Stone Age

on the Columbia River

By

EMORY STRONG



BINFORDS & MORT, Publishers Portland · Oregon · 97242

NATIONAL MUSEUMS OF CANADA MUSÉES NATIONAUX DU CANADA LIBRARY - BIRLIOTHÈQUE

402

060045

terns. The one second from the right in Fig. 97, has such a pattern but is so well worn that it did not photograph well.

Most of the buttons are round, from 1.2 to 1.5 inches in diameter, but a few were made octagon or oval shaped, and some were inlaid with mother of pearl. Few of the latter are found on the Columbia. Colonial buttons are found in the same places as Phoenix buttons, and frequently together. I once found eight Colonials and six Phoenix by scraping out the cracks in the bedrock with a knife blade on Lower Memaloose Island during low water. Several came from Sullivan Island. Very few are found above the John Day River. None ever have any markings on the back. The shank is made by bending the wire in a circle, and is brazed or soldered on.

GLASS BEADS

The first use of man-made glass was for beads. Archaeologists uncovered in Egypt some stone beads that were glazed with glass, made at least 5000 years ago and perhaps much earlier. About 3500 years ago the first translucent, purified glass was made—in the form of blue beads. Glass was then precious, like jewels, and saved for the nobility, but a few hundred years later glass became more common and small, white beads were made in large quantities. At the same time, in Syria, they were learning to make colored beads.

The Roman conquest ended the Egyptian glass industry, but the emperors imported skilled workers to Rome where the industry reached a high degree of art, and glass beads became so common that even the poor could wear them. By the year 1200 Venice was making glass and gradually rose to dominate the industry, keeping the workers virtual prisoners on the island of Murano to prevent the art from spreading. One of the most important products was glass beads for trade throughout the then-known world.

In the latter part of the 19th century, Bohemia dominated the bead industry; at one time there were 700 exporters located there. Made in untold millions, mostly in small plants, in many countries, in almost every conceivable size and shape, and for ages, it is no wonder that glass beads are so difficult to trace. There is no publication devoted to beads alone except for the work of Orchard. There are bits of information scattered throughout various periodicals and publications, but this is quite meager, for beads were so common that detailed description seemed unnecessary. And the various nomenclature used by the manufacturers, distributors, wholesalers, retailers and purchasers added to the confusion. For the information contained herein. I am indebted to Mr. Arthur Woodward, retired, of Altenada, California, formerly with the Los Angeles County Museum and the Museum of the American Indian. Mr. Woodward furnished me with a detailed report on trade goods and was very generous with his time and help. I also drew freely from Orchard's Beads and Beadwork of the American Indian, and various books and histories of the glass-making industry.

A glass tube was the starting place for the manufacture of most beads. An early method of making tubes was to attach an iron rod to one end of a pierced globule of viscid glass on the end of a blowing iron, the rod was then grasped by a boy who ran with it at full speed straight away to draw the tube out as far as possible before the glass became too cold. The tube was then cut up into sections. Globular beads were made by charging a drum with glass tubes of the proper size, along with a flux of charcoal and clay or other materials, to keep the beads from sticking together. The drum was then heated while rotating, and as the beads became soft they assumed a globular form. Barrel-shaped beads were made by catching a thread of viscid glass onto a rotating iron bar having a diameter corresponding to the perforation. The revolving bar drew out the glass thread and the operator mani-

pulated it until the desired size and shape was obtained. There were, of course, many other methods of bead manufacture and constant improvement of the technique.

Glass beads were the earliest trade goods on the continent and have been the most popular ever since. Columbus on his landing on Watling Island in 1492, gave the natives strings of beads. A glass factory was erected in Jamestown, Virginia, in 1622, and may have made trade beads, although there is no evidence that it did. Lewis and Clark had a large quantity, but had spent most of them by the time they started back; shortage of this medium of exchange was one of their main concerns on their return trip.

Beads are found on the Columbia in an almost unlimited assortment of sizes, colors, and shapes; most of them can be duplicated in any dime store, but there are some that have a great deal of historical interest. One of these is called the star or chevron bead, called by the makers "paternoster" or "Our Father" bead, Fig. 98, one of the oldest and most expensive types. This type varies in size

Fig. 98



"CHEVRON" BEAD

from small up to one and a half inches long. Star beads are usually formed of successive layers of glass, externally a dark blue, then bright red, then pale green, each layer separated by opaque white. The layers are worked into a design so that when viewed from the end they look like gear wheels, always with twelve teeth. These beads are found throughout North America and parts of Europe and Africa. Some were found in Hawikuh, New Mexico, during excavation of that ruin, and were presumably brought in by the Spaniards shortly after 1500. Star beads were made in Murano, Venice, as far back as records go. In other areas they are usually found in 16th and 17th century sites; the only ones I have seen from the Columbia were found at Five Mile Locks on the Long Narrows.

Second in historical interest is one known to the trade



GLASS TRADE BEADS

as "Cornaline d'Aleppo" and commonly called Hudson's Bay beads. They are short tubular or oblate spheroid, and in length vary from one-eighth to one-quarter inch. Two colors of glass were used, the outer shell is a brick red, opaque, smooth, and shiny. The inner shell looks black but when held up to the light is a translucent green, an infallible test for this type. They are widely distribu-

224

ted in North America and the old world, and were made in Venice in the 17th and 18th centuries. They were a favorite with the Indians trading at the Hudson's Bay posts and some independent traders contributed to their distribution. While not common, they are found all along the Columbia. They are shown in Fig. 99, No. 1.

A later variety of the Cornaline d'Aleppo, Fig. 99, No. 2, is made with a semi-transparent red outer shell, and with a white or yellow core showing plainly at the ends. These occur in several tubular, ovate, and spherical shapes, the tubular ones may be an inch or more in length and the spherical ones a half-inch in diameter. The smaller ones are very fragile and break easily when handled, collectors when stringing them are dismayed to see them fall in half. They occur in large numbers along the river, especially in the later sites, and seem to have been confined to the northwest trade.

Another old bead found along the river is a large, translucent blue faceted variety with a large perforation, No. 4 in Fig. 99. They are found in the oldest sites and are more plentiful near the coast than on the upper river, indicating trading vessels as their source. Sometimes this is the only type bead found in a site, but copper beads seem always to be with them. They occur all along the Northwest coast and are generally called Russian beads, as they are the type used in the Alaskan trade, but they were not made by the Russians.

When Lewis and Clark were outfitting for their expedition they ordered "1. Blue Beads. This is a course cheap bead imported from China, & costing in England 15d the lbs. in strands. It is far more valued than the white beads of the same manufacture and answers the purpose of money, being counted by the fathom. 2. Common brass buttons more valued than anything except beads. 3. Knives, with fixed handles stained red, usually called red handled knives & such as are used by the N.W. Co. in their Indian trade". It seems that the useful knife took third place in the order of value. William Orchard believes these blue beads were the large faceted variety, they were called "Chief Beads" by the natives. At Fort Clatsop a visiting Indian "dressed in three very eligant Sea Otter skins which we much wanted; for these we offered him many articles but he would not dispose of them for any other consideration but blue beads, of these we had only six fathoms left, which being 4 less than his price for each skin he would not exchange nor would a knife or an equivalent in beads of any other color answer his purposes, these coarse blue beads are their favorite merchandise, and are called by them tia Commashuck or Chief Beads," wrote Lewis and Clark.

"Tyee comasuk" means in the Chinook jargon the chief of the beads or the best or superior, and does not mean that they were for chiefs only. James Swan says, "The women are fond of blue cut glass beads, which are highly prized. Light blue beads are worn only by slaves." Swan was on the Columbia nearly 50 years after Lewis and Clark and whether he was referring to the "Chief" beads cannot be determined, one of the other faceted varieties may have been fashionable by then. Light blue beads are found in large quantities and must have been very popular.

The most plentiful type of bead above the Cascades of the Columbia is a round, opaque, robins-egg blue variety having the appearance of glazed porcelain although they are glass, No. 3 in Fig. 99. They are found in at least five different sizes and seem to have been called Canton or China beads by the traders. Alexander Henry in his *Journal* says, "Sunday Apr. 3d. I now desired smelt to be traded at one fathom of small blue Canton beads for five fathom of smelt; yesterday we had traded at four fathoms". Also "Nov. 19th. Large blue China beads seem to be the principal article in demand". In the list of trade goods lost to the Indians during their attack on Stuart's party at the Cascades he lists " $101/_2$ lbs. Canton beads 2nd size. $103/_4$ lbs. Canton beads 3d size".

This bead Mr. Woodward believes to be the variety

known as the Chief beads. He says he has never encountered a statement that says they were manufactured in China. There were several British firms in China during the 18th and 19th centuries importing and exporting a variety of articles, and it is likely they were imported from Italy and redistributed. He says he has seen beads made in China during the 19th century, and they have a different appearance from those of European glass houses.

There were several types of faceted beads besides the blue Russian beads, some are shown in Fig. 99, Nos. 5 to 9. Faceted beads are made of hexagonal tubing, the facets were made with a spatula while the glass was plastic, or more rarely cut and polished by hand. The facets are generally crude and uneven, and the beads were broken from the tube leaving the ends rough. These beads are found in sites dating back to about 1830 and as late as 1870, they were very popular and widely distributed.

Another type of faceted bead was made of brass or other metal, about 1/16 inch in diameter. Since they are so small that they would be overlooked, their distribution is unknown. The only ones I have seen were in a string about six inches long that washed out of the bank near Cascade Locks, the copper salts had preserved the cord. They were made during the 19th century.

The smallest glass beads are less than one thirty-second inch in diameter, with a hole so tiny one wonders how they were threaded. They are part of a group called "seed beads"; the smallest are known to the trade as "Tinised" beads. They were used in making the famous decorated bags, ornaments, and clothing manufactured by the Indians throughout the Americas. Some of the creations involved an unbelievable amount of work. A Comanche cradle in the Museum of the American Indian has 120,-000 beads sewn on it, and every bead is threaded twice! Seed beads were made for a great many years but few are recovered because of their small size. They are shown in Fig. 99, No. 16.

Stone Age on the Columbia River

The more modern beads are shown in Fig. 99, Nos. 10 to 15. White ones similar to No. 11 were made during the 18th century and are as old as the Chief beads. Large blue and green glass beads, like No. 13 and 14, were made Fig. 100



POLYCHROME BEADS

as far back as the 17th century, but those found along the river appear to be modern. The light hollow copper beads shown in No. 15 are quite common along the river. The brass one is machine wound and quite modern.

The polychrome or inlaid beads shown in Fig. 100, are by far the most beautiful and also were the most expensive. They are found in a great many patterns and colors, as they were made in Venice by families in their homes and not in factories; consequently, the fancy and imagination of the maker had full play. They may be inlaid, painted, gilded, spun, or made of varicolored glass. The fourth from the left in Fig. 100 is inlaid, made by fusing on strips of different colored glass to form flowers or patterns, much as the familiar glass blower at county fairs makes his baubles. Some are composed of glass threads spiraled around the perforation, these are called wire laid beads. Another type made with a grey-white background with round dots of red or blue encircled with a white ring, were called "Kitty Fisher Eyes", after the English actress of that name who died in 1767. Another was called "Pompadour", after the mistress of Louis XV of France. In the early 1800's glass tubing was shipped to

England for making fancy beads which were used as weights on lace bobbins.

The polychrome bead dates back to about 1800, although in the 1770's some were made and called "flower beads". Polychrome beads were very popular with the plains Indians, the greater quantities being found in the Crow and Blackfoot country. Most of those found on the Columbia come from the later sites, such as Upper and Lower Memaloose Islands. Frant Wilke has a string of them that were found while digging a basement near Bingen, Washington.

Wampum has become a common word designating shell beads, such as the small disc beads made of clam shells found in large numbers along the Columbia, Fig. 44. The genuine wampum, however, was a small cylindrical shell bead made of the quahog (Venus mercenaria) or hard clam, a very hard and brittle shell, although occasionally other shell was used. These appear in two colors, white and a varigated purple, the latter was the most valuable. Before the white invasion but few were made. because of the amount of work involved, and other shell and even stained wood was used. The whites, on learning the value of the bead, quickly devised methods of drilling and finishing them and Indians became customers instead of manufacturers, and large quantities appeared after 1650. Genuine wampum was made only in the East. It of course, varied in value. Roger Williams states that one fathom was worth five shillings, formerly nine. The usual size of the bead was about one quarter inch in length and an eighth in diameter, but some were larger. Prehistoric wampum was nearly always discoidal, but after the introduction of iron tools, making drilling comparatively easy, the tubular beads became the most popular. The genuine wampum is a beautiful bead.

The disc beads found along the Columbia should not be confused with the wampum of the history books. These disc beads were made by the Indians of clam shells, both fresh and salt water varieties. The shell was broken or cut into small pieces, then drilled. A number of drilled blanks were then impaled on a stick and pressed together, then with an abrasive stone dressed down to the desired diameter. They are found in quantity all along the river.

In the East the wampum served as money, in the West it was the dentalium.

COPPER ORNAMENTS

The earliest ornamental trade articles were copper bangles and rolled copper beads made by the natives from sheet copper. These are found in graves and cremations where no buttons or glass beads are found. Prior to 1800, Boston traders carried sheet copper on their ships. Captain Gray, discoverer of the Columbia, had 3495 pounds of copper aboard. Before copper, there were iron bracelets, but they were not strictly trade goods as they were made from nails taken from wrecked ships or driftwood. They can be identified by either a head or point on one end, or perhaps both. The rust is in flakes, identifying wrought iron. Some of the copper articles may be native copper from the Northwest coast, but a spectographic analysis is necessary to identify it as native copper. Rolled beads and bangles are made of sheet too uniform in size to be native, but occasionally a spherical bead or awl, or a small bangle, that might be native copper is found.

Mr. B. H. McLeod, consulting metallurgist of Stamford, Connecticut, examined some rolled copper beads found by Dr. Douglas Osborne in site 45-BN-3, near Mc-Nary Dam, and believes the technique used by the natives to make them was to hammer the sheet flat on the edge and more or less peen it out. Some round object was then used as an anvil, and the roll started by hammering the edge along the anvil; rolling was continued until the rolled edge touched the flat sheet. The anvil was not used after the initial upturning. Using the side of the bead as a guide, a knife was drawn back and forth along the flat sheet until a notch was started, then the sheet and bead いっしん あたいないになったないのであるのであっています

230