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Roxana Cattáneo, Andrés Dario Izeta & José María Caminoa

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RESEARCH BRIEF

A Fishtail Projectile Point from the Southern Pampean Hills, Characato, Córdoba, Argentina

Roxana Cattáneo, Andrés Dario Izeta  and José María Caminoa

Instituto de Antropología de Córdoba (CONICET) and Universidad Nacional de Córdoba, Córdoba, Argentina

Here we report a newly discovered Fishtail projectile point, or Fell 1 projectile-point type, from Characato valley in the southern Pampean Hills of central Argentina. It is a fluted basal stem fragment on a non-local dark red volcanic rock. Fishtail points are rare, and archaeological sites dating to the Pleistocene-Holocene transition particularly scarce, in this region; hence, this new evidence importantly establishes early human occupation through material culture.

Keywords Fishtail projectile point, Córdoba, Argentina, surface

During the 2008 archaeological field season in Characato valley, several localities were registered during a systematic survey carried out in Villa El Palmar ranch (Figure 1). While most of the sites seem to belong to the late Holocene, one site named Characato 34 has allowed us to record one of the few Fishtail projectile points (or Fell 1 projectile point type) recovered in this portion of Argentina's southern Pampean Hills. Evidence of early hunter-gatherer lifeways and their lithic technology is scarce in the region (e.g., Cornero et al. 2014; Laguens et al. 2007; Rivero 2012; Rivero and Berberían 2011; Rivero and Roldan 2005; Sario 2011), and only one locality (ELS1) has yielded Fishtail point technology (Laguens et al. 2007; Sario 2011). ELS1 is located in the same mountain range but on the opposite slope of the new find, on a straight line 200 km from Characato. In addition, two Fishtail points were recovered some years ago in Villa del Lago, Río Tercero (Córdoba), described by Schobinger (1972) in the same mountain range, halfway between ELS1 and Characato 34. Elsewhere in the Southern Cone, Fishtail points are widespread (e.g., Flegenheimer et al. 2013; Loponte et al. 2015; Politis 1991) but mainly recovered from the surface. Nonetheless, they are used as an indicator of early hunter-gatherer populations during the Pleistocene-Holocene transition in South America because of very well-known dated contexts ranging from 11,000 to 10,000 cal yr BP. Indeed, 75 per cent of the cases listed in Flegenheimer et al.

(2013, table 21.1) corresponds to surficial findings with no absolute chronological context ($n = 113$).

The raw material of the Characato 34 projectile point was described by geologist Dr Edgardo Baldo (CICTERRA-CONICET/UNC) as a dark brown

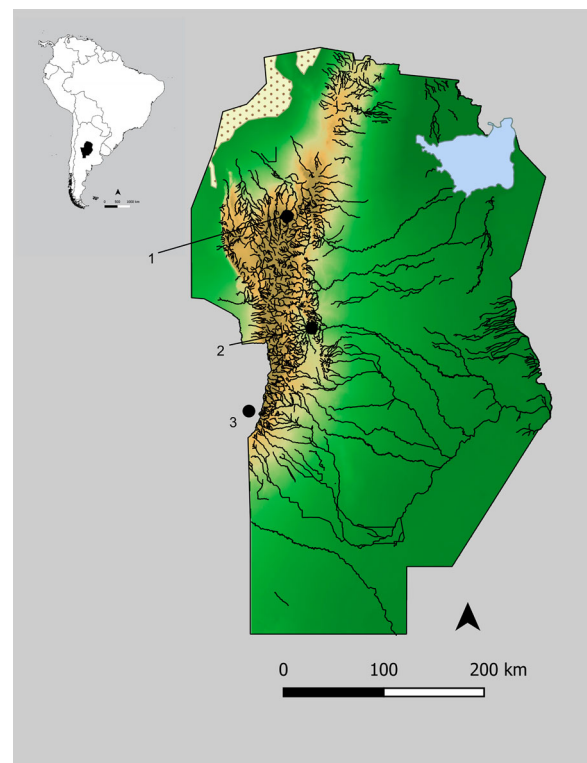


Figure 1 Map showing locations of the Fishtail projectile points from Córdoba, Argentina (1, Characato; 2, Villa del Lago; 3, ELS1 (San Luis, Argentina)).

Correspondence to: Roxana Cattáneo. Email: roxanacattaneo@gmail.com

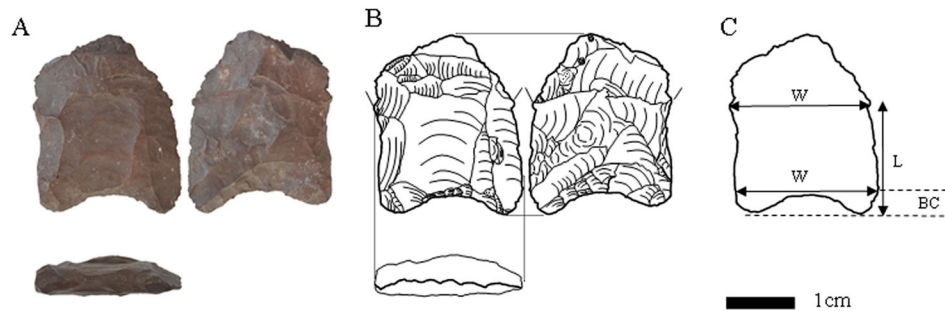


Figure 2 The Fishtail projectile point from Characato. (A) Photographs of the point's two faces and transverse view; (B) line drawings of the point's two faces and transverse cross section; (C) scheme of measurements (W: width; L: length; BC: basal concavity).

volcanic rock mineralized with sulfides of iron and lead (e.g., pyrrhotite, magnetic iron sulfide), with small particles of uniform metallic luster. Under magnification, metal ores are recognized, including yellow brass, a gray metallic gloss, and, to a lesser extent, milky white minerals. These are embedded in a matrix of very fine dark coloration. The material fractures conchoidally, has an average density and hardness of 5 on Mohs scale, and, as a particular feature, has a weakly magnetic character. According to Baldo (1992), who developed his research in the area, this dark brown volcanic rock appears to be an extra-microregional raw material.

The fragment of the fluted stem was found close to the modern shore of a small water reservoir. It displays thermal alteration damage, with a transverse fracture in the neck and a thermal-damage spall. The Fishtail point's fracture surface has a helical development, so that it can be interpreted as a bending fracture or similar flintknapping error (e.g., Jennings 2011).

The point's stem is 25.4 mm long and 20.7 mm maximum wide at the base. Its maximum thickness is 6.1 mm at the base. The stem is concave and was achieved through a fluted technique with later ultra-marginal retouching. Bifacial thinning completely covers the stem; however, on one of the faces (Figure 2A and 2B), thermal alteration has almost eliminated all the flake scars. We also noted scars of potlids and other irregular fractures typical of damage resulting from exposure to post-depositional high temperature. On the other face, a fluted channel was formed by one main flaking event, but three small successive flake scars can still be observed, probably related to the preparation of the beveled platform. The point has a basal concavity of 0.35 mm (Figure 2C).

Importantly, no other types of fluted-stemmed projectile points other than Fishtail points have been found in the area.

In sum, this material culture is consistent with the other two reported occurrences of Fishtail points in the region, together showing characteristics similar to

such projectile points elsewhere in southern South America corresponding to late Pleistocene/early Holocene occupations. Thus, these findings could be interpreted as supporting the "Least Cost Peopling Model" for the region proposed by Laguens et al. (2009). Expecting main rivers to be the entry points for exploration of new territories, it is worth pointing out that the Fishtail point findings occur in an area that connects the southern Pampean Hills with the Río de la Plata Basin and the Pampean region. Through the basin of this river (Río Tercero or Ctlamochita) and close to its headwaters area, the three known examples of Fishtail points occurred, which could be a product of the period of exploration/colonization by the people with Fishtail technology, although evidence is still scarce to establish their relationship with the archaeological findings at El Alto 3 (Rivero 2012), one of the few archaeological sites in the region with early radiocarbon dates reaching around 11,000 ^{14}C yr BP.

The Characato Fishtail point presented here is similar to other Fishtail points from the Pampean and Patagonian regions, located in a low-elevation setting with a wide viewshed of the open plains and neighboring hills. In this sense, the location of the three Fishtail point sites in the region as well as the extra-local raw material support the idea of long-distance social networks (Flegenheimer et al. 2015). With this finding in the southern Pampean Hills, we add new information supporting the Southern Cone archaeological-landscape perspective of the first settlers—that they had a nomadic existence with a common technology and perception of the world (e.g., Flegenheimer et al. 2013; Mazzia 2010–2011; Mazzia and Flegenheimer 2012).

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ORCID

Roxana Cattáneo  <http://orcid.org/0000-0001-6041-2929>

Andrés Dario Izeta  <http://orcid.org/0000-0002-7209-2683>

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