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## Cover Page Footnote

Thanks are due Jay F. Custer for his aid in evaluating the context within which this object was found and for his useful comments on the first draft of this manuscript, and to Mr. Edward Schwar for his permission to examine the cross and to publish this information. Thanks also are due Jean Adelman and David Anderson (The University Museum, Philadelphia), Prof. Charles Bishop, Donald Fennimore, Corradino Ferlisi, Doris Freyermuth, R. Gerstel, Stephen D. Jones, Dr. Barry Kent, Dr. W. Fred Kinsey III, Martha McCartney, Prof. Robert Schuyler, Prof. A. Trevelyan, Prof. W. Turnbaugh, and Prof. A. F. C. Wallace for various suggestions concerning this research. Special thanks are due Dr. Robert C. Mainfort Jr., Elizabeth Rump, Pam Scheifele, and two very helpful anonymous reviewers for extensive comments on earlier versions of this paper. The extensive editorial work and many useful suggestions of Prof. Mary C. Beaudry are particularly appreciated. Any errors in the presentation or interpretation of these data are solely the responsibility of the author. Thanks also are due John Cavallo, D. Hoffman, and Prof. J. Michael Stewart for arranging for the author to examine the Tindall House brooch excavated by Louis Berger & Associates in 1983. Considerable thanks are due Janice Carlson and the Henry Francis duPont Winterthur Museum for arranging to have a series of silver and pewter pieces tested at their Analytical Laboratory, and to M.-L. Pipes (Louis Berger & Associates) for her efforts to locate the Tindall House brooch for restudy. This research was part of a larger program funded by a 1983 grant from the American Philosophical Society and supplemented by a grant from West Chester University of Pennsylvania. The support of Mr. and Mrs. Frank P. Gillon is gratefully acknowledged. Portions of this paper were presented at the 1984 meetings of the Middle Atlantic Archaeological Conference, at the 1984 meetings of the Society for Pennsylvania Archaeology, and at the 1991 meetings of the Council for Northeast Historical Archaeology.

## THE ORIGINS OF TRADE SILVER AMONG THE LENAPE: PEWTER OBJECTS FROM SOUTHEASTERN PENNSYLVANIA AS POSSIBLE PRECURSORS

Marshall Joseph Becker

*A reawakening of interest in material culture has stimulated the examination of some small pewter castings in use among northeastern Native American peoples during the 17th and early 18th centuries. Reports by 17th-century explorers and colonists, who found Eastern Woodland natives to be disinterested in gold and silver artifacts, are now better understood.*

*The period from 1720 to 1750 was critical to the Lenape and other peoples who had just become major players in the fur trade to the Allegheny and Ohio River areas. During this period various silver-colored white metal castings may have been the precursors of sterling-quality silver trade items. Not until 1750 do some native groups in Pennsylvania and elsewhere begin to receive sterling silver trade goods in large numbers. The development of trade in silver objects may be an important indicator of cultural change among many Native American groups. The incorporation of silver-colored items into the colonial exchanges with the Lenape may be an archaeologically detectable indicator of this process. The development of trade in silver goods, possibly via a transitional phase involving pewter objects, reflects a period of transition among the Lenape and also may provide a means of evaluating patterns of cultural resistance to change.*

*L'intérêt que suscite à nouveau la culture matérielle porte à examiner certains petits coulages d'étain en usage chez les Amérindiens du Nord-Est au cours du XVII<sup>e</sup> siècle et au début du XVIII<sup>e</sup>. Les rapports des explorateurs et des colonisateurs du XVII<sup>e</sup> siècle, qui trouvèrent que les Amérindiens de l'"Eastern Woodland" ne s'intéressaient pas aux artefacts en or et en argent, sont maintenant mieux compris.*

*La période de 1720 à 1750 fut critique en ce qui concerne les Lenape et d'autres populations qui venaient juste de commencer à jouer un rôle important dans le commerce des fourrures avec les régions des Alleghenys et du fleuve Ohio. Au cours de cette période, divers coulages en métal blanc de couleur argentée ont pu être les précurseurs d'articles de traite en argent sterling. Ce n'est qu'en 1750 que certains groupes d'amérindiens de Pennsylvanie et d'ailleurs commencèrent à recevoir en grande nombre des articles de traite en argent sterling. L'établissement de la traite d'objet en argent peut être un important indicateur de l'évolution culturelle de beaucoup de groupes d'amérindiens. L'incorporation d'articles de couleur argent dans les échanges coloniaux avec les Lenape est peut-être un indicateur de cette évolution que l'archéologie peut détecter. L'établissement du commerce des articles en argent, par la voie peut-être d'une phase transitionnelle comportant des objets en étain, reflète une période de transition chez les Lenape et peut aussi fournir un moyen permettant d'évaluer comment s'est exercée la résistance culturelle au changement.*

### Introduction

Increasing interest in the importance of material culture in archaeological reconstruction (see for example, Hodder 1989), and in the correlation between the acculturation process and material culture (Quimby and Spoehr 1951), provide a basis for directing attention to several small metal castings from eastern Pennsylvania that have been known for many years. The importance of these pieces as cultural identifiers and possibly as indicators of processes of culture change may now be recognized. Furthermore, scrutiny of various

elements of Native American material culture leads one to question the commonly held belief that the early substitution of European-made goods for traditional tools by various native peoples led to cultural disruption and dependency. Contrary to this once popular notion, the processes involved in alterations of material culture appear to have involved pragmatic acceptance of utilitarian goods and simultaneous rejection of items cognitively associated by various native peoples with European peoples (cf. Bradley 1987; Hamell 1983, 1986; Sahlins 1985).

The processes resulting in native acceptance

or rejection of various material items are neither automatic nor instantaneous, but may be indicators of methods used in the maintenance of cultural boundaries during the first centuries of contact. Recent archaeological and documentary research now enable us to address the interesting earlier periods of Lenape culture history. The processes of change among the Lenape just after contact with Europeans appear far different from those seen during the better known 19th and 20th centuries (Newcomb 1956; Baerreis 1961, 1983). The late (post-1720) and relatively sudden adoption of sterling silver objects as decorative items among the Lenape and other, but not necessarily all, Native American peoples appears to be an important issue in the study of processes of culture change. The evidence for the use of silver-colored metallic ornaments in eastern Pennsylvania (FIG. 1) is reviewed below, with the suggestion that these items were precursors of the more complex array of sterling silver items that rapidly became common after 1750.

### Pewter and Indian "Silver"

Most modern pewters are composed primarily of tin with lead additives, and therefore are related to white metal or Babbitt metal in being tin alloys. English law in the early 1700s regulated the lead content in various pewter items such as mugs and plates, and outlawed lead for use in distillation "worms." Lead was rarely used in the best English pewter, and a maximum of only 8% lead was allowed. Items exceeding that lead content are rare. In the colonies, where legal controls appear not to have regulated these matters, tradition, if not law, may have maintained continuity. Thus the maximum lead content expected in pewter utensils and other objects in colonial America might be about 8%, but an extremely wide variation in the percentage of lead has been demonstrated (Montgomery 1973: 235-239).

The actual proportions of metals in any piece cannot be evaluated except through specific testing. Janice Carlson (1977) has tested numerous supposedly "pewter" pieces, including two presented in this report (Carlson 1981). Charles Montgomery (1973: 235-239) analyzed about 100 pieces of American pewter dating from 1671 to 1840 to determine

composition. In addition to the tin and lead expected, copper, antimony, and bismuth also were found. Lead was absent in at least 10 cases, but copper was absent in only one instance, although the copper content frequently was below 1%. Adding bismuth appears to have aided the casting process, but we do not know if this was deliberate prior to 1700.

By about 1750 antimony became known in Europe as a hardening additive for pewter, and thereafter became generally used in spoons where hard use required rigidity (Montgomery 1973: 27, 37). By the 19th century, Britannia metal had evolved (Goynne 1965; Montgomery 1973: 38-41). This was a 90% tin alloy, with 5-10% antimony and copper, but entirely without lead. This alloy became the white metal base favored for silver plate.

The alloy known as "German silver" is frequently noted as the metal employed for "silver" trade goods after 1850. This alloy is a mixture of copper, nickel, and zinc, with the best examples being in the proportions 16:20:31 (Chemical 1960: 1530). Several variations are known (Austrian or Gersdorf, Birmingham, Dienett's) with the common formula in the ratio of 55:20:25. A sixty percent copper formulation also is known (Chemical 1960: 1530). German silver is the best alloy for metal working and enameling, and is a relatively inexpensive product as compared with silver. The first commercial "German silver" alloys were not produced until 1823 in England, and the German variations followed soon after. Therefore, this material could not have been used for Indian trade goods until about 1830 at the earliest. Woodward (1945: 331) believes that after 1830 members of the Five Nations began to do silversmithing using metal from coins or "the less expensive German silver alloys." How soon after 1830 this began cannot yet be documented. This information is useful in suggesting dates for silver-colored ornaments derived from Native American sites in use after 1800.

Some evidence for silversmithing among acculturated members of the Five Nations appears at the beginning of the 20th century. When this tradition actually began remains unknown. The metals used for these types of ornaments in recent years generally are nickel alloys in the form of rolled sheets.

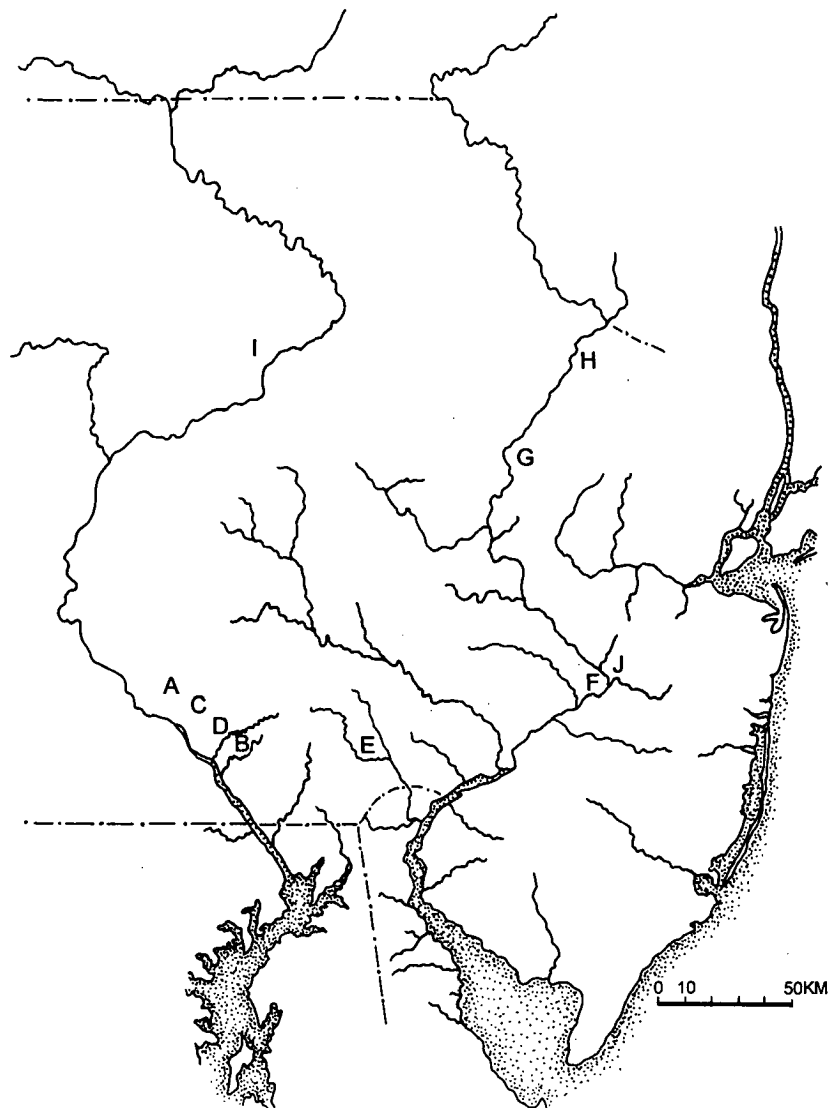


Figure 1. A, area of the principal Susquehannock villages before 1675. B, the location of the Lancaster County Park Site, 36LA96. C, the location of the Eschelmann Site, 36LA12 (Kent 1984: 334). D, the location of the Conestoga Town Site, 36LA52 (Kent et al. 1981: no. 24). E, the location of the Montgomery Site, 36CH60. F, the location of the Pemberton Farm Cemetery Site (Witthoft 1951). G, the location of the find spot of the pewter thunderbird, south of the Mill Brook in New Jersey. H, the location of Montague, New Jersey. I, the general area of the Wyoming Valley, Pennsylvania. J, the location of the Tindall House.

## Early Native Avoidance of Silver and Gold

Badges, "peace medals," and similar presentation pieces in silver are known from at least the 1660s in Virginia (Gillingham 1927: 99), and silver armbands may have been used by

natives before 1740 (Woodward 1932: 17). However, the array of ornamental sterling silver items generally known as "trade silver" was not a significant part of Native American interactions in the northeast until about 1750 (cf. Gillingham 1934). Quimby (1966: 91) suggests that "Such ornaments were not used in

the western Great Lakes fur trade before 1760." Why was there a "delay" of more than 200 years after the earliest European contacts along the east coast before silver goods became significant in the Native-European trade?

Roger Williams (1643) was not the only observer to note that Native Americans had no regard for items of gold and silver. Williams points out that they retained their own symbolic forms to express their individual and specific cultural identities. About 1626 Isaack de Rasieres (James 1963: 69–70) also noted that the natives valued only wampum, and "they consider it as valuable as we do money here." Both Robert Beverley (1725, 3: 58) and Francis Michel (1916: 134) noted similar avoidance of gold and silver among the Indians of Virginia (cf. Thwaites 1896–1901, 5: 60–61). As late as 1748 Peter Kalm (1987: 343) noted that "for the Indians [wampum] is their ornament and money," but also indicated that no natives were producing this commodity at that time.<sup>1</sup>

This pattern is particularly interesting when we consider that other categories of European-produced goods, such as pottery and weapons, rapidly replaced or augmented native-made items. The evidence suggests that despite extensive European contact and specific modifications in material culture, the Lenape (and possibly many other native peoples: cf. Bradley 1987) continued to maintain control of their decision-making abilities concerning social, political, or territorial matters for over 100 years after regular and intense contact with Europeans (see Newcomb 1956). Lenape identity was maintained by language use and marriage patterns, as well as through traditional means of ornamentation, and parallelisms appear likely among other native groups (cf. Hickerson 1992; Sattler 1992).

Martha McCartney (1984) discusses the origins and native use of "copper or silver" identification badges in the Potomac region after 1662. Friendly natives were to wear these

badges, or other indicators of their position, when entering into areas ceded to the colonists. These large badges as well as presentation medals were in common use by 1700 (Gillingham 1936; Becker 1983b). As late as 1755, Indians in New Jersey had to register, carry a pass, and wear a red ribbon to indicate their friendly status (Ricord 1891: 567).

## Pewter Ornaments: Precursors to Silver?

The suspected "transition" from pewter to sterling silver trade objects among the Lenape may provide the prototypic case for many Native American groups. The use of ornamental sterling silver has not been documented from any other contexts prior to ca. 1750. Several pewter items are known historically or archaeologically from the area centered on the Delaware Valley from the period 1600–1750. These include a unique small pewter casting in the form of a cross formée, (FIG. 2B) recovered from a ca. 1720 burial at the Lancaster County Park Site (36LA96) and a crowned heart from the Tindall House site near Trenton, New Jersey (28ME106).

The use of pewter ornaments before 1675 has been well documented from the Susquehannock, who lived immediately to the west of the Lenape, and among the Five Nations (Iroquois) to the north. That use, however, appears to be limited to a period that ends late in the 1600s. A review of the data on their use of pewter objects is useful in understanding a period that may be related to the use of pewter in the Lenape region.

The Susquehannock and Five Nations were horticultural peoples generally living in large villages. They also were major brokers in the fur trade, which provided the basis for their considerable wealth after 1500. Trade goods made of pewter became relatively common at Susquehannock as well as Five Nations' sites during the middle of the 17th century. For unknown reasons they became rare after 1666 (Rumrill 1988: 24; see also Bradley 1987: 153, 227 nn. 31, 32). Barry Kent (1984: 287–288, fig. 86), noting the problems of pewter recovery at Susquehannock sites, lists only one pewter porringer dated to after 1660, as well as several other small objects of the same material from about that date. Silver objects in the form of a

<sup>1</sup> The small pewter and silver items discussed in this paper, such as the Park Site cross, are too small to have served as badges. Williams and Flinn (1990) suggest that much later, or about 1850, after silver hair pipes and gorgets had become common, that these silver items served as the forerunners of the very large shell varieties. This sequence, from silver to shell, is the reverse of the earlier shell-pewter-silver evolution in small decorative objects.

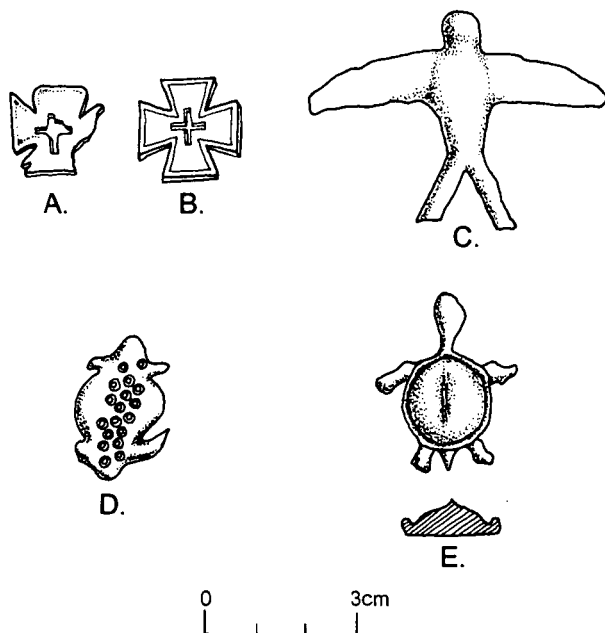


Figure 2. A, a drawing of the Lancaster County Park Site cross, in the orientation suggested by Kinsey and Custer (1982: figure 7D). B, a reconstructed view of the Park Site cross. C, a cast white-metal "thunderbird," from a burial dated to about A.D. 1720, said to have been found in the Tocks Island area of the Upper Delaware River valley. D, a lead (?) frog (36LA12/630) in the State Museum of Pennsylvania, Harrisburg (design approximated). E, a pewter turtle (36LA52/46b) in the State Museum of Pennsylvania, Harrisburg.

few coins and medallions are noted from several of the Susquehannock sites dating from before 1674 (Kent 1984: 274–286), but these are all random or unique examples. No pattern of use emerges in the appearance of these few silver items. Rumrill notes that after 1660 pewter objects here and at Five Nations sites seem to disappear.

The Susquehannock confederacy was dispersed during the winter of 1674–1675, leaving the lower Susquehanna River valley open. By the early 1700s numerous native peoples settled there or were moving through this area. Some, such as the Lenape, absorbed the role of fur traders while others sought refuge in the shadow of the Five Nations (see Mancall 1991). The changes taking place among these cultures at that time reflect both previous stability and offer a glimpse of the recent changes that impelled them into this territory.

Pewter and silver were commonly used among European colonists and sometimes is noted in the trade with native nations. Aside

from pewter trade smoking pipes (Becker 1981, see also Anderson 1992), the Lenape appear to have been uninterested in these items. By 1680 many Lenape had become major fur traders and relocated into western Pennsylvania (Becker 1992). Over the next 20 years those Lenape bands foraging in their traditional homeland decided, one by one, to sell their lands to William Penn, although they continued to forage in these areas into the 1730s.

The many deeds for William Penn's purchases of all of the Lenape lands, made between 1682 and 1701, provide an incredibly useful source of information regarding territorial boundaries, land values, and the kinds of goods in demand by the grantors (see Kent 1979; Becker 1984b). The vast quantities of goods accepted by the Lenape for these land grants were almost all utilitarian with almost no status-marking items, reflecting their needs as foragers. Even the large quantities of wampum and vermillion (red paint) then in demand may have been important to the Lenape for use in fashioning decorations that

served as cultural markings. Very rarely do silver or pewter goods appear on these lists. An exceptional "thirty Pewter Spoons" appears among the masses of goods given on 2 October 1685 to Lare Pakenah and his kin for all of their lands between Quing Quingus (old Duck Creek) in northern Delaware and Chester Creek in Pennsylvania (Kent 1979: 78-79). Since pewter spoons never again appear in the numerous Lenape land transfer documents we may assume that this was a unique and undesirable category of goods received by the Lenape.

A rare direct payment of cash is noted in the unusual land sale made by Tammanen as an individual, rather than a collective grant by the band, to William Penn on 23 June 1683. At the end of the long list of valuable trade goods there is indicated "besides Sevallall Guilders in Silver" (Kent 1979: 61). By 1683 the Lenape had been dealing with and selling land to Europeans for over 50 years. Cash (coinage) was rarely tendered, probably because money was not of direct use. This transaction of 1683, to a single individual, does not conform to the norms of the William Penn land purchases in several ways and should be recognized as an aberrant example. The archaeological corollary is that coins are unknown from Lenape sites. They are rare, and probably random finds, at Mohawk (Rumrill 1985: 25, 29) and other sites in this region (but see Kier 1949).

The inclusion of cash in a few of Penn's purchases may be explained through a review of the following example for which we have more extensive evidence than the deeds alone. The deed for Penn's first land purchase from the Lenape, dated 15 July 1682, provides the usual wealth of information concerning this transaction (see Kent 1979: 58-60). More important to this study is one contemporary "copy" of this deed which offers a clue regarding the only use of pewter goods in such exchanges. A letter of 9 August 1682 from William Markham, Penn's Proprietary agent who actually negotiated this purchase, to Philip Forde (in Myers 1970: 68-71) provides important information about the details involved in the lengthy negotiations that preceded this transaction. Markham's "copy" of the official deed, included in this letter, actually transcribes only the long list of goods exchanged with this particular band of Lenape for their land holdings (cf. Becker 1988a).

Markham sent this information to Forde in order to indicate the considerable cost to Penn of this land purchase.

At the end of Markham's listing of goods, as they appear on the original deed (in Kent 1979: 58-61), there appears the following: "Two anchors of Beere, And Three Hundred Gilders." The latter might seem to be cash paid in hand to these Lenape. Cash is so rarely noted in such transactions that this notation appears suspect. The list of goods presented to these Lenape, as it appears in Markham's letter, provides additional information which solves this riddle and also demonstrates that small land holdings previously sold by this Lenape band to other Europeans were being bought out by William Penn. Markham's list includes the following:

    Anchors of Beere . . . 2  
    Guilders .300 paid in goods:  
    Noat: Given in earnest to 2 Sakamakers  
    Peuter parringers . . . 2  
    Given To .2. men for their Consent to  
        remove their plantans  
    ye Sd 300 guildrs.

Thus the sum of 300 guilders appears to have been paid to, or through, the Lenape grantors of this huge tract in order to buy out the claims of two colonial occupants (John Wood is noted as one) who previously had bought small plots of land from this Lenape band within their territory. Two pieces of information from these records are of importance in the study of the origins of trade silver. First, coins were available to the Lenape at this time, as indicated by the transfer of cash related to the above-noted purchase. Second, Markham notes the presentation of 2 pewter porringers as gifts to "2 Sakamakers," whom I infer to be the pair of natives who signed as witnesses to this transaction: Kowyockhickon and Attoireham. These are Lenape from a different band who are present at this transaction, and who receive what turns out to be unusual gifts. That these porringers were not warmly received is indicated by the complete absence of such items among the considerable number of subsequent deeds to lands in the Delaware Valley (see Kent 1984: fig. 86).

The presentation of these pewter porringers, like the pewter spoons noted earlier, took place during the early 1680s, a



period when pewter objects also had ceased to be popular among the more powerful northern neighbors of the Lenape. As noted above, pewter objects apparently were in demand during an earlier period among the Susquehannock and their Five Nations enemies. Not surprisingly, in 1682 the new Proprietors of Pennsylvania must have found the use of pewter, as gifts or trade items, to be unsuccessful since they discontinued its use in trade. Yet over the next 50 years, very small pewter pieces became important in the ultimate acceptance by several Native American groups of trade silver in various exchanges.

Pewter items from central Pennsylvania before 1680, as well as from Five Nations sites and in the Delaware Valley, are not well represented in the archaeological record (cf. Kinsey 1989). There may be several reasons for this apparent scarcity. First, the historical record suggests that few pewter pieces appear to have been exchanged. Second, for those examples that were placed with burials, subsequent looting and accidental destruction of graves may have eliminated the evidence. Third, aside from colonial buttons and communion tokens (Montgomery 1973: 29, 87–88) small items rarely appear in the literature unless they stimulate a fine arts interest. Fourth, few controlled excavations have been conducted in this region. Fifth, the acid soils of much of southeastern Pennsylvania accelerate the oxidation process, turning lead into powdery masses, which are difficult to identify in the ground and rarely recovered (see Kent 1984: 287; Anderson 1992; Becker 1981). The lead corrosion process is well known (Plenderleith and Werner 1971: 274), deriving from the presence of organic acid vapors such as those generated by oak wood or by modern cardboard. However, organic acids always bring about the formation of lead hydroxide and lead acetate. Tin, on the other hand, tends to be stable under normal atmospheric conditions but when buried in a moist environment it does decompose at a very slow rate. Therefore, the identification of the actual metal or metals used in pieces generally noted in the literature as “silver” or “lead” (FIG. 3) are vital to this study.

The recovery of the Park Site cross described below offers us a rare glimpse into the use of such metal goods for a period quite important in time and location. A description

of the known pewter pieces from this area along with comparative data may help to focus attention on this historical sequence.

## **A Pewter Cross and Other Small Castings**

The Lancaster County Park Site consists of a series of archaeological features reflecting native occupation of this area of Lancaster, Pennsylvania, in the years around 1720 (Kinsey and Custer 1982). The presence at this site of trade goods made of materials such as catlinite, in the form of small pendants, indicates that a considerable network of long-distance exchange was still in operation. This system had been in place for thousands of years, had been used for the fur trade, and continued to bring ornamental stone from the north central region to the Atlantic coast.

During the early part of the 18th century this area of the colonial frontier (see FIG. 1B–D) became the base of several bands of Lenape (Becker 1988a, 1989), as well as Shawnee, Conestoga-Susquehannock, and groups representing several other Native American cultures. The archaeology of their habitation areas during that period would provide important evidence for scholars concerned with this period of history and the processes of cultural change. One piece of evidence from this site is of particular use in interpreting this interesting period in colonial history as it relates to the fur trade in general.

The area of the Lancaster County Park site had been stripped of topsoil some years ago to provide material for a nearby baseball field. This process may have destroyed a number of graves and scattered any artifacts associated with them. When trenching for a pipeline threatened additional damage to this site, excavations were conducted by Kinsey and Custer (1982).

Among the numerous artifacts of particular interest is a small metal cross from within feature 8, the burial pit of an adult female, age 30–40 years. The shape of this piece, actually a cross formée, (often called a Teutonic cross), appears to be unique among known metal pieces of that period. The form also should be distinguished from a Maltese cross, which has 4 arms with swallowtail ends, thus resulting in 8 points. These names, derived from European

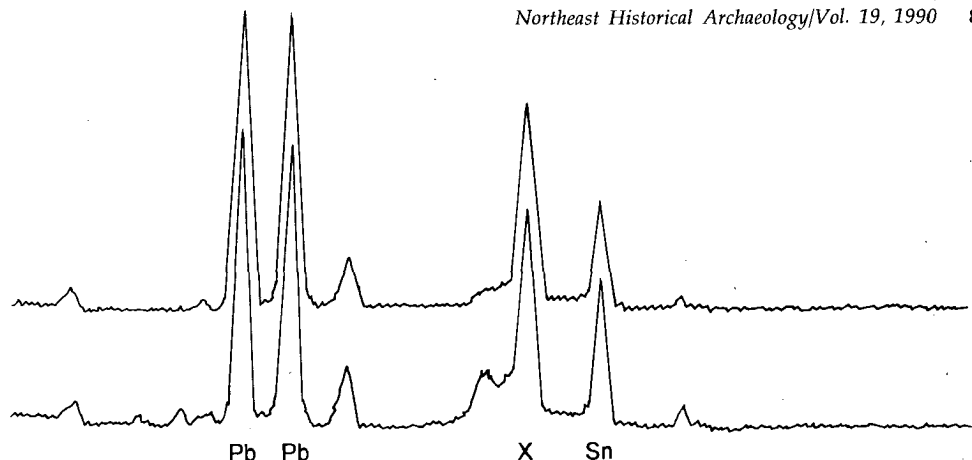


Figure 3. A print-out of the x-ray fluorescence analysis of the pewter turtle from 36LA52/46b (see FIG. 1E) in the State Museum of Pennsylvania, Harrisburg (from Carlson 1984: 1563.9; see also Custer et al. 1986: 22). The lower curve represents the reading from the turtle, while the upper is the "Standard" (80% Sn; 20% Pb). The high ratio of lead (Pb) to tin (Sn) is evident (the x peak derives from the source control and should be ignored).

religious traditions, often are confused.

The Park Site cross appears to have but one archaeological analog, from a very distant location. A tiny cross of similar shape, referred to as a "pewter maltese cross" (Good 1972: 80), was recovered from the Guebert Site in Illinois. This was the site of a Kaskaskia Indian village occupied between 1719 and 1771, and then intermittently until 1833 (Good 1972: figs. 8, 19d). The earlier period of occupation clearly overlaps the period of interest. The Guebert cross measures approximately 1.1 cm across the shorter pair of arms, and about 1.3 cm across the longer arms (Good 1972: figs. 8, 19d). The extremely small size, plus apparent lack of perforation or means of suspension or attachment, suggest that it may have been used as an amulet. Two catlinite molds, one carved for casting crosses and the other for circular ornaments, were recovered at the Guebert Site (Good 1972: 87-88). This cross was not cast in either of these pieces. The use of red molds to cast silver-colored ornaments is quite interesting, and a more secure date for these molds would be very important to this research.

The Guebert cross has the same general shape and small size as the Lancaster County Park cross, and may also date from the same period of time. Otherwise these pieces bear little resemblance to each other. The lack of attaching mechanisms on both indicates that the functions could well have been the same, but the rarity of small pewter or white metal castings provides us with little evidence

regarding possible functions.

The Guebert site produced one other item believed to be pewter. A small triangular piece, with a hole in the apex and a wavy or serrated bottom edge, has been identified as a pewter casting (Good 1972: 82, fig. 20e). Pendants of this shape appear at a number of sites, including the Lancaster County Park site. Similar pendants in brass and silver from the Guebert site are believed to have been nose or ear pendants (Good 1972: 83).

A small triangular "silver" pendant, similar to some catlinite pendants from the Lancaster County Park Site, also was recovered from the Guebert Site. The use of the Guebert site over a period of more than 100 years seriously reduces our ability to interpret the meaning of these artifacts since we cannot determine if they all were used at the same time or at different periods.

The Lancaster County Park cross is perforated at its center with an opening in the shape of a small cross (see FIG. 2A, 2B; see also Kinsey and Custer 1982: fig. 7D, and pp. 36, 42, where it is identified as a "small brooch in the form of a silver cross"). Jay Custer (personal communication, 1983) notes that the cross "was found on the right side of the body next to the hip" along with a metal strike-a-light (iron?), a small chunk of vermilion coloring matter, and a few scattered seed beads. The assemblage and its location suggests that these materials may have been associated with a pouch. The beads may have been decorative

elements and the other items could have been the contents. All are items that were commonly traded to native peoples during the early 18th century, except for the cross. The form and composition of the cross are unusual, but may be related to other trade goods being produced at that time. The ways in which this cross is related to other trade goods provide important insights into an interesting aspect of the development of silver trade goods.

Clearly this piece (FIG. 2) could not have been used as a brooch. The cruciform opening in the Park Site piece is too small to have accommodated a tongue. No evidence for a clasp or other attaching mechanism can be found on this piece, nor would one be expected. Trade brooches of the 18th century were fastened by their tongues only. The probability that this piece was contained in (or on) a pouch suggests that it may have been an ornament sewn onto cloth or leather and/or an amulet used for magical purposes.

Originally the Park Site cross may have had a slightly raised edge or rim (FIG. 2B). No evidence of attachments or other mechanism for fastening can be seen, although such might be expected on a piece produced for native use. Since the piece may have been kept in a pouch, a means of attachment may not have been needed or may have been lost before interment. The original piece may not have been as regular in outline as the reconstructed version of Figure. 2B.

Some of the damage to this cross appears to have resulted from a blow, possibly during an event that took place long before the cross was interred. Corrosion has exaggerated this earlier damage and has blurred details of the original casting. The lead content of the Park Site cross, and possibly other pewter objects serving decorative functions at that time, were not covered by legal restraints and may exceed 8% (cf. Carlson 1981). The corrosion noted, therefore, may reflect the deterioration of the lead in the alloy. This reaction is slower under burial conditions, and the limestone environment of the Park site may have helped in the preservation process. The cross under discussion appears to be cast from high lead content pewter.

In Lancaster County, close to the Park site, are two Native American archaeological sites. Both date to the late 17th or early 18th centuries, and at both small pewter or lead

castings were recovered. One casting from each of these sites, now housed in the collections of the State Museum of Pennsylvania in Harrisburg, is of interest. One is a small (2 cm) casting of a frog or toad, with tiny raised circles on its back resembling "warts" (Cat. No. 36LA 12/630). It appears to be solid lead, based on the weight of the piece and lack of tarnish. The other is a white metal turtle (36LA52/46b) of about the same size and, apparently, of pewter. The turtle was analyzed through the courtesy of Janice Carlson and the Henry Francis duPont Winterthur Museum (5/8/84) and determined to be a high lead content pewter (80% tin, 20% lead: see FIG. 3; cf. Montgomery 1973: 235-239).

The only known comparative metal examples come from 2 Onondaga sites in New York, where 2 turtles (one of pewter and the other of lead) were recovered from sites dated to between 1640 and 1663 (Bradley 1987: 153, 155, fig. 18). Of note is the finding that pewter appears to have enjoyed widespread use among the Five Nations in the middle of the 17th century, but the use of pewter appears to have declined by the end of the century (Rumrill 1985). Turtle effigies in other materials also are common throughout this region. For example, a Susquehannock "antler" comb decorated with a turtle figure and a stone effigy turtle are cited by Fenstermaker (1959: figs. 24A, B; see also Kinsey 1989), and numerous others can be found in the literature.

## A Pewter Thunderbird

Another pewter or pewter-like casting known from a pre-1750 archaeological context comes from along the upper Delaware River Valley (FIG. 1G), and several shell analogues of the same period are known. A cast metal "thunderbird," found on the western fringe of the Munsee area (see Becker 1983a), may provide additional clues to the use of pewter pieces in general (see FIG. 2C). This pewter (?) thunderbird (Inskip 1990: fig. 2) was found associated with some small beads, possibly in a child's burial, which are roughly dated to 1720, but definitely within the first half of the 18th century. The thunderbird (FIG. 2C) has outspread wings (width 50 mm) and a bifurcate tail resembling human legs. The area of this find had been occupied by Shawnee at the very

end of the 17th century, but by the 1720s was clearly within the Munsee realm.

This "thunderbird" and the associated glass beads were recovered by David Hester and his father in 1936 from a soil washout on the southern bank of Mill Brook in New Jersey where it emptied into the Delaware River. They believe that the exposure may be related to the 1936 flood in this region. David Hester gave this "pewter thunderbird" and the associated human bones, shell, glass beads, and information regarding the location to Doris Freyermuth (personal communication, 1983, 1991), and John Witthoft provided Freyermuth with a date for the beads. The location is a short distance from the Pahaquarra Boy Scout Camp in New Jersey, near a cottage on the Blanchard Michaels farm on the Pennsylvania side of the Delaware. Several small teeth and some bone fragments were taken to be the remains of a small child, but the association with the artifacts was not clear. I infer that these items were together in a burial.

The Hester family leased land on which there was a summer cottage adjoining the Blanchard Michaels farm. While digging a foundation for steps down to the river, David Hester found a King George II peace medal [copper?] 4.2 cm in diameter and with a ring added at its top. Photocopies of both sides have been sent to me by Doris Freyermuth.

Petroglyphs of a shape like this thunderbird (Inskip 1990: fig. 1; Custer 1989: figs. 2 and 3; Cadzow 1932: 4) are believed by some to be late in date, and possibly carved by the Shawnee. Shawnee lived in the Upper Delaware in the 1690s before going to the lower Susquehanna, where Becker (1992) suggests that they may have originated as a part of the Susquehannock Confederacy.

A newspaper account in 1865 (Brodhead 1870: 122) purportedly discusses the excavation of a grave of a Native American interred in the area of the Delaware Water Gap, south of Tocks Island. Of interest to this report is the description of the artifacts with this well-preserved male, buried in an east-west position. Parts of 2 "brooches" or ear drops were found in close proximity to the head, both appearing to be circular and about "2 inches" (5 cm) in diameter. Brodhead says that they may have been of pewter (cf. Stone 1974: 135, fig. 63F-J). Silver brooches have been found on head decorations (turbans?) from graves in

Pennsylvania, but these items described by Brodhead may be earrings. The only other artifacts noted from the grave described by Brodhead were 2 spiral wire sprigs of brass, each 1 inch long and 0.5 inch in diameter, 3 bone or shell beads, and a crude pocket knife. These offer no direct clues as to the date of this burial. The brass items and the probability of pewter pieces suggests a date well before 1750 and possibly in the late 1600s.

Several carved shell thunderbirds were excavated from a Munsee cemetery near Montague, New Jersey (FIG. 1H; Heye and Pepper 1915: 37-40, figs. 9-13, Pl. IX), one of which (fig. 13) is nearly identical to the Freyermuth pewter piece (see also Kraft 1978: 76, fig. 54). Probably related, but slightly removed in space, are the 2 small anthropomorphic shell birds among the 24 shell objects found in a cache in the Wyoming Valley of Pennsylvania (FIG. 1I; Kent 1970: 186-192). These items, which may have come from a cemetery area, are dated to the period 1720-1750. However, neither bird has spread wings, which may reflect a difference in the cultural concepts as to how such birds should be shaped, or the materials with which the makers were working.

Beauchamp (1905: Pl. 16: 170, 173, 174; Pl. 18: 200) illustrates "silver" spread eagle pieces of small size which appear to have been used as earrings. Their dates of origin are uncertain.

## Makers and Users: Ornaments as Cultural Identifiers

Details of dress or ornamentation were used by native people to provide an immediate visual means to distinguish among their several nations. These specifics are difficult to identify, but we do have an excellent historical reference that suggests that small items, such as these carved thunderbirds, may have been fashioned according to specific cultural rules.

As the Lenape were moving due west into and through the former heartland of the Susquehannock in the 1730s, their neighbors in southern New Jersey, whom I refer to collectively as "Jerseys," were moving northwest into the Forks of Delaware (Becker 1987). From this region, north of the Lehigh River, the Jerseys generally continued their migration north and northwest into the region

of the upper Susquehannah drainage.<sup>2</sup>

In 1730, along the former boundary of Lenape and Susquehannock territories then occupied by groups from many different cultures, two men and a woman were found murdered. The bodies had decayed beyond recognition, but with them "were found a saddle, a pistell, a knife, some beads & shells, with some other small Things, by all which the Indians said they wear Delawares . . ." (Hazard 1852: 267–269). The identification of these 3 victims as Lenape was subsequently confirmed. The murders were determined to have been a crime of passion. One of the older victim's wives, who wished to marry another person, had killed her husband and 2 children. Of note is that the "shells, with some other small Things" found with the bodies could be used to identify the cultural affiliations of their owners (cf. Woodward 1932: 18). This suggests that the forms or designs were sufficiently distinct among the many peoples then resident in this region to permit other natives to render an accurate judgement in the matter.

The Park Site cross could well have been cast for colonial use, but attracted sufficient native interest to result in it becoming a trade piece. Although this cross is unlikely to have been made by natives, the speed with which Native Americans learned to manipulate Old World artifacts and concepts should not be underestimated. Some basic elements of metalworking (e.g., cold hammering) quickly became a part of Lenape technology, as demonstrated by Governor Johan Printz's observation in 1643: "They are . . . clever in dealings and doings, skilled in making all kinds of things from lead, copper and tin, and also carve skilfully in wood" (Johnson 1911: 375; 1917: 279). We may presume that these metalworking skills involved only low-

temperature (open fire) work, but this would be sufficient to melt and cast lead and alloys of lead such as pewter.

The two castings in the State Museum of Pennsylvania noted above as well as the white metal thunderbird from the Upper Delaware River could have been made by aboriginal crafters. No colonial analogues are known, nor is it known if colonial pewterers produced such pieces specifically for trade. I believe that these early pieces were cast by native people experimenting with the same technology used to produce shot and balls for firearms (see Kent 1984: 241, 247).

Various small medals, rings, and figures (animal and human) cast in pewter are known from sites in New York (Beauchamp 1905: 27, 32, 33), and lead seals frequently appear at sites (e.g., Onondaga: see Bradley 1987: 152–153). Only one "pewter ornament" is noted by Beauchamp (1905: Pl. 15, no. 156), but this appears to me to be a casting (lead?) for swan shot (cf. Kent 1984). The relatively small number of pewter pieces from among the Five Nations<sup>3</sup> after 1700 suggests that they were replaced by another and brighter ornamental metal: silver.

Janice Carlson (personal communication, 1983) indicated that she had seen only 2 small "pewter trade pieces," and that both of these were in the shape of beavers. Since we have no archaeological evidence for these beaver forms and many other similar pieces, the examples seen may be modern and without colonial origins.

Beauchamp (1905) refers to a stone mold used to cast lead ornaments that were used by native people, and the Lancaster County Park cross could have been cast in such a mold. Unfortunately, he does not indicate who made the castings, nor does he describe the forms cast nor indicate a date when the mold was used. Walthall (1981: 23) mentions native lead smelting at two sites in southern Wisconsin during the 17th century, suggesting that native lead casting may have a long history.

<sup>2</sup> de Crèvecoeur (1972: 211) describes an Indian living at Wyalusing on the Susquehanna (ca. 1759–1769) "who had acquired a love of riches and property, contrary to the general disposition of these people." Thus the norm among these foragers on the frontier continued to be egalitarian sharing of resources. Elizabeth Glenn (1982, esp. table 5) discusses some interesting changes in the pattern of the trade in silver ornaments to the Pottawattomi in the period 1800–1802 as compared with 1833–1834, also reflecting change in cultural values and status ranking.

<sup>3</sup> The presence of pewter pieces in Canadian sites is noted in a publication that might be described as a "looters' guide" to trade silver (Carter 1971: 69, 76, 121). As might be expected, site locations are seldom provided, and specific dating of these particular pieces does not exist.

A stone "button mold" possibly dating from the first half of the 17th century was found in Massachusetts and now is in the collections of the Peabody Museum, Harvard University (Barber 1984). This is believed to have been carved by Native Americans for use as a button and buckle mold, but also has a rough figure of a settler carved into one side. This piece is similar to the Guebert site mold and also may relate to "molds" from the historic and proto-historic periods illustrated by Willoughby (1935: 213-214). These molds may have been used to cast buttons, but more likely they were used to cast brooch-like ornaments for native use. Russell Barber (personal communication, 1983) also notes that a pewter "letter seal," in the shape of a heart transfixated with a sword, was recovered in Harvard Square in Cambridge, Massachusetts, from an archaeological level dated to 1650-1670. He suggests that such items may have been used by traders, but not typically as trade pieces, and may have found their way into the native exchange system.

Simple open-faced molds of stone have been in use for thousands of years (Becker 1984a), and the simple process of carving forms for casting has not changed. Simple molds could have been made with ease by Northeastern Woodland peoples, although we have no direct evidence that such were made for anything other than shot prior to the late 19th century. Since large volumes of lead were sold and traded to Native Americans from the 16th century on (Kent 1979: 77, 291, 293, 403), we may presume that they cast their own shot. Other items in common use could easily have been fashioned at the same time. The colonists may have responded to this native interest in pewter with trade items of an even brighter and more valuable material.

### **An Early White Metal Crowned Heart: The Transition to Sterling**

A white metal casting in the form of a crowned heart (Becker 1983b) was recovered from Test Unit F of the Tindall House excavations (28ME106) near Trenton, New Jersey and dated to the 1730s (FIG. 4C; Wittkofski 1984). John Witthoft identified it as a crowned-heart brooch, and I concurred (22 August 1983), suggesting that the material is

cast pewter. This brooch had been poured into an open mold, and no hallmark was expected nor found. However, this piece was not noted in an early report (Hotopp and Foss 1986) and subsequently was "identified" as a "lock escutcheon" (Louis Berger and Associates 1982: 10-95, 96; Pl. 10.9), perhaps because crowned heart brooches were not believed to have existed prior to the 1730s. The material from this excavation is due for review by April of 1993 (M.-L. Pipes, personal communication, 1992), and the brooch may be tested for metal contents at that time.

The Tindall brooch can be dated by its context to the period 1700 to 1730, roughly contemporary with the Park Site cross. In shape and size the Tindall crowned heart is like the sterling crowned heart trade brooches of that period and later. Decorative brooches of this type operated in the same way as a buckle, except that the tongue is anchored on the frame, rather than on a chape, and passes in front of the piece rather than being attached to the back of the piece as in modern jewelry (FIG. 4). The base of the tongue of such pieces often encircled the frame at a constricted place to prevent the tongue from slipping. Although the "notch" in one side of the heart-shaped frame of the Tindall piece may be a defective area which has deteriorated more than the rest of the frame, the location of this feature provides reason to suspect another origin. This location would correspond to that point on the brooch frame where a notch (or narrow place) would be created by the maker to locate a tongue, the base of which would encircle the frame. If this constriction on the Tindall piece was originally made to hold a tongue then we might infer that this piece was worn as a brooch. Thus the Tindall casting is the only pewter or white metal brooch currently known from the Delaware Valley region.

Very few comparative examples are known, and they appear later in date. A "pewter brooch," with a vertical tongue (or chape?), is the only example of the crowned heart shape among 39 "brooches" recovered from Fort Michilimackinac and dated to 1760-1780 (Stone 1974: 134-135, fig. 63E; also see Quimby 1937: 20). Although 26 of these 39 examples are silver-plated brass, none of the brooches are of sterling. The five silver earrings from these excavations, each with a suspended bob, are dated to an earlier period (1730-1760), and

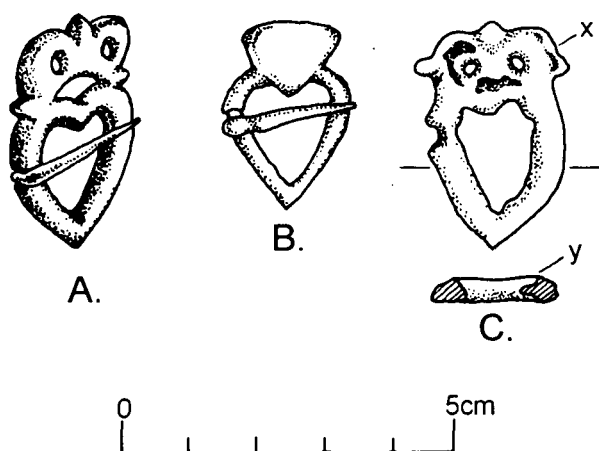


Figure 4. A, a schematic drawing of a generic "crowned-heart" type brooch (after R. Hazen). The heart-shaped portion is called the "frame." The base of the "tongue" encircles the frame. B, the Pemberton Brooch (after Witthoft 1951: 32). Witthoft claims that the tongue is of brass. C, a drawing and section of the pewter Tindall brooch (from Becker field notes, 22 August 1983). Note that the tongue attachment was on the right arm of the rim (which also serves as the chape). An area of extensive corrosion (possibly from a brass tongue?) is on the upper corner of the crown (x). A portion of the surface of the frame has been flattened by scraping or pounding (y).

noted as "possibly French." At Fort Michilimackinac silver trade goods became common only after 1760.

### Sterling Brooches: The Earliest Examples Known

Although Woodward (1932: 17) long ago speculated that "silver" ornaments were being produced for the Indian trade by "about 1740," no documents nor archaeological evidence was then available to support this inference. Now two sterling silver brooches are known from secure contexts dating to before 1740. Both are heart shaped with crowns, like the pewter Tindall House piece (FIG. 4C), and both derive from excavations in Lenape aboriginal territory in southeastern Pennsylvania. Both are now in the collections of the State Museum of Pennsylvania in Harrisburg (Becker 1981, 1983b). Simple circle brooches (cf. Witthoft 1951: Pl. 1), which became extremely common after 1750, remain unknown from earlier contexts.

The Pemberton brooch (Witthoft 1951) is probably the earlier example. This brooch (FIG. 4B) comes from the grave of a Lenape who had been buried in a colonial farm cemetery, the Pemberton Site (FIG. 1F; also Witthoft 1951) that was no longer being used by the family after about 1705. Witthoft (1951: 24) suggests that the burial containing the Pemberton brooch "is slightly earlier than 1750" only because of his belief that all trade silver dates from after 1750 (Gillingham 1936). Witthoft notes, however, that the Pemberton piece "is thicker than usual specimens of the late eighteenth century and represents one of the simplest designs." Witthoft suggested that this brooch "may be one of the earliest forms . . . earlier than the extensive use of brooches by Indians." Witthoft (1951: 23) believes that the tongue of the Pemberton brooch was of brass. Like the Tindall piece, the tongue of the Pemberton example encircles the right of the heart.

The second silver brooch, bearing the mark of Cesar Ghiselin, a silversmith who died in 1733, was excavated from the area of a summer

station (36CH60; Becker 1981) occupied by the Brandywine band of Lenape from ca. 1720–1733 (FIG. 1E).<sup>4</sup> These two silver brooches, the earliest examples of trade goods fashioned in sterling, bring us back to the question as to why Native Americans in general appear to have resisted the use of silver ornaments and coins of all types until after 1750, despite the obvious acceptance prior to 1750 of so many other aspects of European technology. Certainly this was not simply a matter of availability since silver coins, although themselves not plentiful in the colonies, had always provided Native Americans with the potential for silver ornamentation. Early references to a deliberate avoidance by these people of the use of gold and silver suggests the early ethnocentric attempts by the colonists to tempt these peoples with items which in Europe were of high value and associated with prestige.

Despite the existence of these sterling silver crowned hearts worn by Lenape during the period ca. 1700–1735, no trade silver items were part of the numerous Lenape and other land sales in Pennsylvania which lasted until 1701. None are noted in the many confirmation treaties which continued until 1737 (see Kent 1979). The “twelve dozen of Rings” which were part of the extensive goods given on 7 September 1732 to one of the Schuylkill River bands of Lenape for their lands (Kent 1979: 359–362) probably were finger rings (see also Gillingham 1934: 197–198), not sterling ring-shaped brooches.<sup>5</sup> Even in the early 1750s silver was rarely used in the Indian trade (Gillingham 1934: 98; Colonial Records 1851, VII: 337). However, by 1756 large quantities of silver were being ordered by colonial

governments and Indian traders from many of the best known colonial silversmiths. Circle brooches and crowned heart brooches rapidly became common, being frequently referenced in inventories dating from after 1756. By 1760 sterling goods were being produced in huge quantities (see Quimby 1937; Mainfort 1985). Two questions arise when considering this phenomenon: (1) Why are silver ornaments prevalent after 1750 when iron, cloth, guns, and beads had been in demand since before 1550? (2) Why did certain native groups incorporate silver trade goods into their material culture while others continued to avoid them?

### Summary and Inferences

Both of the earliest known trade sterling silver ornaments of established archaeological provenience are of high quality (92.5% silver) and date from the early 1700s. By 1760 silver ornaments for native trade, many bearing the strike marks of well-known silversmiths, were being produced in huge quantities. The distribution of finds of trade silver items helps us to reconstruct patterns of European-Native alliances and trade routes (Quimby 1937: 20). The origins of this important aspect of colonial economics, and the possible relationships with small pewter castings such as the Lancaster County Park Site cross may shed light on the process of culture change as well as the economics of the fur trade.

While very little can be said about the small pewter cross from the Lancaster County Park Site, its date suggests that it may be among those postulated transitional pieces in use by the Lenape in the early 1700s. By the late 1750s an entire category of sterling quality ornamental trade goods becomes well documented in the literature (Gillingham 1936; Woodward 1945) and from archaeological contexts. While no cruciform brooches are known among these later sterling pieces, crowned hearts in the general shape of the Tindall pewter piece and the two sterling brooches noted above become extremely popular.

The total number of cast pewter ornaments from historical Lenape and other sites remains extremely small, perhaps because lead and pewter items do not preserve as well as silver from similar archaeological contexts. The

<sup>4</sup> Quimby (1937: 23, table 1) notes that the only silver ornament then known from Kent County, Michigan, was a cross marked with a “CG.” This may be a Cesar Ghiselin piece dating before 1733 and should be further studied as a possible “heirloom.”

<sup>5</sup> Arthur Woodward’s manuscript, according to Gillingham (1934: 98), is titled “The Use of Silver Ornaments among the Indians East of the Mississippi,” and was produced for the Museum of the American Indian, Heye Foundation. In this work Woodward is said to state that trade silver began to be used about 1730, a date remarkably close to that suggested by the recent archaeological evidence. The basis for his inference remains unknown.



pewter pieces from the Delaware Valley region, discussed above, may have provided a transitional category of trade items, as well as some prototypic shapes, acceptable to or desired by various Native American people.

Two shifts are needed in this transition as I envision it among the Lenape. The first is a shift in the color of important native ornaments, from copper red (blood?) to metallic "silver." The postulated acceptance of silver-colored pewter ornaments, as an intermediate phase, may have been facilitated by Lenape casting of lead for shot and ball. This cognitive shift in the color of valued objects, with developing skills in casting, leads to the second shift, that of the actual manufacture of small ornaments in lead and/or in pewter (see also Custer, Carlson, and Doms 1986). Simple lead and pewter castings could have been made with ease by native crafters, as Johan Printz suggested as early as 1643 when he noted that the natives are "clever [artful] to do all kinds of things of lead, copper, and tin, as also to carve artistically in wood" (Johnson 1930: 150). However, work in sterling silver appears to have been purely a colonial technology, with no known native production anywhere in the northeast during the colonial period. Silversmithing among the Five Nations appears to be a late 19th-century development, strongly reflecting local acculturation. The re-emergence of "silver" use by these natives after 1900, but now made by the native users, is by no means a demonstration that this was a viable tradition in metalworking which had begun during the first few hundred years after contact.

Traveleyan (1987) demonstrates that during the prehistoric period in the Eastern Woodlands significant increases in the use of native copper, as well as important iconographical changes, coincide with shifts in subsistence strategies. She also notes the importance of color in various artifact categories. In the early 1700s many Lenape bands not only were relocating their territories, but embarking on a new course in their economic strategies. Their increased emphasis on hunting, rather than fishing, and concern with the fur trade as a major source of "income" appears to have led to increased social stratification, as indicated by Lenape "settlements" being named for group leaders rather than being taken from geographical

markers (see Kent, Rice, and Ota 1981; Becker 1988b). These changes may correlate with a greater interest in sterling trade goods as indicators of economic success as well as artifacts well suited to an increasingly cash-based economy. The reduction in traditional values of sharing and hospitality, and an increased reliance on individuals "paying" their own way, would prompt interest in these highly negotiable items of exchange.

Mainfort (1985) has provided an excellent example of the archaeological evidence for the social ranking that had developed among a group of Ottawas and Chippewas around 1760 (see also Mainfort 1979; Quimby 1937: 20). When linked to the historical evidence for these people, the emergence of social ranking can be seen (cf. Brown 1981). However, the processes by which small silver trade goods came to be available, and their acceptance by previously uninterested native peoples, are the concerns of this paper.

The monetary value of such lead or pewter items must have been very low. Sterling silver pieces from the early 18th century had a comparatively high value, but not greater than that of many of the items that had long been among the standard goods being traded to Native Americans in this region.

The evidence from among the Lenape indicates that early borrowing of functional aspects of European material culture (e.g., guns, metals, cloth) produced a cultural florescence. After nearly 200 years of European contact we find here the beginnings of socio-political change among the Lenape. Each Native American group appears to have selected ornamentation appropriate to its own traditions and for its own identification. Possibly the ornamentation itself was a primary means of indicating cultural identification, and thereby was particularly resistant to change. Thus, the correlation of the departure of the major Lenape bands from southeastern Pennsylvania around 1730–1740, and the development of sterling items in the fur trade may not be coincidental. The Lenape bands (Barnes 1968; Becker 1988a, 1989), shifting their hunting territories to the west, became more strongly involved in the fur trade after the dispersal of the Susquehannock (see Becker 1992). Lenape development of a more clustered settlement pattern and the changes in their socio-political systems, as evidenced by a

new tradition of naming settlements for "leaders" (Becker 1988a), called for some means by which status differentials could be noted among these formerly egalitarian people. Silver decorative items, later to become regular trade pieces, provided a means for demonstrating these new socio-cultural forms (status differences). The Lenape and other formerly egalitarian people utilized silver, and possibly other items such as silk (see Becker 1994), as a new means of showing distinctions previously unknown among them.

The increasing use of silver ornaments by the Lenape between 1730 and 1750 and the development of silver trade goods in general during this period (cf. Gillingham 1936) suggest that these egalitarian peoples shifting into low-level status-ranked societies became particularly enamored of sterling items and materials such as silk because they were useful in providing indicators for differences in rank. Bells, tinklers, and beads may have been largely decorative, but silver goods form a specific category of European material culture that may have become more than adornment to these Native Americans after 1740.

Mainfort's (1985) archaeological data for the Ottawas and Chippewas in the Great Lakes region from after 1750 also have been interpreted to suggest that trade silver was used in social ranking among formerly egalitarian peoples. The historical literature, as well as drawings and paintings of that time, also can be expected to document this pattern of usage by native peoples.

Those cultures that had status ranking as part of their traditional operating systems had built within the social structure, and probably the material culture, means of differentiating among the status positions of all individuals. Traditional foraging systems, and their individual members, had little use for silver as a means of indicating status differences, relying instead on traditional and still successful cultural behaviors. Foragers such as the Lenape, as well as the Wyandott and others, as they became important suppliers in the fur trade, came to desire a new category of trade artifacts that previously had been without cultural value among them. These silver artifacts provided a once egalitarian peoples with a decorative mode that could be used to demonstrate status as an indicator of income, directly reflecting individual success in the fur

trade. The once egalitarian Lenape, by 1750, appear to have become an incipient ranked society.

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