# Soils-Geology-Ecology Yosemite National Park

## 2009 Joint Meeting Professional Soil Scientists Association of California and California Forest Soils Council September 17-19, 2009

Tour Highlights

Landforms, soils, vegetation, and fire ecology in minimally disturbed Sierran ecosystems. Yosemite National Park soil survey—philosophy, approach, and findings (elevational and ecosystem trends in soil parent material, morphology, chemistry, temperature, and taxonomy).

Areas Visited: Yosemite Valley recessional moraine, A-Rock burn, Crane Flat meadow and forest, Tuolumne Giant Sequoia Grove, Tuolumne Meadow, Tioga Pass.

Organizers

Kerry Arroues, Soil Scientist USDA Natural Resources Conservation Service Hanford, CA 93230 e-mail: kerry.arroues@ca.usda.gov Office: 559-584-9209 ext. 113

Ron Taskey, Professor Emeritus Cal Poly Earth & Soil Sciences Dept. San Luis Obispo, CA 93407

e-mail: <u>rtaskey@calpoly.edu</u>

Joe Seney, Soil Scientist USDA Natural Resources Conservation Service Arcata, CA 95521 e-mail: joseph.seney@ca.usda.gov

Mary Reed, PSSAC Executive Secretary

WEB SITES

YNP: www.nps.gov/yose/

YNP Concessions (Delaware North Companies (DNC)): www.yosemitepark.com

YNP soil survey: http://soils.usda.gov/

### AGENDA

Thursday, September 17, 2009, 6:00 PM

Yosemite National Park visitor center auditorium (Yosemite Village, behind museum) Welcome and Introductions

Overviews of Yosemite ecosystems: geology, vegetation, soils. Soil survey philosophy and approach. Ron Taskey.

Friday, September 18, 2009

#### 7:45 AM BOARD BUS AT CURRY VILLAGE

Stop 1: EL CAPITAN RECESSIONAL MORAINE: Valley glaciation and soils.



PSSAC Group on Recessional Moraine.



Joe Meyer, National Park Service, Yosemite NP.



Kerry Arroues augering soil on recessional moraine.



PSSAC group near El Capitan.



Humboldt State University students near El Capitan.

Stop 2. A-ROCK BURN AREA: Fire ecology, NPS fire policies and practices, soil chemistry and temperatures.



PSSAC group at A-rock Burn Area.



PSSAC Group at A-Rock Burn Area.



Susan Benes and Chip Appel at A-Rock Burn Area.

Stop 3. CRANE FLAT AREA: Meadow soils & hydrology; forest soil.

LUNCH, CFSC BUSINESS MEETING

Stop 4. TUOLUMNE GIANT SEQUOIA GROVE: Soils and ancient landslides.

Walked about 1  $^{1\!\!/}_4$  mi. from site 3. Easy down-hill walk going in, Uphill coming out. Elevation ~ 6,000 ft.



Tunnel Tree at TUOLUMNE GIANT SEQUOIA GROVE.

Stop 5. Curry Village. Return ~ 5:00 pm.

### Saturday, September 19, 2009

## 7:45 AM BOARD BUS AT CURRY VILLAGE

Stop 1. OLMSTEAD POINT: Geology, glaciation, bedrock joint & shallow soils.



Vista from Olmstead Point.



Bob Graham and UC-Riverside students and alumna.

Stop 2. TUOLUMNE MEADOW: Soils of meadow and adjacent lodgepole pine forest. Forest encroachment into meadow. Volcanic ash influence. Soil chemistry and temperatures.



NPS ranger on horseback in Tuolomne Meadow.



PSSAC group bus at meadow stop.

LUNCH, PSSAC BUSINESS MEETING

Stop 3. DANA MEADOW-TIOGA PASS: Glacial features, soils. (elev. ~ 10,000 ft.)



Snow avalanche tracks and meta-sedimentary rocks near Dana Meadow.





Wetland site in Dana Meadow.



PSSAC group in Dana Meadow.

5:30 PM: Tour ended at Curry Village.