

Emerald Forester Gazette



The Emerald Chapter of
OREGON SOCIETY OF AMERICAN FORESTERS

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Visit The Emerald Chapter Website Here: <http://www.forestry.org/oregon/chapter/5/>

MEMBERSHIP MEETINGS

April 2014 Meeting

Date: THURSDAY April 17th, 2014
Location: GATEWAY BUFFET REST.,
3198 Gateway Street, Springfield
Speaker: Chris Cadwell – Association of O&C
Counties
Topic: Current Federal Legislation Centered
on Oregon and California Railroad
BLM Lands Management

May 2014 Meeting

Date: Tuesday May 20th, 2014
Location: GATEWAY BUFFET REST.,
3198 Gateway Street, Springfield
Time: 4:30 PM Exec. Meeting
6:00 PM SOCIAL, 7:00 PM Program
Speaker: Bobby King – King Logging
Topic: Alaska Logging Presentation

Emerald Chapter to Co-Host 2015 Oregon SAF State Meeting in Eugene

The Emerald Chapter will co-host the Oregon State SAF meeting with the Wildlife Society of Oregon in the spring of 2015. This event should gather close to 400 attendees.

Planning is currently underway towards creating an excellent atmosphere for a shared discussion on forestry and wildlife issues in our future. Many of the challenges we face today in modern silviculture have roots based in the need to protect ecological functions that provide good opportunity for thrifty forest stands and native wildlife populations of all varieties.

The opportunities for fascinating topics and discussions abound. Please plan to be a member on the team by contacting Emerald Chapter leadership.

Do you have a good idea for a June picnic and tour location?

Follow up information from Matt Peterson, USFS Willamette NF on his road inventory and priority project on the forest. He presented his project to our chapter in February 2014.

Matt says:

It's finally here! An online mapping app/tool that allows you to tell us about the places you like to visit on the Willamette National Forest, available here: <http://go.usa.gov/KqGH>

This new, innovative tool makes it easy for you to draw right on a map (circling an area, drawing a line, or a specific spot) and tell us why that area is important to you. You can also see what areas are important to others; comments and drawings you make can be seen by others – please add your thoughts to the dialogue.

We will use this information to help develop our road investment strategy and identify the roads and special places that are important for maintaining access over time.

We have also updated our website available here:

<http://www.fs.usda.gov/detail/willamette/landmanagement/resourcemanagement/?cid=stelprdb5436905>

Please share this widely! Facebook! Twitter! Your organization's email list and newsletter! The more we hear from, the more useful it will be.

Let me know if you have any questions, and thanks for taking the time to tell us about your favorite places on the Willamette National Forest.

March Meeting Recap

Geology of Western Oregon and the Influence of the Missoula Floods on the South Willamette Valley.

Aili Gusey Gordon. Geologist. Cottage Grove Ranger District, Umpqua National Forest.

Notes by Bonny Hammon

Aili provided an overview of the 9 Geologic Provinces of Oregon and focused on the Coast Range, Willamette Valley, and the Cascade Range. The Coast Range and the Cascades are formed by a subducting/uplifting of the continental and oceanic plate junction.

The Cascade Range is one of Oregon's youngest provinces first appearing 36 million years ago with the major peaks forming within the last 1.6 million years. It is an arc-shaped band extending from Northern California to British Columbia and is formed by 13 major volcanoes. There are 2 volcanic regions – Western and High Cascades. The Western Cascades region is older, broader, and deeply eroded basaltic andesites and tuffs. Elevations range from 1,700 – 5,800 feet which is about half the elevation of the High Cascade peaks. The High Cascades are dominating, snow-capped peaks of the younger, more easterly volcanoes of the High Cascades, such as Mount Hood, Mount Jefferson, and the Three Sisters (North, Middle, and South Sister). Another High Cascade peak, Mount Mazama, was destroyed about 6,800 years ago by a catastrophic eruption that left a deep caldera later filled by what is now Crater Lake.

As mentioned earlier, the coast range is being uplifted because of the North American Plate and the Juan De Fuca plate locking together and “sticking” during subduction. A large Cascadia Earthquake occurs when the Juan de Fuca plate “slips” during subduction. This is believed to happen every 400 years or so. The rate of uplift has been measured through using tidal gauges and railroad grade surveys at approximately 0.4mm per year. Aili showed a graphic of the uplift of the Coast Range and what is called interseismic strain accumulation. When the plates slip, coseismic strain release, the coast range would subside.

The Willamette Valley is about 130 miles long and up to 40 miles wide. The older foundation rocks are part of a volcanic island terrain, Siletzia, that developed in the Pacific Ocean basin. Colliding and accreting with the continental landmass, Siletzia subsequently subsided and was blanketed with layers of fossil-rich sediments from the late Eocene through the Oligocene. Uplift and tilting of the Coast Range in the late Cenozoic accompanied subsidence of the Willamette Valley into a lengthy structural trough, in which ocean waters shallowed and gradually retreated northward. Uplift and tilting of the Coast Range in the late Cenozoic accompanied subsidence of the Willamette Valley into a lengthy structural trough, in which ocean waters shallowed and gradually retreated northward. By the middle Miocene, the Columbia River lavas, which spilled across from eastern Oregon, invaded the valley as far south as Salem.

Then, starting around 15,000 years ago, the Willamette Valley was flooded by waters and silt from the Missoula Floods. In many ways, the story of the Floods is also the story of J Harlen Bretz (1882-1981), who proposed the theory that the Channeled Scablands of eastern Washington, and much of the Northwest as we know it today, were formed by catastrophic flooding.

Bretz accepted a position as an assistant professor of geology at the University of Washington and later at the University of Chicago. His thesis was on the glacial history of the Puget Sound, and he quickly became recognized as an expert in the features of stream and glacial erosion.

Bretz began his field research in the Channeled Scablands of central Washington during the summer of 1922, and it quickly became clear to him that neither glaciation nor ordinary stream erosion explained the Scablands. The following year Bretz made his two presentations to the Geological Society of America on the Scablands. The first paper provided a detailed physiographic description of the Scablands; the second suggested that it would have taken a massive volume of water to create the degree of channel erosion that had occurred. Bretz's second paper on the Scablands also discussed the mounded gravel deposits that were scattered throughout the area. He proposed the idea of a catastrophic flood and included the first detailed geological map that included all of the Scablands and showed the extent of the floods. Bretz used the name "Spokane Flood" because he assumed the source of the water for this flood was somewhere near Spokane, Washington.

Bretz was confident that a flood had occurred, but was unable to figure out where the water had come from. Originally, he proposed that the water was the result of increased runoff from melting glaciers. But even Bretz had a tough time imagining any significant volume of water melting rapidly enough to have such devastating impact. Not until 1930 did Bretz consider Glacial Lake Missoula as the possible source of water he was searching for. But the geologic evidence was elusive, and he did not fully embrace the idea until 1956.

Joseph Thomas Pardee (1871–1960) also played a key role in understanding the story of the Floods. It was Pardee who proposed that the floods Bretz talked about occurred when the ice dam that had formed Glacial Lake Missoula was breached. Pardee, a geologist with the U.S. Geological Survey, began studying the Scabland region near Spokane, Washington, and the intermountain basins of Montana in 1910. Pardee found geomorphic evidence of a large glacial lake in western Montana; strandlines (high water marks) indicating the maximum height of the lake are clearly visible today in the area around the city of Missoula, Montana. Later, in the late 1930s at Camas Prairie in northwestern Montana, Pardee discovered a series of ripple marks left on the lake bottom sediments of Glacial Lake Missoula that could only have been formed by powerful currents that flowed over the bottom, shaping the sediments into smooth, parallel ridge-rows. The marks were evidence that the ice dam holding back the water had failed suddenly, and Glacial Lake Missoula had drained rapidly. The ripple marks are up to 50 feet high and 500 feet apart. Because the ripples are so large, it was only when Pardee was able to view these unique features from the air that he recognized them as being formed by water. Once they had been identified and people knew what to look for, similar examples of giant ripple marks were found throughout the path of the floods.

In addition to the ripple marks, Pardee found other evidence of the ice dam failure, including severely scoured constrictions in the lake basin and huge bars of current-transported debris. The ripple marks were a key piece of evidence that eventually helped convince skeptics of the cataclysmic-flood hypothesis.

Pardee and Bretz were certainly not the only ones involved in solving the mysteries of the Glacial Lake Missoula Floods. For example, in 1871, geologist Thomas Condon proposed the idea that Oregon's Willamette Valley was flooded sometime during the Ice Ages.

Aili provided an overview of several geologic features originating in glacial Lake Missoula, the Camas prairie ripples, and the channeled scablands in the Montana and Washington states. She also showed pictures of other major geologic features like the Kolks (huge underwater vortex), dry falls which are 5 times the width of Niagara Falls, other falls like the Palouse Falls. Over the centuries, several floods flowed across this landscape and down the Columbia gorge and into the backwaters of the Willamette Valley. About 2/3rd of the flood water flowed down the Columbia River while an estimated 1/3rd flowed into the Willamette Valley.

The pioneer Oregon geologist Thomas Condon concluded in 1871 that the Willamette Valley had once been a bay, an arm of the ocean that existed at a time of a higher sea level. More than a century of further investigation showed that his saltwater bay was actually a series of freshwater lakes that flooded the Willamette Valley as many times as Glacial Lake Missoula emptied it. The floods lasted no more than a few weeks, probably less. They left neither shorelines nor channels eroded across drainage divides to provide us with evidence of the deepest water level, so we must rely on evidence from layers of silty sediment and a scattering of stray rocks called glacial erratics. These glacial erratics arrived inside icebergs caught up in floods and are a different composition than the valley's native rocks. The Willamette silts are the main record of the floods. There are dozens of graded layers up to 100 feet thick with each layer indicating a different flood event. The silt is almost identical to the Touchet Formation in eastern Washington and probably originated in the scablands.

Emerald SAF Executive Committee News

Information from the December meeting of the Executive Committee.

- 1) The Emerald Chapter will co-host the 2015 SAF State meeting. Formal leadership committee for this event is being planned. An event such as a state meeting takes many volunteers. Your help will surely be needed. Program considerations currently: a joint meeting with the Wildlife Society (TWS) in the first or second quarter of 2015, potential registration of 400 + attendees from SAF and TWS.
- 2) Program planning for membership meetings for the fall of 2014 is underway. If you have a suggestion for an interesting topic or tour please speak up.

Next Exec Meeting: Immediately preceding membership meeting. See notes in above.

2014 OSAF ANNUAL MEETING – Canyonville. OR. April 30 – May 2

The 2014 annual meeting will be hosted by the Umpqua Chapter from April 30th through May 2nd at the Seven Feathers Resort and Casino in Canyonville, Oregon. Find informational flyer here:

http://www.forestry.org/media/docs/or/annualmeeting/annual_meeting_flyer_14.pdf

Fall 2014 Event Info - Forest Flora Bouquet Workshop



Non-timber forest products include fronds, lichens, moss, twigs and other fun materials are found in abundance in our amazing forests. We will identify a number of items which work well to create unique, long-lasting centerpieces. An introduction to basic design concepts assist anyone to make a center-piece (or two) to take home.

When: Fall of 2014

Where: To Be Determined

What to bring: garden clippers and gloves.

From Lindsay (Forests Today and Forever) : I really enjoy showing groups how easy it is to use materials that are readily available in our back yards and forests to make unique and different gifts for our-selves, another, or for that special occasion. No special skills or knowledge is needed, just a desire to explore and see what material-izes. I will provide all materials from our local tree farm

Questions? Call Lindsay at 541-746-8990

Did You Know?

SAF members can save up to 55% off prescriptions with the SAF Prescription Discount Card?

Learn more here: <http://myfreerxcard.com/foresters/>

Did You Know?

SAF members can receive rewards and discounts at online home and garden stores like:

ACE, Home Depot, Lowes, Sears, TSC and more.

Start shopping at: www.saf.achieve-links.com

Did You Know?

SAF members can save money on travel services like:

Travelocity, Orbitz, Southwest, JetBlue, Hotwire, and more

Make your travel plans at: www.safachieve-links.com



Photo by Ted Reiss

Editor – Ted Reiss

Chair – Tiffany Roddy