

ARTIFACTS AND FEATURES COSO JUNCTION PROJECTILE POINTS

This article is one of an occasional series discussing matters archaeological, especially with reference to the Maturango Museum. In previous articles I have talked about various techniques and nomenclature in archaeology, and I had intended to discuss dating of petroglyphs this month. Instead, however, I want to shift gears and discuss an actual archaeological analysis which we recently performed on three obsidian artifacts in the Museum collection.

In 2005 a small collection of obsidian artifacts was donated to the Museum by Mr. Galen White. The artifacts had been collected many years ago in the vicinity of Coso Junction by Mr. Lee Coleman, who was a long-time resident of Dunsmovin. Among the artifacts were several obvious projectile points, one recent (Cottonwood triangular) and three probably paleoarchaic. Among the latter were two slim, lanceolate points classified as Lake Mojave, which are part of a class known as Great Basin Stemmed points. In addition there was a broader point with the split base, classified as a Little Lake or Pinto point. All were probably used as points for atlatl darts, and were the focus of this analysis.

These points were said to be from surface finds, with no exact provenience given. We think that they came from the small playa south east of Coso Junction, since other obsidian point collections have been documented there. The sand erosion on the surface of the points shows they were exposed on the surface for an extended time. No non-obsidian artifacts were provided in the collection, so either the points were isolated finds or other artifacts were not of interest.

The points were first analyzed based on typology. The Lake Mojave form was first identified and described in 1967 by Dr. Claude Warren, who found them on the fossil shoreline of ancient Lake Mojave in the eastern Mojave Desert (not to be confused with the current Lake Mohave on the Colorado River). Warren dated them to 10,000 to 9,000 years ago. Dr. Gregory Haynes has recently argued that these points were phased out more recently, about 7,000 years ago in the Mojave Desert.

Little Lake/Pinto points have a more complex history. The type was first identified in the Pinto Basin in Riverside County by E. H. Campbell and E. W. C. Campbell and published in 1935. Subsequently, similar heavy points with bifurcated, or split, stems were identified in many places across the west, and so many variants were described that confusion reigned, described as the "Pinto Problem". To confuse matters further, some Pinto points exhibit only percussion flaking, while others show pressure flaking as well. Beginning in the 1980s an attempt was made to clarify the situation, and today the term "Pinto" generally refers to a broad, heavy point with shoulders and a split stem, with other variants consigned to other point types. The points with pressure flaking are technically termed "Little Lake" points, since they were first identified at the Stahl Site near Little Lake. The point from Coso Junction is strictly a Little Lake point, although the terminology is not used consistently, even by archaeologists. Pinto chronology has reflected this confusion in terminology, and has been characterized by Gregory Haynes as "a history of chronological obfuscation". He argued in a recent article that these points became predominant by about 7,000 years ago; when they ceased being used is not known, but they may have persisted until about 4,000 years ago.

Thus, typology of the points suggests very old artifacts, two in the neighborhood of 7,000 to 10,000 years, the other around 4,000 to 7,000 years. To this we can add estimates of age based on obsidian hydration. All three points have been tested in a laboratory to measure trace element composition, and the trace element “fingerprint” indicates they were made of material from an obsidian flow on the west side of Sugarloaf Mountain, near Coso Hot Springs. The hydration rate for this obsidian is well known, although improved measurements are published from time to time. The two Lake Mojave points have hydration rims of 16.4 and 13.3 microns, while the Little Lake point has a rim of 11.2 microns. These suggest ages of about 12,000 years, 8,000 years, and 6,000 years, respectively, with the caveat that hydration ages for artifacts recovered from the surface must be treated with care. The 8,000 and 6,000 year ages of one Lake Mojave point and the Little Lake point are consistent with what is known about these point types. The 12,000 year age for the other Lake Mojave point is suspect, but possible; it is more likely that the artifact has a chemical composition which caused somewhat more rapid hydration, with an actual age which is therefore somewhat less.

Thus, what we have here are three obsidian projectile points of great age. The two Lake Mojave points are probably on the order of 8,000 years old or older, while the Little Lake/Pinto point is about 6,000 years old. Further supporting this conclusion, paleoclimatic data on the level of Owens Lake suggest the whole area was considerably wetter during before about 6,000 years ago than it is now. Thus, the Coso region may have been a more attractive place to live at that time, and may have been conducive to hunting medium-sized game with atlatl and dart.

The analysis process described shows that a great deal can be inferred based simply on point typology, hydration readings, and ancient climate (and, of course, the cumulative published wisdom of prior generations of archaeologists and climatologists!). We can also regret that we do not have better provenience information. Were the points found on an ancient shoreline? Was there habitation debris nearby, or bone, or lithic debitage from flaking? Was there rock art? We just do not know, but we can infer from this simple analysis that people were hunting in the area 6,000 to 10,000 years ago, and hope their hunting trip was a success!