

2009 Portland GSA Annual Meeting (18-21 October 2009)

**Paper No. 32-49**

**Presentation Time:** 9:00 AM-6:00 PM

## ***MAMMUTHUS AND CAMELOPS FROM PLEISTOCENE STRATA ALONG THE CALTRANS STATE ROUTE 180 WEST PROJECT, FRESNO, CALIFORNIA***

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During 2007, California State University, Fresno conducted a paleontological mitigation program for the California Department of Transportation (Caltrans) along State Route 180 West in Fresno, California. Caltrans was constructing a new 3.8 km highway segment with accompanying drainage basins from Brawley Avenue eastward to 0.2 km east of West Avenue. The Turlock Lake Formation, Riverbank Formation and Modesto Formation occur in the project area. These strata are paleontologically sensitive, all having yielded significant vertebrate fossils elsewhere in the San Joaquin Valley. The university monitored construction activities involving disturbances to *in situ* sediment below 2 m in depth in order to collect unearthened fossils. Construction excavation uncovered vertebrate macrofossils at three locations; Drainage Basin D, Drainage Basin W, and the Hughes-West Diagonal underpass. At Basin D, the Riverbank Formation yielded two cf. *Mammuthus* tusk fragments 2 m below the surface. The Riverbank Formation at Basin W produced a mammoth partial femur, associated pelvic fragment, and two partial molars, at 2.4 m in depth, all potentially from the same individual. At the Hughes-West Diagonal underpass, five cf. *Mammuthus* specimens were collected from the Riverbank Formation, including two rib fragments, two pelvic fragments, and a partial tusk, while a proximal end of a *Camelops* right scapula was recovered from the Turlock Lake Formation. Bulk sediment samples from the Riverbank Formation at Basin D and from the Riverbank Formation and Turlock Lake Formation at sites east and west of the Hughes-West Diagonal underpass failed to produce microvertebrate fossils. The Riverbank Formation and Turlock Lake Formation consist of primarily arkosic, Sierran-derived sediment accumulated in fluvial channels and as overbank deposits on the eastern San Joaquin Basin alluvial fans during aggradational events associated with Quaternary glacial episodes. The 130,000 to 450,000 year old Riverbank Formation unconformably overlies the 600,000 to <1 million year old Turlock Lake Formation. In the project area, maximum thickness of the Riverbank Formation was 4.4 m, while maximum exposed thickness of the Turlock Lake Formation was 4.8 m.

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[General Information for this Meeting](#)

Session No. 32--Booth# 171

[Paleontology: Paleoenvironments, Paleocommunities, Biogeography & Biostratigraphy \(Posters\)](#)

Oregon Convention Center: Hall A

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