

# The First Paleoindian Fishtail Point Find in Salta Province, Northwestern Argentina

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## Abstract

Fishtail or Fell projectile points represent an excellent marker to know the presence of earliest hunter-gatherers populations living during the end of the Pleistocene and its transition to the Holocene. They are widespread in many places along Central and South America. However, there are certain areas with elusive occurrence. Adding new information on the continental and regional distributions of this paleo South American artefact, this paper reports a detailed morphological and technological study of the first fishtail point find in the Salta province, Northwestern Argentina.

## Keywords

Fishtail Points; Lithic Technology; South America; Northwestern Argentina

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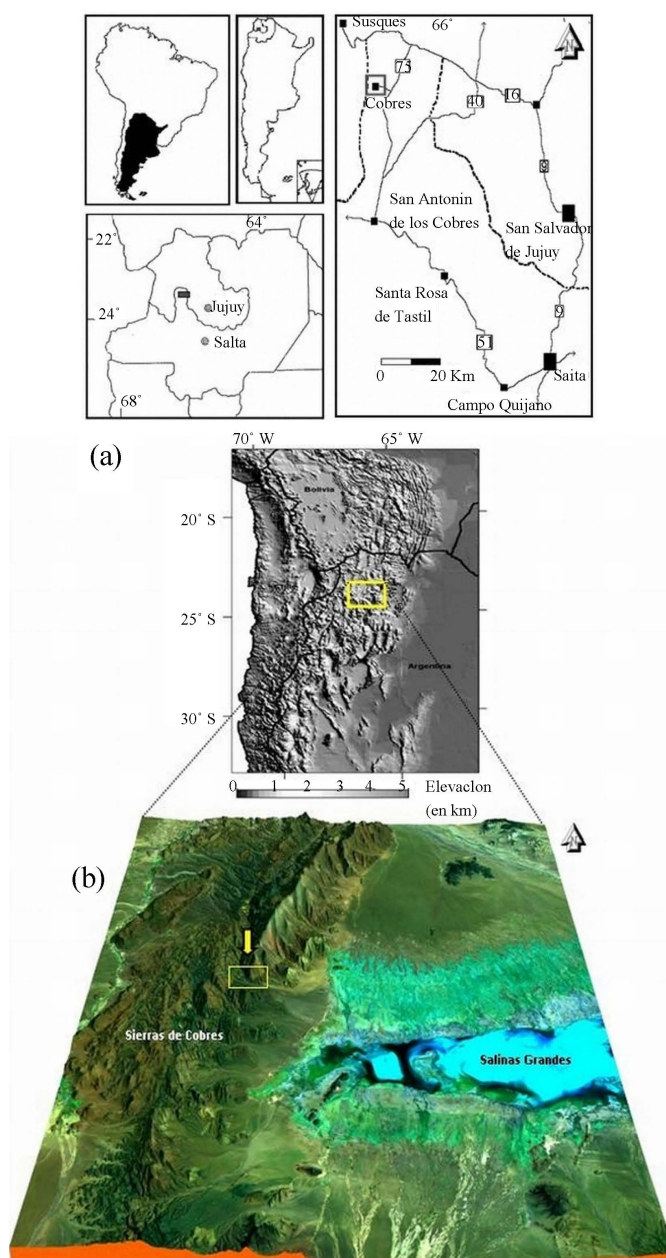
## 1. Introduction

For a long time, the western part of South America and mainly the Andean Cordillera has been proposed as the dispersion area of Paleoindian hunter-gatherers that used fishtail or Fell projectile points in their weaponry (Schobinger, 1969, 1974; Mayer-Oakes, 1963). They represent an excellent marker to know the presence of hunter-gatherers populations living during the end of the Pleistocene and its transition to the Holocene at about 11,000 - 10,000 uncalibrated radiocarbon years ago. Along the Andes, fishtail points have been found in Colombia (Ardilla Calderón, 1991), Ecuador (Bell, 1965; Mayer-Oakes, 1963), Peru (Chauchat & Zeballos Quiñones 1979; León Canales, 2007; Díaz Rodríguez, 2008; Briceño, 2010) and Chile (Nuñez, 1994; Nuñez et al., 2010; Jackson et al., 2007; Nami, 1987). In western Argentina, Fell points have been reported in the provinces of Mendoza (Schobinger, 1971, 1974) and Neuquén (Schobinger, 1974; Nami, 1992). However, despite

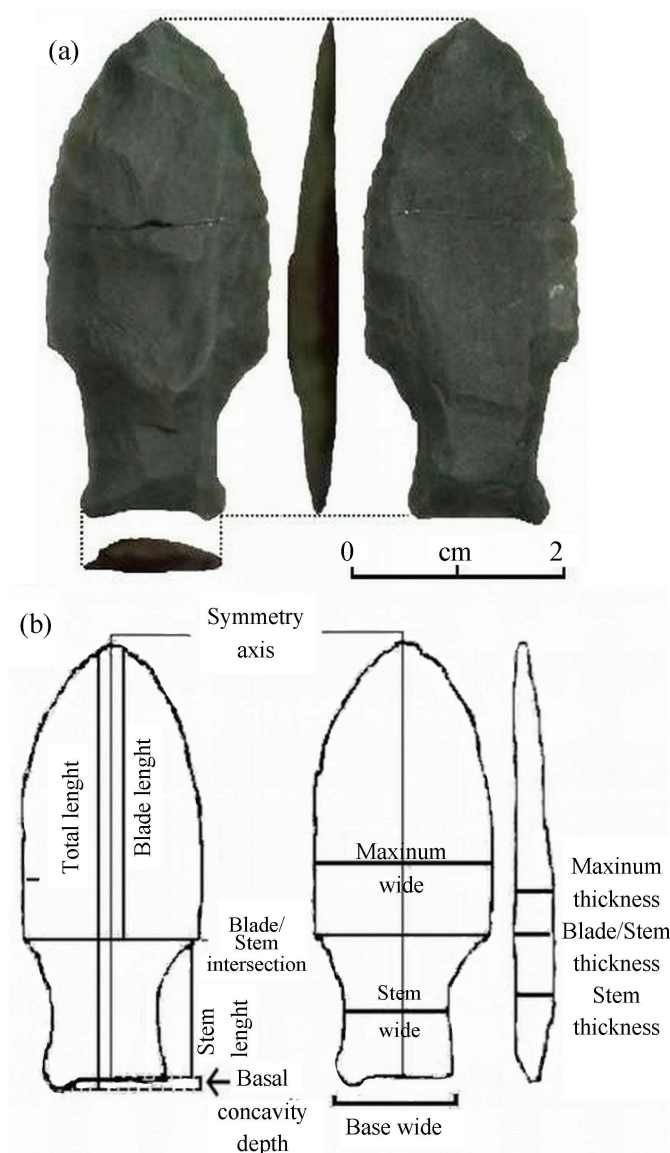
the existence of sites of the same antiquity, fishtail points have not previously been reported in northwestern Argentina. Indeed, their finding has been elusive for many years. Therefore, from that region, in this paper we report a detailed morphological and technological study of the first fishtail point find in the Salta province.

## 2. Morphological and Technological Observations

The example described in this article was found near Cobres ( $23^{\circ}38'59''\text{S}$ ,  $66^{\circ}17'17''\text{W}$ ), a small settlement in La Poma department. Cobres is in the Sierra de los Cobres mountain chain in the eastern Andean puna, near the border of Jujuy province, west of Salinas Grandes at 3.545 m elevation (**Figure 1**). It was found by a local resident and donated to a small museum in the school locality. The specimen (**Figures 2(a)** and **(b)**) is made of high



**Figure 1.** Location of Cobres in Salta province, NW of Argentina (a) related with the Salinas Grandes (b).



**Figure 2.** (a) Fishtail point from Cobres; (b) Measurements' position.

quality green siliceous phyllite, a common rock west of Salinas Grandes (Kirschbaum, pers. comm. 2011). It has a transversal fracture in the middle and was refitted by its finder. It is 45 mm long, 21 mm wide, and has a symmetrical plano-convex transversal cross-section. Thickness is 6 mm in the middle and 5 mm at the blade/stem intersection. The blade is 31 mm long and the stem is 14 mm long by 12 mm wide at the middle and 19 mm wide at the base. Stem thickness is 4 mm in the middle and the concavity in the base is 1 mm deep. As usual in Fell points, the stems show abrasion along the edges. The junction between the blade and the stem has a slightly rounded shoulder, a variation observed in other fishtail points (Nami, 2010, 2012, 2013). The obverse shows flake scars that might result from thinning by soft percussion flaking on the dorsal face. The final shaping was by fairly regular pressure flaking that left short retouches no deeper than 10 mm from the edges. The flake scars on the flat ventral face suggest a similar procedure was applied there. The base of the stem was finished on the reverse using short retouches superimposed on a kind of flute 11 mm long. This kind of manufacture was a regular pattern among hunter-gatherers using these points during the last millennium of the Pleistocene. Pieces of similar manufacture have been found in Ecuador and Chile (Bird, 1969: Figures 2a, 3f), Argentina (Martínez, 2001), Brazil (da Silva Lopes & Nami, 2011), and Uruguay (Bosch et al., 1980: Figure 17; Nami, 2013: Figure

3p, 4b and d). As observed by Bird (1969) and shown experimentally by Nami (1987: Figure 27, 2010, 2011), this kind of point was made from flakes of similar thickness and not much larger than the finished product. Also, longitudinal and transversal cross-sections are generally plano-convex due to the use of thin flakes.

### 3. Final Comment

On the puna in NW Argentina, two unreported fishtail points have been found south of Salta in northern Catamarca province. One is from Antofalla (Haber, pers. comm. to Grosjean et al., 2005) and the other from Laguna Blanca in the Bolsón area (Aschero, pers. comm., 1999, Martínez, pers. comm., 2011). At similar latitude across the Andes but in the Republic of Chile, a fishtail point was found at the Salar Punta Negra 1 site in the Atacama Desert (Grosjean et al., 2005; Nuñez et al., 2010). These finds indicate that foragers using fishtail points were present in the southern Andean area during the end of the Pleistocene.

In summary, the specimen depicted here is the first carefully reported fishtail piece found in NW Argentina and the first Paleoindian evidence from Salta province. Its exhaustive analysis indicates that its technology and morphology are basically similar to other fishtail points in South America and adds new information on the continental and regional distributions of this paleo South American artefact.

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### References

- Ardila Calderón, G. J. (1991). The Peopling of Northern South America. In R. Bonnicksen, & K. L. Turnmire (Eds.), *Clovis. Origins and Adaptations* (pp. 261-282). Corvallis: Center for the Study of the First Americans.
- Bell, R. (1965). *Archaeological Investigations at the site El Inga, Ecuador*. Quito: Casa de Cultura.
- Bird, J. (1969). A Comparison of South Chilean and Ecuadorian “Fishtail” Projectile Points. *Kroeber Anthropological Society Papers* 40 (pp. 52-71). Berkeley: University of California.  
<http://dpg.lib.berkeley.edu/webdb/anthpubs/search?all=&volume=40&journal=5&item=5>
- Bosch, A., Femenías, J., & Olivera, A. (1980). *Dispersión de las puntas líticas pisciformes en el Uruguay. III Congreso Nacional de Arqueología. Anales*. Montevideo: CEA.
- Briceño, J. (2010). *Las tradiciones líticas del pleistoceno tardío en la quebrada Santa María, costa norte del Perú. Una contribución al conocimiento de las puntas de proyectil paleoindias cola de pescado*. Doctoral Dissertation, Berlin: Freien Universität Berlin. [http://www.diss.fu-berlin.de/diss/receive/FUDISS\\_thesis\\_000000018239](http://www.diss.fu-berlin.de/diss/receive/FUDISS_thesis_000000018239)
- Chauchat, C., & Zevallos Quiñones, J. (1979). Una punta cola de pescado procedente de la costa norte de Perú. *Ñawpa Pacha: Journal of Andean Archaeology*, 17, 143-147.  
<http://dpg.lib.berkeley.edu/webdb/anthpubs/search?all=&volume=17&journal=8&item=7>
- da Silva Lopes, L., & Nami, H. G. (2011). A New Fishtail Point Find from South Brazil. *Current Research in the Pleistocene*, 28, 104-107.
- Díaz Rodríguez, L. H. (2008). Una punta tipo “cola de pescado” con acanaladura de Quillane, Arequipa. *Tambo. Boletín de Arqueología*, 1, 73-82.
- Grosjean, M., Nuñez, L., & Cartagena, I. (2005). Palaeoindian Occupation of the Atacama Desert, Northern Chile. *Journal of Quaternary Science*, 20, 643-653. <http://dx.doi.org/10.1002/jqs.969>
- Jackson, D., Méndez, C., Seguel, R., Maldonado, A., & Vargas, G. (2007). Initial Occupation of the Pacific Coast of Chile During Late Pleistocene Times. *Current Anthropology*, 48, 725-731. <http://dx.doi.org/10.1086/520965>
- León Canales, E. (2007). *Orígenes humanos en los Andes del Perú*. Lima: Universidad de San Martín de Porres.
- Martínez, G. (2001). “Fish-Tail” Projectile Points and Megamammals: New Evidence from Paso Otero 5 (Argentina). *Antiquity*, 75, 523-528.
- Mayer-Oakes, W. (1963). Early Man in the Andes. *Scientific American*, 208, 117-128.

<http://dx.doi.org/10.1038/scientificamerican0563-116>

- Nami, H. G. (1987). Cueva del Medio: Perspectivas Arqueológicas para la Patagonia Austral. *Anales del Instituto de la Patagonia*, 17, 71-106.
- Nami, H. G. (1992). Nuevos datos en relación a las puntas de proyectil paleoindias encontradas en el Cono Sur (Neuquén, Argentina). *Palimpsesto. Revista de Arqueología*, 1, 71-74.
- Nami, H. G. (1997). Investigaciones actualísticas para discutir aspectos técnicos de los cazadores-recolectores del tardiglacial: El problema Clovis-Cueva Fell. *Anales del Instituto de la Patagonia*, 25, 152-186.
- Nami, H. G. (2003). Experimentos para explorar la secuencia de reducción Fell de la Patagonia Austral. *Magallania*, 30, 107-138.
- Nami, H. G. (2007). Research in the Middle Negro River Basin (Uruguay) and the Paleoindian Occupation of the Southern Cone. *Current Anthropology*, 48, 164-176. <http://dx.doi.org/10.1086/510465>
- Nami, H. G. (2010). Tecnología Paleoindia de Sudamérica: Nuevos experimentos y observaciones para conocer la secuencia de reducción Fell. *Origenes*, 9, 1-40.
- Nami, H. G. (2011). Observaciones experimentales sobre las puntas de proyectil Fell de Sudamérica. In A. Morgado, J. Baena Preysler, & D. García González (Eds.), *La investigación experimental aplicada a la arqueología* (pp. 105-111). Ronda: Universidad de Granada-Universidad Autónoma de Madrid.
- Nami, H. G. (2012). Arqueología del último milenio del Pleistoceno en el Cono Sur de Sudamérica, puntas de proyectil y observaciones sobre tecnología Paleoindia en el Nuevo Mundo. In E. Boëda, M. Farias, & A. Lourdeau (Eds.), *Peuplement et modalités d'occupation de l'Amérique du sud: l'apport de la technologie lithique/Povoamento e modalidades de ocupação humana na América do Sul: a contribuição da tecnologia lítica*. In Press.
- Nami, H. G. (2013). Archaeology, Paleoindian Research and Lithic Technology in the Middle Negro River, Central Uruguay. *Archaeological Discovery*, 1, 1-22. <http://dx.doi.org/10.4236/ad.2013.11001>
- Núñez, L., Casamiquela, R., Schiappacasse, V., Niemeyer, H., & Villagrán, C. (1994). Cuenca de Taguatagua en Chile: El ambiente del Pleistoceno y ocupaciones humanas. *Revista Chilena de Historia Natural*, 67, 503-519.
- Núñez, L., Grosjean, M., & Cartagena, I. (2010). Análisis secuencial de los patrones de ocupación humana y explotación de recursos en el Desierto de Atacama. *Chungara*, 42, 363-391.
- Schobinger, J. (1969). *Prehistoria de Suramérica*. Barcelona: Editorial Labor.
- Schobinger, J. (1971). Una punta de tipo "Cola de Pescado" de La Crucesita (Mendoza). *Anales de Arqueología y Etnología*, XXVI, 89-97.
- Schobinger, J. (1974). Nuevos hallazgos de puntas "Cola de Pescado" y consideraciones en torno al origen y dispersión de la Cultura de Cazadores Superiores Toldese en Sudamérica (pp. 33-50). Atti del XL Congresso Internazionale degli Americanisti 1, Roma-Genova.