

Abstract

Projectile weapons and the identification of projectile points are very important features used to study evolutionary behaviours. These points act as indices to a variety of human social and cognitive activities. Methods of studying and identifying the emergence of this technology have primarily been focused on morphological identification. The most recent work in this area was undertaken by Shea (2006) who used tip cross-sectional area (TCSA) to extrapolate emergent human behaviours throughout Africa, the Levant and Europe. Shea (2006) used TCSA indices created from North American collections as well as replica points as the baseline for studying archaeological specimens from the Old World. That this comparative database was used across such a wide study region and had originally been used in America assumes that these values can be used universally to identify projectile points. Testing this premise was the focus of this research.

Using the extensive ethnographic and archaeological record in Australia, hafted projectile points of known function were compared to Shea's (2006) indexical TCSA values. The results showed that Shea's (2006) indices could not identify Australian hafted projectile points. This is because Shea's (2006) TCSA comparative database was comprised of points produced using different technological trajectories to the Australian points. A new set of indices based on hafted Australian points accurately identified unhafted Kimberley and *pirri* points. However, the indices failed to identify macroblade spears. Fundamental

problems were discovered in using TCSA indices for assemblages which include flakes which, while resembling typologies, did not share their function.