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Chapter 8

A Small Deposit of Copper Artifacts at Seip

Katharine C. Ruhl

The present paper describes some copper artifacts from a small deposit at the Seip earthworks, discovered in 1980 during field work by N’omi Greber but never analyzed in detail nor previously published. The morphology of these artifacts and the location of the deposit have certain implications and some parallels to other artifacts and deposits found in Hopewell sites.

CONTEXT

Seip Earthworks (33Ro40), situated on Paint Creek in Ross County, Ohio, consists of a complex geometric enclosure and associated mounds. The site was mapped by Squier and Davis (1848:Plate XXI no. 2). Early field work focused on the mounds (Mills 1909; Shetrone and Greenman 1931), and yielded a wealth of Hopewell era artifacts and floor plans of the buildings covered by the mounds. In 1971, a project of the Ohio History Connection (OHC), directed by Raymond Baby, began by investigating a slight rise approximately half way between the large Seip-Pricer mound and the embankment of the surrounding circular wall, in the portion of the earthworks belonging to OHC. The floor plan of a building was discovered, and subsequent field seasons (1972–1977) revealed a total of seven structures (Figure 1) and the corner of another (Baby and Langlois 1979). The data resulting from the OHC work were recently reexamined (Greber, ed. 2009). In 2005 Katherine Spielmann’s field school from Arizona State University made further explorations in areas adjacent to Baby’s excavations (Spielmann 2011) and

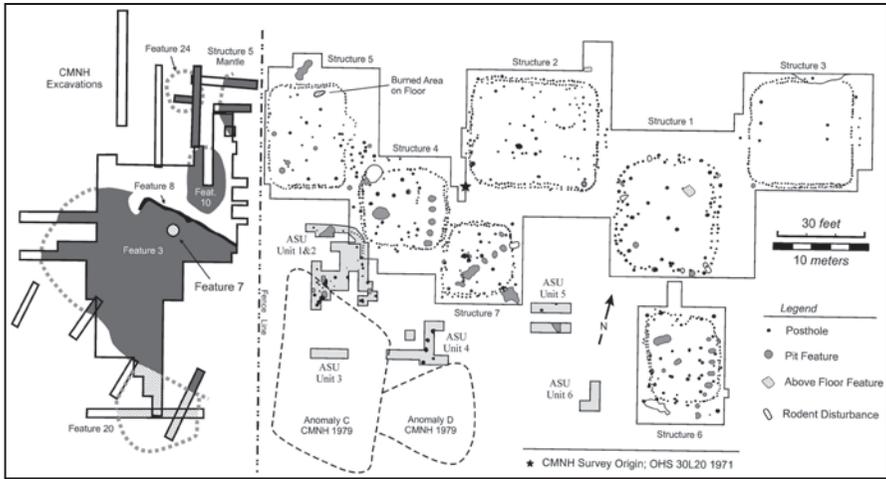


Figure 1. Map of the excavations at the Seip earthworks. The Cleveland Museum of Natural History excavations of 1980-1982 are to the west of the seven buildings excavated by the Ohio History Connection in 1971-1977. Areas excavated by Arizona State University in 2005 are to the south. Note Feature 7 in the CMNH area.

found more evidence of prehistoric activities. Although the excavation of the eighth building floor plan was inconclusive, large post molds indicated a possible woodhenge to the south of the group of buildings.

Meantime, in 1979 N'omi Greber had explored some adjacent areas within and near the Seip earthworks, using two remote sensing techniques, resistivity and ground-penetrating radar (Greber and Griffin 1982). She thereby had detected anomalies on private property, designated location 23, just west of the OHC property and the group of buildings. Upon excavation in 1980, some of these anomalies proved to indicate an activity floor, which had been created by clearing down to the natural subsoil, with an overlying mantle of gravels and sandy soil. Although at the time it was not possible to excavate across the fence line separating the areas, the indications were also that this floor and mantle extended eastward into the OHC property (Figure 1). In 2005, Spielmann's unit 3 tested and confirmed this supposition and revealed more distinct stratigraphy of the mantling layers. No cultural features were encountered in unit 3 and few artifacts (Spielmann 2011).

Returning to the Cleveland Museum of Natural History field work of 1980, the feature of interest for this report is Feature 7. Found in the south west quarter of excavation unit S28E2, Feature 7 had not been identified by the remote sensing data

(Greber and Griffin 1982). According to the field notes of excavator Dennis Griffin (1980), he located this small basin shaped pit, 40 by 30 cm and 10 cm deep beneath the plow zone, intrusive into the mantle layer (Feature 3) but ending above the level of the floor (Feature 4). The fill was very dark grey silty loam and contained the copper artifacts described below. No other artifacts or remains were discovered in Feature 7. The charcoal was minimal but provided a date of 1520 BP (DIC₂₄₇₁; Greber 2009a:Table 2.1). Although mistakenly described elsewhere (Greber 1983:91–92, 1997:210, 2003:107) as the remains of a fire on the surface of the activity floor, the field notes confirm the description in Burks and Greber (2009:Table 8.2).

THE ARTIFACTS

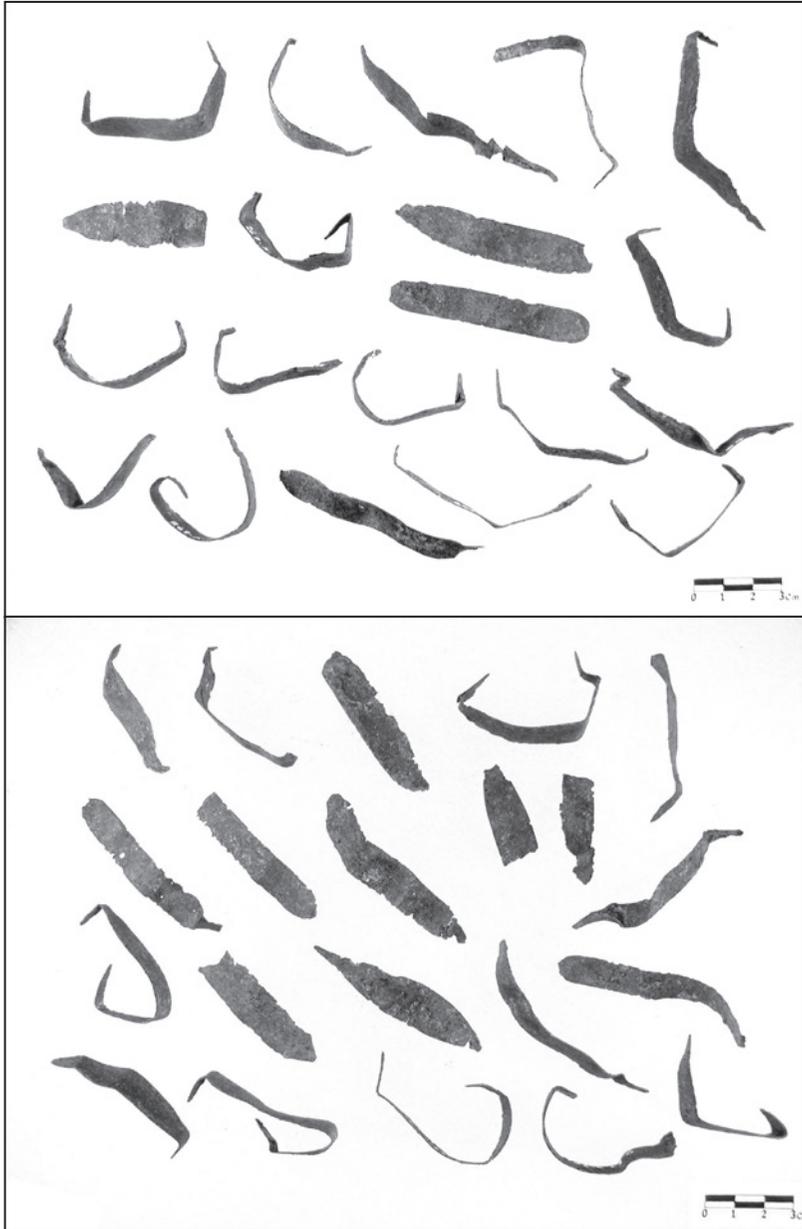
Field supervisor Dennis Griffin excavated Feature 7 in August of 1980. Since the top of the feature had been damaged by plowing, at first only fragments of copper were found, but on August 8, at a depth of 19–25 cm, a pile of copper strips was uncovered. Forty-one artifacts are presently preserved at the Cleveland Museum of Natural History (Figures 2 and 3). Nineteen of these are complete. At either end of a strip of copper sheet is a sharp point, either shaped directly or created by folding in the sides of the sheet to form a more robust point (Figure 4). These ends had then been bent at right angles to the main body of the strip. Thus the artifacts resemble a large staple. Most of them exhibit considerable damage and bending, many with the sharp yield of work hardened copper. They are generally quite well preserved, many with a smooth compact surface layer of corrosion product.

Each strip was weighed and measured. Dimensions recorded are overall length, central length minus the pointed ends, maximum width, and sheet thickness (Table 1). In many cases, the first two dimensions are approximate measurements, due to the bending of the strips.

Table 1. Seip Copper Strips.

	Weight* grams	Overall Length* mm	Central Length mm	Maximum Width mm	Thickness mm
Mean	3.2	75	53	12.5	0.5
Range	2.3 - 4.1	59 - 92	37 - 67	10.0 - 14.5	0.1 - 1.0
Std.dev.	1.27	23.33	21.21	3.18	0.64
Count	19	19	36	30	41

*complete artifacts



Figures 2 and 3. Copper strips, Seip earthworks. From Feature 7, Cleveland Museum of Natural History field season 1980.

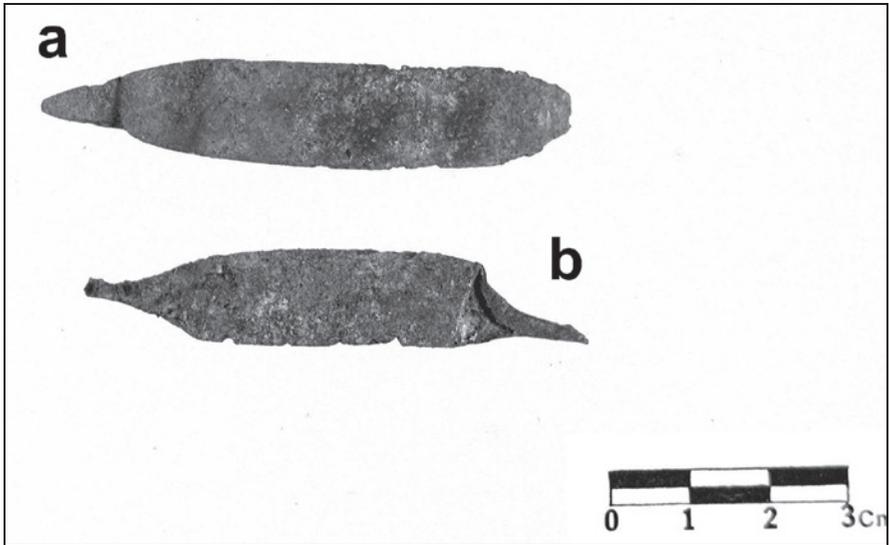


Figure 4. Techniques of forming pointed ends on the copper strips: (a) Shaped point; (b) Point formed by folding in the edges of the strip.

Another variable noted was the shaping of the strips. Seventy five percent are tapered in width toward each end from the maximum at the center. The remaining twenty five percent are uniform in width for the length of the central portion of the strip (Figure 5). The association of central length and maximum width is illustrated in Figure 6. It is noticeable that those strips with uniform width are narrower but fall at the upper end of the range of length. In addition, the median sheet thickness of these strips is 0.3 mm, as opposed to 0.5 mm for the tapered strips.

DISCUSSION

I suggest that the staple analogy is a good one. The strips were likely attached to a substrate by driving the points into it, thereby decorating the surface with a copper ornament. There is also the possibility that they actually functioned as staples, for example, to attach fabric to a wooden backing. The relationship of some dimensional variables to the difference between tapered and parallel sided strips suggests that two different metalworkers interpreted the appropriate form for these decorative elements slightly differently. It could even imply that they decorated two different displays. However, this slight style difference would not have resulted in a dissimilar effect when the polished strips were mounted on a backing.

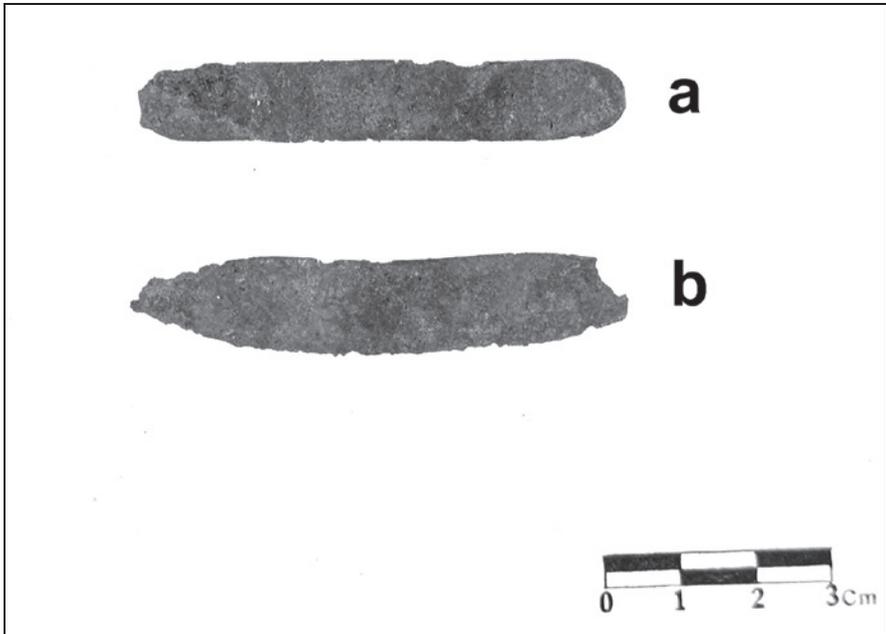


Figure 5. (a) Copper strip of uniform width; (b) Tapered strip.

The production of thin sheet copper from the native metal available to Hopewell artisans requires cycles of cold hammering alternating with heat treatments to soften or anneal the metal. Annealed sheet copper may be easily bent in a smooth curve but, in the work hardened condition, the metal is stronger. When deformed, it yields and bends abruptly at a sharper angle (Schroeder and Ruhl 1968). Most of these strips were finished in a work hardened condition, judging from the sharp bends of deformation. Although the identity of the material upon which the strips were mounted is not known, a modern work hard copper tack can be driven easily into wood. In any case, the substrate must have been sturdy enough to require considerable force in order to remove the strips when the assembled object was dismantled. Deformation occurred during this operation, resulting in bending and breaking of the copper strips.

I am not aware of other Hopewell artifacts similar to the Seip staples. Some very different copper strips from Buzzard Rock Cave seem to be post contact material (Mills 1912).

The layer of gravels and soils (Feature 3) covered the activity floor (Feature 4) as a means of decommissioning that floor (Greber 2009b:176). Feature 7 is an

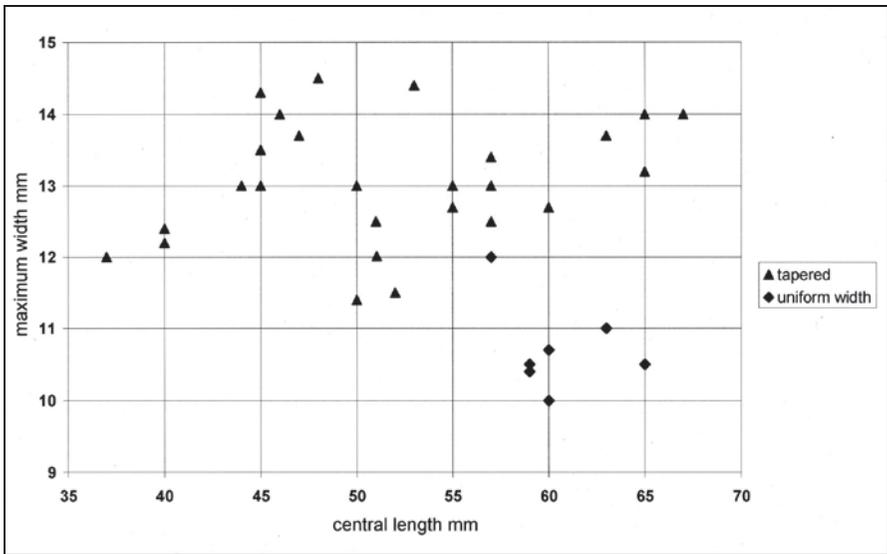


Figure 6. Relationship of maximum width and central length for tapered and uniform width strips.

intrusive deposit in this mantle which may be supposed to be another element of the decommissioning event, when certain artifacts were disassembled, destroyed, and buried. Since the entire floor was not excavated, it is not known whether comparable features were included elsewhere in the mantle or on the floor.

Greber (1996) defined various categories of Hopewell deposits which are not associated with mortuary activities. Feature 7 would fall in her category C, above floor deposits. The outstanding example in this category is from the Hopewell site Mound 25, the great copper deposit. More than 100 copper artifacts, including symbolic shapes cut from sheet copper, two pairs of ear spools, and several bracelets, were piled together on the surface of a sub mound under the large Mound 25. This deposit has been interpreted as two costumes and related paraphernalia, which had been dismantled for deposition during a stage of mound construction, possibly in observation of a particular event (Greber and Ruhl 1989; Greber 1996). Another above floor deposit was located in Shetrone's Mound 26 at the Hopewell site, one of the smaller mounds within the D shaped enclosure surrounding Mound 25 (Shetrone 1926). A basin intrusive in the mound covering ended a foot above the floor. Within it were a pair of ear spools, 1000 shell beads, fabric remains, and a large and elaborate copper plate in the usual breastplate form, but with

comma shaped cutouts in the corners and beads on the paired holes (Shetrone 1926:Plate 112). A wooden backing for the plate was partly preserved. This assemblage also implies the elements of a costume which were deposited during the building of the mound.

At Seip, the simple copper strips were deposited without a backing or any other components of a display. It may seem a stretch to compare this small deposit to the larger and more varied deposits at Hopewell. However, we have evidence in all three that the copper artifacts were once attached to supports to form more complex displays. In the Seip example, the staple form allowed them to be mounted on a substantial material, such as bark or wood. Many of the Mound 25 artifacts have tiny holes along the edges, suitable for sewing them onto a backing of cloth or hide. In the Mound 26 example, however, nothing now remains of the wooden backing reportedly found on the plate, nor is there any indication of a mounting technique.

CONCLUSIONS

To summarize, all three deposits contain elements of a multi-component object or objects which were dismantled in a decommissioning process, terminating the use of an activity area and accompanying paraphernalia. Greber (1996:153) suggests that such events marked moments of transition, possibly based on calendric cycles, rather than a mortuary connection. I hope that the description and photographs of the Seip artifacts will resonate with scholars familiar with objects in other Hopewell collections. In any case, it is one more example of the incredible variety and complexity of ceremonial activities at Hopewell sites. We can only glimpse and speculate upon their true nature and significance to those who practiced them.

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