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**"A River Runs Through It: Creating Rivers in the Basin and Range."**

Stream terraces and adjusting piedmont landforms of the Salt and Verde River valleys, Arizona, form the interpretive backbone of Plio-Pleistocene landscape evolution of central Arizona. The terraces represent the base level of all tributary streams flowing into them, while the pediments and alluvial fans show active adjustment to base level change. Thus, using these landforms it is possible to reconstruct the evolution and establishment of through-flowing drainage systems in this region. This talk presents a new addition to T.L. Péwé’s Salt and Verde River Terrace sequence that has been unrefined for the last 30 years – and reveals new insight in regard to pediment evolution and rates of adjustment in this region.

The existence of an older, higher terrace was predicted by modeling suggesting that the lower Salt River originated by overflow from an ancestral Pliocene-Pleistocene lake in the Tonto Basin. Through the use of cosmogenic nuclide dating, field reconnaissance, aerial photo interpretation, GIS modeling and sedimentological analysis landforms were dated and rates of change were estimated. Additionally, two new terraces were discovered existing substantially (up to 70m) higher than those previously documented. The fluvial sediments of these high terraces overlay Tertiary basin fill or playa sediments unconformably and are larger and lithologically distinct from the lower lying terraces. Because of these differences these newly discovered terraces have profound implications for the understanding of regional drainage reorganization after basin and range extension quiescence, while the lower lying terraces serve as landscape markers of basin denudation through time.

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