



October 2016

LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

October 27 (Thursday) 11:30 AM

Chris Castillo

Ph.D. Candidate, Department of Geophysics, Stanford University

QUATERNARY SUBSIDENCE OF SANTA CATALINA ISLAND FROM SUBMERGED PALEOSHORELINES

Abstract

Sixteen submerged paleo-shorelines around Santa Catalina Island, preserved at depths from 30 meters to 470 meters below mean sea-level, require late Quaternary tectonic subsidence of at least 200 meters below the deepest known Pleistocene glacio-eustatic lowstand sea levels. Several successive parasequences are identified that contain subaerial deltaic deposits originating during sea-level lowstands, that are overlain by subaqueous deltaic deposits interpreted as representing transgression and highstand deepening water. Several samples recovered by remotely operated vehicle from these sequences surrounding Santa Catalina Island contain intertidal to outer shelf faunal assemblages typical of submerged insular terraces of southern California. Living distributions of extant taxa in the assemblages indicate their original deposition occurred at water depths of less than 20 meters to 100 meters, and the presence of extinct taxa in the sequences constrains the timing of subsidence of Santa Catalina Island.

We correlate the terraces surrounding Santa Catalina Island to lowstands and interstadials on a glacio-isostatic adjusted ice-volume-equivalent sea-level curve, and calculate subsidence rates, where possible, for different sections of Santa

Catalina Island. Our data show Santa Catalina Island and its surrounding platform have been subsiding and tilting northeast during at least 16 sea level cycles, for at least 1.2 million years, at a rate of approximately 0.25 millimeter per year.

Speaker's Biography

Chris Castillo was born and raised in Fountain Valley, Orange County, California. He was a small business owner for a few years, but then his passion for the mountains of southern and central California led him to take a geology class at Goldenwest College. This led to his obtaining a bachelors degree in geology at CSU Long Beach, and eventually spiraled into a PhD in geophysics.

Chris is presently a 5th year PhD student at Stanford University, where he studies climate and tectonics onshore and offshore western North America. His primary research involves the marine terraces of southern California, and more specifically how they inform our understanding of tectonic, climatic, and oceanographic processes across multiple time scales!

Meeting Time, Place, Cost and Reservations

When:

Thursday, October 27, 2016

Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM
Announcements: 11:45 AM to 12:00 PM
Guest Speaker: 12:00 PM to 12:45 PM
Questions/Close: 12:45 PM to 1:00 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (I-405), turn west onto Willow Street, and turn right onto Grand Avenue at the sign for the Center. Park for free in the multi-level garage structure.

Cost:

Lunch and Speaker: \$25.00 *with reservations*
\$30.00 *without reservations*

Retired: \$20.00

Student: \$5.00

PAYMENTS IN CASH OR CHECK ONLY

Meeting Reservations:

We encourage you to make your reservations using the LABGS web site, at www.labgs.org

Otherwise, call Ryan Weller at (562) 637-6019, or e-mail ryweller@gmail.com.

Reservations must be made by: 10:00 AM Tuesday October 25th to receive the discount price noted above.

As always, walk-ins are welcome.

Student Sponsorship

Looking for Student Lunch sponsors:

If you or your business/organization would like to become a Student Lunch Sponsor please let us know.

Contact Us – The LABGS Board

President: Bert Vogler

(949) 585-3103

hvogler@kleinfelder.com

VP & Programs: Jacqueline Chavez

(562) 607-1047

GeoJacqueline@gmail.com

Treasurer: Nicky White

(626) 305-8460

nwhite@geomechanicstech.com

Secretary: Ryan Weller

(562) 637-6019

ryweller@gmail.com

Scholarships: Karla Tucker

(714) 658-0474

ktkr2@aol.com

Special Projects: Bill Long

(213) 448-2841

wtlgeoscience@gmail.com

Webmaster: Ivan Aburto

(661) 529-4331

iaburto@labgs.org

OUR WEB SITE ADDRESS:

www.labgs.org

Announcement: Past AAPG president **Robbie Gries** is writing a book about **Pioneering women in petroleum geology** and having trouble getting info re two women who were part of the SoCal geology community:

Daisy C. Hansen (1913-2014): 63-year AAPG member, BA UC Berkeley 1933, Humble, Richfield, and consulted, part of Cuyama Field discovery team, wrote paper about Potero Hills Gas Field.

Marie Clark Hill (1919-2009): 5-year AAPG member; USC 1939, WW II Atlantic Richfield, married to Mason Hill (second wife).

Robbie would also like info re **Elisabeth Watson** (1915-2000), Union Oil, WW II WASP pilot; and **Lois T. Martin** (1907-1994), Stanford 1930, Union Oil and consultant.

Please contact Robbie at RRGRIES@aol.com if you can help her.