

**FACULTY
 COLLOQUIUM**
 Tuesday
 February 20, 2018
 LIB 331 (Boettcher
 Room)
 12:30-1:30 pm

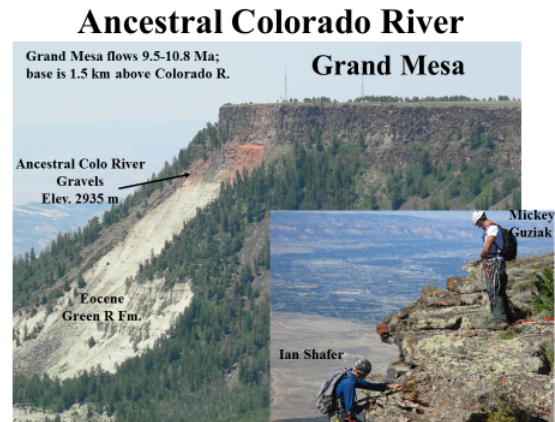
“Geological Evolution of the
 Upper Colorado River System”

Dr. Andres Aslan
 Professor of Geology

This presentation summarizes research Dr. Aslan conducted while on sabbatical during 2016-2017. The major goal of my research was to document the long-term evolution of the Colorado River system with an emphasis on the upper Colorado and Green rivers.

Comparison of river incision patterns show that the upper Colorado River has incised more rapidly than other systems such as the Green River. Upper mantle P-wave anomalies associated with these different drainage basins suggests possible connections between rates of river incision and buoyancy of the upper mantle. Upper Colorado regions have the fastest incision rates and slowest P-wave velocities. In contrast, the upper Green River basin has the slowest incision rates and fastest P-wave velocities. These differences suggest that patterns of river incision and inferred differential bedrock uplift could be explained by differences in mantle flow or buoyancy between the upper Colorado and

Green River basins. If true, this model has important implications for explaining uplift and subsidence patterns elsewhere in settings where traditional tectonic models cannot easily explain the timing and magnitude of landscape erosion.



Bring your lunch and a colleague!