A Morphological Study
of
the Projectile Points from
the ShooFLy Village Ruins

Submitted by

Rosamond Downing
July 1, 1986
ASU Summer Field School, 1986
Shoofly Village is a prehistoric site which was occupied during the 12th century A.D. It is located south of the Mogollon Rim, near the modern town of Payson. The Shoofly ruins consist of a central core of contiguous rooms—some of which were 2 stories high. Around the core are groups of less well-built houses and ca. 10 curvilinear structures. "What we see here are two, perhaps, three community designs combined in a single settlement", perhaps this represents socially and culturally distinct groups of people living together at this one site (Dr. Redman). The entire village was then surrounded by a compound wall which has since fallen. The inhabitants of the
site were farmers and hunters. Their hunting quarry consisted of deer, rabbit, rodents, and fowl. The projectile points utilized to hunt these animals were fairly small and triangular. They were generally made of chert, obsidian, and basalt.

This study is based on projectile points retrieved from the 1984-1985 and the first 2 weeks of the 1986 field seasons. From a total of 186 points, 118 of what I considered to be the best examples of the morphological types which I have distinguished (Fig. no. 1). The purpose of the study was to determine if any patterns existed between the morphological types and their general location, level, and provenance, densities-
such patterns may reflect important cultural and social characteristics. I also performed a separate examination of obsidian points—due to the rare and distinctive nature of the material. I have divided the Shoshon projectile points into morphological categories:

Type 1 is triangular with straight edges; the base is concave. This form can vary in its maximum height, maximum width, and the degree of curve of the concave base. In many examples the base corners are quite elongated (Fig. 10, 1a).

Type 2 is triangular with straight sides and a generally flat base. This form has variations in the maximum height and the maximum width. Type 2 is problematic since some of the bases appear to have been intentionally made flat by pressure flaking, while others are clearly broken—as if snapped off of a larger point (perhaps from a morphologically different point!).

Type 3 is triangular with notched sides—one notch per side, both of which are at the same level. The base
is concave to varying degrees. This form also has variations in the minimum height and the maximum width.

- **Type 4** consists of the relatively large points with a distinct stemmed base. This type varies in maximum height and maximum width as well as the general shape of the body and the stem.

- **Type 5** is similar to **Type 3**, it is basically triangular with a notch on each side. The major difference is that the base portion is squared—rather than continuing in a straight line from the point to the base as in **Type 3**.

One thing which should always be considered is, with a study of this nature is the size of the sample: **Type 1** = 25 examples, **Type 2** = 30, **Type 3** = 44, **Type 4** = 14, and **Type 5** = 5. As the reader can see, types 4 and 5 are rather poorly represented. Therefore, conclusions based on these forms must be accepted with caution.
This project began with an analysis of the locations of the 5 types. Figure 20.2 demonstrates that none of the types concentrate heavily in any particular provenience. In fact most proveniences produced only 1 or 2 examples of a specific type.

The highest concentration seems to have been type 3 in areas 134/114 = 6 examples and 129/174 = 5 examples — although I hesitate to call 5 or 6 examples concentration of something significant. From this datum, it would appear that the production or use of specific types was not confined to certain proveniences — but the reader must also remember that some areas have been excavated more than others — which may produce a distorted picture of the situation. Since this
analysis did not yield any major patterns, I broadened the study to ascertain whether there was any core-to-periphery concentration pattern (fig. no. 3). As for all projectile points—irrespective of specific morphological types—there appear to have been a greater concentration of point production, usage, or disposal in the periphery zone—one:periphery = 29:70—although one should keep in mind that the periphery encompasses a larger geographical area than the core. However, despite such a discrepancy this ratio does seem to represent some sort of cultural pattern. Could the projectile points in the periphery have been used to defend the site from human and animal intruders? Perhaps the village workshops
were located here. I suppose that the periphery could also have been the village's disposal area - the points found there being part of the inhabitants' "trash." The core vs. periphery examination was adjusted to focus on specific morphological types (fig. nos. 203). Types 2 through 5 represent the greatest differences in core & periphery ratios. Type 1 may have been an "all-purpose" point, used by all villagers (this might explain its more even distribution between core and periphery). The distribution data were also examined in order to ascertain the degree to which the different morphological types appeared together in the various proveniences (figs. nos. 108). Of the 31 proveniences considered, 6 contained 4 & 6 of the...
types - 3 areas in the core and 3 areas in the periphery. Obviously the various morphological types were not usually made, used, or stored in the same proveniences - but when they were, the areas seem to have been evenly distributed between the core and the periphery. 20 proveniences produced only 1 to 2 types each. Does this mean that those who lived in these areas made or used only a limited number of point types? Once again, these figures may be biased since the proveniences that yielded 4 to 6 types also generally produced the greatest number of points on the site (fig. no. 5). - Whether this is due to a naturally higher point concentration or
greater excavation activity if cannot say.

This projectile point study also included an examination of the morphological types according to levels. A very interesting pattern arose in which points of all types were most highly concentrated in levels 1 & 2 (level 2 actually generated more points than level 1; fig. 126). Most types were found through at least level 4, but the data may still be distorted due to more extensive excavation of the upper levels as well as the varying size/depth of the upper vs. the lower levels. Despite these problems, the data do appear to reflect a general increase in all morphological types in the upper levels. Was
there a population increase at this time requiring more hunting? Jane Bradley has suggested that these levels reflect a significant disposal of projectile points (perhaps as the "track" of later villagers). Jane also brought to my attention the great discrepancy between the surface and subsurface densities of projectile points (fig. no. 6). Do this further evidence of post-hunt at Sheeley? Perhaps the difference also reflects a drastic decrease in the population during the latter years of the site's occupation.

The obsidian points showed similar results with regards to their provenances and their levels (fig. 7); for example, most of the
points came from the periphery - core: periphery = 1:11. If the sample is representative then obsidian point production/use was concentrated in the periphery. These points also seem to be concentrated in levels 1 & 2. It is interesting to note that the points of this material (whose closest source is a ca. 4-day walk from the site) follow the same location/land patterns as the points made of local materials. etc. The presence was geographically widespread at Seafly (at least in the periphery - fig 180, 183) perhaps indicating that obsidian was available to all the inhabitants. Another interesting feature is that 7 of the 12 examples are type 3 - a form that
appears to be a bit more elaborate than some of the others, perhaps obsidian was employed just for the elaborate types because it was a valued material. The scarcity of obsidian in this region appears to be confirmed by the fact that none of the large, type IV examples were made of it.

Although this study did reveal some interesting patterns, I feel that the results must be supplemented by further excavation data and more in-depth statistical analysis.
Morphological Types

fig. 10.1  *Projectile Points not drawn to scale*
core: periphery (all morphological types)
29: 90

core: periphery (according to specific types)
1 = 10:15
2 = 7: 24
3 = 8: 36
4 = 3: 11
5 = 1: 4

fig. no. 3
E/N = number of points retrieved (Vigorous type)

p = frequency
c = core

129/171 = 10
18/111 = 12
113/124 = 8
117/173 = 8

fig. no. 5
Figure no. 7

Obsidian

Core: P

Levels

Number of points

0 1 2 3 4 5 outside wall

Type = Density

1 = 0

2 = 3

3 = 8

4 = 0

5 = 1
Bibliography

Bontrager, Dan. "Projectile Point Analysis Shoofly Village" (ASU Summer Field School Report)

Bradley, Jane. "Lithics at Shoo Fly Village: An intra-site analysis"

Dr. Redman, Charles. "Shoo Fly Village Ruins Tonto National Forest Payson, Arizona"