Traces of "Wonderful Power" at the Aztalan Site: A Preliminary Analysis of Excavated Native Copper Assemblages

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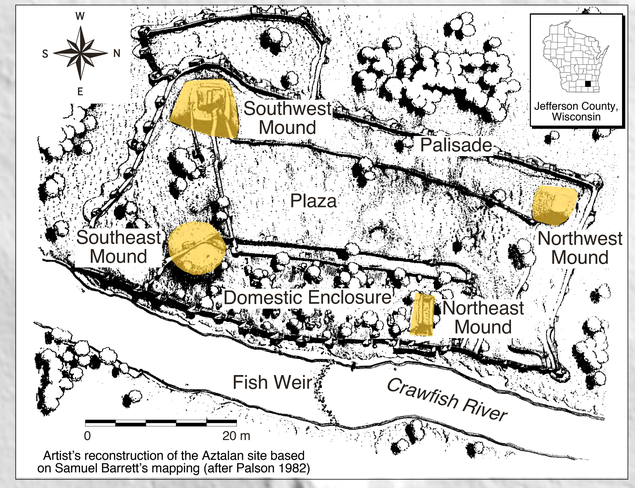
The Aztalan Site (47JE1)

The Aztalan site is a palisaded village site situated on the west bank of the Crawfish River. The site was occupied during Late Woodland and Mississippian times from about A.D. 1000 to A.D. 1250. The site is dominated by four platform mounds situated in each corner of a rectangular palisade. Aztalan appears to be a village farming community connected to the site of Cahokia in southern Illinois, home to the most complex pre-Columbian society in North America (Birmingham and Goldstein 2005).



Aztalan site location and village plan (after Richards 2007)

Often referred to as Wisconsin's premier archaeological site, Aztalan is also a National Historic Landmark and is situated within the boundaries of Aztalan State Park. The site has been the subject of archaeological investigations for over 170 years. Major excavations have been conducted by the Milwaukee Public Museum (MPM) in 1919,1920, and 1932, The Wisconsin Archaeological Survey (WAS) from 1949 to 1952, the Wisconsin Historical Society (WHS) from 1964 to 1969, and UWM from 1984 through 2019. Michigan State University (MSU) and the University of Wisconsin (UW) have also worked at the site.

The Aztalan Copper Project

Major collections from Aztalan are housed at the MPM, UWM, UW, the WHS, and Lawrence University. However, little research in any of these collections has been conducted on the use of native copper by the site's inhabitants. By creating a detailed catalog of copper artifacts, researchers can learn more about how this material was used at the site, variations in the multiple collections, and how the site's copper assemblage compares to contemporary sites.

Our project has several goals. First, we wanted to produce an inventory of all the copper artifacts from the Aztalan site held by UWM. Second, we wanted to investigate from where in the Aztalan site copper remains had been recovered. Third, we wanted to compare the UWM assemblage to materials held by the MPM as well as to copper recovered from UWM excavations from the Lake Koshkonong Locality, some 15 river miles south of Aztalan.

Methods

The initial step was finding the Aztalan copper within UWM's collections and then pulling the artifacts out for study. After the artifacts were pulled, they were sorted by project and morphofunctional type. Next, a relational database was created to track physical measurements, patina (surface coloration), morphological type, and available provenience data. Physical measurements were recorded using a digital scale and calipers, while patina was measured based on Munsell colors. Finally, preliminary analysis and comparison with other collections was conducted..

Indian Use of Native Copper

Major deposits of chemically pure copper occur in the Great Lakes Region and have been exploited by Indian people for about 10,000 years. Soft and ductile enough to be worked with stone tools, copper tools and ornaments were made by "cold-hammering" copper nuggets into foil thin sheets and repeatedly folding and hammering until the desired thickness was attained. Smelting of copper ore has never been documented in North America. The "Wonderful Power" in our title is taken from Susan Martin's 1999 book of the same name in which she details the reverence that native groups had for the material.

MPM diorama of ancient Indian copper miners

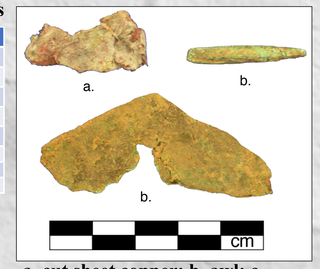
Old Copper spear points, MPM collections

The UWM Collections

UWM's Aztalan collections include materials from projects spanning over 35 years. In addition, UWM curates materials from the 2013 MSU work at the site. The UWM collections are dominated by fragments of sheet copper. These may be waste products or "blanks" to be further processed.

Aztalan Copper-UWM Collections

MorphoFunctional Type	# of pieces	% of whole
Sheet Copper	151	59.4%
Whole Beads	21	8.3%
Flattened Beads	25	5.9%
Bead Fragments	59	23.2%
Awls	2	0.1%
Awl Fragments	4	1.6%
Other	2	0.1%
Totals	**254**	**100.0%**



a, cut sheet copper; b, awl; c, worked piece, possible ornament

The MPM Collections

Aztalan Copper-MPM Collections

Item	Count	%
Copper fragment	43	35.0
Copper-unknown	22	17.9
Awl	14	11.4
Bead	14	11.4
Knife	8	6.5
Artifact-unknown	2	1.6
Chisel	2	1.6
Disc	2	1.6
Ornament	2	1.6
Projectile point	2	1.6
Arrowhead	1	0.8
Band	1	0.8
Beads	1	0.8
Blade	1	0.8
Copper flakes	1	0.8
Ear Spool	1	0.8
Pellet	1	0.8
Ring (Historic)	1	0.8
Scraper	1	0.8
Sleigh bell (Historic)	1	0.8
Spearhead	1	0.8
Spike	1	0.8
Total	123	100.0

Selected copper artifacts from MPM excavations at the Aztalan site. Modified from Plate 69 (Barrett 1933).

The Koshkonong Locality Collections

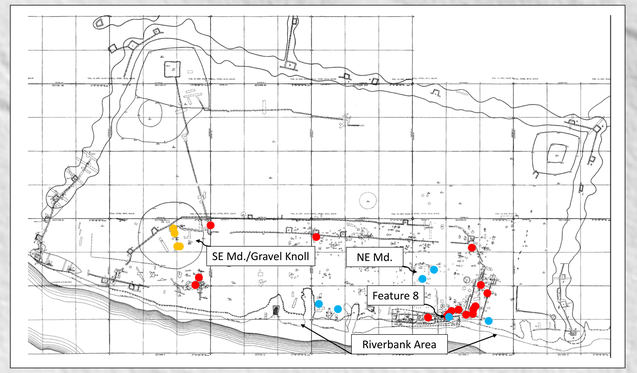
These collections include artifacts from UWM excavations at 4 sites on the northeast shore of Lake Koshkonong including Crescent Bay Hunt Club, Koshkonong Creek Village, Schmeling, and Crab Apple Point (CAP). The Koshkonong materials were analyzed by Jaqueline Pozza (2016) for her Master's thesis project at UWM. The assemblage is dominated by items from Crab Apple Point (80%). UWM has conducted only limited excavations at Crab Apple Point so most of the CAP materials represent surface finds collected by the landowner over decades.

Koshkonong Locality Copper

MorphoFunctional Type	Count	%
Sheet Copper	158	25%
Beads & Bead Fragments	320	51%
Awls	83	13%
Awl Fragments	0	0%
Pendants	67	11%
Other	0	0%
Total Pieces	628	100%

Right: Serpentine pendant recovered from the Koshkonong Creek Village site. Oneota culture, ca. A.D 1050-1400.

Native Copper at the Aztalan Site



Distribution of native copper at Aztalan. Only materials from MPM, MSU, and UWM work are mapped. Red, MPM; blue, UWM; yellow, MSU; Base map from Barrett 1933).

Copper Artifacts from UWM Excavation Localities

Site Location	Morphological Type	# of pieces	%Area	% All
Riverbank Feature 8				
-	Sheet Copper	39	90.7%	15.4%
-	Awl	1	2.3%	0.4%
-	Barrel Bead	1	2.3%	0.4%
-	Awl Fragment	1	2.3%	0.4%
-	Other	1	2.3%	0.4%
	Subtotal	**43**	**100.0%**	16.9%
All other Riverbank Areas:				
-	Sheet Copper	106	97.3%	41.7%
-	Awl Fragment	3	2.8%	1.2%
	Subtotal	**109**	**100.0%**	42.9%
Gravel Knoll (SE mound)				
-	Sheet Copper	3	3.0%	1.2%
-	Awl	1	1.0%	0.4%
-	Flattened Bead	15	15.0%	5.9%
-	Rolled-Cylinder Bead	19	19.0%	7.5%
-	Cone/Frustrum Bead	1	1.0%	0.4%
-	Bead Fragment	50	50.0%	19.7%
-	Other	1	1.0%	0.4%
	Subtotal	**100**	**100.0%**	39.4%
NE Mound				
-	Sheet Copper	2	100.0%	0.8%
	Subtotal	**2**	**100.0%**	0.8%
Grand Total		**254**		**100.0%**

The data, suggests that there are at least two locations of intensive copper usage at the site. Over two-thirds of the copper has been recovered from the Riverbank Area located in the northeast corner of the site and includes both refuse contexts, as well as the a possible copper production facility (Feature 8). Materials from this part of the site are dominated by fragments of sheet copper; tools or ornaments are rare. The second hotspot is the the summit of the Southeast Mound that has produced almost 40% of the recorded finds. This assemblage is dominated by beads and bead fragments and appears to represent ritual and offertory behaviors.

Assemblage Comparisons

The MPM collection is the smaller of the two Aztalan assemblages discussed here, containing about one-third of the total Aztalan assemblage. However, the MPM collection is the most diverse and includes a wide range of tool types, ornaments, and copper waste. This is partly a result of the more areally extensive excavation conducted by the MPM but may also be a reflection of specific recovery contexts. The MPM assemblage is noteworthy also for the presence of a pair of unfinished god maskettes that compare favorably to similar items found throughout the Mississippian world.

Unfinished god maskettes; these artifacts are thought to have been worn as ritual ear decorations and may relate to the Ho-Chunk myth of Redhorn, also known as "He who wears human heads for earrings".

The Koshkonong Locality collection is much larger than both Aztalan collections combined. It also differs significantly is assemblage composition. For example, over 50% of the Koshkonong materials are beads while beads make up only 27% of the Aztalan collections. Awls comprise 14% of the Koshkonong collection but only 5% of the Aztalan collection. Finally, cut sheet copper is present at Koshkonong but makes up only 25% of the collection, while at Aztalan sheet copper accounts for 40% of the total. At this point we can only speculate on the observed differences. The two localities were occupied at roughly the same time but there is no evidence of interaction between Aztalan and the Koshkonong Oneota. So some differences may relate to differing production and use strategies with the Aztalan assemblage dominated by copper waste suggesting intensive manufacture at the site. The Koshkonong materials on the other hand may reflect the acquisition of more completed tools with less on-site production. Pozza's research also noted evidence of specific bead manufacturing techniques used by the Koshkonong Oneota.

Next Steps

This preliminary research was designed to support future more comprehensive analysis of this Aztalan copper assemblage. The remaining Aztalan collections need to be inventoried and entered into the project database. Once accomplished, intensive analysis including compositional studies and attempts to source the Aztalan copper should be conducted. Finally, the Aztalan assemblage should be compared to collections from the Cahokia site in order to further understand the nature and degree of interaction between Mississippian Aztalan and the greater Mississippian world (Richards 2020).

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