

Inland Geological Society

Sept. 2008

Newsletter of the Inland Geological Society

Volume 24 No. 9

This Meeting:
**Thursday,
September 4th**

Time:
**Social: 6:00pm
Dinner: 6:30pm
Lecture: 7:00pm**

Location:
**LSA Associates
1500 Iowa Ave
Suite 200
Riverside, CA
92507
(Map on Pg.4)**

**Coming to
Dinner?**
Please RSVP:
**By Friday 8/29
(951) 782-3295
dlass@
waterboards.ca.gov**

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September Speaker:

Dr. Frederick W. Lange
LSA Associates, Inc.



An Archaeological and Geological View of Cupule Production in an Area of Western Riverside County

Abstract

Small, shallow depressions referred to as “cupules” are often found on the “wave-shaped” faces of tonalite boulders throughout southern California. Cupules are often found in association with prehistoric milling or habitation sites, but occasionally they also occur in isolation from other cultural traces. Similar shallow depressions that are also referred to as cupules are found throughout the world. The initial inventory of sites in southern California that are associated with cupules was published by Smith and Lerch (1984). They summarized (ibid. 1984:7) that “All of the various ethnographic accounts in this region and around the world *sic* “relate” related to cupule rocks have in common the idea that there is some power embodied in the rock which can be tapped by making cupules.” They also noted (ibid. 1984: 7) that “With one exception, Native American consultants contacted for this study had no specific knowledge of cupule features or their functions, but all considered them significant and related them to the mythic past when ‘the rocks were still soft,’ and considered them to have been made by various culture heroes. No further ethnographic evidence regarding cupule production or use has been uncovered since 1984.

Robert E. Reynold’s geological interpretation is that all cupule-sized depressions examined at three different western Riverside County locations were natural – a result of subaerial erosion by percolation of acidic ground water at a pre-late Pleistocene time when granitic boulder outcrops of the Peris Block were buried under granitic gruss and colluvium. None of the proposed cupules at these locations could be demonstrated to be cultural in origin, since the grains of quartz and feldspar in the cupule-sized depressions did not exhibit marks of abrasion.

This presentation explores the questions (1) can we distinguish between natural depressions and cultural depressions?, (2) can we define the processes by which cupule-like natural depressions

were formed, and (3) in the case of bona fide cultural cupules, have we added to our knowledge of who made the cupules and what were they used for?

Biography:

Dr. Lange was awarded a PhD in anthropology by the University of Wisconsin-Madison in 1971 and is a Senior Cultural Resources Manager in LSA's Riverside office. He has more than 40 years of archaeological experience in the North American West, Southwest, and Midwest, and in numerous foreign countries. He is a former member (1990–1996) of the Cultural Property Advisory Committee of the U.S. Department of State and is a Registered Professional Archaeologist. Since joining LSA, Dr. Lange has coordinated several desert cultural resources projects (Mesquite Regional Landfill (BLM El Centro field office), UNAVCO (BLM Barstow field office), Chuckwalla Solar I (BLM Palm Springs field office), and Superstition Solar I (BLM El Centro Field office), as well as participating in a number of larger non-desert projects such as Haskell Ranch, McSweeny Farm, and Mid-County Parkway.

Job Opportunities

The **County of Los Angeles, Department of Public Works, Geotechnical & Materials Engineering Division**, currently has opportunities in Alhambra, CA for the following positions:

Engineering Geologist

\$7,168.36—\$7,990.36 Monthly

\$7,383.82 - \$8229.82 Monthly (Effective 01/01/09)

Exam Number C-4371-L (posting date: August 4, 2008, open until filled)

Position requires a California State Certificate of Registration as an Engineering Geologist. A valid CA Class C Driver License or the ability to utilize an alternative form of transportation when necessary. This position includes standing or walking most of the time, with bending, stooping, squatting, twisting, and reaching; including working on irregular surfaces, occasionally lifting objects weighing over 25 pounds, and frequent lifting of 10-25 pounds. Applicant must provide a copy of his or her college transcripts at time of filing (unofficial transcripts are acceptable).

Job Description: An Engineering Geologist is responsible for performing a combination of the following essential job functions: conduct engineering geological investigations and Phase I/II environmental site assessments (A Phase I Environmental Site Assessment (ESA) documents the presence of recognized environmental concerns in accordance with current standard practice and Federal regulations prior to the acquisition of property, right-of-way or easements by the County; A Phase II ESA documents the presence of subsurface contaminants, in accordance with current standard practice and government regulations through the use of drilling or other investigative method along with collection and analyses of soil and/or groundwater samples followed by evaluation and interpretation of data to form conclusions and recommendations); prepares geologic and environmental investigative reports; performs and evaluates hydrogeologic investigations; reviews, evaluates, and field checks plans for development projects; provides technical review of engineering geologic reports and Phase I/II environmental site assessments for development projects; conducts grading and construction inspections of projects to verify anticipated conditions; conducts meetings, discussions, and other communications with consultants, developers, engineers, etc.; determines the most appropriate exploratory techniques to use for a given project; prepares and analyzes cost estimates for geologic investigations and environmental site assessments; evaluates and analyzes geologic and environmental data to develop conclusions and recommendations for development projects; prepares bid specifications, evaluates bid responses and oversees geologic and environmental work performed on County projects by outside consultants; and drives vehicles to and from work-sites.

Engineering Geology Assistant

\$4,868.00—\$6,074.55 Monthly

\$5,014.18 - \$6,229.18 Monthly (Effective 01/01/09)

Exam Number C-4362-G (posting date: August 4, 2008, open until filled)

Position requires graduation from an accredited college with specialization in geology or engineering geology and a valid CA Class C Driver License. This position includes standing or walking most of the time, with bending, stooping, squatting, twisting, and reaching; including working on irregular surfaces, occasionally lifting objects weighing over 25 pounds, and frequent lifting of 10-25 pounds. Applicant must provide a copy of his or her college transcripts at time of filing (unofficial transcripts are acceptable).

Job Description: An Engineering Geology Assistant is responsible for performing a combination of the following essential job functions: assists in conducting engineering geological investigations and Phase I/II environmental site assessments; reviews existing geologic and environmental literature to determine potential geologic and environmental concerns affecting a project site; provides geologic logging of 24" diameter boreholes. Hollow-stem auger borings and backhoe trenches; operates and maintains electronic equipment used in geologic investigations and environmental assessments; provides field mapping for preparation of geologic maps and cross sections; interprets data observed from stereo pairs of aerial photographs; conducts inspections of construction projects to verify anticipated conditions; conducts meetings, discussions, and other communications with consultants, engineers, etc.; determines rock type and engineering characteristics of field samples; evaluates and analyzes geologic and environmental data to develop conclusions and recommendations for construction projects; prepares all necessary equipment and supplies and performs groundwater monitoring at County facilities; and drive vehicles to and from work sites.

Upcoming Meetings/Events

Rock & Gem Shows—Various locaitons

Various rock and mineral shows will be throughout southern California. To find one nearest you, visit www.rockngem.com/showdates.asp



SEPM—Pacific Section Field Trip

In memory of Dr. John Cooper and his scientific contributions to the local area, a one and a half day field trip is planned beginning in

Silverado Canyon continuing through to Crystal Cove, **Saturday and Sunday, Sept. 13-14, 2008**. For more information and to RSVP, contact Wayne Henderson at 714.278.2972 or Whenderson@fullerton.edu

AIPG/AHS/IPGC/AESE Joint Annual Meeting

"Changing waterscapes and water ethics for the 21st century" and "Global Geoscience practice, standards, ethics and accountability". **Sept. 20—24, 2008** in Flagstaff, AZ. For more information, please visit

www.aipg.org/2008/AIPG-AHS-3IPGC.htm

GRA 17th Annual Conference and Meeting

"Groundwater: Challenges to meeting our future needs" **Sept. 24-26, 2008** in Costa Mesa, CA.

For more information, please visit www.grac.org or contact Kathy Snelson at 916.446.3626 or executive_director@grac.org

IGS is looking for speakers for 2009 meetings!

Thom Deane, Steve Mains, Patrice Copeland and Shelby Harrell have completed the 2008 schedule for speakers! If anyone would like to speak at an IGS meeting or has any suggestions for the 2009 schedule, please contact Thom or Steve.

IGS Meeting Schedule

October 1, 2008 (Wednesday)

Dr. Sally McGill, CSU, San Bernardino
Latest Pleistocene Slip Rate of the San Bernardino Strand of the San Andreas

November 6, 2008 (Thursday)

Dr. David Jessey, Cal Poly Pomona
Basaltic volcanism in the southern/central Owens Valley and its relationship to Neogene tectonics

December 3, 2008 (Wednesday)

Venessa Fava
Paleoecological and paleoenvironmental reconstruction of the Sycamore Canyon member of the mio-pliocene Puente formation, Chino Hills, San Bernardino County, California

January 8, 2009 (Thursday)

TBA

February 4, 2009 (Wednesday)

Dr. Matthew Kirby
Paleoclimate of Southern California

March 5, 2009 (Thursday)

TBA

April 1, 2009 (Wednesday)

TBA

May 7, 2009 (Thursday)

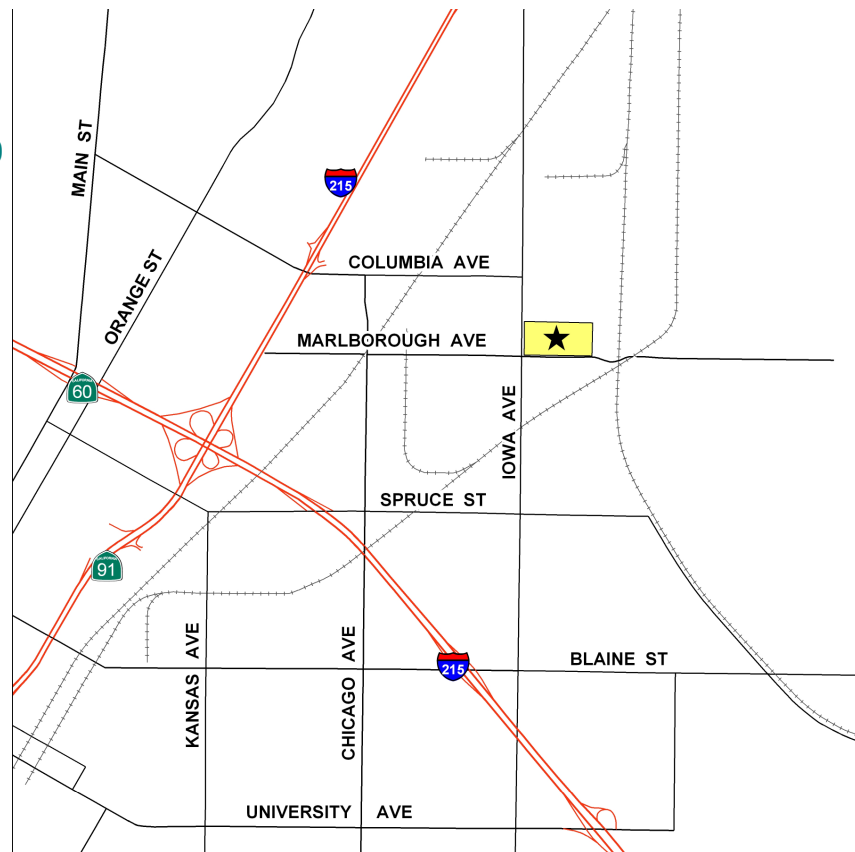
TBA

June 3, 2009 (Wednesday)

TBA

IGS MEETING LOCATION:

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