SHARPSHOOTER

OREGON SOCIETY OF SOIL SCIENTISTS

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Welcome to Lower Crooked Wild and Scenic River

OSSS Summer Tour
August 24 - 25, 2006

By Ed Horn, OSSS President

It is starting to get hot out, I know I am getting fired up! Our 2006 summer tour, on Friday, August 25, is shaping up to be an interesting and informative set of stops in the remote, bulls eye center part of Oregon. We will be getting a rare hiking tour through the Logan Butte (ACEC), Area of Critical Environmental Concern, from John Zancanella. John is the District Archeologist for the Prineville District, Bureau of Land Management (BLM). He will be guiding us through Xaxeus Gulch and the Central Badlands complex, talking in part about this areas importance to fossil collection and interpretation. I am also trying to line up a site to look at soil damage caused by (OHV's) Off Highway Vehicle's, in the BLM Prineville District's Millican OHV area. Keith Brown is the Millican OHV coordinator for BLM and has agreed to talk about OHV management and current strategies of dealing with increased OHV use on BLM lands. Keith is interested in finding best management strategies for reducing soil resource damage with OHV use. These are just two of our stops on the summer tour. I hope you will be able to join us for the rest.

Camping is available at one of the Bureau of Land Management's camp grounds along the Wild and Scenic section of the Crooked River, South of

(Continued in President's Message, on page 2.)

Welcome to Lower Crooked Wild and Scenic River (Chimney Rock Segment)

Welcome to the LOWER Crooked Wiled and Scenic River, which was designated a Federal Wild and Scenic River in 1988. Located along the Crooked River National Back Country, the 8-mile Chimney Rock segment boasts diverse scenery and wildlife and provides access to year-round recreational activities.

The Lower Crooked Wild and Scenic River has 2,300 acres of public land managed by the Bureau of Land Management and approximately 220 acres managed by the Bureau of Reclamation. The river meanders through a ragged canyon that includes towering basalt cliffs up to 600 feet high.

President's Message

Ed Horn
OSSS
President

(**Summer Tour:** from front page.)

Prineville (see map and fees). Note that the Chimney Rock campground is the only one with water. For those of you who want hookups and showers, the Crook County RV Park is available next to the Crook County Fair grounds on State highway 27. This is about 1 mile south of the intersection of US highway 26 and state highway 27, on the south side of Prineville. Chimney Rock Campground is 15 miles south of the RV Park on state highway 27. Rates for the RV Park are $26.28 daily for trailer hookups and 9.86 for tent camping. If you are not staying over night at the RV Park, showers are available for $3.50 per person. Contact information for the Crook County RV Park is: Telephone (541) 447-2599; 1-800-609-2599; Email ccprd@crestviewcable.com; Web site: http://www.rvcampgroud.com/or/crookcounty/ and address 1040 South Main, Prineville, OR 97754.

Plan to meet Thursday evening for a hike up the Chimney Rock trail (see map on page 4). On Friday Morning, we will meet at 7:30 AM at the Chimney Rock trail head which is across from the Chimney Rock Camp Ground, to consolidate transportation and distribute tour packets. Tour starts at 8:00. Check our web site for last minute details at http://osss.peak.org/

Fossil Soils of Logan Butte

From a report by Erick A. Bestland, Ph.D.
Department of Geological Sciences
University of Oregon, Eugene

The Logan Butte ACEC (Area of Critical Environmental Concern) is known for its pinnacled badlands and rich mammalian fossils of mid-Tertiary age (29 Ma). According to John Zancanella, Paleontology Coordinator for Oregon Washington Bureau of Land Management, this ACEC was designated in 1989 to recognize its important fossil vertebrate resources. Logan Butte is the "type-site" for 6 vertebrate species found in the Turtle Cove Member of the John Day Formation. Because of this distinction, and its current fossil production, Logan Butte is recognized as scientifically significant both nationally and internationally. The fossils at Logan Butte and the colorful volcanic and alluvial strata that preserve them are an important record of past climatic change. The climate at the time of deposition was wetter and warmer similar to that of modern lowland Panama or southern China. The transition from the steamy jungles of the past is in sharp contrast to the dry shrub steppe of today. At Logan Butte, the majority of the strata belong to the John Day Formation capped by the Rattlesnake Formation. The stratigraphic members from bottom (oldest) to top (youngest) are: the Big Basin and Turtle Cove members of the John Day Formation, and the Rattlesnake sedimentary beds and Rattlesnake Welded Tuff of the Rattlesnake Formation.

The John Day Formation represents deposition in a non-marine backarc basin east of the Cascade arc. Sediments become finer-grained from west to east as volcanic ash dispersed from the Cascade vents to the west follow this pattern. There are three facies of the John Day Formation (see figure 4). The western facies contains coarse-grained volcaniclastic deposits, welded ash-flow tuff sheets, and a variety of lavaflows. The eastern facies is divided into 4 members, from bottom to top they are, Big Basin Member (red claystone), Turtle Cove Member (green and buff tuffaceous claystones), Kimberly Member (massive tuff beds) and Haystack Valley Member (tuffaceous conglomerates). The southern facies occurs south of the Ochoco mountains and is similar to the eastern facies except it lacks the "Picture Gorge ignimbrite". Logan Butte is found in the southern facies.

WESTSIDE NOTES

By Dan Cressy

OSU soil judging thrives

Our OSSS vice president, Will Austin, has a lot to be proud of when talking about the Oregon State University Soil Judging team. After all, he is the coach and his team has been doing very well. Here is his report:

You may remember that the Soil Judging team qualified for the 2006 national collegiate contest at Cal Poly San Louis Obispo. The team could not attend the contest because the contest date conflicted with OSU finals week. The team asked for an alternate experience in central Oregon. I would like to give you details of the field experience made available to the students.

A total of 10 OSU students were involved in an intensive 3 day field experience in the Bend/Redmond/ Prineville/Sun River area. On Friday, May 19, 2006, Dr. Herb Huddleston of OSU and Mr. Jerry Kathan of the Deschutes County health department facilitated a field exercise regarding soils utilized for onsite waste disposal for single family homes in the Sun River area. At issue here is the loading rate for small to large single family homes and the impact the discharged waste has on the regional aquifer and the Deschutes River tributaries. The students received detailed instruction on the various types of soils which can be used for septic tank systems and more importantly, which soil types could not be used. The students were required to give detailed field examinations of the soil test pits and then evaluate the test pits for septic disposal systems.

On Saturday, May 20, Mr. Tom Clark of the Natural Resources Conservation Service (NRCS) and Dr. Ron Rueter of OSU led a field exercise to evaluate the Oregon high desert soils for use and

(Continued on page 6.)

New Enhancements to Web Soil Survey

By Steve Campbell

Version 1.1 of Web Soil Survey was recently released. Web Soil Survey is an online application where users can create custom soil maps, and reports of soil properties and interpretations. Recent enhancements include:

- Maps can now be viewed at full screen width
- Ability to zoom to an area based on latitude / longitude coordinates
- Ability to zoom to an area based on public land survey township and range
- Can now zoom to a user-specified scale and view the ratio scale on screen
- Dates for orthophotography are now available

Check out the Web Soil Survey at:
http://websoilsurvey.nrcs.usda.gov/app/

DATES TO REMEMBER

August 24-25, 2006: Oregon Society of Soil Scientists Summer Tour, Central Oregon

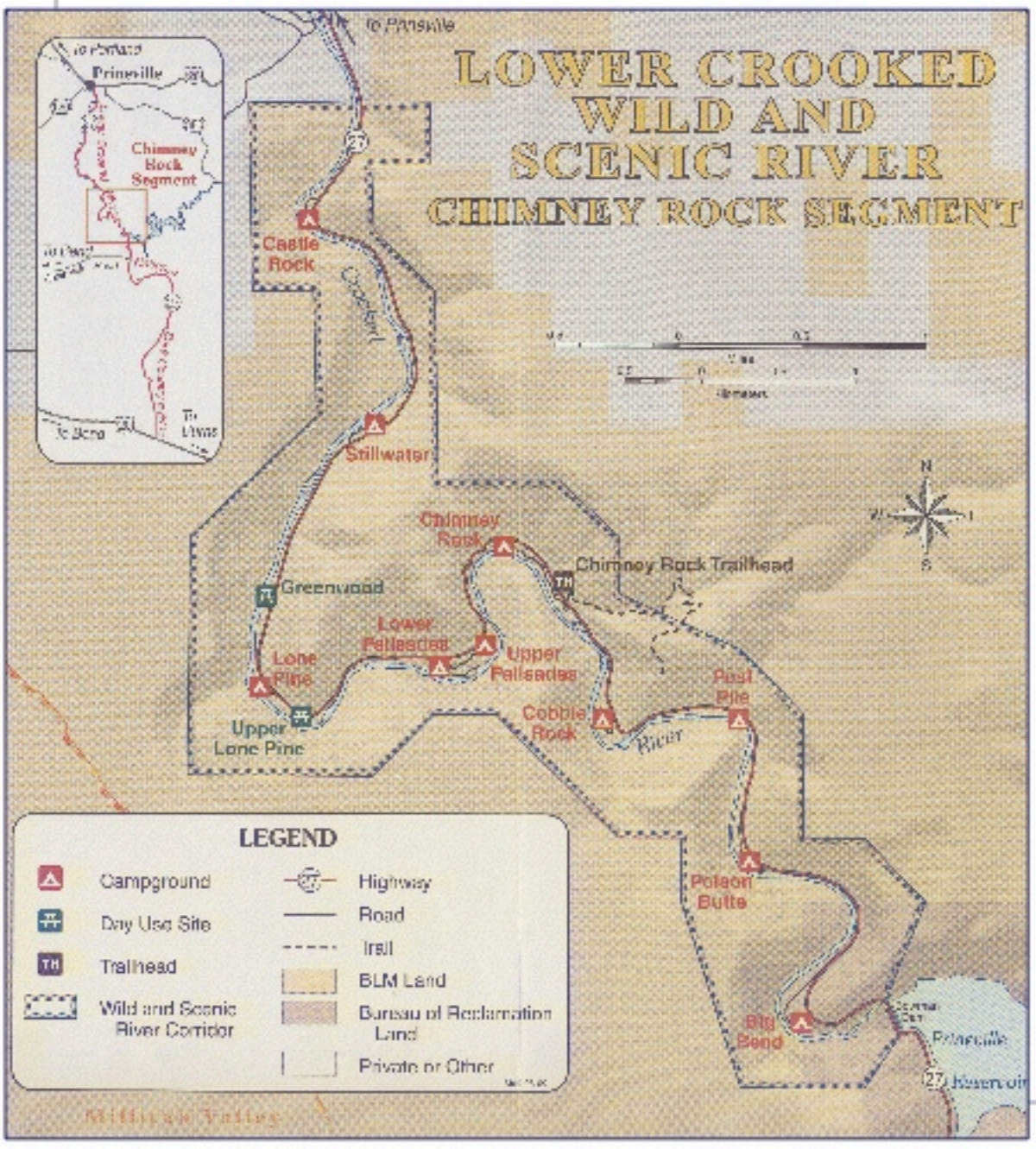
November 4-8, 2006: Soil Science Society of America Annual Meeting; Indianapolis, Indiana. More information at http://www.soils.org/meetings.html.

November 12-16, 2006: ASA-CSSA-SSSA International Annual Meetings; Indianapolis, Indiana. Information available at: http://www.acsmeetings.org/meetings/

CROOKED RIVER DAY USE AND CAMPING

Recreation Site	Boat Launch	Camping	Group Sites	Fee	Drinking Water	Toilets	Location
Castle Rock	No	6	N/A	$8.00	None	Vault	12.4 miles south of Prineville on Highway 27
Stillwater	No	10	N/A	$8.00	None	Vault	13.5 miles south of Prineville on Highway 27
Greenwood	No	Day Use Only	N/A	None	None	Vault	14.4 miles south of Prineville on Highway 27
Lone Pine	No	8	1	$8.00 16.00	None	Vault	14.8 miles south of Prineville on Highway 27
Upper Lone Pine	No	Day Use Only	N/A	None	None	Vault	14.8 miles south of Prineville on Highway 27
Lower Palisades	No	15	N/A	$8.00	None	Vault	15.3 miles south of Prineville on Highway 27
Chimney Rock	No	16	N/A	$8.00	Yes	Vault	16.4 miles south of Prineville on Highway 27
Cobble Rock	No	15	N/A	$8.00	None	Vault	17.1 miles south of Prineville on Highway 27
Post Pile	No	7	N/A	$8.00	None	Vault	18 miles south of Prineville on Highway 27
Poison Butte	No	5	N/A	$8.00	None	Vault	18.3 miles south of Prineville on Highway 27
Big Bend	No	15	1	$8.00 16.00	None	Vault	19.2 miles south of Prineville on Highway 27

There is a $2.00 charge per extra vehicle (tow vehicles excluded) in all fee campgrounds



Bring water bottles, wear long sleeve shirts, carry sun-screen and insect repellent, and wear hiking boots. We're going to be doing some hiking on the tour.

OSSS 2006 SUMMER TOUR REGISTRATION

Central Oregon – Bulls-Eye Tour

August 25, 2006

Prineville, Central Oregon

Name _____

Address _____

_____

City _____

State, Zip _____

Phone _____

Email _____

Lunch will be provided

Cost: $20 per person/ $10 for children under 18

Please make checks out to OSSS and Mail this form to:

Ed Horn, OSSS President

6921 SE Raven Hill Ct

Prineville, OR 97754-8526

If you mail the form late or bring it with you to the tour, please RSVP Ed by email or phone at: ehorn@aaahawk.com or 541-416-2645

(**Westside Notes:** from page 3.)

management. Sites were visited to explore and detail home site, recreation, and agricultural usage of the shallow soils in the Prineville area and southeast of the Prineville area. The students were challenged to make interpretations based on limited field data. The student interpretations were then compared with a federal/state database on use and management of the shallow soils.

On Sunday, May 21, Dr Jay Noller of OSU led an all day field exercise focusing on landforms and soils. The students visited a number of high Cascade volcanic sites. Emphasis of this exercise was to explore landform evolution over time as influenced by episodes of volcanism. The students were challenged to form time scale interpretations of development of volcanic sequences, erosional and depositional landforms evolution.

This coming summer term, we have placed 2 of our 10 soil judgers in internships with the NRCS and 1 with the BLM. One of these 3 is on track to continue as a regular employee of the NRCS after graduation this fall. Also we have placed 2 students in internships with the county health departments in Oregon and 1 of the students has been offered a full time position after graduation. The Oregon Department of Environmental Quality (DEQ) contacted me and subsequently presented a seminar to the soil judgers regarding fulltime employment within the DEQ. The DEQ and county health personnel are in need of new hires for a number of anticipated openings in the very near future.

So because of supporters such as OSSS, the E.R. Jackman Foundation, and personal contributions we are able to provide the field experience that is valued by federal, state, and local agencies. Firstly, as instructors, it is very satisfying to be able to provide the students with the skill set that is obviously in demand. Secondly, and more importantly, it must be very satisfying to our supporters to know that through their support we are returning to the people of Oregon trained, professional-track individuals. If you are searching for a return on investment, the OSU soil judging program is one, and this would not happen without your support!

Let's give credit, for the success of OSU soil judging, where it is due. Our success is the result of a collaborative effort of OSU faculty, our supporters, and our soil judging alumni. Good quality support equals good quality results!

Special thanks to Kathy Clark for arranging lunches for the participants, and also to Ed Horn for helping with tour arrangements, and Judy Haney for acting as house mom for the trip.

Westside Director's comment:

Besides Will, Doctors Huddleston, Reuter and Noller, the Clarks and Ed Horn are all OSSS members. Way to go OSSS members!

200 year OSU study of rotting logs in the Oregon Coast Range

I recently came across an article discussing the rotting logs study on the Science Daily website. It is of great interest to me as a Bureau of Land Management soil scientist involved with timber harvest design and concerned with soil quality. The article demonstrates that we still have a lot to learn about what constitutes healthy forest soil ecology and how to manage to sustain or restore it. The following is my condensation of the contents found on http://www.sciencedaily.com/releases/2005/08/050819123757.htm. This study of 530 logs at the H.J. Andrews Experimental Forest began 20 years ago. The study is giving surprising results causing a big change in thinking about the process of wood decay and the value it provides in nutrient release and soil enhancement. Among the findings to date:

- There are large differences between the decay rate of different decomposers of different tree species, and that some nutrients from dead wood begin to enrich the forest floor immediately. Nutrient release also results from the leaching effects of persistent rains.
- As much as one-third of the nitrogen in Pacific Northwest forests appears to come from nitrogen fixation processes within rotting logs.
- The "brown rot" fungi that cannot break down lignin in trees leave structural material behind to help form the next generation of forest floor and ultimately soil. White rot fungi degrades all parts of the wood, leaving nothing behind.
- True firs decay far more rapidly than other species and may be gone in 60 years. Other trees

including western red cedar and Douglas fir may persist for hundreds of years.

- Decay processes are dynamic and constantly changing, affecting everything including stream sedimentation, and plant, animal and fish habitat.

According to Mark E. Harmon, Professor of Forest Science at OSU, trees increasingly will be planted that are never meant to be harvested. By design they will be left to decay and play certain roles in forest ecology.

Westside Director's comment:

Current management directives for Western Oregon BLM lands provide for coarse woody debris on the forest floor. Within regeneration timber harvest units, 120 linear feet of down logs per acre greater than 16 feet in length and at least 16 inches must remain following harvest. Retained down logs can not exceed a certain level of decay to be counted. When a harvest unit is deficient of coarse woody debris green trees are felled and left to make up for the deficit. Additionally, green tree retention is required inside regeneration timber harvest units to bring forward a portion of the structural legacy from the former stand. On General Forest Management Areas (timber harvest lands managed for a 70 to 110 year rotation), from 6 to 8 conifers per acre are retained leaving a diameter distribution and species mix proportional to the previous stand. On Connectivity lands (timber harvest lands with an objective of providing wildlife dispersal habitat and a variety of stand ages), the number of trees retained per acre is from 12 to 18. Two large hardwoods per acre are also retained if available. The retained trees are at least 20 inches in diameter, if available. There are also Riparian Reserves placed along streams within harvest units to protect the aquatic environment and provide travel corridors for terrestrial species that depend on this habitat type. Retained trees in regeneration harvest units, Riparian Reserves, and mid-seral stands that are commercially thinned would also provide a future source of coarse woody debris.

So because of supporters such as OSSS, the E.R. Jackman Foundation, and personal contributions we are able to provide the field experience that is valued by federal, state, and local agencies.

Sharpshooter

The *Sharpshooter* is the official newsletter distributed to the members of the Oregon Society of Soil Scientists. Published quarterly by J.R. Good, Inc. and the Oregon Society of Soil Scientists. Address changes or inquiries about membership to:

OSSS
Box 2382
Corvallis, OR 97339

Web site and email address:
http://osss.peak.org
email: osss@peak.org

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All articles and advertisements submitted are subject to room available basis.

News items

Remember all articles submitted to the *Sharpshooter* can be sent on 3-1/2" disk in most any DOS, MAC or ASCII format, along with a hard copy. In doing so, the *Sharpshooter* can get to you faster.

Membership rates

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35.00	Sustaining member
10.00	Student member
300.00	Lifetime member

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Summer Tour
August 25th

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