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OCCASIONAL PAPER No. 3

BEADS AND THE DISCOVERY OF THE NEW WORLD

Peter Francis, Jr.

THE CENTER FOR BEAD RESEARCH
4 Essex Street
Lake Placid, New York 12946 (U.S.A.)

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NOTES TO THE READER

The primary sources of information for this work have been the reports, journals, letters, and descriptions of explorations in the New World written by the explorers themselves or by contemporary editors. By relying on historical sources both advantages and disadvantages are encountered. The chief drawback is that such sources are often scanty, since the explorers of the New World were not especially interested in our topic except under certain circumstances. For example, there is a great deal of literature on gold and pearls but very little on plant materials used as beads; there is a wealth of data on wampum, but the ubiquitous other sorts of shell beads are hardly ever mentioned. On the other hand, these sources do afford us a glimpse into the past and into the minds of the people who actually lived the events surrounding the discovery and exploration of America. Such insights are valuable, and it is with an appreciation of both the limitations and rewards of this study that it is being offered.

Our source material is found in a wide variety of publications, four of which are especially rich in early historic documents: the March of American Facsimile Series, the Original Narratives of Early American History Series, the publications of the Hakluyt Society, and *Purchas His Pilgrimes*. In order to orient the reader as to the source of quotations or observations, the author and date used as references in the text are most often those of the original writer and original date of publication; later editions of those works are acknowledged in the bibliography. An exception is made especially when volumes are used which contain the works of several authors. In that case the editor's name and the date of the collected work are used as reference. In such cases, every attempt has been made to incorporate the name and date of the original source into the text .

The letter "v." which appears following page numbers in many of the earlier works is an abbreviation of "verso." It is recorded here when facsimile reprints have been used as sources. Many early books did not number each page, but only the right hand page. The left hand pages are referred to by the number of the right hand page preceding it (on the same leaf) with the designation "verso." Hence, a book is numbered 1 (or 1 recto), 1 verso, 2, 2 verso, 3, 3 verso, and so on. Earlier books were also often divided into signatures, each one being lettered; these page numbers may appear as A3, B5, etc.

I have taken the liberty to modernize the spelling (but not the punctuation) of older texts as an aid to the general reader. Exceptions are made when a passage is being quoted by a modern writer who retains the original spelling or when words of technical interest (paternoster, margarita) are spelled in different ways. Those who are interested in older orthography may consult the texts used as references directly.

Special thanks goes to Elizabeth Harris, whose comments on an early draft of this paper have proved most beneficial.

BEADS AND THE DISCOVERY OF THE NEW WORLD

Peter Francis, Jr.

PART I:

BEADS OF THE NATIVE AMERICANS

SECTION ONE:

FIRST IMPRESSIONS

The Skraelings

The first description of New World Natives is found in the Sagas of the Norsemen or Vikings, who established the short-lived colony of Vinland. Much sheer fantasy and a counterfeit map have been published on these voyages. However, archaeological evidence confirms that around A.D. 1000 several exploratory and colonizing voyages were undertaken from Greenland to North America.

The Sagas recorded the earliest European impression of these people. It was not particularly favorable: "They were swarthy men and ugly, with unkempt hair on their heads. They had large eyes and broad cheeks." [Gathorne-Hardy 1921:61] Before archaeological evidence of the voyages this passage was cited as "probably the most convincing proof of the historical accuracy of these stories" [Ibid.:173]. The picture of Native Americans -- swarthy, unkempt, broad cheeks, large eyes and the rarity of beards -- was quite accurate [Ibid:179-80].

On the other hand, ugliness was a subjective judgment of people who regarded tall blonds as the epitome of beauty. Unfortunately for us, the Vikings preserved no information on the personal adornment of the Native Americans, whom they called Skraelings, or "shriekers."

"Naked as Their Mothers Bore Them"

It was nearly 500 years before others rediscovered America. When they did they brought their own ideas of decency and civilization; what they found rarely fit these preconceived notions. The initial impression of many explorers was that Native Americans wore no clothes. Columbus wrote that the people he saw were, "all naked, men and women, as their mothers bore them" [Morison 1963:91].

The perception of nakedness was widespread. De Cuneo (1493-96) affirmed, "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 of the same cotton" [Ibid.:219]. Soon thereafter Oviedo described the inhabitants of the Caribbean:

> The principal men bear their privities in a hollow pipe of gold: but the common sort have them enclosed in the shells of certain great whelks, and are beside utterly naked. For they think it no more shame to have their cods seen than any other part of their bodies. And in many provinces both the men and women go utterly naked without any such cover at all.
>
> They go naked as they were born, except that on the parts which may not with honesty be seen, they wear a certain leaf as broad as a man's hand, which nevertheless is not kept close with such diligence but that sometimes a man may see that [which] they think sufficiently hid.
>
> [Martire 1555:208 v., 212 v.]

The impression was widespread. Cabeza de Vaca said of the natives of northern Texas, "The inhabitants of all this region go naked. The women alone have any part of their persons covered, and it is with a wool that grows on trees." [1871:82] This "wool" was really a moss, *Tillandsia usneoides*, the common covering of married women throughout the south [Ibid:83, n. 2]. Drake described the natives of Nova Albion, at or near San Francisco Bay as naked, "whose hair being long, was gathered into a bunch behind, in which stuck plumes of feathers: but in the forepart only single feathers like horns, every one pleasing himself in his own device." [1628:126] Even in the north this was true. Verrazano described the people around New York harbor in 1524:

> 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 make 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 birds' feathers.
>
> [Hakluyt 1582: A1 v.]

As with modern travelers, the early visitors to America noticed and described the things which seemed most unusual or striking to them. Their readers relished strange tales of unknown lands, so they emphasized the unusual. Like "ugly," "naked" is a relative term. We would hardly describe people wearing grass girdles, skins to their knees, and feathered neck ornaments as naked. But to the well dressed (should we say overdressed?) Europeans, Native Americans were naked. Precisely the same word was used by contemporary Europeans who were exploring India, Indonesia, and Africa.

In time the impression of naked savages gave way to a more realistic and complex view of dress. (Plate 1) In the tropics people naturally wore little more than symbolic fig leaves, and in other areas clothing was admirably suited to the climate or cultural situation. Sewn clothes were seen by Verrazano north of New York Harbor made from "certain leaves [that] hang on boughs of trees . . ." [Hakluyt 1582:A3 v.]. Waymouth in Virginia (1605) described sewn mantles and long boots of deer or beaver skin [Rosier 1605:B1 v., C1 v.]. Cartier (1534) said the Beothuks of Newfoundland were clothed in skin with the women girdling

up their garments to make them fit closer than the men's [1580:7]. Clothes were distinct for each region, and in Peru were ordained by law to be different in each village [Markham 1873:77].

These distinctions soon came to be noticed. Smith's description of costume in Virginia took into account differences in social status, the seasons, and gender:

> For their apparel, they are sometimes covered with the skins of wild beasts, which in winter are dressed with the 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 & 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]

The Body as Ornament

Aspects of grooming were also recorded. Since the Vikings, the lack of beards had often been remarked upon. Many Native Americans, from New Netherlands (New York) [van der Donck 1841:190] to Virginia [Rosier 1605:B3 v.], considered facial hair unsightly, and it was plucked out as soon as it appeared. The Inca Lloque Yupanqui ordered his men to do this [Markham 1873:82]. The Eskimos of Unalaska conformed to no rule; some plucked their beards and others let them grow [Coxe 1780:151]. In rare instances, growing a beard was a mark of status, as with the cacique of Catarpa [Martire 1555:208 v.].

Tattooing was common. In Panama Balboa said that slaves were tattooed on the face by being pricked with a sharp bone or thorn, and a powder sprinkled in, followed by a black or red juice; the operation was so painful that they could not eat for days afterwards [Martire 1555: 144 v.-145]. On the other hand, Oviedo reported that at Catarpa in the Caribbean the local ruler was distinguished by a tattoo that reminded the Spaniard of those worn in North Africa [Ibid.:208 v.]. In Virginia Percy reported (1607) that the women pricked their legs, arms, and faces with a sharp iron in designs of fish, birds and mammals [Tyler 1907:19]; Smith added snakes to the bestiary and breasts to the bodily parts so decorated [1624:30]. Sparke reported that the men in Florida were tattooed [Burrage 1906:121]. Hall at Hudson's Strait in 1576 likened the women's tattoos to those of the Tartars [Morison 1971: 507], and the Russians in Alaska noted many tattoos, sometimes done with a needle pulling a blackened string through the skin [Coxe 1780: 62, 151]. The Coahuillas of California made black tattoos of agave charcoal and blue ones of maguey charcoal; opinta cactus spines or sharp flints were used to prick the skin [Barrows 1900:49].

Even more widespread than tattooing was body painting, used from Canada to Tierra del Fuego; Florida to California. Sometimes it was monochrome; the Beothuks of Newfoundland painted themselves red,

inspiring the phrase "red men" [Cartier 1580:7; Maxwell 1978:350]. More often many colors were applied like the "beast (as he seemed unto us)" Magellan met off the tip of South America: "He was of good corporature and well made in all parts of his body, with a large visage painted with diverse colors, but for the most part yellow. Upon his cheeks were painted two hearts, and red circles about his eyes. The head of his hair was colored white. . ." [Martire 1555:219].

What was the reason for body paint? In New York, van der Donck said that men painted their faces to disguise themselves "so as to deceive a friend." [1841:195] Strachey said that Virginian mothers painted their children from birth to keep mosquitoes away [1612:70]; Wolley in New York also cited mosquitoes [1701:34]. Decoration was the use suggested by Drake in California [1628:126], Mourt in Massachusetts [1622:37], and Champlain along the St. Lawrence River [Bigger 1922:1 326; 3 133]. Champlain thought dark skin was due to paint [Ibid.:1 118;2 48]. Mourt found that red pigment was used in burials near Plymouth, a fact confirmed by many scientific excavations since [1622:11]. In Virginia men beautified their faces with paint to welcome Waymouth [Rosier 1605: D2 v.], as they did along the Mississippi to greet la Salle [Joutel 1714:159]. In Virginia men painted themselves black, red, white, or multicolored for a celebration of their idol [Smith 1624:45].

At Puget Sound Rickman said that there were several reasons for body painting, including looking frightful for war and disguises for hunting [1781:243]. War was an important reason for body paint. Vespucci and Balboa both said they or their interpreters recognized war preparations when men painted themselves in a certain way [Waldseemüller 1507:116; Martire 1555:151]. War paint was used in Florida [Elvas 1577:87], New York [Le Moine in O'Callaghan 1849:39], Virginia [Strachey 1612:73], and in the southeast [Sparke in Burrage 1906:121], among other places.

As for the paint, Ribault in South Carolina said a dye was prepared from a plant which grew on cedar trees [Hakluyt 1582:F2 v.]. In much of the south, pokeberry (*Phytolacca americana*) juice made a red paint [Strachey 1612:73; Smith 1624:30]. Smith described a mine of antimony dug with large shells; after being washed in a stream it was sold for paint [1634:58]. Cabeza de Vaca said powdered marcasite (pyrite) and galena were used in north Texas [1871:150]. In North Carolina cinnabar from the mountains near the Catawba River was worn [Lederer 1672:16], and red clay was used in Virginia [Strachey 1624:30]. In Peru the Guancabelica mine yielded cinnabar for body paint and later mercury for the Spanish silver industry [Herrera in Purchas 1625:15 527].

A detailed account of paint preparation left by van der Donck in New York (early 17th century) said that stones were pounded, rubbed or ground to produce powders which were more esteemed than vegetable pigments. He did not know what was added to make them adhere to the body, but said they felt greasy. The chief plant pigment was from the berries of the *Oreche* herb. They were bruised and the juice squeezed onto large (6 by 3 feet; 2 by 1 m.) pieces of bark to dry in the sun or on hot stones. Once dried, the paint was scraped off to be mixed with water when applied. Each color was kept in a small leather bag, and those most desired were the most brilliant ones. He concluded that the paintings of the Natives were "of little importance, being mostly confined to the coloring of their faces. . ." [1841:163-64].

SECTION TWO:

NATIVE MADE BEADS

Body paint, tattooing, clothes, and outlandish costumes were more often described by the explorers than beads. Although it is clear that beads of many materials were worn, few descriptions of them are found in the early travel literature. Unless they were made of substances considered precious by the Europeans, they were of little account and hardly merited notice. Vespucci's attitude is typical:

> Their riches consist of variegated birds' feathers, and of strings of beads (like our *pater nosters*), made of fish bones or of green and white stones. These they wear as ornaments on the forehead, or suspended from their lips and ears. Many other such useless trifles are considered riches by them, things to which we attach no value whatever. . .
>
> [Waldseemüller 1507:98]

Since the Europeans thought such "useless trifles [had] no value whatsoever," it is no surprise that reports of them are fragmentary and scattered. Only when beads had value to the Europeans did they attract attention. Such beads were either made of precious materials (gold, silver, jade, pearls) or played key social roles (wampum, roanoke). As for the beads of more prosaic materials (shell, bone, teeth), our best information comes not from historical accounts, but from archaeological excavations. There was far more variety and wealth of beads worn by Native Americans than the European explorers would lead us to believe. The interested reader will find this true by consulting works on native ornament written from this perspective [e.g. Jernigan 1978].

Unicorn Horn and Other Beads

The rarest of bead materials was found in or just north of Florida. Sparke said, "The Floridians have pieces of unicorn horns which they wear about their necks, whereof the Frenchmen 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]

Few modern readers will believe that unicorn horn was made into beads, but other materials were also misrepresented. What were called white coral, bone, "bony substance," or even stones were often shell, a very important bead material. As wampum or roanoke, shell was so esteemed on the east coast that we shall devote an entire section to it (Section 4). Other sorts of shell beads were also widely worn.

In the Carolinas in the early 18th century John Lawson described the fishing and trading of what the English called "Blackmoors' Teeth," a type of shellfish: "They carry [them] a great way into the main land, to trade with the remote Indians, where they are of great value; but never near the sea, by reason they are common, therefore not esteemed." [1709:210]. Although these are usually considered to be cowries [Murray 1890:1 89], Swanton believed they were *Marginella* shells [1946:485].

In *A Treatise of Brazil*, an anonymous Portuguese mentioned collars of Wilkes (whelks) and said, "They use also white bracelets of the same whelks, and they put in their ears certain white stones of a span long and more... [They make their] brooches, beads of whelks" [Purchas 1625: 16 426-7,430]. Later he discussed how inland tribes valued the shells:

> The greatest whelks which are called Guatapiggoaçu, that is, a great whelk, are much esteemed of the Indians, for of them they make their trumpets, furniture, beads, brooches, earrings, and gloves [?] for the children, and they are of such esteem among them, that for one they will give away one person that they have captive: and the Portuguese gave in old times a crown for one: they are as white as ivory, and many of them are of two quarters broad, and one in length.
> The Piraguaig are also eaten, and of the shells they make their beads: and for so many fathom they give a person.
> [Ibid.:492]

Also on the Brazil coast Cabral (1500) saw natives wearing "a large string of very small white beads which look like seed pearls." These small shells were worn for a long time locally [Greenlee 1938:9, n.4].

Some shell beads were valuable enough to be gifts for the Emperor of Mexico. Gómara said that tribute from noblemen included, "strings of snail shells, collars, and other jewels of gold and silver." [Purchas 1625:15 560] *Spondylus* shells were also part of the annual tribute.

Copper was an important bead material in North America. Verrazano (1524) observed many natives around New York with "beadstones of copper hanging at their ears" [Hakluyt 1582:B3 v.]. In the same area Hudson (1609) said "other things of copper they did wear about their necks," presumably gorgets [Purchas 1625:13 592]. Strachey tells us that in Virginia, "They adorn themselves most with copper beads" [1612:73]. A caption of a picture by White explained that young ladies of Virginia wore: "hanging about their necks instead of a chain certain thick, and round pearls, with little beads of copper, or polished bones between them." [Hariot 1590:A4] Brereton in northern Virginia (1602) described these beads well:

> 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 together 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]

The source of this copper was a subject of debate. Brereton heard that it was mined in Virginia [Burrage 1906:338]. Lane said that it was panned for in a Virginia river and the ore later refined [Ibid.:254]. There was at least one local source for native copper near Virgilina, Virginia [Swanton 1946:492-3], but most of it was traded through a complex network originating around Lake Superior.

Despite occasional mention of a few small gold and silver ornaments, only the doubtful witness of David Ingram describes either being used to any extent north of the Rio Grande. His "sumptuous chairs of silver or crystal, garnished with divers sorts of precious stones" and rubies measuring two by four inches were apparently a product of a fertile mind bidding for European attention [Hakluyt 1589:557-8].

Many beads were worn as status symbols, and this is often remarked upon. On the California coast, Drake said that only certain people were allowed to wear necklaces and the number worn, whether 10, 12 or 20, indicated social standing: "The chains seemed of a bony 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 . . ." [1682:125]. Whether these were bone or shell is impossible to say. Hakluyt assumed that they were wampum [Ibid.:223], but even if they had been shell, they could not have been wampum as such.

At Plymouth King Masasoyt was attired little differently "from the rest of his followers, only in a great chain of white bone beads about his neck, and at it behind his neck, hangs a little bag of tobacco, which he drank and gave us to drink." [Mourt 1622:37] Tobacco was "drunk" rather than "smoked" in those days.

In Brazil Davis said that the chiefs (kings) wore on their heads, "a crown of parrots' feathers, of several colors, having either about his middle or about his neck, a chain of lion's teeth or claws, or of some other strange beast" [Purchas 1625:16 416]. A Portuguese who had "long lived" in Brazil listed the commoners' beads: seeds, bone, stones (that is bones) from Piraembu fish (snorting fish) heads, white coral, and teeth of the water hog, especially used for children [Ibid.:469-98].

Barlowe described Granganimeo, the local chief's brother, and his family at Pamlico Sound (1584) with many typical southeast ornaments:

> About her [the wife's] forehead she had a band of white coral, and so had her husband many times: in her ears she had bracelets of pearls hanging down to her middle, (whereof were delivered to your worship a little bracelet) and those were the bigness of good peas. The rest of her women of the better sort had pendants of copper hanging in either ear, and some of the children of the king's brother and other noble men, had five or six in either ear: he himself had upon his head a broad plate of gold, or copper, for being unpolished we knew not what metal it should be. . .
>
> [Burrage 1906:232]

As we have seen, many of these descriptions are vague, and archaeology tells us more about nonprecious durable bead materials than does history. However, we must rely upon historical sources for identifying one class of beads rarely found by archaeologists. These beads are made of plants, which quickly decay under ordinary circumstances. As we might expect, there are few references to such beads, but they were very likely to have been much more widely worn than recorded.

Pocahantas wore a necklace she made herself of rose hips (*Rosa blanda*). Along the east cost of North America the seeds of the chinquapins (*Castenea pumila*) were widely worn and could be eaten right off the string [Quinn 1936:103-5].

A *Treatise of Brazil* notes several bead plants. One seed was used in a timbrel, a small hand drum or tambourine, to make it rattle, "whereof they make also very good beads" [Purchas 1625:16 428]. The bark of the Cabueriba tree was made into beads "and other smelling things" [Ibid.:469-70]. The Iequitimguaçu tree, likened to the Spanish strawberry, bore pods which could be used for soap and in them hard seeds, "they are of the best beads that can be, for they are very equal, and very black, and they have a gloss like jet." [Ibid.:473]

Corn, a crop of great importance to Mesoamerica and far beyond, was made into beads in some circumstances. Parker said the Iroquois wore beads of corn kernels [1910:87]. Acosta reported that during Mexican festivals "roasted maize," (popcorn) was worn by the worshipers and celebrants [Purchas 1625:15 341, 360-1]: "They brought much of this roasted maize, and the chief men put it upon their heads, and about their necks, taking flowers in their hands." [p. 361]

SECTION THREE:

BEADS SOUGHT BY THE EUROPEANS

Introduction

The Europeans had definite ideas of what constituted wealth. Spices first impelled Columbus, but it was other materials that bred dreams of treasure. Columbus thought he came home from his third voyage (1598) with: copper, lapis lazuli, gum arabic, amber, cotton, black pepper, cinnamon, brazilwood (a dye source), aromatic gums, flax, aloes, white and yellow sandalwood, ginger, incense, myrobolans (used in tanning and for ink), and pearls. Of these, Morison believed that only the cotton, pearls, and brazilwood were genuine [1963.:281-2 n.7], although copper, gums, and possibly amber may also have been. Most East Indian riches were not available in the West Indies. But some certainly were.

Precious materials -- gold, silver, pearls, turquoise, emeralds, and jade -- were abundant only in Spanish controlled territories, and Spain enjoyed the initial flush of wealth from the New World. Great riches free for the taking promote jealousy, greed, and overexploitation, all of which entered the story of American colonization. For a while Spain and some of her colonies were fabulously wealthy, but soon this wealth disappeared. Spaniards are not by nature worse than anyone else; their opportunity for disaster was simply greater than other Europeans'.

Precious Metals, I: Immutable Gold

Gold, the base of European wealth, was eagerly sought in the New World. The Native Americans had a different perspective of it. As Acosta put it, "We find not that the Indians in former times used gold, silver, or any other metal for money, and for the price of things, but only for ornament . . . whereof there was great quantity in their temples, palaces, and tombs, with a thousand kinds of vessels of gold and silver, which they had." [Purchas 1625:15 71]

Most gold and silver found in America was melted down, sent to Europe, and minted or made into European-style jewelry. Between 1503 and 1560, 101 metric tons (about 225,000 pounds) of gold was so treated [Braun 1980:98]. The operation was thorough; not a single object which can be indisputably traced to the Mexican Conquest period survives [Kelemen 1969:240]. The great collections of pre-Columbian gold -- the 26,000 plus objects in the Museo del Oro of Bogotá and Jan Mitchell's, (some to be given to New York's Metropolitan) [Russell 1985] -- were assembled by private, nonarchaeological means. Although they provide important records of styles, most data about the pieces are lacking.

Not only are there no authentic specimens from the pre-conquest period, but information on the jewelers and miners is also scanty. All we have are a few references in explorers' journals, which furnish only a glimpse of the wealth of precious metals of the area.

The rush for gold was begun by Columbus. On his first voyage at Port de Paix, Haiti, his men bartered glass beads for thin pieces of gold [Morison 1963:123], and the next day the cacique gave Columbus two pieces. Another piece was obtained for six beads, and he ordered that something always be given in exchange to the natives [Ibid.:131]; on Hispaniola the natives traded their gold for hawkbells [Ibid.:137].

On his next voyage, Guacanagari, cacique on the Virgin Islands, put a cotton coronet on Columbus's head and gave him 12 belts, "wonderously polished, some of them embellished by small bits of gold inlay work ingeniously interlaced with cotton." [Ibid.:240] On Hispaniola the Spaniards "were led 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. . ." [Ibid.:245].

On the third voyage Columbus saw the Venezuelans wearing "golden eyes around the neck" and "they all wore gold and collars and beads of infinite variety" [Ibid.:271, 273]. Ferdinand Columbus on the fourth voyage said that near Puerto Limon, Costa Rica, the natives had eagle pendants and in Panama, "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.:331, 348]

The raw gold Columbus brought home in 1493 was called pyrite (fool's gold, an iron ore) by Las Casas [Morison 1963:120, n. 3]. The jewelry he brought was *guanin*, an alloy of variable composition, but mostly 18 parts gold, 6 silver and 8 copper [Ibid.:265], about 14 K gold.

Columbus saw only small pieces or thin plates of gold in the Indies; nor was there much to the north. Ribault (South Carolina, 1562) saw a gold and silver collar [Hakluyt 1582:F3 v.]. The de Soto expedition in Florida heard of gold mines and smelters, but did not find them [Elvas 1851:46]. Sparke (1565) saw gold gorgets and plates holding up women's breasts [Burrage 1906:127]. Gathering gold in streams in the Apalatecy (Appalachian) Mountains was described second hand by Le Moyne [Cumming et. al. 1971:187], but it was rare in this area [Swanton 1946:494-5].

The gold was elsewhere, on the western edge of the Americas: Alaska, California, west Mexico, Central America, and northwest South America. This area is part of the Circum-Pacific belt which contains the world's only major post-Archaean gold deposits [Read and Watson 1975:323]. The southern segment, the home of the Incan Empire, was the center of gold

and silver production and the first area in the Americas to work gold. From there, metallurgical techniques spread to Columbia, Venezuela, Panama, Costa Rica, and eventually to Mexico [Kelemen 1969:240-1].

Centuries of highly refined goldsmithing preceded the Conquest. Alloying, hammering, annealing, welding, granulation, lost wax and mold casting, repousse, electrochemical plating, burnishing and depletion gilding were all practiced [Bray 1978:26-38; Lechtman 1984]. Most gold was panned for, but some was mined from veins. On long trade routes kept open with complex exchanges, metals and beeswax for casting were important goods [Plazas and Falchetti de Saenz 1979; Bird 1979].

When the Spanish entered Mexico they bartered eagerly to trade glass beads for gold -- a bit too eagerly. In 1518 the de Grijalva party in the Guacacualo district traded beads for "some golden jewels, some were diadems, and others were in the shape of ducks. . . and other jewels like lizards and three necklaces of hollow beads. . ." [Diaz 1956:22]. They also saw shiny miniature axes with painted wooden handles being carried "as though for show or as a matter of elegance." In three days they bought 600 axes for green glass beads, convinced they had made the deal of the century. By the time they got home to Cuba the axes had rusted "and there was a good laugh at us, and [the other Spaniards] made great fun of our trading." Diaz concluded, "we were very well contended thinking that [the axes] were made of debased gold, and the Indians were even more contented with their beads, but it was no good to either party, for the axes were made of copper and the beads were valueless." [1956:28] This tale is one of rare amusing episode in the all too often sanguinary story of the Conquest.

The Conquests of Mexico, Peru, and Columbia were all for gold lust. In Mexico Cortez ordered his men to trade for gold rather than steal it [Ibid.:41], and they received fabulous gifts: "four diadems and some gold lizards, and two [ornaments] like little dogs, and earrings and five ducks, and two masks with Indian faces and two gold soles for sandals" [Ibid.:62]; "twenty golden ducks, beautifully worked and very natural looking, and some [ornaments] like dogs, and many articles of gold worked in the shape of tigers and lions and monkeys, and ten collars beautifully worked and other necklaces. . ." [Ibid.:74]. This great wealth has not been confirmed by archaeology; much pre-Columbian "gold" in Mexico has proven to be alloyed copper [Weaver 1972:273].

At the capital, Cortez took Montezuma and demanded a ransom of gold. Montezuma sent men around his Empire to fetch gold equal to his annual tribute, but warned Cortez that not all provinces had gold; some could only give small heirlooms of little value [Ibid.:246-7]. It was all melted into bars and stamped with the Spanish seal. Montezuma was accidentally killed by his own people, and the Mexicans turned on the Spanish, who fled for their lives, only to return and conquer.

The conquest of Peru is also the story of a ransom. Pizarro seized the Inca Atahualpa (Atabalpa) and demanded a room full of silver and gold in 40 days. Pizarro said it was 25 by 15 feet and as high as a man plus a span; Xerxes said it was 22 by 17 feet and as high as a man and a half [Purchas 1625:17 414, 425]. The treasure was just a bit late arriving, but Pizarro probably intended to kill Atahualpa anyway. Many other natives were also killed, and the Spanish "triumphed" again. An estimated 4,605,670 gold ducats worth was received [Ibid.:403].

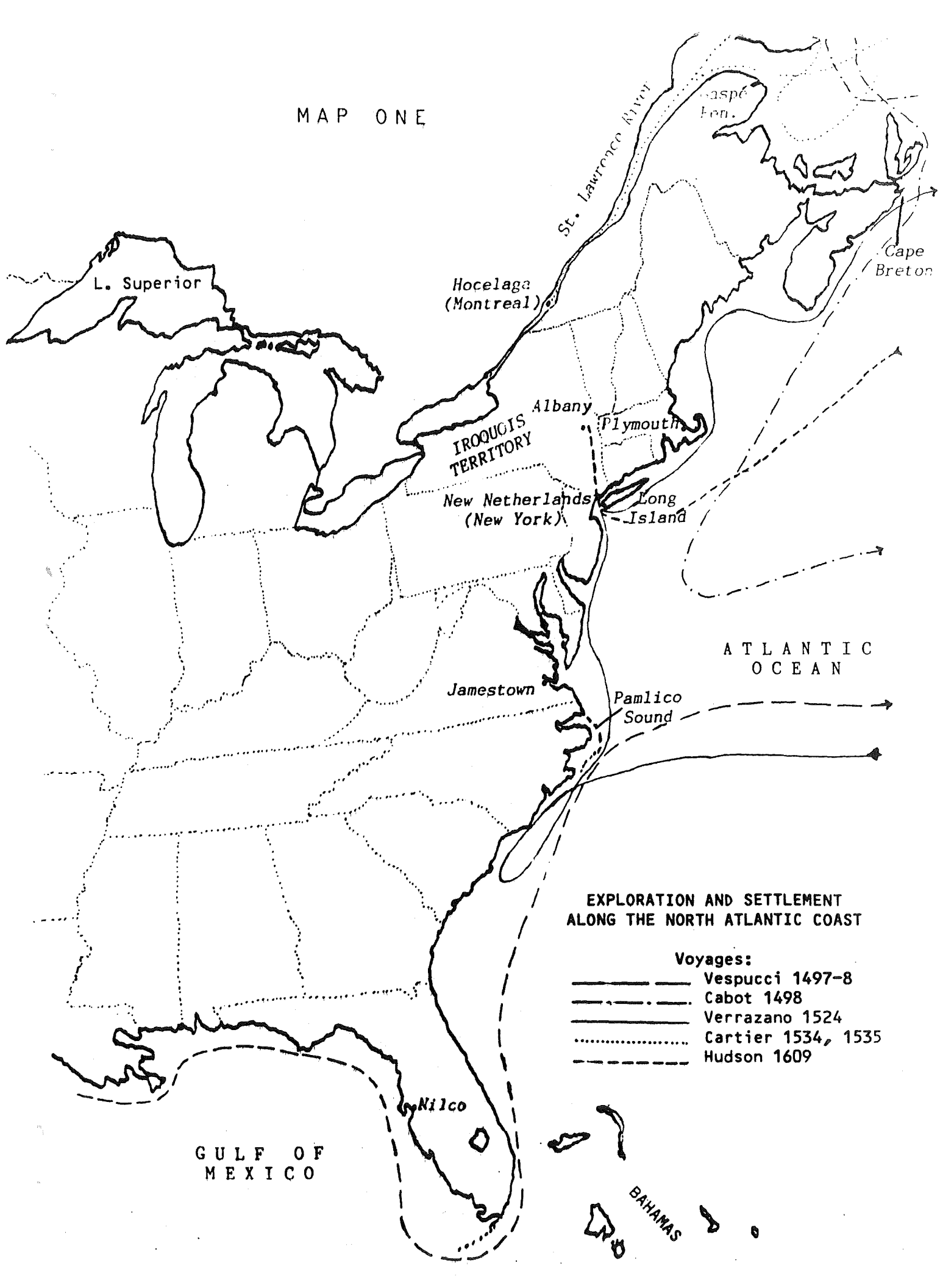
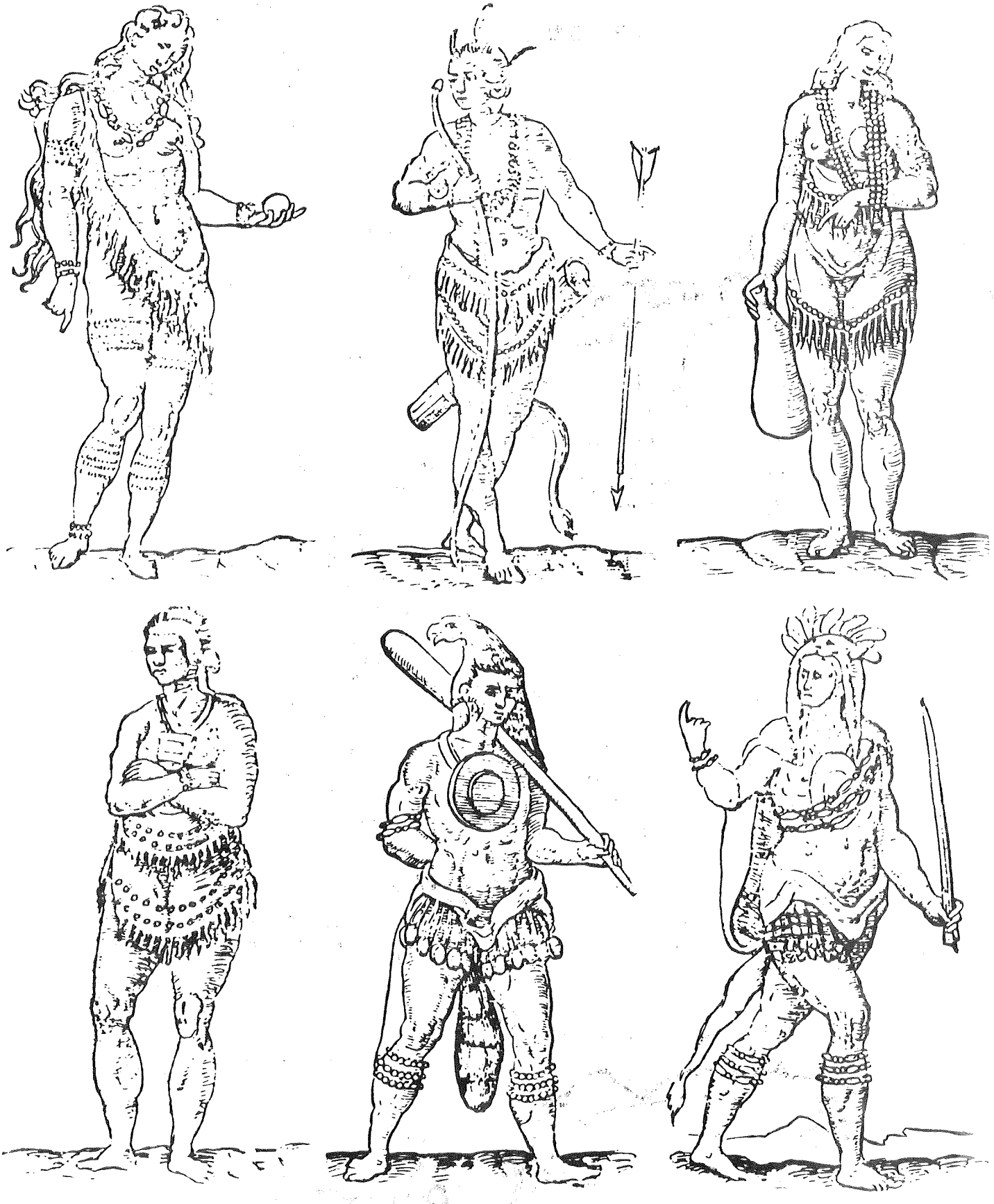

MAP ONE
St. Lawrence River
Gaspé Pen.
Cape Breton
L. Superior
Hocelaga (Montreal)
Albany
Plymouth
IROQUOIS TERRITORY
New Netherlands (New York)
Long Island
ATLANTIC OCEAN
Jamestown
Pamlico Sound
Nilco
GULF OF MEXICO
BAHAMAS
EXPLORATION AND SETTLEMENT ALONG THE NORTH ATLANTIC COAST
Voyages:
Vespucci 1497-8
Cabot 1498
Verrazano 1524
Cartier 1534, 1535
Hudson 1609

PLATE ONE



Figures 1 through 6: A Gallery of Americans.
Drawings of Native Americans adapted from the engravings by John White and Jacques Le Moyne de Morgues and published as woodblocks by Ceasare Vecellio in the 16th century. The first four are by White of Virginians and the last two by Le Moyne of Floridians. Beads, breast plates, furs, and feathers are very much in evidence.

The ransom was great because the Spaniards could see for themselves how wealthy the Inca was. In addition to idols covered with turquoise and emeralds (for lack of diamonds and rubies), there was an enormous amount of worked gold:

> This garden. . . had many sorts of herbs, flowers, plants, trees, birds great and small, wild, tame, snakes, lizards, snails, butterflies, small and great birds, each [of gold or silver and] set in their place. They had maize, quinva [quinoa, a nutritious grain], pulse, fruit-trees with the fruit on them all of gold and silver, resembling the natural. They had also in the house heaps of wood, all counterfeit of gold and silver, as they had in the house royal: likewise they had great statues of men and women, and children. . . All the vessel (which was infinite) for the temples' service, pots, pans, tubs, hogsheads, was of gold and silver, even to the spades and pickaxes for the garden.
>
> The Inca's chambers were lined with gold, with figures of men, women, birds, all known beasts wild and tame, all in their natural figure and largeness in gold and silver; the Inca's chairs of state were of solid gold, without backs, having a great square table of gold over them. . . . All the vessels of service both for table, buttery, and kitchen, small and great, were of gold and silver. . . He had in them also of like metals many granaries and repositories, not to keep grains but to express majesty.
>
> [Garcilaso de la Vega in Purchas 1625:17 343-4, 358-9]

In Columbia gold was mined around Buriticá, while jewelry making was done in many centers, especially at Dabeiba. Columbian tribes were not as organized as the Aztec or Incan Empires, and the conquest there was different. The Europeans were ambitious to discover the riches of El Dorado (The Gilded Man). When the Muisca chose a new ruler he went to Lake Guatavita, where his naked body was covered with gold dust. With some officials, he rode to the center of the lake to offer gold and other treasures to the local god. The story so excited the Spanish (as well as the Germans, English, and others) that for centuries attempts have been made to retrieve the wealth from the lake. Although some has been recovered, most attempts have ended in failure [Bray 1978].

It was even noted where gold and silver were not found. Herrera carefully described the New World district by district, stating whether gold was there. When explorers did not find gold, their disappointment was palpable. De Soto was so unhappy without gold in Florida that a companion commented, "since his intent was to seek another treasure like that of Atabalipa, lord of Peru, [he] was not contented with a good country . . ." [Elvas 1851:58]. Castañeda was downcast when Coronado turned back at Quivira (central Kansas) in 1542, "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." [1922:75]

When mines were found the Spanish impressed natives to dig them, and "after the native islanders were killed with too much labor, the Spanish procured slaves from Guinea [West Africa] in great multitudes, and used their services in the mines." [Benzo in Purchas 1625:17 293]

Gold poured out of the viceroyalties of Peru and Nueva Granada. Most was shipped to Panama, crossed the isthmus to Nobre de Dios, and then was freighted to Cartagena, which became wealthy from the trade as the principal American gold port [Herrera in Purchas 1625:14 436].

The crown controlled all aspects of the trade very closely: mining, smithing, and commerce. The King reminded the tribunal at Santo Domingo in 1526 of the laws forbidding "bellows or other smelting tools except those in our [the Royal] foundries. . .any gold- and silversmith caught soldering will be severely punished." The colonists in San Juan, Puerto Rico complained that the laws hurt trade, and in 1528 the King allowed smiths to work, "provided that they do not have in their homes or shops bellows, ovens (furnaces), or crucibles, or other smelting tools. . . . Any smelting or refinishing must be done in our foundry before our inspector and with our officials present. . ." [Luis Ribera 1976:25-6].

Precious Metals II: Silver and Potosí

Even more than gold, silver became the richest commodity which the New World furnished to the Old. An immense amount made the Spanish enormously wealthy; the Spanish milled dollar ("pieces of eight," whence our expression "two bits" for a quarter) became the standard coin of the entire world.

Silver was especially abundant at Cerro Rico ("Rich Mountain") near Potosí, Bolivia. The legend is that in the late 15th century the Inca Huainca Capac visited Cerro Rico and ordered it mined. But when a vein was opened a heavenly voice said, "Do not dig, it is not meant for you; God has saved it for others." [McFarren 1983:9]

The legend must be a rumor started by the Spanish. Acosta said that a man named Gualpa discovered the silver, dug and refined it. Soon its purity attracted the jealous attention of one Guanca. The two worked together, but they fell out, and Guanca informed Villaroel, his master [Purchas 1625:15 77-8]. The rush was on. So much was dug in the first year (1549) that the Royal fifth (the King's 20 % share) came to about 30,000 pesos [Ibid.:14 535]. De Zárate reported, "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]

The cone-shaped Cerro Rico, the tallest mountain in the area, had four silver veins: Rich vein, Centeno vein, Tin vein and Mendieta vein, each six feet (2 m.) to nine inches (23 cm.) thick [Acosta in Purchas 1625:15 81]. Before the Conquest, there was some mining at Porco, a village 6 leagues (22 - 44 kms.) away [Herrera in Purchas 1625:14 535].

The Spanish impressed 6000 or more men to work in the mines in short order [Zárate in Cohen 1968:247]. In 1593 Sanders estimated that 100,000 natives worked at the mines and Ordonnes included 14,000 slaves from Africa as well [Purchas 1625:17 202, 212].

Two institutions were initially kept intact in the mining operation. One was the method of recruiting the workers who were drafted though the *mita* system, an invention of the Incas. De la Vega described it:

> The servants and officers for water, fuel, and the kitchen, for the table of state (for the women and concubines provided for the Inca himself) butlers, porters, keepers of the wardrobes, jewels,

> gardens, and in other offices, were not particular persons: but for every office they had two or three towns assigned whose charge it was to send men of ability and trust by days, weeks, or months changed in course: and this was their tribute; the whole town being punished in any defect.
>
> [Purchas 1625:17 359-60]

Under the mita every man worked for the state at more or less hard labor once or twice in his lifetime. The Spanish abused the system, and soon Las Casas and others complained to the King that many workers died in the mines. Ordinances which forbad excessively bad conditions and required workers to be paid had little effect on the distant colony [Cohen 1968:235]; African slaves were soon deemed necessary.

Acosta described the mines after descending into some of the shafts himself. The workers "labor in these mines in continual darkness and obscurity. . .those places are never visited with the sun. . . [and are of] an extreme cold. . ." [Purchas 1625:15 82]. (Plate 2, Figures 7, 8)

The Spanish also borrowed ore refining from the Incas. Bellows were not effective, so they employed *guiaras* ("wind"), small kilns built on a hillside with a port open to the prevailing wind. Silver ore and sheep dung were fired on charcoal, and the wind stoked it hot enough to melt and refine the silver [Cohen 1968:44, 247]. In 1563 a Portuguese, Henrie Garces, realized that the vermilion the Incas used as body paint from the old mine at Guancavilca would yield mercury. By 1572 mercury refining allowed even low-grade ore to be profitable; production soared [Purchas 1625:14 527; 15 85-90; Luis Ribera 1976:29].

Potosí was a boom town. In 1553 Charles V made it an Imperial City. In 1601 it had 500 Spanish households and 50,000 natives working the mines [Herrera in Purchas 1625:14 534]. By 1650 it housed more than 160,000 (not counting slaves?) and was the largest city in the Americas and one of the largest in the world. It was graced with 90 magnificent churches, people had sinks of sterling silver, llamas brought Persian carpets and European furniture over the Andes, and the wealthy even sent their clothes back to France to be cleaned [McFarren 1983:9]. The city chronicle for 1656 listed scores of imported luxuries, including Venetian glass, African ivory, diamonds from Ceylon, precious stones from India, and pearls from the Caribbean [de Madariaga 1947:66].

To the south, modern Bolivia, Paraguay, Uruguay, and Argentina (named for the metal) were organized into the Viceroyalty of La Plata (ironically not named after Potosí's mines but by Cabot years earlier when he found silver at the mouth of the Parana or Rio de la Plata). The routes from the mines to Buenos Aires were the *caminos de la plata*. Even modern maps show numerous references to the white metal. Buenos Aires grew into the main silver working center, and master craftsmen came from afar to live there. A 1748 list of gold- and silversmiths in the city included Peruvians, Paraguayans, and Argentinians, but also Spaniards, Portuguese and Italians [Luis Ribera 1976:6].

Potosí silver production increased until the mid 1600s, slacked off for a time, and picked up again around 1740. During the wars for independence, production again declined, and by 1825 Potosí, once one of the greatest urban centers of the world, had a population of only 8000 [Ibid.:29]. The chronicler of *Archivo Boliviano* in 1872 recalled the old days and mournfully asked,

> [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]

Gems From the Sea: Pearls

Pearls are almost natural beads. Their shape, ease of perforation, and above all, beautiful sheen (water or orient), have made them favorites for millennia. They are formed by molluscs secreting nacre around some irritating foreign matter in their shells. This zoological fact was not understood by 15th century Europeans. The testimony of ancient writers was believed absolutely, even though they often disagreed. Aristotle said that pearls were oyster hearts, and Pliny wrote that oysters "seem to yawn and gape . . . and then . . . conceive a certain moist dew as seed [sperm]. . .and the fruit of these shell fish are the Pearles . . ." [Pliny 1964:94]. There were many questions: did oysters walk around on the sea floor? Were pearls soft in the shell?

Some explorers tried to discover the truth about pearls. The ever-curious Balboa queried divers in the Gulf of Mexico and learned that oysters stayed in one place. [Martire 1555:65, 141 v.]. Hawkins said that the theory that pearls were made from dew must be "some old philosopher's conceit . . . [they are made] out of the fatness of the fish, in the very substance of the fish." [Purchas 1625:17 126]

In Venezuela, Columbus remarked: "Some women came who wore on their arms strings of small beads and among them pearls or baroque pearls of high quality. . . wherever they grow . . . they are very fine, and they bore a hole into them as in Venice." [Morison 1963:273-4] Venice (after which Ojeda named Venezuela) was a center for drilling and stringing Indian and Persian Gulf pearls.

The Ojeda expedition was awed by pearls on the Paria Peninsula; for a single brass hawkbell Vespucci received 500 of them [Waldseemüller 1507:124]. They stayed 47 days on one island bartering, "bells, and looking-glasses, and beads . . . and tin foil. For one bell a native gave all the pearls he had. Here we learned how they fished for them, and where, and they gave us many shells in which they are born." One shell with 130 pearls was claimed by the "queen." Others Vespucci "put aside that they might not be seen" [Markham 1894:29].

Margarita ("Pearl Island") was seen by Columbus, but Ojeda landed there first [Markham 1894:32-3]. A bit later when Balboa was there he was given a "basket of curious workmanship" full of 110 pounds of pearls (at 8 ounces to the pound; 25 kgs.), some as big as hazel nuts. The cacique said that the sea all around was full of them, but friendship was worth more than a million pearls. What could be better than friendship and pearls? The cacique was baptized and pledged 100 pounds of pearls a year to the Spanish Crown [Martire 1555:140-1].

In Darien (Panama), Balboa forced cacique Tumaccum to ransom his son for 513 pesos of gold and 240 "of the biggest and fairest pearls as well as many small ones. Our men marveled." When Tumaccum saw how the Spaniards loved pearls he sent out his divers. In four days they found 12 pounds of them, whereupon Balboa and the cacique "embraced and made a league of continual friendship." Some were as big as beans or olives and "as sumptuous Cleopatra might have desired" [Martire:93, v.].

All these pearls were "not quite white because they first roast the mussels to open them and eat them." [Ibid.] They were only by-products for the natives, who gathered the shells for the meat. If pearls were found they were bored and strung, but no especial value was attached to them. However, the cooking spoiled the gems in the Europeans' eyes.

Balboa described the pearl fishing. Men learned to dive underwater while young, but they only dove in fair weather. Big pearls were deep, while smaller ones (the "daughters" and "nieces") were nearer the surface. Oysters with small pearls might be washed ashore in a storm, and nets were occasionally used, but diving was most important. Divers could not stay too long because they were afraid of giant sea monsters, and, obviously, needed to come up for air. Balboa knew that the oysters were not the same as Old World ones; he thought they tasted better [Ibid.:94 v.-95, 142]. The American species are the Atlantic Pearl Oyster (*Pinctada imbricata*) and the Panamanian Pearl Oyster (*P. mazatlanica*) on the Pacific side; the Old World *P. margaritifera* is a close relative.

Balboa contrasted two famous pearls. A walnut-size one bought from a Venetian merchant by Pope Paul (II) cost 44,000 ducats. But Peter Arias (Pedarias), the Governor of Panama and Balboa's father-in-law, bought a larger pearl for his wife for only 1100 ducats. The difference in prices was not quality, but a lesser mark-up on American pearls [Ibid.:141]. As an aside, Pedarias had his illustrious son-in-law executed in 1517 on a probably trumped-up charge of sedition.

Pearls, both marine and fresh water, were reported in many parts of the New World. In Florida a "lady cacique. . .took from her own neck a great cordon of pearls and cast it about the neck of the Governor [de Soto]." [Elvas 1851:56] Near Tampa, he robbed a cemetery of 14 rooves (392 lbs.; 178 kgs.) of pearls and "little babies and birds made of them" (pearl-covered objects?). Here again, "they burned them in the fire, [and they] did loose their color" [Ibid.:57-8]. Along the coast Ribault (1562) saw a native wearing a pearl "as great as an acorn at the least." But when one of the Europeans reached for it, the owner drew back. He knew that these strangers wanted pearls and he would not give it up except in trade [Hakluyt 1582: F3 v.].

In Virginia, "King" Menatonon gave Lane (1585-6) a rope of black pearls and assured him of a "great store of pearl that were white, great, and round, and that his black pearl his men did take out of shallow water, but the white pearl his men fished for in very deep water." [Burrage 1906:249-50] Smith said that "Emperor" Weramocomoco wore "many chains of great pearls about his neck" [Tyler 1907:48], and he was given "a chain of pearls" [Smith 1624:65]. Strachey said that the natives wore stained (roasted) pearls in their ears [1612:74].

Lord Baltimore wrote a tract to entice settlers to Maryland: "The women affect to wear chains and bracelets of beads, some of the better sort of them wear ropes of pearls about their neck, and some hanging in

their ears, which are of a large sort, but spoiled with burning the oysters in the fire, and the rude boring of them." [Calvert 1635:32]

Pearls were even reported far to the north. Waymouth, on the coast of Maine found an "abundance of great mussels; and in some of them many small pearls." One had 14, including a large orient one; another had 50. He was sure that if he could have dragged for them he would have found many valuable ones [Rosier 1605: B2 v.]. Gilbert along the southern coast of Newfoundland (1579) found pearls in oysters, but they lacked sheen; he assumed they were out of season [Burrage 1906:192].

The *Treatise of Brazil* said that there were many oysters with good meat and "in these are some pearls found very rich, in other smaller [ones] are also very fine pearls found." The author explained the origin of huge shell middens by the shore and described how sea gulls drop mussels on a rock to break them open [Purchas 1625:16 491-2]. Even in the Strait of Magellan pearls were found, although "they are but of a bad color, and small" [Hawkins 1625:17 125].

Perhaps not all the reports of natives wearing pearls were accurate, but many clearly were. Whether they came from the sea or not is more difficult to say. The Atlantic Pearl Oyster presently ranges from South Carolina to Brazil [Abbot 1974:440]. They may have had a greater range in the past, but the Virginia and Maryland pearls were probably fresh water. None of the far northern finds were of gem quality.

The Spanish controlled the richest pearl beds: Margarita, the Pearl Islands (I. de San Jose de las Perlas), in the Gulf of Panama (although not discovered for 15 years after the opening of Panama-Peru traffic [Vaz in Purchas 1625:17 281]), and Cubagua, off the coast of Venezuela, where fisheries were opened in 1510.

Cubagua was so barren that all the food and fresh water had to be brought from the mainland. By 1520, 300 settlers founded Nueva Cadiz, "the first Spanish political and social experiment in Venezuelan territory," with jurisdiction over Margarita and the coast. Over the next 20 years it grew into the most prosperous city in the Indies, with 1000 Spaniards and many mita-impressed natives [Morón 1964:33-4].

Herrera described Cubagua, whose bareness only proves the wealth the pearl beds must have had: "this island had no water that could be drunk, nor trees, nor beasts; for all is brackish, except those hogs that have the navel in their backbone [!], and some small conies [rabbits]. . ." [Purchas 1625:14 459]. But then disaster struck:

> The sea did rise four fathoms from his ordinary course, and entering into the earth it began to shake, and the fortress which the Captain Jacome of Castille had built by order of the Counsel of Hispaniola, fell, and the earth did open in many places, whereout sprang much salt water as black as ink, and did stink of brimstone, and the mountain of the Gulf of Cariaco remained open with a great rift: many houses fell, many people died drowned, and with fear, and taken with the earthquake. [Ibid.:459-60]

In 1543, the whole population moved to Margarita, not only because of the earthquakes, but also because the Cubagua pearl beds had been exhausted in a few decades [Morón 1964:34]. Pearls were never again as

important as they had been in the heady days of Nueva Cadiz; by 1594 Hawkins reported that the fishing industry at Margarita was in "decay," although many pearls were still found [Purchas 1625:17 187]. They remained a major export for Venezuela for a long time, even serving as money inland well into the 17th century [Morón 1964:71].

On the Pacific side, aside from the Islands of Pearls, which were soon depleted, great beds lay off the tip of Baja California, around La Paz. These were not worked until the mid 18th century. As elsewhere, overexploitation ruined the sources [Kunz 1892:218-9], although the industry has been revived by the Mexican government and still functions [Davis and Pack 1963:241].

Pearl diving was big business; Sparke said 200, 300, even 1000 ships went out daily off Florida with impressed natives. He explained they did not drag because "that would mar the bed of them" [Tyler 1907:127]. (Plate 2, Figure 9) At Margarita, Hawkins saw long pinnases or small barks with four to eight divers, and agreed with Champlain that in the 1590s they were African slaves [Purchas 1625:17 187; Champlain 1599:7].

Pearls were so plentiful that travelers often remarked on how common they were. Gage, an Englishman visiting Mexico (1648), said, "a hatband of Pearles is ordinary in a Trades-man; nay a Blackmore or Tauny young maide and slave will make hard shift but shee will be in fashion with her Neckchaine and Bracelets of Pearls . . ." [de Madariaga 1947:192]. Balbuena Grandeza said that in 1821 pearls were used to decorate horse harnesses [Ibid.:201], and Jorge Juan and Antonio de Ulloa said in 1826 that the fine women of Lima disdained even to wear pearls [Ibid:198].

Although Spanish carelessness quickly depleted the great pearl beds, like silver at Potosí and jade in Mexico, the great pearl wealth was not soon forgotten. As late as 1709 J. Lawson was still writing about "Spanish oyster-shell, where come the pearls" along the coast of South Carolina [1709:8].

Jade: The Most Valuable Bead

Jade is unusual in our story because it was not initially sought by the explorers, and only became important following the conquest of Mexico. "Jade" is a popular name for two mineralogically distinct but similar species. The slightly more widespread nephrite, sometimes called the "true jade" of the Orient, is an amphibole, while jadeite, a pyroxene, was more common in Mexico and Central America. Both have a high silica content, are similar in appearance, and are quite tough, though jadeite is somewhat harder and tougher than nephrite.

The names "jade," "jadeite," and nephrite" are closely associated with the conquest of Mexico. The Mayans called green stones *tun*; in Nahua they were *chalchihuite*, and in Nahuatl (Aztec), *chalchihuitl*. The Spanish called the stone "piedra de hijada" or "loin stone" because the Mexicans told them that it was a remedy for colic and other intestinal disorders. The Spanish physician Monardes first wrote about the curative power of jade in 1563 [Keleman 1969:284].

Neither the Mexicans nor the Spanish knew about the mineralogy of jade, and there was much confusion over its identification. Sahagún said that *iztac chalchihuitl* meant the lesser sorts of green stones and that true jade was *quetzal chalchihuitl* [Kunz 1892:282]. All green,

jade-like stones were grouped together. Of eight ancient Mexican chalchihuitl ornaments Kunz examined only four were jade; the others were serpentine, green quartz, and a quartz-hornblende mixture [1913: 251]. Jade varies greatly in color; the "spinach" green which we often associate with it was very rare in Central America. The Mayans preferred a greyish-green, very opaque stone, while the Olmecs favored a bluish-grey color [Sinkankas 1959:257-8]. Much of what is sold to tourists today as "jade" is actually a dyed calcite (sometimes also called "onyx") from Tecali, Mexico [Ibid.].

Jade use in Central America is very old. Fine ceremonial tools and small ornaments have been found in Olmec sites such as Tlatilco (about 1500 B.C.). The skill used to carve these pieces from such tough stones indicates that jade must have had a considerable history long before this time [Sinkankas 1959:257; Weaver 1972:54-6].

Most of us associate jade with the Orient rather than Mesoamerica. Its high value to both cultures is as striking as the similarities in their treatment of jade. In Mexico only certain families were believed to know how it could be found, and then only at sunset and sunrise. In China it was said to glow in moonlight to aid detection. Some writers perceive a similarity in bead forms used by the Olmecs and the Chinese [McBain 1984:89-90]. In both places jade beads were put into the mouths of the dead [Keleman 1969:287]. These facts, coupled with the natural scarcity of jade and its unassuming appearance when found, have fed speculations of prehistoric Sino-Mesoamerican contacts. Fischer's *Nephrit und Jadite* (1875) held that American jade was physically transported to the New World by Chinese mariners [Kunz 1913:249-50].

This extreme view had been discredited. For one thing, American jadeite contains diopside, which is not found in Asian jadeite, and Asian nephrite has phosphorus, but not the American variety [Keleman 1969:285]. Mesoamerican jade sources have also since been found. One was discovered by Leslie in 1962 along the Motagua River in Guatemala with evidence of ancient workings [Sinkankas 1959:237, 258]. More recent chemical tests indicate that Mesoamerican jades must have come from at least three separate areas [Lange et al. 1981]. Jadeite and nephrite have been found from Alaska to Brazil [Gill 1978:120-21].

Nonetheless, the similarities in jade use and some other cultural traits between China and Mesoamerica are intriguing. Though no one now believes that the Chinese brought jade to America, the possibility of prehistoric trans-Pacific contacts has its serious supporters [Estrada and Meggers 1961; Ekholm 1964; McBain 1984].

Given the scarcity of jade in Mesoamerica and the difficulty of working it with primitive tools, it is no wonder that it was valuable. What is surprising, however, is just how valuable it was in Mexico.

The Spanish noticed the demand for green beads: "we showed them strings of green [glass] beads . . . and as soon as they saw them they assumed a more friendly manner, for they thought that they were chalchihuites which they value greatly," Diaz wrote in 1518 [1956:21]. In 1519 Montezuma sent ambassadors to meet Cortez with presents or bribes to get him to turn back. Among them were four jade beads Diaz said were: "green stones of very great value and held in esteem among the Indians more than emeralds are by us. . . each one being worth more and being esteemed more highly than a great load of gold." [Ibid.:76-7]

Cortez did not turn back. Once he reached the Valley of Mexico he received presents from Montezuma's own hand, including more jade beads which the Emperor said were ". . . some very valuable stones which you will send to [the King of Spain] in my name; they are chalchihuites, and are not to be given to anyone else, but only to him, your Great Prince. Each stone is worth two loads of gold." [Ibid.:248]

A "load" is what a man could carry on his back. Although sometimes officially restricted to 50 lbs. (22.7 kgs.), it was often as much as 100 lbs. in weight. Neither gold nor silver were as valued by the Aztecs as some other commodities, but here a single bead of jade was worth 50, 100 or even 200 lbs. of gold. Was Diaz exaggerating?

It seems not. After Montezuma was killed and his followers rose in revolt, the Spanish were forced to flee at night. So many of them were killed that the event is called Night of Sorrow, *La Noche Triste*. Before they fled, Cortez told his men they could have whatever treasure they could carry. Many soldiers loaded themselves with gold and sunk and drowned when they fell into the lake surrounding the city.

But not Diaz. He lived to tell the tale because he had ignored the gold and took only the four jade beads promised to the King of Spain. They proved most valuable as an "infinite advantage as a resource against famine" [Diaz 1800:219]; "the price of them served me well in healing my wounds and getting me food" [Diaz 1956:314]. (Note the differences between the two translations.)

Another proof of the value of jade beads is in the *Codex Mendoza*, prepared under the direction of Antonio de Mendoza, the first governor of New Spain (1535-1550). It contains the "Tribute Roll of Montezuma," drawn in glyphs by native scribes and detailing the tribute paid to the last Aztec Emperor. It was originally to be presented to Charles V (Carlos I) of Spain, but it was pirated by the French, sold to Richard Hakluyt, willed to Samuel Purchas, and after other changes of owners was deposited in the Bodleian Library at Oxford [Ross 1978:11-12].

The tribute was high: cotton mantles and bales, baskets of corn and copal, sea shells and feathers, all in the hundreds, thousands, or even tens of thousands. Part of modern Oaxaca was the richest district, and taxed large amounts of gold and cocoa, many cotton mantles, 16,000 rubber game balls (Purchas reads 1600), feathers, and many other goods. A tribute of jade was also levied, but only three strings of round beads, four of long beads, and three large pieces or beads [Purchas 1625:15 468; Ross 1978:59]. Another district paid 200 pots of honey, 400 baskets of white and 8000 baskets of unrefined copal (for incense), and five jade necklaces [Ross 1978:52-3]. Jade was assessed from only three other districts, two of them two necklaces each, and the other a single necklace [Purchas 1625:15 464, 471, 474]. (Plate 3, Figure 10)

The tribute provided the Emperor and his court with cloaks, copal, rubber balls, feathers, cotton, corn, and chili peppers in enormous quantities. But the annual assessment for jade -- a handful of large beads and only 17 necklaces -- makes their relative value obvious.

It is difficult to say how willingly all this tribute was given. Cortez heard complaints from some districts that the Emperor had stolen jade and other goods or extorted them [Diaz 1956:145].

Tribute was not levied by population but by village and by craft guilds, which, in turn, assessed their members [de Zorita 1963:187]. Aztec society was divided into guilds, membership in which was mostly

hereditary. Young men could choose some occupations, but others were strictly regulated. The wealthiest guilds were the merchants, who were organized in the ten major cities of the Empire, and could only be joined through birth or with the permission of the Emperor. There is evidence that the goldsmith-jewelers were foreigners to the capital and had come from the Yopi area of western Mexico [Soustelle 1962:67].

De Zorita described the guild system in answer to questions asked by the Crown after he returned to Spain in 1553. He said that merchants and artisans, specifically including jewelers, were required to pay in tribute whatever goods they handled [de Zorita 1963:187]. In each town a collector was responsible for the tribute and could loose his life if he cheated or errored on the collection [De Gomera 1965:155]. We do not know if the beadmakers themselves or the much wealthier merchants were assessed for jade. In either case, the beadmakers must have spent much of the year just making beads for the annual tribute.

To work jade, large pieces were sawn; some partly cut ones have been found. Tough plant fibers and an abrasive were probably used; Oviedo said the natives used Henequen fiber to saw off iron fetters [Purchas 1625:15 194]; leather thongs may also have been used [de la Calle 1969: 414]. Because of jade's value, many beads were just water-worn pebbles only bored to preserve as much stone as possible [Keleman 1969: 285-6]. Other stones were chipped or cut by drilling a row of small holes and sawing with a string [de la Calle 1969:414]. Drilling was done with both solid and hollow (copper) drills; no glyphs show any mechanical rotating device for drills, only hand turning [Orchard 1929:50-1]. The *Codex Mendoza* pictures a beadmaker with a bead strung at his feet, teaching an apprentice. In one hand is a bead and in the other a flint blade, apparently for perforating [Purchas 1625:15 503; Ross 1978:115]. (Plate 2, Figure 11) After being drilled, the beads were polished, perhaps with a cloth and a soft abrasive or a piece of wood [Keleman 1969:286].

In addition to showing wealth, jade indicated the high social status of its owner [Ibid.], and was also used as state presents, as those to Cortez and the King of Spain indicate. Jade beads found in the Tairona area of Columbia, where there are no known sources [Kessler and Kessler 1978:4] may also have been gifts. Jade beads were put in the mouths of the dead and may have served as a form of currency. They were perhaps offered as dedicatory presents when cities were built, and "killed" or "sacrificed" by being broken when they were abandoned [Garber 1983].

Few materials have had so much cultural meaning and value as jade in pre-conquest Mesoamerica. But this high esteem did not prevent its disappearance. Within 50 years after Cortez, jade fever in Spain caused the export of all the jade the Spanish could find [Sinkankas 1959:257]. Most of it was powdered to be swallowed, and the knowledge of where to find it and how to work it -- skills the Mexicans believed had been given to them by the god Quetzalcoatl himself [Soustelle 1962: 66] -- disappeared. Who was left to sing the ancient Aztec song?

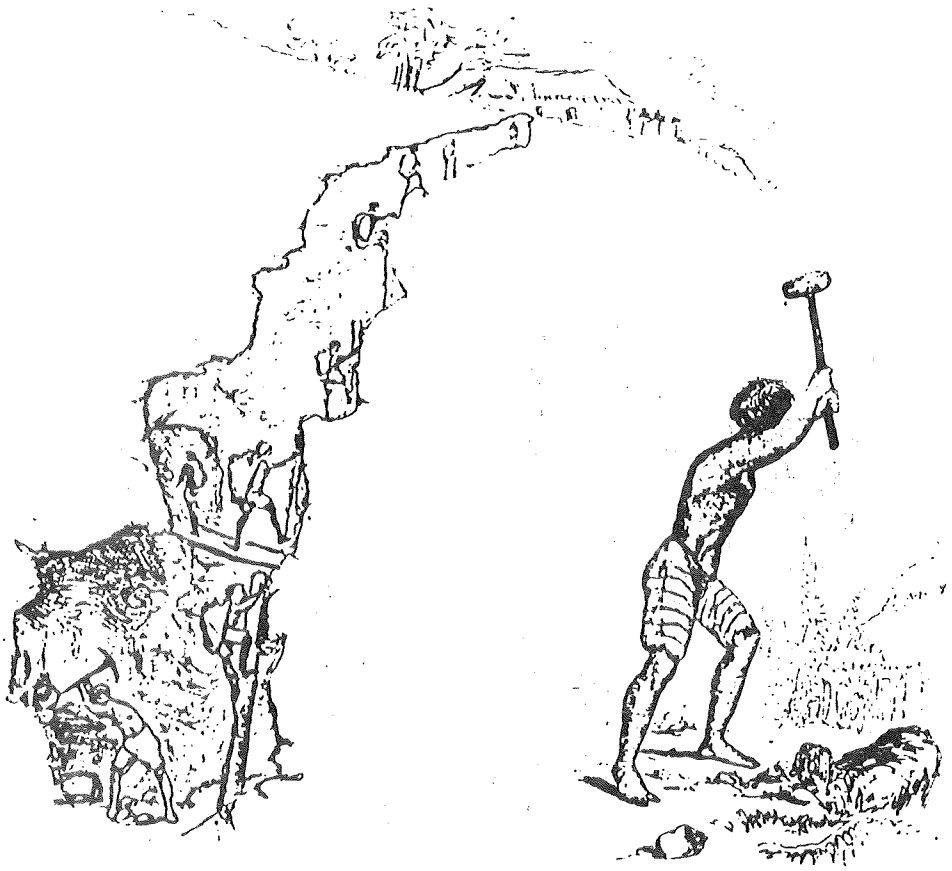
> Like the gold that I cast,
> Like jade that I pierce,
> Like beads that I string,
> That is my song.
>
> [McDowell 1980:732]

MAP TWO SPANISH POSSESSIONS IN AMERICA c. 1600

NEW SPAIN = Viceroyalties

Voyages:

- Vespucci 1497-8
- Vespucci 1501
- Ojeda 1499
- Pinzon 1499-1500
- Magellan 1520-1



Figures 7 and 8: Two views of silver mines worked by natives (these in Honduras). Figure 7 shows a section of the mine; Figure 8 illustrates the breaking up of the ore. From Harper's *1856:725, 730.*

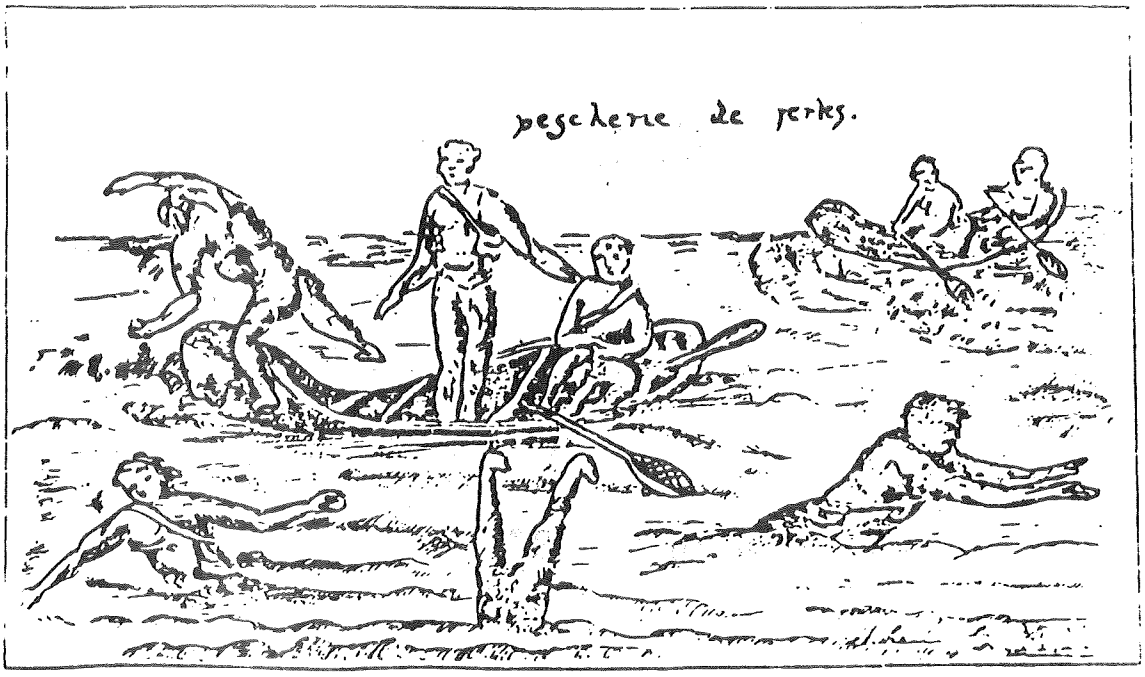


Figure 9: Fishing for Pearls. This crude drawing of pearl divers at Margarita was published in Champlain's account of his visit there. From Champlain 1602:opp. 7.

Some Other Precious Materials

The Europeans sought many precious substances in the New World. Diamonds and rubies they did not find, but in addition to those we have discussed, others were available.

Columbus thought he had found amber, lapis lazuli and pearls (p. 8). The pearls were genuine but the lapis lazuli was not, while amber is a special case. Other than the Baltic Sea area, the largest deposits of amber are in the Dominican Republic, but there is no evidence that this source was exploited in pre-Columbian times [Poinar and Agudelo 1980: 36]. There is amber in Mexico (and indeed, there are small deposits in many countries); the "Tribute Roll of Montezuma" shows amber beads and pieces [Purchas 1625:15 468-8, 471]. We might be tempted to equate this with copal, but amber and copal were listed separately. Mexican amber does not seem to have caught the imagination of the Spaniards.

Turquoise was a bit more appreciated. Both pierced and unpierced stones were part of Montezuma's tribute [Purchas 1625:15 461, 465, 475; Ross 1978:53, 62], and de Zárate noted "small turquoise beads" in South America [Cohen 1968:32], but the chief deposits were in the southwest, and this was recognized as soon as explorers entered the area. Coronado wrote of the pale blue stones to Governor Mendoza, and included some samples [Castañeda 1922:183]. He received some turquoise as presents in Cibola (New Mexico) [Ibid.:38], but suspected that the natives were holding out on him: "I think that they have a quantity of turquoise, which they had removed with the rest of their goods, except the corn, when I arrived." [Ibid.:174].

In Peru and Nueva Granada (Columbia) the great prize was emeralds. Acosta (1588) and Herrera (1601) both discussed how they "grew" like crystals in veins [Purchas 1625:15 97; 14 513]. Acosta said that in his day Europe was getting so many emeralds and pearls from America that their prices had dropped significantly; only diamonds of Pliny's three most valuable gems held their value [Ibid.:15 97]. He also noted their use in Mexico as a symbol of the Emperor when worn through the nose [Ibid.:272]. When the Spaniards came across them in Columbia they were foolish with their new wealth. Zárate wrote:

> In Coaque we found some very fine emeralds, for the village is already south of the Line [Equator]. But Pizarro's men shattered or chipped many of them, for they knew little about this kind of stone. They thought that, like diamonds, if genuine they would resist hammering. 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 false idea that diamonds would resist hammer blows was a legacy from Pliny [1962:207-9]. De Trujillo, a soldier with Pizarro, remarked that "the only person in the place who could identify emeralds was Fray Resinaldo, who collected upwards of a hundred and sewed them into his doublet." [Cohen 1968:67] An amusing thought: the untrusting troops shattered emeralds into bits while a priest quietly stowed them away.

Amber, turquoise, emeralds, and many other treasures could be found in the New World. None of them, however, achieved as much importance as the precious metals, the loin stone, and the gem of the sea.

SECTION FOUR:

WAMPUM: AMERICA'S MOST IMPORTANT BEAD

Wampum is a most extraordinary bead. It is the most important bead in American history and the best documented bead in the world. A short survey cannot do justice to all of the issues surrounding wampum. Here we shall trace only the highlights of its history; a more complete study is underway.

Cartier was the first European to encounter wampum at what is now Montreal in 1497: "The thing most precious that they have in all the world, they call it Esurgny: it is as white as any snow: they take [the shells] in the [St. Lawrence River]. . . Of them they make beads, and wear them about their necks, even as we do them of gold, accompting [accounting] it the [most precious] thing in the world." These shells were gathered by throwing an enemy, slashed all over his body, into the river and leaving him for ten to 12 hours, and they had the property of stanching nosebleeds [1580:51].

Not everyone agrees that esurgny was wampum. Beauchamp said shell beads are rarely found at Montreal, and the story of their gathering suggests "eye stones" (actually stomach stones or gastroliths) of the carnivorous fresh water lobster [1901:360-1]. Taxay also does not equate the two [1970:110-2]. On the other hand, Slotkin and Schmitt did [1949:226], and Dawson found tubular shell beads made of the bivalve *Unio* at Hochelaga, the settlement visited by Cartier [Hale 1897:224; Tylor 1897:248]. As for the meaning of esurgny, Hale derived it from the Huron words *es* (thy) and *ionni* (string of beads) [1897:224].

Esurgny sparked interest. Champlain could not understand the meaning of the word [Bigger 1922:3 101-3], but recorded wampum (as *pourcelaine*) in use all along the St. Lawrence. Hakluyt likened the beads Drake saw in California to esurgny [Drake 1628:223], but they could not have been true wampum. De Charlevoix described wampum in detail and speculated on Cartier's tale. He said Montreal had no whelks, and the only shellfish he knew that could stem nosebleeds were in Virginia [1761:319].

After Cartier, wampum was not mentioned for more than a century, largely because the northeast was not as well explored as the warmer south. In 1603 Champlain wrote: "They adorn themselves with feathers, wampum beads, and other knick-knacks, which they arrange very neatly after the manner of embroidery." He also noted their use as friendship gifts, courting, and grave goods [Bigger 1922:1 411;2 194;3 138, 162].

The Dutch were the first to realize wampum's importance and exploit its economic possibilities. In 1609 Hudson's men were given "strops of beads" by the natives around modern Albany; apparently belts of wampum [Purchas 1625:13 368]. After settling New Netherlands, the Dutch monopolized wampum among the Europeans. When Minuit bought Staten Island (1626) he gave wampum to the natives, probably to seal the agreement, and drilling awls so that the natives could make more [*Collections* 1913:29; Francis 1986b]. The monopoly was explained by de Raisere, the secretary of the colony, in a letter written to the (Dutch) West India Company: The "French" Indians "come to us for no other reason than to get wampum, which the French cannot procure unless they come to barter for it with our natives in the north, just as the Brownists of Plymouth come near our place to get wampum in exchange." [van Laer 1924:223-4]

The Dutch introduced wampum to the English at Plymouth. Bradford wrote in 1628 that some Dutchmen had visited them and spoke of the profit in wampum. The English bought £ 50 worth from the Dutch, but for two years it just sat,

> Till the inland people knew of it; and afterwards [we] could scarce ever get enough for them, for many years together. . . For all the Indians of these parts and Massachusetts [Bay Colony] had none or very little of it. . . Only it was made and kept among the Narragansetts and Pequots, which grew rich and potent by it. . . Neither did the English of this Plantation or any other in the land, till now that they had knowledge of it from the Dutch, so much as know what it was, much less that it was a commodity of that worth and value. . . [1966:203]

The aggressive Pequots took tribute wampum from the Narragansetts, the principal makers, and in turn traded it inland for furs, growing rich thereby. Their bellicosity and the economics of trade sparked the first Anglo-Indian war, the Pequot War of 1637, considered to have been fought over the control of trade in this bead [Josephy 1982:32-75].

Wampum Use: Native and European

What was the great attraction of wampum? The key to its importance was its value to the Iroquois of upstate New York. This was one of the most powerful native groups north of the Aztec Empire; their democratic procedures and federative government profoundly impressed many of the colonists, and have been credited with inspiring the U.S. Constitution.

The Iroquois were the most important consumers of wampum; among them it became necessary for virtually every stage of life and public action. Although wampum was made along the coasts of New York and southern New England, where shells were available, the inland trade was well established before significant colonization of the area.

Wampum was central to Iroquois life. Johnson is usually credited with calling attention to its value in a letter to New York Governor Clinton on 23 March 1753: "It is obvious to all who are the least acquainted with Indian Affairs, that they regard no Message or Invitation be it of what consequence or nature it will, unless attended or confirmed by a String or Belt of Wampum, which they look upon as we do our Letters, or rather Books." [O'Callaghan 1851:2 625] Its uses were legion: "wampum, which is their money, is also their ornament, and their pledge for the performance of every contract and oath . . . the orators frequently mark down with wampum the leading points of their speech. . . By a similar arrangement of their wampum, the young Indians [later] report to the council in a manner scarcely intelligible to anyone but themsleves." [De La Rochefoucault 1799:1 180-3]

Wampum was used in adoption rites [Hy-we-saus 1885], condolences for the dead [Hale 1895; Beauchamp 1895], as gifts, as payment, to call councils together, to allow one to speak at a council [Beauchamp 1901: 438-55], in both political [Synderman 1954] and religious [Synderman 1961] spheres, to make war and peace. Wampum was used in council meetings [Parker 1915]. Wampum belts, with the beads woven into patterns, served as mnemonic devices to recall and perpetuate agreements.

[Tehanetorens n.d.]. With the birth of Handsome Lake's New Religion in the early 19th century, wampum use was revived as an essential part of the ceremony of the faith [Parker 1913; Wallace 1969].

Wampum was needed by the settlers as much as by the Iroquois. Europe did not want resources drained to the New World, so coins were scarce in the colonies. Wampum was rare yet common enough to take their place. Massachusetts made it legal tender in November 1637, shortly after gaining control of the trade by defeating the Pequots [Josephy 1982:70]. This control contributed to the growth of other colonies, such as Connecticut. All 13 original colonies used wampum as currency; New York was still fixing the exchange rate in 1701 [Fernow 1893:299].

Despite the popular notion of wampum as "Indian money," it was actually "White Man's money." The natives used it for tribute, but not as currency. The colonists, however, used it as money in transactions both with natives and among themselves. A few examples may show this. Dankers and Sluyter went to New York in 1679 to look for a new home for their Dutch Labadist sect. In the year they were there they used wampum to have their baggage brought from the ship to their hotel, to pay customs duty, to buy meals, for ferries, guides, and boatsmen, and for beaver pelts. They noted that a Dutchman had bought Tinicum Island in the Delaware River from a Swede with wampum, and when they left they paid their tailor in wampum [1867 passim]. Wolley, the first Anglican minister in New York (who met Dankers and Sluyter) noted that the Dutchman Fredrick Phillips was the richest man in the colony because he "was said to have whole Hogsheads of Indian Money or Wampum" [1701:69].

A 1640 patent from the Kingdom of Scotland for Southampton, Long Island, specified who was and was not allowed to trade the natives for wampum [Bunce and Harmond 1977:13-4]. In 1648 the Colony of New Haven on behalf of Southampton signed an agreement with the natives that the latter were "at liberty to fish in all convenient places for shells to make wampum," also if an Englishman killed a deer a native chased into water, the Englishman got the body and the native the hide [Ibid.:15].

The economic importance of wampum to New Netherlands is reflected in official ordinances. In 1649 the natives had more wampum than the settlers, and could buy better bread [Fernow 1897:1 14]. In the next year a case of Gresham's law was noted: "Whereas we see and for some time past have seen the decline and depreciation of the loose wampum, among which is found much unpierced and only half finished, made of stone, bone, glas[s], shells, horn, nay even of wood, and broken . . . henceforth no loose wampum shall be current or be considered good pay, unless strung upon a wire, as hitherto it has usually been done." [Ibid.:15-6] A few months later badly strung wampum was devalued to half its worth [Ibid.:17]. In 1658 "as wampum must be current for want of ready money and for the daily household necessities between man and man, purchaser and seller," a triple price schedule was fixed for silver, beaver, and wampum, with commodity prices tied to beaver, so that prices rather than the wampum rate would fluctuate [Ibid.:41].

The Distribution of Wampum and Wampum Makers

The use of wampum spread all over the present U.S. It was current in Wisconsin possibly as early as 1715 [P.V. Lawson 1908]. Pontiac in 1762 sent war belts along the Ohio River and as far south as the mouth

of the Mississippi [Parkman 1894:1 186]. Lewis and Clark gave it away to the Sioux and the Aricaras (Ricaras) in the Dakotas in 1804 [Lewis 1814:1 178;2 17, 19], but it was rejected in the Rockies [Ibid.:2 216]. The Ottos (eastern Nebraska) understood war belts by 1817 [Hunt in Bradbury 1817:224], and in 1819 Nuttal said the Osages along the Arkansas River were "acquainted with the value of wampum" [1821:175].

In the southeast shell beads were valued and played roles similar to wampum. In 1608 Powhatan showed Smith a river in Virginia and, "described unto me how he sent [canoes] over the bay, for tribute beads; and what countries paid him in beads, copper or skins." [Tyler 1907:56] Four years later, Hamor described "Roanoake (a small kind of beads) made of oystershells, which they use and pass to one another, as we do money." [Slotkin and Schmitt 1949:231]

Was roanoke the same as wampum? Some authorities believe roanoke was a disc bead, common along the east coast, and much easier to make than tubular wampum [Taxay 1970:107-8]. But others contend they were the same [Bushnell 1906:174-5; Slotkin and Schmitt 1949:231-2], pointing to a "Virginian Purse," apparently collected by John Smith now in Oxford's Ashmolean Museum with some small wampum-like beads on it. However, the same museum has "Powhatan's cloak," covered with beads described in 1656 as "roanoke," but which are whole shell beads [Piper 1977:25].

In 1635 Lord Baltimore writing about Maryland said, "Roanoake (which is a sort of beads they make, and use for money). . . 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] The differences between the two have also been ascribed to coming from different shells; Beverly (1705) said roanoke was worth less because it was a cockle shell disc bead [Becker 1980:3].

The manufacture of wampum was originally done along the New York and southern New England coasts; in time it spread. J. Lawson in Carolina said, "[it is] very difficult to cut. Some English Smiths have tried to drill this sort of shell-money and thereby thought to get an Advantage; but it proved so hard, that nothing could be gained." [1709:193] Any native could make wampum [Williams 1643:210; Parker 1915:37]. One at Bergan, N.J. complained of taking Dankers and Sluyter inland in 1680 on the grounds that he would "loose so much time in making zeewant" [1867:265]. Wampum making seems to have been a part time activity; it was reported to be made in the winter [de Rasiere in Jameson 1909:106] and also by old and infirm men [Wallace 1969:57].

Although Hewitt [1907:905] and Wilcox [1976:10] said that there were no contemporary descriptions of wampum making, there are a few short ones. Montanius (1671) said, "the inside little pillars of the cockle-shells. . . they polish smooth; drill a hole through the center; reduce it to a certain size, and string the pieces on threads." [O'Callaghan 1851:4 128]. Roger Williams added the fact that stone drills were used before the Europeans introduced metal ones [1643:213].

Despite the difficulty Lawson noted in wampum making, the colonists established factories for its manufacture. Weld, who traveled in America from 1795-97, doubted that the natives could ever have made it themselves because clam shells were so hard. He also said that shells were sent to England and made into wampum there [1799:390]. Although

Weld's account has been taken as fact [Becker 1980:6], he was clearly in error about the natives not being able to make beads of clam shells, and he is the only contemporary to say that wampum was made in England.

Several wampum factories were set up by whites in the northeast. In 1748 Kalm said, "The Indians formerly made their own wampum, though not without great difficulties, but at present it is made mostly by the Europeans, especially by the inhabitants of Albany, who make a considerable profit from it. . . Many people at Albany make wampum for the Indians, which is their ornament and money, by grinding and finishing certain kinds of shells and mussels." [Benson 1966:129, 343] The best known wampum factory was run by the Campbell family from about 1770 at Pascack, New Jersey [Barber and Howe 1844:72-3; Philhower 1928:314-5; Wilcox 1976]. The last work there was done in 1905 when exhibits were prepared for a few museums with a photogapher documenting the process [Molloy 1977:113]. Several other wampum factories are also known. The Stoltz factory in Hawthorne, New Jersey, may have been begun before the Campbells' [Haggerty 1980:12]. Others were reported at Philadelphia [Beauchamp 1912:64], on Staten Island [Ingersol 1883:475], at Babylon and Oyster Bay on Long Island (until 1830), Keyport, Egg Harbor, Cape May, Absecon, and Hakensak, New Jersey [Philhower 1928:314]. Little is known of these factories or how they worked, save the Campbell factory.

The Origin of Wampum

True or "council" wampum is a small tubular shell bead, about a quarter of an inch (6 mm.) long and an eighth of an inch in diameter. It is of two colors: white and "black," actually a light violet. The beads are made from marine shells, the black from quahog clams (*Venus mercenaria*) and the white from the columella of univalves, periwinkles or conchs. The term "wampum" is shortened from *wampumpeak*, Algonkian for "white shell beads"; the synonym "peak" has the same origin. "Suckauhock" was applied to the black beads. "Sewan" or "zeawant" were also used, and often referred to single unstrung beads. All of these names (and a few others) have been variously spelled by Europeans, who learned them from natives speaking different dialects [Speck 1919:5-7; Becker 1980:1-2].

Tracing the origin of wampum involves three lines of inquiry: native traditions, testimony of early Europeans, and archaeological evidence. Speck discussed various writers' theories at length [1919:3-5], without reaching any conclusions. Archaeology has shown that there were no technological barriers to wampum manufacture before the Europeans came [Slotkin and Schmitt 1949:223-5], but that it was not common until 1600 or so, after the introduction of metal drills. This is true along New York's coast [C.S. Smith 1950], New England [Snow 1980:79], and central New York [Wray and Schoff 1953]. But let us consider: "It is a curious perversity which makes some scholars loathe to examine the traditions of the very people they are studying. As though primitive societies were incapable of saying anything worthwhile about themselves, and only the judgments of foreign adventurers, who knew not even the aboriginal language, had value! The Iroquois have always claimed credit for the invention of wampum." [Taxay 1970:112] And so they have.

There are several versions of the Iroquois' story of the origin of wampum, but most of them involve Hiawatha, the founder of the Iroquois league. Parker, himself a Seneca, related that Hiawatha left home and,

> On the morning he came to a place where round jointed rushes grew. He paused as he saw them and made three strings of them . . . [Later he came to a lake covered with ducks.] In a compact body the ducks flew upward suddenly and swiftly, lifting the water with them. Thus did he walk down the shore and upon the bottom of the lake. There he noticed lying in layers the empty shells of the water snail, some shells white, and others purple. Stooping down he filled a pouch of deer skin with them, and then passed on to the other shore. . . . [He went to a village, built a fire and erected a pole.] On this he placed three strings of the wampum shells. Then he sat down and repeated his saying: "Men boast what they would do in extremity but they do not do what they promise. If I should see any one in deep grief I would remove these shells from this pole and console him. The shells would become words and lift away the darkness with which they are covered."
>
> [Parker 1915:20-1]

A similar story was gathered by Hale from Ha-ne-se-hen, a chief of the Onondagas (the keepers of the wampum for the Iroquois League), who named Lake Oneida as the source of the first wampum; another version says it was Lake Tulley [Beauchamp 1922:90-1]. Sometimes quills were said to be the first wampum [Ibid.:91]; bits of wood are also said to have preceded shell [Loskiel 1794:26]. There is also a story about a warrior who saw the magical wampum bird and told his fellows. The village chief offered the hand of his daughter to anyone who could bring the bird down. No one could until a boy from another tribe asked to try. The men refused to let him, but the chief agreed, and the boy killed the bird: "Having received the daughter of the head chief in marriage, he divided the oh-ho-ah [wampum] between his own tribe and that into which he had married, and peace was declared between them. Then the boy husband decreed that wampum should be the price of peace and blood, which was adopted by all nations." [Beauchamp 1922:214]

As a final note, the most famous Hiawatha of English literature was not based on the historic (or legendary) Hiawatha of the Iroquois. Longfellow only chose the name because he liked the sound of it:

> "Honor be to Mudjekeewis!"
> Cried the warriors, cried the old men,
> When he came in triumph homeward
> With the sacred Belt of Wampum,
> From the regions of the North-Wind,
> From the kingdom of Wabasso,
> From the land of the White Rabbit.
> He had stolen the Belt of Wampum
> From the neck of Mishe-Mokwa
> From the Great Bear of the Mountains
> From the terror of the nations
> As he lay asleep and cumbrous
> On the summit of the mountains. . .
>
> [Longfellow 1947:157]

PART II:

BEADS BROUGHT TO AMERICA

Introduction

A significant feature of the history of beads is the great quantity brought to the New World and distributed to the natives. "Trade beads" and "the bead trade" are key terms in the discussion of the roles beads played in the European settlement of the New World.

The phrase "bead trade" may conjure a vision of a smoothly operating system in which importers buy beads from manufacturers and sell them to traders, who in turn barter them away. However, a moment's reflection should convince anyone that this idealized picture does not represent reality. The notorious difficulties in bead research are proof enough; if the bead trade had functioned so smoothly, research would be easy. Quimby admitted that he had once believed that it would be simple to trace manufacturers and their dates of operation and build a chronology to help date American sites [1966:82]. Soon he realized the problems involved. Despite our progress since, many of these problems remain.

Generally, beads are made by one group of people and distributed by many others. Raw materials, manufacturing methods, and styles may suggest origins, but such information was hardly ever recorded in the past. Traders cared little for beads and did not describe them in detail. Bead distributers were a mixed lot: settlers and soldiers, missionaries and merchants. Some gave them away as gifts; others used them as currency. Afterwards, beads often traveled long and circuitous paths within the cultural sphere of Native Americans. All of this make it difficult to precisely identify many of the beads traded in America. However, there is much to be gained from a survey of the trade: an appreciation of European and native attitudes and insights into the mechanics of the trade and the role it played in American history.

SECTION FIVE:

THE PERCEPTION OF THINGS

Native American Attitudes Toward Beads

Native Americans were predisposed to favor human adornment long before the Europeans arrived. Most any appropriately showy or unusual article might be worn. The Europeans brought many such objects with them, not all ornaments to them, but seen differently by Native Americans.

The first Dutch visit to New York harbor (perhaps Hudson in 1609) illustrates this. An oral history gathered around 1760 from the oldest natives of the area has raised questions [Goodwin 1919:10; Hamilton 1929:23], but the ability of pre-literate people to transmit accurate information and the proximity to the event argue for its veracity. In any case, it shows the attitude of the natives toward European goods.

The natives saw a ship and dressed in their best attire. The Dutch landed, drank with them, gave them "beads, axes, hoes, stockings, &c," and promised to return in a year. When they did, they found that the natives had strung the hoe and axe heads as pendants and put tobacco in the stockings. The Dutch hafted the tools and demonstrated their uses. "Here (say they) a general laughter ensued among them (the Indians) that they remained for so long a time ignorant of the use of so valuable implements, and had borne with the weight of such heavy metal hanging to their necks for such a long time." [Heckewelder 1841:73]

If hoes and axes were the heaviest native-adapted ornaments, they were by no means the only ones. About 1530 Castillo met a man in north Texas wearing a sword belt buckle stitched to a horseshoe nail around his neck. The owner said they had come from the same place as his glass beads: heaven [Cabeza de Vaca 1871:173]. Along Pamlico Sound, North Carolina, Barlowe showed Granganimeo everything he had (1584): "Of all things that he saw, a bright tin dish most pleased him, which he took up and [held] it before his breast, and after made a hole in the brim thereof and hung it against his neck, making signs that it would defend him against his enemies' arrows. . ." [Burrage 1906:232]. Swanton is probably right when he said that the tin dish was more ornament than defense [1946:519-20].

Of all European objects not made for human adornment, the most popular were small brass or bronze hawkbells, intended for falconry. Their shiny aspect and jingling sound made them desirable trade items. Columbus came equipped with them; De Cueno said that they were liked "more than anything else and which immediately they attached [them] to their ears and to their noses." [Morison 1963:222] Las Casas said, "They gave nothing for beads, but all they had for hawk's bells; and other things they did not want." [Ibid:271]

The Europeans took beads and hawkbells wherever they went. The ill-fated Narváez expedition to Florida gave away "beads and hawk's bells, with other articles of barter." [Cabeza de Vaca 1871:31] The four survivors of the expedition wandering in north Texas obtained a bell, "thick and large, figured with a face." They were told it came from the north and concluded that it was made in a foundry [Ibid.:150]. Although copper came from the Great Lakes, it was probably an import.

At Cibola in New Mexico (1540) Coronado gave the natives, "some glass dishes and a number of pearls [glass beads] and little bells which they prized highly, because these were things they had never seen."[Castañada 1922:38] In Virginia, Smith traded "knives, hatchets, beads, bells, and such trifles" [1624:17], and Bland (1650) gave away "bells and other pretty truck" to the local chief [1651:3].

We noted Vespucci said that Caribbean natives would trade all their pearls for a single shiny bell. Pinzón on his way to Brazil (1499) said a crew member threw a bell to a giant on the coast, who in turn threw down "a wedge of gold a cubit long." When the sailor went to get the gold the giants captured him, but the crew managed to rescue him [Martire 1555:41]. Tales of "giants" are common in early exploration literature; Native Americans ate more nutritiously than did Europeans, and were often taller and stronger than the explorers [Crosby 1972].

European Attitudes Toward Beads

Despite Bland's "other pretty truck," Smith's "trifles" more accurately reflected the European attitude toward beads. The Natives' enthusiasm and admiration was not shared by the Europeans at all. They did not highly regard the goods they carried, and they called them "trifles" and "toys." Smith went even further saying that Virginians were "generally covetous of copper, beads, and such like trash" [1624:30].

This may strike us as patronizing, but it was quite appropriate for European explorers. Trade goods were mostly frivolous objects, which were exchanged for highly prized ones. Not only were the beads, hawk-bells, jew's harps, Morris dancers, and the like of little account, but they were often of poor quality. A few better goods were reserved to impress local rulers, but most of the truck was inferior.

The stock list of the Armada de Molucca, Magellan's around-the-world fleet, is typical. It included, "20,000 hawk's bells in three sizes, 500 pounds of glass beads, brass bracelets, fishhooks, silk, cotton, and woolen cloth of many colors, 400 dozen German knives 'of the worse quality,' a thousand little hand mirrors, '100 of them better quality,' and a ton of mercury (for medicinal purposes)." [Morison 1974:343-4] The knives and 90 % of the mirrors were specifically of inferior quality. Most objects were merely decorative or marginally useful.

Strachey said that the Virginia natives were "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] Here is another confession of giving away inferior products; not only were the hatchets not much good, but the white beads were probably also the cheapest to be found.

This sort of trading continued for a long time. Indeed, anyone who is familiar with trade between Native Americans and "Whites" can recall many cases where the economically weaker partners are taken advantage of commercially. This is seen archaeologically in California, which was actively explored and settled by Europeans later than the Atlantic coast. Chevron beads are rarely excavated there, presumably because of their costliness [Meighan 1981:29]. A white bead, the most common glass bead before 1850, has been called "probably the shabbiest bead that ever came into the North American trade" [Whittoft 1972:10].

There were several motives for such stinginess. One was profit; the cheaper a trade item was, the greater the monetary reward, justified by the risks involved in trading. There may also have been planned obsolescence of trade items; tools of poor quality would wear out just as they were becoming indispensable to the natives. And there is a strain of cultural superiority or even racism expressed. "Naked savages" deserved nothing but the cheapest goods, nor were they smart enough to demand top quality. Such practices still go on all over the world. What is sad and astonishing is that they are so old.

Tall Travelers' Tales

A lesson in how things are perceived may be learned from studying what are, ironically, some of the more interesting tales of discovery: the spurious ones. Several alleged explorations, voyages which took place only in the authors' minds, were once regarded as fact. Although these

accounts are based on fiction and second-hand information they are instructive because they illustrate contemporary thought and reveal how the perception of the New World changed.

One of these voyages has been quoted here: the 1597 trip by Vespucci to the continents later named after him. Because he later did go to America (first in 1599), his descriptions of the natives are lively and often very insightful, as they were based on what he actually observed. Though his primacy and navigational skills are questionable, his observations seem accurate [see Markham 1894; Morison 1974:276-311].

The earliest of these voyages was by the Zeno (Zeni) brothers to new islands in the Atlantic in 1380. For a long time, Estland, Estotiland, Friesland, Icaria, and Drogio were on maps and their existence firmly believed. The descriptions of these lands were nothing like later ones of the New World. Idols and cannibals were found, and a gold mine recorded, but there were no naked savages, bead giving, natives with body paint, tattoos, or pearls [Purchas 1625:13 413-17; Morison 1974:87-9].

Accounts written after America was discovered are quite different; they echo what explorers actually found. Ingram did go to America with Hawkins, but claimed to have walked from the Gulf of Mexico to Cape Breton, Nova Scotia, from October 1568 to September 1569. Hakluyt published this narrative in 1589, but its inconsistencies made him delete it from later editions of his *Principall Navigations* [Hakluyt 1589].

Though Ingram saw the New World, he spiced his tale up with fabulous events and sights, some of which (elephants and a "silent trade") recall Africa, and others (a beast with no head and one as big a house) are just fantastic. He wanted to excite his audience, regale it with stories of riches in the unexplored interior. We meet naked people; men with penis sheaths made of gourd necks, and women clad in palm leaves, but the riches he described never existed: kings with enormous rubies, people wearing bracelets, anklets and plates of gold and silver. The only believable ornaments were the pearls, which were widespread, but not as much as he claimed. The women wore many bracelets and chains of pearls, and, "in every cottage he found pearls, in some houses a quart, in some a pottle [about half a gallon], in some a peck, more or less, where he did see some as great as a bean" [Ibid.:557].

A third imaginary voyage has all the elements we might expect from a mythical place described long after Columbus. Fernandez de Quiros incessently petitioned the King of Spain to recognize his discovery of Terra Australis (not to be confused with Australia or Antarctica). The huge, rich, populous southern continent remained a goal of mapmakers and explorers for a long time until the Pacific had been thoroughly explored. By the time of this "discovery" the Solomon Islands were known to Europeans, and Quiros may have hoped to lay claim to any lands nearby. His description of Terra Australis is full of details that reflect what was known about America. The inhabitants were simple folk; some had long hair and others cut it. They wore a skirt from the waist to the knees and pearls and shell beads around their necks. They had gold, silver and pearls "the three most precious darlings that lie and are cherished in the bosom of nature" [Purchas 1625:17 221-3].

Sound familiar? The reasons for the contrasts between the Zeno's stories and those of Ingram and Quiros are easily discerned. They have little to do with geography or keenness of observation. The stories reflect what was and was not already known at the time they were told.

SECTION SIX:

THE OPENING OF THE BEAD TRADE

The Vikings were the first to describe Native Americans and were also the first bearers of European goods. The Sagas record two trades between the Vikings and the Skraelings; one was milk exchanged for furs [Gathorne-Hardy 1970:84], and in the other an ornament was involved:

> 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 cloth began to give out they [the Vikings] cut it into pieces so small that they were no more than a finger's breadth. The savages gave as much for it as before, if not more. [Ibid.:61-2]

Here again are two familiar elements: the native love for ornament and the European love for making the best possible deal. It is noteworthy that the earliest contacts between natives and Europeans were of a trading nature. Were beads part of the trade?

Excavations at L'Anse aux Meadows, Newfoundland (Vinland) uncovered the first glass bead brought to America. It is a clear glass spheroid, about a centimeter in diameter [Schonback 1974:3, 8]. Was it used for trade? It is impossible to say; it may have been, but women also lived at Vinland. The Sagas tell us this, and a soapstone spindle whorl cut from a cauldron confirms it [Ingstad 1977:261; Morison 1971:69]. The Vikings were fond of glass beads [Callmer 1977], but the Sagas mention only a woman in Greenland wearing a "rosary" [Gathorne-Hardy 1970:34].

Columbus and Beads

Since the Vikings did not leave a lasting legacy in the New World, the honor of beginning the bead trade goes to Columbus. His experience in Western Africa (the Guinea trade), gave him an idea of what to carry to what he died believing was India. On 12 October 1492, after he landed on San Salvador in the Bahamas, he wrote in his journal:

> In order that they might develop a very friendly disposition toward 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, [I] 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]

In this admirably humanistic passage we see the dichotomy between European and native attitudes toward beads. Columbus was prepared to give them away and the natives, who had never seen artificial glass before, knew exactly what to do with them -- put them on their necks.

Columbus left some details about the beads he carried. On 15 October he gave a man, "a red cap and some little beads of green glass which I placed on his arm, and two hawk's bells which I placed on his ears." [Ibid.:70] The next day he gave away "only a few beads, 10 or 12 glass ones on a thread and some brass jingles." [Ibid.:72] On 3 December at Punta Rama, Cuba, "The Admiral [as Las Casas called him] had given them hawk's bells and brass rings and green and yellow glass beads" [Ibid.: 108]. On 22 December on Haiti, Las Casas said, "for 6 glass beads they gave a piece of gold so Columbus ordered that something be always given in payment." [Ibid.:131] Ferdinand Columbus (Christopher's son) on the fourth voyage (1502-04) said at Jamaica he bought round cassava bread loaves for "two or three green or yellow rosary beads" [Ibid.:356].

These descriptions suggest that two sizes of beads were involved: small ones strung to make a necklace or bracelet without any further effort, and larger "rosary" beads, 10 or 12 per string. All were monochromes; only green and yellow ones were mentioned. Smith and Good suggested that a small doughnut or disc shaped wound bead is of such early date in Spanish regions and of such simple construction that it is a good candidate for the smaller beads [1982:3, beads #105, 106].

There is much debate over the island on which Columbus first landed. Morison identified Watlings Island (Bahamas) as San Salvador. Its name was changed to reflect this, although many question the identification. Hoffman claims he found the precise landfall, but this is unproven. The island was abandoned by 1520 and the artifacts found were of the early contact period: "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." The small beads match those Smith and Good believe Columbus brought [*N.Y. Times* 1982:A 12; M. Smith 1983]. An excavation at Navidad, Haiti, where Columbus spent Christmas, 1492, found early objects, but no beads or other artifacts indisputably related to the expedition [Morison 1940:272-8]; recently another site has been proposed as La Navidad [Wilford 1985; Francis 1985a].

Surprisingly, not all the beads Columbus gave away were glass. On 18 December 1492 at Port aux Paix, Haiti, he entertained a local chief on the ship and afterwards the chief gave him an exquisite belt and two pieces of gold, "and [I gave him] some very good amber beads which I wore at my neck." [Morison 1963:125] On 30 December elsewhere on Haiti a local chief put his crown on Columbus' head, "and the Admiral took from his neck a collar of good bloodstones [most likely carnelian] and very handsome beads of many pretty colors, which appeared very good in every way, [chevrons?] and put it on him" along with a scarlet cloak, good boots, and a large silver ring [Ibid.:140-1]. The question remains whether Columbus habitually wore beads or had put them on in both cases for just such a dramatic presentation to the local rulers.

The First Stage of the Bead Trade

Europeans gave Native Americans beads for many different reasons. Some were given in a simple act of friendship or an exchange of gifts. Others were to break down hostility or shyness or to impress the local rulers. Still others were bartered for necessities or treasure. In time, trading grew into an elaborate system with beads as a major commodity, approaching the status of a currency.

There was never a time when any of these were exclusive. While it is generally true that gifting preceded bartering, the line between trade and gift-giving is quite thin, and motives were most often mixed. The very first day Columbus landed beads were given away, but even on his first voyage they were also used for barter.

Dispelling aggressiveness or wariness was important. Vespucci gave away beads to induce the natives to draw near: "[They were] very loath to approach us or have anything to do with us. . . But finally. . .with this one purpose in view, we managed to allure a few of them by giving them little bells and mirrors and pieces of crystal and other such trifles." [Waldseemüller 1507:91] "They showed themselves to stand in fear of us: I believe (it was) because they saw us clothed and of other appearance. . .and this day we labored so greatly in giving them of our wares, such as rattles and mirrors, beads, *spalline*, and other trifles, that some of them took confidence and came to discourse with us. . ." [Eliot 1910:32-3] The "crystal" and "beads" were probably both glass; *spallina* is "epaulette" in modern Italian.

On the Argentine coast (1591) Knivet said, "lest our sudden coming should raise an uproar among them. . .giving . . .them a knife, and a few beads, they departed very joyfully." [Purchas 1625:16 207]

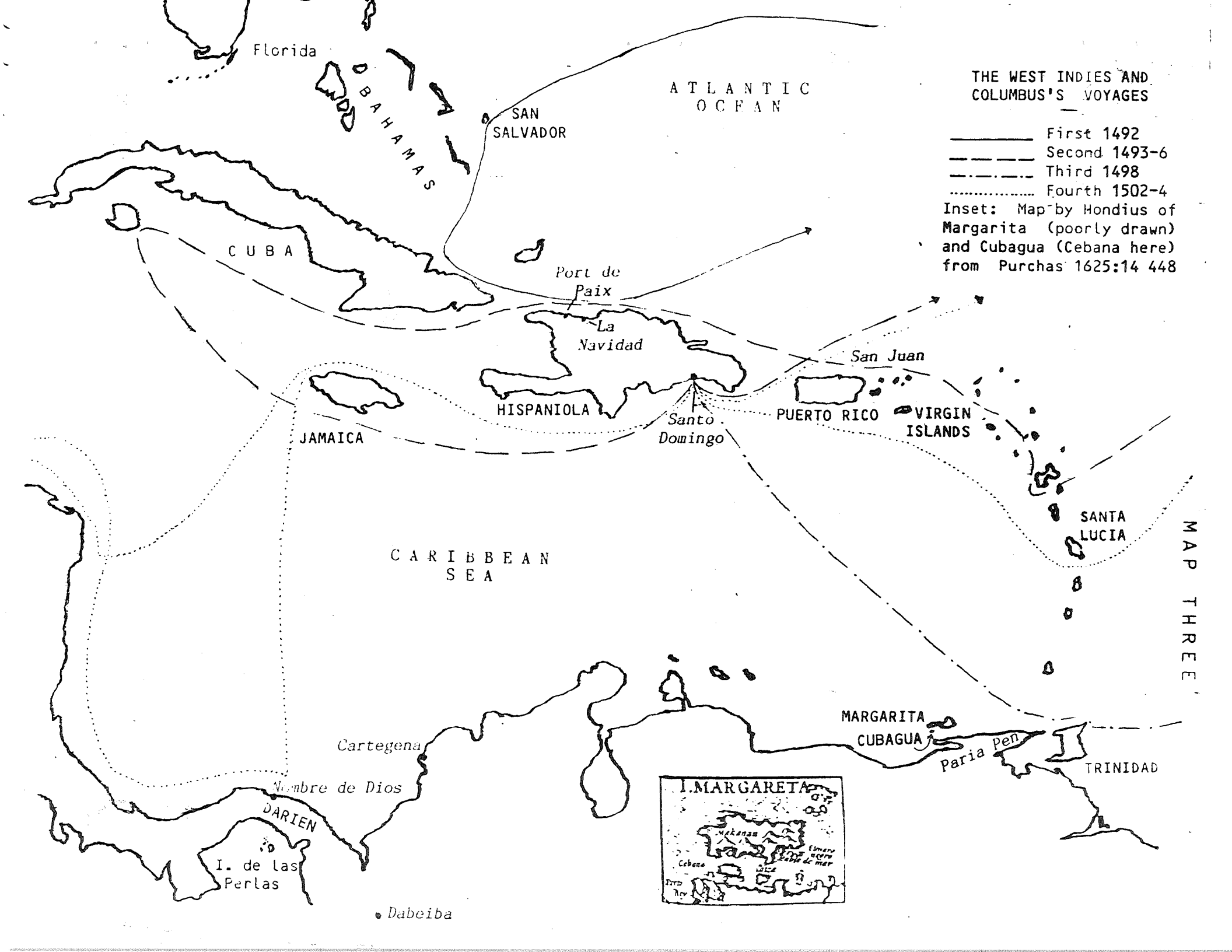
Along the Maine coast (1607-8) Davis related how a few men came out to the ship but would not board. The Europeans threw knives, beads and mirrors into their boat, but still they refused. Later others returned and boarded, where they were shown "commodities of beads, knives, and some copper, of which they seemed very fond; and by way of trade, made show that they would come down to the boat there and bring such things as they had to exchange them for ours." [Burrage 1906:402-03, 416]

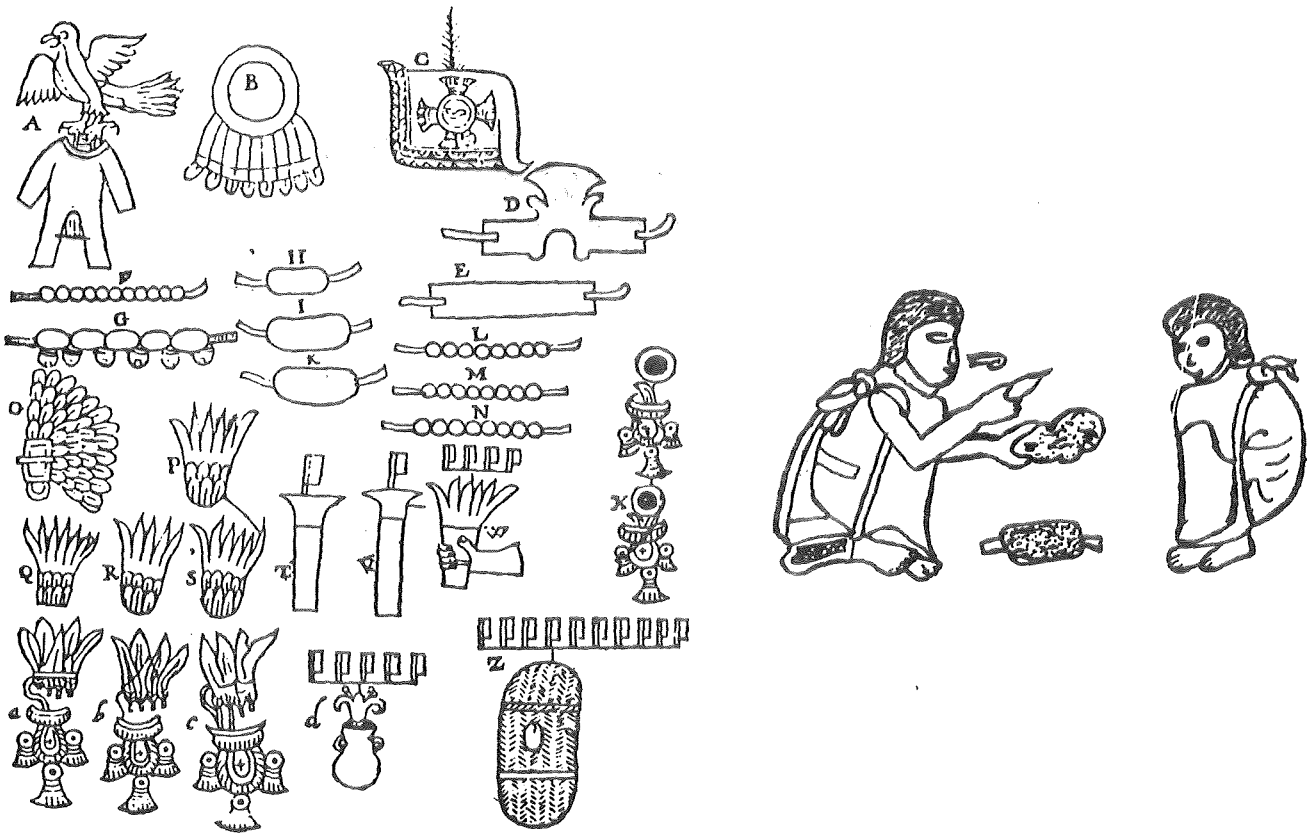
Magellan at "his" Strait, gave away hawkbells and other bells, a mirror and a comb, and "a pair of beads of glass." These impressed the "giant" who met them. Soon another swam out for gifts, and then four who received "beads of crystal." The Spaniards caught two of them; one escaped, but the other one was baptized Paul [Martire 1555:219-v.].

Beads also showed mutual respect. The valuable presents Cortez took with him apparently anticipated the great king that he encountered. At San Juan de Ullua (23 April 1516) he gave Montezuma's representative, Tendile, gifts; he had brought gifts for the Spaniards hoping that they would leave with them. Later ambassadors received blue beads. Presents for Montezuma were elaborate: "an arm-chair, richly carved and inlaid and some margaritas, stones with many (intricate) designs in them, and a string of twisted glass beads packed in cotton scented with musk and a crimson cap with a gold medal engraved with a figure of St. George on horseback, lance in hand, slaying the dragon. . ." [Diaz 1956:69, 71].

Later Cortez gave gifts directly to Montezuma: ". . . a necklace which he had ready at hand, made of glass stones, which I have already said are called margaritas, which have within them many patterns of diverse colors. These were strung on a cord of gold and with musk so that it should have a sweet scent, and he placed [it] round the neck of the Great Montezuma." [Ibid.:193]

We are still dealing with reciprocal gifting when de Soto at Nilco, Florida, was given a fur cloak and in exchange, "gave [the chief] a few small margarites, which are certain beads much esteemed in Peru, and other things, wherewith he was very well contented." [Elvas 1851:117]


THE WEST INDIES AND COLUMBUS'S VOYAGES
First 1492
Second 1493-6
Third 1498
Fourth 1502-4
Inset: Map by Hondius of Margarita (poorly drawn) and Cubagua (Cebana here) from Purchas 1625:14 448
Florida
BAHAMAS
ATLANTIC OCEAN
SAN SALVADOR
CUBA
Port de Paix
La Navidad
San Juan
HISPANIOLA
Santo Domingo
PUERTO RICO
VIRGIN ISLANDS
JAMAICA
SANTA LUCIA
CARIBBEAN SEA
MAP THREE
MARGARITA
CUBAGUA
Paria Pen
TRINIDAD
Cartegena
Nombre de Dios
DARIEN
I. de las Perlas
Dabeiba
I.MARGARETA



Figures 10 and 11: Jade in the Codex Mendoza. *Figure 10 is a somewhat rearranged page showing the Imperial tribute from a district in Mexico. Objects F through N are jade beads; G also has gold pendants. From Purchas 1625:15 467. In figure 11 a master beadmaker instructs an attentive young apprentice in jade beadworking techniques. The master holds a piece of raw jade and a pointed stone tool, perhaps a drill. At their feet is a finished bead. After Ross 1978:115.*

Figure 12: The Purchase of Manhattan Island. This woodblock was redrawn several times and published in a number of school textbooks. The Dutchman in the middle (presumably Minuit) is holding up a string of beads. The rosary in the small chest in the front is most unlikely cargo for Protestant Dutchmen of the time. From Hendrick 1896:18.

Perhaps the purest example of gifting was when Ribault on the South Carolina coast (1582) saw campsites which had been hurriedly abandoned as the white strangers approached. At one spot, where even freshly dressed meat was left, the French put, "knives, looking glasses, little beads of glass, which they love and esteem above gold and pearls, for to hang them at their ears and neck[s], and to give them to their wives and children." [Hakluyt 1582:G2 v.]

The line between gifting and bartering blurred. In one passage Leigh (Guiana, 1602) made friends: "Four Indians in a small canoe showed themselves unto us, to whom we sent our boat with some of our commodities, as hatchets, knives, glasses, beads, they had nothing but maize and small blue-headed parrots, for which we gave them some of our trifles." Another stresses the role of trade, "My loose commodities, as hatchets, beads, knives, looking-glasses, &c. are almost all gone; a great part in buying of victuals. . ." [Purchas 1625:16 310, 322].

Provisions could be bought; for cassava bread, hens, fish, potatoes, and bananas, Harcourt (Guiana 1608) gave, "knives, beads, jews trumps, and such toys, which well contented them." At Wiapoco the same goods secured weekly deliveries [Ibid.:361, 365]. In Brazil, Lerius in 1557-8 "never traveled far from home without a satchel of merchandises, which might serve us instead of money among those barbarians [;] knives, scissors, pinchers, to the men: combs, looking-glases, bracelets, and glass beads to the women, and fishhooks to the children." [Ibid.:575-6]

Luxuries were also for sale. Knivet said on the Potosí road natives carried people in nets slung on canes "for a fishhook or a few beads of glass, or any such trifle." [Ibid.:288] On Santa Lucia, Nicol (1605) saw fine cloth and oil jars the natives salvaged from Spanish ships, "All which we could have bought for hatchets, knives, beads, thimbles, fishhooks, and other such trifles." A small boat cost them "hatchets, knives, and beads, until they were contented" [Ibid.;325, 329].

Blurred also was the line between gifts of mutual esteem and barter. Smith said that the colonists in Virginia (1608) repaid the natives with beads and other goods after "dancing and feasting us with strawberries, mulberries, bread, fish, and other [food]. . . Captain Newport kindly requited their least favors with bells, pins, needles, beads, or [looking] glasses, which so contented them that his liberality made them follow us from place to place, and ever kindly to respect us." [Tyler 1907:33] Later he related that Powhatan "much desired . . . some few bunches of blew [blue] beads . . ." and traded three pecks of corn for them [Ibid.:57].

The conquest of La Plata furnishes examples of giving beads for very different reasons, due to the personalities of the givers and their conditions at the moment. Traveling up the Paraguay River in 1536-7 Ayolus' expedition was presented with plates of gold and rings of silver by the Orthuses chief. "For all this, our commander gave the chief of the Indians a hatchet, knives, paternosters, scissors, and other things which are made at Nuremberg." [Dominguez 1891:48] In 1541 Cabeza de Vaca heroically crossed on land to relieve Asunción and distributed presents along the way; to the Guaycurús he gave, "gifts and jewels among the chiefs." [Ibid.:154] Two years later he sent Gonzolo de Mendoza to find provisions "which he would pay for with merchandise, such as beads, knives, iron wedges, which they esteem highly, and . . . a large number of fishhooks" [Ibid.:226].

No matter by what mechanism, beads were always in demand. At New York harbor Verrazano (1524) recalled giving gifts to the natives, who only wanted beads and other bodily adornments:

> The things that they esteemed most of all those which we gave them were bells, crystal of azure color, and other toys to hang at their ears or about their neck[s]. They did not desire cloth of silk or of gold, much less of any other sort, neither cared they for things made of steel and iron, which we often showed them in our armor which they made no wonder at, and in beholding them they only asked the art of making them: The like they did at our [looking] glasses, which when they beheld, they suddenly laughed and gave them to us again. . . [Hakluyt 1582:B 1 v.]

The Earl of Cumberland said on Dominica (1596) "They most desired to have swords, hatchets, or knives, and very much clothes. But if they could get none of these, they would sell their commodities for glass beads, and such trifling things." [Purchas 1625:16 37] Even deep in Brazil (1608) Davies saw: "at the bridge of the nose he hangs in a reed a small glass bead or button, which hanging directly afore his mouth, flies to and fro still as he speaks, wherin he takes great pride and pleasure." [Ibid.:414]

The Beads Used in the Trade

Vespucci, Verrazano, and Magellan all mentioned "crystal." At Yucatan Balboa's men were given "many brooches and jewels of gold, very fair and of cunning workmanship. Our men recompensed them with. . .counterfeit stones of colored glass and crystal, hawk's bells of latten [a pewter], and such other rewards which they greatly esteemed for the strangeness of the same." [Martire 1555:150] Harcourt in Guiana traded with, "blue and white beads, crystal beads" [Purchas 1625:16 386]. Cortez's gift to Montezuma's ambassadors has been translated as "some artificial jewels called margaritas enveloped in perfumed cotton [and] a string of artificial diamonds." [Diaz 1800:55] Gómara said Cortez put on Montezuma "a necklace of pearls, diamonds, and other gems made of glass" [1965:139].

These references to crystal and artificial diamonds probably refer to glass beads. Confusion arises because "crystal" may mean rock (quartz) crystal, a type of lead glass, or even any clear glass.

On the other hand, we know that Columbus carried some beads other than glass (amber and "bloodstones"). A carnelian bead, most likely from India, was found at Nueva Cadiz on Cubagua; it must date to before 1543 [Francis 1984:27, fig. 3]. Faceted quartz crystal beads excavated principally in Florida ("Florida Cut Crystal Beads") date from the late 16th to the early 17th century, and may have been obtained from shipwrecks or owned by the Spanish themselves [Fairbanks 1967:13-16]. But, they could also have been given as gifts by early explorers, and been handed down for several generations before they were lost.

Aside from the small beads tentatively connected with Columbus, only two glass beads are rather securely identified. The margaritas of Cortez and de Soto which Elvas said were popular in Peru are almost

certainly chevron beads; Columbus may have had these as well. The twisted beads Cortez gave to Montezuma are no doubt the long square cased drawn tubes which were often twisted and are now called "Nueva Cadiz" beads after their findspot on Cubagua; they were also popular in Peru. Early chevron beads and the Nueva Cadiz beads are often associated on early Spanish contact sites [Smith and Good 1982].

SECTION SEVEN:

THE ORGANIZING OF THE BEAD TRADE

Bartering

Bartering beads for other goods began with the first Europeans to come to America. Columbus (and maybe the Vikings) exchanged them for food or furs, gold or pearls. The natives were eager to trade their goods for the wonders the Europeans brought. Cartier said the Mumacs of the Gaspé Peninsula, "traded skin off their backs," that is, the furs they were wearing, for "hatchets, knives, beads and other such like things" [1580:16-7]. The passage has been more recently rendered as "hatchets, knives, paternoster beads and other merchandise" [Morison 1971:370].

In Cartier's truck were "beads made of tin" [1580:48]. Rosaries (paternosters) were often used by French traders. Champlain in 1613 traded "hatchets, rosaries (patinostres), caps, knives and other knick-knacks" [Bigger 1922:1 296]. When Hudson reached Maine, the natives were already trading furs with the French and receiving "red cassocks, knives, hatchets, copper, kettles, trivets, beads, and other trifles." [Purchas 1625:13 586]. Hudson was ready to deal on the same terms. In New York harbor he exchanged knives and beads for some green tobacco [Ibid.:592].

The Dutch at New Netherlands were great fur traders. Though most trade involved wampum, glass beads were also used. De Rasiere, the secretary, wrote on 23 September 1626, that he had received ten beaver skins for, "a fathom of duffle-cloth, and a small quantity of beads [*een deel corael*], two hatchets and a few other things" [van Laer 1924: 192]. He also gives us an insight into the working of the colony, the importance of beads there, and the way in which it obtained them:

> 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 for 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.
>
> [Ibid.:232]

White beads were admired in Virginia, as Strachey said. In a native glossary Smith drew up, "because many desire to know the manner of their language," one of the few complete sentences he included was, "Bid Pokahantas [*sic*] bring hither two little baskets, and I will give her white beads to make her a chain." [1624:40]

Beads were so important to Jamestown that the colony set up a glass and bead factory. Smith asked for German or Polish glass-men soon after the colony was established [Barbour 1969:2 245] and sent samples of its products to England [Kidd 1979;49], but it soon closed. A second attempt was made in 1621, and beads were the primary product scheduled to be made. Captain Norton specified bead production and asked for four Italians [Harrington n.d.:9]. It was reported: "Sixteen persons and others have been provided and sent for the making of beads for trade in the country with the natives, and for making glass of all sorts." [Purchas 1625:19 144] This passage has been quoted elsewhere with the substitution of "Persons Italian and others" [Kidd 1979:78]. This makes sense; Italians are known to have gone to Jamestown, perhaps six of them [Ibid.:50].

But the second attempt at beadmaking also failed. A massacre of the settlers finished any hopes the Virginians had of making beads to trade with the Indians. Captain Butler, the governor of Bermuda, visited the colony in 1622 after the massacre and reported: ". . .the iron workers were utterly wasted and the men dead, the furnace for glass and pots at a stay and in a small hope." The colonists replied to his charges, but nothing about rebuilding the glass factory [Tyler 1907:412-8].

Some glass historians have tried to identify Jamestown beads [Barber 1916:162-3; Northend 1926:14-5], but the beads they describe are most likely European. Excavations at Jamestown have turned up no evidence of glass beadmaking [Harrington n.d.:13-5; Kidd 1979:49-51].

The trade for beads and other commodities was especially lucrative wherever furs were bought. Plowden described the trade on Long Island: "The trade for hatchets, knives, and nails, beads and toys, which the savages [take] for their beavers, here worth 1 & 2 s a weight, and otter's skins and deer skins, and for their maize wheat [corn] is worth ten for one by way of truck." A 900 % profit, even before the furs got to Europe, where they were worth much more [Bunce and Harmond 1977:7].

Considering all this, it is unusual that beads were not mentioned by those who compiled lists of goods to be taken to the New World. Despite the extensive nature of such commodity lists by Thorne in 1527 [Hakluyt 1582:1 2ff.], Mourt [1622:63-4], and Lord Baltimore [Calvert 1635:50], no beads were listed as items for trade. Lederer, who was in Virginia and North Carolina in 1669-70, however, wrote, "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. . ." [1672:27].

Mechanics of the Bead Trade

As commodities, beads must pass through several hands before they reach their ultimate consumers. The raw materials from which they are made must be gathered and formed. Finished beads must be packaged and sent

to distributers. In the early stages of the bead trade, distributers may have put beads directly into the hands of the consumers, but more often it was a network of subdistributers who "retailed" them.

In order to fully appreciate the distribution of beads each of these stages must be understood. Unfortunately, we find many gaps when trying to piece the story together. No evidence has yet surfaced, and perhaps none ever will, of the channels through which Columbus, Cortez Magellan, or Smith obtained their beads. Lacking this information, it is difficult to judge where the beads in question were made.

Something is known of the more important bead manufacturing centers; beadmaking at Venice [Francis 1979a], the Netherlands [Karklins 1974; 1985], Bohemia [Francis 1979b], India [Francis 1982a, b], and China [Francis 1985b] have been studied in some detail. Spain [Frothingham 1963], Russia [Menshutkin 1952:93-106], England, Germany, Austria, and perhaps Sweden [Kidd 1979] also made beads, as well as several Middle Eastern countries [Francis 1979c] during these centuries. It has only been through archaeological studies that some of the beads in the American trade could be identified with their manufacturers, and even some of these identifications have not been entirely successful.

After manufacturing, beads were sold to large distributers. Early in the American bead trade they were based in Europe; their operations are rather a mystery. We know that some organizations, such as the West Indies Company, had officials in Europe secure beads for the colonists, who distributed them locally. This may well have been a widespread pattern; it matches that for similar companies in the Far East [Francis n.d.]. Where and how independent traders got their beads is unknown.

After European establishment in America, private firms bought beads and distributed them. Advertisements in New York City papers indicate that most beads being sold by jewelers were imported:

P. and G. Skidmore on Pearl Street, 1798: "just imported in the *Chesspeak, Severn* and *America*; Jewellery, of the first quality and the newest London fashions [which include] Bugle necklets . . . glass beads" [Gottesman 1954:93]. Dunlap & Woolsey on Queen-Street, 1793: "Received by the last vessel from London. . .beads" [Ibid.:201]. John Cook & Co. on William Street, 1800: "from London cut gold beads by the doz or gross" [Gottesman 1965:95]. Ephraim Hart on Courtland Street, 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." [Ibid.:108] And again Ephraim Hart of Courtland Street in 1803: "And, on hand, a general assortment of agate, pound and seed beads; coral and children's coral bells." [Ibid.:347]

Unfortunately, none of these notices tell us where the beads were made, a secrecy which still prevails among many bead dealers. For the first advertisement of Ephraim Hart, we might suggest that the coral and the arms and hands (possibly ficus amulets) were probably Italian, the largest producer of coral at the time. The "black hands" may have been jet, in which case England or Spain would be the likely sources [Kelly 1977; Muller 1980]. The pound and seed beads were probably Venetian. If the "dog's teeth," were similar to the "wolves' teeth" sold by the Schwan Co. in 1783 [Urban n.d.:10], they would be Bohemian.

The agate beads were probably from India; Europe got most of its agate beads from India at the time. These are only educated guesses, but they fit what is known of the contemporary bead industry.

The large trading companies -- the Hudsons' Bay Company and Astor's American Fur Company -- presumably imported great amounts of beads at the height of the fur trade. Lists from three American Fur Company trading posts in Michigan and Wisconsin (1834-40) show a wide variety of beads handled through these posts. The glass (or presumed glass) beads included: sky blue and large blue, fancy, mock garnet, coarse and chalk white, white and colored barley corn, seed beads, black, faceted glass, large glass, and blue & white beads. Shell was represented with spotted sea shell beads, and black, white, hair pipe, and moon wampum. Stone beads included three sorts of garnets (ruby, uncut and a type designated as Br.), and blue, white, oval white, and cornaline agates. There was also a listing for gold beads [Spector 1976:19]. Many of these types may be imagined, but not all can be securely identified. We can assume that many glass beads were Venetian products and that the agates came from India, while the "wampum" beads were probably American, perhaps made by the Campbells of Pascack, New Jersey.

There was also considerable trade conducted on a more modest scale by individuals who distributed beads in small quantities. Gregg described small Mexican traders who left home with only $20 in beads and other stock and wandered through the southwest. They were content to finish the season having gained a mule or two [1844:2 54].

Trading networks were also run by the Native Americans among themselves. Lewis described several such networks operating along the Columbia River and adjacent areas in the first decade of the 19th century. Near the Columbia, trade involved "blue and white beads, copper tea-kettles, brass armbands, some scarlet and blue robes, and a few articles of old European clothing. But their great object is to obtain beads . . ." [1814:2 56]. This trade extended from the Pacific, through the Columbia and its tributaries on to the Rocky Mountains and the Great Plains. Food, horses, and European clothes moved along these routes, and beads were always important [Ibid.:142, 229, 232, 246].

PART III:

CASE HISTORIES IN THE BEAD TRADE

SECTION EIGHT:

DID BEADS BUY MANHATTAN ISLAND?

This is an appropriate juncture to discuss the most widely quoted and best known incident in the history of the American bead trade: the purchase of Manhattan Island [Francis 1986b]. The story, as told and retold, goes like this: Peter Minuit arrived in New Netherlands in 1626 and almost immediately proceeded to buy Manhattan Island from the natives, trading beads and other goods worth $24.

The tale was taught to our grandparents in grade school: "One of the first acts of Director Minuet was to purchase Manhattan Island for twenty-four dollars . . . paid in gay clothing, beads, and brass ornaments." [Hendrick 1896:18] It is still taught in New York state public schools: "Peter Minuet bought the island of Manhattan from the local Indians [for] $24 worth of colored beads and trinkets . . . . " [Schwartz and O'Conner 1981:60] It has been repeated by one historian after another: "The first important act of Minuit's administration was the purchase of the island of Manhattan from the natives. . . for the value of 60 guilders in beads and ribbons . . . . That must have furnished enough ribbons and beads to give every brave and every squaw a chance [at having some]." [Fiske 1899:1 120-1] "The famous purchase of Manhattan Island . . . was paid in the usual form of trading goods, knives, beads, and trinkets." [Andrews 1937:2 74, n.3] And, of course, those who have an interest in beads also repeat the story: "and included in the barter for Manhattan, as we have all been taught, were strings of glass beads." [Erikson 1969:22]. (Plate 3, Fig. 12)

And so we <u>have</u> all been taught. Unfortunately, this received wisdom is only partially true; most of it lacks documentation, and the rest is simply false. Let us examine the events involved.

After Hudson's voyage of 1609, other Dutch expeditions aroused an interest in New Netherlands, which become part of the (Dutch) West Indies Company holdings when it was organized in 1621, even though it was not considered as important as the Caribbean and Brazilian colonies. The first colonists in 1624 settled at Fort Orange (present Albany), Noten or Nut Island (Governor's Island), and High Island (perhaps Burlington Island near Trenton, New Jersey).

In 1626 William Verhulst (or van Hulst) and Peter Minuit (spelled several ways) arrived. Verhulst was the new director-general of the colony and was instructed by the Company not to drive away natives but "by good words [persuade them] to leave, or be given something therefor to their satisfaction. . ." [van Laer 1924:52]. Minuit, born of French parents in Germany, was a mercenary, and his duties included sailing up the Hudson River, assessing the land, trading with the natives, digging for minerals, and looking for valuable products [Ibid.:49, 75].

Of the early settlements, only Fort Orange lasted. High Island was quickly abandoned, and Nut Island was too small for pasturage. On 22 April 1625 the Company sent out Further Instructions to Verhulst to find a better site: ". . . And finding none but those that are occupied by the Indians . . . either in return for trading-goods or by means of some amicable agreement, induce them to give up ownership and possession to us, without however forcing them thereto in the least or taking possession by craft or fraud, lest we call down the wrath of God upon our unrighteous beginnings." [Ibid.:106] Thus, the stage was set for the purchase of land, but what happened next is not precisely known.

Verhulst proved an inept administrator and Minuit was appointed in his place. On 11 May 1626 Minuit wrote a letter telling Jan Lampo to ask the sachems of Manhattan if they wanted to sell the island [Gehring 1980:7]. Exactly when the sale took place was not recorded. The only contemporary notice of the purchase was written by Peter Schagen, a board member of the West India Company. He wrote the Dutch Parliament, the States-General, about the colony on 5 November 1626, after *The Arms of Amsterdam* arrived from America. The key part of the letter says, "They have purchased the Island Manhattes from the Indians for the value of 60 guilders; 'tis 11,000 morgans [about 22,000 acres] in size. They had all their grain sowed by the middle of May, and reaped by the middle of August." [O'Callaghan 1856:1 37]

On 10 August Minuit bought Staten Island (named for the States-General). As with Manhattan, the original deed has been lost, but a copy of it made by Melyn says that the price included, "Some Duffies [duffles or cloth], Kittles [kettles], Axes, Hoes, Wampum, Drilling Awls, Jew's Harps, and diverse other wares. . ." [*Collections* 1913:124] Note that no glass beads were mentioned, although they may have been included in the "diverse other wares" category. Note also the importance of wampum (no doubt to seal the agreement) and drilling awls, which would have been used to make more wampum.

So there is little question than Manhattan was bought, but the date and circumstances are unknown. It is also clear that there is no evidence whatsoever for beads or any other goods used in the purchase.

So where do beads fit in? To answer that we must trace the history of our knowledge of the acquisition of the island by the Dutch. The earliest history of New York was written by William Smith, Jr. [1757]; it mentions no purchase at all. Nor was it included in Washington Irving's spoof, *Diedrich Knickerbocker's History of New-York* (1809), the basis of many New York legends. The first historian to note the purchase was Lambreschtsen, a Dutchman, who must have used archival sources. His history of 1818 was translated into English in 1841. The first American to say that Manhattan was bought was Moulton [1826;427], but his account of the purchase farm by farm was totally fictitious.

Contemporary historians paid no attention to Lambreschtsen, and criticized Moulton for using his imagination as his only source. The early histories of New York discussed no purchase of Manhattan, much less any beads. These include those by Macauly (1829), Eastman (1832), Dunlap (1839), Barber and Howe (1842), and Watson (1846).

A radical change in the availability of documents about New Netherlands took place after Hermanus Bleeker was appointed by his fellow Dutch New Yorker, Martin Van Buren, as ambassador to the Netherlands.

Bleeker realized that the Dutch archives held much material about the colony. In 1839 he persuaded the New York legislature to send John R. Brodhead, his secretary, to Amsterdam to transcribe the material. Upon Brodhead's return, E. B. O'Callaghan included these in his 15 volume collection of documents from the colonial period of New York.

In 1846 O'Callaghan's history of the colony stated that "The island of Manhattans . . . was therefore purchased from the Indians, who received for that splendid tract the trifling sum of sixty guilders or twenty-four dollars." [1846:1 104]

O'Callaghan was the first to use the well-known figure of $24, par in his day for 60 gold guilders. It has caused great debate, as various historians tried to estimate its worth. In 1902 Anderson and Flick reckoned that if it had been put at 6% compound interest it would be worth $122,500,000 [1902:14], actually a bit low for 1902. In this spirit, a similar calculation from 1625 to 1985 gives us a figure of nearly $31 billion dollars! Unfortunately, the Canarsie Indians did not have a bank account.

Wilson asked the Dutch Queen (Sophia) if she thought the price had been fair. She thought so because, "If the savages had received more for their land they would simply have drunk more fire-water. With sixty florins [guilders] they could not purchase sufficient to intoxicate each member of the tribe!" [Wilson 1893:1 158] Her majesty did not envision bank accounts, but payment in coin and a neighborhood bar.

The purchase of Manhattan for 60 guilders equaling $24 was repeated faithfully by nearly every historian since: Mather and Brockett (1849), Brodhead (1853), Valentine (1853), Volgelvanger (1859-60), Booth (1867), Randall (1870), and Stone (1872). Randall first noted that coins were worthless to the natives and goods would have been used [1870:19]. With this there is no argument. The mistake was in trying to enumerate the goods without any proof of what they were.

And the beads? We have Martha J. Lamb to thank for them. She was apparently the first historian to specify the products exchanged for Manhattan: "He [Minuit] then called together some of the principal Indian chiefs, and offered beads, buttons, and other trinkets in exchange for their real estate. They accepted the terms with unfeigned delight, and the bargain was closed at once." [1877:I 53].

Everyone parroted her. To list historian after historian repeating the story would be tedious. Although a few careful ones did not fall into the trap, most of them assert: "Glittering beads and brightly colored cloths, glittering trinkets of small value brought from the ships nearby in chests, and opened on the shore before the eager eyes of the aborigines, were what worked the miracle." [Sullivan 1927:1 157] The story is enshrined in cartoons, television sketches, numerous book illustrations, and the famous painting by Alfred Frederick.

The myth is now part of our national legend. It makes a great story. It is also possibly true; there is sufficient evidence that beads were one of the most important trading items throughout the colonial history of the New World. But the point is this: there is no proof that beads bought Manhattan Island and, of course, no way to identify them.

SECTION NINE:

ONE MAN'S EXPERIENCE WITH TRADE BEADS

One reason there is so little evidence about the bead trade is that the Europeans who wrote the histories of the New World paid little attention to beads in general. We have seen the small value explorers put on beads and how scanty were their descriptions of them. We are left with no connected narrative of the trade or the beads involved in it. Typical was the attitude of Merriwether Lewis, who had no idea of the importance of beads on the frontier. This almost led to tragedy, but he was a quick study and he soon learned to appreciate them.

Lewis and his friend, William Clark, led the Corps of Volunteers for Northwest Discovery, commissioned by Thomas Jefferson, to explore up the Missouri, across the Rockies, down the Columbia to the Pacific, and then to retrace their steps if they could. This was the unknown part of the Louisiana Territory, recently bought from France. The Lewis and Clark Expedition, as the Corps came to be called, made cartographic studies and observed the natural history of the region. It set out in May 1804, and was gone for two and a half years.

The Corps had Jefferson's complete backing; in fact, Lewis was the President's secretary. Jefferson wrote Lewis an avuncular letter in 1803 which advised taking "light articles for presents and barter among the Indians." [Jefferson 1813:xiii] In the early weeks, Lewis recorded that they had clothing ornaments, medals and certificates, fishhooks, handkerchiefs, brooches, paint, flags, wampum, tobacco, mirrors, rings, brass armbands, ribbons, knitting needles, thimbles, knives, and files along with them to trade.

No beads? Oh, yes, they were there, but Lewis gave them no thought. Peace medals, modeled after European medals given in friendship to other monarchs [Woodward 1965:4] were handed out often. There were of different sizes for differing ranked chiefs [Lewis 1814:1 38]; the most important was the Jefferson Peace Medal with clasped hands, a pipe and a tomahawk on the reverse. The chiefs regarded the medals as proof of their recognition by the great "foreign power" of the U. S. Government [Ibid.:1 38]. Lewis insisted upon proper ceremony, putting them himself on the necks of the recipients [Ibid.:1 38, 120]. When a Cheyenne chief was afraid of the white man's medicine he took a medal only after Clark explained that it was a gift from the "great father" to prove sincere friendship. 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.:2 415]

Medals, wampum, and paint were recorded several times each before the first record of trading beads and fishhooks for meat to the Ricaras (Arikaras) on 26 October 1804 [Ibid.:1 109], but it was nearly another year before the importance of trade beads was driven home to Lewis.

While the Expedition was wintering on the Pacific coast, Lewis noted the extensive network of trade in food, clothing, and ornament:

> 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 article of clothing or the 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, skin, 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. [Ibid.:2 56-7]

Lewis appreciated the beads' role in this trade, but had not learned yet that only specific beads were acceptable. That lesson came on 23 November as they tried to trade a Clatsop for a skin, offering:

> A watch, a handkerchief, an American dollar and a bunch of red beads; but neither the curious mechanism of the watch, nor even the red beads could tempt him; he refused the offer but asked for *tiacomoshack* or chief beads, the most common sort of coarse blue-colored beads, the article beyond all price in their estimation. Of these blue beads we have but few, and therefore reserve them for more necessitous circumstances. [Ibid.:2 84]

A few weeks later Clark tried to trade red beads for an otter skin, but was refused, "as they valued none but the blue and white beads." [Ibid.:2 95] Lewis commented on the enthusiasm for betting on the hand in which an opponent held a bean: "and this evening several of the Indians lost all the beads which they had with them." [Ibid.:2 94] On 17 January 1806 a Clatsop insisted on six fathoms of blue beads per skin but the expedition had only four. Nothing else, neither "a knife, [n]or any quantity of beads of another sort," was acceptable [Ibid.:2 123]. On 20 January the last blue beads were gone. For an otter skin they had to pay "our only remaining four fathoms of blue beads, the same quantity of white ones, and a knife." [Ibid.:2 125]

At the end of the winter on the Pacific Coast Lewis summarized what they had learned in his journal:

> But as we have had occasion to remark more than once, the object of foreign trade which is the 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 commachuck*, 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 seduce them to part with their most valuable effects. Indeed, if the example of civilized life did not completely vindicate their choice, we might wonder at their infatuated attachment to a bauble in itself so worthless. Yet these beads are, perhaps, quite as reasonable objects of research as the 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.:2 144]

On the way back up the Columbia the Corps traded six fathoms of wampum for a canoe. They seemed pleased to be able to use something besides the blue beads they did not have, but soon after the bargain was struck, the native returned the wampum and demanded his canoe back. Lewis commented, "To this we consented, as we knew this method of trading to be very common and deemed perfectly fair." [Ibid.:2 216]

After they got canoes, up the river to Skillot country they had to go overland again. Now they had canoes to spare. On 20 April they cut one up for fuel and traded two others along with elk skins and some old iron for beads [Ibid.:2 247]. Four days later they wanted to trade their other canoes, but the natives refused to buy them, believing that the strangers would abandon them and they would have them for nothing. To prove they would not be abandoned, the explorers "actually began to split them, on which they [the natives] gave us several strands of beads for each canoe." [Ibid.:2 251]

So now the Corps was trading <u>for</u> beads. They had to. Their goods were fast disappearing and they were hungry. On 21 May they took stock and found that each man had only an awl and a knitting needle, half an ounce of vermilion, two needles, and a bit of thread and ribbon: "a slender means of bartering for our subsistence." No one minded since they had been through so much already [Ibid.:2 298].

On 1 June a raft overturned and all was lost. "We therefore created a new fund, by cutting off the buttons from our clothes, preparing some eye-water and basilicon, [which we put into] some phials, and small tin boxes, in which we had once kept phosphorous." [Ibid.:2 305] To add to this "new fund," the men were pleasantly surprised on 21 June to find some beads quite by accident which had been forgotten in the pocket of a waistcoat. They immediately traded them for salmon, providing some much needed protein [Ibid.:2 321].

Fortunately, the end was not far away. Soon they were in familiar territory and were running into old native friends. The great journey was over, and the men had a lifetime of marvelous stories to tell.

Lewis died under mysterious circumstances soon after the expedition completed its commission. He had been a superlative leader of men and a beacon to westward expansion, and his place in history and in legend was secure. Back in the East, beads were no longer the medium of exchange, but we cannot doubt that he or any of his companions would ever underestimate the power that common, cheap beads could have in the proper place at the right time.

SECTION TEN:

CONCLUSIONS

It is a cliché among those interested in the history and trade of beads that they played a considerable role in the contacts between Europeans and Native Americans during the period of discovery and exploration of the New World. The research for this project began several years ago, spurred by a curiosity as to how accurate that assessment was.

There is a considerable and growing body of archaeological sources which document the use of beads by Native Americans before Columbus and the trade in beads after his discovery opened a new chapter in human history. That invaluable data has not yet been completely synthesized into a coherent body of information. Except for some regional studies, there has also been little work with the historical literature covering this subject. This research for this paper, which is extensive but by no means exhaustive, is an attempt to partially rectify the situation. It may be thought of as a complement to the archaeological record, and should only be considered an opening to the resources which may be tapped to learn about the history of beads.

An invaluable part of working with the historical sources is that they can lead us to an understanding of the attitudes of the people who were involved in the bead trade. The glass beads of Europe, as eagerly sought by the Natives as by modern bead collectors, were only "trifles" or even "trash" to the settlers. Meriwether Lewis learned the value of beads the hard way, and by following his growing awareness of their importance we can appreciate their role along the Columbia basin nearly two centuries ago.

Time and again, the historical record shows that beads were nearly always present during the journeys of exploration in the Americas. If they were underappreciated by those who brought them, and their meaning to those who received them is only beginning to be understood [see Hamell 1983], it is evident that they were ubiquitous and served persistent, if minor, roles in the history of these continents.

The Europeans regarded some native bead materials so much higher than others that we are left an unequal historical record of the beads they found here. Some were already familiar to them; the gold, silver, and pearls of the New World added to the wealth which was already part of the Old World. Jade had to be introduced to Europe, and became prized for its supposed medicinal effect long before it gained attention as a mineral beautiful in its own right. Nor did it ever achieve the value put upon it by the ancient Mexicans. Among the beads of prosaic materials, only wampum caught the attention of the Europeans because it served as the small coinage of the northeastern colonists.

If this paper has taught us some sobering lessons about the differences in perceptions between people, one of the sharpest of these lessons has been our investigation into the story which many of us were taught in school of the purchase of Manhattan Island. If nothing else, it should demonstrate the value of critical examination and the danger of blind repetition, no matter how attractive the story may be to bead lovers everywhere.

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Abbreviations employed:
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INDEX OF PEOPLE WITH SHORT BIOGRAPHICAL SKETCHES

Abbreviations Used (U.S. Post Office abbreviations for States)

Am. = America/n	est. = established	N.A. = North America
Can. = Canada	ex. = explorer/ed	Pt. = Portugal/uese
Car. = Caribbean	Fr. = French/man	S.A. = South America
dis. = discoverer/ed	gov. = governor	sail. = sailed for
Dt. = Dutch	It. = Italy/Italian	Sp. = Spain/Spanish
Eng. = English/man	§ = geographic place named after person	

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