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## 2007 Summer Tour—Soils and Vineyards Tour

by Will Austin  
OSSS President

Late August in the western Willamette Valley is a great time to find some slow back roads and great vineyards. Friday, August 24 is the formal OSSS summer tour date. But first, Thursday, August 23 is the pre-tour gathering. So here are the details.



Thursday we meet at Evergreen Aviation museum in McMinnville, Oregon for a no-host group tour (<http://www.sprucegoose.org/>). See the Spruce Goose, rockets, an SR-71 spy plane, and other interesting aircraft. Group tour starts at noon. Around 3 pm we head for Erratic Rock State Park. Never been there? You have missed out. You will get to see an ice rafted erratic all the way from somewhere east of Oregon. The rock is beached on a wave cut terrace. If it is a

clear day you will be able to trace the elevation of the terrace and pick out other terraces east across the valley floor. Then to round out our day we will return to McMinnville for dinner at a local brew house.

Okay, now on to Friday, August 24, at 8:30 am. We meet at The Natural Science building on the campus of Western Oregon University, in Monmouth, Oregon (for map: <http://www.wou.edu/>) for a talk on subsurface geology of the Willamette vineyard country followed by a talk about climate change effects on vineyards in Oregon. Then a briefing on logistics for the tour and we are off! We have four 12-passenger vans with designated drivers. Seating on the vans will be first registered, first served—so register early to ensure a seat. When we fill up the vans, you will have to drive your own vehicles for the tour.

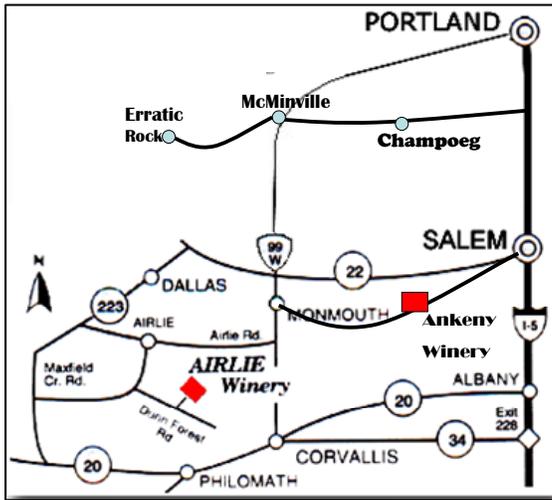
We are touring two vineyards. First stop is the Ankeny Vineyard. The vineyard faces south, looking down toward the Ankeny National Wildlife refuge. Soil physical and chemistry data will be provided, and plant analysis of grape petioles will also be given. A tour of the vineyard with llamas, goats, and ducks with a trip to the pioneer cemetery located on the premises will be given by tour master Hershey, the vineyard's Labrador retriever! Next is lunch on the winery deck provided by the OSSS. Interested in wine tasting? I suggest the latest variety of Hershey's Red.



"Master" Hershey leads a tour

After lunch we head to Airlie vineyard and winery. Airlie sits in a natural amphitheater setting with a small pond next to the Dunn Forest. I really enjoy the Airlie setting; it takes you away from the traffic and hustle of the daily grind. Again soil and plant data will be provided. A number of award-winning varieties at Airlie. We will engage in debriefing and present awards, then we will end our tour back in Monmouth.

So check out the registration page (page 2) in this issue of the Sharpshooter and grab a seat in the van!



Here's a few camping opportunities in the tour area:

I have reserved 4 full hook-up sites at Champoeg State Park. You may want to double up with other OSSS members to save money on camping. If you want one of these contact me directly at my OSU email address: [will.austin@oregonstate.edu](mailto:will.austin@oregonstate.edu)

Salem Area:

Eola Bend RV resort near Salem. 877.364.9990. Rates \$29 and up.

Premier RV resort near Salem. 503.364.7714. Rates \$33 and up.

Corvallis Area:

Benton Oaks, near OSU 541.766.6259. Rates \$25 and up.

National forest campground, Mary's Peak Campground. \$10, with water available.

## OSSS SUMMER TOUR REGISTRATION

### WILLAMETTE VALLEY – SOILS AND VINEYARDS AUGUST 24, 2007 SALEM – MONMOUTH – INDEPENDENCE – MCMINNVILLE – AIRLIE

|            |
|------------|
| Name       |
| Address    |
|            |
| City       |
| State, ZIP |
| Phone      |
| Email      |

Lunch will be provided  
 Cost \$30 per person/ \$10 for children under 18  
 Please make checks out to OSSS and mail this form to:  
 Will Austin, OSSS President  
 1547 ILER Street S.  
 Salem, OR 97302

**Register early to get a seat in the van and to make sure we have enough supplies to meet everyone's needs. Registration must be received before August 15<sup>th</sup> to ensure summer tour special bonus items.**

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## President's Message



by Will Austin

I am thinking ahead to the OSSS Winter 2008 meeting. The meeting will occur in mid-February, possibly early March. The venue will be the Newport area. In the past we have avoided Valentine's Day weekend so I will work around this date. I am working on details and speakers for the meeting.

The OSU Soil Judging team traveled to Logan, Utah for the national collegiate contest in late October. We traveled by van through the volcanics of northern California, then across the northern basin and range of Nevada. Ancient lake terraces, desert pavement, and triangular facets surrounded the van as we rolled across Nevada and into Utah. The practice and contest sites showed fascinating landscapes and carbonates ruled the day. The team did well in comprehending morphology and genesis of Cache Valley, Utah. We

traveled home via back roads of Utah and Idaho, along the Snake River, then on to the Columbia Gorge, and finally home. Another outstanding opportunity for the students. Another opportunity facilitated in part by the generous contributions of the OSSS and its members. Thanks.

## Dates to Remember

### **July 31 and August 1, 2007:** Upcoming Northwest Forest Soils Council Tour

The tour will be covering a number of topics relating the effects of management actions to long-term soil productivity and covering restoration studies in the Diamond Lake District of the Umpqua National Forest. Topics include the mapping of previous harvest impacts, the value of mycorrhizae inoculation for outplanting, biosolid application in road restoration and meadow enhancement, fire suppression and BAER rehabilitation, hydropower mitigation projects, temporary road/skid trail obliteration, and fuel reduction for wildlife objectives. You can register on-line at [www.westernforestry.org](http://www.westernforestry.org). Questions can be directed to Michele at 503-226-4562. There are no registration fees. Westside Director Dan Cressy will be there.

**August 23-24, 2007:** Oregon Society of Soil Scientists Summer Tour; McMinnville and Monmouth, Oregon

**November 4-8, 2007:** Soil Science Society of America Annual Meeting; New Orleans, Louisiana. Information available at [www.acsmeetings.org/2007](http://www.acsmeetings.org/2007).

## Westside Notes

by Dan Cressy

### Our Unofficial State Soil, Jory

Our upcoming summer tour to western Willamette Valley wine country gives me an opportunity to enlighten readers about our unofficial state soil, Jory. Jory is an important component of soils used for agriculture in the Willamette and Umpqua River valleys, vineyards included. Cherry Hill Winery reports on its web site that extensive soil analysis of its vineyard revealed Jory to be beautifully suited to Pinot Noir. Jory is also a productive forest soil with a 100 year site index for Douglas fir of 155.

As many of you already know, a resolution to officially make Jory the state soil was recently introduced to the State House of Representatives and referred to its Committee on Agriculture. OSSS member Dr. Scott Burns was instrumental in getting Jory introduced. Apparently not everyone is happy with the resolution. According to the internet blog, The Wine Knows, the wine makers and grape growers in the Yamhill-Carlton District "didn't think much of the idea of a state soil that did not include the more ancient marine sedimentary soils" (the Willakenzie Series) that also grow grapes and are more prevalent than Jory in four of the five American Viticultural areas in

the northern Willamette Valley. The blogger contends that the resolution is a waste of everyone's time and energy, including the Oregon Wine Board.

An important concept behind having state soils seems to have been missed by the blogger. The purpose of a state soil is not to elevate any one soil over that of another. Will Austin, our president, eloquently stated in a letter of support to the Oregon legislature, "The purpose of a state soil is to share with the public an aspect of the natural history of a unique property of Oregon." Jory would be a representative of all of the unique soils that reside in Oregon. In conclusion Will submits that none of these soils are less praiseworthy than the others.

I think that we as OSSS members should have some level of knowledge about Jory beyond that of it being our state soil and of its general importance so I am going to give a semi-technical description of Jory's properties and a lesson in soil taxonomy. The following discussion may be too elementary for you soil scientist types well versed in soil taxonomy so be patient or skip the remainder of the article. I hope the rest of you find the following comprehensible and interesting.

The majority of Jory soils developed in the foothills forming the margins of the Willamette Valley from basic igneous rock (primarily basalt) and sedimentary rock derived from this basic igneous material. Unlike the young floodplain soils of the valley floor that developed from the geologically recent Missoula flood deposits and alluvium from the Coast Range and Cascade Mountains, Jory has been around long enough to weather under western Oregon's mild, wet climate into a very deep soil with a clay enriched subsoil (an argillic horizon), which has relatively low natural fertility (the technical term – low base saturation). The low fertility is a product of the intense and almost complete weathering of soil minerals into secondary clays and oxides and the leaching of nutrients out of the soil profile. In Jory's old age, there are relatively few minerals left that can break down further and release nutrients to replenish the supply. Fortunately, biocycling and the capacity of clay and organic matter to hold nutrients on their base exchange complexes counters the leaching process and keep these soils productive in their natural, forested state.

An argillic horizon, low base saturation and also mesic and the warmer soil temperature regimes (mesic and thermic) are the diagnostic features of the soil order Ultisol so this is where Jory belongs in the broad scheme of soil classification. Orders are the basic taxonomic breakdown in soils. Soils also are narrowly divided into families which correspond to the genera of the plant and animal kingdoms. Jory's family name is fine, mixed, active, mesic Xeric Palehumults. Jory has its own unique range of characteristics within this family to give it Series status.

One real neat aspect of soil taxonomy for me is that a lot can be surmised about the properties and genesis of the soil from the family name. The "ults" at the end of the name informs us that Jory is an Ultisol. "Pale" hints to a higher degree of oldness and "hum" to higher organic matter content (same prefix as humus). Palehumults are Ultisols that have pretty high accumulations of organic matter to at least 40 inches depth, high clay content to at least 60 inches depth and no bed rock contact within 60 inches, in other words, a very deep soil. It usually takes a very old soil to form these properties.

A mesic temperature and a xeric moisture regime give the soil climate – a cool average yearly temperature and a soil moisture characteristic of one cool, moist wet season and one warm to hot dry season per year (common to Mediterranean climates). There is a limited amount of soil moisture during the dry season meaning that irrigation or summer fallow is commonly necessary for crop production. It is dry for longer periods than the wetter soils with udic moisture regimes we encountered at the winter meeting in Astoria. The mean annual precipitation where Jory is found is about 40 to 55 inches.

"Fine" refers to a clayey subsoil texture. Mixed refers to a variety of minerals found in the soil, with no type overly dominant. I am an old-timer who learned the current taxonomic system in the 1970s. There are changes and new terminology I am still not familiar with. "Active" is one of those terms. I have an idea what it means but I am not sure. Maybe one of you can educate me on this one.

Other properties of Jory not readily evident in the family name are that they are well drained and are moderately to strongly acid. Surface textures are typically silty clay loams.

I will end with one trivia question: How common are Ultisols in eastern Oregon? The answer is on the bottom of the next page.

# *& In Memoriam &*

*by Will Austin*



**Elizabeth Sulzman  
Associate Professor  
Department of Crop and Soil Science  
Oregon State University  
1966-2007**

The unexpected death of Elizabeth is a tragedy to everyone who knew her. Friends, colleagues, and students have lost the fellowship of an amazing woman. Many adjectives could describe Elizabeth to anyone who never had the pleasure to meet or work with her. My adjectives for her are amazing and accomplished. Elizabeth was by far the best teacher I have ever seen in the college classroom. She accomplished so many things that I can not list them all. I will miss her daily smile and her from the heart "Hey! Great job, Will. Way to go!" Accomplished, sincere, and always positive...I will miss her.

Answer to the Trivia Question: Ultisols do not exist in Eastern Oregon. Eastern Oregon does not have long enough frost free seasons and in most places, abundant enough rainfall for the intense chemical and biological weathering of minerals and for the leaching of nutrients needed to develop Ultisols. The highest concentration of Ultisols in the United States is in the hot, humid South. The most highly weathered soils are the Oxisols, which occur almost entirely in the tropics.

## Sharpshooter

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

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<http://osss.peak.org>  
email: [osss@peak.org](mailto:osss@peak.org)

## Advertisements

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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.

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