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# TRADE BEADS FROM FORT BERTHOLD, N. D. <sup>1</sup>

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## INTRODUCTION

Among the many kinds of goods manufactured for and traded to the American Indian, none is more familiar or of greater interest than the humble bead. In the earliest contacts between Indian and White in the new world beads and other ornaments play an important part, and the commodity is still of importance to the native American.

As is so frequently the case with everyday speech, the word "bead" is ordinarily used very loosely. When it is used, most persons probably think of small globular objects, pierced for threading. But many objects obviously belonging in this category are neither small nor globular—some, for example, are polyhedral—and the essential characteristics of a bead would seem to be that it have a hole for suspension. But then one might ask, when do beads leave off, and pendants and other suspended ornaments begin?

Some varieties of beads have from time to time had special names, which today are probably unfamiliar to most persons. Such a variety is the "bugle," once more familiar than today, at a time when women's gowns were more elaborately decorated. And not only in English are there names for special kinds of beads. The French used the word *rassade* for small globular beads, particularly those traded to native peoples such as the American Indian and the African Negro, and also had the term *canon* for a long tubular bead, apparently much like the bugle. A direct borrowing from French is probably involved in the case of the term once heard on the Indian frontier, "hair pipes." These were long tubular beads, probably originally for use in the hair, and the term seems to be derived from the French pipe, also a long tube, which also

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"Archeological work at Fort Berthold has been accomplished through the cooperation of the National Park Service, the Corps of Engineers, and the State Historical Society of North Dakota, with the Missouri Basin Project, River Basin Surveys, Smithsonian Institution." G. Hubert Smith, Archeologist.

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gave rise to the English "pipe", for smoking, and "a pipe of wine", not to mention water pipes.

#### FORT BERTHOLD

Bead materials of various kinds were obtained in 1952 in excavations at a historic site in the Garrison Reservoir area, North Dakota, by the Missouri Basin Project, River Basin Surveys, Smithsonian Institution. This site, also within the Fort Berthold Indian Reservation, is a part of a larger site, designated 32ML2, centering about the famous late Mandan-Hidatsa-Arikara village known as Like-a-Fishhook Village from the former topography of the Missouri River at this point. Like-a-Fishhook Village is of particular importance in the history of the Three Affiliated Tribes, as they are officially known, since it was the last village at which they constructed and dwelt in earth lodges, and was occupied for nearly half a century, from about 1845 until the early 1890's.

The site of Like-a-Fishhook Village proper, during the past three field seasons (1950-1952), has been the scene of investigations by the State Historical Society of North Dakota, excavation having been made possible through cooperative agreements between the National Park Service and the Society. During the season of 1952 the Missouri Basin Project also excavated at 32ML2, but at a historic site of White provenience in the immediate vicinity of the great village. This was the site of Fort Berthold II, so designated to distinguish it from that of the first Fort Berthold, built in 1845 by the firm of Pierre Chouteau, Jr., of St. Louis, commonly known as the American Fur Company.

Fort Berthold II, built in 1858 by a group of traders competing with the earlier firm, was first called Fort Atkinson. It was known as Fort Berthold only after 1862, when the old post was burned by hostile Indians. This fire was the occasion for the Chouteau firm to acquire the use of the buildings of their previous competitors. Thereafter, a procession of trading firms maintained Fort Berthold until the Indian village itself was abandoned.

For more than forty years the trading posts at this point were the most important establishments of the kind between Fort Pierre in South Dakota and Fort Union at the Montana-North Dakota line. Not until the decline of the steamboat traffic on the upper Missouri and the crossing of the Dakotas by transcontinental railroads was the ultimate fate of these posts decided. By steamboat, vast quantities of goods for the Indian trade arrived from downriver transfer points such as St. Louis, Kansas City, Council Bluffs, and Sioux City.

The partial excavation of the site of Fort Berthold II produced a great quantity and variety of the more durable smaller objects of the trade, but none more profusely or more varied than the glass beads. Those found had probably been lost in actual handling in trade, since they were found within the enclosure of the post, and at the sites of storerooms where they had doubtless been kept. The supply of beads available to the traders here must have been ample for their needs, and they probably were not worth searching for when dropped. In excavation they were constantly encountered, widely scattered, and in the few instances in which they occurred in small groups or concentrations these appeared to be accidental. No specimens of beadwork on hides or fabrics were found, and only one or two small fragments of threaded beads were noted.

#### BEADS

Two general classes of beads are represented in this collection. The first is a small group, of bone and shell, probably of native origin; the second is a much larger group, of glass or glass-like material, typical of the imported trade goods. The beads in this latter group are sufficiently numerous—more than eight thousand specimens—that the collection may be of use for comparative purposes, and an attempt is here made to provide data of this kind.

On the first class of beads mentioned, those probably of native origin, the most interesting are eleven specimens of dentalia, a shell particularly well known throughout the West, in native ornamentation, during the nine-

teenth century. This shell was common on the Great Plains, reaching that area through both native and White trade channels. It is said to have been highly prized at Fort Berthold, where the White traders had found it "advisable" to obtain them for the trade. As late as 1866, ten small shells of this variety, costing the traders but one cent each, would buy a superior buffalo robe, and previously the value of this shell had been even higher (Matthews, 1877, 28). The traders are said to have obtained shells of this kind from eastern importers, and to have been unaware of their actual origins. Bits of abalone shell were also found here. These were known by the traders as California shells. California shells were also handled at other posts on the upper Missouri, as is known from inventories of stock taken at Fort Union and elsewhere in 1850 and 1851, where they seem to have been differentiated from "Sea Shells" and "St. Lawrence Shells" (McDonnell, ed., 1941, 201, 211, 228; see also Hewitt, ed., Denig, 1930, 590-591).

The fragmentary specimens of polished bone beads of the type frequently called "hair pipes" were also found. These are large cylindrical beads, tapered slightly from the middle toward each end, and some as great as four inches in length. They are frequently seen on the great necklaces favored by Plains people, in rows of beads fastened horizontally hung over the chest, or were worn in long strands about the neck. Although these hair pipes were of bone, they appear to be true trade goods, and to have been supplied to the Indian by White traders.

The second class of beads found, those of White rather than native origin, comprises those of glass or glassy material, the trade beads proper. These may again be divided into two large groups: the larger, generally more showy beads, suitable particularly for necklaces, and the smaller beads most frequently used for ornamenting hides or fabric, and sometimes called seed beads. Among the traders these seem to have also been called pound beads. Varieties mentioned, probably larger beads, and doubtless represented in the present collection include Pigeon Egg, Agate, Barleycorn and other types, in var-

ious sizes and colors. (McDonnell, ed., 1941, 195, 201, 210).

In the following accounts of trade beads from Fort Berthold II, the nomenclature suggested in Beck's comprehensive study of ancient beads has been followed as far as possible (Beck, 1928). No attempt has been made to identify precisely the material of which the beads are made; most of the specimens are certainly of true glass or frit (the partially-fused materials of glass), though a few of the larger specimens look not unlike ordinary earthenware, both glazed and unglazed. (Orchard, 1929, Plate III, opp. p. 88, shows similar large beads referring to them as though they were of glass.) Evidence of methods of manufacture is sometimes visible on the larger beads here described, and sometimes on the seed beads; the spiral structure of the matrix of some beads is visible on the surface or the end, near the perforation, the result of the rotary motion employed in handling viscid glass.

Measurements here given have been obtained with vernier calipers. The size of beads, particularly of the seed beads, however, grade imperceptibly from smaller to larger, and size groupings are therefore somewhat arbitrary. Much the same comment might be made regarding the colors. It has not seemed profitable to attempt to grade these colors according to standard color charts, inasmuch as the shades merge imperceptibly from one to another, and since there is in many instances extensive discoloration, resulting from chemical changes that have taken place through aging in the earth.

#### SEED BEADS

Glass beads predominantly oblate spheroid or sub-cylindrical, with an occasional eccentric shape; dull surface texture unless otherwise noted (Fig. 14).

Groups	Diam. (cm.)	No. Speci. (est.)
Colorless, translucent	.18-.28	26
Colorless, translucent	.12-.17	14
Total (colorless)		40
White, milky opaque (some have slight buff discoloration)	.33-.42	62

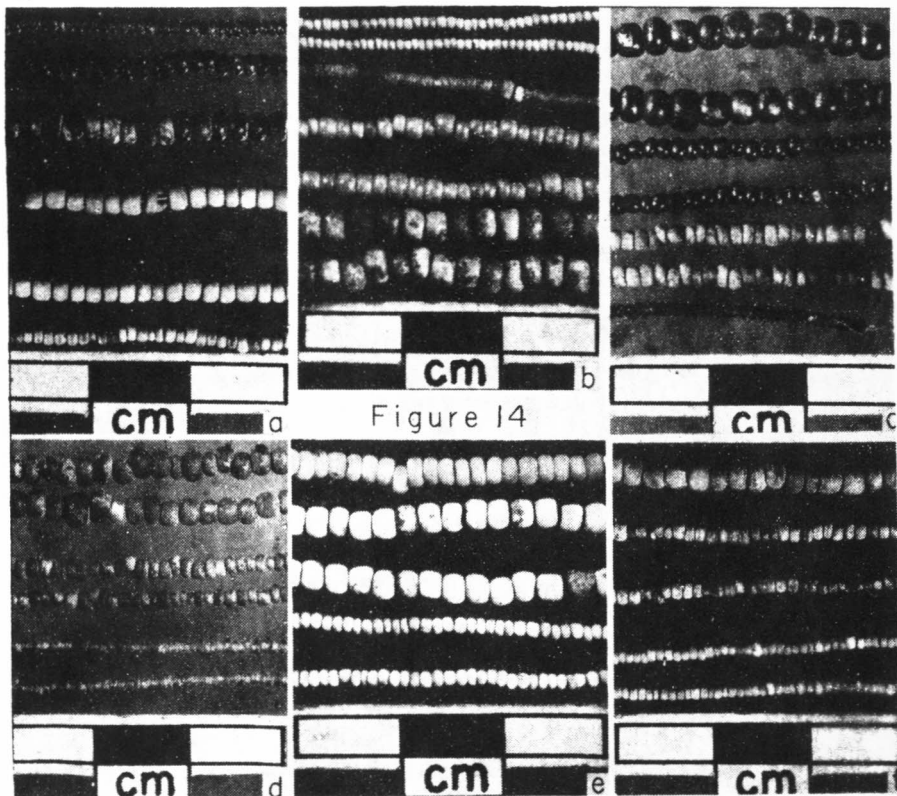


Fig. 14 Seed Beads from Fort Berthold.

Groups	Diam. (cm.)	No. Speci. (est.)
White, milky opaque (many have buff discoloration)	.18-.32	616
White, milky opaque	.12-.17	816
Total (white)		1494
Blue, bright, semi-translucent (extensive buff discoloration)	.33-.42	502
Blue, bright, semi-translucent (dull to glossy surface texture)	.18-.32	610
Blue, dark, translucent (extensive gray discoloration)	.18-.23	380
Blue, bright, semi-translucent; dull to glossy surface texture; some have small facets	.12-.17	70

Groups	Diam. (cm.)	No. Speci. (est.)
Blue, dark, translucent; some have small facets	.12-.17	102
Blue, pale opaque	.12-.17	774
Blue, pale slate, opaque	.12-.17	20
Blue, pale, translucent	.12-.17	34
Total (blue)		1992
Green, dark, translucent (extensive buff discoloration)	.23-.32	210
Green, dark, opaque (slight buff discoloration)	.18-.22	176
Green, dark, translucent (slight buff discoloration)	.18-.22	480
Green, pale, translucent; some have small facets	.12-.17	336
Total (green)		1202
Yellow, light, opaque (slight buff discoloration)	.23-.32	40
Yellow, amber, translucent (slight buff discoloration)	.23-.32	48
Yellow, amber, translucent (slight buff discoloration)	.13-.22	70
Yellow, light, opaque (slight buff discoloration)	.13-.17	1080
Total (yellow)		1238
Buff, opaque (slight buff discoloration)	.23-.32	420
Buff, opaque (slight buff discoloration)	.13-.17	462
Total (buff)		882
Pink, opaque (slight discoloration)	.23-.32	350
Pink, opaque (slight discoloration)	.13-.22	108
Pink, translucent; glossy surface texture; some have small facets	.13-.22	48
Total (pink)		506
Violet, dark translucent; glossy surface texture; some have small facets	.13-.17	38
Total (violet)		38
Red, bright, translucent, with white centers; glossy surface texture (A recent variety of Cornaline d'Aleppo, according to Orchard, 1929, 87.)	.33-.51	104



Groups	Diam. (cm.)	No. Speci. (est.)
Red, bright, translucent, with white centers; glossy surface textures (see above)	.21-.23	90
Red, dark, opaque; glossy surface texture	.17-.22	10
Red, bright, translucent; glossy surface texture	.13-.17	196
Red, dark, translucent; glossy surface texture; some have small facets	.13-.17	38
Total (red)		438
Black, opaque, dull or iridescent surface texture (slight discoloration)	.33-.42	88
Black, opaque, dull or iridescent surface texture	.18-.23	320
Black, opaque, dull or glossy surface texture; some have small facets	.13-.17	32
Total (black)		440
Grand Total (all colors)		8270

The color frequencies of the seed beads in this collection are of special interest, and probably reveal something of the preference of Indian users of beads at this time and place, which might be correlated with color preferences of the Three Allied Tribes known from ethnographic evidence or museum specimens of their work. It is known, for example, that the Arikara in Tabeau's time (about 1800), like the Sioux, preferred blue glass beads (Tabeau, 1939, 170 and elsewhere).

Approximately twenty-four percent of all the specimens of seed beads in the present collection are of blue; following this, in order of frequency, are white or colorless, eighteen percent; yellow, fourteen percent; and green, fourteen percent. Of all colors represented, these four comprise more than seventy percent of the total. Thereafter, there is a sharp decline in percentages of other colors, the more frequent being buff, pink, red, and black. It might be suggested that the relative frequencies of colors, as of sizes and types of beads, must have been

controlled primarily by the manufacturer and the trader, rather than the ultimate consumer, though an attempt would certainly have been made to furnish desired kinds. Some varieties and colors, of which relatively few specimens were found, may also therefore have been valued the more highly, by the buyer as well as by trader.

The sizes of the smallest of these beads are also of some interest in themselves. Although in actuality the beads in the collection grade imperceptibly from small to large, they tend to fall into three size groups—the smallest from 0.12 to 0.17 cm., those from 0.18 to 0.32 cm., and those from 0.33 to 0.42 cm. or larger. The smallest are amazingly small, and would have required the finest of needles for threading. Whether such fine needles were available here from the traders is not known, but fine sinew fibers must sometimes have been employed also for using the smallest beads in garnishing objects. From the frequent mention of the sale of bunches of beads, it seems probable that the smaller seed beads were often purchased in strands, and so re-used in decoration with rethreading.

#### LARGER BEADS

The larger glass beads in this collection, probably used particularly in necklaces, include several unusual and attractive specimens, some of which are unique in the collection. These are individually-made beads—the variety sometimes referred to as wire-wound beads—and some are individually hand-decorated as well, either by the application of bits of glass or frit or by "painting" with viscid glass or pigment before firing.

Three specimens of large size (max. diam. 0.9 - 1.0 cm. length 1.1 - 1.2 cm.) have a dull white matrix into which small round fragments of opaque blue glass—possibly waste derived from the manufacture of the smaller blue seed beads—were pressed (Fig. 15A). Four very similar beads with white matrix (max. diam. and length 0.9 cm.) differ only in the respect that both blue and pink fragments were used for decoration, being arranged in regular rows running around the bead. The decoration of

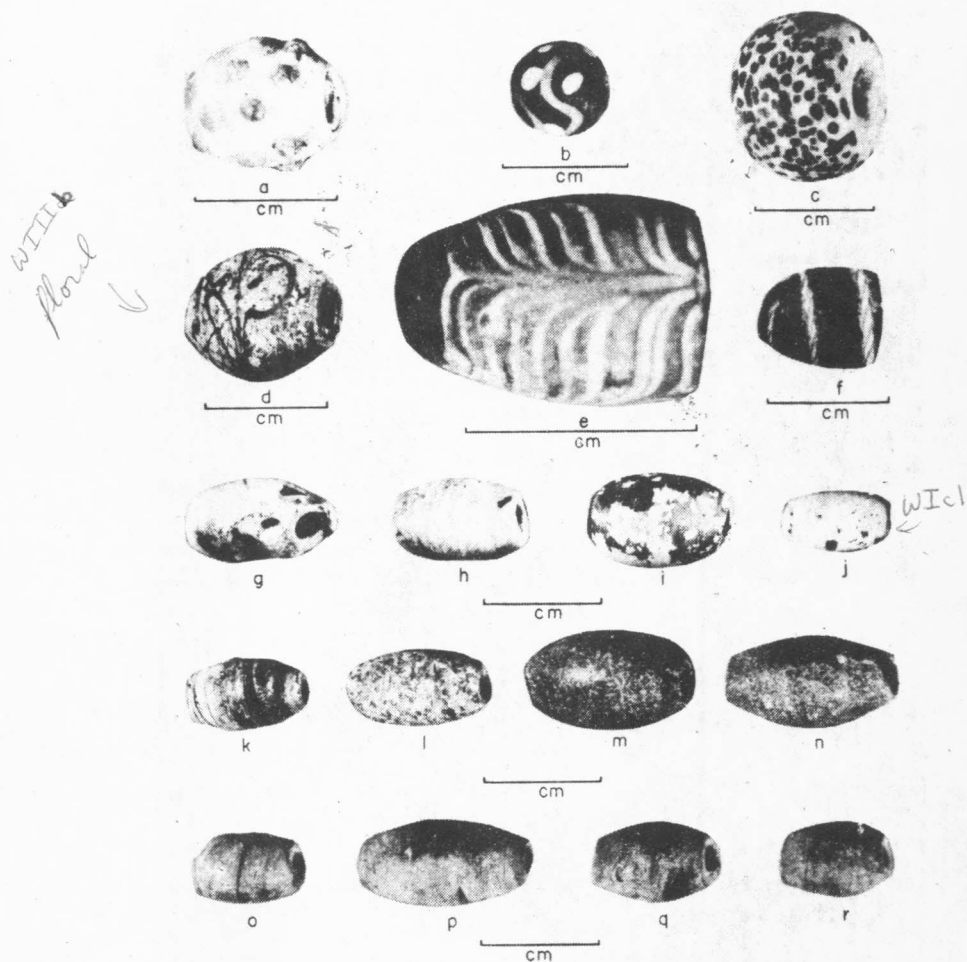


Fig. 15 Large Trade Beads from Fort Berthold.

these specimens is similar to that of beads illustrated in color by Orchard (1929, Plate III, opp. p. 88, upper row, third bead). A fragment of another bead has a matrix of opaque black glass decorated with large white bits, impressed into this matrix. Still another variety is illustrated by three specimens of opaque brown glass (max. dia. 1.1 cm.; length 1.0 cm.) decorated with "painted" spots of white, probably a slip or wash applied with a brush, and upon these, smaller spots of blue were ap-

plied. Not unlike this is a unique specimen of opaque dark blue glass (max. diam. and length 0.8 cm), the surface of which is prettily decorated with large white dots and wavy bands of dull yellow (Fig. 15 B). The largest bead in the collection is also one of the more striking specimens (max. diam. and length 1.4 cm.; flattened at the ends); this is of dull white, and decorated with a blue "spatter" (Fig. 15 C).

A small group of beads are rather skilfully painted with a thin pigment. A unique specimen (max. diam. 1.1 cm.; length 1.2 cm) bears a delicate floral decoration; the matrix of the bead is an off-white, the design is pale red, a "stem" with "leaves", continued around the bead (Fig. 15 D). This specimen is similar in style of decoration, though not in color, to beads illustrated in color by Orchard (1929, Plate III, upper row, fourth and eighth beads). A unique fragment of another variety is a bead of barrel shape (max. diam. 0.9 cm.; est. length ca. 1.8 cm.), of opaque blue glass, and hand painted (Fig. 15 E). In this instance, the decoration is in red, blue, and white pigment, in bands, giving the effect of marbling. Another unique fragment of decorated bead is of a translucent dark red glass, barrel shape (max. diam. 0.8 cm.; est. length 1.5 cm.) (Fig. 15 F). Here the decoration consists of a small thread of white frit resembling a twisted cord, molded with the matrix while viscid; this bead appears to be identical with a specimen illustrated in color by Orchard (1929, Plate III, third row, sixth bead).

*combed*

As may be noted in the case of the larger decorated beads mentioned above, the barrel shape is less numerous than the globular, and this is also true of the larger undecorated beads, though both shapes are represented. The barrel shape bead is represented here in various colors and sizes (Fig. 15 G-R). Seven specimens of translucent red glass, in this shape, are included in the collection (max. diam. 0.6 - 0.8 cm.; length 0.9 - 1.5 cm.). Three specimens of similar dimensions are of opaque green glass and seven of white glass (max. diam. 0.5 - 0.8 cm.; length 0.9 - 1.2 cm.), some of which have a dull surface, while others have a rather high glaze.

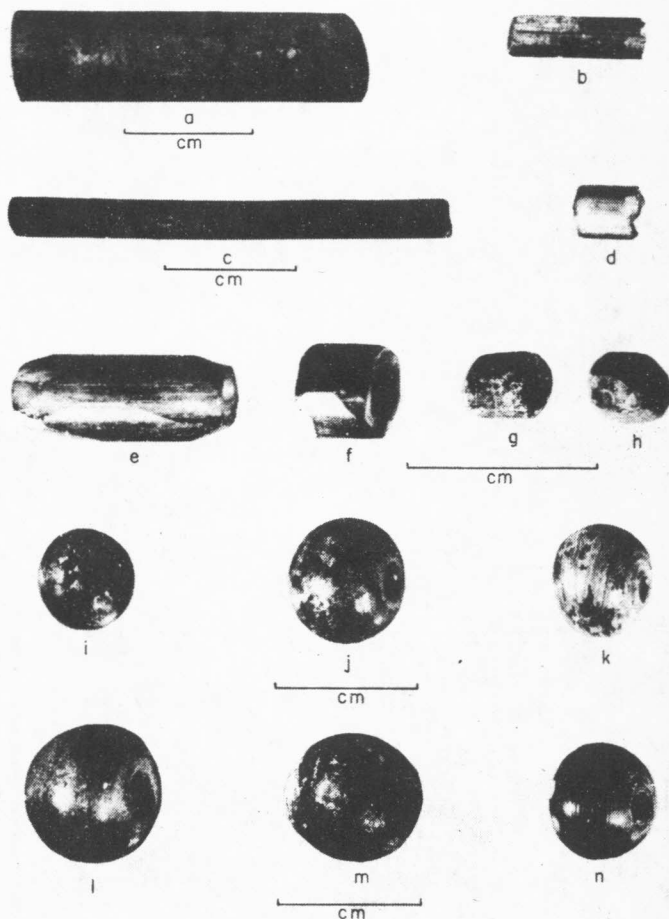


Fig. 16 Large Trade Beads from Fort Berthold.

Large undecorated globular beads are also present in some numbers (Fig. 16, i-n; 17, 15, p, q). Four are of black glass (max. diam. 0.9 - 1.1 cm.; length 0.7 - 1.1 cm.). One specimen is of opaque brown (max. diam. and length 0.9 cm.)—apparently an unusual bead color—and two are of translucent red glass (max. diam. and length 0.9 cm.). Seven are of translucent dark blue glass (max. diam. 0.7 - 1.2 cm.; length 0.5 - 1.2 cm.). Eight similar specimens are of opaque light blue (max. diam. 0.6 - 1.1 cm.;

length 0.7 - 1.0 cm.). Three are of a translucent green (max. diam. 0.7 - 1.0 cm.; length 0.7 - 0.9 cm.). A single bead is of opaque green (max. diam. and length 0.6 cm.), while another is of opaque pink (max. diam. and length 1.3 cm.). Finally, five specimens of the larger globular beads, undecorated, are of white (max. diam. 0.8 - 1.5 cm.; length 0.7 - 1.4 cm.). Enough has, perhaps, been said to indicate something of the irregularity and range in size, as well as of the color range, of these larger plain beads.

Unlike the wire-wound beads, to which class both the seed beads and the larger decorated specimens belong, the collection also includes beads manufactured from glass tubing—both long beads—the bugles—and short beads, both plain and faceted. A unique specimen, of white, is of this sort, having been made from hexagonal tubing (max. diam. 0.6 cm.; length 2.0 cm.) (Fig. 17 k), and another single specimen of the kind is of black (max. diam. 0.3 cm.; length 3.5 cm.) (Fig 16 c). Of the short beads made of hexagonal tubing, but lacking facets, and sometimes left with rough ends (Fig. 16, e-h; 17, a-c, f-h), some eight specimens are of colorless glass (max. diam. 0.3 - 0.5 cm.; length 0.4 - 0.6 cm.), while two others of colorless glass and similar in size were made with hand-cut facets. It seems probable that the faceting was done to improve the appearance of beads of this kind, since those lacking facets are frequently rough or irregular at the ends, according to the way in which they were broken from the tubing. Two specimens are of amber hexagonal tubing, of similar dimension. Eleven dark or light blue beads, made from hexagonal tubing, have added facets (max. diam. 0.4 - 1.0 cm.; length 0.5 - 0.9 cm.), while only one blue bead of similar size made of such tubing lacks the facets (max. diam. and length 0.4 cm.). Of dark green glass beads of this sort, faceted, there are three specimens (max. diam. 0.7 - 0.8 cm.; length 0.7 - 1.7 cm.), while those of dark green, unfaceted, are represented by eight (max. diam. 0.3 - 0.4 cm.; length 0.3 - 1.1 cm.). Finally, in this class, two specimens of beads made from hexagonal tubing but left unfaceted, of black glass, are

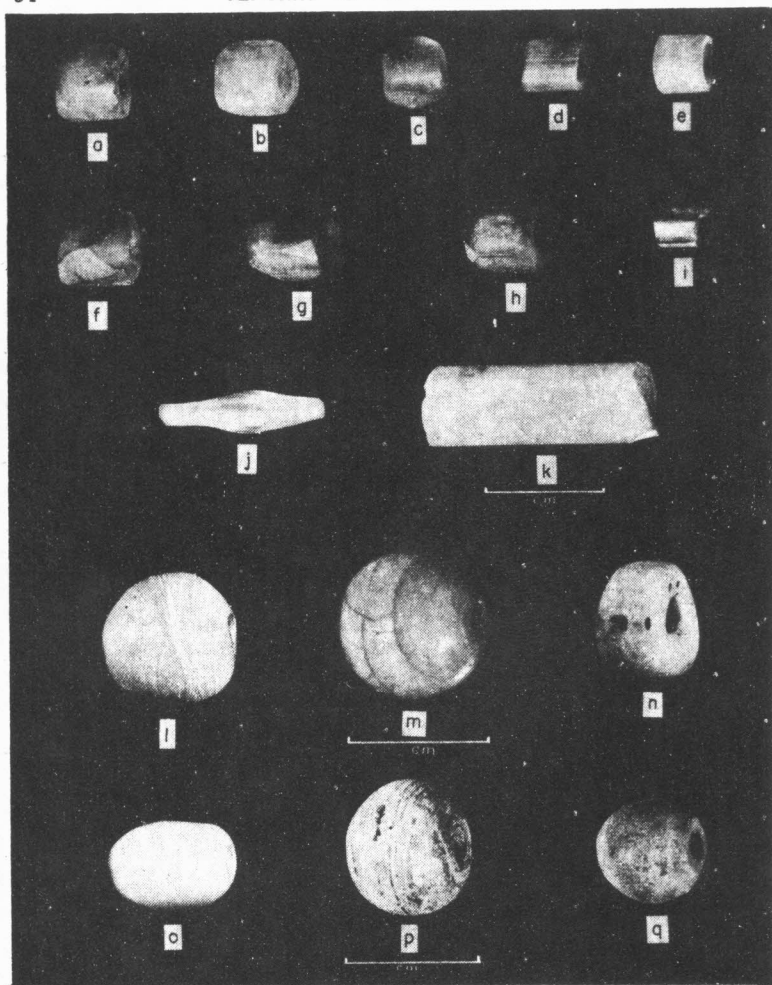


Fig. 17 Large Trade Beads from Fort Berthold.

included (max. diam. and length 0.6 - 0.7 cm.).

Beads fashioned from round, as contrasted with the hexagonal tubing, are also present, but this variety seems much less common. A single specimen made of cylindrical tubing is of black glass (max. diam. 0.7 cm.; length 2.7 cm.) (Fig. 16 a), while there are but five that are of white (max. diam. 0.2 - 1.1 cm.; length 0.6 - 2.7 cm.). To conclude this account, mention may be made of one opaque

buff and white bead, which appears to be of natural marble, and highly polished (max. diam. 1.1 cm.; length 1.0 cm.) (Fig. 17, m), a colorless bulbous shape bead, tapering to either end (max. diam. 0.3 cm.; length 1.3 cm.) (Fig. 17, j), and a black bead with large perforation (max. diam. 1.0 cm.; length 0.3 cm.), possibly an accidental product.

#### SUMMARY

The site of Fort Berthold and the adjacent Like-a-Fishhook Village is located on the upper Missouri River in west-central North Dakota, and played an important part in the history of the West from about 1845 to 1890. Among the numerous objects of White manufacture found in excavation at the site of the trading post at this point were more than eight thousand beads. Of these, a few were of bone, shell, and similar material other than glass. Although these beads are of materials native to North America, they are not native to this area, and are themselves essentially trade items. The remaining beads the greater proportion, are of glass or glassy material, the characteristic beads of the period of White trade. These glass beads include approximately 8270 seed beads and 100 larger beads.

It is hoped that the foregoing description and illustration of beads from the present collection may be of value for comparative purposes. Sites yielding glass beads, from the Atlantic to the Pacific, and from the Dakotas to Texas, may eventually be more clearly interpreted through comparison of trade goods found within them. Beads were a major item of trade at many such sites, and offer hope of further knowledge of native American history.



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