

## Preliminary Results of Excavations at the Late-Pleistocene Site of Las Monedas, Semi-arid Coast of Chile

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Our ongoing early settlement research program along the Los Vilos coast (31° S) considers all Pleistocene evidence, with or without cultural associations (Méndez et al. 2004), and no matter how complex the depositional context of the remains. Under these premises, our research team excavated the Las Monedas site (LV. 210), where late-Pleistocene mammal bones were ambiguously associated with a few lithic artifacts (Méndez et al. 2006). The site lies along a small ravine that drains a paleolacustrine basin (Varela 1981), just 2 km from the edge of the sea. Discontinuous stratigraphic profiles expose evidences through different energy-event layers, defined by the particle size of the sediments. Most remains were identified within two low-energy strata composed mainly of fine-grained sands. Excavations limited to the upper cultural stratum (layer 6) involved in situ unearthing and piece plotting of all materials in a 15-m<sup>2</sup> area. The record was very sparse, with only 33 bone remains and 18 lithic artifacts. A small test pit (1 m<sup>2</sup>) confirmed the presence of a lower, less dense stratum separated from the upper stratum by a thin sandy compact layer.

Among bone materials, native horse (*Equus* sp.), extinct camelid (*Palaeolama* sp.), and ground sloth (Milodontinae) were identified. Most are vertebrae of the first two taxa and ground sloth skin bones (i.e., ossicles). Nonetheless, remains are considerably fragmented, preservation is good, and there are no signs of weathering. Rootlet etching is present on one side of the bones, suggesting depositional stability, while evenly distributed abrasion implies flow of sediment particles carried by water (Lyman 1994). Culturally modified remains are restricted to a humerus of native horse, which bears a traumatic fracture with an impact point and negative flake scars. No carnivore action was detected on this bone; however, other horse and camelid remains exhibit these traces. One third metacarpal of *Equus* sp. was recorded in direct associa-

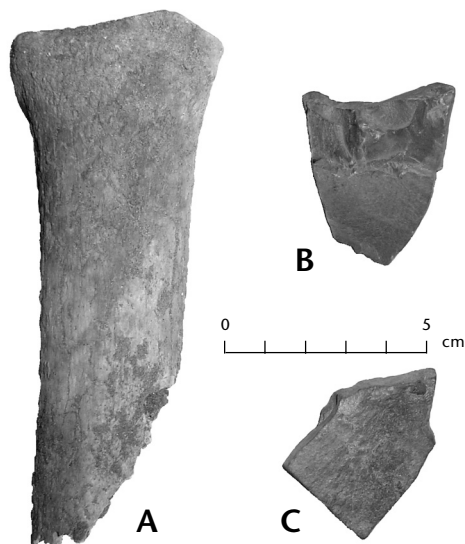
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tion with a fine-grained volcanic tuff flake (Figure 1). Other anthropogenic evidences, including a small chipped nodule, suggest lithic reduction on this locally available and abundant rock. Faunal diversity, high fragmentation, and anthropogenic traces on one bone and lithic material argue for some degree of cultural agency in the formation of the deposit. However, the particular nature of water flow was principally responsible for the secondary deposition of the materials. We propose that it is likely that the observed remains were originally deposited at a short distance upstream (since transport traces are few) and not necessarily in the same positions as recorded at the site.

Attempts to date horse bones, by conventional and AMS  $^{14}\text{C}$  techniques, have



**Figure 1.** Bones and lithics from Las Monedas (LV. 210): **A**, third metacarpal of *Equus* sp.; **B**, chipped nodule; **C**, flake directly associated with **A**.

been unproductive. The abundance of flowing water and bone exposure seem to be responsible for collagen loss. Regional experience suggests remains should be of late-Pleistocene age, an idea supported by the taxa represented and the site's similarity and proximity (less than 2 km to the west) to Quebrada Quereo (Núñez et al. 1994). Both sites share analogous geological contexts, and both exhibit two independent stratigraphic events with extinct fauna, but only Quereo has definite evidence accounting for human processing of extinct herbivores (Jackson et al. 2003). It is significant that taphonomic observations described for Las Monedas are mainly the same as those recorded for the earliest level of Quereo (López et al. 2004). Also, 800 m northwest of Las Monedas, the El Membrillo site exhibits remains of *Mylodon*, native horse, and *Palaeolama*, some with anthropogenic traces and others in surface association with lithic artifacts (Jackson 2002). Altogether, the evidence from Quereo, El Membrillo, and Las Monedas suggests a complex ecological and cultural panorama for the terminal Pleistocene of the Los Vilos coast.

Though materials at the Las Monedas site are complex and elusive, they suggest probable close proximity to a primary deposit. For this reason new excavations at

the edge of the ravine, more dating attempts, and assessing formation processes that account for bone-artifact associations could reveal significant relations.

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