

Research Project
on
the Occurance of Plant Foods
at Shoofly Village
using Flotation Techniques

Kathleen Mcconnell 1986

**SHOOFLY CHAPTER
ARIZONA ARCHAEOLOGICAL SOCIETY
P. O. BOX 1613
PAYSON, AZ 85547-1613**

The purpose of this research project is to determine, if possible, the useable plant resources of the Shoofly Village area from the botanical remains. Very little is known of the climate and rainfall and subsequent vegetation at the time Shoofly Village was occupied (1000-1200 AD). Lands to the south and north have been shown to have had higher rainfall than at present (Paul Minnis). It is assumed that Shoofly Village is included in this weather pattern; however detailed information as to plant species, quantities available is lacking. This study is attempted with the aim of identifying plant species through seed remains using the techniques of flotation.

Shoofly Village is located outside of the town of Payson on Houston Mesa, south of Mogollon Rim and 12 miles from the East Verde River. It was occupied from 1000 - 1200 AD by a group of indians whose origins are unknown. The current theory is that they were pre-Hohokam who traded extensively with the Sun Valley pueblo indians to the south and the cliff-dwellers to the north in the Flagstaff area, using the Verde River valley as a trade route.

Two to three soil samples consisting of 2.0 liters each were taken from the rooms excavated in the 1986 summer season. They were taken from the hearths, where present; failing that, the floor was sampled randomly across its surface.

The architecture at Shoofly Village is unique in that both pueblo-style room blocks and separate pit houses are present. Two rooms of each type were sampled hoping to gain information indicating whether they were occupied seasonally, or if there was a shift from pit houses to pueblos over time or if possibly they were used for special purposes only.

The flotation tools used were a 50 gallon barrel with a $\frac{1}{2}$ " mesh bottom tub sitting on top. Both the heavy fraction and the light fraction were kept but only the light fraction was examined for seeds. This was screened through 2.0mm, .991mm, .500mm and .246mm mesh and examined under a microscope.

			Corn	Charcoal	J. Seeds	Portulaca	Mollugo
130/125	No Hearth	Block Room	57,3	10*grams	0,0	3,0	0,0
97/85	Hearth	Block Room	225,15	0,0	0,0	125,54	42,48
89/165	Hearth	Peri. Room	6,10	4,12	1,1	3,2	2,1
59/123	Hearth	Peri. Room	4,9	2,9	0,0	20,3	15,0

*This is given in total amount because it was so great. The charcoal amounted to over 90% of the light fraction for both samples taken from this room. Two samples were taken from each room, accounting for the double numbers.

Interpretations

The preservation of organic material is very poor in the soil at Shoofly, made acidic by decaying limestone and pine needles. The quantities of juniper charcoal found in each room reflects something of the different occupation patterns. In the primary room block 130/125 charred juniper beams were found criss-crossing the floor surface. Just beneath them the flotation sample was taken showing some corn kernels as well as juniper charcoal. This room was dug to a depth of 1½ to 2 meters before this evidence was found. No roof beams were found above this level indicating that once the original occupation roof burned it was not replaced and the area was used thereafter as an open air shelter. The depth at which the flotation sample was taken also explains why so little intrusive organic matter, represented by the Portulaca and Mollugo seeds were found. These two plant types were introduced in historical times from Europe and indicate the measure of organic sample contamination from later times.

Room 97/85, located in the secondary core block had a deep stone-lined hearth which yielded a very high percentage of charred corn kernels. The amount of corn found was almost four-fold that of the next highest amount - 130/125. This is consistent with the abnormally high amount of manos and metates also found in this room, indicating, along with the stone-lined hearth (the only one found), that perhaps the room was used as a communal corn-grinding and cooking area. Charcoal, Juniper or other types, is lacking indicating that this room was not burnt.

The peripheral rooms 89/165 and 59/123 show evidence of Juniper charcoal in the flotation samples which were taken from the hearths. A few fragments of corn cob were also found, probably used for fuel. No charred

kernel fragments were found as at 97/85. Some intrusive Portulaca and Mollugo seeds were found which is expected as the floor surface is less than 1 meter below the present land level.

Conclusions

The conclusions reached from this project are that a) corn was heavily utilized as a food source; it was probably grown locally along river and creek beds but the fields have not been found yet. b) no other plant foods have been identified from this project although they were in existence and have been found at other sites with better preservation. Perhaps work currently in progress on pollen analysis will throw more light on the plant foods utilized at Shoofly Village.