

Techno-Morphological and Use-Wear Analysis on Lithic and Bone Tools from Campo Laborde Site (Pampean Region, Argentina)

Pablo G. Messineo and Nélida Pal

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Investigations carried out at Campo Laborde site provide new evidence for technological strategies associated with hunting and butchering a giant ground sloth (*Megatherium americanum*) during the early Holocene (Messineo and Politis 2009; Politis and Messineo 2008). Debitage analysis developed previously indicates that the last stages of the lithic reduction sequences (production and resharpening of cutting tools) were recognized both on non-local quartzite and on local raw materials such as chert and silicified dolomite (Messineo 2008; Politis and Messineo 2008). This paper reports techno-morphological and use-wear analysis performed on two lithic and two megamammal bone tools found in the site.

Both lithic tools were made on quartzite. One is interpreted as the base of a broken lanceolate bifacial projectile point. The bottom of this piece is convex with a transverse fracture, and with the edge not abraded. One face has laminar pressure-flaked scars along the base, and the opposite face has a single tiny fluting scar (Figure 1A). Use-wear analysis indicates that both edges have sedimentary abrasion and soil sheen and lack diagnostic features associated with tool use. The face with the small fluting scar, on the other hand, has fractured quartz crystals and micropolishing in the first stages of formation associated with striations and small pits (Figure 1B). This evidence suggests that this projectile point was probably used hafted. The second tool is a sidescraper made from a large flake without cortex. It has two working edges with unifacial and marginal retouches (Figure 1C). This tool has been completely modified by sedimentary abrasion and soil sheen (Figure 1D), but shows no evidence of polishing.

Both bone tools were made on megafaunal remains. One of them is made from the right distal end of a giant ground sloth rib. This implement is a fracture-based utilitarian bone tool (*sensu* Johnson 1985). Its fracture edge is rounded and polished. These modifications are localized on the end section of the fracture edge; adjoining segments of the fracture edge and the rest of the rib are unmodified (Politis and Messineo 2008: Figure 10). The second

Pablo G. Messineo, CONICET-INCUIA, Facultad de Ciencias Sociales (UNCPBA), Av. Del Valle 5737, Olavarría (B7400JWI), Argentina; e-mail: pmessineo@soc.unicen.edu.ar

Nélida Pal, CONICET-INCUIA (Facultad de Ciencias Sociales, UNCPBA), Centro Austral de Investigaciones Científicas (CADIC), Bernardo Houssay 200, Tierra del Fuego (9410), Argentina; e-mail: nelidapal@cadic-conicet.gob.ar

bone tool is a fragment of a rib from an unidentified megafaunal species. Along the exterior compact bone are negative flaking scars produced during tool manufacture (Figure 1E). One bone flake was refitted on one of these negatives (Messineo 2008). The end edge of this piece is rounded and polished with parallel striations and microflaking on the exterior cortical surface that are probably related to its use (Figure 1F). The rest of this piece does not show these types of modifications. Use-wear analysis of the end segment of the fracture edge (Figure 1G) detected polishing with thin and wide parallel striations. This polish was the result of contact between the bone piece and a hard material, perhaps associated with its use. In contrast, the rest of the tool has an irregular surface with moderate to severe alteration associated with a taphonomic origin (Figure 1H).

Campo Laborde was interpreted as a megamammal hunting and butchering site. For these activities, people used lithic and bone tools. Lithic tools were curated items associated with the individual toolkit of the hunters. The megamammal bones were fractured and used as expedient tools in butchering tasks. Different megafaunal species have been interpreted as food resources for hunters (Gutierrez and Martínez 2008; Politis and Gutierrez 1998; Politis and Messineo 2008). At Paso Otero 5 site megamammal bones were exploited as raw material for combustion (Martínez 2001). Campo Laborde yields the first evidence in the Pampas for megamammal bone-tool technology.

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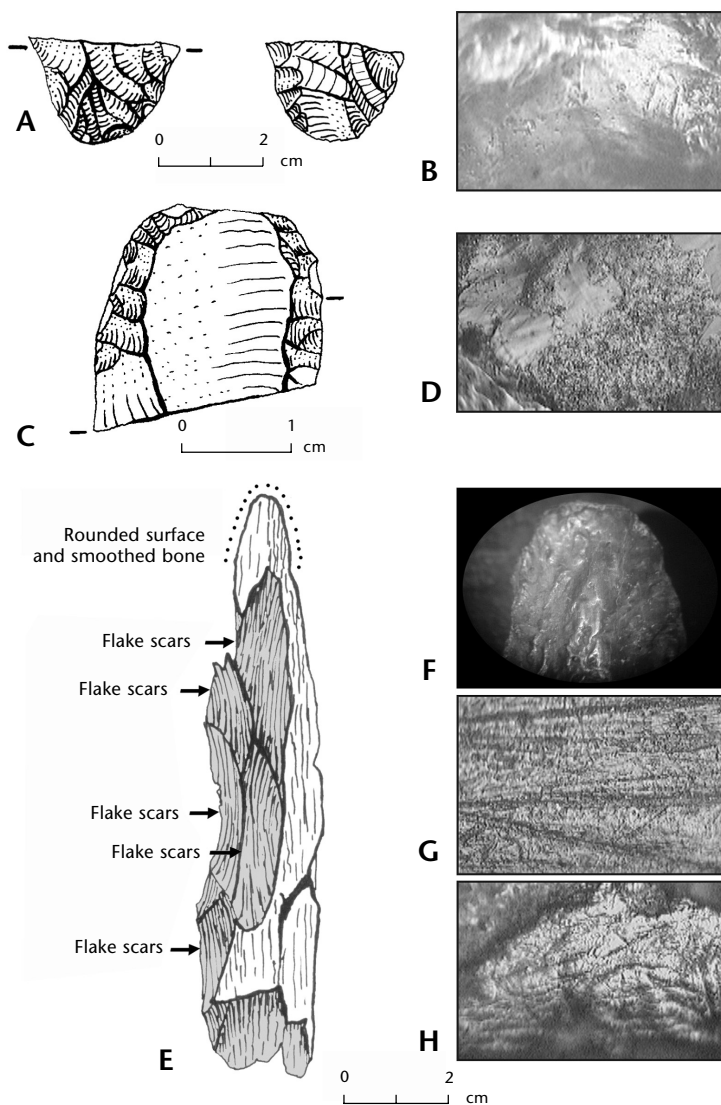


Figure 1. A, Projectile point; B, striation and small pits associated with micropolished (x 200 magnification); C, sidescraper; D, sedimentary abrasion (x 200 magnification); E, bone tool with negative flake scars F, end edge exhibiting rounded and smoothed surface (x 40 magnification); G, end edge polished with thin and wide parallel striation (x 200 magnification); H, irregular surface with sedimentary abrasion (x 200 magnification).