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NEW MAMMOTH FOSSIL LOCALITY DISCOVERED NEAR VILLA AHUMADA, CHIHUAHUA

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INTRODUCTION

The first reference to vertebrate fossils noted in Chihuahua was recorded in the diary of Captain Castañeda in 1540 while he was on one of the advance groups of the Coronado Expedition (Winship, 1896). The captain found, in the area now referred to as the Sands of Samalayuca, a 4-5 m horn of ivory. He used it as a marker pole pointed in the direction from which they had come (Santa Barbara) in order that they might find their way back across the dunes. Since that time, there have been numerous references to surface vertebrate fossils in northern Chihuahua by both Mexican and American workers.

The fossil remains of elephants (*Mammuthus*) and horse (*Equus*) have recently been discovered in a shallow water well at the Santa Barbara ranch located some 9 km north of Villa Ahumada, Chihuahua (Fig. 1). The disarticulated fossils (Fig. 2) occur in a 6 m, coarse-grained sand matrix unit (Figs. 3 and 4) which has been covered by 3 m of recent gypsum-bearing alluvium.



Figure 1. Fossil enthusiast shows specimens at the Santa Bárbara well.



Figure 2. Mammoth molar fragment and polished bone.
Camera cap for scale.

The fossils are believed to be associated with Pleistocene spring deposits in the vicinity of the Late Cenozoic Lake Guzman. The fossil bone material has a tumbled-like sheen as might be expected in a fresh water spring deposit. Numerous elephant (*Mammuthus*) molar fragments, a 1.5 m tusk, and horse teeth (*Equus*) have been identified. The Pleistocene age of the deposit is Irvingtonian or younger, possibly Rancholabrean.

Similar spring deposits are known to crop out in the region. They contain a fauna that includes elephants (*Mammuthus*), camels (*Camelops*), and horse (*Equus* [?] *tau*). We would expect further work at the Santa Barbara Ranch to yield a similar fauna. Reported gomphotheres (e.g., *Stegamastodon*) from northern Chihuahua are probably older (Pliocene).

As we stand and look out over the arid northern Mexico desert, it is difficult to imagine that this locality was once, in the not too distant past, a lush, vast grassland savanna with wooded forests in the surrounding ranges. It would be expected that there may have been some niche partitioning of this paradise by the forms living here. The mammoth *Mammuthus*, for example, is a grazer while other elephant-like forms (e.g., gomphotheres) are typically browsers. All of the vertebrate forms mentioned, however, would be expected to come to the water at the springs where they would daily drink; eventually die, for whatever reason; and, finally, would be preserved as we see them today as an outstanding vertebrate bone bed or fossil *lagerstätten*.

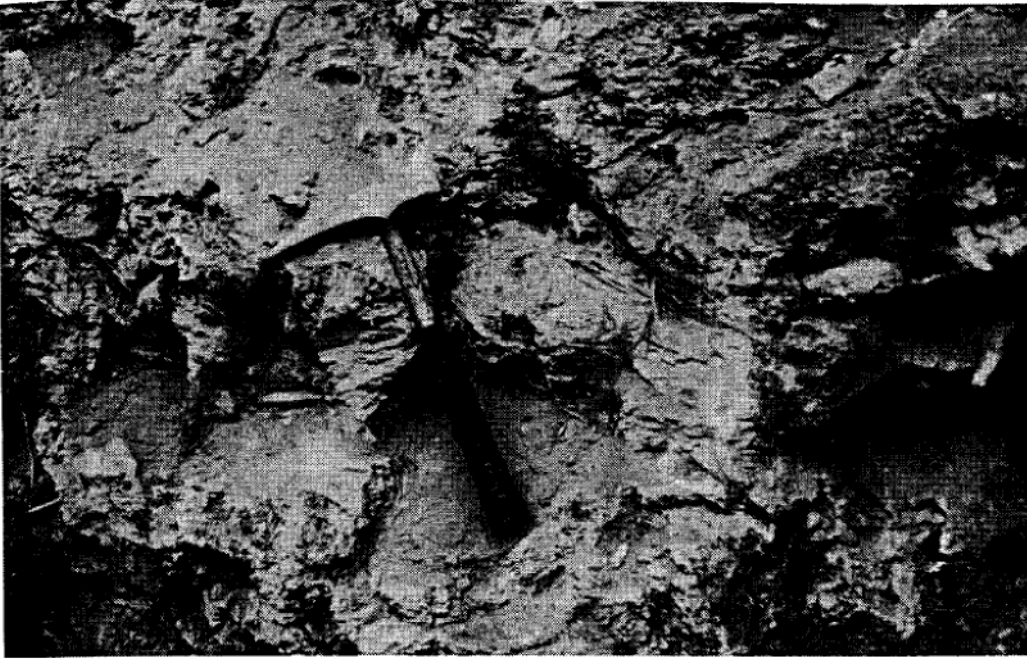


Figure 3. Section of a tusk and elephant molars in a sand matrix. Pick for scale.

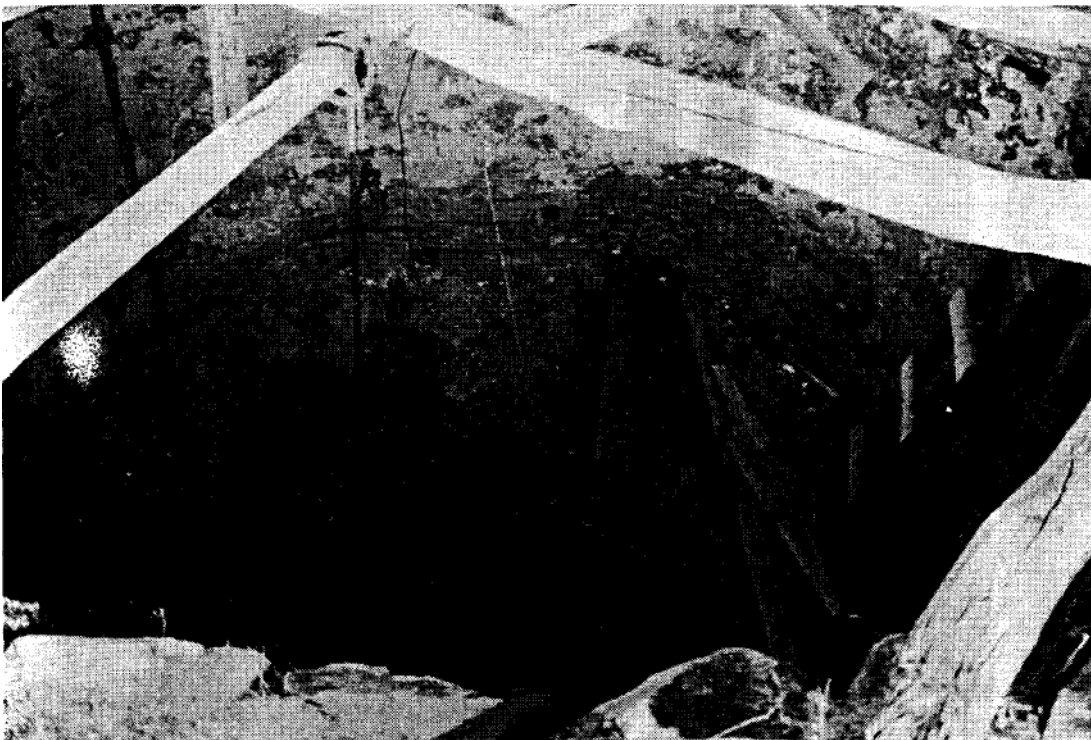


Figure 4. The 6 m pile of fossils is covered by 3 m of alluvium exposed in the well.

Winship, George Parker, 1896, Coronado Expedition of 1540-42, Part I: XIV Ann. Rept., Bur. Amer. Ethnology, p. 329-613 (reprinted in 1964 in English by the Rio Grande Press).