Umpqua Watersheds

100 Valleys

A Quarterly Publication for the Supporters of Umpqua Watersheds, Inc

An Oregon 501(c)(3) Non-Profit

Fall 2022| Issue 93

WHATS INSIDE:

WHATS NEW IN OUTREACH

By Kasey Hovik

WHILE WE CONTINUE TO FACE CHALLENGES RELATED TO THE COVID-19 pandemic, we are progressing to a new normal in which we are all doing what we can to return to the favorite things we enjoyed prior to the pandemic. Students have returned to the classroom after two years of online learning. We hosted our first in-person banquet in two years. This summer was very busy for Umpqua Watersheds as we hosted several events and activities including River Appreciation Day, Camp AmeriCorps, the Twin Lakes Wilderness Campout, and Kids in Nature.

Campers at the Twin Lakes Summit.

On **Saturday, September 24th** Umpqua Watersheds and the Native Fish Society will host the 38th annual river cleanup. Give Bob Hoehne a call at 541-679-7077 or email **uw@umpquawatersheds.org** for details.

On **Saturday, October 8th**, we will have our first Umpqua Brew Fest since the pandemic started at the Douglas County Fairgrounds. It has always been a major fundraiser for the organization as well as a great opportunity to celebrate our community. There will be great music, food, games, and of course, the best beer on the planet. We are proud of our local breweries and for all the breweries that come to the Umpqua to support our event. It will be so great to see everyone together again while raising funds to support our programs.

Our Mission: *Umpqua Watersheds is dedicated to the protection and restoration of the ecosystems of the Umpqua watershed and beyond through education, training, advocacy and ecologically sound stewardship.*

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EXECUTIVE DIRECTORS REPORT: AMERICORPS SUPERHEREOS

By Kasey Hovik

FALL IS ALWAYS AN EXCITING TIME FOR UMPQUA WATERSHEDS AND me personally because it starts another term for our AmeriCorps program. We are very proud of all the AmeriCorps who have served with us over the last 12 years. Each year our AmeriCorps members continue our environmental education programs which provide so many opportunities for young people, as well as adults, in our community to learn about our precious natural environment. It is always amazing to see how each of our AmeriCorps superheroes adds a novel activity or project that helps us to expand our program. We are also very proud that our past three AmeriCorps members, Robyn Bath-Rosenfeld, Ryan Kincaid, and Viviana Young, continue to work with Umpqua Watersheds after their service. Robyn teaches 7th-grade science at Fremont Middle School and worked closely with both Ryan and Viviana to provide access and opportunities to work with her school. Ryan continues to serve as our Director of Education and created the annual Learning in Umpqua Watersheds environmental education workshop for teachers. Viviana continues to work with our Conservation and Restoration Committees and will be working with us to provide opportunities to collaborate with the Umpqua Community College (UCC) Natural Resources program. She is using her AmeriCorps education stipend to return to school and add Natural Resources classes to her Bachelor of Science degree from Oregon State University (OSU).

We are very happy that for the second year in a row, we will have someone local to our community serve as our AmeriCorps. Prior to Viviana, all our AmeriCorps members came from places outside our community to serve here. They had to travel to an unknown place, find housing and learn about the community all while getting up to speed with learning about Umpqua Watersheds. Jessica Saxton, also a UCC/OSU student, started her service with Umpqua Watersheds on September 2nd. She will provide great opportunities for us to work with both schools in teaching environmental education in the Umpqua Watersheds, as well as work with us on conservation and restoration projects.

Another first and exciting opportunity we will be engaged in this fall is collaborating with the Umpqua Valley Audubon Society (UVAS) as they host their first AmeriCorps member, Tracy Maxwell. She will be based at the Umpqua Watersheds office, and I will be a co-mentor/ supervisor along with Diana Wales from UVAS. She will serve to provide training and outreach opportunities for people in our community related to the mission of UVAS. We will be working closely with UVAS on several events in the coming months.

In addition to UVAS, we will expand our efforts to collaborate with other AmeriCorps host programs through our partnership with the United Communities AmeriCorps program. We will offer to provide facilities, airtime on our radio, co-hosting events, and other collaborative opportunities to increase effectiveness and participation in our work.

We are very fortunate to have a thriving AmeriCorps program. Our members serve with us for 11 months and Umpqua Watershed's cash match is only about $10,000. While it is a small amount for a full-time position, it is a lot for a small organization. We have had tremendous support from members in our community over the years and need your help again. Please consider donating to support our program. Feel free to reach out to me if you have any questions.

PRESIDENT'S REPORT: STATE OF THE UMPQUA

By Janice Reid

On a recent trip to Minnesota via Canada, we visited the west side of the Olympic Peninsula and Vancouver Island, British Columbia. We had heard about forest harvest practices there and so we were not surprised that very little primary forest remains in this area. Of course, in the Olympic National Park, the forests are in their natural state, untouched by modern harvest methods. These higher elevation forests are composed of smaller trees that have adapted to harsh soil and moisture conditions. The lower elevation forests are where trees would normally thrive and grow very large.

Much of the Olympic National Forest has been harvested at least once, but a few stands remain in their natural state and are protected for tourists like us to visit. The same is true on Vancouver Island, although some of the provincial parks we visited were harvested sometime in the past and then presumably turned into parks. You can find tourists visiting places such as Cathedral Grove in the Port Alberni area. Flocks of tourists packing the sides of the road and jamming the highways, stop to take in the sights of a remnant stand of primary forest. Large cedar, hemlock, and Douglas-fir are protected from adoring fans by a boardwalk with rails, and signs asking that visitors remain on the trail so as not to compact the soil around the trees.

As we were walking this boardwalk, I could not help but think of the 1970 Joni Mitchell song "Big Yellow Taxi." The words in the song kept swirling in my head. "*They took all the trees and put 'em in a tree museum and charged the people a dollar and a half just to see 'em. Don't it always seem to go that you don't know what you've got 'til it's gone? They paved paradise and put up a parking lot.*"

We are fortunate to have big trees and primary forests in the Umpqua Basin that we can visit on our public lands – unless, of course, private landowners put up gates in the BLM checkerboard, which is happening more often. Umpqua Watersheds is dedicated to the protection of these forests and we fight for the retention of our older forests. Our successes are sometimes short-lived and we continue to have to monitor and challenge harvests that we successfully challenged in the past. A tree that is still standing is at risk, but one that is cut is lost forever. In the Umpqua Basin, older forests are being targeted by our own public land managers who ignore the science, the advice of experts, and calls by the global community to halt all logging of older forests. These forests are important for native flora and fauna, maintaining water quality and flow, and also mitigating climate change. We don't have much time and we have the difficult task of convincing those in leadership positions to do the right thing.

Currently, the Roseburg BLM has timber sales in old forests despite the new executive order issued by the Biden administration. It can be a difficult task for land managers to navigate the rules, laws, and policies of the past that have put us on this trajectory. More recent laws and cooperative agreements reflect the need to address past mistakes. The Endangered Species Act and the Northwest Forest Plan are examples of public attempts to override bad policies of the past. Business as usual must not be the norm and we need courageous land managers to put a stop to destructive practices when they are able. Where there is room for interpretation in policies, laws, and agreements, we all have a reasonable expectation that public employees will make decisions in the public's best interest, and that of future generations. We must keep challenging bad policies to stop them from being the status quo.

Our forests are the nations and the worlds. The hoards of people visiting the Cathedral Grove trees are from all over the world and they have an interest in them just as we do in the Umpqua. Stay strong, go see your forests, and be informed.

Above, Bill Holborow with the authors late wife Jody at Cottonwood Creek Falls; *below,* an award ceremony at Champagne Ridge.

ANNUAL MOONLIGHT TREK AROUND MT. THIELSEN

By Paul Nolte

OVER THIRTY YEARS AGO I BEGAN AN ANNUAL TREK encircling Mt. Thielsen in the Winema and Umpqua National Forests. The inspiration was Holly Jones, who was the head social science librarian at the University of Oregon. He served on the Sierra Club's Board of Directors in the 70s and was one of the founders of the Oregon Wilderness Coalition, serving as its first president from 1976-1978.

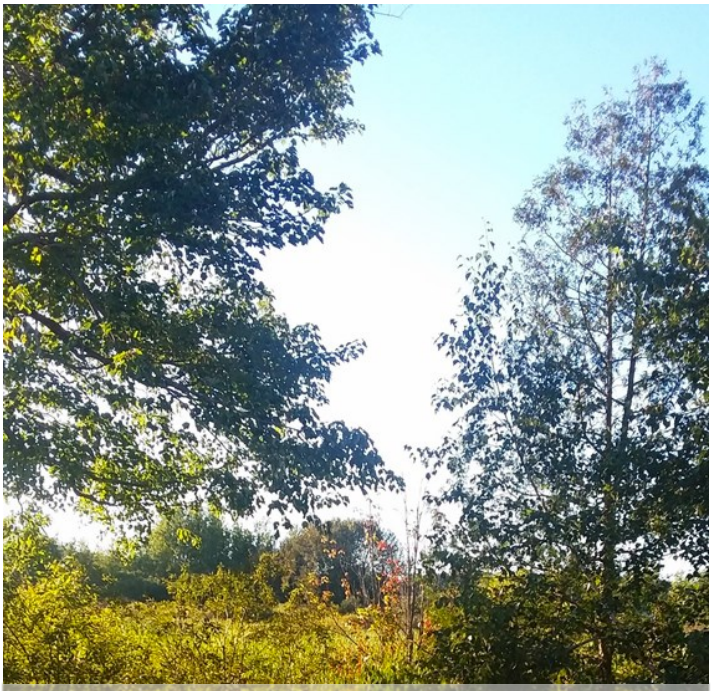
In the late 70s, Holly led an off-trail Sierra Club hike on the east side of the Cascades from Windigo Pass to Highway 138. He picked a topo line of about 7,000 feet which led him to Cottonwood Creek Spring at the eastern base of Mt. Thielsen. I tried to replicate that hike from the opposite direction and eventually developed an annual off-trail hike from Summit Rock, an andesitic plug about 200 feet high, one mile north of Highway 138 near the highway's summit. This hike went north from Summit Rock in the Winema National Forest (the dividing line between the Winema and Umpqua National Forests is the crest of the Cascade Range) through a forest of mountain hemlock, true firs, Alaska cedar, and whitebark pine.

After a few years, I decided that hiking off-trail was interesting but that a more exciting way to do it would be to hike off-trail at night. Thus began the annual moonlight trek around Mt. Thielsen or "Moon TAT". We would start at four in the morning on the Saturday closest to the full moon in September. I would entice family and friends to join me in the hike by describing Cottonwood Creek springing out of Mt. Mazama ash on the east side of Mt. Thielsen, transforming into a boisterous stream within a few feet of its source then immediately plunging 30 feet over a cliff. We would have as few as four trekkers (my family) but usually a dozen or more brave souls willing to walk off-trail in the dark. I explained to them that they would be guided only by moon shadows and their own sense of adventure and that there was nothing more exciting they could do standing up!

It is a rather strenuous hike of about 15 miles with lots of elevation gain and loss. The beginning of the hike at Summit Rock is about 5,000 feet in elevation and Cottonwood Creek Spring is about 7,000 feet. The highest elevation on the trek is a ridge just north of Thielsen at about 8,000 feet (Mt. Thielsen is 9,182 feet). From the ridge, you can see the Lathrop Glacier, the southernmost glacier in Oregon. We named this ridge Champagne Ridge as ultimately someone produced a bottle(s) of champagne to toast what we considered to be a unique achievement. Awards were given to first-timers (there weren't many repeaters) - a bandana or tee shirt emblazoned with a picture of the mountain and full moon encircled with "MOON TAT Nolte's Annual Moonlight Trek Around Mt. Thielsen".

CONSERVATION ON A SMALLER SCALE

By Angela Jensen



I often write about what our Conservation Committee is doing, the challenges we face in our efforts, and inevitably, the ongoing uphill battle of climate change mitigation and adaptation. Writing to you in this way keeps you apprised of our efforts and ongoing struggles. But it has occurred to me that my contributions here may be read as mere news and ongoing reports—elaborating the same problems, just in new locations. Same story, different day.

This time, I write to you with a question. What does ***conservation*** mean to you?

Currently, I reside in Fairfield, Maine. And while I shall forever work for the protection and conservation of the forests and watersheds of southern Oregon, living on the east coast has provided me with a new perspective of what conservation means to me. And I would like to share it with you.

Behind our small home is a wetland. It is not big, and it is bordered by other houses, a high school football field, and a small industrial park. Yet, here it sits in all of its wild beauty; sheltering nesting waterfowl in the spring, providing habitat for migrating bird species, and serving as a safe haven for a menagerie of species. Indeed, we have seen red fox, bobcat, and wild turkey stroll along its border at our property's edge. And we are frequently entertained by a beaver, several muskrats, and snapping turtles that venture beyond the shelter of the cattails.

Upon realizing the abundance of diversity in our very backyard, we decided to leave a buffer between our lawn and the edge of the wetland. We let the weeds and wildflowers grow uninterrupted. And this summer we witnessed the most beautiful ecosystem of wild honeybees, bumble bees, dragonflies, monarch butterflies, and hummingbirds—all of this in addition to a variety of wild bird species. We didn't see this amazing display of a fully functioning ecosystem last summer as our yard was kept in "immaculate" shape by our landlord prior to us moving in. Now, it's absolutely beautiful, the ecosystem services are abundant, and the wildness of this small oasis is nothing short of breathtaking to watch in motion.

This is conservation. It's not just about protecting our public lands from extractive interests. It's not just about working to change administrative policies to conserve resources and protect biodiversity. Conservation is about each of us recognizing that we can do something to positively shape the natural world around us. Whether it's leaving the dandelions in our lawn, eliminating the use of pesticides and other chemicals, or leaving a portion of our land or rented property untouched entirely. These things matter to the smallest of creatures and in ways that we don't often consider.

It all begins with stopping to look at, and listen to, the natural world around us. It's about finding the beauty and energy in all life forms and marveling at their interconnectedness. Then, it's about finding a way to be an integral part of that world—to do no harm, and to help wherever we can. This, to me, is conservation.

What does conservation mean to you? We want to know! And as always, we welcome new thoughts, ideas, and energy into our conservation endeavors here at Umpqua Watersheds.

THE KEYSTONE ROLE OF OAKS IN PNW ECOSYSTEMS

By Ken Carloni

A COUPLE OF DECADES AGO, A TIMBER COMPANY CLEARCUT all the conifers in a forest adjacent to a historic property in Yoncalla. While this was a shocking event for the stewards of that land, they were relieved to see that at least the centuries-old oaks on the property had been left standing. That small bit of solace evaporated when workers later arrived and began hacking the oak's trunks with "hypo-hatchets". With each slash of this highly efficient tool, a powerful silvicide was injected into the cambium below the bark. Within a few days, centuries of biological legacy were reduced to lifeless hulks.

Why did the timber company do this? To get rid of anything that would compete with the new Douglas fir seedlings destined to be the next harvest of 2X4s. Oaks were simply thought of as "trash trees" to be gotten rid of to make way for the next cash crop.

Oak-dominated habitats in the interior valleys of the Pacific Northwest are in steep decline caused by 175 years of conversion to housing subdivisions, timber plantations, grazing land, orchards, and vineyards. Estimates of remaining oak ecosystems in our region range from 5-15% of their pre-colonization extent with less than 1% of that land protected in parks and reserves. There is little monetary value in oak trees and there is always a more profitable use for their habitat.

But over the last few decades, ecologists have discovered that oaks are the linchpins that hold together a vast array of organisms in highly complex ecosystems. Far beyond their value to commerce and industry, the habitats dominated by these majestic giants support an astonishing number of organisms that would not survive otherwise. In the remainder of this article, we will explore the outsized role oaks play in maintaining the rich biodiversity that contributes significantly to the quality of life in our region, the landscape history that has brought us to this point, and ways you can help reverse the decline of oaks in Douglas County.

Makers, Takers, and Rakers: The Web of Life

All ecosystems are composed of interacting populations of diverse organisms that can be divided into three functional groups: **Producers, Consumers, and Decomposers**.

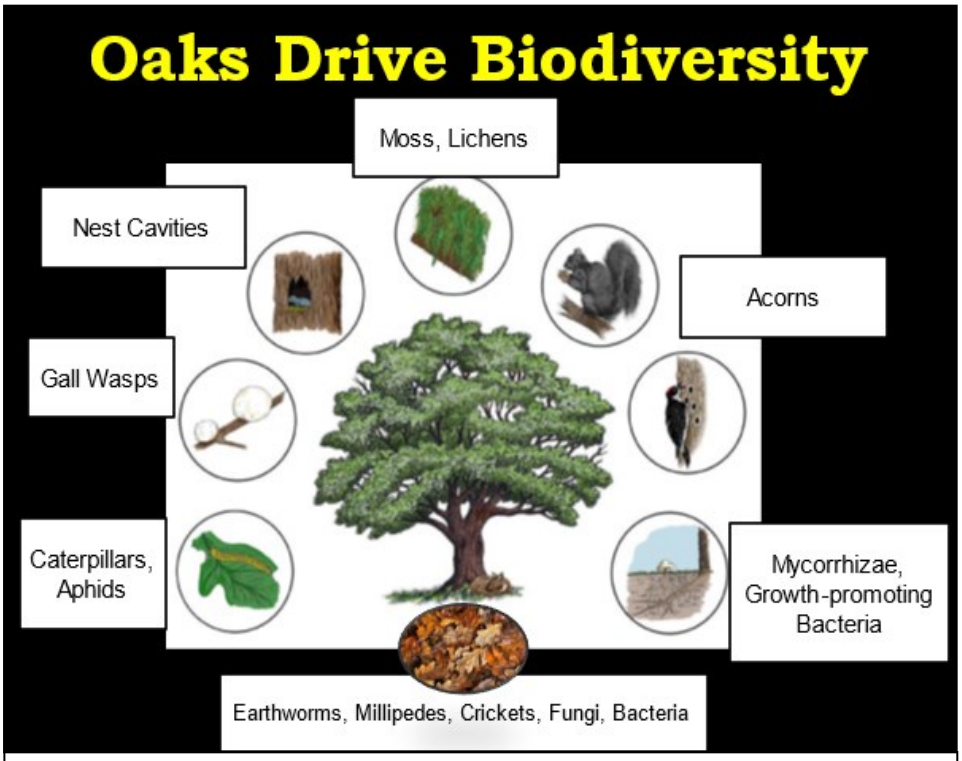
Producers include photosynthetic plants and bacteria – they are responsible for capturing light energy and converting it to the chemical bonds of complex organic molecules. *Consumers* comprise the herbivores that eat the producers and the predators that eat those plant eaters or other smaller predators. *Decomposers* include a myriad of organisms that digest the waste products and dead bodies of producers and consumers. This group is largely made up of bacteria, fungi, and small invertebrates such as earthworms, sow bugs, springtails, and millipedes that feed on decaying biomass.

Populations of producers, consumers, and decomposers interact in complex Food Webs where they compete for resources, avoid enemies, and cooperate with friends. Producers can be thought of as the "makers" in a food web, capturing energy and creating the resources that the whole system ultimately depends on. Consumers are the "takers", exploiting other organisms as food to maintain their populations. Decomposers are the "rakers", sifting through the waste and debris from other organisms to find bits of leftovers that they can use to complete their life histories.

Oaks Drive Biodiversity

Most ecosystems contain a few species that have an inordinately large effect on the biological diversity found in their habitats. These are referred to as **keystone species**. For example, top predators such as wolves control the populations of large grazing animals that if left unchecked would overgraze the plants that provide food and habitat for birds and smaller mammals. These plants also shade streams, maintaining the cold water essential for the survival of salmon, trout, and the myriad small invertebrates that they feed on. Beavers serve a keystone role as *ecosystem engineers*, building dams that create wetlands which regulate stream flows and support numerous plant and animal species that would not otherwise survive in that habitat.

Oaks have a keystone role in enriching the biodiversity of their habitats by acting as a *foundation species.* This type of habitat-forming organism creates the structural complexity in an ecosystem that leads directly to biological complexity. It is estimated that oak trees provide food and habitat for as many as 4,000 different types of insects worldwide – more than any other genus of tree. The Oregon white oak (*Quercus garryana*) is the most abundant oak species in the Umpqua Valley and provides food and habitat for several hundred insect species and over 100 wildlife species, including birds, small mammals, reptiles, and amphibians. They maintain



Oregon white oaks provide food and habitat for herbivores, acorn consumers, parasitic wasps, cavity nesters, epiphytes and a diverse suite of decomposers (modified from blm.gov/or/districts/salem/files/white_oak_guide.pdf).

this enormous diversity by providing many resources to the other members of their ecosystems including:

ACORNS. The highly nutritious nuts of oak trees are produced in great abundance and are an important and often essential food source for birds, rodents, deer, and insects. These animals are in turn prey for higher-level consumers, so the energy and nutrients derived from acorns will eventually make their way into the bodies of top predators. Acorns were also an important staple for many indigenous peoples in the Pacific Northwest and beyond.

PHOTOSYNTHESIS. The leaves and twigs of oaks provide food for many species of leaf-eating and sap-tapping insects. Oaks provide food for more species of moths and butterflies than any other native plant. At least six species of gall wasps make homes for their developing larvae in specialized growths (galls) they induce on leaves and twigs. Many of these insects are important pollinators that other flowering plants in the ecosystem depend on.

HABITAT STRUCTURE. Oaks have a highly branched architecture and the ability to heal damage from broken limbs resulting in the creation of cavities within living trees. These are an essential resource for cavity-nesting animals such as woodpeckers that feed on insects attacking other parts of the tree, and rodents that disperse acorns. Deep fissures in the bark provide cover for lizards and predatory insects, and roosting habitat for small birds and bats. All of these animals help defend the tree against high levels of insect damage. Large branches and rough bark also provide substrate for dozens of species of mosses and lichens, providing cover for even more spiders and insect predators. The dense canopy casts deep shade, helping to maintain soil moisture and cooling nearby streams.

NUTRIENT CYCLING. The deep layers of leaf litter produced from leaves that drop every fall create microhabitats for a wide variety of arthropods, worms, small mammals, reptiles, and amphibians. The decomposers among these organisms break down this decaying biomass, releasing nutrients to surrounding soils to be recycled back into living organisms. Oak roots also provide nutrients to the mycorrhizal fungi that "infect" them. In return, the filaments of these fungi greatly expand the absorptive surface of this mutualistic partnership and bring large amounts of water and dissolved minerals into the root system. The fruiting bodies (mushrooms) of these fungi provide food for mammals that then disperse fungal spores to other trees in their droppings.

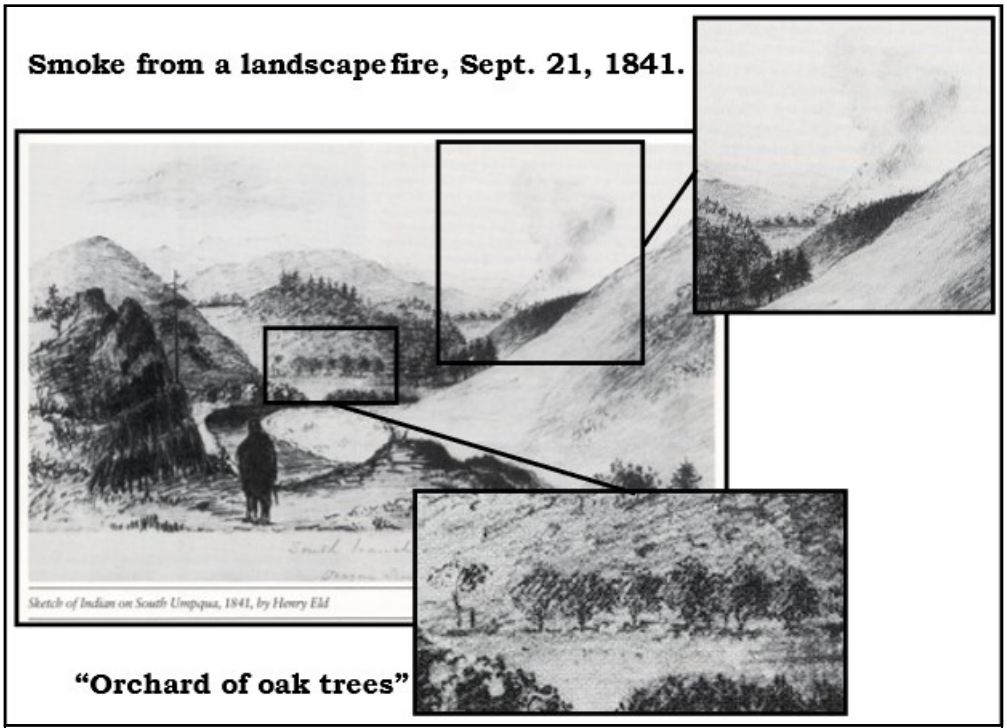
LONG-TERM CARBON STORAGE. Although not a direct benefit to the immediate habitat, oaks take carbon dioxide (the main greenhouse gas) out of the atmosphere and store it in their roots, trunks, and branches for centuries. Preserving existing oaks and restoring degraded oak habitats can have a significant mitigating impact on the climate crisis.

Restoring Oak Habitats: Humans, Oaks, and Fire

Over the last two decades, the impact of Native American burning practices on pre-European fire regimes has been well documented in many regions of North America, and southwestern Oregon is no exception. The Rogue, Umpqua, and Kalapuya peoples systematically burned large expanses of grasslands in our region. The fire-resistant bark of oaks allowed more of them to survive annual grass fires set by indigenous people compared to most conifers (the pines being an exception here). In fact,

early settlers to the savannas of western Oregon described coming upon “orchards of oak trees”, and the open lands were full of edible bulbs, fruits, and game.

The late Cow Creek tribal elder Chuck Jackson was once asked: With so many oaks around, why are there so few (none?) bedrock mortars in southwest Oregon compared to California? His response was that shelling, grinding, and leaching the tannins out of acorns took a lot of work, and after all that, they didn’t taste very good. But the deer ate a lot of acorns to fatten up for the winter, and they tasted a lot better. So no matter how the energy of acorns made it up the food chain and into the stomachs of local tribespeople, oaks played an important role in their lives.



This pencil sketch from Sept. 21, 1841 of the South Umpqua River by Henry Eld of the Emmons expedition documents a landscape fire in the background, an “orchard of oak trees” in the middle ground, and an Umpqua Indian in the foreground. Notice that the landscape is dominated by meadow and savanna unlike current conditions.

In an ecological sense, Native Americans were keystone ecosystem engineers in their habitats -- by controlling local fire regimes, indigenous managers had as robust an impact on dryland biodiversity as beavers did on wetlands through their control of hydrological regimes.

But in the absence of landscape fire, the more fire-intolerant conifer species will nearly always create dense stands that eventually overtop and shade out legacy oaks and inhibit the survival of their seedlings. Those of you who have been reading this column in the 100 Valleys for the last few years will recall that a number of our members and board members are actively involved in oak habitat restoration in Douglas County.

We Need Oaks and Oaks Need Us

The growing appreciation of the keystone role oaks play in maintaining native biodiversity, and alarm over their rapid decline, has led a coalition of state and federal agencies along with landowners and NGOs (including Umpqua Watersheds) to come together to form the Umpqua Oak Partnership (UOP). This dedicated group of professionals has been working to educate the public on the value of preserving and maintaining our remaining oak habitats for the last three years.

Do you own or manage acreage with a significant oak component? If so, the UOP can help with grants and technical assistance for restoring these critically important habitats. For more information, visit pacificbirds.org/umpqua-oaks-partnership/ or contact UOP coordinator Steve Denney (**stevedenn@mydfn.net**) or OSU Extension Forester Alicia Christiansen (**Alicia.Christiansen@oregonstate.edu**).

KQUA UPDATE

By Patrick Schneider

SO MANY GREAT THINGS ARE HAPPENING AT KQUA. WE ARE SET TO REACH LARGE PARTS OF THE COUNTY, WE ARE EXPANDING OUR PROGRAMMING, AND WE HAVE MORE GREAT THINGS IN THE WORKS.

We are making some progress on getting KQUA up to full power. When KQUA reaches full power, it will cover the Umpqua Basin from Drain to Canyonville. With this move, we expect to increase our audience size and anticipate that listeners will tune in for longer. We have had some technical hiccups along the way that has pushed the installation date back, but there is a good chance that we will have this project done by late October.

At the beginning of 2022, we started to move away from our mostly commercial music format. We signed on with the NACC (North American College Charts). By joining the NACC we are being sent a lot of music that you won't hear on any other station broadcasting out of Douglas County. We are now playing music you would hear on stations like KEXP or KCRW and bands that have been, or may in the future be, featured on NPR's Tiny Desk. This move aligns us with other college/community stations around the country.

One of our long-term goals is to give a voice to the voiceless. We do this with music by flooding our format with more female artists, artists of color, LGBTQI+ artists, and music by indigenous artists. We have been seeking out music that touches on modern progressive issues and music that talks about the environment as we move away from traditional alternatives made by four white guys with guitars.

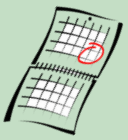
For those that prefer talk or specialty programming, we have added more programs and will continue to do so. Recently we added two shows from Oregonian, Mike Meyer. Every Sunday morning beginning at 10 am you can catch Hearts and Bones and Island Earth Radio. These shows feature modern folk, classic rock, Indigenous music, poetry, and more. We are also featuring segments of Green Teacher. Green Teacher is a registered charity in Canada serving a global network and we are dedicated to helping educators, both inside and outside of schools, enhance environmental literacy among young learners. Green Teacher magazine offers perspectives on the role of education in creating a sustainable future, practical articles, and ready-to-use activities for various age levels, as well as reviews of dozens of new educational resources.

A big thank you to grants and contributions from **The Collins Foundation** and **Medicine Flower** for helping to make all of this possible.

We are always seeking content contributors. We are looking for programming that gives a voice to those that don't have one in our community, as well as programming that keeps locals informed of things happening in our community. If you would like to host a podcast on KQUA, visit our website at https://kqua.org/submit-your-podcast/. We are seeking programming that discusses issues such as Climate Issues/Change, Social Justice, LGBTQI+ issues, Native American voices Other (Income Inequality, Gun Violence, Healthcare), and News and Public Affairs. No experience is necessary. We will train you.

To sign up to be a host of a program, check out new music, or get local news visit KQUA.org. Any comments, questions, or concerns, send us an email through the website or at **KQUA@umpquawatersheds.org.** If you have a community announcement, you can submit it to us via our website at https://kqua.org/on-air-announcement-request/.

Upcoming Events



Saturday, September 24th ~ Umpqua Watersheds and the Native Fish Society will host the 38th annual river cleanup. Contact Bob Hoehne at 541-679-7077 or email **uw@umpquawatersheds.org** for details.

Wednesday, September 28th at 6pm at the Stewart Park Pavilion ~ The Wilderness Committee is inviting folks to a get together and update about the Crater Lake Wilderness Proposal. Refreshments will be provided.

Saturday, October 8th at the Douglas County Fairgrounds ~ Umpqua Watersheds will host the 11th annual Umpqua Brew Fest. See umpquabrewfest.info/ for more information.

UMPQUA WATERSHEDS PETITION FOR THE LISTING OF SPRING CHINOOK SALMON

By Stanley Petrowski

Well, here we go again! As most of our faithful members know, Umpqua Watersheds – and a handful of sincerely committed members in particular - have been working for years to preserve the spring Chinook population of the Pacific Northwest. Because we are passionate about this keystone species, especially the populations of the Umpqua Basin, we've done a tremendous amount of volunteer and contracted work to do all we can to keep this invaluable natural treasure alive and flourishing. Chinook are called King Salmon for no small reason.

Let me give you a little background on this project for the uninitiated.

The National Oceanic and Atmospheric Administration (NOAA), under the guidance of their department the National Marine Fisheries Service (NMFS), is the federal agency responsible for maintaining healthy populations of native fish in our region. The NMFS has policies that dictate how it defines a "species" when evaluating Pacific salmon for listing under the Endangered Species Act (ESA). They have divided salmon populations into distinct genetic groups known as Evolutionarily Significant Units (ESU). NMFS defines an ESU as being substantially reproductively isolated from other members of the species and representing an important component in the evolutionary legacy of the species. Furthermore, they have clarified that an ESU qualifies as a Distinct Population Segment (DPS) under the ESA (the smallest taxonomic division allowed under the Act). The NMFS considers the discreteness, significance, and conservation status of a given population segment (in relation to other members of the species) when deciding on DPS status.

There is actually some sound science behind these complicated designations. Nevertheless, the distinctions between groups are often not clearly black and white. In this context, Chinook in the Umpqua basin is one of the last surviving sub-groups of the Oregon Coast ESU. Many of Oregon's coastal rivers and streams, which once

Map of the Oregon Coast showing the location of the Oregon Coast ESU (dark blue) and the S. Oregon/N. California Coastal ESU (light green). Map created using databasin.org and the "Salmon ESUs—west coast USA" dataset.

abounded with Chinook salmon no longer support spring Chinook fish runs. Needless to say, the Southern Oregon/ Northern California ESU is also suffering a dire failure of its native Springer Chinook runs.

You'll recall that some years back Umpqua Watersheds partnered with the Native Fish Society and the Center for Biological Diversity to petition the Federal agencies to list the Oregon Coast ESU spring Chinook run under the ESA. We did this not only because numbers were rapidly declining, but because the UC Davis animal genetics dept. discovered that a genetic mutation that separates fall Chinook from spring Chinook took place once in geologic time. Let me emphasize that once again. The gene mutation that distinguishes fall and spring Chinook is very, very rare as evidenced in the DNA of these salmon. If we lose these genetics due to extinction they are likely gone for thousands of years, if not forever. Until this discovery was made, NMFS managed the Springer Chinook as though the life history shift

between fall and spring Chinook happens often. Ooops! The genetic analysis says, “not so”. Based on this new discovery, we submitted the petition for ESA protection on behalf of the Springers as a unique subspecies of Chinook.

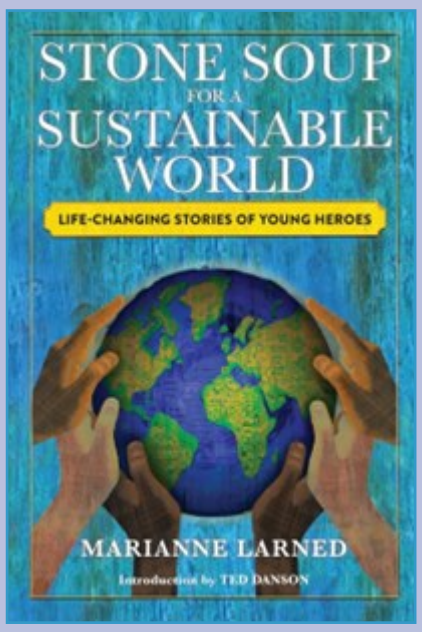
After over a year of wrangling, NOAA decided that they weren't going to acknowledge the Springers as an ESU. Very disappointing after years of work and data gathering to say the least. In the interim, the number of spring Chinook returning to spawn continues to decline. In the meantime, the California Dept of Fish and Game has acknowledged the native cultural and unique genetics of spring Chinook and has listed them under the California Endangered Species Act. Kudos to them.

Image courtesy of the USFWS

This August, Umpqua Watersheds, The Native Fish Society, and the Center for Biological Diversity once again submitted a petition for ESA listing. This time the petition includes protections for the Southern Oregon/ Northern California ESU, and the Oregon Coast ESU, with special attention paid by Dr. Rich Nawa to the Klamath spring Chinook runs. Umpqua Watersheds has just received notice from NOAA/NMFS that our petition has been accepted for a 90-day review. This is a positive step forward. It's the first hurdle in the long process of gaining needed protections for animals under threat of extinction.

This time we have submitted the petition based on aspects of the ESA that declare species and subpopulations of species can be listed under this law. Rather than debate whether spring Chinook should be defined as a unique subspecies we asked that spring Chinook be listed as a unique population of Chinook. It really is technical jargon debated by scientists, agencies, and commercial interests with political and social ramifications. Nothing is ever easy when it comes to this stuff.

In the meantime, this iconic treasured fish is on the brink. The South Umpqua run is in serious danger. It's all about the web of life and King Salmon is a critical food component for that tenuous web on many diverse levels. Orcas, seals, bears, eagles, and a host of other living creatures (including humans) have depended on this specific fish throughout history and it needs to be protected. Your support for Umpqua Watersheds will help keep this important issue in the limelight, and a focus of agency attention as it should be.



Exciting New Radio Show Coming Soon!

We will be partnering with Stone Soup Leadership Institute and Green Teacher to produce a podcast featuring the inspiring stories of young change-makers from around the world. Stay tuned for more information! If you would like to offer financial support for this collaboration, please contact our Executive Director **kasey@umpquawatersheds.org.**

Teachers in Douglas County

Do you want some help planning outdoor and environmental activities for your students? Email our Director of Education **ryan@umpquawatersheds.org** to set up a brainstorming session! We will have a variety of resources to lend, and our AmeriCorps member is available to lead lessons and activities in your classes. We would love to hear from you!

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