

2023 Pacific Cell: Salton Trough - San Andreas Fault

Friends of the Pleistocene
Pacific Cell
2023 Field Conference
27-29 October 2023

Hi all. This years' field trip will focus on the southern San Andreas fault. There has been a lot of new work over the past few years by a lot of great researchers. Consequently, this years' trip will have a lot of leaders! But that's not all! We will discuss the history of lakes that repeatedly filled the Salton Depression, and possibly discussions on soils and their relationship to past climate variations.

Day 1. will focus on the slip rate of the fault system. What's the strain budget that we should observe from paleoseismic studies and slip in individual earthquakes (covered on Day 2). How does the 20-25 mm/yr slip rate in Imperial and Coachella Valley (from geologic and geodetic studies) make it through the San Gorgonio "knot", where slip rates are inferred to be considerably lower by some workers. Is the Mission Creek-Mill Creek fault still a major player? Or is strain now most accommodated by other structures. Slip rate presentations on the Mission Creek fault in the Indio Hills and the Banning fault in northern Coachella Valley (Kim Blisniuk and Kate Scharer), the Banning Pass fault system (Dick Heermance, Katherine Kendrick, Jon Matti, Kate Scharer) (in memory of Doug Yule), the current activity of the Mission Creek fault north of Highway 62 (Jon Matti, Dick Heermance, Katherine Kendrick, Mike Oskin), and the application of soils in the northern Coachella Valley in view of past major changes in climate.

Day 2. will focus on the late Holocene history of the southern San Andreas fault. Paleoseismic studies have been completed at several sites and presentation for the Coachella site (Mission Creek fault: Philibosian, Weldon, Marina Argueta, Seulgi Moon), North Palm Springs site (Banning fault: Castillo, McGill, Scharer, et al.), and focus on the late Holocene history of the southern San Andreas fault. Paleoseismic studies have been completed at several sites and presentation for the Coachella site (Mission Creek fault: Philibosian, Weldon), North Palm Springs site (Banning fault: Castillo, McGill, Scharer, et al.), and Salt Creek (southern SAF south of the Mission Creek / Banning fault juncture: Williams, Rockwell, Scharer, Buckley, Seitz). New studies on the slip distribution in past earthquakes, based on offset rills, small stream channels, alluvial bars, etc. and tied to the paleoseismic studies, provide an independent check on the modern slip rate (Buckley, Blanton, Rockwell, Williams). Plus, the southern SAF is creeping! (Bilham) How do we account for the creep signal in geomorphic offsets?(Blanton, Rockwell) What does the creep tell us about the evolution of the landscape features (small rills, etc.) that we use to resolve slip? Much of the southern SAF system has components that cross the shoreline

of ancient lake Cahuilla: what is the late Holocene history of the lake and how does that inform us on fault interaction, the effects of lake loading, and related topics (Rockwell, Hall, Weingarten).

Day 3. Regional aspects. An overview of the regional tectonics and evolution of the Salton Trough (Fuis, Oskin, others), the structure of the southern SAF (Weldon), faults in the Salton Sea and crossing the border, and current environmental.

Camping will be in Painted Canyon in the Mecca Hills. There are no formal campgrounds, per se. There is lots of room up and down the canyon, and there is one bathroom. 4WD vehicles recommended. I plan to stake out an area not too far from the bathroom for the bonfire / FOP central. We will conclude early Sunday afternoon to allow time for travel to your home bases.

We will need to charge something to cover beer, ice (if you want your beer cold) and a T-shirt. You are also encouraged to bring your own fluids. Price and details to follow, but it won't break your bank (ie, we are a non-profit organization, if you call this organized!)

**2023 FRIENDS OF THE PLEISTOCENE PACIFIC CELL
FIELDTRIP SIGN-UP INFORMATION**

Hi FOPpers:

We have set up a Wells Fargo checking account to receive \$\$ for the FOP Pacific Cell fieldtrip at the end of October, 2023. Co-leader Will Buckley is the official FOP treasurer for this trip. We will keep a running list of attendees/payments on an Excel sheet to keep track of everything efficiently. For your T-shirt, please indicate the desired size (we cannot guarantee the correct size for late sign-ups). After you have sent \$\$, email Will (williambuckley92@gmail.com) your preferred T-shirt size. The cost of the trip is \$35.

You have four options to pay: Zelle, Venmo, personal check, and direct wire transfer.

For those that use Zelle, use Will Buckley's cell number to transfer funds directly:

Cell number: 951-707-9634

For those that pay with Venmo, you need to type in Will's username and then send funds.

Venmo Username: williambuckley

For those that pay with check, send the check directly to Will at:

Will Buckley
5050 Lotus Street, Apt. 20
San Diego, CA 92107

For direct wire transfers, all you need is the account number and routing number for the FOP account, which are as follows:

Account number: 7617158436

Routing number: 121000248

We are looking forward to hosting y'all on the Southern San Andreas Fault in October!

Will and Tom

And, in case you have any questions, email us at:

williambuckley92@gmail.com

trockwell@sdsu.edu

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