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## AN UNUSUAL CACHE FROM THE WYOMING VALLEY, PENNSYLVANIA

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## ABSTRACT

In 1964, topsoil removal operations in the Wyoming Valley, Pennsylvania, exposed a large cache of beads and shell objects. There is evidence that many of the beads and objects were originally strung as necklaces or belts, but these were destroyed when the discoverer washed the material. An attempt is made to reconstruct the contents of the cache and to determine its approximate age.

A S THE Susquehanna River passes Lackawannock Gap, it flows into the Wyoming Valley of Luzerne County, Pennsylvania. The broad flood plains of the valley on either side of the river have produced abundant archaeological remains. Many sites are covered by the city of Wilkes Barre and its numerous surrounding communities. Untold sites also lie buried beneath the ubiquitous culm piles from the valley's once active mining operations. Many of the plains which are no longer being farmed are rapidly being torn away, together with their sites, for saleable topsoil.

In 1964 a topsoil removal operation in Plains Township exposed an unusual cache of beads and shell objects. The discovery was made by Mr. Peter Sarf of Avoca, Pennsylvania, who during the course of his bulldozing noticed the cache on top of one his dirt piles. The exact provenience of the find can no longer be reconstructed, as continued soil extraction has eliminated all points of reference. The approximate location of the find is at  $6\frac{7}{16}$  in. from the east, and  $2\frac{3}{16}$  in from the south printed margin of the Pittston, U.S.G.S. map, 15 min. series, 1939 edition.

Sarf indicated that he was excavating about 8 ft. below the original land surface at the time he created the pile on which the cache was found. It is unlikely, however, that the cache would have been interred that deeply.

Some time after his discovery, Mr. Sarf showed the contents of the cache to several members of the Frances Dorrance Chapter of the Society for Pennsylvania Archaeology. They, in turn, reported the find to John Witthoft who was at that time State Anthropologist for the Pennsylvania Historical and Museum Commission. When Witthoft first examined the collection, he found that it consisted of several thousand shell and glass beads together with a number of carved shell objects, all of which had been washed and strung on necklaces.

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According to Sarf's description of the cache in its original condition, the beads and various shell objects were in a grease-caked wad inside of a leather pouch. The pouch had been placed inside of two brass kettles which were jammed together mouth-to-mouth and then hammered to secure a tight fit. Sarf recalls that at least some of the beads may have been on single strands, but he was unable to verify whether or not the beads and shell objects were strung in any particular pattern before he washed them.

In March of 1968, Mr. Sarf consented to loan the collection to the William Penn Memorial Museum for a period of three months in order that it could be studied and photographed.

The two brass kettles in which the cache was contained were of medium size (Fig. 1). The overlapping kettle measured about  $7\frac{1}{2}$  in. in diameter and approximately  $3\frac{3}{4}$  in. in depth. The inner kettle was smaller in both dimensions by less than a half inch. Sarf removed the pouch through the missing bottom of one of the kettles. The bottom of the other kettle subsequently fell out, but it is still with the collection.

Approximately one half of the tanned leather pouch, which is presumably buckskin, is extant. No sewn seams are present on this portion. A number of holes are visible (Fig. 2) around the crinkled mouth of the pouch, which suggests that it was originally closed with a drawstring. The pouch did have a greasy feel. Since it was becoming very brittle around its edges, it was treated with hot neatsfoot oil as a preservative measure before it was returned to Mr. Sarf. The inside of the pouch had retained the impressions of numerous beads, but no uniformity of arrangement which might suggest wampum belts was discernible.

The contents of the pouch which were examined at the William Penn Memorial Museum consisted of 16,967 shell and glass beads, 6 tubular brass beads, and 24 carved and drilled shell objects. Originally the cache included a few dozen more shell beads and one large white columella shell bead, which were not with the materials examined at the Museum. AMERICAN ANTIQUITY



Fig. 1. Two brass kettles which contained the Sarf cache.

The salient features of each of the several types of beads in the collection are presented in Table 1. All but 3 of 43 longitudinally split shell beads showed evidence of having been drilled from both ends. The few exceptions to this may have resulted from a nearly perfect meeting of the drill holes, and therefore they probably do not represent beads drilled in only one direction. The purple beads range in color from dark purple to grey; some of the white beads grade into a light green.

For convenience, the basic dimensions and descriptive features of the various shell objects are given in Table 2. Two types of decorative elements are listed: holes made with one point of a pair of dividers or a drill tip, and small circles incised with a pair of dividers. Holes created by the point of a divider in describing large circles or arcs were not counted as decorative holes. Two of the objects (Fig. 3e, h) have gouge marks as part of their decoration; these were not included in Table 2. Six of the objects on Fig. 3 (e, g-k) are positioned so that their suspension holes are vertical. The exact locations of the holes through the fish are indicated by lines on Fig. 3e. Suspension holes on all of the other objects pass through their necks.

Five of the objects shown in Fig. 3 (g-k) are referred to in the literature as runtees (e.g., Holmes 1883: 229). Runtees commonly have two longitudinal drill holes, suggesting that they were suspended on paired strings. The runtees

shown in Fig. 3 (h-k) each have two such holes, while Fig. 3g has three. The third hole may have served to suspend another object below it. All of the runtees are bifacially similar in design with the exceptions noted in Table 2. Each runtee has one face which is stained slightly yellow and is more highly polished, the staining being caused by contact with the skin.

Two anthropomorphic birds are shown in Fig. 3 (a, b). The beaks and the folded wings are quite apparent. Each has a necklace and belt of shallow drill holes bordered by incised lines. The eyes are depicted by incised compass-work circles. The leg-like projections probably represented the bifurcated tail of the swallow. The feet are stylistically portrayed by incised crosses on the bulbous protrusions below the belts. Heye and Pepper (1915: 38) illustrate a shell bird on which similar protrusions are much more obviously feet.

The two turtles (Fig. 3d, f) are extremely similar in size and design and are the most obvious pair of objects in the cache.

Probably all of the large shell objects in the cache were cut from conch shells. In lateral view, the beaver shows the marked curvature of



## CACHE

RANGES IN MM. Number Material Color Shape Length Diam. Notes 6667 shell purple 3-9 2.5-4 cylindrical 5475 shell white 3-8 2.5 - 4cylindrical 4782 glass black subspherical 1 - 22 - 3.5no core difference glass white 7 subspherical 1 - 22 - 3no core difference 11 glass blue subspherical 1-2 2 - 3no core difference 3 glass blue cylindrical 8 4 no core difference 1 glass red cylindrical 6 4 translucent core brass 6 cylindrical 3-6 3 20 glass clear faceted 8-12 8-12 wire-wound 1 glass blue spherical 6 6 no core difference

TABLE 1. DESCRIPTIVE FEATURES OF THE BEADS

the conch from which it was cut. Its legs (Fig. 3c) are portrayed in the same manner as those of the turtles. The scaly structure of its tail is shown by crisscrossed incised lines. On the underside of the beaver there is an incised compass-work circle measuring 18 mm. in diameter.

Most of the shell objects survived their discovery nearly unscathed, except for one broken runtee (Fig. 3i) and the fish (Fig. 3e), which was somehow scarred in the area of its mouth and eye. Many of the decorative holes and incised lines on all of the objects except the fish have had grease and dirt worked in for the purpose of accentuating them. The decorative incisions on the fish all had a red pigment rubbed into them.

The three crescent-shaped shell objects (two of which are shown in Fig. 4f, g) probably served

as spreaders or dividers on necklaces, as suggested by Beauchamp (1901, Pl. 5). There were also 10 additional pieces (4 are shown in Fig. 4a-d) which may have had functions similar to the crescents but which were on single strand necklaces. Most still have two visible eyes and, with one exception, a backward z-shaped design on the body. They are referred to here as geese, for lack of a better descriptive interpretation.

When the collection was examined a few months prior to its coming to the William Penn Memorial Museum for study, it included three tubular brass beads which were strung in conventional wampum belt fashion, i.e., parallel to one another. However, by the time the collection was examined again in Harrisburg, these beads had been pulled apart, and only a few

	Measured in mm. Diam. o <del>r</del>			Suspension Drilled FROM One Both		SMALL INCISED CIRCLES		DRILLED HOLES		Polished Side		Bead	
Object	Fig. Ref.	Length	Width	Thick.	End	Ends	Obverse	e Keverse	Obverse	Keverse	Obvers	e Keverse	Wear*
Bird	3a	97	35	14		Х	2		27			Х	Р
Bird	3Ь	76	22	9		Х	2		21			Х	Α
Beaver	3c	91.5	39	6		Х		1	44		X	Х	Α
Turtle	3d	43.5	29	4.5		Х	25				X	Х	Р
Fish	3e	81	26	9	Х		1					Х	Р
Turtle	3f	44.5	28.5	5		Х	24					Х	Р
Runtee	3g	32		5.5		Х	44	43				Х	А
Runtee	3h	43		6		Х	23	22				Х	А
Runtee	3i	33		6		Х	41	38			Х		Р
Runtee	3j	36		5.5	Х		44	47			Х		Α
Runtee	3k	35		5.5		Х			43	49		Х	Р
Geese** (10)	4a–d	37	9	5	Х				18		Х	Х	Р
Cresents**(3)	4 <i>f</i> ,g	29	4	4	Х								А

TABLE 2. DESCRIPTIVE FEATURES OF THE SHELL OBJECTS

\* Enlargement at the mouth of the suspension holes caused by contact with adjacent glass bead; P=present, A=absent.

\*\* Average measurements and counts are given.

pieces of the sinew strands which once held them together were preserved.

Wampum was commonly used in belts, but single strands of beads were often employed for many of the same functions. It must be noted, however, that wampum was also carried loose in pouches. John Hays' diary of 1760 (Hunter: 1954) mentions that the party occasionally passed the time by making strings and belts of wampum, obviously from the loose supply carried by the expedition. Wampum was used parsimoniously by such travelers, and it was apparently strung as it was needed.

There is one piece of evidence in the Sarf collection which suggests that at least a portion of this wampum may have been carried unstrung in the pouch. The cache includes one purple shell bead which was started at both ends but never completely drilled through. Had all the beads been strung in either belts or single strands, it is very likely that this one bead would have been lost. The presence of this undrilled bead very strongly suggests that a portion of the beads were unstrung, as they might have been secured from a bead factory or other place where they were made. This one bead could easily have been mixed in with finished beads where they were manufactured. When the rest of the beads were strung, it surely would have been drilled or discarded and not carried as one loose bead among a collection of belts and strings.

Some of the beads were unquestionably strung as a few of them contained bits of sinew or other string material. It has already been noted that at least three of the tubular brass beads were originally strung in parallel rows. Shell wampum belts occasionally have other tubular beads woven into them, but rarely are glass seed beads so used. Such beads would more likely have been used in strings of wampum or in making up necklaces. Occasionally various objects were attached to wampum belts, but here again they were more common on single strands. It is possible that the shell objects were suspended in this manner. The fact that many of them show bead wear at the mouths of their drill holes (Table 2) demonstrates that they were at one time suspended on strings of beads. All of the shell objects, however, are drilled so that they would be suspended in a balanced position on a necklace but not if they were at the end of a single string of beads or wampum. The 4,782 black glass beads, together with the 43 miscellaneous beads, may have formed the basis for such necklaces. All totaled, the glass beads in the collection could have made as many as nine midchestlength necklaces (32 in. in length), which could well have accommodated the 25 single and/or paired shell objects.

It might be concluded, therefore, that the cache probably contained a quantity of unstrung wampum, some strings of wampum, perhaps several belts, and very likely a number of necklaces of glass beads on which the shell objects were suspended.

The fact that the beads and objects were in a leather pouch is not in itself unusual; only the fact that it was preserved is out of the ordinary. Beauchamp (1901: 436) notes that wampum belts were carried in little sacks. Indians of the 18th century may have known that brass or copper would preserve various delicate and important items. Often, perishable grave offerings of 18th-century Indian cemeteries were intentionally placed inside of an overturned copper or brass kettle.

This also raises the question as to whether or not the Sarf collection may have been a burial offering. The conditions under which the materials were found provide no answer. However, the unusual amount of care used in preparing it for interment and the comparative value of the material would seem to imply that it was intended to be recovered.

The first historical references to native populations in the Wyoming Valley begin as early as 1701 when, according to Wallace (1961: 154), small bands of Shawnee settled there. All of the histories of the area pertaining to Indian settlements reflect a pattern of many short-lived occupations. Throughout most of the 18th century, the Iroquois encouraged Indians of other nations to settle in the Wyoming area. Although the Iroquois were unable to colonize the valley themselves, the presence of Shawnee, Delaware, Nanticoke, and Conoy there, under their invitation and protection, served to block white encroachment of the Iroquois country from Pennsylvania. As Wallace (1961: 153) has noted, the valley was a "nub of Iroquois geopolitics." This also meant that it was an area which was often contested and frequently traveled through. These conditions, together with widespread stress upon all Indians of the period, made the valley a politically difficult place in which to live.

This pattern of temporary settlements in the valley may also characterize the century and a



FIG. 3. Shell objects from the Sarf cache.



FIG. 4. Shell objects and glass beads from the Sarf cache. *a*-*d*, geese (?); *a*,*b*, obverse; *c*, reverse; *d*, lateral; *e*, faceted wire-wound glass beads; *f*,*g*, crescents.

half prior to the earliest historically recorded occupations. Archaeologically the valley appears as nearly a complete void after about 1550 A.D. A number of stockaded villages existed here prior to this date. At about this time the Susquehannocks, who formerly lived in Bradford County, were beginning to move southward. Their passage through the Wyoming Valley is marked by the presence of Schultz Incised sherds in at least two of the major stockaded villages of the indigenous peoples. The Pennsylvania Historical and Museum Commission has conducted excavations, which are as yet unpublished, at two such sites: Schacht (Lu. 1) and Parker (Lu. 14). No European trade materials have been found in association with any of these sites, indicating that they were not occupied long after 1550 A.D. Logically this would imply that the demise of these towns was associated with the migrations of the Susquehannocks through that area.

No sites of the succeeding two centuries have been excavated in the Wyoming Valley. In fact, it is uncertain if any existed there between 1550 and 1675. By the latter date the Iroquois had defeated the Susquehannocks, thus making it possible for other Indians to move more freely throughout the Susquehanna Valley. The few scattered trade goods which have been found in the Wyoming Valley pertain to this post-Susquehannock period, but they are not associated with sites of known dates or Indian nations.

Charles Miner (1845: 26–7) notes the presence of two cemeteries on the plain where the Sarf cache was found. One of these may be associated with the Parker site. The other, according to Miner's description, was a historic cemetery located on the riverbank, and it consisted of extended burials laid out in rows.

The only documented finds from these latter burials include a number of blue beads and a vanity case (Miner 1845: 27). A King George I medal, also reported by Miner (1845: 27), was found on the surface in this general area. It is, of course, impossible to associate this medal, which may have been lost there during the reign of King George I (1716 to 1727) or anytime thereafter, with the historic cemetery. Unfortunately it is also equally impossible to demonstrate any relationship with either the medal, the cemetery, or any attending historic village, and the Sarf find.

Members of the Frances Dorrance Chapter of the Society for Pennsylvania Archaeology report that several burials and refuse pits were exposed in the general vicinity of the cache. The few identifiable artifacts recovered from these features during the course of the bulldozing indicate that they were pre-contact in origin and therefore not temporally related to the cache.

With this as a starting point, it was obvious that any attempt to assign a more specific date to the cache would depend upon comparisons with similar objects from dated sites in other areas. It was also apparent that the cache could not clearly be attributed to any one particular Indian tribe of the seven or more that are known to have settled in or passed through this valley during the post-contact times.

The shell wampum is of little help in attempting to date the cache. Tubular wampum has its beginning some time prior to 1600 A.D. in the Seneca sequence (Wray and Schoff 1953: 56). It is also known from the pre-1600 Susquehannock cemetery at the Blue Rock site in Lancaster County, Pennsylvania (Heisey and Witmer 1962: 115). The Sarf wampum is technologically later than these, but it is of a general type which was made until at least the end of the 18th century. Woodward (1934: 20) notes that wampum was still being supplied to the Indians, primarily those just west of the Mississippi and in the Great Lakes region, until the 1840's. Many of the wampum beads during this last stage of their use were almost twice as long as those of the 17th and 18th centuries (see, for example, Orchard 1929, Pl. X).

Runtees or drilled shell disks may have considerable antiquity in North America. It is possible that the crosses and, particularly, the floral designs which frequently appear on conventional runtees may reflect a European influence. However, crosses are also known from Mississippian engraved shell objects. Both Indians and whites are known to have made and used shell wampum, and perhaps this is true for some shell objects. Runtees may be an example of this, whereas the animal and bird figures display an artistic style which is more purely Indian. The types of runtees found by Sarf are certainly postcontact in date, if for no reason other than the fact that their suspension holes had to be made with fine steel drills.

Extremely similar runtees are reported by Heye and Pepper (1915: 30–5) from the late 17th-century cemetery at the Bell-Philhower site in Sussex County, New Jersey. Wray and Schoff (1953: 58) note that runtees of this type are just beginning to appear in the Seneca sequence during the 1650–1675 period at the Dann and Marsh sites. Heye and Pepper (1915: 37–43) also describe shell figures from the cemetery at the Bell-Philhower site which are basically similar to the fish, beaver, and birds of the Sarf cache. Another very similar fish was recovered by an amateur archaeologist from a grave at the Conestoga site in Lancaster County, Pennsylvania, which dates from about 1695 to 1763. Less ornate shell turtles and geese have been found at the Susquehannock town of 1635 to 1675 known as the Strickler site in Lancaster County.

None of the forms depicted by the shell figures in the Sarf cache is unique. Each has been previously described in the literature (see, for example, Beauchamp 1901), but in few cases are the comparative forms as ornate or as finely made.

Trade beads have in recent years become important in dating post-contact sites. In comparing the glass beads of the Sarf cache with dated samples, it soon became apparent that they included a number of types representing a long timespan.

The spherical blue and the subspherical black beads (Table 1) are identical to types found on Susquehannock sites of the period from 1575 to 1675. Heisey and Witmer (1962: 117) have shown that these types have their greatest occurrence in graves associated with the Washington Boro Susquehannock village, which is dated between 1600 and 1625 (Witthoft and Kinsey 1959: 95). The blue and white subspherical beads described in Table 1 are also like types which enjoy their greatest popularity at the same time in the Susquehannock sequence. However, somewhat similar seed beads again become popular during the 18th century, e.g., at the Chambers site in western Pennsylvania, where they are by far the most common beads. This site has been assigned dates of 1750 to 1775 upon the basis of historical records (Zakucia 1960: 12). Tubular or cylindrical glass beads like those in the Sarf cache (Table 1) have their earliest occurrence in both the Seneca and Susquehannock sequences at about 1635. Brass tubular beads are rather timeless, appearing in all sites of the Susquehannock sequence.

The latest beads in the cache, and therefore the most important in terms of dating the find, are the 20 clear glass, wire-wound, faceted beads (Table 1 and Fig. 4). Identical beads have been found at the Conestoga and Conoy sites in Lancaster County. The beginning date for Conestoga is uncertain, but it was probably just prior to

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1700. The last occupants of this town were killed during the infamous Conestoga Massacre of 1763. According to Wallace (1961: 108), Conoy Town was occupied from about 1718 to 1743.

Small quantities of similar faceted beads have been found in grave lots from two separate sites represented in the Deisher collection at the William Penn Memorial Museum. Both sites produced total bead inventories very much like those from Conoy and Conestoga. One of Deisher's sites, located about 1/2 mi. northeast of Kutztown in Berks County, Pennsylvania, included a number of other trade materials. Among these were two kaolin pipes with the letters "ER" stamped on the proximal side of their bowls. H. Geiger Omwake, who examined these two pipes (personal communication to John Witthoft, August 18, 1953), suggested that they might have been made between 1720 and 1740; thus, possible dates are provided for the site.

No wire-wound beads of any type are reported for 17th-century sites in this region. Only a few wire-wound faceted beads, and none like those in the cache, were present in the Chambers site (1750-75) collection in the William Penn Memorial Museum, which includes more than 4,000 beads from 70 graves. Witthoft (1967) notes that a number of the wire-wound types of the Conoy site (but few of the faceted type under discussion) are present at the Wyandotte site (1748-51) of Old Kuskuskies at West Pittsburgh, Lawrence County, Pennsylvania. He also suggests that by 1760 these wire-wound types were no longer in use. The paucity of these beads at the Chambers site would seem to confirm this statement.

On the basis of the evidence presented here, 1700 to 1760 would appear to cover the approximate time range for these faceted beads and, therefore, represents the earliest period during which the cache could have been buried. All of the other beads in the cache are known to occur on earlier sites, some perhaps as early as 1600. Their inclusion with beads known only from 18th-century sites is, however, not unusual. Wray and Schoff (1953: 60) have noted the use of grave-looted beads by later Indians, and certainly there must have been a few heirloom pieces. If the William Penn Memorial Museum's sample from the Conoy Town in particular is any indication, the practice of securing beads from 17th-century sites must have been rather prevalent. All of the 18th-century sites mentioned here have some 17th-century beads in them. It is quite evident, however, that those sites which date after 1750 have far less of these early beads than those which come before this date. If this is indeed a valid criterion, then the high percentage of 17th-century beads in the cache might place its dating before 1750.

The precise date for the introduction of wirewound beads is uncertain, however, as Witthoft (1966) has suggested they probably began sometime after 1700. All varieties of wire-wound beads appear to have reached their peak of popularity at the Conoy Town (1718-43) and at other sites of this same period. This might imply, then, a narrower time range for these beads perhaps 1720 to 1750. Such dates would not necessarily bracket the period of complete manufacture of the belts and necklaces and their subsequent interment as a cache. The contents of the pouch, which may have been acquired over a period of time, undoubtedly had some sort of ceremonial or political significance to its owners, who would therefore have used them and who obviously intended to preserve them as long as possible.

From 1700 to 1768, when in accordance with the Fort Stanwix Treaty the Iroquois ceded lands (including the Wyoming Valley), the Shawnee, Delaware, Nanticoke, Conoy, and occasional Iroquois are all known to have settled in the valley for different lengths of time. Many groups traveled through the valley during this period, and the histories mention various Indians there until at least the time of the American Revolution.

Any further guesses at this point as to when or which Indians deposited the cache would certainly tax the reader with far too much speculation. Unfortunately it seems that the truth will never be known. The site is gone, the original condition of the contents of the cache is destroyed, and there is every promise that other sites which could provide answers will be found only as a result of man's fatal need to strip, spoil, and scar.

BEAUCHAMP, WILLIAM M.

1901 Wampum and Shell Articles Used by the New York Indians. Bulletin of the New York State Museum, Vol. 8, No. 41, pp. 319–480. Albany.

HEISEY, HENRY W. AND J. PAUL WITMER

1962 Of Historic Susquehannock Cemeteries. Pentr sylvania Archaeologist, Vol. 32, No. 3–4, pp. 99-130. Gettysburg.

- 1915 Exploration of a Munsee Cemetery near Montague, New Jersey. Contributions from the Museum of the American Indian, Heye Foundation, Vol. 2, No. 1. New York.
- HOLMES, WILLIAM H.
  - 1883 Art in Shell of the Ancient Americans. Second Annual Report of the Bureau of Ethnology, 1880-81, pp. 179-305. Washington.

HUNTER, WILLIAM A. (EDITOR)

1954 John Hays' Diary and Journal of 1760. Pennsylvania Archaeologist, Vol. 24, No. 2, pp. 63–84. Milton.

MINER, CHARLES

1845 History of Wyoming, in the Series of Letters from Charles Miner, to his son, William Penn Miner, Esq. J. Crissy, Philadelphia.

ORCHARD, WILLIAM C.

1929 Beads and Beadwork of the American Indians. Contributions from the Museum of the American Indian, Heye Foundation, Vol. 11. New York.

WALLACE, PAUL A. W.

1961 Indians in Pennsylvania. The Pennsylvania Historical and Museum Commission, Harrisburg. WITTHOFT, JOHN

- 1966 Archaeology as a Key to the Colonial Fur Trade. *Minnesota History*, Vol. 40, No. 4, pp. 203–09. St. Paul.
- 1967 Notes on medals, beads, and other objects from 18th Century Indian sites. MS on file in the William Penn Memorial Museum, Harrisburg.

WITTHOFT, JOHN AND W. FRED KINSEY, III (EDITORS)

1959 Susquehannock Miscellany. The Pennsylvania Historical and Museum Commission, Harrisburg.

WOODWARD, ARTHUR

1934 Wampum and its Uses. Pennsylvania Archaeologist, Vol. 3, No. 6, pp. 15–20. Harrisburg.

WRAY, CHARLES F. AND HARRY L. SCHOFF

1953 A Preliminary Report on the Seneca Sequence in Western New York — 1500–1687. Pennsylvania Archaeologist, Vol. 23, No. 2, pp. 53–63. Milton.

ZAKUCIA, JOHN A.

1960 The Chambers Site, An Historic Burial Ground of 1750-75. Eastern States Archaeological Federation, Bulletin No. 19, p. 12.

> WILLIAM PENN MEMORIAL MUSEUM Harrisburg, Pennsylvania February, 1969