

Projectile weapons before the bow: metric data from the southern Andes, 30–34°S

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Projectile technology was a significant factor in the demographic expansion of *Homo sapiens* out of Africa. Settlement in the Americas was made possible by a series of human strategies including the use of atlatls and throwing spears. These were the dominant weapons for much of the continent's human history, prior to the initial appearance of the bow and arrow. This significant technological breakthrough was culturally transmitted over a wide region and accompanied major economic changes. Most methods for distinguishing archaeological dart and arrow projectile points rely on metric comparisons to ethnographic collections (Shott 1997) and the general trend that spear points are large and heavy, atlatl dart points are somewhat smaller, and arrow points are the smallest. In the southern Andes, lithic points prior to the use of the bow include fishtail points (late Pleistocene–early Holocene), large stemmed and lancolate points (early Holocene) and triangular points (middle–late Holocene).

This paper's goal is to begin to characterize the metric variability of projectile points prior to the introduction of the bow in the southern Andes. To do this, we selected points from contexts that are unambiguously prior to the bow, based on associations with 1) preserved wood atlatl elements or 2) radiocarbon dates that are well prior to the introduction of the bow. We present data for 64 lithic points from the site Los Morrillos (30°S) in levels dated 4000–7500 years BP and at nine other sites (32–34°S) from levels dated 2000–7500 years BP. These points have also been analyzed morphologically to reduce noise by excluding points reused as knives. These data will allow us to estimate the metric range of pre-bow projectile points from secure archaeological contexts (Castro et al. 2021). This will help provide a stronger comparative baseline for identifying arrow points, which is currently done with ethnographic measurement that sometimes differ significantly from archaeological ones. This will also help establish a comparative baseline for the Andes, where regional variation may also be a factor in variable point sizes.

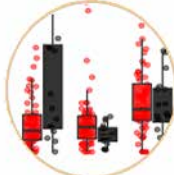


Dart projectile point and preserved foreshaft from the site Los Morrillos, San Juan (Gambier 1977).

8. LITHIC TECHNOLOGY AND EVOLUTION ORAL COMMUNICATION

References

- Castro, Silvina, Lucía Yebra, Valeria Cortegoso, Erik Marsh, Agustín Castillo, Agustina Rughini, María Victoria Fernández, and Raven Garvey. 2021. The Introduction of the Bow and Arrow Across South America's Southern Threshold Between Food-Producing Societies and Hunter-Gatherers. In *Ancient Hunting Strategies in Southern South America*, edited by J. Belardi, D. Bozzuto, P. Fernández, E. Moreno, and G. Neme, pp. 137–158. Springer International, Cham.
- Gambier, Mariano. 1977. *La cultura de Ansilta*. Instituto de Investigaciones Arqueológicas y Museo, Universidad Nacional de San Juan, Argentina.
- Shott, Michael J. 1997. Stones and shafts redux: the metric discrimination of chipped-stone dart and arrow points. *American Antiquity* 62:86–101.



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INDEX

Sponsors _____	5
Local Organizer Committee _____	9
Scientific Committee _____	9
Welcome _____	11
List of sessions _____	13
Foreword _____	15
Program _____	17
Abstracts _____	35
Authors List _____	233
Affiliation List _____	243