricarpos genus, but our native has the name albus, giving the plant a Harry Potter bewitchment, despite being the "common" snowberry. Add to this the supple quality of its sturdy twigs, and you might find yourself with a strong desire to snap off a small branch and shout its name while pointing it at the closest person, "Symphoricarpos albus!"* Or perhaps that's just me. But I digress.

Even though the snowberry may not be magical in a wizardry sense, it certainly works wonders. We use snowberry for riparian restoration because of its bank stabilizing and erosion control properties. Native Americans reportedly used it as hair soap, a poultice for wounds, and tea from the bark was used as a remedy for tuberculosis and sexually transmitted diseases. It was also used for arrow shafts and pipe stems.

An important quality for me in plants is a memorable name, and the snowberry has that and more. Break open a berry and the fruit inside looks like fine, sparkling granular snow. And yes, they are delicious! For quail, grouse, and pheasant. To humans they are poisonous and induce vomiting due to alkoloids. But no matter, I get my fill of snowberries just looking around Sonoma Valley. And good news – Symphoricarpos albus is distributed throughout California (and much of the U.S). So keep an eye out, and feel the magic.

*Note: If you do happen to accidentally act out this scene, don't worry because snowberry can be propagated vegetatively. Refer to Matt's article, "How to clone" for more direction here.

A macabre exposé of fish for dissection, as told through the ancient art of Haiku

By Bonnie Stewart, Education Team Leader

To my dear Japan,
Sorry for the following.
Sincerely, CB

Can I have a fish?
Chisel apart, dull thud, thunk
Morning Thaw, like me

In my office, dark
Watershed Education
Comes to mind, all day

Blood. Death. Fish. Restore
Grow up. Do good. For the Earth
Migrate. Spawn. Fight. Love

Hatchery, fish farm
Is it dead? How did it die?
Hot water means death

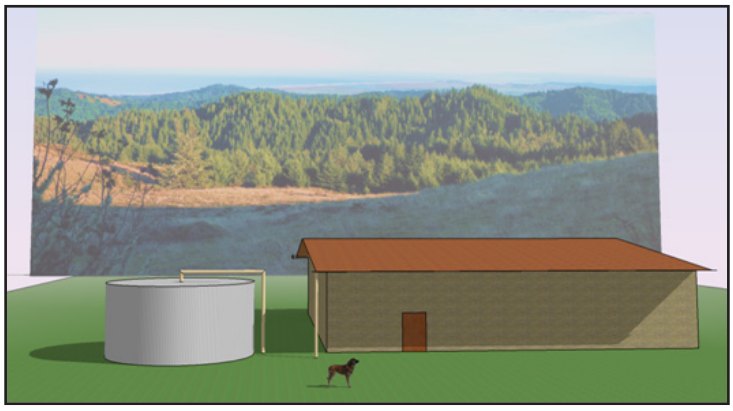
A Treasure Chest for California's Gold

By Matt Bray, placed at DFG Coastal Restoration Monitoring and Evaluation Progam

The tour Watershed Stewards Project members took during Spring Training 2012 of the CCC Los Padres rainwater storage system got me interested in maybe, someday having one of my own. Their system is used to provide water for their native plant propagation nursery. Rainwater is collected from the 4,000 sq. ft. roof of their warehouse, and stored in a 47,000 gallon tank. This system reduces drawdown of local groundwater levels by storing up water during infrequent rain events to use year-round, instead of irrigating with water that is drawn from aquifers that are critical for local streams during low flows.

I was interested in how the system designer sized the pipes that transport the rainwater from the roof to the tank (Exhibit A). Bernoulli's principle is a useful way to size the pipes in a rainwater storage system. The principle states mathematically that in flowing water an increase in speed is due to a decrease in potential energy or pressure. There are limitations on how accurate Bernoulli's principle is: it assumes no friction in the pipes so the flow velocity will actually be lower in real life, but Bernoulli's is a good start in figuring out how big the pipes need to be to handle a heavy rain event.

Exhibit A: Here's a rough sketch of a rainwater storage system.



According to the American Meteorological Society, a heavy rain can dump water at up to 2 inches per hour (above that it's called violent rain, a.k.a. a gully washer, trash-mover or toad-strangler). Assuming our roof is 100ft x 40ft, we've got a 4,000 sq. ft. surface catching rain. To determine the flow rate that rain would generate coming off our roof, we multiply the surface area of the roof by the rain rate:

[4000ft2 x 2in/hr = 4987 gallons-per-hour!]

Now we use Bernoulli's principle to determine the velocity at which the water would travel (without friction) from the gutter to the tank. We're going to assume the tank is mostly full, which is when the water velocity would be slowest because the pipe is submerged in the tank and the drop from the gutter to the water surface in the tank is least. Skipping some steps Bernoulli's principle simplifies to:

$$V = \sqrt{2gz}$$

V is water velocity, g is acceleration due to gravity, and z is the height difference between the water in the tank and the gutter. Let's say that the gutter is only one foot higher than the water in the tank (the tank is almost full at this point):

$$V = \sqrt{2(32.2\frac{ft}{s^2})(1ft)} = 8.02\ ft/s$$

Now we need to size our pipe to handle the 4,987 gallons-per-hour potentially coming off the roof!

$$A = Q/V$$

Where A is the cross-sectional area of the pipe, and Q is the flow rate. So:

$$A = {}^{4987\ gal/hr}/_{8.02ft/s} = 3.33in^2$$

This equates to a pipe diameter of 2.06 inches. So, this would be the smallest pipe diameter you would want to go with for the system, and considering pipe friction losses (much more complicated calculations) you would want to over-size the pipe to be safe. But also consider that we sized the pipe for extreme rain with the tank almost full so some safety is built in. The next step would be to size the tank to handle my water needs, while taking into account the frequency and amount of rainfall my area receives.

Salmon Jokes
By Alex Blessing, placed at DFG Fortuna

- What did the fish say when he hit the concrete wall? Dam!

- Two guys are talking about fishing. One says to the other, "I am NEVER going to take my wife fishing with me, ever again!" "That bad, huh?" asked the other. "She did everything wrong! Wrong! She talked too much and made the boat rock. She tried to stand up in the boat and baited the hook wrong. She used the wrong lures and WORST of all, she caught more fish than me!"

- How many fishermen does it take to change a light bulb? One, but you should have seen the bulb, it must have been THIS big!

- Alex had a terrible day fishing on the lake, sitting in the blazing sun all day without catching a single one. On his way home, he stopped at a local fish market and ordered four rainbow trout. He told the fishmonger, "Pick four large ones out and throw them at me, will you?"
  "Why do you want me to throw them at you?" asked the salesman.
  "So that I am able to tell my wife, in all honesty, that I caught them," said Alex.
  "Okay, but I suggest that you take the salmon."
  "Why's that?" asked Alex.
  "Because your wife came in earlier today and said that if you came by, I should tell you to take salmon. That's what she'd like for supper tonight," replied the fishmonger with a grin.

- "I caught a twenty pound salmon last week."
  "Were there any witnesses?"
  "There sure were. If there hadn't been, it would have been forty pounds."

Image by Michael Horwitz, placed at Marin Municipal Water District

Water is Blue

By Ben Scheilfer,
placed at Marin Municipal Water District

Water is what, keeps me alive
Water is what turns my body blue
When water moves, who will survive?

Water is where, I live and dive
Water is what turns my old brain new
Water is what, keeps me alive

Where'd you go, to see the water arrive?
What did you do? You saw the water grew.
When water moves, who will survive?

Water is who, will renew and revive
What do you know, if the water's true?
Water is what, keeps me alive

Water is who, will kill and deprive
What do you know, when the water's few?
When water moves, who will survive?

The water will tip, the scale at five
And you will know, the water is you
Water is what, keeps me alive
When water moves, who will survive?

Photos by Chelsea Neill, placed at DFG Hopland

Leaper! Leaper! Salmon in European Cultures

Dave Wesolowski, placed at Mattole Salmon Group

Out here in California we're lucky enough to work with the beautiful salmonids of the Oncorhynchus genus. As most of us are well aware, salmonids have played a crucial role in the culture and lifestyle of people indigenous to western North America. However, it is not always known that the Atlantic salmon (Salmo salar) has been a key cog in the culture and lifestyle of Western Europe. It's easy to forget how many people and cultures salmonids have impacted. Below are just a few tidbits from different European cultures in regards to Salmo salar:

The Vezere River in France is known for its caves and ancient hominid inhabitants. In one of the caves along the river lies a salmon carving that dates back 22,000 years, thought to be the oldest European record of salmon. Along this same river system, it is thought that inhabitants modified the river to make it easier to catch salmon. When Rome conquered Gaul (France) around 50 B.C., it was found that both cultures word for salmon was "leaper". The Gaulish word was salmo and the Roman word was salar. (ASF 2012)

The people of the British Isles have salmon riddled throughout folklore and cultural history. They were thought to be one of the oldest and wisest creatures. By being anadromous, salmon were associated with living in two worlds. Outmigration to the ocean was thought to be a journey to another world, and that is why salmon were associated with wisdom and old age. Salmon were also revered for strength. Cú Chulainn, the mythological Irish hero, would make a "salmon leap" into battle. (Evans, D. L. 2011)

In Norse mythology, Loki, the trickster god is on the run from the other gods. To escape, Loki turns into a salmon and jumps in a pool. As Loki is jumping, the god Thor catches Loki just under the tail. Thor's grip is believed to have caused the tapering of a salmonids body just before the tail fin. (Pulpett, D. 2010)

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Image by Elizabeth Weisbrot,
placed at US Forest Service Supervisor's Office, Eureka

AmeriCorps.gov

Watershed Stewards Project
1455-C Sandy Prairie Ct
Fortuna, CA 95540
707.725.8601
www.ccc.ca.gov/go/wsp

Carrie Lewis – Project Director

Kristin Kovacs – Northern Project Manager

Jody Weseman – Southern Project Manager

Andrea Berengue – Member Coordinator

Brenda Syverson – Office Manager