

KS WILD NEWS

The Journal of the Klamath-Siskiyou Wildlands Center

Winter 2019



EXPLORE UNIQUE LIFE
IN THE KLAMATH-SISKIYOU

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GET OUTSIDE



WILD AND SCENIC LOWER ROGUE RIVER

Saturday, December 15, 10am-3:30pm

This is a moderate difficulty, 6-mile hike on a historic trail to enjoy old-growth forests, waterfalls, creeks, and the gorgeous Rogue River.

FENCE RESTORATION AT FRENCH FLAT

Saturday, January 12, 11am-4pm

Help your public lands with a habitat restoration project at French Flat in the Illinois Valley, home to a large meadow with the endangered *Lomatium cookii*. BLM plans to build a fence along the private property boundary. Be prepared to carry wooden fence poles to the meadow in preparation for fence building which will occur at a later date!

FAMILY NATURE WALK

Sunday, January 20, 11am-3pm

Bundle up with family and friends and enjoy a low elevation winter hike through Jacksonville Forest Park. This family friendly educational nature walk will incorporate both natural and human history in the area. Explore exposed rock faces that demonstrate the geology of the Klamath-Siskiyou region and a mixed forest of madrone, oak, and conifer. This will be a moderate hike of about 4 miles round trip.

SNOWSHOE HIKE

Saturday, February 16, 10am-3pm

Winter can be a magical time in the mountains above the Rogue Valley so join Michael Dotson on a snowshoe hike. Snow accumulation and levels will determine what trail we hit, but you can anticipate a 3-4 mile trek. We will likely find ourselves among the snow-covered evergreens near Mt. Ashland or in the Cascade-Siskiyou National Monument.

www.kswild.org/events

Once you sign-up online you will receive more details, including carpooling locations and what to bring.

NATURE GEMS IN THE KLAMATH-SISKIYOU

Roseburg

SISKIYOU MOUNTAINS SALAMANDER



Salamanders play a key role in forest nutrient flow because they feed on soil invertebrates that breakdown plant material. This special salamander can only be found in isolated pockets of Klamath and Applegate river drainages.

DARLINGTONIA



These unique and beautiful carnivorous plants entice their prey by producing a sweet nectar on their leaves, which leads insect prey downward into their digestive tubes.

Medford

OR

CA

Pacific
Ocean

PIKA



These fuzzy little high-elevation critters are a great indicator species to show change in high altitude habitats around the mountain West.

COHO SALMON

Also known as Silver salmon is an anadromous fish that spends part of its life in freshwater and part of its life in the saltwater of the Pacific Ocean.



Redding

UNIQUE TREES

The Port Orford Cedar, the Brewer (or "weeping") Spruce and the rare Siskiyou (or "Baker") Cypress are three trees that grow in the Klamath-Siskiyou region and nowhere else on Earth.



Climate Refugia

NOTES FROM THE TRAILHEAD

There is no place on earth like the Klamath-Siskiyou. It is home to wild rivers, ancient forests, many rare plants and animals that occur here and nowhere else. It is a world class natural treasure. The rich diversity of life is a sign that this region has been a refuge for wild nature for millennia.

This edition of *KS Wild News* explores the most endangered wildlife and ecosystems at risk from climate change in this region. In these pages you can not only explore the amazing lifeforms of the Klamath-Siskiyou, but you can also learn about how to save them as our climate changes.

WHAT IS AT STAKE? With the projected warmer temperatures, many plants and animals will be at-risk in the coming decades. Species such as gentle high alpine plants and the fuzzy little American Pika may have nowhere to go. They live at high elevations near the top of mountains and can't move easily up slope as the temperatures get too hot where they are currently living.

Rare trees like the Brewers Spruce and Siskiyou Cypress only occur deep in the forests of the Klamath-Siskiyou. They need snowpack to thrive, but our wintertime snowpack may diminish in the coming years. Our precious salmon streams are also fed by snowpack, and the cool water from the snow melt may be in shorter supply leading to warmer streams that salmon need to spawn.

WHAT CAN WE DO? There are many actions we can take to protect wild nature in our region from climate change. The first thing we must do is protect these habitats from non-climate change threats such as development, pollution, and unsustainable logging. We can best prepare our landscapes for the coming climate changes by protecting and restoring them. By reducing the other stressors that are placed on these species and landscapes we give them the best chance to adapt on their own to the coming climate changes.

We can also emphasize protection for the habitats that are going to be critically important in the coming decades. For example, our ancient forests will become especially important to buffer climate extremes – it can be up to 5 degrees cooler under the canopy of an old-growth forest!

Climate change brings an unprecedented threat to the ecosystems and human communities around the globe. But it is up to all of us to respond. We can make all the difference in the world. We must take action to reduce our carbon emissions and avoid the most catastrophic outcomes. While we take actions on the global scale, we also must also do our best to prepare our landscapes and human communities for the coming changes.

Read on to find out more...



Joseph Vaile is KS Wild's Executive Director

ANCIENT FORESTS OF THE KS

HABITAT: Along the Oregon/California border is the 11-million acre Klamath-Siskiyou region, home to some of the most diverse forests in the world. Douglas fir and various pine species from 150 to 750 years old dominate the canopy of these majestic forests, which provide habitat for rare species, clean water for salmon and people, remarkable recreation, and climate change mitigation.



Older forests are key habitats to protect given their ability to function as a climate refuge. Studies show that forests provide shade and protection from the elements that are not found in more open habitats.

Reducing non-climate stressors (e.g., mining, logging, road-building, etc.) is a critical step that will help forests function most effectively as a climate change refuge.

THREATS: As a result of overcutting in the 1980s and early 1990s research showed that Pacific Northwest forests were in peril and ecosystem collapse was likely if trends did not change. This led to the science-based Northwest Forest Plan in 1994. Today, there is a concerted push from the timber industry and their political allies, including the Trump administration, to increase logging, grazing, and mining on public lands.

FUN FACTS: Old-growth forests have four main structures:



Big Trees: Huge trees bring energy into the forest through photosynthesis, and serve as our planet's lungs. Each tree also stores many tons of organic material and nutrients, which are eventually recycled back into the ecosystem.



Standing Dead Trees: Big trees die from tree diseases such as root rot, fire or their tops are broken off in a windstorm. These "snags" are used by many different kinds of wildlife, including woodpeckers and owls.



Fallen Trees: It takes decades for a fallen tree to decay completely on the forest floor. As the trees decay, they become home to ants, spiders, mushrooms, salamanders and voles (to name a few). Rotten trees turn into nurse logs as young trees grow on them.



Multi-layered or Continuous Canopy: Big old trees have large branches and deep crowns. Younger, smaller trees spread their branches through spaces between big trees. Shrubs create another layer. An old-growth forest has so many layers of branches that the canopy is essentially continuous.

Some of this information is adapted from www.fs.fed.us/pnw/owl/oldgrowth.

AMERICAN PIKA

OCHOTONA PRINCEPS

HABITAT: High altitude plants and animals are some of the primary reasons we love to spend time outside in the Klamath-Siskiyou region. Species like the American Pika avoid excessively warm temperatures by surviving in high altitude talus slopes.

THREATS: Climate change will continue to challenge the vulnerable high altitude ecosystems that support plants and animals.

Around much of the world, including right here in the Klamath-Siskiyou, source water for communities starts its life as snowfall on mountaintops.

As air rises over mountains, it forces water to condense and form precipitation. This process, called orographic lifting, is responsible for the gradient of precipitation that wanes as you get closer to the Rogue Valley and the Great Basin to our east.

But that process is also responsible for the cool and moist habitat of the mountain peaks around our region. Mountain glaciers that reflect light and keep high altitude talus habitats cool will warm with lower snowpack. Lakes that hold a host of species will struggle to maintain diversity under warmer temperatures and lower snowfall.

Currently, high altitude environments in the Klamath-Siskiyou are undergoing changes. Some years bring no snow at all to mountain tops that otherwise had appreciable snowfall in all but the driest of winters. The Pika and the plants it relies on may struggle to survive the changes.

Their entire ecosystem is rooted in the unique conditions that occur in the high elevations—cool nights year round, winter snow, sparse yet hardy vegetation. It's conditions like these that are threatened by higher temperatures, volatile weather extremes, and the production of energy from sources that continue to skyrocket levels of atmospheric carbon.

FUN FACT: Pika don't hibernate, instead, they spend the warm months gathering grasses and plants to put in their den to keep them warm through the winter.



SISKIYOU MOUNTAINS SALAMANDER

PLETHODON STORMI

HABITAT: We are wild about the Siskiyou Mountains salamander. So much so, it is our KS Wild mascot! This special creature can only be found in isolated pockets of Klamath and Applegate river drainages, preferring shaded talus slopes with mature moss. Salamanders play a key role in forest nutrient flow because they feed on soil invertebrates that breakdown plant material. Requiring a moist habitat to breathe through their skin and hardly moving beyond several meters in their lifetime, they are extremely sensitive to forest disturbances such as logging.



The Siskiyou Mountains salamander is a member of the lungless salamander family, *Plethodontidae*, and the woodland salamander, *Plethodon*, genus. As a lungless salamander, Siskiyou Mountains salamanders breathe through their skin, which must always be moist or wet for respiration to occur. Due to their need for moist climates, Siskiyou Mountains salamanders live in talus or rocky hillsides in the shade of late-successional or old-growth forests with closed canopies and moist micro-climates.

Since the Siskiyou Mountains salamander's activity is restricted to a cool, moist, or rainy climate, determining their abundance is difficult. Currently, there are 420 square miles of known habitat in California and 290 square miles in Oregon. Sixty-eight percent of this area is on Federal lands, but their total population is yet to be determined.

THREATS: The most prevalent threats are clear-cutting or regeneration harvests on known or suitable habitat, road building, quarry development, and increased temperatures due to climate change. Studies of Siskiyou Mountains salamanders in Siskiyou County, California have shown that two years after clear-cutting on known Siskiyou Mountain salamander sites, no salamanders were found. Seven years proceeding the clear-cut, one Siskiyou Mountains salamander was found.

In 2000, we completed a status review for the Siskiyou Mountains salamander. We are following new genetic research which has the potential to warrant protections for distinct populations. In 2004, KS Wild and a coalition of groups filed a petition with the U.S. Fish and Wildlife Service requesting protection of the Siskiyou Mountains salamander as an endangered species under the Endangered Species Act. The salamander was formerly protected under a provision of the Northwest Forest Plan called the "Survey and Manage" Program, which required the Forest Service and BLM to conduct surveys of the salamander and protect its habitat. The Bush Administration eliminated the Survey and Manage Program March 23, 2004.

FUN FACT: Siskiyou Mountains salamanders feed upon spiders, pseudo-scorpions, mites, ants, collembolans (or 'springtails'), and beetles on the surface at night.

COHO SALMON

ONCORHYNCHUS KISUTCH



The Klamath-Siskiyou region is home to an abundance of wild, clean, clear rivers. These waterways provide drinking water, recreational opportunities and important habitat to iconic fish species like the threatened Coho Salmon. However, this indicator salmon species is struggling due to a variety of human impacts on their habitat.

HABITAT: Coho Salmon, also known as Silver Salmon, live in clearwater tributaries like the Illinois and Applegate Rivers, as well as the main stem of the Rogue River. Coho are one of three types of salmonids that call the Rogue Basin home. This anadromous fish spends part of its life in the freshwater of the Rogue and its tributaries and part of their lives in the saltwater of the Pacific Ocean.

Born in freshwater streams of the Rogue Basin, Coho will spend 1-2 years in their home streams and sloughs before making their way to the ocean. Once in the Pacific Ocean, they will live for 1-3 years relatively close to the coast, feeding and growing before they make the arduous journey back to their birth place in the Rogue Basin. When the Coho return they are large and silvery in color with blue tinted backs.

After a few years at the coast, the chemistry and a magnetic imprint of their home river will pull these incredible fish back to the very waters where they were born. Coho will return to their freshwater river or stream, swimming upstream over rapids and obstacles to get to their birthing grounds where they will spawn. Male Coho will change color from silver to green/brown with red sides once they return to freshwater. Both males and females will develop a hooked snout and large teeth, known as a kype. Coho will spawn in the same place they were born completing the life cycle of this iconic salmon species.

THREATS: Coho populations are declining due to habitat impacts and degradation. Coho were listed as threatened in southern Oregon in 1997, under the National Marine Fisheries Service, because of drastically reduced numbers from habitat loss. Impacts from dams, culverts, mining, forestry practices, commercial fisheries, climate change and more have impaired this sensitive species and populations for our region continue to decline.

FUN FACT: Juvenile coho always defend their territories through a sequence of maneuvers including a complex shimmy-shake, generally dubbed by scientists as the “wig-wag dance”!

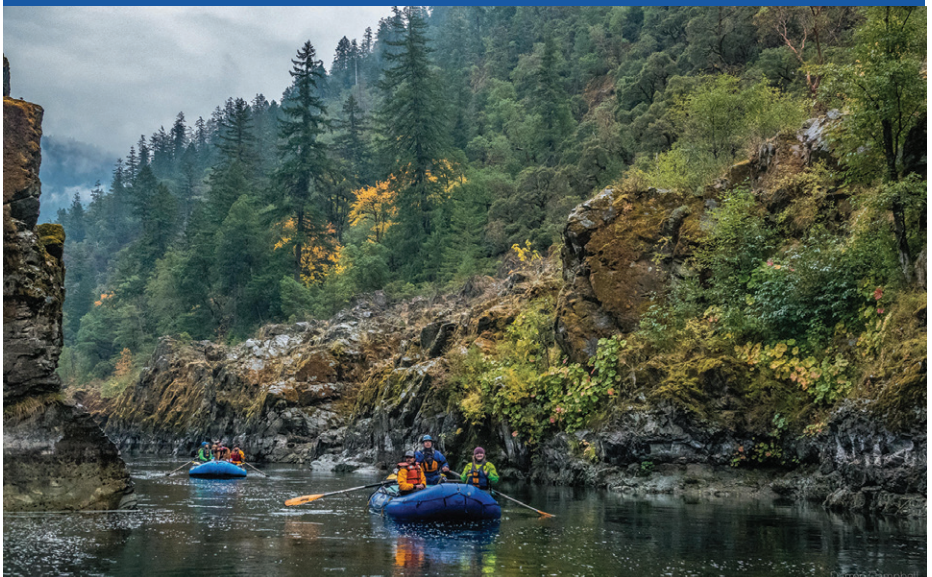
WHAT'S BEING DONE: Rogue Riverkeeper is working to help restore habitat and cold water tributaries, by working for permanent protection through the Oregon Wildlands Act. The Oregon Wildlands Act would designate over 100 miles of lower Rogue tributaries as Wild & Scenic, as well as expanding wilderness in the lower Rogue canyon. Protecting headwater tributary streams not only provides cold, clear water but also restores important habitat for these iconic salmon species both in tributaries and in the main stem of the Rogue.

Show your support for Coho salmon and the Oregon Wildlands Act by visiting our website at www.rogueriverkeeper.org



PROTECTING OUR SPECIAL PLACES

From the Cascade-Siskiyou National Monument to the east, to the Smith River Canyon in the west; from the Umpqua River to the north, to the Shasta-Trinity forests in the south, KS Wild and our Rogue Riverkeeper program protect some of the most spectacular wild places and wild rivers in North America. We focus on place-based campaigns, working with local communities to protect at-risk landscapes for wildlife and for future generations. We are currently building partnerships to protect the Wild Rogue Canyon, Chetco River, Smith River and many other special places as part of the Oregon Wildlands Act.



ENDEMIC TREES OF THE KS

C. LAWSONIANA — *H. BAKERI* — *P. BREWERIANA*

There is no other place on Earth like the KS, and we have the conifers to prove it! Several trees grow here and nowhere else: they include (1) Port Orford Cedar that can thrive on serpentine soils and provide shade to mountain streams, (2) Brewer (or "weeping") Spruce that grace a few high elevation mountains in the region, and (3) the rare Siskiyou (or "Baker") Cypress found in a few corners of the forest including a lovely grove near Miller Lake near the Siskiyou Crest Mountain Range.

HABITAT: All three of these rare conifers have evolved to deal with the unique soils and geology of the Klamath Siskiyou. They provide habitat niches for flora and fauna that otherwise would not exist and help mitigate the effects of climate change on wildlife by providing a variety of habitat types at different elevations and aspects.



THREATS: Each of these species has a very limited range and they are all experiencing challenges and stressors. Streamside Port Orford Cedar stands are threatened by an introduced waterborne root disease that is often spread in the backcountry by unmanaged off-road vehicle use and poorly designed logging roads. Brewer Spruce face challenges associated with decreasing winter snowpack and reductions in spring water availability at high elevations. Siskiyou Cypress appear to be increasingly impacted by a pathogen that is likely exacerbated by increased tree density resulting from fire suppression policies.

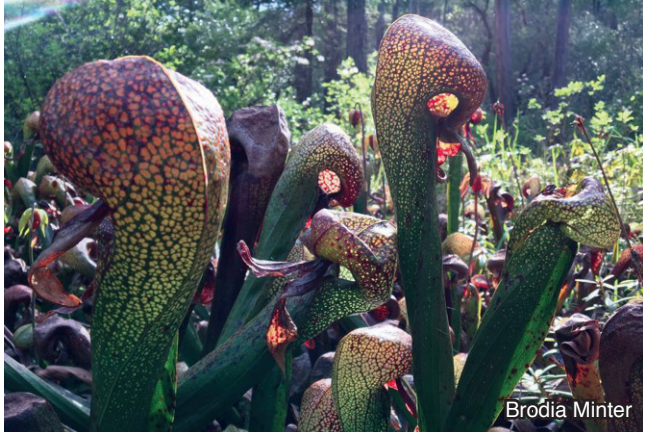
FUN FACT: In his 1930 classic "Rogue River Feud" famed Western author Zane Grey has a tree-loving river runner describe "Oregon Cedars" (Port Orford Cedars) in glowing terms as he vows to do his utmost to protect the salmon and forests of the beloved Rogue River.

KS Wild stands tall for all three species and the ecosystems that they support. We work to enact seasonal wet weather protections for Port Orford Cedar, we fight climate change and advocate for policies that will help Brewer Spruce populations, and we support efforts to introduce fire into fire dependent Siskiyou Cypress forests.

CALIFORNIA PITCHER PLANT/COBRA LILY

DARLINGTONIA CALIFORNICA

HABITAT: A rare serpent like plant grows in groups of hundreds in the wet meadows of southern Oregon and northern California. The *Darlingtonia californica* is also known as the California Pitcher Plant or Cobra Lily. You might never guess that these unique and beautiful plants are patient and deviant predators. *Darlingtonias* are carnivorous!



Brodia Minter

These plants entice their prey by keeping a sweet nectary feast waiting on their leaves leading insects into their downward facing openings. Once inside, insects become confused by the light that shines through the snake like patterns on the *Darlingtonias*. Insects are instinctively drawn to the light but false exits confuse and tire the plant's prey. The downward facing opening is the only way out and hard escape for the distracted prey. Eventually the prey becomes worn out and falls down the vertical tube of the *Darlingtonia*. This tube is lined with downward facing hairs that discourage upward travel. Ultimately, prey drowns in a puddle of liquid at the base of the tube.

This adaptation for survival allows *Darlingtonias* to collect energy from the sun, but also gives them a unique source of nutrients through the carcasses of their insect prey. This alternative nutrient source allows *Darlingtonias* to thrive in habitats that might otherwise be hostile to plant growth.

THREATS: The combination of cold, slow moving water, nutrient-poor soils, and bright sun provide the perfect conditions for *Darlingtonias* to thrive. However, the wet meadows these conditions exist in of the Klamath Siskiyou are threatened. By what you say? Climate change and illegal off route OHV/ATV travel. Changes in precipitation amounts and timing will affect the hydrology of wet meadow habitats.

Unlawful OHV/ATV in sensitive wet meadow habitats turn what was once meadows into mud fields destroying habitat for these unique endemic species.

KS Wild and supports have delivered over 400 letters to the Rogue River Siskiyou Forest Supervisor asking the Forest Service to prioritize enforcing the existing seasonal restrictions on motor vehicle use on public lands to protect wet meadow habitats and the species that thrive there.

FUN FACT: The mosquito like midge larvae reside within a watery liquid produced by the plant's tube-like leaf, and are thought to live nowhere else on earth.

A WILD (& SCENIC) TIME!

The response to this year's annual fundraiser was incredible! The KS Wild community is growing and stronger than ever thanks to you. Your contributions helped us raise nearly \$60,000 for forest and river conservation efforts in the wild Klamath-Siskiyou.

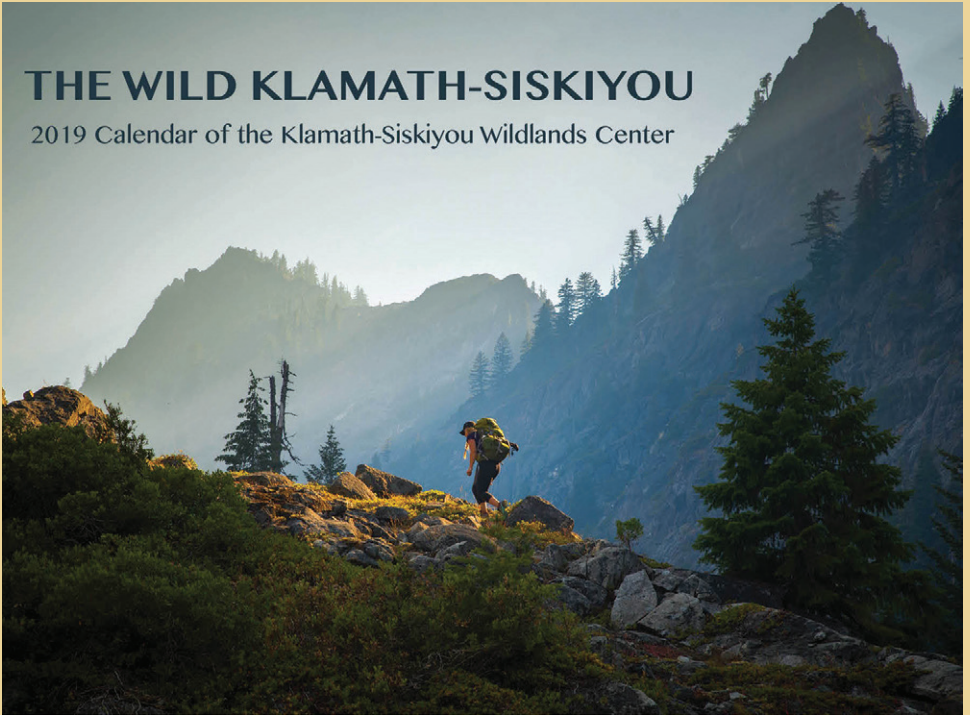
This event is made possible because of the generosity of our supporters and local business owners. More than a dozen food producers donated to the event, with a large portion of the dinner sourced from local farms in the Rogue Valley. More than 100 other volunteers, businesses, artists, and entrepreneurs donated and contributed to the success of this year's event & auction. **THANK YOU!**

All photos by Marga Laube



THE WILD KLAMATH-SISKIYOU

2019 Calendar of the Klamath-Siskiyou Wildlands Center



ADD SOME WILD TO YOUR WALL THE 2019 KS WILD CALENDARS ARE HERE!

Our 2019 Wall Calendars have stunning images from around the Klamath-Siskiyou region as well as fun facts, a wildflower guide, and more!

Donate \$50 between now and the end of 2018, and we'll send you one for free. Or you can buy them individually at \$15/piece on our website at www.kswild.org/calendar.

THANK YOU to all of the photographers
who donated their images for the
2019 KS Wild calendar.

Shane Stiles
shanestilesphotos.com
Sue Newman
NewmanImages.com
Nate Wilson
nwrafting.com
Holly Christiansen
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Mel Clements
Mike Shoys
Ken Morrish
flywatertravel.com





17th Annual Siskiyou FilmFest

February 10, 2019—3pm—Grants Pass Performing Arts Center

This annual event focuses on the activism, science and history of the environmental movement and features award winning films about people creating real world solutions to today's environmental challenges on a local, regional and global scale. Tickets go on sale in December. Sign up to volunteer or become a sponsor at www.siskiyoufilmfest.org.



Tim Palmer

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KS WILD MISSION

KS Wild's mission is to protect and restore wild nature in the Klamath-Siskiyou region of southwest Oregon and northwest California. We promote science-based land and water conservation through policy and community action.

KSWILD.ORG

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Cover: Mount Shasta (Karuk: Úytaaḥkoo or "White Mountain") is 14,179 feet tall, and a potentially active volcano at the southern end of the Cascade Range. Jonathan Shaw @ www.500px.com/jonno1