



Orleans Foodshed

Addressing Food Security

By Mark DuPont

Food security is on a lot of people's minds these days, and for good reasons. From 2006 to 2008 food security appeared regularly in headlines—grain stocks were at their lowest level in 60 years, world grain prices surged, sparking food riots in 15 countries in 2008 alone, and many food-producing countries cut off their exports for fear they could not feed their own people, which in turn provoked hoarding and further shortages. Lately mainstream media is more concerned with the economy and elections, but the urgent problems underlying food security persist: a world population growing by 80 million people a year, the loss of agricultural lands to development and soil erosion, the depletion of aquifers and loss of snow pack, biofuels competing with food for prime agricultural lands, and the disruption of global weather patterns due to climate change.

continued on page 2



Geena and Josa Talley help out at the butchering workshop.

Klamath Youth Stewardship Corner

Local Teen Employment Opportunities in Watershed Restoration

Summer Jobs in the Great Outdoors!

By Jillienne Bishop

MKWC's stewardship intern program is a youth employment program that runs for seven weeks in the summer. Interns receive CA minimum wage and have the opportunity to participate in local projects that help them develop natural resource career skills. Currently, MKWC has enough grant funding to hire at least four interns for the summer of 2012.

Interns participate in projects occurring in MKWC's Fisheries, Invasive Weeds, Native Plants, and Watershed Education Program. Throughout the summer, an intern will have the opportunity to snorkel for juvenile salmon, remove invasive weeds, make a creek navigable for fish passage, remove trash from a river corridor, and challenge themselves by learning backpacking skills while hiking up to 15 miles a day during monitoring surveys in wilderness areas. These

activities put the responsibility of taking care of the Mid Klamath Watershed directly in the hands of the intern.

How Do I Apply for the Stewardship Intern Program?

Applications for the stewardship intern program are available at the MKWC office in the Panamnik Building in downtown Orleans. Applicants must be between 15-18 years of age and be able to obtain a work permit. This year's deadline for stewardship intern applicants is May 1, 2012. Priority for these positions will be given to former participants of MKWC's Klamath-Siskiyou Outdoor School, and for those who can commit to attendance throughout the entire summer. For more information, contact Jillienne Bishop at the MKWC office.

For more ways to Get Involved see pages 8 & 9

Here on the Mid Klamath, food, culture, and landscape have long been intertwined. In 2004, Karuk Cultural Biologist **Ron Reed** collaborated with **Dr. Kari Norgaard** to assess the availability of traditional foods among the Karuk Tribe. Their findings showed “Karuk people face significant and costly health consequences as a result of denied access to many of their traditional foods. Not only does a traditional diet prevent the onset of conditions such as obesity, diabetes, heart disease, kidney trouble, and hypertension, but a traditional diet of salmon and other foods is one of the best treatments for such conditions.” The study documents the increase of these conditions and the decrease of traditional foods and correlates these occurrences with a lack of access to traditional gathering sites and the degradation of the Klamath River by dams in the Upper Klamath Basin that block anadromous fish passage. By connecting the dots from food to culture to watershed, the study changed the discourse during FERC hearings on dam relicensing and drew national attention when a story appeared on the front page of the *Washington Post*.

The Klamath Trinity Resource Conservation District was formally established in Hoopa in 2007 as one of the first RCDs informed by native values. The organization is recognized as a Tribal Conservation District by the USDA and serves as a point of contact for USDA programs, especially by the Natural Resources Conservation Service (NRCS). It is a community based non-profit membership organization, chartered by the Hoopa Valley Tribe. Their mission is to advocate for agriculture and conservation in the Hoopa Valley and surrounding communities. Everyone is welcome to participate. Major projects over the past five years include: helping get a major up-grade to the Hoopa Valley irrigation system; partnering with the School District, Ki'ma:w Medical Center, the Hoopa Food Distribution Program, and AmeriCorps to develop the Kin Tah Te Community Demonstration Garden; establishing a Local Food Policy Council for the Hoopa Valley Reservation; operating Vegetable Club, a direct farm-to-consumer marketing project; accessing GSA Surplus Property to obtain

a tractor; and lobbying the NRCS to establish and fund the Environmental Quality Incentives Program on California Indian lands, which is now accepting applications.

Amayav (which means “good food” in Karuk) is a local collective whose mission is “to achieve food justice in the Karuk ancestral territory. This means healthy, affordable, accessible, secure, and appropriate food for all. We promote both



Laverne Glaze at Karuk DNR teaches canning.

traditional and local food sources. We are a group of indigenous and non-indigenous people, striving for a decolonized, land based food system. By tending our natural resources, through traditional management and sustainable animal husbandry and agriculture, we believe the wealth of the people can be as great as it was before colonization. The creation of egalitarian economies is crucial to the survival of our community and the world as a whole.”

Since 2010 Amayav has hosted local farmers markets and last summer planted a community garden. In 2011 Amayav purchased the two acre parcel in Orleans, located on the downriver side of the Orleans Market where they will be holding The Orleans Exchange, which includes a farmers market, flea market, crafts, and more, every Sunday starting early spring. We are planning on having the taco truck rolling by this summer. Jim Bennett has volunteered to come down a build a small kids play structure and a farm stand!

They welcome and encourage everyone to come to Sunday exchanges and participate and input as the new space at Amayav takes form!

Holly Hensher has recently been hired to help administer the Federally Recognized Tribes Extension Program Grant awarded to the Humboldt County Extension Service. Holly is a Karuk Tribal member who grew up in the community of Forks of the Salmon in southern Siskiyou County but currently resides in McKinleyville. She has worked for the Karuk Community Development Corporation and Karuk Tribe in varying capacities. The Humboldt Ag Extension Service is very excited to add Holly to the team. Her cross-cultural skills and experience will be an asset in bringing more opportunities and education to the rural native communities of Northern California, especially youth outreach and her love of gardening!

In September of 2011 **Mark DuPont**, **Grant Gilkison**, and **Ramona Taylor** began organizing community food workshops under a small grant from the USDA. Our approach has been to organize monthly events based on seasonal food activities. In September we held a workshop at the Karuk DNR on canning and preserving food. We canned local tomatoes from Homeplate Farm and Laverne Glaze demonstrated how to can salmon and deer. Richard Myers demonstrated how to clean and prepare salmon for canning. In October the topic was home butchering, and participants butchered a goat and two ducks with help from Kurt Talley, and Sabita Basnet and Anil Adhikari, owners of the Orleans Market. The theme for November was mushrooms; guest instructor Wendell Wood was on hand to identify over 100 species of locally gathered mushrooms. We also brought a juice press to the Orleans School and juiced apples with the kids during their Halloween

Festival. This January we held a Fruit Tree Pruning Workshop and in February a Fruit Tree Grafting Workshop at Sandy Bar Ranch, and sent everyone home with a grafted apple tree. The community response has been extremely enthusiastic and growing with each workshop, and we have plans to grow into a **Community Foodsheds Program** in the years to come based on community input and interests.

At one point in time the foodshed and the watershed were synonymous. While this point is far in the past in much of the developed world today, it is only a matter of generations here on the Mid-Klamath. Colonization and the extractive industrial economy have taken their toll on the land and the people of this region, yet still a strong culture of traditional ecological land management and food procurement persists. As people throughout the world learn to cope with a contracting economy and the diminishing availability of energy and resources we will all turn more and more towards our own watersheds for the sustenance that was once found there. The fact that these watersheds are degraded, and their ecological functions impaired, combined with our own proclivity for the consumption of energy and goods from far away, will define the challenges of generations to come. Turning to our gardens, our community, and the watershed rather than the supermarket for sustenance entails the learning of new habits for some, the reclaiming of tradition for others, and the recognition of reciprocity: *that if we are to take, be it from the garden, the river or the forest, then we have to return.*



Mushroom ID tables at Sandy Bar Ranch

You Are Invited to a Town Meeting on Food

If you re interested in food and food security on the Mid Klamath you are invited to a Town Meeting at the Orleans Elementary School in Orleans on March 22, time TBA.

Come hear about local projects and initiatives, express your concerns and opinions, and find out how you can get involved.

For more information, call Grant Gilkison at the MKWC office at (530) 627-3202 (Tues, Weds or Thurs only) or call Mark at Sandy Bar at (530) 627-3379.

Off-Channel Coho Salmon Rearing Habitat Projects Completed in Seiad Valley

By Will Harling

The Mid Klamath Watershed Council, in partnership with the Karuk Tribe, US Fish and Wildlife Service (FWS), PacifiCorp, local contractors (ABC Logging and Mark Thomas Logging), and participating landowners (Grider Creek Land Company and Thomas Helsaple) completed construction of two ponds for off-channel rearing habitats in the Seiad Valley this fall of 2011. MKWC Fisheries Program Co-Director Charles Wickman, oversaw these projects which opened up these habitats to fish by the beginning of December. These constructed habitats, or ponds, are located along lower Seiad Creek near the CalTrans fill site, and on the opposite side of the valley where West Grider Creek comes into the larger

Grider Creek floodplain (Figures 1 & 2). In total, they created 11,520 square feet of high quality juvenile coho winter rearing habitat. The ponds have already begun to attract juvenile coho from Seiad Creek.

Coho salmon require specific water quality and habitat requirements. Emerging from the gravels as fry, their ultimate survival depends on finding good rearing habitat in the summer when high water temperatures may cause stress and disease, and then on finding winter rearing habitat protected from high flows. The linkages between these habitats in the Klamath River system to a large part have been broken and much suitable coho habitat has been lost due to a combination



Figure 1. West Grider pond before and after construction. Trees removed during excavation were used as cover in the finished pond design.



Figure 2. Lower Seiad pond before and after construction. Seiad Creek is in the lower section of the picture running from right to left. Pond size is much larger than shown in this picture.



A juvenile coho salmon migrates up a “blind” (not connected to the creek at the top) channel into the constructed West Grider rearing habitat on Feb. 1, 2102.

of factors. These include fragmentation caused by dams or excessive temperatures, diversion of surface waters, flood control berming and channelization after flood events, and extirpation of beavers. Poor water quality from upstream dams and agricultural use stress fish and lead to high rates of fish disease. Coho populations in the Klamath River are declining at an alarming rate.

Seiad Creek and other low gradient streams in the area have all been repeatedly bulldozed and channelized with levees after major floods to keep them in their channels and protect private property. However, nothing could be worse for juvenile coho than having to spend their first winter in a fast moving river or creek before they migrate to the ocean. Without calm backwaters and off-channel ponds to access (which are normally formed by large flood events and beaver dams), they are swept away and killed during winter floods.

Landowners like Al Durazo, who owns nearly a mile of Seiad Creek above the Highway 96 Bridge, found out the hard way that the bulldozer push-up levees meant to protect his property after the 1997 Flood likely set him up to lose more pasture land in the 2006 Flood. Al and his neighbors are currently working with the Karuk Fisheries Department, MKWC, and GeoEngineers, Inc, to plan and implement a project to restore this stretch of Seiad Creek.

Off-channel habitats like these constructed ponds are particularly good over-wintering sites. Juvenile coho that over-winter in these areas commonly experience survival rates two to six times greater than those that use main-channel habitats. This survival difference can have a tremendous influence on whether a fish population is sustainable under current environmental conditions.

Coho habitat restoration brings jobs to the local economy and provides opportunities for local businesses such as contractors and equipment operators. In addition to heavy equipment operators, these projects require whole conifer trees (with root wads attached, preferably Douglas-fir) to improve instream habitat, and native plant nursery stock to stabilize disturbed streambanks and improve riparian shading. These projects also rely on landowners who are willing to allow fish habitat restoration projects to occur on their properties. Where feasible, we design these projects to improve flood protection of areas valued by the landowners while improving coho habitat.

If you own riparian property on a low gradient tributary to the Klamath (Seiad, Indian, Horse, Beaver, Grider, Camp, etc) and are interested in this type of work, give Will or Charles a call at the MKWC office (530) 627-3202.



Cody Thomas looks on as his father, Mark Thomas, installs large woody debris cover in the Lower Seiad rearing habitat site.

Mycoremediation

Cleaning up a Toxic Waste with Mushrooms!

By Mark DuPont

One of the quandaries we acquired with the Panamnik Building was an old diesel generator and fuel tank located in a shed behind the building. For many years the generator supplied backup power to the post office and Panamnik Store during frequent winter outages. Old diesel generators are notorious for leaking oil and fuel, and old storage tanks never had the safety features common today such as automatic shut-off, so spills were a fact of life. Once the old tank and generator were removed a considerable patch of contaminated soil remained. What's more, we tore down the old dilapidated shed that housed them and realized that the winter rains were liable to leach the contaminants into the water table or the river itself. Some research revealed that the County of Humboldt had toxic clean up funds available for our site. We'd heard about using mushrooms to clean up contaminated soil and thought it was worth a try. (Go to Paul Stamets' website *Fungi Perfecti* at www.fungiperfecti.com for more information.)

Mycoremediation is the use of fungus to degrade or remove toxins from the environment. Fungus has evolved to break down wood, and wood is pretty tough stuff—long chain carbohydrates such as cellulose and lignin resistant to decay, often soaked in resins as a further means of defense against rot. Trees are constantly evolving new defenses against fungus, and fungus in turn evolves ways to overcome these defenses to attack the carbohydrates stored in wood. A walk through any local forest reveals both sides of the game, with large healthy trees standing next to snags and fallen logs covered with a host of mushrooms. It turns out that a complex hydrocarbon like diesel is not too different from a complex carbohydrate



Michael Korejko digs out the toxic soil.



Michael Stearns covers the final pile.

like wood, at least as far as fungi are concerned, and studies have shown many species of fungus to be capable of breaking down a wide range of persistent chemical toxins, including petroleum, pesticides, dyes, dioxins, and preservatives.

Our first step was a small trial run where we pasteurized a bale of straw, inoculated it with oyster mushrooms (*Pleurotus ostreatus*) and let it colonize. In late April members of the Humboldt Permaculture Guild out on a weekend retreat at Sandy Bar Ranch helped to layer the inoculated straw with layers of cardboard and contaminated soil. Six weeks later the pile was fully colonized and fruiting with oyster mushrooms, so we were inspired to go bigger. The next step was to contract Levon Durr of Fungaia Farms, a mycoremediation firm in Freshwater, to scale things up. Levon identified and isolated suitable strains of oyster mushrooms and propagated several truckloads of “bunker spawn”, pasteurized straw packed in burlap sacks in quantities large enough to inundate the contaminated soil. In mid October we excavated the contaminated soil under the supervision of Laco Engineering and a Humboldt County representative. Levon showed up with truckloads of bunker spawn, which we layered with straw, cardboard, and contaminated soil. The situation required some creative problem solving in finding a way to store the inoculated soil and prevent it from leaching (in order to meet the hazardous waste standards), while permitting the treated soil and fungus enough oxygen. The amount of soil removed proved far more than we'd anticipated, so we were only able to treat a fraction of the toxic waste and the rest was stockpiled—it's amazing how much soil a relatively small spill can contaminate. We still have some funds left for the



Levon Durr and Calder Bullwinkle of Fungaia Farms with "bunker spawn."

project, so Fungaia Farms is busy developing a new method for propagating spawn in even greater quantity at lower cost in order to treat the remaining soil. Stay tuned for further results!

Pan Fried Oyster Mushrooms

Recipe from Jill Pizzuto,
to be included in the new Community Cookbook

Oyster Mushrooms
Eggs
Panko (or any bread crumbs)
Peanut or other Oil for Frying

First, find yourself an Oyster Log!!!

Treat the mushrooms like you would a chicken cutlet, pounding them to a flat and even thickness.

Dip mushrooms into beaten eggs, then coat with Panko (or any breadcrumbs)

Pan fry in a small amount of oil, flipping half way until evenly cooked and golden brown. Season with salt to taste.



Tributary Delta Mapping and Restoration Planning Project

By Brian Pierce

Funding from the Karuk Tribe and the Arcata Fish and Wildlife Service, and precise Total Station GPS mapping equipment from the Yreka Fish and Wildlife Service have allowed MKWC to create detailed topographic maps of tributary deltas identified by fish biologists as having potential for mechanical enhancement or restoration for fish passage and rearing habitat. To date, 28 tributaries have been surveyed in preparation for beginning the project planning and permitting process. This work has greatly expedited restoration for these critical habitats. Already, O'Neil Creek planning has allowed Caltrans to use mitigation funds to pay for the USFS Happy Camp RD Fisheries to conduct National Environmental Policy Act (NEPA), and MKWC to implement proposed creation of winter rearing habitat for coho salmon at the mouth of the creek in the summer of 2012. The Department of Fish and Game (DFG) will be funding a proposed project at the mouth of Stanshaw Creek to remove fill from a critical coho rearing habitat (map at right).

The Tribe has expanded the contract with MKWC to conduct an additional nine surveys on tributaries with mechanical restoration potential. In late March, we will be presenting these projects to funding and permitting agencies at the Arcata Fish and Wildlife Service office, and in April hosting a field trip to kick off our first ever bulk environmental permitting effort (similar to what the Trinity Restoration Project has done). If successful, this will greatly increase the

scope and pace of fisheries restoration work in the Middle Klamath subbasin.



Get Involved!

MKWC offers seasonal opportunities for volunteers to participate in hands-on fisheries and upslope restoration projects. We also offer workshops that provide information and expertise on restoration techniques and gather community input on a wide variety of land management topics. If you have interest in participating in one of MKWC's programs please contact the MKWC office.

Mid Klamath Watershed Council: Fisheries Restoration Meetings

Orleans: Tuesday May 1st, Panamnik Building
Seaid Valley: Tuesday May 15th, Location TBA

Local contractors, landowners, agency professionals, and concerned community members are invited for a slideshow presentation and discussion on MKWC's fisheries restoration projects. You will have the opportunity to learn about MKWC's Tributary Delta project, Off-channel pond construction sites, and the work that MKWC and the Karuk Tribe have done during the past year to improve juvenile and adult fish habitat on Klamath River tributaries. There will also be a short presentation highlighting youth and adult opportunities to participate in these projects.

Free Restoration Raft Trip for Community Members

Somes Bar: Friday July 6th

During the summer, we offer many free raft trips to youth in our area. This summer we have a free opportunity for adults to join us for a day of river restoration. Come join us on a raft trip to help us design step pool fishways at creek mouths and



Pete Sturges of Otter Bar Lodge and Sam Stroich instructs students on kayaking basics during the KSOS Camp.

improve fish access. Lunch will be provided. Limited spaces are available. To sign up contact Jillienne at the MKWC office.

MKWC Youth Program 2012 Activity Dates

Klamath-Siskiyou Outdoor School

June 19th-24th: Ages 12-14

Twenty local youth are invited to participate in a cost-free weeklong overnight rafting and backpacking trip. Students will learn about kayaking, outdoor survival skills, fishing, arts and crafts, salmon restoration, invasive weeds, gold panning, snorkeling, rock climbing, and more! To sign up for this camp, or for any questions, contact Jillienne at the MKWC office (530) 627-3202 or Michael at the SRRC office (530) 462-4665.

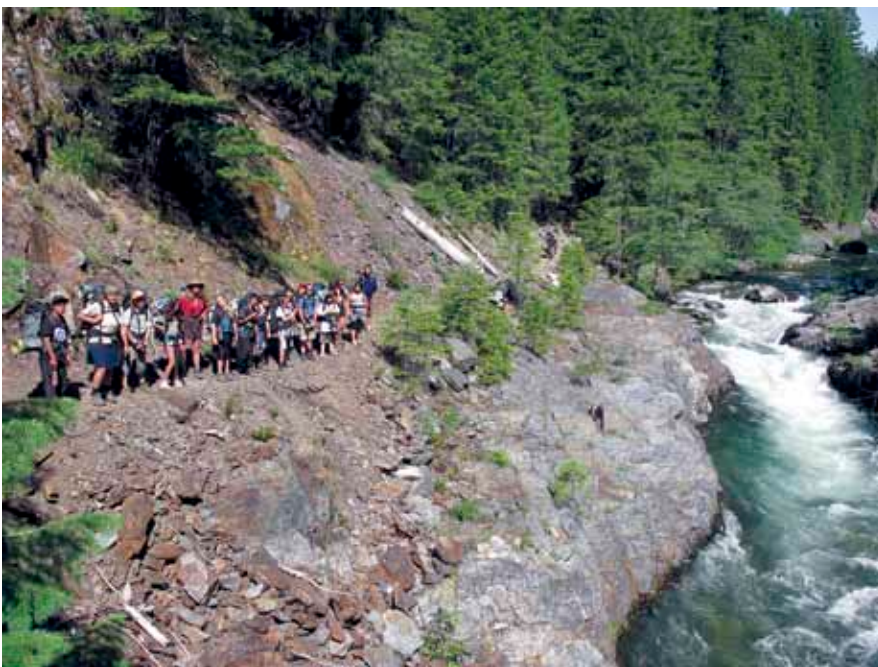
Youth Restoration Raft Trip

Friday July 13th: Happy Camp Ages 9-12

Friday July 20th: Orleans Ages 7-9

Friday July 27th: Somes Bar Ages 9-12

All raft trips are cost-free and lunch is provided. MKWC contracts to local licensed and insured raft guides. To sign up for any these raft trips, please contact Jillienne at the MKWC office.



A group of Klamath-Siskiyou Outdoor School (KSOS) students backpacking through the Marble Mountain Wilderness.

Summer 2010—Youth Stewardship Intern Program

By Sinéad Talley, a MKWC stewardship intern in 2010 and 2011

During the summer months of 2010, grant funding from the US Fish and Wildlife Service and the Siskiyou County Resource Advisory Council provided local youth with the opportunity to work for the Mid-Klamath Watershed Council. Interns Lucius Robbi, Summer Goodwin, and Sinéad Talley worked at a range of tasks from July to August. The MKWC Fisheries Program took the interns weekly along the Klamath River to perform creek mouth enhancement, often using rafts to travel from one creek to the next. The Interns, as well as other MKWC staff, built paths in the creeks for juvenile salmonids, so that they could more easily travel up into the cooler water on days when the Klamath's temperature rises to dangerous levels for the young fish.

The interns also teamed up with AmeriCorps workers and Tanya Chapple to get rid of invasive weed species that have a strong presence along Highway 96 and other roads in the area. As a part of this effort, they organized a community star thistle removal day at the Wooley Creek Trailhead in Somes Bar. Additionally, there were four backpacking expeditions into the Siskiyou and Marble Mountain Wilderness Areas, where the youth were taught to inventory rare plant species as well as noxious weeds.



Interns work with MKWC's program directors to survey for invasive weed populations during and overnight backpacking trip in the Trinity Alps Wilderness. (From left to right: Sinéad Talley, Jillienne Bishop, Tanya Chapple, Zea Robbi, and Daniel Hacking)



Stewardship Interns remove Scotch Broom from the Somes Trail along the Salmon River. (From left to right: Summer Goodwin, Zea Robbi, Eric King, and Daniel Hacking)

When asked about his feelings toward the program, former AmeriCorps worker Brandon Basino stated, "I found the Stewardship Intern program to be not only extremely educational for its members, but incredibly helpful for its partners...I was impressed with the level of professionalism and enthusiasm the interns showed under all conditions, ranging from wilderness surveys to creek mouth enhancement projects."

Susan Pienta, another former AmeriCorps worker, expressed her enthusiasm about future continuation of the Stewardship Intern program. "Training youth in these types of projects increases their knowledge of environmental issues, which in turn increases community awareness of these issues. The area is definitely positively affected; look at the work being done and the results...even if the interns choose to go into an unrelated field, they now have a stronger connection to the environment and will be more likely to support environmental issues on local and global scales. I believe one of the biggest problems today in youth is the disconnection between the environment and its resources and all the things we take for granted in society."

The interns involved all reported a positive and enriching experience as well, and expressed their gratitude in having a summer job that allowed them to have such beneficial effects on their community and environment.

Requesting Recipes for a Community Cookbook!

Calling all cooks, farmers, hunters, and gatherers to send any of your favorite family recipes to Meredith at meredith@mkwc.org or meriday100@gmail.com, or leave them on my desk at MKWC, or even stick them in my post office box- 265—by March 31st. My goal is to have this completed and available for purchase by Mothers Day 2012.

Any recipe will do! Even if you think it's too boring or simple, I guarantee somebody will use it, or be inspired by it. If its a family favorite you can even write me a little story to go along with it—I read cookbooks for fun, and sometimes the vignettes are my favorite part. Lastly, if it's not your recipe, make sure you include where you got it. I'll check with the publishers on the logistics of that.

MKWC Merchandise

T-Shirts:

- MKWC "Spawner" by Artist Conrad Calimpong
- "Diminishing Returns" by Artist Bari Talley
Adult Men/Women's Sizes S-2X: \$20
Children's Sizes S-XL: \$15
~ New styles, designs, and colors are coming this Spring!



Coffee:

MKWC is pleased to offer Café Mam Coffee. Whole beans are 100% organic, Fair Trade Certified, shade grown, and are roasted and prepared upon order to ensure the highest quality and freshness. Café Mam offers 12 varieties of roasts from very light to very dark, and their blends range from mellow to very rich.

- 5 lbs of whole bean coffee (available by order): \$50
- 1 lb whole bean bags (available at MKWC): \$11.50

All orders take 4-5 business days to arrive, and are placed after we have fulfilled a 'full' order of eight bags.

To order call Heather at (530) 627-3202, or stop by the MKWC office and see the tantalizing menu.

Note Cards:

Newly arrived to MKWC are 4x6 note cards. The cards feature striking images from the Klamath River Basin. You can purchase individual cards for \$2.50 or purchase a four-card set for \$9. Sets come in 2 styles: **Landscapes**, which highlight our spectacular mountains and pristine waters, or a beautiful **Birds-on-the-Klamath** set. The cards are printed using eco-friendly inks and materials.



FLASH

Fire-adapted Landscapes And Safe Homes

Homeowner Reimbursement Program

Most everyone who has lived here a while knows that the threat of wildfire is very real, and reducing the fuels around one's home is a wise thing to do. Getting it done is often another matter. The incentive program called FLASH is an effective way to create a fire-safe environment for your home.

You may have already heard of the program because last year, 20 Humboldt County landowners in the Orleans area participated in it. This program is funded by the USFS through a grant to Humboldt County and the Orleans/Somes Bar Fire Safe Council. Participants in the first round of the program from Orleans, Somes Bar (Humboldt County), and Weitchpec brushed, burned piles, chipped, mowed, fenced in browsing animals, and implemented broadcast burns, and

once complete, all were paid a partial reimbursement for their work. Payment ranges from \$100 to \$650 per acre depending on technique used and heaviness of the fuel being treated. All told, these homeowners treated 46 acres, much of it within 100' of their homes, the "defensible space" mandated by CalFire. Others treated areas along access roads and driveways creating shaded fuel breaks and improving access and egress for their property. In an emergency wildfire situation their roads will be safer for emergency vehicles.

Sign up now for a site visit, to assess whether you can be a part of the 2012 FLASH program and get paid to do work on your own property. Call the Orleans/Somes Bar Fire Safe Council at (530) 627-3202 and talk to Nancy or Will for more information.

Orleans/Somes Bar FSC Continues Prescribed Burning Program To Maintain Fuelbreaks on Private Lands

The Orleans/Somes Bar Fire Safe Council (OSB FSC) completed 35 acres of controlled burning in 2011 under the USFS Wyden Amendment Grant. The OSB FSC partnered with local community members, the Orleans Volunteer Fire Department (OVFD), and Firestorm to accomplish these burns. Pairing interested landowners and community members with fire professionals, these burns allow for on-the-ground training on how to safely and legally conduct prescribed fires. For the seventh year, all burns were successfully mopped up and no unintentional fire starts occurred.

The Spring and Fall of 2011 provided some exceptional conditions for controlled burning. The OSB FSC conducted 17 acres in the Spring and 18 acres in the Fall under the Wyden Amendment grant, and aided a local landowner in organizing a small controlled burn under the FLASH (Fire-adapted Landscapes and Safe Homes) program. These burns are small in size, but have a large benefit for landowners. Occurring on



Bull Pine Burn May 15, 2007

previously brushed areas adjacent to residences and critical access routes, these burns maintain the fuelbreak by killing sprouting vegetation and improve its effectiveness by removing ground fuels. In fact, research on several large fire events in the area point to the critical role prescribed burning plays in creating wildfire resilient forests. Over time, the OSB FSC has begun to see burning of treated units as integral to any fuels reduction effort.

In the upcoming year, we will be implementing the rest of this USFS Wyden Amendment grant and a prescribed burning grant from the Siskiyou County RAC for properties in Somes Bar. If you are interested in participating in any of these burns, please contact Will Harling or Chris Root at the MKWC office: (530) 627-3202.



The 2008 Jake Wildfire at night
By Wind Beaver

Maintain Your Fuel Breaks

By Nancy Bailey

Many local landowners have benefited from grant-funded fuels reduction projects implemented by the Orleans/Somes Bar Fire Safe Council over the last ten years. Others of you have done your own projects to fire-safe the area around your homes. If you are one of these you will have noticed that these treated areas grow back, sometimes even heavier than before. In many situations, where the forest canopy lets a lot of light in, and particularly on southern slopes, the brush grows back quickly. Local hardwoods, including tan oak, black oak, bay, and madrone will stump sprout, creating bushy undergrowth soon after being cut. There are a few ways to maintain these fuel breaks so that they don't become even more of a hazard.

Broadcast burning is considered the best, since a low level burn consumes fuels that can not be reduced with a chainsaw or loppers and cleans the forest floor of bugs, creating a healthier

situation for the forest and all native plants remaining. This is, after all, a fire-adapted environment, having evolved with both naturally recurring fire and Native American use of fire for thousands of years.

The next best technique is to just get out there every other year with some mechanical or hand tools and cut the re-growth back. Doing this soon and regularly after a major brushing or burning treatment will keep the brush at bay, until eventually the remaining trees will assist by shading out the re-growth. This is when it is finally a true "shaded fuel break".

Consider maintenance of a fuel break in the same category as maintenance of your house. Just as you wouldn't want your roof to start leaking, you certainly wouldn't want your house to burn down due to brush too near the house. Call the Orleans/Somes Bar Fire Safe Council if you need help with resources to maintain your fuel-break.

Native Plants in your Home Landscape

Both Fire Resistant and Edible!

By Nancy Bailey

As you work in your yard this time of year, in preparation for the upcoming growing season, consider planting some native plants. Or perhaps look around and nurture something that is already there.

Many species of native plants are fire resistant, making them a good choice for near the house. Then there is a big collection of native plants with edible parts. What about planting things that have both qualities? The following is a list of plants that qualify in both aspects: Fire resistant and edible!

Blue Elderberry

Sambucus mexicana is a beautiful native shrub with large heads of creamy white flowers in the spring and summer followed by blue to black berries which can be used to make wine, jam, pie, or dried for snacks. Avoid the berries raw but the flowers are edible. Elderberry has also been used medicinally to reduce fever and for coughs and colds. Plant elderberries in the full sun and give them a touch of water for the most flowers and fruit.



Toyon

Heteromeles arbutifolia is a good choice for screening or background in the garden since it is evergreen, long lived, and fairly easy to grow. Giving it some summer water makes it very fire resistant. The decorative red berries, collected in the late

Toyon Fruit Leather

4 cups fresh Toyon berries collect in winter

½ cup water

Lemon juice

Honey, Manzanita sugar (dried and ground manzanita berries), or agave

Cinnamon

Nutmeg

Rinse berries and remove stems. Place in a pot and cover with water. Simmer for 15 minutes. Add desired sweetener, lemon juice and spices to taste. Cook another 5 minutes.

Blend in processor or blender until smooth.

Pour a thin (1/8") layer onto a baking sheet.

Let dry in oven, food dehydrator, or sun, covered with cheesecloth. Cut into strips.

Recipe and food information from *Living Wild: gardening, cooking and healing with native plants of the Sierra Nevada* by Alicia Funk and Karin Kaufman, 2011 Flicker Press

fall and winter, are tasty raw, made into fruit leather, or dried and ground into a flour. (Don't forget the berries' colorful addition to a holiday wreath.)

Oregon Grape

Berberis aquifolium

can make a nice hedge or barrier planting and is drought tolerant. In our climate of hot summers it does best in partial shade. The fruit can be eaten dried, frozen, or cooked while the root is used for multiple medicinal purposes.



Check your local nurseries for availability of these and other native plants for your landscaping needs.

📍 **In Orleans:** Rolling River Nursery 627-0012, Riverview Nursery 627-3812, and Crimson Sage Nursery 627-3457.

📍 **In Somes Bar:** River Life Nursery 469-3346. Nancy Bailey

For a list of other resources regarding native and fire resistant plants stop by MKWC in Orleans or call 627-3202.

Gypsy Moths: Colonizing a Madrone Near You

By James Peterson

I awoke one morning

in the spring of 2005 to my father stating we have some new friends in the yard. At first I assume it must be something good but as we walk through the yard I see what I initially thought was a massive spider web surrounding the majority of the crown of one of our crab apple trees. As I am fairly squeamish around arachnids of any kind I was not too pleased that this was the new friends my father had spoken of. On closer inspection of the nest I saw that it was filled with a withering black mass of hairy worms. Not much better. This was the first of my many encounters with these nasty little critters that plague the landscape. I moved out to California from Minnesota about four months ago so it was startling that within the first few days of field work I began to notice these same mass of webs encompassing many of the Madrone trees in the area. I had not known this pest that had infested my father's yard over 2000 miles away had spread to inhabit a good majority of the United States.

Having previously dealt with these nasty little worms I was curious to find out more about them as my only knowledge was they are bad news and have a habit of killing host trees. Being as it was time for our article submissions, it seemed like a good idea to write about my far reaching little friend.

After some research, I discovered that these "worms" are actually moth larvae from the Gypsy Moth (*Lymantria dispar*). The two groups I had observed are both Gypsy Moths, however each have distinct places of origin and slightly different life cycles. One species is indigenous to Europe, while the other hails from Asia. One prefers deciduous hardwoods while the other enjoys the taste of conifers, both types of trees that are abundant in the Pacific Northwest. They were first introduced in the Northeastern United States, sometime around the 1860s. Since then, they have spread throughout the country. Gypsy Moths are masters of defoliation and, since their introduction they have been credited with defoliating millions of acres of forest habitat. Any part of the tree that is covered in their massive web usually dies or becomes extremely susceptible to disease. In areas that have frequent summer fires, these infestations can lead to increased amount of brush and fuel for summer wild fires.

After additional research, I began looking into the methods that are being used to control their impact. I had always either

burned the nest or

used a pesticide that was available. Now that I know more about pesticides, I am extremely opposed to using them in almost any form, however the Department of Agriculture and Forest Service has a different view than myself. The most common method of control is a microbial insecticide called "Bt" which uses, *Bacillus thuringiensis kurstaki*, a bacteria which is found in soil that is deadly to the species in several stages of its life cycle. At first, I thought this technique was pretty neat, in that they used natural occurring bacteria to combat these leaf blighters, but as usual the term "natural" is up for interpretation.

There are several inert, synthetic chemicals that are combined with the bacteria to produce the insecticide which is, unfortunately, certified to be sprayed on organic agriculture as well as over populated areas. One of my first questions was, 'if they're inert, why are they needed?' After reading an article about the spray, I found that "inert" means that manufacturers won't tell you what the chemicals are to protect "trade secrets." In other words, if you knew what they were, you might think twice about spraying it. Most of the time, the "inert" chemicals in these compounds are more dangerous than the active ingredients, as these chemicals are designed to increase the toxicity of a substance. The effects that these additives have on humans are still unknown. Some claim that it could cause neurological damage with repeated exposure; regardless the USDA has given its stamp of approval for safe use around inhabited areas. I will leave it up to anyone who reads this to determine what they think about that.

Another downside to this method

is that the insecticide is not selective and will kill many types of native moth and butterfly larvae. This "friendly fire" so to speak is seen as a necessary risk for containment of the moths. The larvae usually

hatch in spring or summer,

which is when you will see most of the nests, although the nests do stick around without any inhabitants for quite a while. In my personal opinion, the safest option is to destroy the nest on site. For those of us who are frequently out in the field or exploring the landscape this spring, if you see a nest within reach, cut it down and destroy it by crushing or burning. Every little bit counts. Since one nest can hold several hundred larvae, you can help stop a generation from breeding and wreaking havoc on the forest in your area.



Photo courtesy Oregon.gov



MKWC Welcomes New Staff Members

Grant Gilkison, New Office Assistant—I am a tribal descendent that has a passion for working with kids. I have worked with local youth in different capacities, both socially and scholastically and am a Karuk Youth Council Advisor and mentor. I was raised on the Klamath River and have strong family and community connections here. I have extensive technology and management experience from my years spent away from Orleans. I practice animal husbandry and have taught that to many community members. Currently I am working on ways to improve food security here in Orleans.



Josh Saxon is the new Fisheries Project Coordinator for MKWC. He and his family recently returned to the river from Arizona and are settling back into the routine of rural living. They have three children and are expecting a fourth in March. Anyone wanting to volunteer to babysit is welcomed!



He will be focusing on coordinating the National Fish and Wildlife Foundation Restoration Implementation Planning grant that brings together partners in the Middle Klamath to develop a subbasin-wide restoration plan for fisheries. He will also coordinate the CA Department of Fish and Game Mid Klamath Water Diverter Outreach and Screening Grant that seeks to educate water diverters about new State Water Resources Control Board reporting procedures. He will also focus on installing new fish friendly pump screens for identified landowners pumping from pools where juvenile coho are rearing.

Hi, my name is **Meredith Morehead**. As the new Fundraising Coordinator for the Panamnik Building Project, I would



like to take a few minutes to introduce myself and share my plans for the future. I have been a resident of Orleans for almost five years now, and my husband and his family are Karuk Tribal Members and have deep roots here. When I

first moved here I was so impressed by the strong feeling of community I got, of how every person, because of the size of the town, was so necessary. I immediately wanted to be a part of it, and to give back. I have some great ideas on how we can raise funds to move forward in making this building a vital hub of our community.

My big fundraiser, along with Third Thursdays and the like, is a community cookbook. I have been soliciting recipes and am working on formatting them. Please, share any of your favorite family recipes with me! My goal is to have this completed and available for purchase by Mothers Day 2012.

Food brings a community together. We have all witnessed this at our Third Thursday dinners, community picnics, and our Annual Banquet. So many people in our little river towns are such accomplished cooks, farmers, hunters, and gatherers that a community cookbook seems like a great idea.

MKWC Welcomes Two New Americorps Workers to the Staff

Brian Pierce has been dedicated to supporting conservation work the San Francisco Bay Area for many years before joining the WSP. His lifelong love of the outdoors and all things living and growing drew him to the Klamath river and surrounding mountains. Brian practices woodcarving, bladesmithing, and primitive-living skills in his spare time, and is known to enjoy long walks in the backcountry.

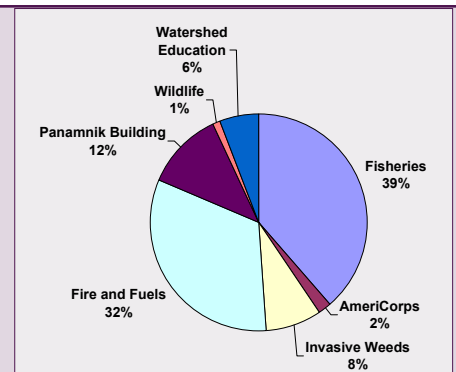


Jimmy Peterson hails from Duluth, MN where he spent much of his time exploring the beautiful north shore of Lake Superior. He is an avid whitewater kayaker and looks forward to

exploring more of the wild rivers that the area has to offer. He is dedicated to restoration and conservation of the natural environment and looks forward to working with the community throughout the year.

MKWC 2011 Program Report

Fisheries	\$282,504	# of Employees	37
AmeriCorps.....	\$ 13,371	# of Contractors	43
Invasive Weeds.....	\$ 61,378	# of Volunteer Hours.....	4543
Fire and Fuels	\$236,949		
Panamnik Building.....	\$ 85,023		
Wildlife.....	\$ 9,298		
Watershed Education....	\$ 41,665		



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2011/2012 AmeriCorps Watershed Stewards Project Members

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**MID
 KLAMATH
 WATERSHED
 COUNCIL**

I WANT TO SUPPORT MKWC!

MEMBERSHIP LEVEL

(PLEASE CHECK ONE)

- \$25 Spring
- \$50 Creek
- \$100 River
- \$250 Confluence
- \$500 Estuary
- \$1500 Ocean (Lifetime Member)
- Other \$ _____

Thank you!

NAME: _____

MAILING ADDRESS: _____

CITY, STATE, ZIP: _____

E-MAIL: _____

PHONE (OPTIONAL): _____

\$50 and up check one: Please send me a Notecard Pack,
 T-Shirt (Shirt Size _____), No Gift.

All members will receive an annual newsletter and annual report.

Check any that apply: I want to be anonymous, List me as a member, but don't specify my member level, Please add me to your current events mailing

IN ADDITION TO MY MEMBERSHIP,
 I WOULD LIKE TO DONATE

\$ _____ TO:

Programs: Fire & Fuels Fisheries Native
 Plants Invasive Weed Management Panamnik
 Building Project Watershed Education Wildlife

Donations of \$250 or more are eligible for a one-day tour of current on-the-ground projects.

Please send me information on the restoration tour dates.

Send your check to:
 MKWC
 PO Box 409

Calendar of Events

Ongoing Fitness Classes

check calendar posted on door for any changes/additions

African Dance: 2pm every other Sunday

Yoga: Mondays 5pm, Weds 12:30pm

Plyometrics: Tues and Thurs 5pm

March

15th: Third Thursday Café

17th: Rod and Gun club Corned Beef and Cabbage Dinner

30th: Orleans Capers (Orleans Elementary School)

31st: Riverkeeper Benefit – Dinner and Music

April

15th: Sunday Brunch and Annual Plant Sale, plus crafts and rummage sale

19th: Third Thursday Cafe

May

MKWC Fisheries Restoration Meetings

1st: Orleans

15th: Seaid Valley

4-5th: Bigfoot Birding Days

13th: Sunday Brunch and Plant Sale

24th: Fourth (not Third!) Thursday Café

June

21st: Third Thursday Cafe

Klamath-Siskiyou Outdoor School

June 19th-24th: Ages 12-14

July

6th: Free Restoration Raft Trip for Community Members

19th: Third Thursday Cafe

Youth Restoration Raft Trips

Friday July 13th: Happy Camp Ages 9-12

Friday July 20th: Orleans Ages 7-9

Friday July 27th: Somes Bar Ages 9-1

What's Inside:

Food Security Workshops in Orleans 1

Local Teen Employment Opportunities in Watershed Restoration..... 1

Fisheries Program

• Off-Channel Coho Salmon Rearing Habitat Projects Completed in Seiad Valley 4

• Tributary Delta Mapping Project..... 7

Mycoremediation Project

at MKWC Toxic Site..... 6

Recipe: Pan Fried Oyster Mushrooms..... 7

Watershed Education

• Get Involved! 8

• Youth Stewardship Intern Program 9

Cookbook Announcement 10

Merchandise..... 10

Fire and Fuels Program Update

• FLASH

Homeowner Reimbursement Program... 10

• Orleans/Somes Bar FSC Continues

Prescribed Burning Program 11

• Maintain Your Fuel Breaks 11

Native Plants in your Home Landscape 12

Recipe: Toyon Fruit Leather 12

Gypsy Moth:

Colonizing a Madrone Near You 13

New Staff Introductions..... 14

MKWC Programs

—Funding Summaries 14

Board & Staff List 15

Newsletter Editor: Blythe Reis

Design & Layout : Jeri Fergus, Trees Foundation



Mid Klamath Watershed Council

Panamnik Building
38150 Highway 96
PO Box 409
Orleans, CA 95556

NON PROFIT ORG
US Postage Paid
PO Box 409
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