

New Paleoindian Finds and Microwear Analysis at the Arroyo Cacique Site, Tacuarembó Department, Uruguay

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The Middle Negro River basin in the central part of Uruguay has produced an unusual archaeological record. Over the years Paleo South American remains were recovered as isolated finds or in archaeological sites. One of these sites, Arroyo Cacique (AC, Tacuarembó Department; 32° 41' 54.30" S, 56° 11' 30.66" W), yielded diverse terminal-Pleistocene/Holocene projectile points and unifacial tools. Among them were unequivocal Paleo Southamerican Fishtail points, systematically dated in the Southern Cone at ca. 11–10 kya (Nami 2007). AC is currently submerged beneath the Rincón del Bonete Lake. When the water level falls, however, a small island about 200 by 800 m with archaeological remains emerges. Paleoindian finds were reported previously (Nami 2007: Figure 4), and several recent visits have produced additional artifacts (Figure 1A–E) consisting of Fishtail points (AC1–3), unifacial tools (AC4–5) and a bladelike flake (AC6).

A brief description of each piece follows, with dimensions (length, width, and thickness in mm) in parentheses. AC1 (Figure 1A) (17.0 x 21.9 x 6.2) is a red chert Fishtail stemmed point fluted on both faces and probably broken by use. AC2 (Figure 1B) (27.5 x 18.8 x 7.8), made from crystal quartz, shows a flake starting at the tip and ending at a step fracture, possibly produced by impact, that eliminates a great part of the blade. The blade does not have enough mass to bear continued resharpening, and for this reason it was probably discarded. AC3 (42.1 x 19.0 x 8.6, Figure 1C), made on dark brown silicified sandstone, has a fracture on the tip, and a step and burin-like fracture located on one border and the opposite edge. As usual on Fishtail points, the margins of the stem are highly abraded. These points show signs of resharpening and fractures from use, a common condition seen on other Fishtail points from South America (Nami 1998, 2000).

The state of the projectile points suggests that they were probably brought to the site on foreshafts and that repair of weapons was one of the activities performed there. AC2 reaffirms that Fishtail-producing hunter-gatherers preferred crystal quartz as raw material (Nami 2009). The similarity of AC3 to a

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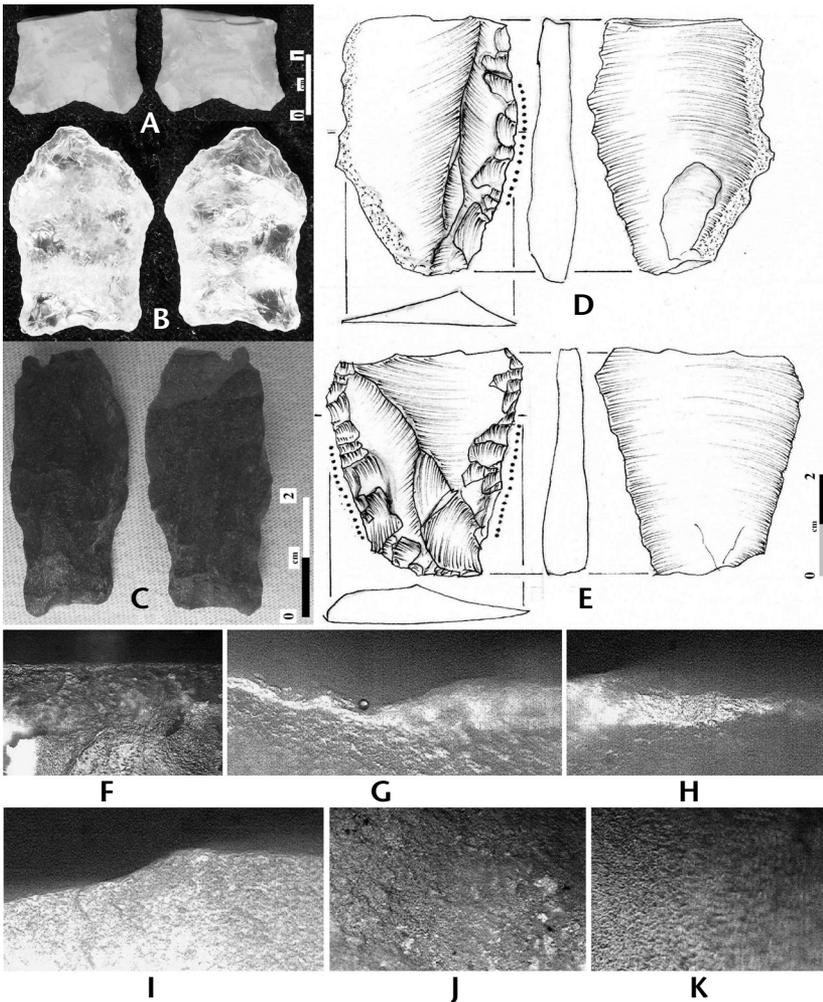


Figure 1. A–E, Paleolithic artifacts recovered at Arroyo Cacique site. **A**, Fishtail fluted stem; **B–C**, Fishtail points; **D–E**, unifacial tools showing microwear location along the edges; **F–J**, photomicrographs of the damage observed during microwear analysis; **F**, functional edge of AC4 used to scrape an undetermined hard substance; **G–H**, micro lunar flakes and micropolish that might be attributed to bone observed on AC5; **I–J**, natural edge and surface of AC6 showing generalized luster; **K**, experimental fresh fracture, which lacks the luster shown in previous images.

Fishtail point found at Cueva del Medio in southern Chile is remarkable (Nami 1985-86: Figure 6, 1987: Figure 16a).

Three pieces that might be considered part of the Paleolithic lithic assemblage by virtue of striking technological and typological similarities were also recovered (Nami 2007). Two are unifacial tools, AC4 (Figure 1D) (53.2 x 25.8 x 8.9) and AC5 (Figure 1E) (46.3 x 39.5 x 8.2); AC6 (52.2 x 32.8 x 9.7) is a non-

retouched distal part of a bladelike flake made on red chert, a stone commonly used by early hunter-gatherers in this part of the continent. Flake blanks of these tools show careful platform preparation and diffuse bulbs and lips, suggesting use of some kind of strategy for preparing the core and detaching flakes using a variation of soft percussion flaking (Nami 2006).

Use-wear analysis on these pieces was done using the “high power” approach following Keeley’s (1976, 1980) methodology. Polishing intensity and striations were analyzed with a UNION metallographic microscope with magnification between 100x and 300x. Despite the fact that AC artifacts came from an underwater site, their edges and ridges do not show water alterations (rounding by water abrasion, salt deposit, or an opaque patina) such have been observed in the late Pleistocene/early-Holocene artifacts from the flowed zone of Los Toldos cave 2 (Cardich et al. 1993–94). The generalized luster, however, suggests some wind polishing with sand. AC4 shows non-intensive generalized luster on the entire surface and small striae with perpendicular orientation to the functional edges, indicating that it was used to scrape an unidentified hard substance (Figure 1F). Both edges of AC5 have polishing striations and a few semilunar flakes that suggest the tool was used with a longitudinal action for cutting a hard substance, probably bone (Figure 1G–H). Finally, specimen AC6 shows no functional wear, but has generalized luster and abrasion on the natural edges and entire surface (Figure 1I–J). This modification did not occur on a fresh fracture experimentally produced in a piece of the same raw material (Figure 1K).

In summary, the new finds from the AC site provide additional details on the lithic technology employed by Paleo South American hunter-gatherers living in the eastern part of the Southern Cone during the terminal Pleistocene. They also further our understanding of stone tool function and technological organization, a topic not very well known in this part of the South America.

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