

Analysis of
Crystals, Minerals, Shell,
and Ornaments or Non-Utilitarian Objects

Shoofly Village Ruin
ASU Field Season, 1984

SHOOFLY CHAPTER
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The collection of artifacts discussed herein represent the majority of the quartz crystal, mineral, shell, ornament or non-utilitarian objects which were excavated from Shoofly Village Ruin during the 1984 field season. This report is intended to include a preliminary description of the artifacts as well as a summary of the distribution of the items across and by PLT. Additional analysis is needed in several areas: (1) use ware vs. natural fracture of the quartz crystal edges; (2) reexamination of the shell and mineral identifications by a specialist; (3) reexamination of the ornaments or non-utilitarian objects to confirm the nominal functions assigned to them. In addition, analysis of the artifacts in association with features within units and areas may prove useful in the determination of the function of these areas (i.e., midden vs. burial features), and a study to determine the sources of the mineral, shell and fossils found.

A total of 27 crystals, 7 pieces of shell, 20 mineral, presumably non-indigenous to the area, and 21 ornaments or non-utilitarian objects were collected and analyzed from the 1984 field season. They were unequally distributed across the site (see chart of the Distribution by PLT), with the majority (57%) found in large rectilinear rooms, 15% in curvilinear rooms, 9% from outside the compound wall in middens, and 9% from open plaza areas.

The quartz crystals reportably come from a local source near Diamond Point, north of the site near the Verde River. This may account for the relative high numbers of crystals found at Shoofly Village. They show some use ware although the ware pattern was hard to determine due to the fragile nature of the crystal. That is, edge fracturing may have been caused by non-purposeful,

non-cultural events. By this analysis, which consisted of looking at the ware pattern under a high-power microscope and looking for concoidal fracturing, 40% exhibited no use ware or working; 33% showed some possible use; and 26% were indeterminate either due to the fractional condition of the crystal or my own indecision as to what to categorize them as. Crystal condition ranged from several (15%) which were essentially whole or euhedral; the majority being either fractured or shattered (41%) or subhedral, when some, but not all, of the crystal facies are intact (37%). 2 (7%) were ocellular or needle-like, and opaque due to impurities.

7 fragments of shell were uncovered: 4 clam, 1 possible oyster, 1 olivella, and 1 unidentified. 57% came from large rectilinear rooms.

4 main, presumably non-indigenous, minerals were found at Shoofly. These include malachite (45%), azurite (10%), calcium carbonate or calcite (20%), and hematite or red ocher (10%). 3 other minerals were found: a calcium carbonate precipitate (it appears to be a cave formation); a sandstone with lead carbonate; and a quartz or chalcedony botryoidal (rounded) crystal. Again, most (50%) came from large rectilinear rooms, with 25% from curvilinear rooms. Identification was accomplished through the assistance of Paul King, a fellow student at the field school with a background in geology.

3 recognizable ornament types were uncovered: 5 pendants or pendant fragments: 4 of argillite and 1 of basalt; 4 ring fragments: 2 of argillite, 1 of bone, 1 of sandstone; 5 beads: 4 crinoids and 1 of soapstone. In addition, a turquoise mosaic piece was found, 2 possible gastroliths, and 4 pieces of worked argillite which may be pendant or bead blanks. 52% of the non-utilitarian objects came from large rectilinear rooms, with 10% each from curvilinear rooms,

wall clarification (within compound), and outside compound wall:
midden.

From this analysis alone, it would appear that since most of these objects were found in large rectilinear rooms, that these may be the living/work spaces, or areas where people most frequented. In a comparison of the distribution of objects with that of the intrusive painted ceramic wares, there were only 6 "highly" correlated unit areas: 2 core pueblo area rooms: E118 N120 and E134 N114; 1 curvilinear room at the NNW portion of the site: E89 N165; the burial in the plaza midden toward the southern portion of the site: E86 N85; and the midden areas on the outside of the compound wall at the SE section of the site: E161 N73 and E141 N71. At this point in the excavation of Shoofly Village, this data doesn't imply much, except that intrusive and/or speciality items are found fairly well distributed throughout the site, and not concentrated in one area. The one surprise was that the "very rich" room inside the northern wall (E129 N174) had many minerals and ornament objects, while no intrusive painted ceramic wares (see maps of the distribution of ceramic and that of the crystals, shell, mineral, and non-utilitarian objects).

In conclusion, it would outwardly appear that most items of concern in this paper are found in large rectilinear rooms. However, additional excavation needs to be done before any conclusions can be drawn concerning the distribution of such items, both by PLT, and by area of the pueblo found. In addition, a sourcing study should be undertaken in order to assess the relative value of such items and then relate this information to the PLT and to the area of the village that items of the different materials were found.

Distribution by PLT

	RRM	RRL	CR	POP*	POP	WINT	OUTO	OUTM	WEX	Total
Crystal	1 4%	10 37%	2 7%	3 11%	1 4%	2 7%	1 4%	5 19%	2 7%	27 100%
Shell		4 57%	2 29%			1 14%				7 100%
Mineral	2 10%	10 50%	5 25%	2 10%			1 5%			20 100%
Ornaments or Non-Utilitarian Objects		11 52%	2 10%	1 5%		2 10%		2 10%	1 5%	21 92%**
Total	3 4%	35 57%	11 15%	6 8%	1 1%	5 7%	2 7%	7 9%	3 4%	75 100%

* This represents the unit designation E85 N86 which included a burial in a midden in the plaza.

** There were 2 non-utilitarian objects picked up by visitors to the site which have no provenience. Total number of such objects should be 23, and the total number of artifacts analyzed was 77.

Crystals

<u>Spec. #</u>	<u>Unit. Des.</u>	<u>L-L</u>	<u>Description</u>	<u>Worked/Not worked</u>	<u>PLT/Comments</u>
74	E86 N85	3-0	Fractured	Not worked	POP, assoc. with burial in midden.
316	E85 N86	2-0	Euhedral	Worked (?)	POP, assoc. with burial in midden.
75	E87 N86	0-0	Acicular	Not worked	POP(same unit as above 2)
270	E59 N123	4-0	Subhedral	Not worked	CR (D-shaped)
4083	E58 N121	2-0	Fractured	Worked (?)	RRM
2144	E47 N141	2-0	Fractured	Not worked	OUTO
3349	E77 N210	1-0	Fractured	Indeterminate	OUTM
3262a	E129 N174	2-4	Subhedral	Worked (?)	RRL
3262b	E129 N174	2-4	Subhedral	Indeterminate	RRL
4077	E123 N158	3-0	Subhedral	Not worked	CR
3077	E167 N153	2-0	Acicular	Not worked	WINT
4105	E180 N159	1-1	Fractured	Indeterminate	RRM
3064	E178 N133	1-0	Euhedral (fractured at one end)	Not worked	WINT
1091	E167 N93	1-0	Fractured	Indeterminate	POP
1146	E161 N73	1-1	Subhedral	Worked (?)	WEX
1124	E161 N73	3-0	Subhedral	Worked (?)	WEX
1133	E141 N71	1-0	Euhedral (fractured at one end)	Not worked	OUTM
1158	E141 N71	2-0	Subhedral	Indeterminate	OUTM
1177a	E141 N71	3-0	Subhedral	Worked	OUTM
1177b	E141 N71	3-0	Subhedral	Worked	OUTM
3260	E133 N142	2-3	Fractured	Not worked	RRL
3202	E133 N142	3-2	Fractured	Worked (?)	RRL
1379	E134 N114	1-3	Subhedral	Worked (?)	RRL
1331	E134 N114	2-2	Euhedral (fractured in middle)	Not worked	RRL

<u>Spec. #</u>	<u>Unit. Des.</u>	<u>L-L</u>	<u>Description</u>	<u>Worked/Not worked</u>	<u>PLT/Comments</u>
1321	E134 N114	2-2	Fractured	Indeterminate	RRL
1390	E134 N114	2-3	Fractured	Not worked	RRL
1419	E134 N114	3-3	Fractured	Indeterminate	RRL

Shell

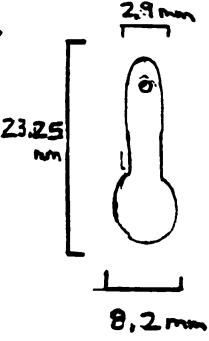
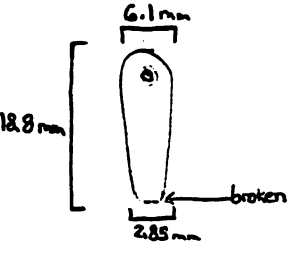
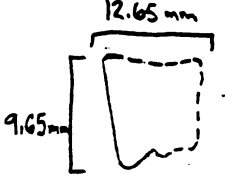
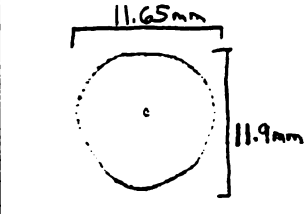
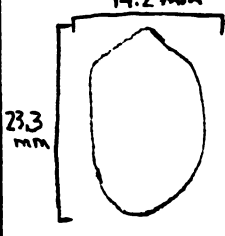
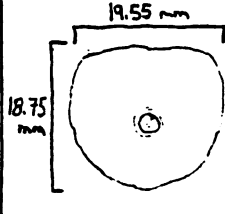
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2324	E176 N103	1-0	Unidentified	RRL
2343	E176 N103	3-0	Clam	RRL
2363	E176 N103	3-0	Clam	RRL
2103	E89 N165	4-0	Oyster(?)	CR
2018	E98 N125	2-0	Olivella	POP
362	E129 N174	3-5	Clam	RRL 2 pieces




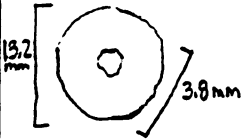
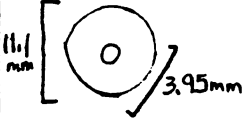
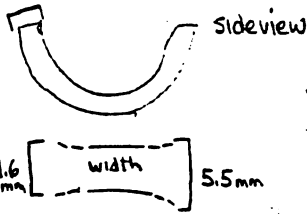
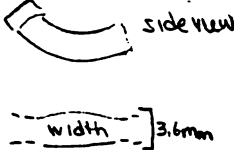
Minerals

<u>Spec. #</u>	<u>Unit Des.</u>	<u>L-L</u>	<u>Description</u>	<u>PLT/Comments</u>
2364	E176 N103	3-0	Azurite w/malachite in limey-sandstone	RRL
169	E59 N123	2-0	Azurite	CR
162	E59 N123	1-0	Malachite	CR
182	E59 N123	3-0	Malachite	CR
2201	E89 N143	2-0	Malachite	CR
154	E101 N60	2-1	Malachite	RRM w/burial
3093	E129 N174	0-0	Malachite	RRL
3281	E129 N174	2-4	Malachite w/azurite	RRL
3370	E129 N174	2-4	Malachite w/azurite	RRL
33	E106 N80	2-0	Malachite w/azurite flecks	RRL
264	E111 N110	3-0	Malachite in quartz	RRL
2298	E89 N165	3-2	Calcite (Calcium carbonate)	CR
3208	E129 N174	2-3	Calcite (Calcium carbonate)	RRL
1359	E134 N114	4-2	Calcite (Calcium carbonate)	RRL
334	E85 N85	2-0	Calcite (Calcium carbonate)- rhombohedral crystal, assoc. with burial in midden	POP
2098	E89 N165	4-0	Red Ocher	CR
1347	E134 N114	3-2	Hematite	RRL
3206	E129 N174	2-3	Calcium Carbonate Precipitate (cave formation?)	RRL
3266	E129 N174	2-4	Sandstone with Lead Carbonate	RRL
2139	E47 N141	1-0	Quartz/Chalcedoney(?) -botryoidal crystal	OUTO

Ornaments or Non-Utilitarian Objects

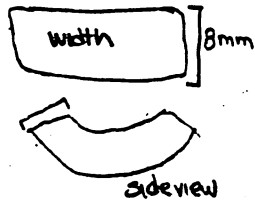
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234	E111 N110	1-1	Argillite Pendant	RRL
1153	E141 N71	2-0	Argillite Pendant (broken)	OUTM
2249	E89 N165	1-3	Argillite Pendant (broken)	CR
3371	E129 N174	2-4	Argillite Pendant (broken)	RRL
1132	E141 N71	1-0	Basalt Pendant	OUTM
1320	E134 N114	2-2	Argillite Ring (broken)	RRL
4134	E999 N999	0	Argillite Ring (broken) not known - picked up by visitor to the site.	Provenience
3072	E178 N133	2-0	Bone Ring (broken)	WINT
244	E111 N110	2-0	Sandstone Ring (broken)	RRL
2051	E118 N120	6-0	Soapstone Bead	RRL
198	E60 N80	2-0	Crinoid (Bead?)	WINT
1298	E148 N101	2-0	Crinoid (Bead?)	RRL
2179	E89 N165	1-1	Crinoid (Bead?)	CR
71	E86 N85	2-0	Crinoid (Bead?)	POP, assoc. with burial in midden.
2071	E118 N120	7-0	Turquoise Mosaic	RRL
1144	E161 N73	1-1	Gastrolith	WEX
4135	E999 N999	0	Gastrolith not known - picked up by visitor to the site.	Provenience
1421	E134 N114	3-3	Argillite Disk (Bead blank?)	RRL
1422	E134 N114	3-3	Argillite Disk (Pendant blank?)	RRL
3200	E133 N142	3-2	Argillite Disk (Pendant blank?)	RRL
2349	E180 N159	2-3	Worked Argillite (Pendant blank?)	RRL

SPEC. #			
234		<p><u>Argillite Pendant</u>: Length: 23.025 mm Width: 2.09 mm at top 8.02 mm at bottom</p> <p>Club-shaped, with small perforation at top. Polished.</p>	
1153		<p><u>Argillite Pendant</u>: Length: 18.8 mm Width: 6.1 mm at top 2.85 mm at bottom</p> <p>Cone-shaped, broken at bottom tip, with small perforation at top. Polished</p>	
2249		<p><u>Argillite Pendant</u>: Length: 9.65 mm Width: 12.65 mm Thickness: 1.65 mm</p> <p>Flat, with tang(s) at bottom. Broken. Polished</p>	
3200		<p><u>Argillite Disk</u>: 11.65 x 11.9 mm Thickness: 2.1 mm</p> <p>Flat, circular disk with what appears to be the beginnings of drilled hole in center of one side. Both sides and edges show polishing striations. Possible pendant blank.</p>	
1422		<p><u>Argillite Disk</u>: 14.2 x 23.3 mm Thickness: 3.5 mm</p> <p>Flat, oblong disk. Both sides and edges show polishing striations. Possible pendant blank.</p>	
1421		<p><u>Argillite chunk</u>: 19.55 x 18.75 mm Thickness: 9.1 mm</p> <p>Roughly circular and polished on both sides, although not smooth. Edges show little work. One side has one drill hole, approximately 3mm deep. The other side has six very small drill holes, approximately 1mm deep, adjacent to each other. Possible bead blank.</p>	

SPEC. #			
71		<p><u>Crinoid</u>: Diameter: 8.55 mm Depth: 6.1 mm</p>	<p>Possible use as bead. Fragmented on one side. 5 layers.</p>
2179		<p><u>Crinoid</u>: Diameter: 8.5 mm Depth: 6.5 mm</p>	<p>Possible use as bead. 5 layers.</p>
198		<p><u>Crinoid</u>: Diameter: 11.4 mm Depth: 6.3 mm</p>	<p>Possible use as bead. 3 layers.</p>
1298		<p><u>Crinoid</u>: Diameter: 13.2 mm Depth: 3.8 mm</p>	<p>Possible use as bead. 3 layers.</p>
2051		<p><u>Soapstone Bead</u>: Diameter: 11.1 mm Depth: 3.95 mm</p>	<p>Smoothed and polished. Depth is uneven ranging from 1.3 mm - 3.95 mm.</p>
1320		<p><u>Argillite Ring</u>: Width: 4.6-5.5 mm</p>	<p>Broken approximately in half. Outside is smoothly polished while inside shows striations from the shaping process. Edges are squared off flat</p>
4134		<p><u>Argillite Ring</u>: Width: 3.6 mm</p>	<p>Broken, this piece represents approximately 1/4 of a small ring. The outside shows slight striations, while the inside is smooth and looks worn. Edges are squared off, in a similar style as # 1320. Appears to be bicentrically drilled.</p>

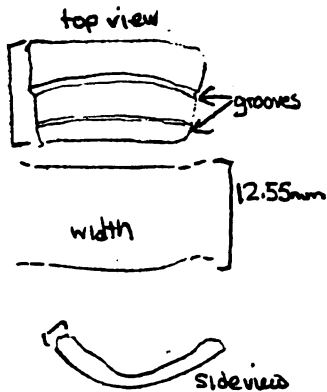
SPEC.#

244



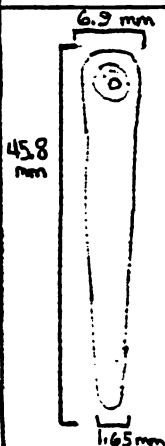
Sandstone Ring: Broken, this piece represents approximately 1/4 of a ring. Striations are seen on all surfaces, and it is not particularly polished. Edges are squared off in the same manner as the 2 argillite ring fragments. Center was biconically drilled with a ridge still prominent on the inside. This suggests that the ring was never worn or that it is not a finger ring. Ivory in color

3072



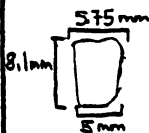
Bone Ring: Broken, this piece represents approximately 1/4 of a ring. All surfaces are highly smooth and polished. Outside surface of ring has 2 carved grooves, one deeper and larger than the other. Ivory in color.

1132



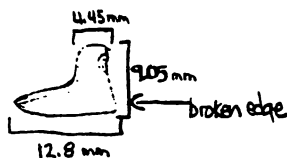
Basalt Pendant: Needle-shaped pendant, slightly flatish (3.9mm thick). Striations from the shaping are visible, although the surface is smooth but not highly polished. No special use wear is seen at the tip which suggests use as an ornament and not a needle or awl. It curves slightly concave (lengthwise). Color is dark gray or black. There is a tiny nick at the tip.

2071



Turquoise Mosaic: 1.25 mm thick. Appears to be an inlay piece. All sides and edges are extremely smooth and polished. Edges are squared off. Color is bluegreen to sky-blue.

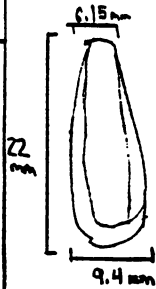
3371



Argillite Pendant: 2.65mm thick. Flatish. Appears to be broken in half. Part of perforation is visible. Highly polished

SPEC. #

2349



Worked Argillite: Maximum thickness: 9.65 mm. Roughly 5-sided. Appears to have been in the process of being shaped into either a rectangular piece or rounded piece, perhaps a pendant blank. Striations are sometimes deep and highly visible. Surface is largely smoothed although there are some rough spots. Mineral has abundant crystalline inclusions.

References

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