

## Calcrete, Ancient Megafloods, Active Tectonics at a Geomorphic Triple Junction - Palouse, Scablands, Yakima Fold Belt

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- When:** September 7-10, 2023
- Where:** Saddle Mountains area, central Washington
- Lodging:** Motels in Othello or Moses Lake and camping options
- Leaders:** Skye Cooley, Jim O'Connor, Bruce Bjornstad, Scott Burns, Lydia Staisch, Richard Waitt & others
- Difficulty Level:** Rough roads, hiking over uneven terrain, hot weather, beautiful vistas, cool rocks.
- Geology Overview:** The Saddle Mountains provide the backdrop for this year's trip - spectacular scenery and challenging geology await us. The Saddle Mountains are located at a geomorphic triple junction, where sediments of the Channeled Scablands, Yakima Fold Belt, and Palouse Hills interfinger. Visually-stunning calcrete paleosols span all three domains. The Stage III-V calcretes, hundreds of thousands of years old, formed in an alluvial lowland setting and on gently-sloping alluvial fans. They serve as a conspicuous marker unit that helps constrain the age of pre-Wisconsin

scabland flooding, local tectonism, and dramatic topographic changes that occurred in the area over the past ~7 million years - from a broad, low-relief floodplain to the high-relief escarpment we see today. A central question remains: where were the ancestral Snake and Columbia Rivers in Plio-Pleistocene time? The trip will focus on the new outcrops and new insights on the interplay of tectonics, climate, and topography informed by field work completed in recent years. Little of what we will see and discuss is found in any guidebook. Join us for the adventure!

- What's next?** Look for a pre-registration email from Skye Cooley. Respond if you are interested in attending so we can plan trip logistics. Pre-registration will be required. Registration instructions will be emailed to all of those responding to this call. This will be the one and only general call.
- Tell a Friend:** Feel free to forward this announcement to potentially interested colleagues.
- Questions:** [skyecooley@gmail.com](mailto:skyecooley@gmail.com)