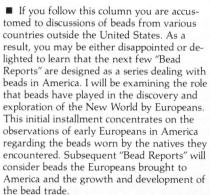
BEAD REPORT XI:

BEADS AND THE DISCOVERY OF AMERICA, PART I Beads of the Native Americans

Peter Francis, Jr.*



Bead research must rely on many sources. Those used in this series are primarily historical in nature: the journals, letters, and accounts of explorers and settlers. Of course, none of these people were particularly interested in beads as such, and their descriptions are often rather vague. This disadvantage must be weighed against the advantage of working with primary materials which give us unique first-hand descriptions. One note before we begin. The English language has changed over the last few centuries. Throughout this series I have chosen to modernize the often archaic spelling encountered in early documents, but what the reader may lose learning about early orthography is compensated for by greater clarity and more immediate_understanding.

THE EUROPEANS' FIRST IMPRESSIONS OF NATIVE AMERICANS

Travelers are generally first and most deeply impressed by what they perceive as differences between "home" and the places they

visit. The explorers to America were no exception, and as a result they often reported those things that seemed most unusual to them.

One of the first views of Native Americans was that they wore no clothes. On his first voyage (1492) Christopher Columbus said that the people he met were, "all naked, men and women, as their mothers bore them" (Morison 1963: 91). Michele de Cuneo, who was on Columbus' second voyage, reported on the people of the Caribbean, "it is true that women, when they have had knowledge of man, cover themselves in front either with the leaf of a tree, with a cotton clout, or panties made of the same cotton (ibid.: 219)."

However, nakedness is not only a state of undress, but also a state of mind, particularly the mind of the beholder. John Verrazano, exploring the harbor of New York (1524), said of his new-found friends:

"These people go altogether naked, except only that they cover their prime parts with certain skins of beasts, like unto martins, which they fasten onto a narrow girdle made of grass very artificially [artfully] wrought, hung about with tails of diverse other beasts, which round about their bodies hang dangling down to their knees. Some of them wear garlands of bird's feathers (Hakluyt 1582: A1 verso)."

This is hardly what we would call naked, but it must have seemed so to well-dressed (we might say over-dressed) Europeans of the 16th C

As Europeans came to learn more about America and to settle here they became more sophisticated in describing native attire. John Smith in Virginia left us a record of native costume that took into account differences in

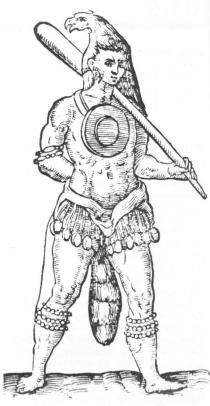


FIG. 1 Fashionable dress for a chief of the Timucuas of Florida's northern lake region in the 16th C. Note the headdress, the beads, the tail, and the protective metal pendant.

the seasons, in social status, and in the sex of the wearers:

"For their apparel they are sometimes covered with the skins of wild beasts, which in winter are dressed with hair, but in summer without. The better sort use large mantles of deer skins, not much differing in fashion from the Irish mantles. Some are embroidered with white beads, some with copper, others painted after their manner. But the common sorts have scarce to cover their nakedness, but with grass, the leaves of trees or such like. We have seen some use mantles of turkey feathers so prettily wrought and woven with threads that nothing could be discerned but the feathers. That was exceedingly warm and handsome. But the women are always covered about their middles with a skin, and very shamefaced to be seen bare (Smith 1624: 30)."

In addition to clothing, early explorers and settlers also took note of the ornaments worn by the natives. William Strachey, another Virginia colonist, listed some of the things that natives wore in the two or three holes bored into their ears:

"Chains of stained pearls, bracelets of white bones or shreds of copper, beaten thin and brought round and hollow, and with a great pride, certain fowl legs, eagles, hawks, turkeys, etc. with beast's claws, bears, arrahocounes (raccoons), squirrels, etc. The claws thrust through, they let hand upon the cheeks to the full view; and some of their men wear in these holes a small green and yellow colored live snake near half a yard in length, which, crawling and lapping itself about the neck, oftentimes familiarly he suffers to kiss his lips, others wear a dead rat tied by the tail and such like conundrums (Strachey 1612: 74)."



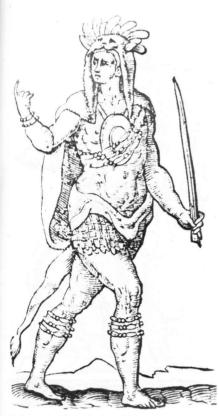


FIG. 2 Taken from the same plate as Fig. 1, originally by Jacques Le Moyne de Morgues.

Strachey and Smith also discussed hair ornaments consisting of whole stuffed hawks, buzzard wings, rattles from rattlesnakes, and the hands of dead enemies. Such fashions were depicted by Jacques Le Moyne de Morgues in his drawings of natives in Florida in the late 16th C. (Figs. 1 & 2). The term "Florida" at that time meant a stretch of the Atlantic coast considerably further north of the limits of the present state of that name, but still south of Virginia.

BEADS OF SHELL AND BONE

Beads of shell were reported all along the Atlantic coast of the Americas. In 1500 Pedro Alvares Cabral, sailing along Brazil, was given "a large string of very small white beads which look like seed pearls." These were a small variety of shell made into beads which were long used on the Brazilian coast (Greenlee 1938: 9, n. 4).

Jacques Cartier, traveling along the St. Lawrence River in 1534, described beads used by the Hurons which he said were called esurgny, "as white as snow." These were gathered in an unusual manner. When a person was put to death or captured in war the body was slashed and thrown into the river. After 10 or 12 hours it was taken up again and in the cuts esurgny was found. "Of them they make beads, and wear them about their necks, even as we do them of gold, accounting it the [most] precious thing in the world. They have this virtue and property in them, they will stop or stench any bleeding at the nose, for we have proved it (Cartier 1580: 51)."

The peculiar way of gathering this bead material and its obvious value to the natives caused several writers to try to determine what it was. Champlain stated that he had

trouble understanding the meaning of *esurgny* (Bigger 1922: III 101-3), while Pierre de Charlevoix (1761: I 319), traveling in the area in the mid-18th C., said that perhaps Cartier's *esurgny* "is the same we are now speaking of [wampum]; but they are no longer to be found on the island of Montreal, and I never heard of any but the shells of Virginia which had the property Cartier speaks of [stopping nosebleeds]."

More recent authorities writing on wampum have considered this problem. Slotkin and Schmitt presume that Cartier's passage is the first historical reference to wampum (1949: 226). On the other hand, Beauchamp notes that shell beads were rarely found around Montreal and suggests that <code>esurgny</code> may have been the "eye stones" (actually stomach stones or gastroliths) of the carnivorous fresh-water lobster (1901: 360-1). Taxay, who also does not equate <code>esurgny</code> with wampum, discusses this problem in some detail (1970: 110-112).

Leaving aside Cartier's esurgny, shell beads were common all along the Atlantic coast of what is now the United States. In Virginia a shell bead called roanoke was current in the early 17th C. John Smith said that Powhatan took him to a river in 1608, showed him canoes and "described unto me how he sent them over the bay, for tribute beads; and what countries paid him in beads, copper or skins" (Tyler 1907: 56). These were apparently roanoke shell beads; in 1612 Smith mentioned "Roanoake (a small kind of bead) made of oystershell, which they use and pass to one another, as we do money (Slotkin and Schmitt 1949: 231)."



FIG. 3 Native-made shell beads. The two discs on the left are from the Dyar site (GA), ca. 1000-1550. The oblate in the center is from the King site (GA), ca. 1550. The two wampum beads are post-contact, but the same size as native-made beads. They may have been made by the Dutch, but were not made by later factories in New Jersey. They were found near Lake Oneida.

The exact shape of *roanoke* beads is not quite clear. Many authorities feel they were disc-shaped (Taxay 1970: 107-8); such beads are common archeological finds in this part of the country (Fig. 3). Others, including Bushnell (1906: 174-5) and Slotkin and Schmitt (1949: 231-2), have assumed that they were wampum-like small tubes. To bolster this argument these writers point to a "Virginian Purse" in Oxford's Ashmolean Museum, apparently collected by John Smith, on which

some of the smaller beads resemble true wampum. Clearly many sorts of shell beads were worn and used by the natives in Virginia. "Powhatan's cloak," also in the Ashmolean, is embroidered with whole shells which the museum notes of 1656 call *roanoke* (Piper 1977: 25).

In 1635 Cecil Calvert, Lord Baltimore, wrote of shell beads being used for money in Maryland:

"Roanoke (which is a sort of beads that they make, and use for money).... It fell in the way of my discourse, to speak of the Indian money of those parts. It is often of two sorts, Wompompeag and Roanoake; both of them are made of a fish-shell, that they gather by the sea-side, Wompompeag is of the greater sort, and Roanoake of the lesser and the Wompompeag is three times the value of Roanoake; and these serve as gold and silver do here (Calvert 1635: 35-6)."

Lord Baltimore appears to have made a distinction between wampum and roanoke. Perhaps by 1635 wampum from north of Maryland had begun to devalue the roanoke which had been current in areas to the south (Fig. 3).

True wampum or "council wampum" is made from white shells, usually periwinkles, and the purple sections of the quahog clam. The term "wampum" is a European corruption of wampumpeak or wampumpeag, Algonkian for "white strung objects," and came to be used for both the white and the purple (also called blue or black) beads. Linguistically and historically wampum properly belongs to the coast of New York, Long Island, Connecticut and Narragansett Bay, and from there spread far and wide.

In 1603 Samuel de Champlain saw wampum being used by the natives along the St. Lawrence River. He referred to these beads as "pourcelaine," as did many later French writers, but it is clear that beads of shell and not porcelain were being used. According to Champlain, "They adorn themselves with feathers, wampum beads, and other knick-knacks, which they arrange very neatly after the manner of embroidery (Bigger 1922: I 411)." In addition to ornament, Champlain also mentions other uses of wampum, including gifts for friendship (ibid.: III 194), for courting (ibid.: III 138) and as grave goods for the dead (ibid.: III 162).

The Dutch, who settled New York, discovered the importance of wampum very early. Henry Hudson was given a present of "strops of beads," which sound very much like wampum belts, around the site of Albany in 1609 (Purchas 1625: 593). After the settlement of the New Netherlands colony the secretary, Issack de Raisere, informed the (Dutch) West India Company that he intended to make sure that Fort Orange (Albany) was well stocked with wampum for the winter of 1626, as the natives wanted it so badly (van Laer 1924: 223-7). Part of the purchase price for Staten Island, negotiated by Peter Minuit in 1626, included wampum as well as drilling awls so that the natives could make more wampum (Collections 1913: 29; Francis n.d. a).

The Dutch introduced the use of wampum for trade to the Plymouth colony in 1628; this was an economic boon to Plymouth (Bradford 1966: 203). The control of the wampum trade and production along the Connecticut and Rhode Island coasts is now recognized as an important ingredient leading up to the first Indian-European war, the Pequot War of 1637 (Josephy 1982: 32-75).



FIG. 4 "A Great Lord of Virginia." The caption commented on the hair style and tattooing and named beads of copper, pearls and claws worn on ears, neck and wrists. Based on John White's work.

Wampum is the most important bead in American history. Wars were fought over it and peace was made with it. For a century or more it was common currency for the colonists, and is still regarded as a sacred material by the Iroquois Nation. The problems regarding wampum are numerous and complex. Aside from its possible identification with esurgny and roanoke, the questions of its origin, its spread throughout most of America, and its elaboration among the Iroquois still remain. We cannot go into all of these questions here, but I have been researching wampum for some time and hope to present a more detailed discussion of it in the future.

Beads of bone are also mentioned frequently by the explorers and early settlers. Amerigo Vespucci, an Italian who sailed for Spain and Portugal, and after whom a German working in France named the New World, described the natives along the Caribbean coast around 1497: "Their riches consist of varigated bird's feathers and of strings of beads (like our paternosters), made of fish bones or of green and white stones (Waldseemüller 1507: 98)."

In the late 1570s Sir Francis Drake went ashore in California, which he named New Albion, and where he described the necklaces worn by the natives he met: "The chains seemed of a boney substance, every link or part thereof being very little, thin, most finely burnished, with a hole pierced through the midst. The number of links going to make one chain, is in a manner infinite." He went on to explain that these necklaces were symbols of rank, only certain people being allowed to wear them, and that the number of necklaces, whether 10, 12, or 20, indicated the person's relative social standing (Vaux 1854: 125). Interestingly, Cartier's surgny emerged again

in connection with Drake's visit to New Albion. Richard Hakluyt, the English geographer, said in his *Principall Naviagations* (1589) that the beads Drake described were the same that Cartier called *esurgny*. We know today that this could not have been so, but it is possible that the beads Drake saw were made of shell rather than bone (Vaux 1854: 223).

Bone beads were also used in Virginia, as Strachey's quotation cited above shows. Several of the captions of John White's pictures of Virginia natives mention that polished bone, along with copper beads and pearls, were worn by the inhabitants (Figs. 4 & 5).

To my mind the most interesting bone beads to be reported were those that John Sparke said were worn by the natives of "Florida":

"The Floridinians have pieces of unicorn horns which they wear about their necks, whereof the French obtained many pieces. Of these unicorns they have many: for that they do affirm it to be a beast with one horn, which coming to the river to drink, putteth the same into the water before he drinketh (Burrage 1906: 127)."

BEADS OF METAL

Native Americans also wore beads made of copper. Verrazano mentioned seeing copper beads being worn (Hakluyt 1582: B 3 verso). James Rosier said that the natives of the Maine coast sewed copper beads to their clothing (1605: C 2), while Henry Hudson's crew saw the natives of New York harbor wearing copper plates (Purchas 1625: 592).

As noted above, copper beads were also common in Virginia. In addition to the people represented in Figs. 4 and 5, the wooden idol Kiwasa, of the town Secotam, was bedecked with white beads alternating with those of copper (Hariot 1590: D 2) Fig. 6).

The best description of copper beads in Virginia was given by John Brereton:

"Their chains are many hollow pieces cemented together, each piece the bigness of one of our reeds, a finger in length, ten or twelve of them on a string, which they wear about their necks: their collars they wear about their bodies like bandoliers a handful broad, all hollow pieces like the other, but somewhat shorter, four hundred pieces in a collar, very fine and evenly set together (Burrage 1906: 337)."

Brereton said that the natives mined their copper (Burrage 1906: 338), but this statement was second-hand; he never reported seeing a mine. A contemporary, Ralph Lane, said that the Virginia natives obtained theirs by panning for it in a river and later refining the ore, but this was not based on first-hand information either (*ibid.*: 254).

Europeans were not really interested in copper; they had their sights set on more precious metals. Pedro Casteñada's disappointment at not finding gold while on Francisco Coronado's expedition of 1540-42 is typical. The expedition turned back at Quivira (central Kansas) and he reported, "Neither gold nor silver nor any trace of either was found among these people. Their lord wore a copper plate on his neck and prized it highly (Winship 1922: 75)."

The search for gold, on the other hand, reached mad proportions, and much has been written about it. The madness started with Columbus, and here I shall only mention some of the incidents that happened during his voyages. On the second voyage Nicolo Syllacio said that, on Hispaniola, the Spanish "were led



FIG. 5 "One of the Chief Ladies of Secota." John White drew this Virginia woman with several sorts of beads and bead-like tattooing on her torso, wrists, arms and legs.

by a certain *cacique* to a goldsmith's shop, where a certain smith was beating gold into very thin plates. A conspicuous stone with a highly polished surface was used. This man [was] skilled in making diadems and miters, which the Indian women use to adorn their heads . . . (Morison 1963: 245)."

Columbus had little trouble gathering gold, and when it was taken to Spain it was assayed at 18 parts gold, 6 of silver and 8 of copper. This *guanin*, as the alloy was called, was not always of the same composition (Morison 1963: 265). Ferdinand Columbus, reporting on his father's last voyage, told of some of the ways in which gold was worn around the Caribbean: "gold mirrors, eagles, little gold cylinders which they string and wear on their arms and legs, and twisted gold cords which they wear on their heads like coronets (*ibid.*: 348)."

The Europeans also lusted after silver and found it here and there. But early in the 16th C., Captain Francisco de Caraveja discovered the "silver mountain" near Potesi, Bolivia. Augustin de Zatate wrote, "No richer mines have ever been found or heard of. When news of the discovery came to La Plata, all law was at an end (Cohen 1968: 247)." Soon 6000 natives were impressed by the Spanish under the old Inca mita system. Silver was not refined using European furnaces with bellows but in the native guiaras, small furnaces built so that the door faced windward, the wind kindling the fuel (Cohen 1968: 44, 247). Potesi soon became incredibly rich and one of the world's largest cities. The city annuals of 1656 listed scores of imported products, including glass from Venice, ivory from Africa, ivory and precious stones from India, diamonds from Ceylon, and pearls from Margarita and





FIG. 6 The idol Kiwasa of Secotam village, Virginia. The painted wooden idol was 4 feet long and "has a chain about his neck of white beads, between which there are round beads of copper which they esteem more than gold or silver" (Hariot 1590: D 2).

Panama (de Madariaga 1947: 66).

But the wealth of this world is transitory. The anonymous chronicler of *Archivo Boliviano* in 1874 yearned for the old days, asking, "Where are:"

"The rich costumes of your half-caste women, their slippers on their feet, tied with strings of silk and gold, stuffed with pearls and rubies, skirts and bodices embroidered in fine silk cloth, chains of gold? What became of the costumes of the Indian women, those coifs with which they covered their head, adorned all over with pearlseed and precious stones, the cloth with which they dressed strewn all over with rich pearls and gems; the shirts the Indian men wore, of brocade and rich silk, the fillets on their heads, worth eight thousand pesos owing to the pearls, diamonds, emeralds and rubies which could be seen in them? (de Madariaga 1947: 201)."

OTHER PRECIOUS BEAD MATERIALS

In addition to gold and silver, precious gems were also sought by the newcomers to the Americas. David Ingram, who claimed to have walked from the Gulf of Mexico to Nova Scotia in 1568-69, reported that the kings of the interior "wear great precious stones, which commonly are rubies, being 4 inches long and two inches broad (Hakluyt 1589: 557)." Not everyone believed Ingram's story, and Hakluyt deleted it from later editions of his book, but the tales of fabulous riches spurred many to come to America.

The (Dutch) West India Company hoped to find riches in their colony of New Netherlands. The instructions given to the first colonists in 1624 included provisions for the mining and division of any gold, silver, copper, diamonds, rubies or pearls found in the colony

(van Laer 1924: 10-13).

Some precious materials were to be found in America. Pearls were first reported by Columbus, and nearly every explorer after him sought them, many finding them. The natives spoiled the pearls in the Europeans' eyes because they ate the shellfish, opening the shells by means of heat. This ruined the sheen and color of the pearls. Soon the Spanish set up their own pearl fisheries to insure their quality and quantity.

The town of Nueva Cadiz (Venezuela) was founded on the island of Cubangua by 1520 specifically for the pearling industry, even though all provisions from food to drinking water had to be imported. In two decades the Spanish managed to exhaust the local supplies of pearls and moved elsewhere. Pearls continued to be popular, especially in colonial and independent Latin America, and were used for currency as late as the 17th C. in the Venezuela interior (Francis n.d. b).

Another precious bead the Spanish sought was the jade of the Mexican Aztec empire. Hernando Cortés' expedition soon learned that the Aztecs valued jade very highly. Montezuma told Cortés that a single jade bead was worth two loads of gold (Maudslav 1956: 248), as much as 100 or even 200 pounds. The Aztecs called jade chalchihuitl, and claimed that it cured abdominal pains. This supposed medicinal quality recommended itself to the Europeans (our word jade comes from the Spanish for "loin stone"), and soon the Spanish cleared Mexico of all the jade they could find. The Mexicans had valued jade highly as far back as the early Olmec civilization, and jade beads have been found in tombs dating from about 1500 B.C. But the supply was exhausted within decades after the Spanish conquest (Francis nd ()

Turquoise was also desired by the Europeans. The Coronado expedition found a small quantity, but Castañada reported of Cibola, "There are many fine turquoises, although not so many as were reported (Winship 1922: 93)." Don Antonio de Mendoza, the first governor of New Spain, wrote to the King of Spain in 1540 describing the women of Cibola: "They wear their hair on each side done up in a sort of twist, which leaves the ears outside, in which they have many turquoises, as well as on their necks and on the wrists of their arms (ibid.: 153)."

Yet another green stone that interested the Europeans was the emerald. The Spanish found many large ones in Peru, but Augustin de Zarate tells us that Pizzaro's men smashed and chipped many of them. "Believing that the Indians were passing off false jewels on them, they hammered them with stones, thus destroying emeralds of very great value (Cohen 1968: 69)." The logic behind this seemingly bizarre behavior was that it was commonly believed — a belief that Zarate shared — that hitting a diamond was a valid test, since diamonds did not break. Diego de Trujillo, also on the expedition, recorded that the only man who really knew how to identify emeralds was the monk Resinaldo, who quietly gathered as many as he could and sewed them into his clothing (ibid.: 67).

In the rush for riches the explorers reported several valuable materials that were mistakenly identified. Martin Frobisher returned to England with a whole shipload of what he thought was gold ore; it turned out to be worthless marcasite (Morison 1971: 516-54).

Columbus said that the natives of Panama assured him that, on the other side of the



FIG. 7 "A Chief Lady of Pomeioc . . they wear a chain of great pearls, or beads of copper, or smooth bones, 5 or 6 folded about their necks, bearing one arm in the same." (Hariot 1590: A 6)

isthmus, the people were so rich in coral that the women wore necklaces that hung to their waists (Morison 1963: 376). Arthur Barlowe assumed that the band of white beads on the head of the wife of a nobleman he met was made of coral (Burrage 1906: 232). But precious coral is not to be found in these waters, and Barlowe probably mistook shell beads for it. Samuel Eliot Morison, the Columbus scholar, believes that the natives of Panama were merely responding to Columbus' requests after he had shown them coral and asked if any was to be found (Morison 1963: 377 n. 4).

Columbus brought back what he claimed was amber from his third voyage (Morison 1963: 281), and Vespucci reported amber in the home of the cannibals, that is, the Caribbean islands (Eden 1555: 155- verso). Morison dismisses Columbus's claim of amber, along with lapis lazuli, sandalwood, ginger, and a number of other products that were misidentified (1963: 282 n. 7). However, amber is found in small deposits all over the New World. Pre-Columbian use of amber is attested to in Mexico, and the world's second largest deposit of amber is in the Dominican Republic, on the island of Hispaniola, though no pre-Columbian use of it has yet been demonstrated (Poiner and Agudelo 1980: 35-6).

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BEAD REPORT from p. 19

CONCLUSIONS

I have often emphasized in this column that beads are virtually a universal phenomenon. This short survey of the use of beads in America at the time of European contact is another indication of that. Not everything can be learned about the Native Americans' use of beads from the European explorers; their visits were often short and native beads rarely interested them.

We have seen, however, that the Europeans recorded a number of different beads, showing that a variety of materials was exploited by the natives including those of organic origin, minerals and metals. History also gives us some idea of how these beads were worn: necklaces, bracelets, earrings, anklets, strands around the body and beads sewn onto clothing were all employed. Beyond their use as ornament, we have several hints of other uses of beads. The immense value of jade in Mexico, beads as status symbols in California, and beads as tribute in Virginia are examples of this. It is not yet clear if the wampum and/or roanoke beads were used as currency before the coming of the Europeans, but the value attached to them is obvious.

Some beads used by the Native Americans were of great interest to Europeans because the latter considered them to be precious. Naturally, there is more information on these sorts of beads, whether of gold or silver, pearls, jade, turquoise or emeralds. Some of the riches the Europeans sought in the New World were not to be found, while others were plentiful. What is notable is how many of these riches were used for personal adornment both in Europe and America.

Native beads soon took second place in the eyes of Native Americans to the new beads the Europeans brought with them. This is the subject of the next part of this series.

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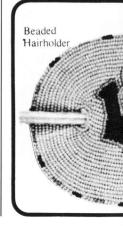
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A Note on the Illustrations

Except for Fig. 3, all of the illustrations for this article have been reproduced from Vecellio's Renaissance Costume Book (Dover Publications, New York: 1977). This is a reproduction of a 16th C. book of costumes by Cesare Vecellio, done in wood-blocks. In turn, Vecellio drew his pictures from contemporary works. For the Americas he especially relied upon the paintings and drawings of John White, who had been to Virginia, and Jacques Le Moyne de Morgues, who had been to Florida. Both men's works were published in Germany as engravings from which Vecellio derived his plates. The pictures are reproduced here through the kind open reproduction policies of Dover Publications.







BEAD REPORT XII BEADS AND THE DISCOVERY OF **AMERICA** Part II, Beads Brought To America

Peter Francis, Ir.*

A significant element of our bead lore regards the great quantities of beads brought to the New World as gifts or trading commodities. In this column, the second in the series "Beads and the Discovery of America," we shall examine the facts concerning the European importation of beads in the first century and a

half of American exploration.

Our primary sources are the journals, letters and descriptions of the Europeans who came to the New World to explore and settle. Reading through these documents proves that beads were part of the explorers' cargo. In fact, few accounts of this period lack at least some mention of beads. It is equally evident that beads played a secondary role in early exploration, even though that role was rather constant.

NATIVE AMERICAN AND EUROPEAN ATTITUDES TOWARD BEADS

We noted in the last "Bead Report" that native Americans were favorably disposed toward personal adornment long before any contact with Europeans. The pre-Columbian jewelry of these people often consisted of objects which were unusual and showy. During early Euro-American contact several incidents show that Native Americans wore objects that the Europeans had manufactured for other purposes. These are examples of how people adapt otherwise unfamiliar objects to a familiar purpose: ornamentation.

The oral history of the tribes who once lived around New York harbor was gathered by the Rev. John Heckewelder around 1760. The oldest members of the tribe said that their grandfathers had told them, as much as a half century before, that when the Dutch first came to Manhattan Island (perhaps Henry Hudson in 1609) the Dutch gave away beads, axe and hoe heads and stockings. When the Dutch returned in a few years they found that the natives had hung the axe and hoe heads as pendants around their necks and were using the stockings as tobacco pouches. The natives were themselves amused when the Dutch put handles on the tools, and they laughed at themselves for being ignorant of their use and for wearing such heavy "pendants" for so long (Heckewelder 1819: 71-5; Collections 1841: 73; Francis n.d.).

Alvar Nuñez Cabeza de Vaca was ship-

wrecked off Texas in 1527; he and three companions spent six years among the natives before they ran into other Spaniards and were rescued. During this time they saw a native wearing a sword belt buckle stitched to a horseshoe nail around his neck. When one of the Spaniards asked where it had come from, he was told that it came from the same place as the glass beads the natives had. that is, from heaven (Smith 1871: 173).

On an island along Pamlico Sound, North Carolina, Arthur Barlowe met Granganimeo, the brother of the local ruler, in 1584. The English showed him all their goods, but his eye was caught by a tin dish which he took, perforated, and wore around his neck. Granganimeo maintained that it was not only decorative but would also shield him from his enemies' arrows (Burrage 1906: 232).

Clearly the Native Americans were fond of ornaments and were willing to wear any new object that the strange white men gave them. The most important item which was not originally manufactured for human adornment but adapted for that purpose were hawk's bells. The popularity of these jingle-belllike objects often rivaled that of glass beads.

Commentators on Columbus' second and third voyages at the end of the sixteenth century point this out. De Cuneo said that hawk's bells were like "more than anything else and . . immediately they atttached [them] to their ears and noses." (Morison 1963: 222) La Casas said "They give nothing for beads, but all they had for hawk's bells; and other trifles they did not want." (Ibid.: 271).

Martin Alonzo Piñzon accompanied Columbus on his first voyage and sailed himself to Brazil in 1499. He reported that a sailor along the Brazilian coast threw a hawk's bell toward a "giant" who in turn threw down a "wedge of gold a cubit long." The giant captured the sailor, but the crew rescued him (Eden 1555: 41). Native Americans, often better fed and taller than the Europeans, were often called giants in early reports; the point to note here is the high value placed on a single hawk's bell.

The admiration shown by the Native Americans for beads and hawk's bells was not shared by the Europeans. Most Europeans thought very little of the goods they were carrying and often refered to them as "trifles" or "toys." John Smith in describing Virginia said that the natives were, "Generally covetous of copper, beads, and such like trash." (1624: 30) Trash, indeed! We beg your pardon, Captain Smith.

Nevertheless, the European attitude toward their trade goods was appropriate from their standpoint: Not only were they trifles but they were often inferior trifles. Rarely are these goods mentioned as having any special quality, and in such cases they were usually reserved as personal gifts for native rulers.

The stock list of the Armada de Molluca, Magellan's around-the-world fleet (1519) is instructive. It included "20,000 hawk's bells in three sizes, 500 pounds of glass beads, brass bracelets, fishhooks, silk, cotton, and woollen cloth of many colors, 400 dozen German knives 'of the worse quality,' a thousand little hand mirrors, 100 'of the better quality,' and a ton of mercury (for medicinal purposes)" (Morison 1974: 343). It is impressive that glass beads were probably the heaviest component of the lot, and it is clear that most of the goods were not top-rate.

William Strachey, an early Virginia settler, said, "they [the natives] are generally covetous of our commodities, as copper, white beads for their women, hatchets, of which we make them poor ones of iron, hoes to pare their corn ground, knives, and such like." (1612: 75) Not only were the hatchets of the poorest quality, but the white beads were probably the cheapest to be found.

The trading of inferior goods to Native Americans continued for a long time. The cheapness of the glass beads that reached the far west has been noted by archaeologists. Meighan commented on the scarcity of the expensive chevron beads in California (1981: 29), while Whittoft said that the white beads imported to California before 1850 were probably the shabbiest bead that ever came into the North American trade." (1972: 10). The point need not be labored. Anyone familiar with trade between Native Americans and "whites" can think of plenty of cases where the economically disadvantaged were taken advantage of. It still happens. What is perhaps astonishing and certainly sad is that the practice is so old.

THE EARLIEST GLASS BEADS IN **AMERICA**

The first European settlement in America was established five centuries before Columbus. The Vinland colony was a short-lived off-shoot of Viking colonies in Greenland, themselves born from trade of a common bead material, walrus ivory. This trade was drastically reduced from about 1340 as the African elephant ivory trade was opened to Europe. The

The Vinland colonists were the first people to bring glass beads to America. Excavations at L'Anse aux Meadows in 1974 uncovered a clear spherical glass bead about a centimeter in diameter. It was found just outside the east wall of a house clearly associated with the Norse settlement (Schonback 1974: 3, 8).

Was the bead worn by a Viking lady or was it brought for trade? That is difficult to say. The Viking sagas of Vinland mention glass beads only in connection with a "rosary" worn by a woman in Greenland (Gathorne-Hardy 1970: 34). However, the Vikings were great traders, and there are accounts of their trade with the Native Americans which they called "Skraelings." One exchange involved milk for furs (Ibid.: 84), while another account says: "They were swarthy men and ugly with unkempt hair on their heads. They had large eyes and broad cheeks At the beginning of spring . . . they began to trade: the (strange) people wanted particularly to buy red cloth, in exchange for which they offered skins and grey furs. They wished also to buy swords and spears, but Karlsefni and Snorri forbade this. The savages got for a dark skin a span's length of red cloth, which they bound round their heads. Thus things continued for a while, but when the red cloth began to give out they cut it into pieces so small that they were not more than a finger's breadth. The savages gave as much for it as before, if not more." (Ibid.: 61-2)

In this short passage we meet several of the elements we have already discussed including the native love for personal adornment and the European tendency to get the very best out of any deal. Certainly it is possible that glass beads were used for trade by the Vikings, but it is not likely that we shall ever know for sure.

The Vikings left no lasting legacy in America, so it was up to Christopher Columbus to open the way for greater exploration and colonization, even though he died believing he had reached Asia. Columbus was personally acquainted with the Guinea (African) trade and knew how to stock his ships with suitable goods. On the day he first landed on San Salvador island in the Bahamas he wrote in his journal: "I . . . in order that they might develop a very friendly disposition towards us, because I knew that they were a people who could better be freed and converted to our Holy Faith by love than by force, gave to some of them red caps and to others glass beads which they hung on their necks, and many other things of slight value, in which

they took much pleasure." (Morison 1963: 64-5)

Aside from an admirable humanistic viewpoint, this passage shows that Columbus was ready to give away glass beads and that his "Indians" were immediately prepared to wear them. What sorts of beads did Columbus take to America?

Columbus gives us a few hints in his journals. On 15 October 1492 he recorded that the beads he put on the arm of a native were small and green (Morison 1963: 70). The next day he said that 10 or 12 beads were strung on a thread (Ibid.: 78). On 3 December he mentioned yellow and green glass beads (Ibid.: 108), and on 22 December he traded 6 beads for some gold (Ibid.: 131).

We seem to be dealing with more than one type or at least size of bead. Some were small and strung in such a way that they could immediately be put on the neck or an arm. Others must have been larger and strung in hanks of 10 or 12; these must have been the type given 6 for some gold. On the fourth voyage (1502-4) Fernando Columbus mentioned trading 2 or 3 yellow or green beads for some cassava bread (Ibid.: 356). Green and yellow are the only bead colors mentioned.

Can archaeology help us to identify the beads that Columbus brought? An early attempt to locate a Columbus site was an excavation at Navidad, Haiti in the 1930s. No beads were uncovered and none of the objects found unequivocally attested for Columbus' presence (Morison 1940: 272-8).

But Columbus' beads have recently made headlines. In early 1982 Smith and Good suggested that small doughnut or disc shaped wound beads were early enough and simple enough to match Columbus' description of his (smaller) beads (1982: 3, beads #105, 106). In July 1983 a team led by Charles Hoffman of Northern Arizona University excavating on San Salvador uncovered "four green and yellow glass beads, two brass buckles, metal spikes and a fragment of Spanish crockery mixed with native Arawak Indian pottery and shell beads." (New York Times 1983: A 12) These beads match those described by Smith and Good (Ibid.; Smith 1983. (Fig. 1)

It has not yet been established that this bay on San Salvador was the place where Columbus landed, but the island was apparently depopulated by 1520, so these beads are clearly from early contact. Such beads were used in the American trade for nearly a century after Columbus, and it is likely that they were typical small Venetian wound beads. The drawn bead technique was introduced into Venice about 1490 (Francis 1979: 5-6), and it is plausible that Columbus would have carried the older wound beads with him in 1492.

BEADS OTHER THAN GLASS

Surprisingly, a number of beads that Columbus gave away on his first voyage were not made of glass. On 18 December near Port de Paix, Haiti, Columbus entertained the local ruler with dinner and afterwards they exchanged presents. Columbus got a fine belt and gave his new friend 2 pieces of worked gold and, "some fine amber beads which I wore at my neck." (Morison 1963: 125)

On 30 December at Navidad, Haiti, the local ruler gave Columbus his crown and in turn, "the Admiral [Columbus] took from his neck a collar of good bloodstones and very handsome beads of many pretty colors, which appeared very good in every way, and put it on him." (Ibid.: 140-1) The pretty beads of many colors could have been either glass or stone. The "bloodstone" may have been the redspeckled green jasper we call bloodstone or could have been carnelians. In either case, we wonder if Columbus was in the habit of wearing beads or had put them on for dramatic effect.

There are quite a few references to "crystal beads" in the reports of the explorers. In some cases beads are apparently meant. In one account Amerigo Vespucci talks of giving, "little bells and mirrors and pieces of crystal" (Waldseemüller 1507: 91), and in another of his accounts he spoke of "rattles and mirrors, beads, spalline, and other trifles" (Eliot 1910: 33). Spallina is Italian for epaulette, spalla meaning shoulder; spalline seems to be some sort of shoulder ornament.

John Verrazano around New York harbor in 1524 said of the natives "The things that they esteem most of all which we gave them were bells, crystal of azure color, and other toys to hang at their ears or about their necks." (Hakluyt 1582: B 2 verso) The "crystal of azure color" to be hung on the neck or in the ear was probably a blue glass bead.

On the other hand, some accounts appear to contrast glass beads to those of crystal. Balboa at Yucatan (1519) said that for gold jewels of fine workmanship he gave "counterfeit stones of colored glass and crystal." (Eden 1555: 150) At the Strait named for him Magellan and his fleet in 1519 met a "giant" who swam out to them and was given "a pair of beads of glass," but later when four similar "monsters" swam out to the ships they were given beads of crystal (Eden 1555: 219 verso). In 1519 Cortés sent Montezuma, the Aztec emperor of Mexico, gifts including, "some artificial jewels called margajites . . . [and] a string of artificial diamonds" (Keating 1800: 55).

Do these passages indicate that rock crystal (clear quartz) beads were involved as well as glass beads? It is difficult to say. Balboa may have been contrasting colored glass with clear (crystal) glass; Cortés artificial diamonds could have been fac-

eted glass; and the Magellan report is really quite sketchy.

However, it is clear that Columbus carried beads other than glass. Moreover, faceted rock crystal beads have been uncovered by archaeologists in Florida and a few other places. These "Florida Cut Crystal Beads" are thought to have been obtained from shipwrecks or owned by the Spanish themselves, and are dated to the end of the sixteenth and beginning of the seventeenth century (Fairbanks 1967: 13-6). (Fig. 2) But they could have been given as gifts somewhat earlier and, always being rare, may have been passed down through several generations before being lost.

Another bead of stone found by archaeologists must certainly come from early contact times. It is a carnelian bead found at the site of Nueva Cadiz, Venezuela, a town built for the pearling industry on the island of Cubagua. Nueva Cadiz was abandoned by 1543, so the bead must have reached Nueva Cadiz before then. The carnelian bead has all of the properties of Indian beads, and was probably made there (Francis 1982). (Fig. 3)

Of other non-glass beads mentioned in these early reports, the only other definite reference I have encountered was that of tin beads. Jacques Cartier reported giving these away around Montreal, Canada, in 1535 (1580: 48).

GIFTING BECOMES TRADING

Europeans came to America for many reasons. One of the earliest motives was exploration, quickly followed by exploitation of mines, fisheries, and the fur trade. The colonists and missionaries came later. Since most of the early explorers were not in America for its own sake but looking for a quick route to the east, the beads they brought were often used only to sew good-will among the natives they met.

Cortés gave away many bead presents to Montezuma and his aides. One of them included "some margaritas, stones with many (intricate) designs in them, and a string of twisted glass beads packed in cotton scented with musk . . . " (Maudslay 1956: 71). The margaritas have been identified with chevron beads and the twisted glass beads with those now called "Nueva Cadiz Twisted" (Smith and Good 1982: 8). (Fig. 4) Similar beads have been found in some numbers in Peru. In Florida Hernando de Soto gave the local chief," a few margaritas which are certain beads much esteemed in Peru." (Elvas 1577: 177) As we have noted before, such expensive beads were used primarily for state presents.

The word margarita is derived from the Latin for pearl. This helps make clear what Coronado was giving at Cibola: "some glass dishes and a number of pearls and little bells which they prised highly

because these were things they had never seen." (Winship 1922: 38)

An excellent example of pure gifting was recorded when John Ribault was exploring the south-eastern coast of the U.S.A. in 1582. The crew often saw campsites which the natives had hurriedly abandoned when they heard that the white strangers were coming. At one such spot where even freshly dressed meat was abandoned, the Europeans placed "knives, looking glasses, beads of glass, which they love and esteem above gold and pearls, for to hang on their ears and neck and to give them to their wives and children." (Hakluyt 1582: G 2 verson)

In short, throughout much of the sixteenth century beads were given away, either as a mark of respect or just out of friendship. Bartering was not entirely unknown; we saw Columbus doing that from the beginning. But the bead as a bartering commodity was not well established until late in that century.

Jacques Cartier said that the Momoca of the Gaspé Peninsula, "traded the skins off their backs" for "hatchets, knives, beads, and other such like things." (1580: 16-7) The "skin off their backs" referred to the furs they were wearing. This passage has been more recently translated as including "paternoster beads" (Morison 1971: 370), that is, rosaries, often used by the French for trading or giving away. Champlain in 1613 reported gifts of "hatchets, rosaries (patinoseters), caps, knives and other knick-knacks." (Bigger 1922: I 296)

Fur was the most lucrative object received by the Europeans in trade, and the fur trade spread quickly. Along the coast of New England in 1609 Henry Hudson discovered that the natives immediately wanted to trade their beaver skins and other furs, "for the French trade with them for red cassocks, knives, hatchets, copper, kettles, beads, and other trifles." (Purchas 1625: 589)

The profits from this trade were enormous. Plowden's account of Manhati (Long Island; 1632) said that for hatchets, knives, nails, beads and other "toys" corn and the skins of beaver, otter and deer were exchanged. The skins yielded no less than 1000% profit when sent back to Europe! (Bunce and Harmond 1977: 7)

The Dutch colony of New Netherlands (New York) was acquainted with the power of glass trade beads. The secretary, Issack de Raisere, wrote to the West India Company in Amsterdam (1626) about how for a bit of cloth, 2 hatchets and some beads he had gotten 10 beaver skins (van Laer 1924: 192). Later in the same letter de Raisere said: "I send your Honors by this vessel two strings of coral or beads (corael off greyn), one black and the other white, as a sample. Your Honors will kindly send me of each sort 200 or 300 pounds, strung to the same length and of the same sizes as these are much

sought after and there are no more here.

I sold the colonists here 10 or 20 lbs. of beads at one guilder a pound, and this because they complain so much of the victuals, and can buy them from the Indians maize, fish, and various other things. Should your Honors not approve of this, you will be pleased to advise me of it and it shall not occur again." (van Laer 1924: 232)

In Virginia beads played an important part in relations with the natives. At Jamestown a glass factory was set up and was supposed to produce beads. Several early writers on glass have identified beads which were supposed to have been made at Jamestown (Barber 1916: 162-3; Northend 1926: 14-5), but the latest archaeological evidence indicates that glass beads were never made there (Kidd 1979: 49-51).

We noted earlier that Strachey talked of white beads being in favor in Virginia. John Smith said that he traded blue (blew) beads with Powhatan for corn (Tyler 1907: 57). In another of Smith's books he included an Indian vocabulary, "Because many desire to know the manner of their language." One of the few whole sentences in this glossary was translated, "Bid Pokahantas bring thither two little baskets and I will give her white beads to make her a chain." (Smith 1624:40)

It is now evident that European glass beads were important to the exploration and settlement of America. It is, therefore, peculiar that among the rather extensive lists of commodities compiled by various writers for taking to America, beads were not mentioned. This is the case with lists prepared by Robert Thorne in 1527 (Hakluyt 1582: I 2 ff.), G. Mourt in 1622 (pp. 63-4), and Lord Baltimore in 1635 (Calvert 1635: 50). John Lederer who explored Virginia and North Carolina in 1669-70 said: "To the remoter Indians you must carry other kinds of truck, as small looking-glasses, pictures, beads, and bracelets of glass, knives, scissors, and all matter of gaudy toys and knacks for children which are light and portable, for they are apt to admire such trinkets and will purchase them at any rate." (Lederer 1672: 27)

CONCLUSION

Long before and long after Lederer's day beads played a steady and ever widening role in Euro-American contact. Native Americans had beads of their own long before the Europeans came, and they were quick to use European beads of glass and other materials. Sometimes they even adapted unsuitable European products for their adornment.

The first Europeans to come to America were explorers, and they gave many of their beads away. In their wake came traders and colonists who used (the often

cheap and often scorned) beads for commerce. Today, long after the settlement of America by those who followed Columbus, there are still a few of us around who are "apt to admire such trinkets."

* Take Placid, New York

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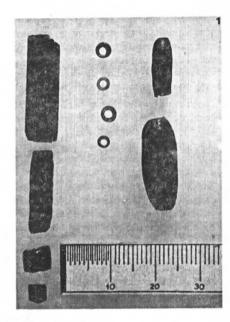
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Northend, Mary Harrod (1926) American Glass, Dodd, Mead & Co., New York, NY. FIG. 1 Glass beads of the early 16th C. Spanish trade excavated at Juandolino, Dominican Republic; collection of the University of Florida, Gainesville. The four small beads in the center are similar to those that have been tentatively identified as having been carried by Columbus.

FIG. 2 Florida cut crystal beads from various sites; collection of the University of Florida.

FIG. 3 A carnelian bead from Nueva Cadiz, Venezuela; collection of the Unversity of Florida; 25 mm (1 inch) long. This bead must predate 1543, the date of Nueva Cadiz's abandonment, and is most likely from India.

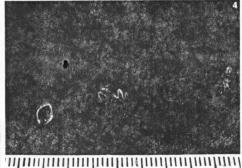
FIG. 4 Glass beads brought by the Spanish into Peru. The one on the left is a Nueva Cadiz plain type bead; on the right is a Nueva Cadiz twisted bead; in the center is a 12-pointed, 7-layered ground chevron.



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lenistic objects (Nos. 1-16) from Egypt, the Middle East and Italy, Greek (17-29), Roman (30-73) and rings from the Islamic World (82-100) form the bulk of the material, while Sassanian and Byzantine rings are represented by three examples each.

The scholarly importance of this collection is enhanced by the fact that most gems and finger rings contained therein are of Syrian provenance, and consequently the author of the catalog dedicates one of her introductory essays to "Syrian Rings."

PWS

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The Bead Society

Los Angeles, California

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BEAD REPORT XIII BEADS AND THE DISCOVERY OF AMERICA Part III, The Later Bead Trade

Peter Francis, Jr.*

The term "bead trade" may conjure up a vision of a smoothly working system in which importers buy beads from manufacturers and then sell them to traders who, in turn, barter or give them to the natives.

A moment's reflection will dispel this false picture. Our task of identifying beadmakers and dates would be much simplified if this was true but, in fact, bead research is notoriously difficult. Almost 20 years ago, George Quimbly admitted that a quarter of a century previously he had thought it would be easy to trace beads to their manufacturers, discover when they were made, and build a bead chronology which could be used to date Indian sites and artifacts (1966: 82). In time, he realized that this could not be done so easily. Though there has been considerable progress in bead research since the mid-1960s in the United States difficult problems remain.

In this last installment of the series, "Beads and the Discovery of America," we shall consider some of the difficulties in identifying beads, the people who made them, and the people who imported, distributed and traded them. So as not to close on a negative note, we shall then consider examples of what we can learn about beads, using the three tools most useful in the research: history, archaeology and ethnography.

THE DIFFICULTY OF IDENTIFYING MANUFACTURERS

The story of every bead begins with its manufacture. For glass trade beads in America, one center of beadmaking is considered most important: Murano, an island district of Venice, Italy. Most writers have assumed, probably rightly, that most trade beads coming to America since Columbus were made in Venice. The expansion experienced by Venetian beadmaking beginning in the late 15th C. is closely associated with the Age of Exploration when Venetian beads were taken all around the world (Francis 1979a: 5-6).

Other European glass beadmakers are also known. Among the best documented

are those of Holland (Karklins 1974) and Bohemia (Francis 1979b). England, France, Germany, Austria and perhaps Sweden also made beads (Kidd 1979). Spain produced some glass beads (Frothingham 1963: 15, 23); the extent of Spanish beadmaking is not known, but has been discussed by students of early Spanish colonial beads (Fairbanks 1968: 8; Smith and Good 1982: 12-15).

Another addition to European beadmakers is Russia. M.V. Lomonosov (1711-1765), the first Russian scientist of international repute, built a glass factory at Ust'-Ruditsy near St. Petersburg (Leningrad) and worked for many years to develop various colored glasses. Among the products made in the factory in the mid-18th C. were glass beads (Prokhorov 1970: III 679, XV 124). Estonia is known to have made glass beads in the 18th and 19th C., but none seem to have been exported (Roosma-1969: 78).

Outside Europe small glass beadmakers in the Middle East and elsewhere are known, but they appear to have made beads only for local consumption. However, two non-European beadmakers were large enough to have possibly produced beads which were imported to America.

One of these is China. Much remains to be learned about Chinese bead production, and there is considerable controversy about its extent. The question of Chinese bead production was raised by Woodward, who noted that William Clark of the Lewis and Clark Expedition said that the blue and white beads so important to the tribes they met had come from China. Woodward believed this was not correct, though he cited no evidence (1965: 14-15). His position has been supported by those who believe that these beads were only transshipped through China from Europe (Jenkins 1975: 6). Others disagree, maintaining that Chinese beads were traded during the 19th C. (Ross 1975: 3-4; Liu 1975: 14; Chu and Chu 1973: 138; Fenstermaker and Williams 1979: 31).

The crux of the argument is the age and extent of Chinese glass beadmaking

and exporting during the last few centuries. Some believe that this dates from only about 1850, while others claim that the Chinese hardly ever exported glass beads (Sleen 1975: 99, 102). But I cannot agree with this. What we do know is that China has long made glass, including beads; that it is a large country with room for many beadmaking locations; and that we do not yet know enough about Chinese glass bead production to make any definitive statements about it.

However, I can offer some evidence for the export of Chinese beads in the 17th. 18th and 19th centuries from 1608 to 1889. A letter from John Saris at Bantam (Indonesia) recorded that the Flemings brought blue beads from China and sold them in Indonesia at a great profit (Danvers 1896: 22). At Maimatschin, on the Russo-Chinese border, William Coxe revealed that in 1780 "glass corals and beads" from China were among the Chinese products against which the Russians levied no duties; they were apparently used in the Alaska trade (Coxe 1780: 241). Chinese glass beads were imported to India in the late 19th C. (Balfour 1871: I 365; Watt 1889: I 428). In none of these cases does it seem likely that European beads would have been transshipped through China.

Were Chinese beads imported to America? One in the Harris collection, now in the Smithsonian Institution, at least looks exactly like beads commonly called "Peking glass." It is made of a deep green, semi-translucent bubbly glass in an olive (ellipsoid) shape, about 1 cm long with a large perforation, made by the winding process [Harris and Harris 1967: 178 (bead #146); pers. observ.] The Harris collection was gathered from well-dated Wichita Indian sites in Texas and Oklahoma and this bead was found in sites dating from 1780 to 1820.

The other important non-European glass beadmaker was India. Indian glass beads could have been brought to America in American, British or other ships up to the early 19th C. when British policies bankrupted many small Indian industries. including glass beadmakers (Francis 1982 a: 6). It may prove difficult to identify some of these beads; early Venetian beads often imitated bead styles which had been established in India as long as 1500 years (Francis 1982 b: 34). Later in this report we shall see that Indian agate beads were apparently sold in America in some numbers; there is no reason why glass beads could not have been as well.

It should be evident that identifying glass beadmakers is only a first step for us. We must also learn the types of beads they made and when they made them. Many glass beadmakers are old-style craftsmen who kept few records and only passed their knowledge first hand to the next generation. Even in Venice there seems to be little documentary evidence on beads.

THE BEAD TRADERS

After beads were made, importers brought them to America and distributed them. These people's records are also spotty. Importers bought beads from many sources and were not inclined to advertise where they came from. This is true even today: Try learning the origins of even new beads from most dealers; few will volunteer information.

A notice that appeared in the (New York) Daily Advertiser illustrates our problem; this ad was dated 8 July, 1803: "Imported beads. For sale by the subscriber. Received by the last vessels from Europe, an assortment of Coral Beads, Dog Teeth, and Coral Arms, with hand white and black, Agates, pound and seed Beads, two trunks gold and silver Tamboured Muslins, which will be sold on a reasonable credit, by Ephraim Hart, No. 13, Courtland Street." (Gottesman 1965: 108).

The ad is more informative than most from the period and we can guess where some of the beads may have come from. The coral and the arms and hands (ficus amulets?) were probably from Italy, though "black hands" may have been English or Spanish jet. The pound and seed beads were doubtless Venetian. If the "dogs teeth" were anything like the "wolves teeth" offered for sale by the Schwan Company in 1783 then they are Bohemian glass (Urban n.d.: 10). These are only educated guesses, but it is quite a mixture for one importer.

One source of information on beads used by dealers and traders are those found on bead sample cards. Recently three collections of these cards have been published. One was used by the Levin Company in London. Another was used in India and added to the Felix Slade glass collection by 1896 (Slade 1896: 163, Francis n.d.). These are both in the British Museum and are the subject of a study by Karklins (1982). The Dan Frost collection, used in New York, is in the Illinois State Museum and was recently covered in this journal (Liu 1983).

Both Liu and Karklins mentioned problems involved in studying beads on sample cards. Many beads were made for long periods of time and cards are often not marked as to the beads' origin, nor often dated. There are other problems as well. Beads may be made for sample cards and never made thereafter. Is this what happened to the American Flag beads seen in the Dan Frost collection? (Johnson 1977: 436; Liu 1983: 26-7). Old beads may be used on cards newly made up; a card in the University of Florida collection contains beads which match those on the cards of the 19th C. described by Karklins, but the colophon on the card shows that it was not assembled until some time after 1948 (Fig. 1).

We have even less specific bead information from the people who actually traded or gave them to the natives. Though we saw in the last installment of this series that glass beads were important in America since at least Columbus's time, much trading was conducted unrecorded.

Trade was often carried out by smalltime traders like those described by Josiah Gregg. These traders left Mexico with only \$20 worth of stock and wandered through the Southwest, being content to bring home a mule or two (Gregg 1844: II 54). Still other beads were traded by the natives themselves. Networks reaching from tribes who lived near trading posts outward to more isolated groups were a feature of the frontier. Meriwether Lewis described several such networks in the early 1800s (1814: II 56, 142, 229, 246); those in the Columbia basin and the Rocky Mountains always involved beads.

Both small and large trading concerns pushed back the frontier so that by 1890 the Census Bureau declared that no frontier was left. Trading posts were built on native village sites and were connected by rivers and old buffalo trails. Albany, Pittsburg, Detroit, St. Louis, Kansas City and many other communities owe their beginnings to this phenomenon. Only two types of commodities were suitable for trade along the frontier: those that were small in bulk, like beads, and mobile ones like cattle (Turner 1894: 210-211).

Even the records of large trading companies do not seem to be of much help. Those of the American Fur Company have been collated and give us some idea of the beads stocked at various posts, including "wampum" hair pipes, black and white wampum, agates and carnelians, barley corn and seed beads. The hair pipes and wampum probably came from the Campbell factory of Pascac, New Jersey, the agates and carnelians from India, and the glass beads from Venice. But many other beads are listed whose exact identification can only be surmised: sky blue beads, fancy beads, mock garnets, black beads, large glass, cut glass, blue and white, and spotted sea shell

beads (Spector 1976: 19).

In sum, the mechanics of the American bead trade were very complex. We have only begun to identify manufacturing centers; also the types of beads and the dates in which they were made will be problems for a long time to come. Once they left the factories, beads traveled various circuitous routes before being bartered to natives or sold to a city lady. Not only was the trade complex but those involved with it rarely kept records. Those records which have survived are only occasionally detailed enough to tell us something about the particular beads involved. All is not bleak however. The good news is that there are still many sources to be tapped for information about beads; in time we should have more detailed information available.

MERIWETHER LEWIS LEARNS ABOUT BEADS

Though detailed historical information on beads is scanty, historical documents do give us information about beads which is available from no other source. One thing we learn when studying primary historical sources are the attitudes held by people towards the beads they handled. We have discussed this in earlier columns in this series; here is another example of how one man learned the value of beads.

Meriwether Lewis and his friend William Clark set out in charge of the Corps of Volunteers for Northwest Discovery in May 1804 at the behest of President Thomas Jefferson. They were to go up the Missouri, over the Rockies, down the Columbia and back again if they could. Along the way they made cartographic studies and observations of the natives and natural history of this unknown part of Louisiana recently bought from the French. They were gone for two and a half years.

Lewis was Jefferson's secretary, and the President in 1803 advised Lewis to take along "light articles for presents and barter among the Indians." (Jefferson 1813: xiii) The expedition was well equipped; among the light items recorded by Lewis were flags, paint, clothing ornaments, medals and certificates, wampum, tobacco, mirrors, rings, brooches, ribbons, handkerchiefs, knitting needles, brass wire, thimbles, knives, fishhooks, brass armbands and files.

Beads? Oh yes, they were there too, but it took a while for Lewis to appreciate them. In the early years of his journal he describes entering villages and giving the chiefs wampum, paint, cloth and medals. The silver and bronze medals were most

Along the Missouri in early August 1804 a large medal was given to the grand chief of the Ottos, lesser medals to the other Otto and Missouri chiefs, and even smaller medals to minor chiefs of both tribes (Lewis 1814: I 38). In October he described these three types of medals; the most important had a picture of President Jefferson, the second type showed domestic animals, and the least important depicted a farmer sowing (Ibid.: I 120). In April of the next year he further described the Jefferson medal as having a reverse of clasped hands, a pipe and a tomahawk, and added that they were also carrying some Washington Peace Medals (Ibid.: I 384). A Jefferson Peace Medal is shown by Woodward (1965: 4).

The Americans insisted on proper medal-giving ceremonies, putting them on the chiefs' necks themselves (Lewis 1814: I 38, 120). The Indians also valued these medals, as it proved their recognition as chiefs by the great "foreign power," the United States (Ibid.: I 38). Near the end of their return journey (21 August 1806) a Cheyenne chief refused to take a medal, as he was afraid of white men's medicine. Clark explained that it was a gift from the "great father" to his friends and proved sincerity. The chief "now appeared satisfied and received the medal in return for which he gave double the quantity of buffalo meat he had offered before" (Ibid.: II 415).

Medals, along with wampum and paint, were so important to Lewis that he mentioned them each several times before he first records anything about beads (26 October 1804). Along with fishhooks they were traded to the Ricaras for meat (Ibid.: I 109). It was almost a year later that the significance of the right glass beads dawned on Lewis. While wintering on the shores of the Pacific he wrote on 1 November 1805: "But their great object is to obtain beads, an article which holds the first place in their ideas of value, and to procure which they will sacrifice their last mouthful of food. Independently of their fondness of them for ornament. these beads are the medium of trade, by which they obtain from the Indians still higher up the [Columbia] river, robes, skins, chappelel bread, bear-grass &c. Those Indians, in turn, employ them to procure from the Indians in the Rocky Mountains, bear-grass, pachico, roots, robes &c." (Lewis 1814: II 56-7).

The expedition was in for unexpected trouble because the members did not realize that they were running out of their one most valuable trading object. On 23 November the members offered a Clatsop a watch, a handkerchief, an American dollar and some red beads for an otter skin coat. Neither the curious watch mechanism nor the red beads tempted the Clatsop. He demanded "tia commochuck or chief beads, the most common sort of blue beads, the article beyond all price in their estimation." (Ibid.: II 84) The expedition's stock of blue beads was running so low that they were saved for a more necessary purchase. The next month Clark tried to buy an otter skin with red beads, but only blue or white were acceptable (Ibid.: II 95).

Again and again, they found that only the blue beads, or at second best the white ones, were wanted (Ibid.: II 98, 123). The last ones were gone after they had traded four fathoms (about 24 feet) of both the blue and white beads and a knife for some otter skins (Ibid.: II 125). Lewis had begun to appreciate these beads. His comment on the "hiding stone" game so popular with the Indians was that they would play "through the night round the blaze of their fires, till the last article of clothing or even the last blue bead is won." (Ibid.: II 140). Summing up the winter's stay he wrote: "But as we have had occasion to remark more than once, the object of foreign trade which is most desired, are the common cheap, blue or white beads, of about fifty or seventy to the penny weight, which are strung on strands a fathom in length, and sold by the yard, or the length of both arms; of these blue beads, which are called tia commochuck, or chief beads, hold the first rank in their ideas of relative value; the most inferior kind, are esteemed beyond the finest wampum, and are temptations which can always induce them to part with their most valuable effects . . . Yet these beads are, perhaps, quite as reasonable objects of research as precious metals, since they are at once beautiful ornaments for the person, and the great calculating medium of trade with all the nations on the Columbia." (Ibid.: II 144).

Can we identify the tia commochuck beads? Some believe that they are the light blue opaque wound round beads similar to those called "padre" beads in the Southwest and that they came from China through Russian traders (Sorensen 1971: 16; Sorensen and Roy 1968: 40). The "padre" and "pony" beads are said to definitely be Chinese types (Chu and Chu 1973: 139). Another guess is that they are

the large dark blue cornerless hexagonal tube beads sometimes called "Russian" beads (Strong 1965: 33). Both types are common in the Northeast. However, the passage just quoted from Lewis suggests that the tia commochuck were much smaller (he said 50 to 70 to the pennyweight or 0.05 oz.!) suggesting the beads used for beadwork. On the other hand, the phrase might have been applied to blue beads of

The Lewis and Clark Expedition met difficult terrain and bad weather on their way home, and suffered from the lack of blue beads. The expedition actually bought beads, selling their canoes for several strings of blue beads each to the Skillots, at a point where they had to cross land. At first the natives refused to buy the canoes, and one had to be broken up to prove that they would not simply be abandoned (Lewis 1814: II 247, 251).

On 21 May 1806 the expedition took stock and found that each man had only "one awl, one knitting-pin, a few skeins of thread, and about a yard of ribbon" left for trading. The men, having gone through so much already, did not seem to be alarmed (Ibid.: II 298). On 1 June they cut the buttons off their coat to trade with them (Ibid.: II 305). And on 22 June they were pleasantly surprised by the unexpected discovery of a few beads that had been overlooked in the pocket of a waistcoat; they bought the much needed protein (salmon) with them immediately (Ibid.: II 321).

Fortunately, the end was near. The expedition was soon in familiar territory and began running into old friends among the natives. The great journey was over and the men had a marvelous story to tell. Lewis died under mysterious circumsta les soon thereafter, but who could doubt that he or anyone else on the expedition would ever again underestimate the value of the right bead at the right time and place?

INDIAN AGATE BEADS IN AMERICA

In bead research, history and archaeology go hand in hand. History can suggest the sorts of beads we may find in a particular area. Historical accounts would suggest that we look for green glass (jade-like) beads in Mexico, red glass beads imitating Spondylus shell in the Southwest, and beadwork beads in areas where quill work was practiced (Woodward 1970: 2). We do not always find these beads, but at least we have an idea of what sort of beads to expect. Conversely, archaeology may uncover beads that force us to reThese beads were of great interest to me because of my concern for the trading of Indian agate beads (Francis 1982 c: 40-41). Since returning to America I have learned that they have been found in several sites. Credit for the "spadework" of locating these examples goes to Marvin Smith, and I wish to thank him for helping me locate this material.

In the last "Bead Report" a carnelian bead from the early 16th C. found at Nueva Cadiz, Venezuela, was discussed. Other examples from the 18th C. have been found in Florida, Louisiana, Tennessee and Mississippi. The largest find consisted of 325 round beads and 2 faceted tapered beads from Trudeau, Louisiana, a Tunica site, dating from 1731-1763 (Brain 1979: 221).

Carnelian beads have been found in at least three places in St. Augustine, Florida, the nation's oldest city. Two "date-shaped" beads (originally reported as amber) were found in levels dating to 1735-1755 (Deagan 1976: 62). A tan to reddish brown tapered octagonal tube with faceted ends was dated to 1740-1788 (Martinez and Ruple 1972: 12). A fourth "rose marbled" colored tapered and faceted bead was uncovered from another 18th C. site (Young 1975: 14).

These carnelian beads were all most likely from India; the one from Nueva Cadiz was perhaps cut at Limodra, and the others would have been cut at Cambay. How did they get to America? Those from the Barbados slave graves may have been indirectly introduced from Africa (Handler et al. 1979: 17), while those of the Tunica treasure are thought to have been brought by the French or Spanish (Brain 1979: 116). The beads from Nueva Cadiz and St. Augustine would have been imported by the Spanish. As they never had a foothold in India, they may have bought them from English, French, Dutch, Portuguese or Arab traders. The 19th C. agate imports we mentioned before (Ephriam Hart of New York and the American Fur Company) were bought from British dealers. Again, the complexity of the bead trade is obvious.

BEADS IN THE SMITHSONIAN

A third important source for study are beads in ethnographic collections, especially when they have been properly gathered and are well documented. The dates the beads were acquired tell us at least their minimum age. As long as such beads are kept in their original stringing order (even if they must be restrung), they also show us exactly how beads were worn.

On a recent visit to the Smithsonian Institution of Washington, D.C., Joseph Brown and Robert Elder were most helpful in locating beads in their collection and correlating them with their records. Their kindness is most gratefully acknowledged.

The beads shown in Figs. 2-10 have been photographed and published with permission from the Smithsonian. They represent a variety of beads gathered from different parts of the country during the last century or so.

*Lake Placid, New York

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Continued on p. 53

FIG 1 A sample card from Venice, Italy in the University of Florida, Gainesville collection. The colophon (printer's name, etc.) shows that the card itself was printed in 1948, though the beads on it appear to be older.

FIG. 2 Beads from the Smithsonian Institution, Ethnology division, museum number 6235, accessioned in 1868. These were found in a grave near Lima, New York; the beads are clearly of an older type.

FIG. 3 Smithsonian #10734 (accessioned 1871). One tubular shell bead, the rest of glass. Found near Gorham, ME. Restrung by the museum.

FIG. 4 Smithsonian #17981 (1875). Shell and glass beads and a metal ring; not original stringing.
FIG. 5 Smithsonian #17322 (1875). From a burial

in Wyoming, around the head of a child; all glass. FIG. 6 Smithsonian #152,865 (1891). Collected on the Kiowa reservation in modern Oklahoma. Restrung in the original order. It contains 19 brass and iron springs, 6 brass beads, a cotton charm bag

and 25 glass beads. Partially cropped.

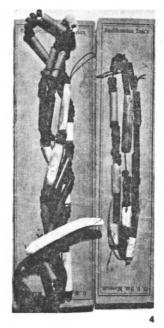
FIG. 7 Smithsonian #200,897 (1899). Collected from the Arapahoes. An elk tooth, a wooden bead, round brass beads and glass beads. A diamond shaped beaded pendant is no longer with this

FIG. 8 Smithsonian #359,275 (1931). From the collection of Victor Justice Evans; origin unknown.

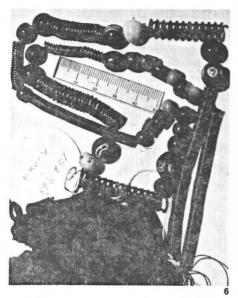
FIG. 9 Smithsonian #359,237 (1931). From the V.J. Evans collection; apparently restrung into 2 strands. Four abalone shell discs, 1 deer dew claw, 3 elk's teeth, brass and glass beads.

FIG. 10 Smithsonian #359,630 (1956). Collected by William A. Miller, then in the collection of the Catholic University of America, Washington, D.C., before being given to the Smithsonian. Can anyone help identify these beads?

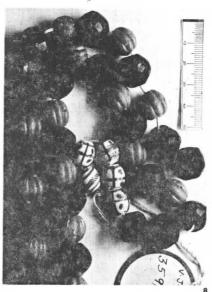


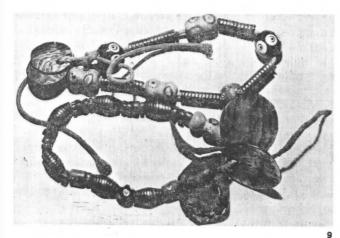


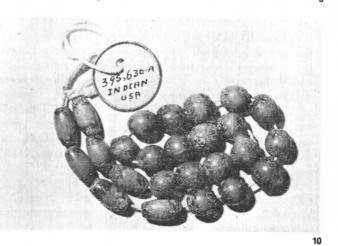












PUBLICATION REVIEWS

projects. These parts of the book almost invite the reader to try new techniques, since the applications are so obvious. Like all of his books, they are written by a working jeweler for the working jeweler. It will be hard to buy a better accessory than this book for your flexshaft machine.

 WRUCK, Charlotte 1981 Jewels for their ears. NY, Vantage Press: 210 p. \$8.95. There has not been a book on earrings until now. First time author Wruck, who has traveled widely to Europe, N. Africa, the Middle East and South America, has put together a curious and interesting book by gathering hundreds of notes from articles and books on "jewel-lore" over a number of

years. A diverse mixture of subtopics are piercing of ears, other ritual incisions are covered but it is not possible to discover this from the table of contents. Besides included, all illustrated by very gray photos taken from many sources. While it is frustrating to try and find information on any specific topic, the diverse information and low price make this a worthwhile book for the jewelry student's library.

■ JANATA, Alfred 1981 Schmuck in Afghanistan. Akad. Druck- u. Verlagsanstalt, Graz: 212 p., OS 850. The last two decades have seen increasingly more significant ethnographic books on jewelry/adornment, at a time when acculturation is occurring rapidly, accelerated by regional warfare. Such is the case with Afghanistan, where certainly the research/collecting of data and specimens for such a book could not occur in today's situation. Reviewed previously by

Schienerl (Ornament 7(3): 48, 1984), this book deserves further amplification. The introductory text covers history, society, cosmetics and other temporary body adornment, clothes, jewelry, including methods of manufacture, amulets, and pre-Islamic symbols in these two categories of ornaments.

Photographic plates, many in color, comprise a major part of the book. Each plate has a facing page of explanation and description; covered are types of jewelry as varied as prayer beads, seals, those set with glass, headdresses. There are also two informative plates on manufacture of rosaries and lostwax casting. Even for those not conversant with German, the photos provide much information, especially if one had use of a good German-English dictionary. Janata's book belongs in the library of anyone with a serious interest in ethnic jewelry, and in libraries in general.

RKI

BEAD REPORT: from p. 50

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silver surfaces, balanced by ribbons of 10k gold and sterling silver draped to the side. Quartz and 14k gold beads lead from this focal point around the neckline.

Several pairs of earrings and pins in sterling silver and a variety of stones suggested elements from Okim's personal background - origami, fans, fragments of costume — each handsomely fabricated in simple geometric shapes, assembled with gems or snippets of titanium set as stones. These works offer thoughtful, beautifully executed and affordable jewelry that should attract even those who may be hesitant to make their first purchase of art jewelry.

Dalene Barry

Dalene Barry is an enamelist and free-lance writer in Washington, D.C.

OKIM: from p. 59

In the pin "Double Image," the colors and lines of a uniquely carved citrine-amethyst were echoed by yellow and pink 14k gold.

"East of the Sun and West of the Moon," was a montage of metals and semi-precious stones (Fig. 1). A large yellow topaz crowned a pair of reticulated

ERRATA

8(2) SUE DORMAN: Page 58, Paragraph 5, line 5: two 31-point diamonds not 31carat diamonds.

cheap and often scorned) beads for commerce. Today, long after the settlement of America by those who followed Columbus, there are still a few of us around who are "apt to admire such trinkets."

*Lake Placid, New York

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FIG. 2 Florida cut crystal beads from various sites; collection of the University of Florida.

FIG. 3 A carnelian bead from Nueva Cadiz, Venezuela; collection of the Unversity of Florida; 25 mm (1 inch) long. This bead must predate 1543, the date of Nueva Cadiz's abandonment, and is most likely from India.

FIG. 4 Glass beads brought by the Spanish into Peru. The one on the left is a Nueva Cadiz plain type bead; on the right is a Nueva Cadiz twisted bead; in the center is a 12-pointed, 7-layered ground chevron.



Continued on p. 65



