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Archaeological evidence of *Pudu pudu* (Cervidae) in central Chile

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Pudu pudu is the smallest South American deer. Normally, their head and body length measures approximately 800 mm, the height of the shoulder 400 mm, typically the weight less than 10 kg. Males bear a spike-like antler. *Pudu pudu* is endemic to forest regions of south-central Chile, inhabiting dense forest and bamboo patches (OSGOOD 1943; NOWAK and PARADISO 1984; see HERSHKOVITZ 1982 for a review of the genus). In Chile, *P. pudu* occurs from Curicó (35°S) southward, exhibiting a more continuous distribution south of Bio Bio down to northern Magallanes (46°S app; TAMAYO and FRASSINETTI 1981). However, it is presumed that *P. pudu* formerly extended their distribution further north, but there is no evidence to support this assumption. Further, it is assumed that *P. pudu* disappeared from northern areas only recently (MILLER 1980).

During the recovery of faunal remains from archaeological sites in the foothills of the Andes of Santiago, we found a specimen attributable to *P. pudu*. Here, we describe this finding.

The remain was recovered from an excavation at La Batea 1 rockshelter, located in the El Manzano creek, Maipo River (33°S). The site is located at 1250 m above sea level in the foothills of the Andes of Santiago. This site was used by prehistoric humans from 5560 ± 250 to 1430 ± 280 B.P. as a stopover refuge while in transit from the lowlands to the higher mountains (CORNEJO and SIMONETTI 1990). The remnant was recovered among faunal remains from other mammals, including rodents and camelids. The single piece attributed to *P. pudu* is the lower portion of an eroded antler, which was recovered from stratum 5, dated 2390 ± 130 B.P. The specimen comprises the burr and a small portion of the beam. The diameter at the base is 9.7 to 8.0 mm, and the beam has a strong angulation toward the back (141°), typical features of *Pudu* antlers. The specimen is labeled B1 EC1 (C2) N7 in the temporary collection of the Chilean Museum of Precolumbian Art at Santiago.

Archaeofaunal specimens employed as an attribute of an archaeobiological sample can be used confidently to assess the presence of a given animal species in a region (e.g., GRAYSON 1983). In our case, the single antler recovered gives support to the previous contention that *P. pudu* may have had a wider distribution in the recent past (MILLER 1980). The paucity of the archaeological and paleontological records precludes any analysis regarding the speed and potential causes of their disappearance from the Andes of Santiago. The single record dates from the late Archaic period, when human populations exploited the Andean region only seasonally, prior to the advent of native agriculture and presumed habitat alteration that could have diminished *P. pudu* populations (MILLER 1980; CORNEJO and SIMONETTI 1990). Further, the scarcity of records could also reflect the rarity of this species in central Chile due to lack of suitable habitat following the last glacial period (MILLER 1980). The disappearance of another cervid, *Hippocamelus bisulcus* from north-central Chile during the Holocene may give some support to this argument. *Hippocamelus* is currently distributed much like *Pudu* in south-central Chile, but during the late

Pleistocene reached the 31°S (SIMONETTI 1990 for a review). Both *Pudu* and *Hippocamelus* may have restricted their distribution following the vegetational changes that followed the last glacial period (e.g., HEUSSER 1983).

Reference osteological collections of *P. pudu* are almost non-existent in Chilean museums (YÁÑEZ 1982). This fact may have precluded the analysis of faunal remains from archaeological sites. Fortunately, *Pudu* remains can be distinguished from other cervids because the cuneiform is fused with the navicular/cuboid, rendering a key element to determine the presence of this species in the archaeological record. Undoubtedly, a careful reexamination of bones from large mammals recovered in central Chile is urgent, as it may clarify past and present distributional patterns of the mammalian fauna.

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