February 2019

LOS ANGELES BASIN GEOLOGICAL SOCIETY
MEETING ANNOUNCEMENT

February 28 (Thursday) – 11:30 AM

George Morgan
Geologist

WHAT IS NEW IN THE COYOTE MOUNTAINS?

Abstract

Recent mapping of the Coyote Mountains (west of El Centro, California) by George and JR Morgan has produced several concepts that are new and somewhat controversial. This presentation will discuss these new concepts. First, the mapping has revealed there are roughly 10 near-sea-level, transgressional-regressional marine sequences within what has been mapped as the Latrania Formation within the Coyote Mountains, despite Winker and Kidwell (1996) and Bykerk-Kauffman (2017) recognizing only one such sequence. Second, the lowest(?) Latrania in the Coyote Mountains interfingers with the 17.1-million-year-old (Ma) upper basalts of the Alverson Formation. Woodring (1931) first recognized this relationship. At its type location (the Split Mountain area), the Latrania Formation is much younger (6.3 to 5.5 Ma), and it is comprised of turbidities (Winker and Kidwell, 1996). Thus, in the Coyote Mountains only, George and JR have designated the Latrania Formation as the "Viejo Formation."

Their recent mapping also has revealed that the Garnet Formation mapped by Christensen; Winker and Kidwell; and Bykerk-Kauffman interfingers with several transgressional-regressional sequences of the Viejo Formation. George and JR have thus demoted the Garnet Formation to member status within the Viejo Formation.

Finally, in Ocotillo Canyon, they have mapped a normal, high angle fault that is syn-tectonic with deposition of continental sediments. The fault and sediments are stratigraphically below the basalts of the 17.1 Ma Alverson Formation. They believe the normal Ocotillo Canyon Fault is linked to a detachment beneath the Coyote Mountains (Pridmore and Frost, 1992). The only extensional tectonics taking place in the region before 17.1 Ma was in the Basin and Range Province in Sonora, Mexico. Kerr (1982) first proposed that parts of the Salton Trough originated in the Basin and Range Province in Sonora.

Recommended "light reading" to prepare for George's talk (for old ideas and at times opposing viewpoints):

Bykerk-Kauffman, A., 2017. Neogene sedimentation, volcanism, and faulting in the eastern Coyote Mountains, Salton Trough, southern California, in Kraatz, B., Lackey, J.S., and Fryxell, J.E., eds., Field Excursions in Southern California: Field Guides to the 2016 GA Cordilleran Section Meeting: Geological Society of America Field Guide 45, p. 49-79.

Speaker's Biography

After attending San Diego State University, George Morgan worked for Tenneco Oil Company's mineral division, exploring for borates in the Death Valley area, and he was one of two geologists responsible for discovering a new deposit. He also studied earthquake faults for the State-funded Cal-Mexico Project. As a private consultant, he also worked on several water projects, for Don Fife, Dick Brown, and Boyle Engineering. His last project was for Bell Copper, looking for copper and molybdenum in the Kingman, Arizona area. George and his brother, JR (who worked for Gulf Oil), then moved back to San Diego to take care of their mother after she broke her hip. To help cope, George and JR looked for an area to map that was interesting, not too far away, and not being mapped by others. They began mapping in the Coyote Mountains in 2001. Using digital ortho-quadrangles with resolution of 1 meter to 30 centimeters per pixel and an ESRI Arcmap program, they have been able to map the area at 1:2,000 scale!

Please join the LABGS for George's informative presentation!

Meeting Time, Place, Cost, and Reservations

When:

Thursday, February 28, 2019

Meeting Agenda

Lunch Served: 11:30 AM to 11:45PM
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:	$30.00 with reservations
	$40.00 without reservations
Retired:	$25.00
Student:	**$10.00**

PAYMENTS IN CASH OR CHECK ONLY

Meeting Reservations:

We encourage you to make your reservations using the LABGS web site, at www.labgs.org
Or, call **Wanjiru Njuguna** at (818) 739-9154 or email her at wanjiru.njuguna@gmail.com.

Reservations must be made by:
10:00 AM Tuesday February 26th
to receive reservations discount price noted above
(this *will be strictly adhered to*)
But, as always, walk-ins are welcome!

OUR WEB SITE ADDRESS:
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ANNOUNCEMENTS:

LABGS has expanded our meeting raffles.
We would appreciate raffle prize donations!
Please bring donation items to the next meeting.

We still need a new LABGS treasurer. *If interested, please contact a current officer and let us know a bit about you. The LABGS executive committee will select from the interested candidates.*

Please inform a LABGS Board member if you have a pertinent announcement.

Alverson-Fossil Canyon Area, Coyote Mountains