

ARCHAEOLOGICAL STUDIES

CIRCULAR No 10

REPORT OF THE INVESTIGATIONS OF THE
FOUR BEAR SITE, 39DW2
DEWEY COUNTY, SOUTH DAKOTA

1958-1959

BY
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too fragmentary and disturbed to determine the pattern of the elements. The right earring had a cylinder formed of spirals of iron wire, 14 mm. long and with an exterior diameter of 31 mm., inside a cylinder of brass spirals 2 mm. long, and with an exterior diameter of 38 mm. The other earring was fragmentary but is composed of copper spirals that form a cylinder 15 mm. long and with a maximum diameter of 35 mm., a copper cylinder of spirals that are 13 mm. long and have a maximum diameter of 28 mm., and iron fragments from a cylinder of spirals of wire. It is probable that the smaller cylinder of copper was inserted into the larger copper cylinder. The large copper cylinder has three strands of sinews spaced evenly around the perimeter of the cylinder encircling the spirals and probably used to hold the spirals in place. A strip of leather also encircles the spirals and was possibly used to attach the earrings to the ears.

All of the copper and brass spirals are identical in structure. They are made of long strips of sheet metal 15 mm. thick and approximately 10 mm. wide that are made into cylinders by rolling each longitudinal edge in toward the center of the strip so that the cross-section of the spirals is roughly heart shaped. One side of the earrings, the exterior side, presents an appearance of twice the number of spirals that the interior side has. The individual spirals of both the copper and brass of all the specimens have the same diameter which is 2.5 mm. overall and the diameter of the smaller spirals formed by incurving the metal on one side is 1.2 mm. The iron spirals are made of solid wire and are not cylinders. The diameter of the iron wire is 2.5 mm. Two fragments of copper identical to sections of the copper spirals of the earrings were found in the village proper in 1958. These are identical in all respects to the copper spirals described but were not formed into earrings. They may have been fragments of earrings or some other ornamentations.

GLASS BEADS

The only glass artifacts represented are trade beads. The beads recovered in 1958 were sent to Dr. Kenneth E. Kidd, Curator of Ethnology, Royal Ontario Museum, Toronto, Canada. Dr. Kidd writes, "In the present state of our knowledge, it is next to impossible to affix firm dates to glass beads; the best that can be done is to assign them to periods, and even here some degree of tolerance is necessary. I feel, however, that most of the beads from the Four Bear site are likely to be attributable to the very late 18th or the first quarter of the 19th century. There is no conclusive proof where any given bead of this period may have been made except to say that it was made in Europe." The glass beads recovered in 1959 were similar in most details to the beads recovered in the 1958 excavation.

a. Small Vari-colored Beads (Fig. 29, P-R)

These beads are small in size and are globular to ring shaped. Dr. Kidd writes, "It appears that there are several types in this lot, both as to color and shape, most appear to be constructed of two kinds of glass, an inner coat and an outer covering. These are ancient forms of

beads, which seem to have continued into the 19th century; hence, are difficult to date accurately. My guess would be that they are of late 18th or early 19th century origin".

Variety A. (676 specimens)

The beads in this variety are generally dull white in color but often have a brownish stain that partially obscures the white coloration. They are both circular and slightly cylindrical in shape with gradations between the two forms. The average size is 2 mm. long and 3 mm. in diameter. Unlike Variety B, below, these beads do not have great variation in coloration due to the flaking of the surface.

Variety B: (533 specimens)

These are blue beads basically but there are many variations in coloration due possibly to differential weathering of the surface of the specimens. The variations in color are all shades of blue, violet, lavender, and silver. It is felt that they were all originally similar because there are many single specimens that have several variations of coloration on their surfaces. It appears that several layers of either paint or some other material were originally on the beads and that these layers have flaked off to different degrees on different specimens exposing differences in coloration. All of the beads are circular in shape and do not approach cylindrical shapes. The average size is 3 mm. in diameter and 2 mm. in length.

Variety C: (53 specimens)

The specimens in this variety are white and have a pearly lustre that differentiates them from the other small glass beads. They are small in size, averaging 1.5 mm. in length and 2 mm. in diameter. All of these beads are globular in shape and do not approach cylindrical shapes.

b Large White Beads (Fig. 29, V)

These specimens are opaque white to very pale green in color and are differentiated from the other glass beads on the basis of size, shape, and coloration. They have been separated into three varieties on the basis of distinctive shapes but all share common features of coloration and texture and, while the majority of the specimens have smooth surfaces, some specimens in each variety have minute striations parallel to the length. Dr. Kidd writes, "Normally one would expect these to be wire-wound, but the longitudinal striations indicate that they are made by the "cane" method, for all their regularity. They are in an ancient tradition so far as shape is concerned but rather carelessly made which suggests strongly that they are of no great age--probably originating about 1800 plus or minus 25 years". Similar beads were found at the Dodd Site and Phillip Ranch Site (Lehmer, 1954:130) and were said to be found in early contact sites dating from 1690-1750 and were Venetian glass beads.

Variety A. (60 specimens)

These beads are very irregular in shape. Generally the extremities do not terminate symmetrically but are truncated tear-drop shaped. Normally the aperture does not penetrate the exact center of the bead but is off-center. The shape of the bead is oblong. The average length is 13 mm. and the diameter is 8 mm.

Variety B: (38 specimens) (Fig. 29, S)

Similar in all respects to Variety A except in its shape are 38 specimens of fairly regular shaped white glass beads, sometimes termed "barrel shaped". These specimens are parallel sided as a rule and have a somewhat symmetrical extremities of Variety A but are truncated close to the body of the beads. Although they are crude in design and there is some gradation of specimens between Variety A, the majority are distinctive enough to be recognized as a separate variety. The average length is 13 mm. and the average diameter is 7 mm. One specimen is not white but is stained green from direct contact with a copper artifact.

Variety C: (16 specimens)

These specimens either have a greater diameter than length or closely approach the same size in diameter and length. The average length is 7 mm. and the average diameter is 8 mm. The shape is generally that of a "doughnut". There is not any gradation between specimens in this variety and specimens in Varieties A and B. The specimens are distinctive on the basis of their short length to diameter ratio.

c. Spiral Decorated Beads (3 specimens) (Fig. 29, I)

Three beads were recovered that were decorated with three sets of lines composed of three parallel blue spiral lines in each set. The lines spiral from one extremity to the other with a "left hand twist". The shape is similar to the plain white beads, Variety A. The color of the spirals is dark blue, the outer surface of the beads is white and the core is light blue. Dr. Kidd says, "similar in shape and technique to those of Burial 3, but so heavily painted as to make determination of color difficult. It was probably pale blue glass, however. Into this matrix have been laid strips of glass of other colors resulting in a striped bead. This also is an ancient technique. My opinion is that it dates, however, about the same as those of Burial 3". The average length is 12 mm. and the average diameter is 8 mm.

d. Circular Translucent Beads (1 specimen)

One specimen of a translucent pale blue circular glass bead formed by a spiral drawing of glass was found. The structure of the glass spirals slightly and one end of the bead is slightly "tipped" by the projection of the end of the spiral. The shape is not quite circular due to the truncation of the two ends for the aperture. It measures 9.5 mm. long and 10.5 mm. in diameter.

e. Decahedral Beads (8 specimens) (Fig. 29, V)

A distinctive type of bead of translucent blue glass with facets forming a decahedral shape rather than a spherical shape were recovered

from the Four Bear site. Dr. Kidd says, "faceted beads of translucent blue glass. This type first comes to notice about 1700 but did not become abundant for another 75 to 100 years. A debased form was still popular on the Plains well into the 19th century. A likely date for this specimen would be late 18th century." Identical beads were found at the Dodd Site (Lehmer, 1954:130) and identified as an old type of Venetian trade bead on which the facets were formed while the glass was hot and still plastic dating well back into the 17th century. Later types of the same bead had cut facets. The facets on the specimens from the Four Bear site are concave and poorly formed similar to the specimens found at the Dodd Site. The average dimensions are 9 mm. long and 11 mm. in diameter

PERISHABLE MATERIALS

Despite the normal conditions that are not conducive to the preservation of food, skin, textiles, wood and other normally perishable materials, a small quantity of these materials were recovered from the excavations in the village and burial ground. The Pierre shale that underlies the soil has a high degree of gypsum which when dissolved by percolation of water forms sulphuric acid. This ditule acid attacks perishable materials and destroys them. (Harry Weakly, personal correspondence).

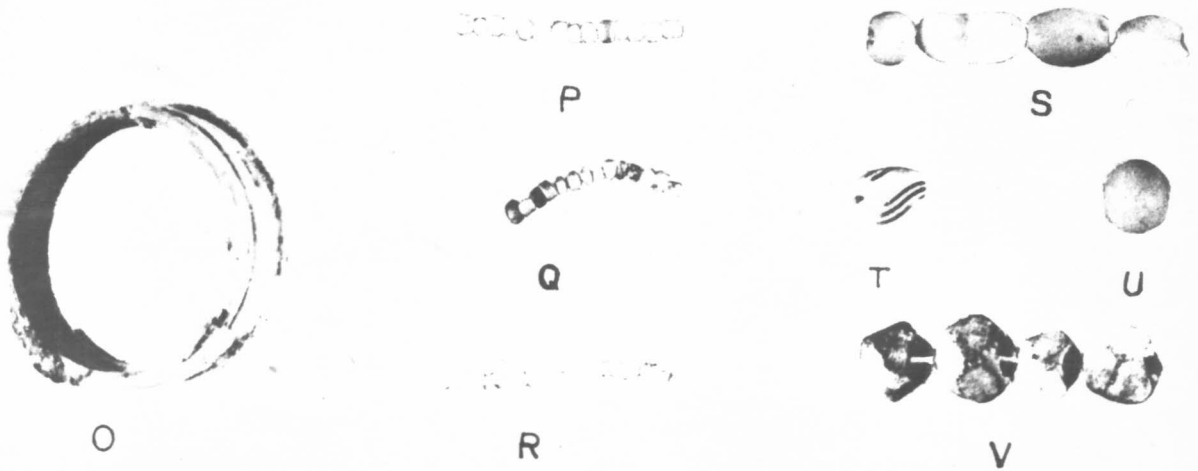
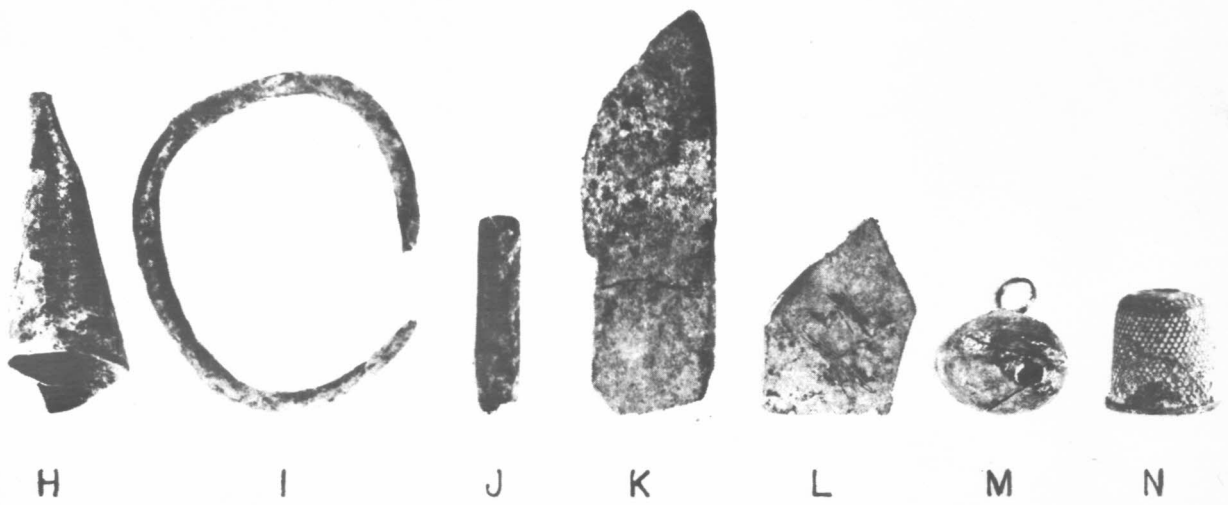
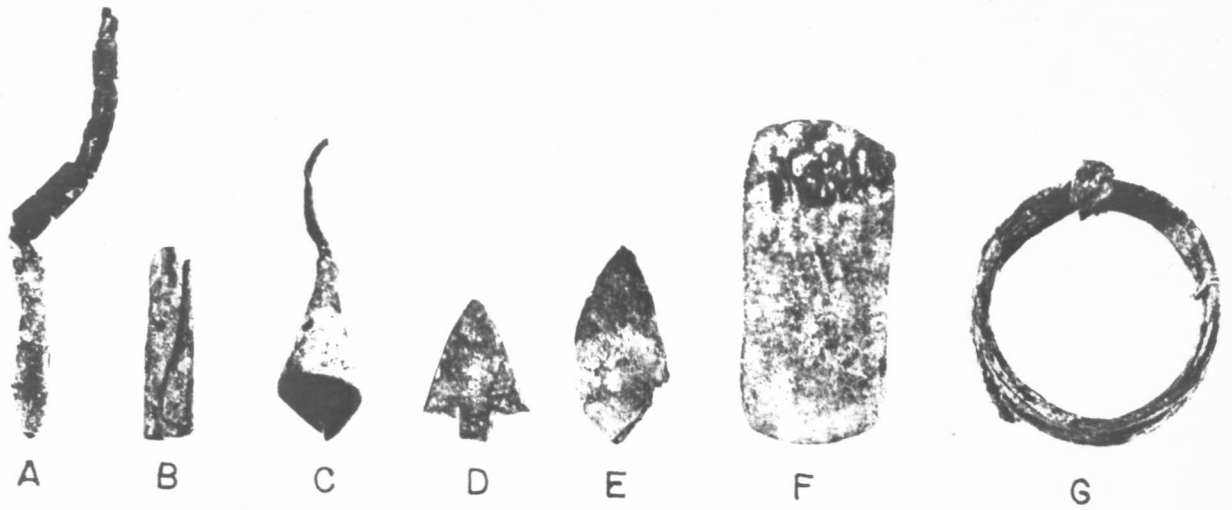
Basketry or Matting Outlines

Two burials in the 1959 excavation had the outlines of basketry associated with them. Only very minute decomposed fragments were recovered but the dense shale preserved the color and outlines of the elements. The materials associated with Burial 23-59 was too decomposed to collect but it was possible to determine that the colors were black and purple. The method of combining the elements was impossible to determine outside of the fact that it was composed of parallel rows of what were probably willow rods perpendicular to each other and possibly twilled. The specimen was oval shaped, 32 inches long and 18 inches wide immediately above the burial and covering the entire burial.

Probably associated with Burial 13-59, but removed by workmen before the provenience was established definitely, were fragments of a simple twilled mat. The warp pieces are willow rods and the weft elements are plant fibers (unidentifiable). The wefts are all passed through the warp elements similarly, with no variations. It is a simple process of passing all the rods over the same warp pieces and under the same successive warp elements. The fragments recovered were so fragmentary and badly decomposed that the description given may apply only to a fragment of the specimen. The colors of the elements are purple and black, possibly due to decorative techniques or because of discoloration from the shale matrix.

a. Fiber Mat

Lying at the base of the skull of Burial 18-59 was a square of unidentifiable fibers 80 mm. long, 80 mm. wide and 15 mm. thick. The mat was decomposed and its nature and materials are unknown. The fibers are brown in color



ALL SPECIMENS NATURAL SIZE

FIG. 29