

THE FAUNA OF THE PLEISTOCENE AND EARLY SETTLERS IN BAJA CALIFORNIA

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Numerous lines of evidence show a relationship between the fauna and man at the end of the Pleistocene and the beginning of the Holocene. This evidence shows the use of large mammals as a source of subsistence for man during the Ice Age; a theory has been generated that proposes man as a determining factor in the extinction of the great mammals. In Baja California, throughout 10 years, the Centro Instituto Nacional de Antropología e Historia (CINAH-BC) has taken care of complaints and has achieved diverse salvage projects of Pleistocene fauna. In the present article, we describe the findings that are recorded for the state and the evidence for the interaction of Pleistocene fauna with the first men.

THE PLEISTOCENE FAUNA IN BAJA CALIFORNIA

Throughout Baja California, there are six sites recorded where remains of Pleistocene fauna have been salvaged (Figure 1). Among the places are Los Algodones and San Quintín Valley; these are the places where a large number of reports have been documented. The remains that have been identified include mammoths, mastodons, camels, horses, deer, and even remains of ground sloths (Guía-Ramírez 2011). These findings have been casual, and the majority were reported by people who found them while doing construction, in streams, or in waterholes.

On the other hand, there has been evidence that the peninsula was inhabited since the end of the Pleistocene. Some sites located at water bodies that are now extinct, like Laguna Seca Chapala, Ejido Ignacio Zaragoza, and Cerro Pinto, may show evidence of the presence of man in the Paleoindian period, some with dates from 9,000 years ago (Bryan and Gruhn 1999; Davis 2002; Porcayo Michelini 2007).

Other sites, like Isla Cedros (Matthew R. Des Lauriers, personal communication 2012) and Costa Azul (Drakic 2005) in the state of Baja California and El Rancho Batequi (Hyland and Gutiérrez 1995) and San Joaquín to the south of San Ignacio (Aschmann 1952) in Baja California Sur, report the presence of fluted points, all of which were recovered from the surface without any specific context. However, some sites on Isla Cedros report ages of least 11,000 years (Des Lauriers 2005).

In 1947, Massey reported bones of bison that were longitudinally split, as well as burned bones from horses and camels, which today are extinct. The find was located in the drainage of Comondú, south of San Joaquín, Baja California Sur. No associated human artifacts were found.

Despite the presence of early man on the peninsula and the existence of megafauna, there has been no documented association between Paleoindian people and now-extinct fauna. This situation is not exclusive to Baja California. In Mexico, there are 270 locations with megafauna remains; however, at only in 17 locations was there evidence of interaction with man. Researchers need to investigate further whether interaction actually occurred (Arroyo-Cabrales et al. 2006).

A MAMMOTH AT SAN QUINTÍN AND ITS STRATIGRAPHY

San Quintín Valley is one of the places where many mammoths lived (Figure 2), because many remains of these proboscideans have been recorded and salvaged there, all with contexts of their deaths and taphonomy (Guía-Ramírez and Oviedo-García 2009, 2011). However, a new discovery could generate new ideas about the first human settlers of Baja California and their relation with mammals during the late Pleistocene and the beginning of the Holocene.



Figure 1. Sites in Baja California with salvages Pleistocene faunal remains.



Figure 2. San Quintín Valley location.

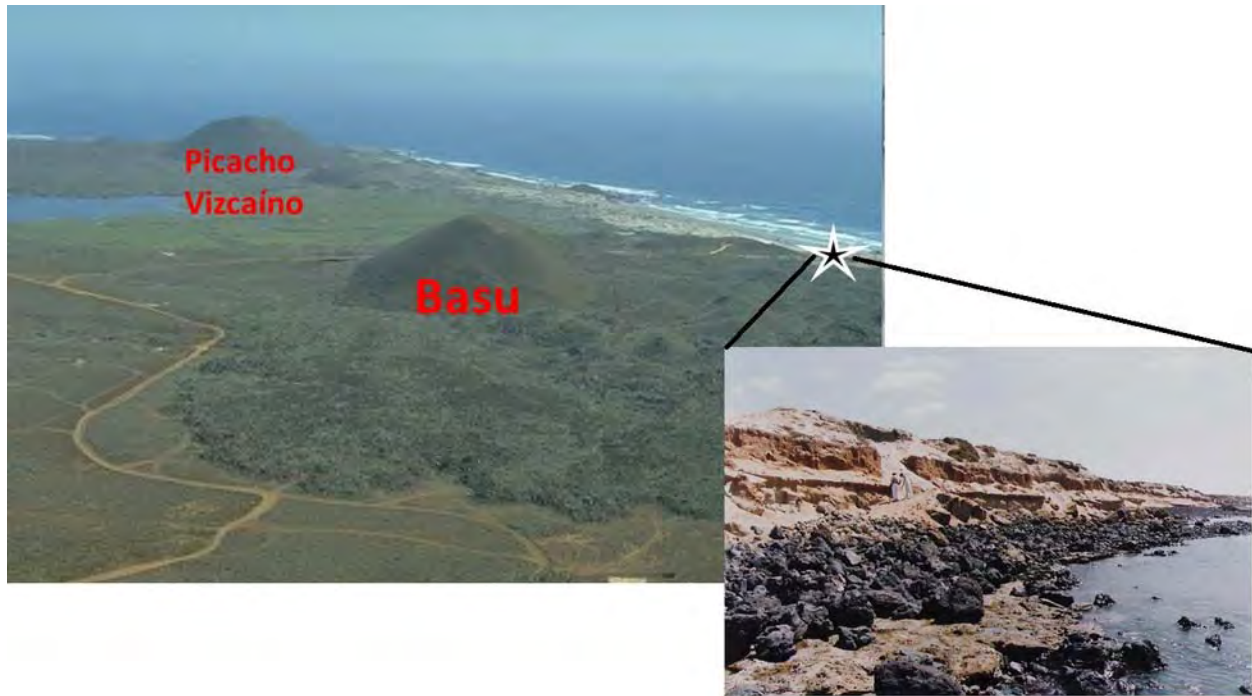


Figure 3. Location of mammoth skull recovered near San Quintín Bay.

In 2003, CINAH-BC received a report of the presence of a skull from a mammoth at San Quintín. It was excavated and extracted by students from Pasadena City College and taken to INAH. The tusks were removed from the skull and left in situ, so INAH personnel were designated to recover the tusks (Guía-Ramírez 2007).

The skull was recovered from a sandy beach cliff near to San Quintín Bay in front of San Martín Island (Figure 3). It was positioned forehead down, lying on a thin (0.5 x 2 m) layer of sand, probably wind-deposited, on top of the regular surface of a subaerial lava flow from a nearby volcano, probably Basu.

The skull was buried in a layer of cinder and ash that appears to have been ejected from a small cinder cone (Picacho Vizcaíno). This is a youngest cone in the San Quintín volcanic field. This cone is approximately 1.5 km southeast of the site.

Faint (2-8 mm) laminations in the bottom (1-10 cm) of the deposit suggest that the base of the deposit was emplaced by a rapid flow of cinder-rich material. About 0.5 m above the base, there is a very thin caliche layer that may represent the initial surface of the deposit immediately after deposition. This caliche layer shows that the cinder layer buried most of the skull, except for the jaws and some portion of the tusks, which must have stuck out above the original surface. Above the thin caliche layer, there are about 0.7 m of poorly defined, 3-10 cm layers consisting of variable proportions of both sand and cinders. It appears that this upper material accumulated over a longer period of time while both cinders and wind-blown sand were deposited. Near the top of this upper layer, sand is much more abundant than in the lower part. This material is heavily cemented by a thick (10-20 cm) caliche layer at the top (Figure 4). Many root casts in this caliche suggest that it was a long-lasting, stable surface that developed an extensive shrub community.

The taphonomy appears to indicate the animal was killed and the skull was rapidly buried in the cinder and ash from the volcanic eruption. When the skull was cleaned, some cut marks were observed, which may indicate a modification by human activity (Figure 5).

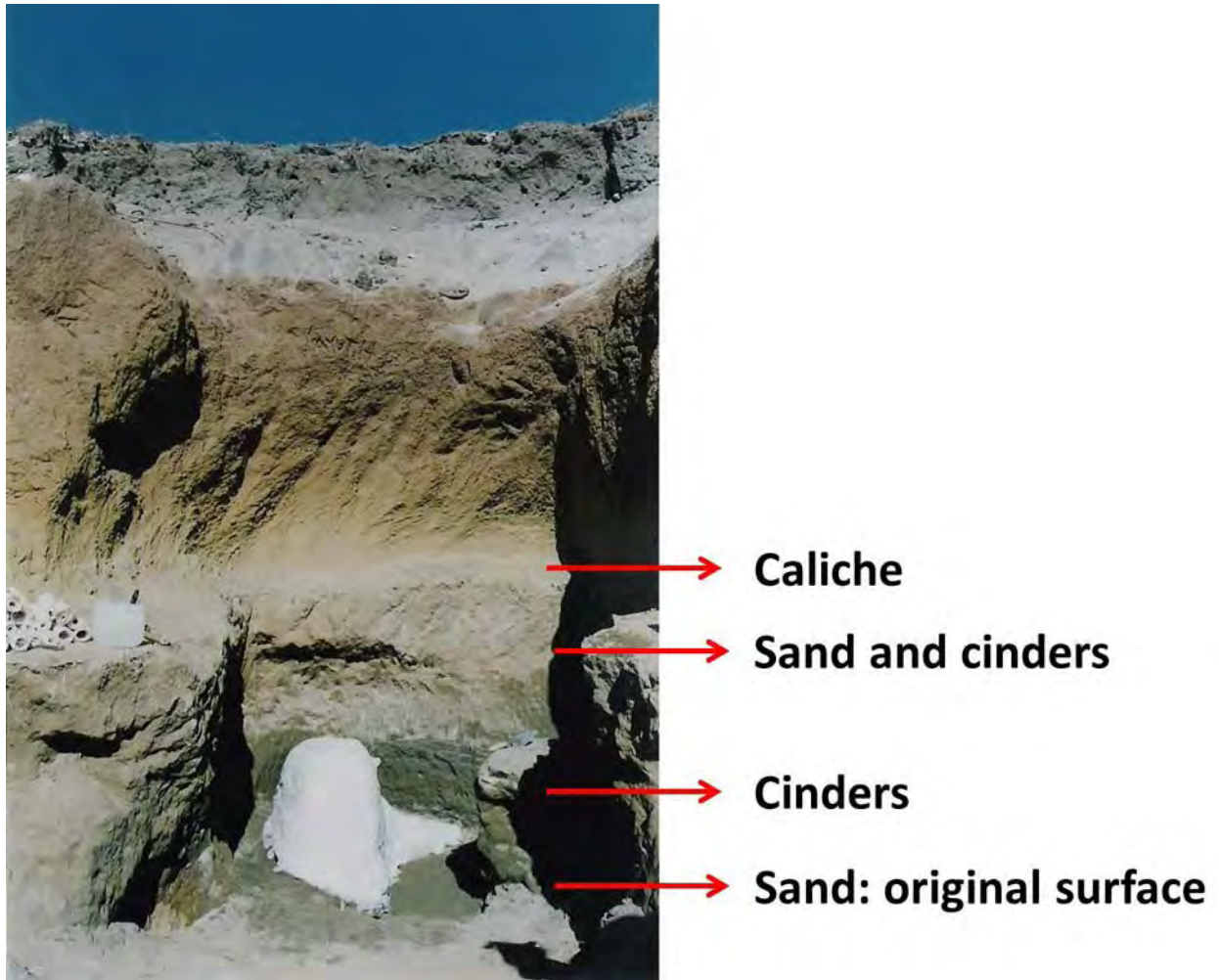


Figure 4. Stratigraphy of the San Quintín mammoth site.

FINAL COMMENTS

In the sediments that were being removed, there were no artifacts or evidence of the presence of humans associated with the skull, but some sites in the area record the early presence of man. This may support the interpretation of interaction between the first populations and megafauna at the end of the Pleistocene. These data are preliminary, and they will need to be confirmed by other analyses, such as a taphonomic study to rule out modification by natural agents such as rodents, carnivores, and roots, and by obtaining radiocarbon dating to have a more precise period of death, as well as by doing some prospecting to look for evidence of the presence of early humans in the region and revisiting other sites with megafauna.

If the find was caused by human action, it would be probably the first evidence of the relation between fauna and men that inhabited Baja California during the late Pleistocene.



Figure 5. Excavated mammoth skull.

REFERENCES CITED

- Arroyo-Cabrales, Joaquín, Oscar J. Polaco, and Eileen Johnson
 2006 A Preliminary View of the Coexistence of Mammoth and Early Peoples in Mexico. *Quaternary International* 142/143:79-86.
- Aschmann, Homer
 1952 A Fluted Point from Central Baja California. *American Antiquity* 17:262-263.
- Bryan, Alan, and Ruth Gruhn
 1999 *Excavations at the Abrigo Paredon, Laguna Chapala, Baja California, Mexico*. Technical report, Centro INAH Baja California, Mexicali.
- Davis, Loren G.
 2002 Geoarchaeology and Geochronology of Pluvial Lake Chapala, Baja California, Mexico. *Geoarchaeology: An International Journal* 18:205-224.
- Des Lauriers, Matthew R.
 2005 Rediscovering Huamalgua, the Island of Fogs: Archaeological and Ethnohistorical Investigations of Isla Cedros, B.C. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

Drakic, Danilo

- 2005 *Salvamento arqueológico Costa Azul-Lote 20*. Technical report, Centro INAH Baja California, Mexicali.

Guía-Ramírez, Andrea

- 2007 Cómo rescatar un mamut y no morir en el intento. *CAMINAH por los Centros* 12-18.
2011 Los fósiles de Algodones. Paper presented at the ciclo de conferencias del Museo Histórico Regional de Ensenada.

Guía-Ramírez, Andrea, and Fernando Oviedo-García

- 2009 Historia de un rescate: Mamut de San Quintín. Paper presented at the X Encuentro Binacional: Balances y Perspectivas, Mexicali, Baja California.
2011 Realidad o mito: la cacería de mamuts en Baja California. Paper presented at the XII Encuentro Binacional: Balances y Perspectivas, Mexicali, Baja California.

Hyland, Justin R., and Maria de la Luz Gutiérrez

- 1995 An Obsidian Fluted Point from Central Baja California. *Journal of California and Great Basin Anthropology* 17:126-128.

Massey, William C.

- 1947 Brief Report on Archaeological Investigations in Baja California. *Southwestern Journal of Anthropology* 3:344-359.

Porcayo Michelini, Antonio

- 2007 *Proyecto Registro y Rescate de Sitios Arqueológicos de Baja California: Fase Municipio de Mexicali, informe técnico parcial de la primera temporada y propuesta para el trabajo de campo 2007*. Centro INAH Baja California, Mexicali.