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Wampum: the Development of an Early American Currency

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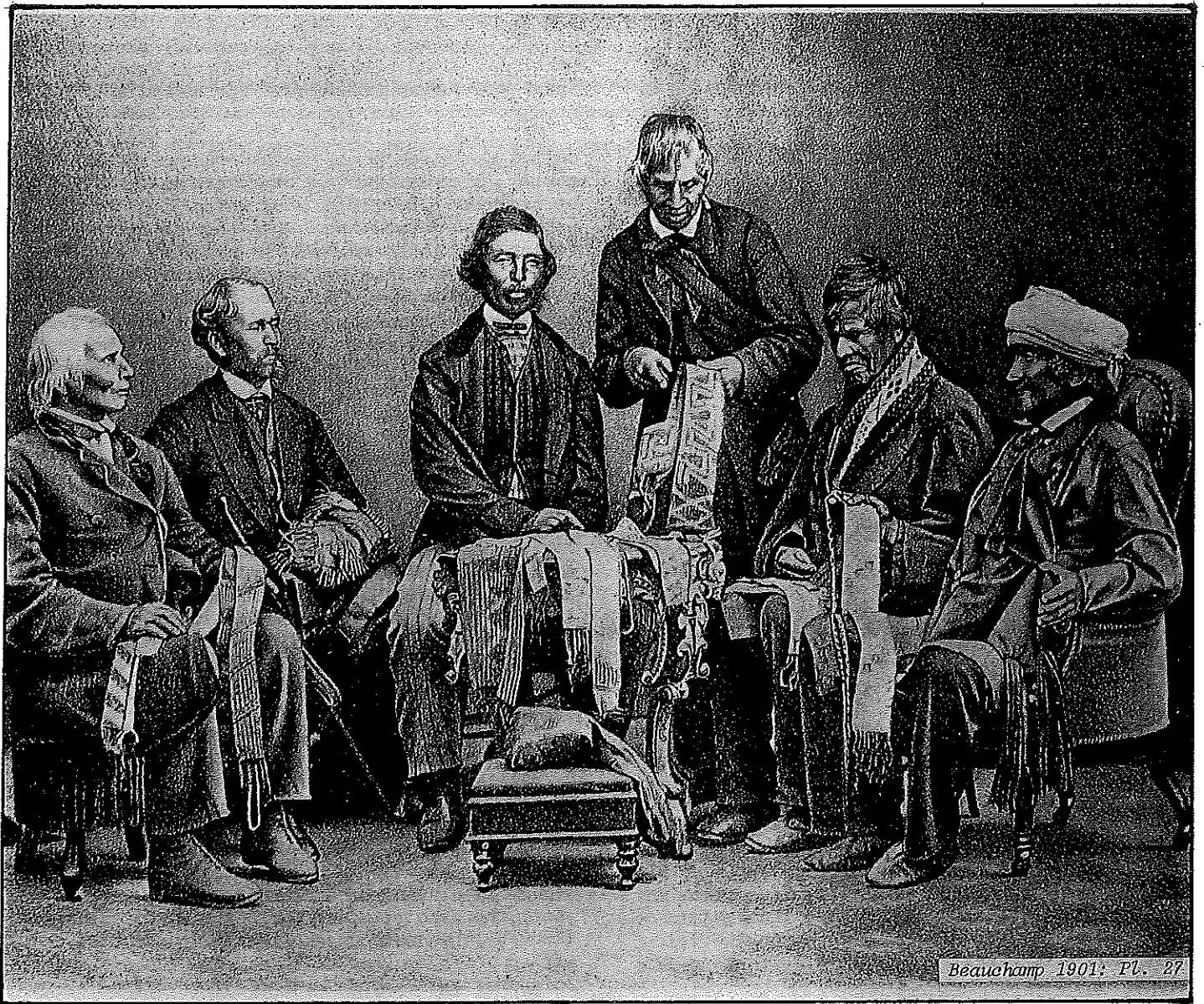
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ABOUT THE COVER

The effigy-bearing celt illustrated on the cover was found on the Miller Field site during excavations conducted by the Archaeological Research Center of Seton Hall University (1969). The artifact was associated, as a grave offering, in burial pit No. 3 (Feature C-F14). The burial, a tightly flexed adult male, had been positioned on his right side with a clay tobacco pipe by his face and this celt near his pelvis.

An effigy face consisting of two eyes and a mouth is pecked into one face of the celt near the tapered butt. Wear polish in the area of the face indicates that this portion of the celt was originally encompassed by the handle (now decayed). In the upper Delaware Valley such effigy faces occur with some frequency on Late Woodland pottery and on certain cobblestones, but so far as I know, this is the only instance of an effigy face appearing on a utilitarian implement.

H.C.K.



Beauchamp 1901: Pl. 27

Fig. 1 Early photograph of the Iroquois chiefs reading wampum belts in Brantford, Canada, dated 1871.

WAMPUM:

The Development of an Early American Currency
by Marshall Joseph Becker*

Wampum, the shell "money" used in the Eastern Woodlands during the historic period, appears to have developed only after European contact. Although shell beads of diverse sizes and shapes were commonly used by native American Indians, the value of true wampum (cylindrical shell beads) as more than decoration or a useful item in simple gift exchange appears to have been generated by the fur trade and its ancillary activity of "land purchase". As a medium of exchange in the fur trade, shell beads evolved into a standardized size and shape. Simple gift giving, or exchange within a culture, evolved into trade, or a complex economic interaction between cultures, which continued to the end of the nineteenth century.

WAMPUM: VARIATIONS IN NAMES

Wampum, the "marine shell tubular beads..." (Driver 1972: 221) of the Eastern Woodland Indians, became an important medium of exchange during the years which Withoft (1965) designates as the period of trade (1604-1674), throughout the colonial period, and even late into the nineteenth century. The individual cylindrical beads called *seawhoun* by the Massachusetts Indians and *siwan* by the Narraganset Indians, were called *zeband* by the early Swedish traders and *sewan*, *sewant* or *seawant* by the Dutch. Johnson (1911: 192) believes these latter terms are derived from the Narraganset *siwan*, meaning scattered. Lindström (1925: 224) equates *sewan* with "skins", perhaps linking the shell of the shellfish with its "skin", or perhaps reflect-

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ing the use of the term in the fur trade.

Although many authors suggest that *siwan* and the other terms derive from an Algonkian root, the ethnographic data supports the hypothesis that the terms derive from a Dutch source. In either case the terms *wampum* and *siwan* clearly were related to commerce in New England during the period of trade, and one must assume that these were important factors in the commerce of the period since the native pieces of wampum were made from New England to Virginia. *Sewan* and related terms referred only to the loose or unstrung (scattered?), polished, cylindrical beads made from shell.

The word *wampum* is derived from an Algonkian term, and, as *peage* or *peak*, is used only as an abbreviation of *wampomeag*. The Narraganset called white wampum *wampomeage* (Wood 1634:61), and the Massachusetts called it *wampampiag*. This derives from *wab* (being white) plus *umpe* or *ompe* (string) with the animate plural suffix *ag* or *ak* (see Hodge 1907, Vol. 2:904-909). Heckewelder (1834:368) notes the Delaware Indian use of the term *wa* for white. The various spellings, *wampum* or *wompum*, appear to be generally accepted in these and in all related words (see Trumbull 1903:340). The various usages noted in the Oxford English Dictionary (Murray 1928, Vol. X, II:60-61) shed no light on the etiology, nor on ideas regarding European influence.

Williams (1643:151) defines *wompequayi* as "cloth inclining to white". Williams also (1643:153) defines *teauquock* as "money", while Trumbull (1903:297) believed that no term for true money existed among the Indians, but that they used a corruption of the English term and called it *moneash*. Williams noted that, "They have great differences of their Coyne,..." and then refers both to several varieties as well as counterfeit shell and very black shell counterfeits made of stone.

Wood's early account (1634) of the Indians in the New England area, published immediately after he had lived there from 1629 to 1633, speaks only generally about the various tribes of Indians, but gives numerous specifics regarding the Narraganset. Wood found that the Narragansets, who lived in the most southerly area, were the most industrious Indians and therefore the most wealthy. "These men are the most curious minters of their *Wampomeage* and *Mowhakes*, which they form out of the inmost wreaths of Periwinkle-shells" (Wood 1634:61). The Narraganset also carved steatite pipes and bowls in addition to beads and therefore were wealthy suppliers of finished products to all of the neighboring tribes.

Wood's account, and subsequent observations, note that there were really two kinds of beads. Although Wood never specifies color, he offers clear descriptions of the two kinds of beads which in all other accounts are noted as coming in a white form and a dark purple or black variety (often called blue or brown). In size and shape both were alike (Jones 1873:502). Jones compared

both kinds to English bugle beads, which were small, usually jet black, cylindrical beads sewn as trim on women's clothing, commonly around the neckline. Jones (1873:502), however, noted that "peak was not as transparent nor so brittle".

Williams (1643:147) held that the Massachusetts called the black beads *Suckauhook* and the black shells *Suckauanusuck*, a statement later repeated by Trumbull (1903:340). The white shell beads were called *meteauhook*. This term is quite different from the term *Mowhakes* given by Wood, who also noted that the Indians in western New England were the "Mowhacks" (Wood 1634:56). Although Wood never mentions color, his definitions (Wood 1634: vocabulary) enable one to recognize that he is referring to shell beads of different value. Wood defines *Mowhachies* as "Indian gold", and *wampomeage* as "Indian money".

In 1642 Campanius Holm indicated that trade in zeband was an important part of the Indian-European economic interaction, although his details on the subject are contradictory and confusing (Du Ponceau 1834:118, 131-2). Campanius did indicate that zeband had the additional advantage of serving as an ornament. William Penn (Meyers 1937:39) later made a similar statement. Certainly wampum was the chief currency of the eastern seaboard throughout most of the seventeenth century for both Indian and European alike.

Source of Shell

Williams (1643) said the black shell, inclining to blue, came from a "fish" the Indians called *Poquauhook*, and the English "hens". In Elizabethan England the term "hens" could be used for any marine animal such as a lobster, clam, or even a scaly fish. The same concept appears in France about the same time, as indicated by Lescarbot (1609:842) who discusses fertilizing of fields with "...*Les ordures de la cuisine, coquillis de poissons, & choses de meme stoffe...*" (see also Ceci 1975:27). Specific identification of this "fish" called "hens" is clarified by Trumbull's (1903:341) description. Trumbull notes the term *suckauhook* as being related to the *suckauaskeesaquash* which he defines as "the black eyes". Trumbull, following Williams, explains that this refers to a specific part of the shellfish called *poquauhook*. This is obviously the hard clam *Venus mercenaria*, for which the English had no term and therefore called it by the sixteenth century generic English word "hens". The English also used a corruption of the Algonkian term *poquauhook*, which has now come into common use on the New England coast as "quahog". Compare the Massachusetts *poquauhook* (also *poquahoc*) with the Pequot term *p'quauhhaug*. The "black eyes" of the quahog are a characteristic marking.

Williams (1643) also offers native terms for tools used to make wampum and various matters related to this aspect of the Indian economy. The native-made variety of wampum were "double-drilled" from both ends with stone tools. Manufactured shell beads were tubular and drilled from one end with a metal drill.

Williams (1643:144-149), speaking about the Natick (Massachuset), says their white "coyne" is made of the stem or stock of the Periwinkle (*Pyrula carica* or *P. carakucykata* Say), which they call *Meteahnick* after all of the shell has been broken off (see Trumbull 1903:341). The white beads, *meteahnock*, made of these ends are strung and valued at 6 to the English penny, while black beads (*Suckauhock*) were valued at 3 to the penny.

Beverly (1705, Bk. III, Chpt. 12:58) was certainly correct in observing that the Indians of Virginia had no riches before the coming of the Europeans except for peak, which they made of the "cunk" shell (probably the quahog clam). Jones (1873:502) evidently took his ideas from Beverly.

Jones (1873:502) quotes the "Westover papers" as giving the Virginia coast as the source of the "Conch" shells from "which the Indians peak is made." Jones also recounts that only the extremities of these white "conchs" are blue, so that the "two sorts, or rather of two colours" of "peak" are drilled out of the same shell. This note suggests that the term "conch" was being applied to *Venus mercenaria*, which today is generally called a clam. The term "conch" was formerly applied to bivalves and other shellfish, while today it only applies to large, spiral, univalves. The ratio of colors in *V. mercenaria* explains why the white forms of wampum commonly had half the value of the darker beads. Jones (1873:509), using Burnaby's observations of 1759-1760, notes that wampum was made from clam shell (like a thick oyster shell), which is well-known to have a blue or dark patch toward the valve hinge. Burnaby described the shell as being clipped to proper size "that of small oblong parallel piped", then drilled, and finally ground to a round, smooth surface preparatory to polishing. Both white and blue beads were made from the same shell, with the latter more rare and more valuable. One may assume that originally wampum was made wherever the quahog was found.

Another decorative shell item which had some value to the Indians was roenoke (*roanoke*, *ronoke*), which is generally believed to be a less valuable form of wampum made from oyster shell in the area south of the Delaware Bay. Beverly's early account notes that "Roenoke" had less value than "peak" and was made from cockle shell bits, drilled and used as "peak". (Beverly 1705, Bk III, Chpt. 12:58-59). The cockles noted by Beverly were probably of the genus *Cardium* or a genus related to *Cardium*. They may also have been scallops, but this is less likely. Jones (1873:503) states that these shells were broken "into small bits with rough edges, drilled through in the same manner as Beads...." Jones is almost certainly using Beverly as a source. Although roanoke had far less value than "peak", it was used in the same manner. Weslager (1945:105) is incorrect in stating that roanoke was the white version of peak.

Wood (1634:66, 85) was one of the only observers to specify how their beads were worn. First

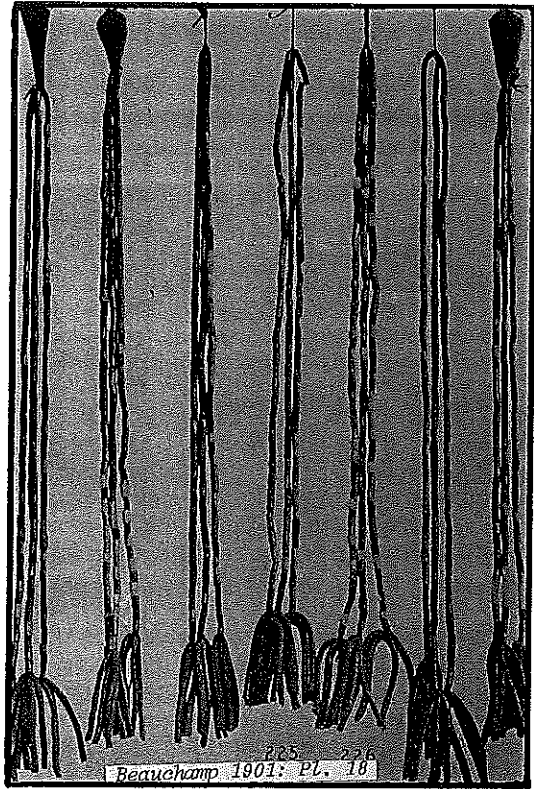


Fig. 2. Strings of wampum used at mourning council.

Wood states that they had "long bracelets of their curious wrought wampompeage and mowhackees, which they put about their necks and loynes...". Wood (1634:66) later specifies that the dress of a male Narraganset would include "...Mowhackees for his gold chain, good store of Wampompeage begirting his loynes...". Johnson (1911:192) suggests that the Swedes and Dutch began the custom of stringing the beads. Perhaps the scarcity of the beads prior to the coming of the Europeans did not make stringing a feasible technique.

Wampum had come to denote the strung sashes, belts or strands of siwan.

The extensive linguistic data indicates that shell beads of different colors and different values were in use by the Indians prior to the arrival of the Europeans. This is confirmed by the archaeological as well as the ethnohistoric evidence.

Archaeological Evidence

Prior to the arrival of Europeans, Eastern Woodland Indians made relatively small numbers of shell beads, probably as ornamental items. These beads were not standardized in size or shape. Their decorative value made them desirable items to give as gifts or tokens. Firm archaeological evidence for the Indian manufacture of tubular shell beads prior to 1600 is available for the Seneca (Wray and Schoff 1953:56) and from the Blue Rock site in Lancaster County, Pennsylvania (Heisey and Witmer 1962:115, fig. 4). However, the evidence indicates that very few were made, and the range of sizes represented at these early sites is great. Orchard (1929:64) was correct in assuming that the Indians

generally made perforated shell discs, and infrequently made cylindrical beads, a technological development which resulted from European contacts (see also Loskiel 1794:26). Wooden ornaments probably were more common than those of shell among the precontact Indians. Loskiel (1794:26) stated that the Indians made ornaments of black and white wood as well as shell, the latter being more highly valued.

Precontact Indian burials on the Rhode Island shores have been found to contain shell blanks from which shell beads were produced (Simmons 1970:74-75), and similar blanks were recovered from Fort Corchaug on Long Island (Solecki 1950:27-29). Solecki believes that the Indians made the beads from whelk-shell cores, and Simmons (1970) illustrates the stages in the manufacturing process, using as examples artifacts recovered in his excavations. H.C. Kraft (pers. com.) reports that there are very few documented instances of wampum appearing in Indian graves in New Jersey, possibly due to acidic conditions hostile to the preservation of shell. A small amount of wampum was recovered together with shell runtees and glass bead necklaces in an historic Indian burial from the Pahaquarra Site (Kraft 1975:45, fig. 13c). This burial from Warren County, New Jersey, and some isolated examples from the "Munsee Cemetery" site opposite Minisink Island (see Heye and Pepper 1915:33) are the only New Jersey examples which Kraft has been able to document to date (see also Simmons 1970).

Barry Kent (pers. com.) indicates that virtually no wampum appears in excavations of Susquehannock sites which were occupied prior to 1600, although the incidence increases somewhat by 1650. Of the beads found during this period Kent estimates that only about 1% is true wampum while the other 99% is glass. This agrees with the evaluation of Arthur C. Parker (in Orchard 1929:69) that cylindrical wampum was rare in the period from 1600-1630, but by 1650 great quantities were known, and the amounts increased steadily until 1800. The Susquehannock Indians' greatest use of wampum as grave offerings, according to Kent, was during the period from 1700 to 1750, when the ratio of glass beads to wampum becomes nearly 1:1. Kent notes that the Conestoga town excavations produced in excess of 40,000 glass beads, often called "porcelain" (see Woodward 1933:15a), and almost as many of wampum. This archaeological evidence agrees quite well with the evidence of Wray and Schoff (1953) and reflects the movement of trade toward the West leading to statements of the late seventeenth and early eighteenth centuries regarding the decline in volume of wampum in circulation along the Atlantic shore.

Wray and Schoff (1953:54-60) note that the Seneca interred trade goods as rapidly as they got them, thus providing good dating controls in the form of beads. Although early types of beads are often found mixed in with later types, suggesting that looting was constant, the beads generally provide an accurate means by which burials may be dated. The following summary of Wray & Schoff's evidence from Seneca burials offers an excellent

idea of changing customs during the period of contact with Europeans:

1550-1575: Normal native trade, with few trade items when "the wearing of ocean shell beads and ornaments was popular". In this period "numerous discoidal, cylindrical, and massive wampum-like beads were worn as necklaces".

1575-1590: Beginning of fur trade, thus increased trade materials, including polychrome, tubular red, black and white glass "cane beads".

1590-1615: Fur trade develops, but native materials still 75% of burial goods. Iron axes replace stone, but other stone tools are common. In this period "true wampum beads appear for the first time", and there is a great increase in glass beads in graves.

1615-1630: Grave goods still about 50% of native material, but gun flints appear and glass beads are numerous.

1630-1650: Trade material is abundant, but native goods still half of all items. "Shell was the reigning style of the day, even overcoming glass beads in quantity and varieties". In this period "discoidal shell beads reached their maximum" and "necklaces of both tapered and straight drilled wampum beads" are common.

1650-1675: Native goods only 1/4 of inventories, and "shell was the rage...". Wampum necklaces and belts were common, with most of the beads being of colonial manufacture, i.e., "having small straight drilled holes". Glass beads also reached their height of abundance.

1675-1687: Native goods are less than 25% of grave goods. Shell beads were popular but trade beads, of the contemporary tubular and polychrome types, were virtually non-existent. Cane beads of black, green and red were common.

Witthoft (1966:208), however, believes that the volume of grave goods after 1700 is much reduced, possibly as a result of the bottom dropping out of the fur trade in 1675. Although furs were no longer the chief item that the Indians had to trade, they did have some value. Perhaps other commodities were sold to the Europeans (see Becker 1976), and Indians were employed later as mercenaries in numerous situations, thereby maintaining a steady stream of wampum into Indian "economic" operations.

The volume of goods interred in graves by the Indians was well known to the Colonials and other Indians. Weslager (1945:105) notes three cases of Indian graves being looted between 1661 and 1713. Weslager relates that when a "king" among the Assateague of Maryland died, his bones would be processed for burial in a skin case. The case would then be filled with "Ronoke" and other valuables (Weslager 1945:105). Wray and Schoff (1953:54) note that numerous Seneca graves were looted of useful articles shortly after burial, but whether by other Seneca or by their enemies is not

known. Early settlers also were known to loot Indian cemeterys for iron just as modern pillagers intrude upon these graves for artifacts. Weslager (1945:104) also relates that Europeans stole money chests from mourning Indians in the middle of the seventeenth century. Weslager believes these chests were boxes to hold sewan.

William A. Hunter (1954:78) indicates that during the later Colonial period various documents refer to the use of wampum as an offering at religious ceremonies. The function of wampum for the Indians was for ritual purposes (ceremonials and burials), and as a medium for gift-giving between individuals conducting business, treaty talks, or other social or ritual interactions.

Ethnographic Evidence

Quite probably wampum began as a small scale native craft which became elaborated as the fur trade developed and ultimately became one of the important items to be traded to Indians for furs. In this early period, however, there is some question as to who was producing these goods.

Wood (1634:61) noted that other tribes went to fetch their "coyne" from the Narraganset. Since Wood made his observations only a few years after the alleged introduction by the Dutch to the English of shell beads as a medium of exchange, one may assume that the Narraganset manufacture was a native tradition. Certainly the Narraganset had the beads as well as the drills, in both stone and iron, at an early period. This is attested to by Wood's account (1634) and recent archaeological discovery (Simmons 1970:46, 138).

Johnson (1911:192) notes that Pieter Minuit's first trading venture along the South River (Delaware) in 1637-8 involved the exchange of cloth and sewant for pelts. The preparation for this expedition, scheduled to have gone by way of Nova Terra (Newfoundland) which was to be claimed for Sweden, involved trading stops along the New England coast to buy sewant from the Indians. Specially noted was a stop at "Cromeguige (?)" (Johnson 1911:113). Since Wood (1634) had already indicated that the Narraganset were the chief suppliers of wampum in the New England area, the reference to "Cromeguige" may relate to a particular location in Narraganset territory. Minuit's expedition of 1637-8 was forced to take the southern route to the New World and no mention is made of any purchases of sewant. Although English colonies were well established along the New England shores by 1637, the Indians seem to have been the principle suppliers of wampum for the fur trade at that time. Williams (1643:152) noted that the Indians traded among themselves only in goods, but that "most on the Sea-side make money and store up shells in Summer against Winter whereof to make their money...". This suggests a winter occupation which could be turned to profit by trading with the Europeans.

This evidence is supported by the archaeological data presented by Wray and Schoff (1953), who note that in the period 1630-1650 shell was the

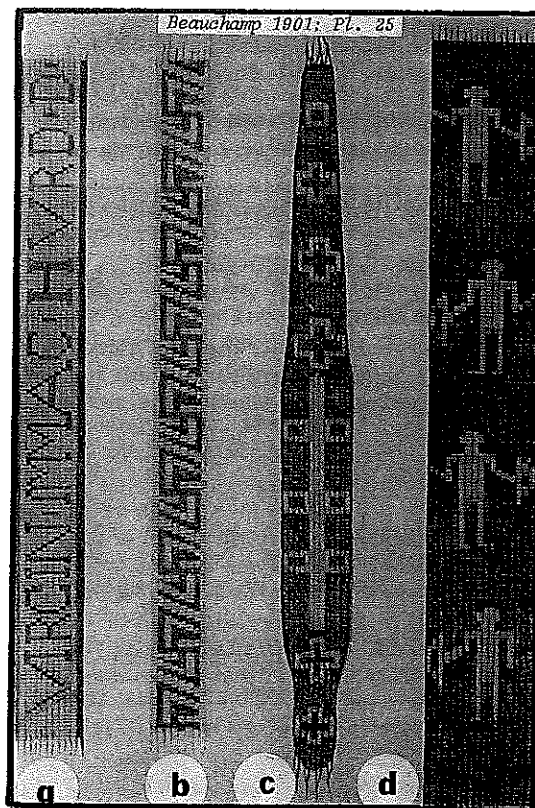


Fig. 3 (a) Photograph of a belt in the Trocadero Palace in Paris.
 (b) Belt of 8 rows, ca. 224 beads long; purple "swastikas" on white ground.
 (c) Belt called a "scapular", an exceptional form. Thirteen rows at widest part and about 260 beads long.
 (d) Belt 17 rows wide and ca. 225 long showing 4 figures in white on purple ground.

"reigning style of the day...". Since the native-made discoidal beads reached their maximum during this period, and both native and European wampum was common, one can only conclude that the non-Indian manufacture of beads was only developing while native industry was at its peak. Colonial-made wampum does not become common in burials until after the period beginning in 1650.

Weslager (1945:107) presents a summary of an account of 1643 in which a Virginia trader named John Willcox traveled north to New Sweden with knives, kettles, axes and sewant to trade for pelts. The source of the sewant is not known, but it may have been made in Europe along with the other trade goods noted. Weslager further notes (1945:106) that shell money was in great demand by Europeans as well as Indians. The instructions for John Printz in 1644, with reference to the Lenape Indians, described them, as at that time, being poor, with practically no sewant from the "Manathans and of the North English where sewant is made and it can be bought cheaply there from the savages" (Weslager 1945:106). This statement suggests that as late as 1644, no great European or Colonial manufacturing of sewant had developed.

In 1647 Knut Persson was sent from New Sweden to New England to procure sewant and some oxen in exchange for merchandise. He bought 1,000 yards

(the account reads, "n 1,000") of wampum for cloth, hats, mirrors, etc. (Johnson 1911:333). This wampum seems to have been bought from the Indians, but possibly Colonial merchants were acting as middlemen in the wampum trade, or New England Colonists were making these beads as early as 1630 for sale to merchants dealing with the Indians. The oxen certainly were bought from the Colonials.

Lindeström's account (1925:232) written in the 1650's, indicates that the Dutch went into commercial production of wampum in Holland, but that the Indians did not like the manufactured product. The Indians appear to have preferred the native product and at first refused to accept the new standardized commodity.

European Made Wampum

The first Dutch traders appear to have noticed that the Indians exchanged beads as a part of ritual "gift-giving" when agreements were made (see Woodward 1933:14). European-made glass beads called "porcelaine" beads, were already being used in the fur trade and as part of land "purchases" from the Indians, which appear to have been agreements to allow the Dutch to use the land (see Simmons 1970:39, 41). These "porcelaine" beads are often termed "straw" or "cane" beads since they were made as tubes 15 to 18 cm. long which were broken into segments and worked into beads, generally of white, black, blue or red. The earliest straw beads appeared in burials dating prior to 1600. The incidence of glass beads in Indian burials increased consistently for the next hundred years (Witthoft 1966:205). Quite rapidly the Europeans appear to have added native beads to their trading inventory, buying where the price was low and selling where the price was high. Later on they began to make shell beads themselves. This enabled them to use readily available clam shells from the New World as a ballast and then as a raw material in bead manufacture. This provided employment in home countries as an alternative to the purchase or manufacture of glass beads for trade. This export of clam shell to England and the return of wampum continued even after the American Revolution, since the manufacturing process provided an inexpensive product which the Indians valued as much as silver (Weld 1799:390-1).

According to an account by Campanius (Du Ponceau 1834:132) one person could make an average of 5 to 8 stivers worth of sewan per day. In 1642 this would have meant at least 6 to 8 white shell beads per day. Du Ponceau, however, does not indicate if such a "person" was an Indian or a Colonial. Weld doubted that the Indians could work the clam shell, suggesting that by the time he wrote in the 1790's the manufacture of wampum had long since superceded the native handicraft. The native ability to produce wampum is documented by archaeological as well as ethnohistorical evidence.

Woodward (1933:12) believed that the Narraganset Indians only began to make the white and black beads after 1628. Woodward held that the Dutch had introduced the "new" item of barter to the Indians via English at Plymouth. Woodward (1933:13)

derives his evidence from the documents involving the laws of New Netherland (O'Callaghan 1868) and other sources. Governor Bradford commented on the introduction and spread of wampum in New England, a point which Woodward (1933:14) uses as evidence that wampum is a European innovation. Although Woodward also notes that several early scholars also doubt that wampum existed prior to the arrival of the Dutch, these authors are probably considering only the commercially produced, standardized beads and not shell beads in general. The manufacture of tubular shell beads for use in trade seems to be an early Dutch invention (Woodward 1933:15) which spread to the English by 1627.

Coins are rarely found in burials or at Indian sites. Although coins might be considered by the Colonials as possible decorative items, they were not "traditional" burial goods. Furthermore, the purchasing power of coins was recognized, and the Indians preferred to barter for the less expensive beads of glass and shell. Campanius indicated (Du Ponceau 1834:131-2) that very little value was placed on metal coins in the years around 1642, a phenomenon which probably reflects a preference for traditional beads as well as an awareness of the greater volumes of beads which could be had in lieu of coinage.

In the period from 1650 to 1700, straw beads constitute the hallmark for archaeological sites, in as much as they can be dated to the decade of manufacture (Witthoft 1966:204). Although shell beads continued to be popular, their preservation in archaeological contexts is not as good as that of glass. Witthoft (1966:205-7) offers a good description of the bead types used from about 1590 to 1700. By 1634, Wood (1634:93) observed that the Narraganset would inter with the dead "their Bows and Arrows and good store of their *Wampompeage* and *Mowhackies*; the one to affright that affronting Cerebus, the other to purchase more immense prerogatives [sic] in their Paradise." The reduction of the weight of precious metals in coins produced by the English mint had no effect on the Indians, although the Colonials may have been impelled to greater use of wampum as a medium of exchange. This use, however, was strained by the removal of wampum from circulation.

Williams (1643) noted a decline of some 50% in the value of wampum, probably reflecting European mass production techniques. The changing value of sewan, due to changes in the demand for furs, is later reflected by S. Smith's account (1765) of the revaluation made in 1673. Smith noted that a decline in the value of sewan occurred between 1647 and 1673. However, in 1673 a severe currency shortage in New Jersey (Nova-Caesaria) and elsewhere along the shore stimulated an attempt to increase the availability of wampum through a revaluation. At that time wampum was believed to be draining from circulation in the state at a tremendous rate.

This loss of wampum from circulation was believed to have been the result of a sudden and general movement of Indians toward the West (see Smith 1765:76). Since wampum was being placed in Indian

graves all along the Atlantic coast and increased volumes were being removed from the coast toward central and western Pennsylvania via the fur trade (see Wray and Schoff 1953:54-60), the sudden, rapid decline of currency does seem to suggest a peculiar activity such as might be explained by Indians converting heavy goods to wampum and then leaving the area. In New Jersey, wampum was revalued from 8 white and 4 black to 6 white and 3 black for a guilder "stiver". The stiver is a Dutch coin worth 1/20 of a guilder or approximately the former value of 1 pence (English penny). The equivalencies given by S. Smith (1765:76) were confusing, but clearly this was a revaluation of 25%. However, even the revaluated sewan of 1673 was worth half the figure quoted by Campanius for 1642 (see Table 1).

A more interesting point is that Smith's account (1765), using the term wampum, suggests that both white and dark beads were strung together, possibly with two of the lower valued white for every one of the more valued black. However, by 1700 the value of individual beads no longer may have been related to color.

The "fathom" indicated by Campanius or Williams may refer to a unit value of wampum and not an actual length of a band. The length of a fathom (linear measurement) in 1650 ranged between 5 and 6 English feet. A fathom's worth of wampum on the other hand, may have had its "length" determined by the quality of the beads involved. Thus a "fathom" length with extremely well made and valuable sewan may have been shorter than a "fathom" with poor quality sewan. Both would have the value of a "fathom". While noting that a fathom of wampum was worth 5 Dutch guilders in 1642, Campanius also noted that this was reckoning 4 beads for every stiver. Thus 5 guilders, or 100 stiver, was worth the equal of 400 beads (Du Ponceau 1834:131).

Since the value of wampum was flexible, and various figures have been noted for the seventeenth century, a list of values and conversion rates may be found in Table 1.

An entirely separate problem, but one which has the potential for recovering direct evidence via archaeological field work, concerns the actual size of wampum. Table 2 provides some published observations on the size of these beads. The figures given by Jones, Woodward and Campanius are rough approximations.

Simmon's data is derived from actual measurement of seventeenth century archaeological specimens from Rhode Island, and Kent's information derives from a Pennsylvania find dating from the first half of the 18th century. These authors provide a good idea as to how variable the size of these beads can be. Both Simmons and Kent indicate that very short beads as well as fairly long examples were made. The size range in Kent's sample is great. Perhaps the beads made in later periods were generally longer, or early observers overestimated the size of wampum beads. The Narraganset Bay variety appears to have been very uniform, especially when compared with the range of variation

known from the earlier Blue Rock site: 1575-1595 (Halsey and Witmer 1962:115). This uniformity is the greatest evidence that these beads were being "manufactured" as part of the economic system which developed around the fur trade.

Campanius (Du Ponceau 1834:132) explained that wampum beads were measured by the length of a thumb, with the interval from the end of the nail to the first joint equalling 5 beads. This would be a distance of approximately 3 cm. (somewhat over an inch), suggesting that each bead was about 5mm. long (200 per meter).

Strung on a line, 400 of the beads in Simmon's group would be about a fathom long (160cm.). Four hundred beads of the first three measurements above would produce strings 2.0 to 4.45 meters long (6½ to 15 feet). In any case the beads may have been counted out loose, rather than strung, when used in trade (see Kent 1970:188). Belts, strands and loose beads were all carried together in small pouches in the later period (Beauchamp 1901:436).

As the relationship between Indians and Europeans changed from simple interactions at trading posts to being residential neighbors, more complex interactions between these trading partners became necessary. By 1700 commercial manufacture of shell beads by Colonials seems to be the rule, in addition to the production of glass trade beads in Europe. Orchard (1929:66-68) gives a good account of the commercial process and the development of this industry. The excavation of a wampum factory or manufacturing site should prove quite interesting as a means of reconstructing this unusual adaptation of European technology to a native American tradition.

By the middle of the eighteenth century "wampum" had come to indicate loose beads, while "belts" indicated woven pieces and "strings", i.e. those which were simply strung. Hunter (1954:70) notes the purchase of a bull in 1760 for 1,400 wampum, or a value of 3 pounds 10 shilling, or about 1.7 pence per bead.

Kent (1970) provides extensive information concerning the manufacture, transport and uses of shell wampum (loose or strung beads). He notes that shell wampum belts might have tubular beads of other materials (e.g. brass) woven into them in addition to shell wampum, "but rarely are glass seed beads so used" (Kent 1970:188). Glass seed beads would be used in strings of wampum or as necklaces. Kent also notes that various objects could be attached to wampum belts, but were more often found on single strands.

The early accounts do not indicate that sewan was woven into belts, patterns, designs or appeared as decorative beadwork. No mention is made of their use as mnemonic devices or for picture-records of events. They are described only as a medium of exchange in a relatively simple (redistributive) economic system.

TABLE 1: VALUES GIVEN FOR WAMPUM

1642	Campanius, in (Du Ponceau 1834:131)	a) Fathom of wampum	5 Dutch guilders
		b) piece of brown wampum white bead	piece of silver piece of copper
	(Du Ponceau 1834:132) Note contradiction	c ₁) white bead	stiver (piece of silver)
		c ₂) black or blue beads	several stivers or piece of silver
1643	(Williams 1643:144-9)	6 (white) Meteahock	1 penny
		3 (black) Suckauhock	1 penny
		Fathom	5 shillings.
Williams noted that the value of a fathom had declined from 9 or 10 shillings when the value of beaver pelts, declined. Five shillings = 60p. = 360 meteahock = 1 fathom (6 ft. ?) or approx. 5 meteahock to the inch.			
1644	(20 April) (Johnson 1911:192)	1 yard, color not specified	4 florins
		1 yard of same color	5½ florins
1643	Acct. Bk.		Different Values
1648	(Johnson 1911:192)		
1654	Linderström	1 ell dark	1 ducat
1656	(Weslager 1945:104)	1 ell white	1 riksdaler
1705	Virginia (Beverly 1705 Bk. III, Chpt. 12:58). Beverly may have confused the terms and reversed the values.	1 yard "wampom peak"	18 pence
		1 yard "white peak"	9 pence

MEASURES:

ELLS: a measure of length, as for cloth, which varied from 27 to 48 inches throughout Europe.

FATHOM: approximately the spread of a man's arm, or about 6 feet.

COINS:

Swedish: RIKSDALER = 2½ DALER (About \$6.00 U.S.A. in 1911: Johnson 1911:41).

Swedish: RIKSDALER = 48 SKILLING (not equal to the English shilling)

Skilling = 4 STYFVER (not equal to the Dutch stuiver)

Ducket = 11 shillings/six pence (George 1879:146): written "11/6"

TABLE 2: DIMENSIONS OF WAMPUM BEADS

1.	Jones (1873:501) Orchard (1929:61 appears to be repeating Jones' data.	1/6 to 1/4 inch long	approx. 4.26 to 6.36 mm
		1/8 inch diameter	approx. 3.18 mm diameter
2.	Woodward (1933): New England	1/8 to 7/16 inch long	approx. 3.18-11.13 mm length
		1/8 to 3/16 inch diameter	approx. 3.18-4.77mm diameter
3.	Campanius (in Du Ponceau 1834:132)	5 to the inch (thumb joint to nail end	(approx. 5 mm)
4.	Simmons (1970:87)		range 3.7 to 4.3 mm length (diameters 2.6 to 3.0 mm)
5.	Kent (1970:187)		range 3 to 9 mm length 2.5 to 4 mm diameter

Zeisberger's (1776:11) Delaware word list from this period includes "*Sche jeek*, a String of Wampum". This Delaware Indian term is unrelated to any of the Algonkian terms noted above and may relate to a new function of the item (memorial string, mnemonic string, etc.), but a specific translation has not been discovered.

William A. Hunter (personal com.) provides a summary of the three diplomatic contexts of the later period (after 1750) in which wampum is used:

1. Belts (wampum) serving as memorials or records of an event.
2. As strings and small belts serving as reminders of points to be made in a speech (see Hunter 1954:68, 69, for an example).
3. In strings and belts which accompany a statement to indicate the authority of that statement (Hunter indicates that no wampum would be given with a mere sharing of news).

This might also be seen as a means by which a "gift" would be delivered along with a "strong request". The gift would obligate the receiver for a reciprocal action, which could be provided by complying with the request.

Hunter further notes that in these contexts white wampum had "peaceful connotations", black wampum "denoted danger, emergency, etc.", and that red-smear wampum "implied war". In general, the later use of wampum by the Indians was extremely symbolic (see Woodward 1933:18-19). Indian concern with belts given in the past may not have been to use them as mnemonic devices, but to see if the belt had been kept in a proper place and well treated. A change of treatment meant a change in the terms of the treaty or the responsibilities of the various parties.

An analysis of these three contexts suggests that each of the situations could be expected within the framework of a hunting and gathering society. Lacking writing, any object would serve to commemorate an event (Hunter's category one). More likely wampum would be given (gift exchange) to denote "kinship" and "reciprocal obligations" in the context of the "treaty" or meeting to discuss various events. Wood (1634:81) observed that Wampompeage was given as "dowry" at a marriage, suggesting the formation of an affinal relationship and the reciprocal obligations generated by this new situation.

The belt of wampum donated to the Historical Society of Pennsylvania in 1857 is considered to be one of three given as gifts to William Penn, who died in 1718. The belt may have been a gift such as those described above. Two other belts, once with it, are now at the Museum of the American Indian, Heye Foundation, in New York City. If these actually date prior to 1718, they would be the earliest known examples of wampum belts. The Pennsylvania piece, containing 18 strings (illustrated in Woodward 1933:16b) comes with no documentary evidence (Myers 1937:10, 57), and probably dates to after 1750. Penn had been a first-hand observer of gift exchange among the natives

of Pennsylvania. Penn noted that in the fall "... they begin to feast one another... But they that go, must carry a small Present in their Money, it may be six Pence, which is made of the Bone of a Fish; the black is with them as Gold, the White, Silver: they call it all *Wampum*" (Myers 1937:38-39). Speck and Orchard (1929) noted that the three Penn wampum belts appeared to be of the late, cylindrically drilled beads, but such beads were made before William Penn was born.

The only evidence that such belts existed in Penn's lifetime, also providing an example of the gift-giving aspect of wampum, used to "seal an agreement", is reported by Budd in 1685. He noted that the Friends met with a delegation of Indians in an attempt to put down the sale of rum, brandy, etc. The Indians noted that such drinks had been sold to them by the Dutch and Swedes, who were blind to the harm that it did. The Indians even specified that "seven score" of their people had been killed through alcohol consumption since it was first sold. For this treaty (talk) "they had prepared four Belts of *Wampum*, (so their current Money is called, being Black and White beads made of a Fifth [sic] Shell) to give us as Seals of the Covenant they made with us" (Budd 1966:28-29). This appears to be an example of gift exchange.

The third context noted by Hunter, indicating the authority of a statement delivered, is exemplified by the following record. John Hays' diary for 24 May 1760 (Hunter 1954:68) notes that they "Sent a string to the Mingoos at Paciksakcunk to call them to council...". This probably indicates that a messenger delivered a verbal request (or "order") asking the Mingoos to come, and delivered a string of wampum to provide the authority for his message or obligate them to come as a return of a favor. In two cases noted by Hunter (1954:68, 76) the information was written out for the messenger to read. Other similar examples are given by Hunter (1954:77). These belts and strings were laboriously made in advance in order to be ready for such occasions (Hunter 1954:66-68). Making beads also helped pass time in useful activity. Quite probably the work consisted of making strings and weaving the belts, as by 1760 most of the beads were purchased in finished form.

John Hays (Hunter 1954:78) observed the division and distribution of wampum in the course of a ritual event in 1760. Later in the same journey, the Hays party bought a bull for meat on the return trip from Tekesakacunk (Hunter 1954:f.n. 126). To gather the funds the local Indians "Laid Down A Blanket and Preaclemed A Publick collection and for Joy the Wemen and Girels and children throd in wampum till There Wase 14 fathem for to helpe For strings on our Journey..." (Hunter 1954:79).

Hunter notes that in diplomatic circumstances certain persons are identified as custodians of the wampum, and that names relating to wampum also occur. Examples of such names follow:

Seneca: *Kaghsuaghtaniunt* (variously spelled):
Belt of wampum, or "Old Belt"

Onondaga: Hunter compares the Seneca name with Zeisberger's Onondaga term *gaschwech-tonni-* to make a belt of wampum.

Delaware: *Depaakhossi*: translated by the Moravians as *ein Halsband von Seewand, das breet genug ist.* (a necklace of sewan which is wide enough).

Wampum continued to be made well into the nineteenth century. Many of the late forms were nearly twice the length of beads from the 17th and 18th centuries (Kent 1970:191). As late as 1890 the Campbell Wampum factory in Pascack, New Jersey, continued to manufacture their foremost product (H. C. Kraft:pers. com.).

In conclusion one might consider that the original value of wampum among the simple hunting and gathering societies which inhabited the eastern woodlands became a useful medium of exchange in the fur trade. The qualities of this native product as a gift in internal exchange was later extended to ritual exchange with Europeans, and the significance of the material was expanded to cover new and more complex circumstances of trade, which is similar to a gift exchange except that it takes place between individuals who have no mutual kin relationship.

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References

- Beauchamp, W.M.
1901 "Wampum and Shell Articles". Bulletin 41, New York State Museum. Albany.
- Becker, Marshall Joseph
1976 "The Okehocking: A Remnant Band of Delaware Indian". Pennsylvania Archaeologist.
- Beverly, Robert
1705 History and Present State of Virginia, in four parts. R. Parker. London.
- Budd, Thomas
1966 Good Order Established in Pennsylvania and New Jersey. Ann Arbor, University Microfilms. "March of American" facsimile series, reprint of 1685 edition printed by William Bradford, Philadelphia.
- Ceci, Lynn
1975 "Fish Fertilizer: A Native North American Practice?" Science 188-26-30.
- Driver, Harold E.
1972 Indians of North America. University of Chicago Press. Chicago.
- Du Ponceau, Peter S.
1834 A Short Description of the Province of New Sweden. Translated from the Swedish of Thomas Campanius Holm. McCarty and Davis. Philadelphia.
- George, Staughton, Benjamin M. Nead and Thomas McCamant (compilers and editors)
1879 Charter to William Penn and Laws of the Provinces of Pennsylvania, Passed between the years 1682 and 1700. Preceded by Duke of York's Laws... Published under the Direction of John Blair Linn. Lane S. Hart, Harrisburg.
- Heckewelder, John G. E.
1834 "Names Which the Lenni Lenape or Delaware Indians, Who Once Inhabited This Country, Had Given to Rivers, Streams, Places &c, &c ..." in, Transactions of the American Philosophical Society N. S. IV:351-96. (Prepared by Peter S. DuPonceau). Philadelphia.
- Heisey, Henry W. and J. Paul Witmer
1962 "Of Historic Susquehannock Cemeteries". Pennsylvania Archaeologist, 32:99-130.
- Heye, George G. and George H. Pepper
1915 Exploration of a Munsee Cemetery near Montague, New Jersey. Museum of the American Indian, Heye Foundation, Contributions, Vol. 2, No. 1. New York.
- Hodge, Frederick W.
1907 Handbook of American Indians North of Mexico. Washington: Government Printing Office. Two Volumes. Smithsonian Institution, Bureau of American Ethnology. Bulletin 30. Washington, D. C.
- Hunter, William A., (Editor)
1954 "John Hays' Diary and Journal of 1760". Pennsylvania Archaeologist, 24 (2):62-83.
1975 "Moses (Tunda) Tatamy, Delaware Indian Diplomat". In, A Delaware Indian Symposium. Anthropology Series No. 4:147-152. Edited by Herbert C. Kraft. Pennsylvania Historical and Museum Commission. Harrisburg.
- Johnson, Amandus
1911 The Swedish Settlements on the Delaware: 1638-1664. University of Pennsylvania. D. Appleton and Co. Two Volumes. New York
- Jones, Charles C., Jr.
1873 Antiquities of the Southern Indians, Particularly of the Georgia Tribes. D. Appleton and Company. New York.

- Kent, Barry C.
1970 "An Unusual Cache from the Wyoming Valley, Pennsylvania". American Antiquity, 35:185-193.
- Kraft, Herbert C.
1975 "Indian Prehistory of New Jersey". In, A Delaware Indian Symposium. Anthropology Series No. 4:1-55. Edited by Herbert C. Kraft. Harrisburg. Pennsylvania Historical and Museum Commission.
- 1976 The Archaeology of the Pahaquarra Site: A Preliminary Report. Seton Hall University Museum. South Orange.
- Lescarbot, Marc
1609 "Histoire de la Nouvelle France". Paris: Chez Iean Milot. University Microfilm. American Culture Series No. 22: Reel 3.
- Lindeström, Peter
1925 Geographia Americae. Translated by Amandus Johnson. Swedish Colonial Society. Philadelphia.
- Loskiel, Georg Heinrich
1794 History of the Mission of the United Brethren Among the Indians of North America. Part I. Bretheren's Society. Translated by C. I. Latrobe. London.
- Miller, W. B.
1955 "Two concepts of Authority". American Anthropologist. 57:271-289.
- Murray, Sir James A. H. et al.
1928 A New English Dictionary. Clarendon Press. Vol. X (II):1-60. Oxford
- Myers, Albert Cook (Editor)
1937 William Penn: His Own Account of the Lenni Lenape or Delaware Indians. Published by Albert Cook Myers. Moylan, Delaware County Pennsylvania.
- O'Callaghan, Edmund Bailey
1868 "Laws and Ordinances of New Netherland, 1638-1674". Documents Relative to the Colonial History of the State of New York, Volume 12: Dutch and Swedes on the Delaware. Albany, New York. Weed, Parsons Printers.
- Orchard, William C.
1929 Beads and Beadwork of the American Indians. Contributions from the Museum of the American Indian, Heye Foundation. Vol. II:61-74. New York.
- Simmons, William Scranton
1970 Cautantowit's House: An Indian Burial Ground on the Island of Conanicut in Narragansett Bay. Brown University Press, Providence.
- Smith, Samuel
1765 The History of the Colony of Nova-Caesaria or New Jersey. James Parker. Burlington, New Jersey.
- Solecki, Ralph
1950 "The Archaeological Position of Historic Fort Corchaug, Long Island and Its Relation to Contemporary Forts". Bulletin of the Archaeological Society of Connecticut, 24:3-40.
- Speck, Frank G. and William C. Orchard
1925 The Penn Wampum Belts. The DeVinne Press, Heye Foundation Pub. No. 4. New York.
- Trumbull, James Hammon
1903 Natick-Dictionary: Bulletin 25, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office. Washington, D. C.
- Weld, Isaac Jr.
1799 Travels through the States of North America and the Provinces of Upper and Lower Canada during the Years 1795, 1796, 1797. Second Edition. John Stockdale, Two Volumes. London.
- Weslager, C. A.
1945 "Indian Graves Robbers of Early Pennsylvania, Delaware and Maryland". Pennsylvania Archaeologist, 15 (4):104-107.
- Williams, Roger
1643 A Key into the Language of America. Gregory Dexter (Facsimile reprint 299, Scholar Press. Menston, England. 1971).
- Witthoft, John
1965 Indian Prehistory of Pennsylvania. Commonwealth of Pennsylvania, Pennsylvania Historical and Museum Commission. Harrisburg.
1966 "Archaeology as a Key to the Colonial Fur Trade". Minnesota History, 40 (4):203-209.
- Wood, William
1634 New Englands Prospect. London. Thomas Cotes for Iohn Bellamie.
1939 New Englands Prospect. A True, Lively and Experimental Description of that Part of America, Commonly Called New England... Iohn Dawson, to be sold by Iohn Bellamy. London.
- Woodward, Arthur
1933 "Wampum and Its Uses". Pennsylvania Archaeologist, 3 (5):11-16; 3(6):15-20.
- Wray, Charles F. and Harry L. Schoff
1953 "A Preliminary Report on the Sececa Sequence in Western New York:1550-1687". Pennsylvania Archaeologist. 23:53-63.
- Zeisberger, David
1776 Essay of a Delaware and English Spelling Book, for the Use of the Schools of the Christian Indians on Muskingum River. Henry Miller. Charles Evans American Bibliography, No 15228. Early American Imprints. Philadelphia.