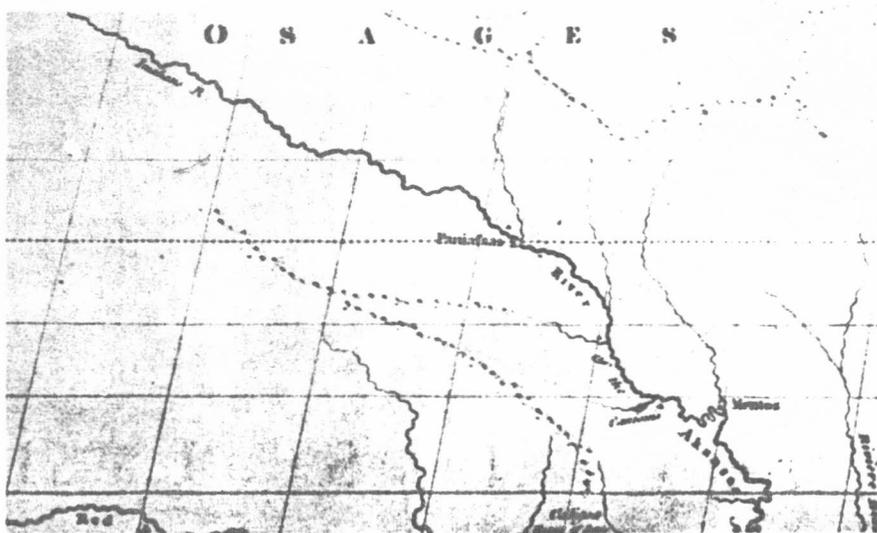


**KA-3, THE DEER CREEK SITE:
An Eighteenth Century French Contact Site
in
Kay County, Oklahoma**

Byron Sudbury



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PURPOSE

This paper is not a typical archeological report in several ways. First, it addresses itself primarily to an examination of surface collections from the site under study. Secondly, it considers only a small portion of the available artifact sample. Thus, an explanation of the criteria and reasoning behind the selection of materials for the preparation of this report is warranted.

When first introduced to the Deer Creek Site (Ka-3) and the Bryson site (Ka-5) (see Appendix II for a discussion of the Bryson site) on a November, 1966 field trip, I was very intrigued by what I was told of the presumed history of the sites, by the features I saw, and by the artifacts which I found. An examination of the literature for information about these two historic sites revealed that very little had been written about them. With this realization, I developed a desire to make surface collections from both sites and prepare a detailed report comparing and contrasting their respective artifact samples in an attempt to determine their relationship. With this objective in mind, I began to surface-hunt the sites whenever possible. I would go first to the Deer Creek site and then to the Bryson site, sometimes spending several days at a time collecting from them. Gradually, I began spending proportionally more time at the Deer Creek site. As this imbalance continued, my Deer Creek collection grew enormously while my Bryson collection remained small. When I finally was ready to begin a comparative analysis three problems presented themselves. First, I had an inadequate amount of cultural material from Bryson upon which to base an adequate comparison. The second problem was the great bulk of material which I had amassed from the Deer Creek site. The third problem was that I was starting college and the available time was not nearly adequate to prepare a report on my collection.

Now, several years later, the need for the report still exists. My desire to fulfill this need is still strong, but available time continues to be short. Thus, I have elected to prepare a report on the Deer Creek site. For this report, I have selected the fraction of materials most informative about the time and origin of the occupation which experienced the white contact evident at the Deer Creek site. The body of this report will deal with the trade goods. It is felt that the presentation of this data will fulfill several current needs. First, it will fill a void in the literature about when and by whom this site was occupied by supplying the supporting, comparative and artifactual data as well as the conclusions. Secondly, as the Deer Creek site is slated for excavation in the near future, it is hoped that the information in this report will assist the excavators in assessing the goals they set and the questions they hope to answer by their excavations. In addition, it is felt that this presentation will enable placement of the Deer Creek site in proper chronological sequence with several other related sites.

In conjunction with my initial hopes for this report, a brief description of some Bryson site trade goods is presented in Appendix II. This information is sufficient to allow comparison with the more complete Deer Creek site trade goods sample. Also, a brief summary of the native-made artifacts found at the Deer Creek site is given (Appendix III); this brief supplement is intended to complement the trade goods information by indicating the general types of native cultural debris present at the Deer Creek site.

Thus, the primary thrust of this paper is an in-depth analysis of the Deer Creek site based on the European contact materials present. In addition, information and conclusions regarding its relationship to the Bryson site is also included.

ACKNOWLEDGMENTS

As in any archeological endeavor, the aid of many persons is required to turn out a final report, and this work is no exception. I wish to express my appreciation to the following contributors to this study.

round kettle bail. This specimen is 5.36 cm. long and has an average diameter of 0.75 cm. The pointed end tapers from the shaft and is 0.8 cm. long; the tip appears broken off. At the base the original bail continued making a sharp acute angle with the existing specimen; the bail was broken at this point. The butt end of the finished object has a flattened triangular striking surface; this is made from what originally was the side of the bail. Some flaring resulting from pounding is evident at the base.

Wedge (NH; Figure 12:16)

One thin iron wedge occurs. This is the wedge type which was driven into the end of an implement handle to spread the end so the mounted tool would not move or come off. It is rectangular in front view, triangular in side view, and tapers gently to its pointed edge. It measures 4.63 cm. long, 1.43 cm. wide, and has a maximum thickness of 0.65 cm. at its flared basal end.

Large heavy wedges used for cutting metal scrap have been reported from a number of sites. However, handle wedges like the Deer Creek specimen are not mentioned in reports examined while preparing this manuscript. R. K. Harris (personal communication, 1973) reports that similar handle wedges are common at Spanish Fort.

Iron Awl (Figure 12:17)

A single, badly deteriorated iron piece might be the remains of a straight iron awl. It is 8.44 cm. long. An original end is not present, and the original cross section is not discernible.

The Womack site yielded one iron awl (Harris *et al.* 1965:349-351). Gilbert yielded nine awls, and only four are thought to be of European manufacture (*ibid.*). The Deer Creek specimen could be of either native or European manufacture.

Ornaments

In this section, the trade goods classified as ornaments are described. These include the glass trade beads, a lead bead, a circular sheet brass disc, sheet brass cylinders, sheet copper cylinders, sheet brass tinklers, sheet copper tinklers, a silver tinkler, brass rings, a sleigh bell, and a hawk bell.

Glass Trade Beads

Glass trade beads are a very significant part of any historic site artifact sample. Due to structural, stylistic, design, and color changes which occurred over a period of bead manufacturing, specific well-defined bead types can yield important information about the site they represent. An in-depth pilot study of this situation, specifically considering beads which were recovered from Wichita sites, has been made. This study made use of 106,354 glass beads from various collections which represented 18 different sites in Louisiana, Oklahoma, and Texas which are believed to have been occupied by Wichita peoples. By comparing the respective bead types from each site, a schedule of the time range of occurrence as well as the time of most prevalent usage was derived for each of the 184 glass bead types present. It was determined that some bead types were present for the entire time period (1700-1850) while others were in use for only a restricted time period as evidenced by their presence on sites of one period and absence on sites of other periods (Harris and Harris 1967:129-162, Figures 52 and 53). Thus, based on this work, it is possible to identify some bead types which are good time indicators. As long as additional data is being amassed, this definitive work (*ibid.*) will be subject to needed additions and revisions. However, based on the extensive sample which it is, the dates may be considered reliable.

In this study, the 1700-1850 time period was broken down into five segments as called for by the time of occupation of sites under consideration and by the changes noted in the bead types. These periods are:

- Period 1: 1700-1740
- Period 2: 1740-1767
- Period 3: 1767-1820
- Period 4: 1820-1836
- Period 5: 1836-1850 (Harris and Harris 1967:130)

The same period designations are used in the present report. Period 5 bead documentation is somewhat incomplete as only one site of this period was represented in the bead sample (*ibid.*:158).

The presentation of the bead sample from Deer Creek does depart somewhat from the Harrises' presentation. The sample is presented and analyzed on its own merits. Thus if two similar types of beads appear to be distinct groupings based on physical characteristics, they are presented as such. It is realized that there are size and shape variations within bead types resulting from the manufacturing process. With a larger bead sample perhaps these "clusters" of distinct bead types would disappear; however, based on the present sample they are evident and are therefore presented as separate entities. This presentation is based on the empirical facts and not on the supposition of what a more complete sample might indicate. This is the reason that, on occasion, two different Deer Creek types represent the same "Wichita Type" as defined by the Harrises. The description given is not meant to conform to established definitions, but to fully and accurately describe a bead sample from a previously unreported site. Whenever the Deer Creek bead type is comparable to a type defined in the Wichita bead report, this is noted and the assigned date is given.

In some instances, the term "subtype" is used. This term denotes that the various beads are, so far as known, identical in all aspects other than size. Thus, subtypes are different sizes of the same bead type; they are designated by the same bead type number followed by a small letter. The size designations and the diameters which they represent, based on Harris and Harris (ibid.:139), are:

extra large:	over 10.00 mm.
large:	6.05-10.00 mm.
medium:	4.05-6.00 mm.
small:	2.05-4.00 mm.
extra small:	0.00-2.00 mm.

The size of a bead generally had a correlation with its use. In the Womack report, we are told that "documentary evidence (Du Pratz--quoted in Swanton 1911:56) suggests that the larger beads were used mainly on necklaces, while the small and medium-sized ones were used principally on skins, garters, and the like" (Harris et al. 1965:307).

The dimensions of the beads within each type are given. These are presented in the form of a size range (smallest and largest of each measurement) and the average dimensions (when more than two specimens are present). These values are presented in the order of bead diameter, bead length (or height), and hole diameter.

In the bead descriptions, other physical characteristics are also described. One of these is the method of manufacture. A brief summary of the various techniques used in producing the beads in this sample is given here; more extensive descriptions are available in the literature (Kidd and Kidd 1970:45-70; Good 1972:95-97; Harris and Harris 1967:134-138). The majority of beads in the Deer Creek sample were made by a technique referred to as the hollow cane method. In this procedure, a mass of molten glass with a central air bubble was drawn into a long slender rod. Upon cooling, this cane was cut into short sections of the desired length. Often, these beads were tumbled to give them a more spherical shape; this process also served to smooth down the rough cut ends. Additional variations of this method included layering a second type of glass on top of the first to form a compound bead, or inlaying slender glass rods of varying colors in the surface to yield the stripes of a complex bead. A second method of bead manufacture represented in the Deer Creek bead sample is the mandrel wound technique. In this method, the bead is formed by winding a molten thread or rod of glass around a mandrel (wire) which was later removed. Beads of this type could be further modified by pressing them into desired shapes, a process referred to as molding.

As indicated, three structural complexities are recognized (Duffield and Jelks 1961:40-41). Simple beads are composed of one single homogeneous unit of glass. Compound beads have at least two structural components in the form of layer(s) of glass superimposed over the original layer. Complex beads are beads which consist of one or more layers of glass which have glass rods pressed into the outside layer of glass forming stripes.

Having considered Good's (1972:98) comments, use of the Munsell Book of Color (1957) as a color reference seemed desirable. However, due to its lack of general availability, it was decided to use a more readily accessible standard color reference. Thus, the colors given in the bead descriptions are taken from Bustanoby (1947:28, and Plate 8).

Bead shape is also an important physical parameter used in this presentation. The shape of a bead is determined by examining the bead perpendicular to its axis (hole) [most of the beads are round in cross section]. The particular nature of the Deer Creek site bead sample seems to necessitate a deviation from previously used descriptive shape terminology. The set of

Table 2. Definitions for terms used in describing the Deer Creek trade bead sample.

Tubular: a bead with straight parallel sides, and a length at least two times its diameter, (Plate 13:2).

Spherical: a bead with strongly convex sides which form a continuous curve with the ends (i.e., circular), (Plate 13:8a, 8b).

Olive-shaped: a bead with its greatest diameter in the middle, and which gently constricts towards both ends, (Plate 13:6).

Elongated Olive-shaped: an olive-shaped bead in which the medial section possesses a parallel-sided region as if it was an olive-shaped bead that have been stretched in the middle, (Plate 13:1).

Doughnut-shaped: a bead, with diameter greater than height, which is flat and disc-like in appearance. The ends and sides merge in a continuous unbroken curve, (Plate 16:66). Note that the ends are not distinctly flattened.

Cylindrical: a bead with relatively straight and parallel sides. At the point where the sides merge with the end of the bead, there is an abrupt angular change. The length to diameter ratio is less than 2:1, (Plate 15:48D).

Barrel-shaped: a bead with flattened ends, and weak to strongly convex sides (no straight region). The transition from side to end is not as sharp as in the cylindrical bead. Due to the range of side curvatures, each type will be descriptively designated as weakly (Plate 13:17), moderately (Plate 13:18), or strongly (Plate 13:7) convex.

(These last two shape entries are each subdivided into three subgroups:

elongate: length noticeably greater than diameter,

symmetrical: length and diameter nearly equal, and

short: length noticeably less than diameter.

to give enhanced descriptive terms such short barrel-shaped, symmetrical cylindrical shaped, etc.)

terms used in this report are defined above (Table 2) and a good illustration of each shape is referenced. Hopefully, this greater specificity in terminology will enable the reader to better visualize the bead's shape.

In an attempt to further clarify the bead descriptions, additional photographs have been provided. A representative specimen of each bead type is illustrated by four different photographs. The first one, located in column A, is a perspective view showing both the end and side view of the bead. This shot is reproduced at actual size, and is to illustrate the size and general shape of the bead. Columns B, C, and D are two times actual size, and are presented to give more detail of the particular specimen. B is an end view, C is a side view (the hole is horizontally situated), and D is another angle shot like A.

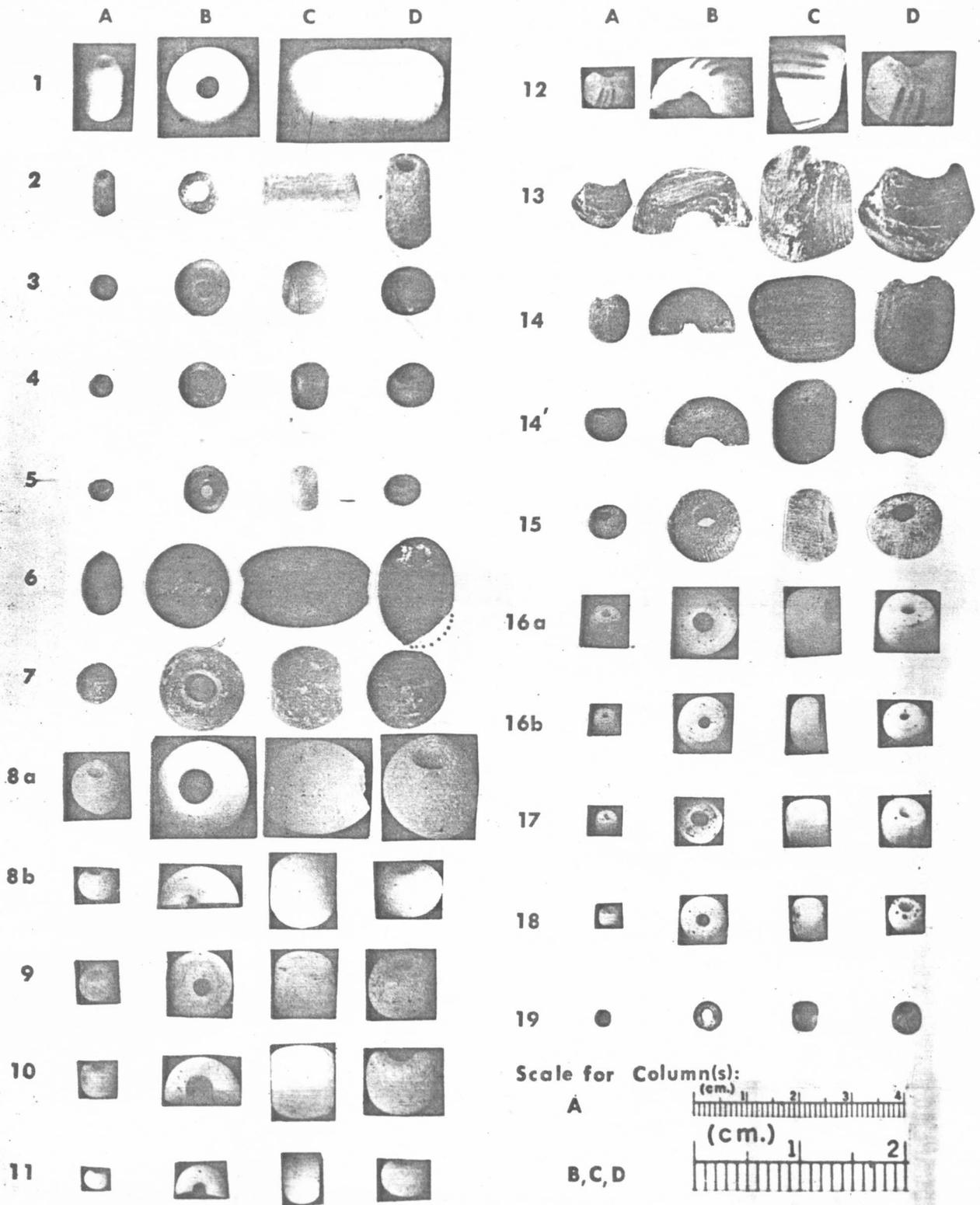


Figure 13. Ka-3 (Deer Creek Site) Glass Beads: 1-19. Bead Types 1-19 respectively. Small letters represent subtypes, and apostrophe represents a second specimen of the same type. Column A is actual size, and columns B, C, and D are two times actual size.

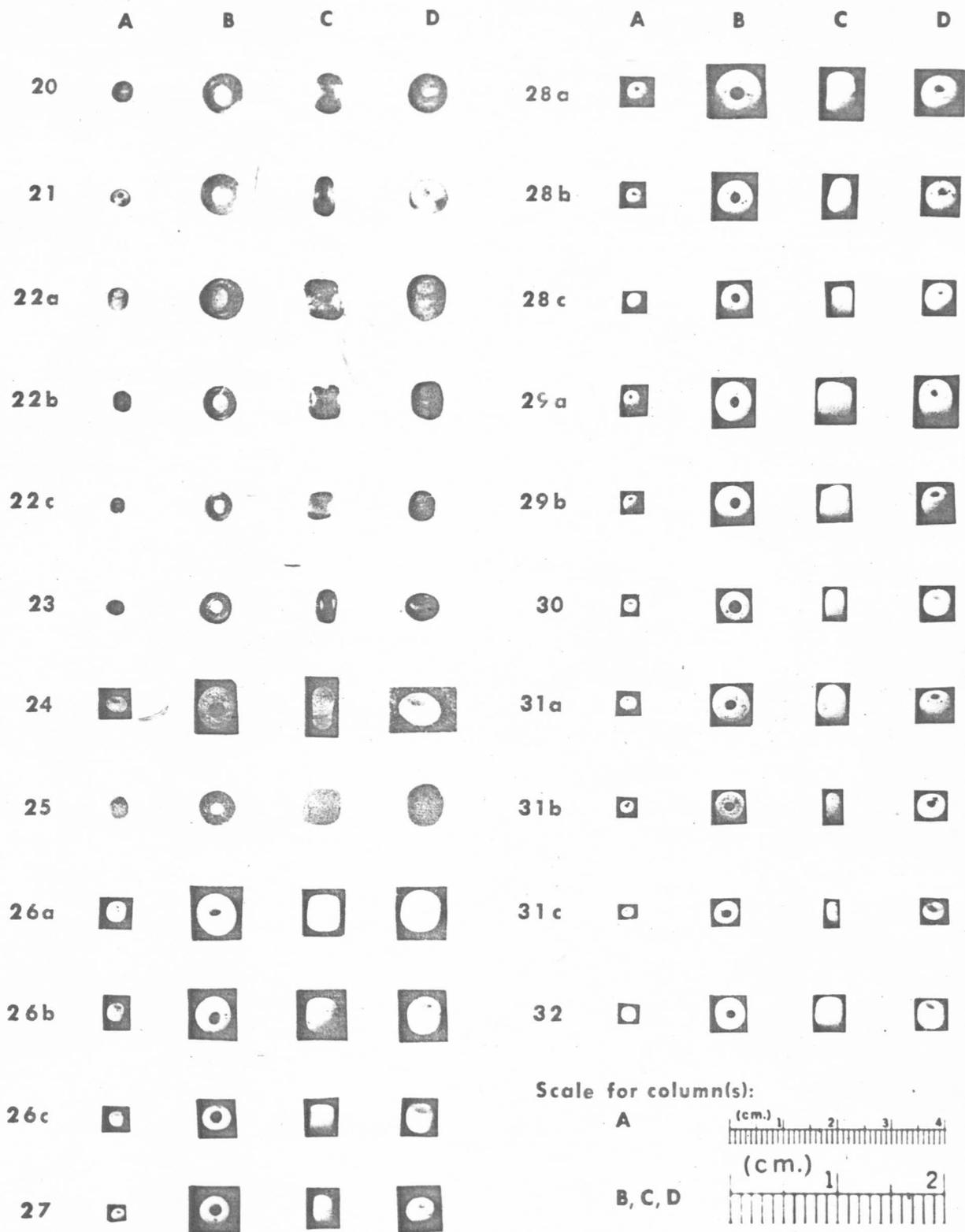


Figure 14. Ka-3 (Deer Creek Site) Glass Beads: 20-32. Bead Types 20-32 respectively. Small letters represent subtypes. Scales as indicated.

The following abbreviations are incorporated into this bead description. Most of the beads are of Hollow Cane (HC) construction. T represents Tumbled in which the ends of the beads were smoothed down; UT means UnTumbled. WBTN refers to the Wichita Bead Type Number assigned the bead type by Harris and Harris (1967:159-155); the dates presented are also from this source.

Following is the description of the 229 beads found at the Deer Creek site. Three small white beads are so deteriorated as to be unclassifiable, and one Copenhagen Blue bead has been melted into a shapeless glob. The other 225 beads are described in the following 75 bead types.

- Bead Type No. 1 (Figure 13:1): 1 specimen, 1 fragmentary specimen (NH)
 Dimensions: 7.80, 15.20, 2.00-8.00, 13.10, 2.20 mm.
 Description: This large opaque white bead of simple construction is elongated olive-shaped and has a porcelain-like texture. One of the specimens is constricted in the middle. (HC, T). WBTN 2; this type was used predominantly from 1700-1740, and continued to occur in small numbers through Period 2.
- Bead Type No. 2 (Figure 13:2): 1 specimen
 Dimensions: 4.00, 8.40, 1.70 mm.
 Description: This small opaque Brittany Blue bead is of simple construction. The middle of this tubular bead is slightly constricted. The glass has a fine fibrous texture. (HC, T). WBTN 56; the primary date of occurrence of this type seems to be Period 1 with some examples occurring through Period 2.
- Bead Type No. 3 (Figure 13:3): 5 specimens (1NH)
 Dimensions: 4.85, 2.80, 0.80-5.30, 3.85, 1.40; 5.30, 3.30, 1.20 mm.
 Description: These medium opaque Gobelin Blue beads are of simple construction. They are short barrel-shaped with strongly convex sides. (HC, T). WBTN 15; this type was predominant in Period 1, but continued to be used through Period 2.
- Bead Type No. 4 (Figure 13:4): 4 specimens
 Dimensions: 4.25, 2.40, 1.00-4.80, 3.00, 1.60; 4.45, 2.80, 1.25 mm.
 Description: These medium opaque Gobelin Blue beads are of simple construction. They are short barrel-shaped with strongly convex sides. (HC, T). This type differs from No. 3 only in being a cluster of beads of different size; after this type, beads with this relationship will be classed as subtypes. WBTN 15; this type was predominant in Period 1, but continued to be used through Period 2.
- Bead Type No. 5 (Figure 13:5): 3 specimens (1WR), 1 fragmentary specimen
 Dimensions: 3.20, 1.70, 1.00-3.90, 2.00, 1.40; 3.55, 1.85, 1.20 mm.
 Description: These small opaque Gobelin Blue beads are of simple construction. They are very short barrel-shaped with strongly convex sides. These are slightly lighter in color than No. 3 and 4. (HC, T). WBTN 47; these were primarily traded during Period 1 although their trade continued through Period 2.
- Bead Type No. 6 (Figure 13:6): 1 specimen (WR)
 Dimensions: 7.30, 11.30, 2.00 mm.
 Description: This large translucent Bluebird Blue olive-shaped bead is of simple construction. (HC, T). WBTN 13; this type was predominant in Period 1, but continued to occur until the end of Period 2.
- Bead Type No. 7 (Figure 13:7): 1 specimen (NH)
 Dimensions: 7.70, 6.20, 2.50 mm.
 Description: This large slightly translucent Pimento bead is of simple construction. It is short barrel-shaped with strongly convex sides. It was made by the mandrel wound technique. This bead type has not been previously reported. R. K. Harris (personal communication, 1973) suggests that this new type is probably related to the early mandrel wound pieces and will probably be found to occur in Period 1, possibly in Period 2.
- Bead Type No. 8a (Figure 13:8a): 1 specimen, 2 fragmentary specimens
 Dimensions: 9.10, 9.70, 3.00 mm.
 Description: This large opaque white bead is of simple construction. It is spherical in shape, and has a porcelain-like texture. (HC, T). WBTN 3; this type was used predominately during Period 1 but continued to occur in smaller quantities until the end of Period 3.
- Bead Type No. 8b (Figure 13:8b): 3 fragmentary specimens
 Dimensions: 7.00, 6.30, 1.90-7.30, 7.90, 2.10; 7.15, 7.10, 1.95 mm.
 Description: These are large opaque white beads of simple construction. They are spherical and have a porcelain-like texture. A rounded protrusion is present on an end of one specimen. This is probably due to the glass cane breaking imperfectly, with tumbling smoothing down the projection. This type is identical to No. 8a in every way except for size. (HC, T). WBTN 3; this type was used predominately in Period 1, with some usage continuing through Period 3.

- Bead Type No. 9 (Figure 13:9): 2 specimens
 Dimensions: 6.50, 5.70, 1.70-8.20, 7.60, 2.20 mm.
 Description: These large white opaque beads are of simple construction. They are short barrel-shaped with strongly convex sides, and are porcelain-like in texture. (HC, T). WBTN 3; this type was used predominately in Period 1 although limited use continued through Period 3.
- Bead Type No. 10 (Figure 13:10): 1 fragmentary specimen
 Dimensions: 7.20, 5.90, 2.40 mm.
 Description: This large opaque white bead is of simple construction. It is short barrel-shaped with moderately convex sides. Its outer surface is covered with striations, and it has a porcelain-like texture. (HC, T). WBTN 3; this type was used primarily in Period 1, with its occurrence continuing through Period 3.
- Bead Type No. 11 (Figure 13:11): 1 fragmentary specimen
 Dimensions: 4.70, 3.30, 1.20 mm.
 Description: This medium opaque white bead is of simple construction. From the end, it appears pseudo-compound; however, examination of its interior shows its simple construction. It is short barrel-shaped with strongly convex sides. (HC, T). According to R. K. Harris (personal communication, 1973), even though it is of smaller size this bead also falls in WBTN 3 which was used primarily in Period 1 but which continued to be present in reduced numbers through Period 3.
- Bead Type No. 12 (Figure 13:12): 1 fragmentary specimen
 Dimensions: 8.90, ?, 2.40 mm.
 Description: This large bead is of complex construction. Its opaque core has a light Turquoise tint, the outer layer of glass is an opaque (very slightly bluish) white, and the stripes are Bluebird Blue. Two complete sets of three stripes are represented as well as part of a third set. Originally, there were three sets of three stripes on this fragmentary olive-shaped bead. The stripes are not deeply set and may be felt protruding above the surface. This bead is porcelain-like in texture. (HC, T). Beads of this type were found at the Guebert site (Good 1972:124, color plate 6). Good (correspondence, 1974) informs me that the color of the stripes on the Deer Creek specimen is identical to the color on the Guebert specimens. Harris (personal communication, 1973) includes this type in WBTN 23. This type was prevalent in Period 1, and continued to appear in small numbers until the end of Period 3.
- Bead Type No. 13 (Figure 13:13): 1 fragmentary specimen
 Dimensions: 11.00, 8.90, 3.80 mm.
 Description: This extra large simple translucent Copenhagen Blue bead is of mandrel wound construction. It originally had eight pressed facets, and it has flattened ends. This bead appears identical to WBTN 40 (Bluebird Blue), and has been assigned a date of primary occurrence during Period 1 with occasional examples being seen through Period 3.
- Bead Type No. 14 (Figure 13:14,14'): 14 fragmentary specimens (4NH, 2WR)
 Dimensions: 6.80, 5.80, 1.90-8.10, 9.80, 2.40; 7.25, 7.30, 2.15 mm.
 Descriptions: These large opaque beads of simple construction range from Turquoise to Peacock Blue in color. These beads are all barrel-shaped and range from short to elongate with side curvatures ranging from weakly to strongly convex. These beads all have a fibrous texture and are badly weathered; their quality of manufacture also seems to have been quite variable. (HC, T). WBTN 10; this type was most prominent in Period 1, but continued to be traded through Period 4.
- Bead Type No. 15 (Figure 13:15): 5 specimens
 Dimensions: 4.40, 3.00, 1.40-6.90, 4.80, 2.10; 5.50, 3.80, 1.60 mm.
 Description: These medium opaque Peacock Blue beads are of simple construction. They are short barrel-shaped with strongly convex edges. They have a very fibrous texture with the fibers running lengthwise along the bead. (HC, T). WBTN 11; this bead type was primarily present in Period 1, but continued to be traded through Period 4.
- Bead Type No. 16a (Figure 13:16a): 1 specimen
 Dimensions: 6.50, 4.30, 1.70 mm.
 Description: This large opaque white bead is of compound construction. It has an opaque white core and a thick outer layer of clear glass which appears frosted, probably due to age. This specimen is short barrel-shaped with strongly convex edges. (HC, T). WBTN 4: this type first appeared in Period 1 when it occurred in very large numbers. It was present in Periods 2-4 in reduced numbers.
- Bead Type No. 16b (Figure 13:16b): 3 specimens (1WR)
 Dimensions: 4.90, 2.90, 0.90-5.30, 3.30, 1.20; 5.05, 2.80, 1.05 mm.
 Description: These medium opaque white beads are of compound construction. They have an opaque white core, and an outer layer of clear glass which is fairly thick; this layer appears frosted, probably due to age. These beads are short barrel-shaped with strongly

convex sides. (HC, T). WBTN 5: This type appeared in Period 1, was present in reduced numbers in Period 2, and continued to be present in very small numbers through Period 4.

Bead Type No. 17 (Figure 13:17): 1 specimen

Dimensions: 4.40, 3.90, 1.20 mm.

Description: This medium opaque white bead is of compound construction. It has an opaque white core and a clear outer layer which appears frosted, probably due to age. It is short barrel-shaped and has weakly convex sides. (HC, T). WBTN 5; this type was most prominent in Period 1, present in reduced numbers in Period 2, and continued to be present in very small numbers through Period 4.

Bead Type No. 18 (Figure 13:18): 2 specimens

Dimensions: 4.20, 2.90, 1.40-4.70, 2.50, 1.70 mm.

Description: This medium opaque white bead is of compound construction. It has an opaque white core and a thin outer layer of clear glass which is frosted, probably due to age. These beads are short barrel-shaped with moderately convex sides. (HC, T). WBTN 5; this bead type was most prominent in Period 1, present in reduced numbers in Period 2, and present in very small numbers through Period 4.

Bead Type No. 19 (Figure 13:19): 2 specimens

Dimensions: 3.10, 2.30, 1.00-3.30, 2.50, 1.00 mm.

Description: These small opaque beads are of compound construction consisting of three layers of glass. The thick inner Surf Green layer is translucent, the middle Brick Red layer is opaque, and the very thin clear outer layer is transparent. This bead type is short barrel-shaped with weakly convex sides. (HC, T). WBTN 51: This bead type, referred to as a small "Cornaline d'Aleppo", is present in rather high numbers in Periods 1 through 3, and in very high numbers in Period 4.

Bead Type No. 20 (Figure 14:20): 12 specimens

Dimensions: 2.80, 1.95, 1.00-3.90, 2.60, 1.50; 3.35, 2.30, 1.20 mm.

Description: These small translucent Bluebird Blue beads are of simple construction. These beads are short barrel-shaped with moderate to strongly convex sides. (HC, T). WBTN 48; this bead type was present in large numbers from Periods 1 through 3, and in very large numbers in Period 4 before disappearing from trade at the end of Period 4.

Bead Type No. 21 (Figure 14:21): 9 specimens (1 WR)

Dimensions: 3.00, 1.30, 0.90-4.00, 2.40, 1.50; 3.60, 2.00, 1.15 mm.

Description: These small translucent Bluebird Blue beads of simple construction are doughnut-shaped. (HC, T). WBTN 48: This bead type appeared in quantity in Period 1 and continued to be present through Period 4 when it was present in larger quantities.

Bead Type No. 22a (Figure 14:22a): 2 specimens

Dimensions: 3.80, 3.20, 1.50-3.80, 3.70, 1.10 mm.

Description: These small translucent Bluebird Blue beads are of simple construction. They vary from symmetrical to short cylindrical. (HC, T). WBTN 48; these beads were present in Periods 1-3 in large numbers and occurred in Period 4 in even larger numbers.

Bead Type No. 22b (Figure 14:22b): 7 specimens

Dimensions: 3.10, 2.50, 1.10-3.50, 3.35, 1.40; 3.30, 2.75, 1.30 mm.

Description: These small translucent Bluebird Blue beads are of simple construction. These specimens range from symmetrical to short barrel-shaped with weakly convex sides. (HC, T). WBTN 48; this type was present in large numbers in Periods 1-3 and was present in even larger numbers in Period 4.

Bead Type No. 22c (Figure 14:22c): 2 specimens

Dimensions: 2.70, 2.30, 0.90-2.70, 2.50, 0.90 mm.

Description: These small translucent Bluebird Blue beads are of simple construction. They range from short cylindrical to short barrel-shaped with weakly convex sides. (HC, T). WBTN 48; this bead type was present in large numbers in Periods 1-3 and was present in even larger numbers in Period 4.

Bead Type No. 23 (Figure 14:23): 1 specimen

Dimensions: 3.20, 1.90, 0.90 mm.

Description: This small doughnut-shaped bead is of simple construction. The ends near the hole are slightly depressed. This specimen appears to be opaque black; in strong light, it is a very dark wine color. (HC, T). This appears to be the same as WBTN 50; these beads are present in Period 1-3 sites in large numbers and are most numerous in Period 4 sites.

Bead Type No. 24 (Figure 14:24): 1 specimen

Dimensions: 3.40-4.00, 2.10, 1.30 mm.

Description: This small doughnut-shaped bead is of simple construction. It is clear although it appears frosted due to age. As indicated by the dimensions, this bead is somewhat oblong. (HC, T). WBTN 49; this bead type is present from Period 1 in large quantity with the largest quantity being present in Period 4.

Bead Type No. 25 (Figure 14:25): 2 specimens (2WR)

Dimensions: 3.20, 2.90, 1.20-3.50, 3.50, 0.90 mm.

Description: These small opaque Peacock Blue beads are of simple construction. They are symmetrical barrel-shaped with weakly convex sides. They have a fibrous texture. (HC, T). WBTN 46; these beads are most predominant from Period 4 sites although they were quite common in Periods 1-3 as well.

Bead Type No. 26a (Figure 14:26a): 2 specimens (2WR)

Dimensions: 3.60, 3.20, 1.00-3.60, 3.30, 1.10 mm.

Description: These small opaque white beads are of simple construction. These beads, and the other two subtypes in this grouping, are all pseudo-compound in that they appear to have two layers. Close examination indicates that the bead is simple and appears compound due to abrasion (as the result of wear) on the ends. These beads are short barrel-shaped with weakly convex sides and have a porcelain-like texture. (HC, T). WBTN 44; this type occurred in large numbers in Periods 1-3, and was present in largest numbers in Period 4.

Bead Type No. 26b (Figure 14:26b): 1 specimen

Dimensions: 3.10, 2.80, 1.10 mm.

Description: This small opaque white pseudo-compound bead is of simple construction. It is short barrel-shaped with moderately convex sides and has a porcelain-like texture. (HC, T). WBTN 44; this bead type was present in large numbers in Periods 1-3, and was present in largest numbers in Period 4.

Bead Type No. 26c (Figure 14:26c): 3 specimens (2WR)

Dimensions: 2.60, 1.50, 0.80-2.90, 2.30, 1.00; 2.70, 2.05, 0.90 mm.

Description: These small opaque white pseudo-compound beads are of simple construction. They are short barrel-shaped with weakly convex sides and have a porcelain-like texture. (HC, T). WBTN 44; these beads occur in large numbers in Periods 1-3 and are in the largest numbers in Period 4.

Bead Type No. 27 (Figure 14:27): 2 specimens

Dimensions: 2.70, 1.80, 1.00-3.15, 2.00, 0.90 mm.

Description: This small opaque white bead type is of simple construction. It is short barrel-shaped with moderately convex edges. (HC, T). R. K. Harris (personal communication, 1973) places this type in WBTN 44, which was introduced in Period 1, continued in large numbers through Period 3, and was used in very large numbers in Period 4. The Deer Creek specimens seemingly differ from this type in that they are not porcelain-like.

Bead Type No. 28a (Figure 14:28a): 4 specimens

Dimensions: 3.70, 2.30, 1.00-4.20, 2.60, 1.15; 3.90, 2.50, 1.05 mm.

Description: These small opaque white beads are of compound construction. They have an opaque white core and an outer layer of clear glass which appears to be fairly thick. This outer layer appears frosted, probably due to age. These specimens are short barrel-shaped with moderately convex sides. (HC, T). WBTN 45; this bead type appeared in Period 1, occurred in large numbers through Period 3, and occurred in largest quantities in Period 4.

Bead Type No. 28b (Figure 14:28b): 5 specimens

Dimensions: 3.10, 1.70, 0.70-3.30, 2.50, 0.90; 3.20, 2.05, 0.80 mm.

Description: These small opaque white beads are of compound construction. They have an opaque white core and a fairly thick clear outer layer which appears frosted, probably due to age. These beads are short barrel-shaped, and have strongly convex sides. (HC, T). WBTN 45; this bead type appeared in Period 1 and continued in large numbers through Period 4 where it occurred in the largest numbers.

Bead Type No. 28c (Figure 14:28c): 4 specimens (2WR), 1 fragmentary specimen

Dimensions: 2.40, 1.60, 0.60-2.80, 2.60, 0.80; 2.65, 2.05, 0.70 mm.

Description: This small opaque white bead type is of compound construction. It has an opaque inner core and a clear outer layer which appears very thick. Three of these beads still have a noticeable surface luster. These beads are short barrel-shaped with moderately convex sides. (HC, T). WBTN 45; this bead type appeared in Period 1 and continued in large numbers through Period 4 with the largest number being present in this last period.

Bead Type No. 29a (Figure 14:29a): 3 specimens (1NH)

Dimensions: 3.30, 3.20, 0.80-3.60, 3.30, 1.30; 3.45, 3.25, 1.05 mm.

Description. These small opaque white beads are of compound construction. They have an opaque white core and an outer layer of clear glass that appears frosted, probably due to age. This type approaches being symmetrical barrel-shaped and has moderately convex sides. (HC, T). WBTN 45; this type first appeared in Period 1 and continued to be present in large numbers through Period 3: but it is present in largest numbers in Period 4.

- Bead Type No. 29b (Figure 14:29b): 6 specimens (1WR)
 Dimensions: 2.70, 2.25, 0.60-3.10, 2.70, 1.00; 2.90, 2.50, 0.85 mm.
 Description: These small opaque white beads are of compound construction. They have an opaque white core and a clear outer layer which appears frosted, probably due to age. This bead approaches symmetrical barrel-shaped and has moderately convex sides. (HC, T). WBTN 45; this bead type was introduced in Period 1, continued to be present in high numbers through Period 3, and was present in largest numbers in Period 4.
- Bead Type No. 30 (Figure 14:30): 2 specimens
 Dimensions: 2.70, 1.60, 1.00-2.70, 1.70, 0.90 mm.
 Description: This small opaque white bead type is of compound construction. It has an opaque white core and a thin clear outer layer which appears frosted due to age. It is short barrel-shaped with moderately convex sides. (HC, T). WBTN 45; this bead type was present in high numbers in Periods 1-3 and was present in highest numbers in Period 4.
- Bead Type No. 31a (Figure 14:31a): 1 specimen
 Dimensions: 3.40, 2.40, 0.80 mm.
 Description: This small opaque white bead is of compound construction. It has an opaque, off-white core, and a moderately thick clear outer layer. It is short barrel-shaped, and has strongly convex sides. (HC, T). WBTN 45; this type first appeared in Period 1 and continued through Period 3 in large numbers; it was present in Period 4 in even larger numbers.
- Bead Type No. 31b (Figure 14:31b): 10 specimens
 Dimensions: 2.50, 1.10, 0.40-2.90, 1.70, 0.90; 2.70, 1.45, 0.75 mm.
 Description: This small opaque white bead type is of compound construction. It has an opaque white inner core and a moderately thick clear outer layer which appears frosted, probably due to age. It is very short barrel-shaped and has strongly convex sides. (HC, T). WBTN 45; this bead type occurred in large numbers in Periods 1-3 and in even larger numbers in Period 4.
- Bead Type No. 31c (Figure 14:31c): 1 specimen (WR)
 Dimensions: 2.20, 1.10, 0.80 mm.
 Description: This small opaque white bead is of compound construction. It has an opaque white inner core and a moderately thick clear outer layer which appears frosted, probably due to age. This bead is short barrel-shaped with strongly convex sides. (HC, T). WBTN 45; this bead type occurred in Periods 1-3 in large numbers and in Period 4 in even larger numbers.
- Bead Type No. 32 (Figure 14:32): 11 specimens
 Dimensions: 2.60, 1.55, 0.60-3.00, 2.20, 1.00; 2.85, 2.00, 0.80 mm.
 Description: These small opaque white beads are of compound construction. They have an opaque white inner core and a clear outer layer which appears frosted, probably due to age. These beads are short barrel-shaped with weakly convex sides. (HC, T). WBTN 45; this bead type occurred in large numbers in periods 1-3 and in even larger numbers in Period 4.
- Bead Type No. 33 (Figure 15:33): 1 specimen
 Dimensions: 4.10, 12.2, 1.60 mm.
 Description: This medium opaque bead is of compound construction consisting of three layers of glass. The thick translucent inner layer is Jade Green, the middle layer is Brick Red, and the thin clear outer layer is transparent. This tubular-shaped bead has a few striations running its length on its outer surface. (HC, T) WBTN 57; this is the large variety of "Cornaline d'Aleppo". This bead type is primarily associated with Period 2 although some do occur during Period 3.
- Bead Type No. 34 (Figure 15:34): 4 specimens
 Dimensions: 3.55, 11.50, 1.60-4.00, 14.60, 1.90; 3.80, 12.75, 1.80 mm.
 Description: This small opaque bead is of compound construction and consists of three distinct layers of glass. The thick translucent inner layer is Jade Green, the opaque middle layer is Brick Red, and the thin transparent outer layer is clear. These tubular-shaped beads have varying numbers of striations on their external surface running from part way to the entire length of the bead. (HC, UT). WBTN 57; this type is primarily associated with Period 2 although it continued to be used in reduced numbers in Period 3.

Bead Type No. 34 is very similar to Bead Type No. 33 in nearly all ways. The 0.1 mm. difference in size was not the divisive criterion especially considering that the small and medium size limits are arbitrarily set. The distinction noted was the fact that No. 33 was tumbled and No. 34 was not. One possible reason for this difference is indicated by the presence of long unbroken canes as well as short tumbled tubular beads of the same type at some sites. This phenomenon is illustrated by Pratt (1961:10-13, plates). Thus, it is conceivable

that longer than bead-length sections of cane could have been either traded to the Deer Creek site occupants who later broke the canes into shorter beads, or canes of this particular style could have been the stock which the traders had available to them. One specimen from the Guebert site, Bead Type No. 125, also seems to be an example of this phenomenon (Good 1972:121, Color Plate 5).

Regarding date discrepancies between the work of Pratt and of the Harrises, R. K. Harris (personal communication, 1973) feels that both renderings are accurate. The difference is in the area of the country due to (1) trade in the Arkansas and Red River valleys did not begin until about 1700 and (2) there was a time lag between introduction of beads in the east, as opposed to the far west.

Bead Type No. 35 (Figure 15:35): 1 specimen

Dimensions: 3.80, 12.90, 1.90 mm.

Description: This small tubular translucent Gobelin Blue bead is of simple construction. (HC, UT). WBTN 61 is the tumbled variety of this specimen; it is most prevalent in Period 2 although a few specimens occur in Period 3.

Bead Type No. 36 (Figure 15:36): 1 specimen

Dimensions: 4.20, 2.60, 1.70 mm.

Description: This medium opaque white bead is of simple construction. It is pseudo-compound. It is short barrel-shaped with strongly convex sides. (HC, T). WBTN 78; this bead type first appears in Period 2.

Bead Type No. 37 (Figure 15:37): 2 specimens

Dimensions: 3.10, (0.13-0.16), 0.13-3.20, (0.07-0.18), 0.12 mm.

Description: These small opaque Sky Blue beads are of simple construction. They are very short barrel-shaped with strongly convex sides. (HC, T). WBTN 79; this bead type was present in Periods 2-4 in fairly constant numbers.

Bead Type No. 38 (Figure 15:38): 1 specimen

Dimensions: 2.30, 2.00, 1.00 mm.

Description: This small translucent Emerald Green bead is of simple construction. It is barrel-shaped with moderately convex sides. (HC, T). WBTN 83; this bead type appeared in the trade in Period 2 and continued through Period 4 when it was in greatest numbers.

Bead Type No. 39a (Figure 15:39a): 1 specimen

Dimensions: 3.50, 2.20, 0.80 mm.

Description: This small slightly translucent Peacock Blue bead is of simple construction. It is short barrel-shaped with strongly convex sides. (HC, T). WBTN 80; this bead type first appeared in Period 2, and is most common in Period 4.

Bead Type No. 39b (Figure 15:39b): 1 specimen (WR)

Dimensions: 2.60, 1.60, 0.80 mm.

Description: This small slightly translucent bead is of simple construction. It is short barrel-shaped with very strongly convex sides. It is turquoise instead of Peacock Blue and in this way as well as size differs from No. 39a. It is probably of the same WBTN 80 though; this first appeared in Period 2, and was most abundant in Period 4. (HC, T).

Bead Type No. 40 (Figure 15:40): 3 specimens (1WR)

Dimensions: 2.80, 1.80, 0.80-3.40, 2.10, 1.00; 3.05, 1.95, 0.85 mm.

Description: This small opaque white bead is of compound construction consisting of three layers: a thin outer clear layer, a thin opaque white middle layer, and off-white opaque core. This bead type is short barrel-shaped with moderately convex edges. (HC, T).

Bead Type No. 41 (Figure 15:41): 1 fragmentary specimen

Dimensions: 8.30, 10.00, 2.00 mm.

Description: This large opaque olive-shaped bead is of compound construction. It has an inner core of white glass overlain by an outer layer of translucent glass. The inner layer has a fine fibrous texture. This bead is porcelain-like in texture.

Bead Type No. 42 (Figure 15:42): 1 specimen, 1 fragmentary specimen

Dimensions: 6.30, 5.70, 2.00-?, 5.90, 2.30 mm.

Description: These large opaque white beads are of compound construction. It has a clear outer layer, an opaque white middle layer and an opaque off-white core. This bead type is short barrel-shaped with weakly convex edges. (HC, T).

Bead Type No. 43 (Figure 15:43): 1 specimen

Dimensions: 2.30, 2.10, 0.70 mm.

Description: This small opaque Turquoise bead is of simple construction. It has a fibrous texture and is symmetrical cylindrical in shape. (HC, T).

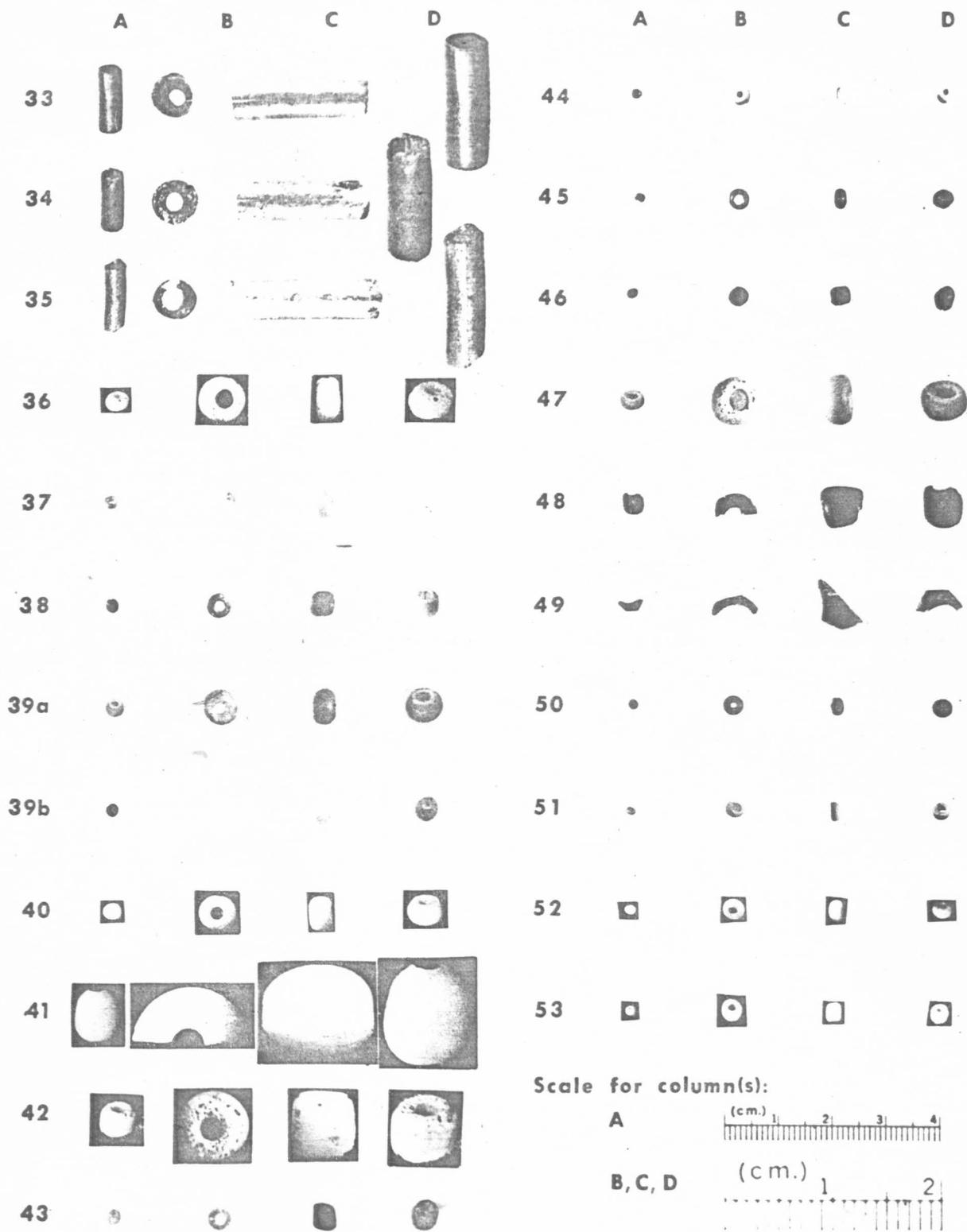


Figure 15. Ka-3 (Deer Creek Site) Glass Beads: 33-53. Bead Types 33-53 respectively. Small letters represent subtypes. Scales as indicated.

- Bead Type No. 44 (Figure 15:44): 7 specimens (7WR)**
 Dimensions: 1.80, 0.90, 0.50-2.00, 1.30, 0.80; 1.90, 1.20, 0.65 mm.
 Description: These extra small opaque Peach Blossom beads are of simple construction. They are doughnut-shaped, and the surface of three of these beads still have a high surface luster. (HC, T). WBTN 177; these Baby Pink beads appeared in Period 3 and 4, but are present in very large numbers in Period 5.
- Bead Type No. 45 (Figure 15:45): 4 specimens**
 Dimensions: 1.90, 1.00, 0.70-2.00, 1.10, 0.90; 1.95, 1.05, 0.80 mm.
 Description: These extra small opaque Yale Blue doughnut-shaped beads are of simple construction. The surface of two of these beads still has a high luster. (HC, T) WBTN 179 encompasses this bead type; it was first introduced during Period 3 and was present in largest numbers in Period 5.
- Bead Type No. 46 (Figure 15:46): 1 specimen (WR)**
 Dimensions: 1.70; 1.60, 0.80 mm.
 Description: This extra small slightly translucent Wedgewood Blue dark bead of simple construction is symmetrical cylindrical in shape. (HC, T). R. K. Harris (personal communication, 1973) considers this bead as being in WBTN 179; this bead type first occurred in Period 3 and is in very large numbers in Period 5.
- Bead Type No. 47 (Figure 15:47): 1 specimen**
 Dimensions: 4.40, 2.40, 1.90 mm.
 Description: This medium opaque bead is of compound construction having an opaque inner core of very light Brittany Blue and a translucent outer layer of light Brittany Blue. This bead is short barrel-shaped with moderately convex sides. This bead type has not been previously reported. (HC, T).
- Bead Type No. 48 (Figure 15:48): 1 fragmentary specimen (NH)**
 Dimensions: 3.80, 3.90, 1.50 mm.
 Description: This small very slightly translucent bead is of simple construction. It is a very dark maroon wine-colored when examined under bright light. It is symmetrical cylindrical and has a caney texture. (HC, T).
- Bead Type No. 49 (Figure 15:49): 2 fragmentary specimens (2WR)**
 Description: This medium bead is of simple construction. It is translucent Bluebird Blue, hexagonal in cross section, and also has some facets on one end. It is very thin-walled, and the external face has striations running lengthwise. No. 13 from the Guebert site is of this type (Good 1972:107, Color Plate 3). It is elongated cylindrical shaped.
- Bead Type No. 50 (Figure 15:50): 1 specimen (WR)**
 Dimensions: 1.90, 1.30, 0.50 mm.
 Description: This extra small doughnut-shaped bead is of simple construction. The ends near the hole are slightly depressed. In strong light, this black opaque-appearing bead takes on a very dark wine color. Although this specimen is nearly identical in construction to No. 23, this size has not been previously noted; so, it is not certain whether or not the same time period is applicable. (HC, T).
- Bead Type No. 51 (Figure 15:51): 1 specimen (WR)**
 Dimensions: 1.80, 0.90, 0.70 mm.
 Description: This extra small opaque light Gobelin Blue doughnut-shaped bead is of simple construction. (HC, T).
- Bead Type No. 52 (Figure 15:52): 3 specimens (3WR)**
 Dimensions: 2.00, 1.20, 0.50-2.20, 1.30, 0.70; 2.10, 1.25, 0.60 mm.
 Description: These extra small opaque white beads are of compound construction. The opaque outer layer is thick and white, and the opaque inner layer is an off-white. These beads are doughnut-shaped. (HC, T).
- Bead Type No. 53 (Figure 15:53): 2 specimens (WR)**
 Dimensions: 1.75, 1.30, 0.70-1.80, 1.40, 0.70 mm.
 Description: These extra small opaque white beads are of compound construction. They have a thin inner white layer, a middle off-white layer, and an outer white layer. There is a low concentric ridge on each end in the middle layer. These could be mold marks. These beads are short barrel-shaped with weakly to moderately convex sides.
- Bead Type No. 54 (Figure 16:54): 1 specimen**
 Dimensions: 2.00, 1.20, 0.90 mm.
 Description: This extra small opaque white bead is of compound construction. It consists of at least four layers of opaque white glass of about equal thickness. The inner layer is white; the next two layers are different shades of off-white; and the outer layer is white. This bead is doughnut-shaped. (HC, T).
- Bead Type No. 55 (Figure 16:55): 1 specimen (WR)**
 Dimensions: 2.90, 2.00, 1.30 mm.
 Description: This small opaque bead is of simple construction and is a light bluish shade of Turquoise. It is short barrel-shaped with weakly convex sides. (HC, T). WBTN 140; this bead type is a late one, first appearing in Period 4.

- Bead Type No. 56 (Figure 16:56):** 2 specimens (2WR)
 Dimensions: 2.00, 1.10, 0.70-2.10, 1.20, 0.70 mm.
 Description: These small opaque Turquoise beads are of simple construction. They are doughnut-shaped, and still have a high surface luster. These specimens are fused together or "twinned", which possibly occurred during the tumbling process. (HC, T). WBTN 140; this bead type first appeared in the trade in Period 4.
- Bead Type No. 57 (Figure 16:57):** 1 specimen (WR)
 Dimensions: 1.90, 1.00, 0.90 mm.
 Description: This extra small opaque Turquoise doughnut-shaped bead is of simple construction. This specimen is unusual in that it has a low concentric ridge around the hole on each end. The method of manufacture is not certain; it is possibly mold-made, the ridges conceivably being the mold marks. A large Sky Blue opaque bead with similar ridges was described by Harris and Harris as WBTN 159. It was suggested that it was possibly of pressed construction. This large bead type came into trade during Period 4.
- Bead Type No. 58 (Figure 16:58):** 1 specimen (WR)
 Dimensions: 2.00, (0.30-1.30), 1.10 mm.
 Description: This extra small translucent Emerald Green bead is of simple construction. It is doughnut-shaped and was evidently improperly cut off of the cane as one side consists of what is essentially a glass thread. (HC, T). WBTN 166; this bead type appeared in Period 4.
- Bead Type No. 59 (Figure 16:59):** 7 specimens (7WR)
 Dimensions: 1.90, 1.20, 0.50-2.10, 1.60, 0.70; 2.00, 1.35, 0.60 mm.
 Description: These extra small doughnut-shaped beads are of compound construction. They have a thin opaque white core and a thick translucent Harvard Crimson outer layer. These beads still have a high surface luster. (HC, T). WBTN 174; this bead type was introduced in Period 5.
- Bead Type No. 60 (Figure 16:60):** 1 specimen (WR)
 Dimensions: 1.80, 1.10, 0.60 mm.
 Description: This extra small opaque Gobelin Blue bead is of simple construction. It is doughnut-shaped, and its surface still has a high luster. (HC, T). WBTN 178 seems to encompass this bead type; this bead type first appeared in Period 5.
- Bead Type No. 61 (Figure 16:61):** 1 specimen (WR)
 Dimensions: 1.60, 0.70, 0.80 mm.
 Description: This extra small opaque Turquoise doughnut-shaped bead is of simple construction. (HC, T). R. K. Harris feels that this type should also be included under WBTN 178 which appeared in Period 5. This specimen is very different in color and dimensions from No. 60.
- Bead Type No. 62 (Figure 16:62):** 1 specimen (WR)
 Dimensions: 1.90, 1.40, 0.80 mm.
 Description: This extra small opaque Sunflower bead is of simple construction. It is doughnut-shaped, and still has a high surface luster. (HC, T). WBTN 175; this type first appeared in Period 5.
- Bead Type No. 63 (Figure 16:63):** 1 specimen (WR)
 Dimensions: 2.10, 1.30, 0.60 mm.
 Description: This small opaque Colonial Yellow doughnut-shaped bead is of simple construction. (HC, T). WBTN 175 also includes this specimen; this type was first introduced in Period 5.
- Bead Type No. 64 (Figure 16:64):** 2 specimens (2WR)
 Dimensions: 2.10, 1.50, 0.90-2.30, 1.50, 0.80 mm.
 Description: These small slightly translucent Yale Blue beads are of simple construction. They are very short barrel-shaped with strongly convex sides; they approach being doughnut-shaped, but they are flattened on the ends. They exhibit some surface luster. (HC, T). This type seems to fall in WBTN 180; this type first appeared in Period 5.
- Bead Type No. 65 (Figure 16:65):** 3 specimens (3WR)
 Dimensions: 1.80, 1.00, 0.60-2.30, 1.20, 0.90; 2.00, 1.15, 0.80 mm.
 Description: These extra small translucent Yale Blue beads are of simple construction. They are doughnut-shaped and exhibit a high surface luster. This type also differs from No. 64 in that the beads are more translucent. (HC, T). WBTN 180; this bead type was introduced in Period 5.
- Bead Type No. 66 (Figure 16:66):** 1 specimen (WR)
 Dimensions: 6.00, 3.60, 2.40 mm.
 Description: This medium translucent bead of simple construction is Wedgewood Blue Dark in color. It is doughnut-shaped, and its surface has a high luster. (HC, T). R. K. Harris (personal communication, 1973) suggests that this bead is probably representative of one of the later periods.

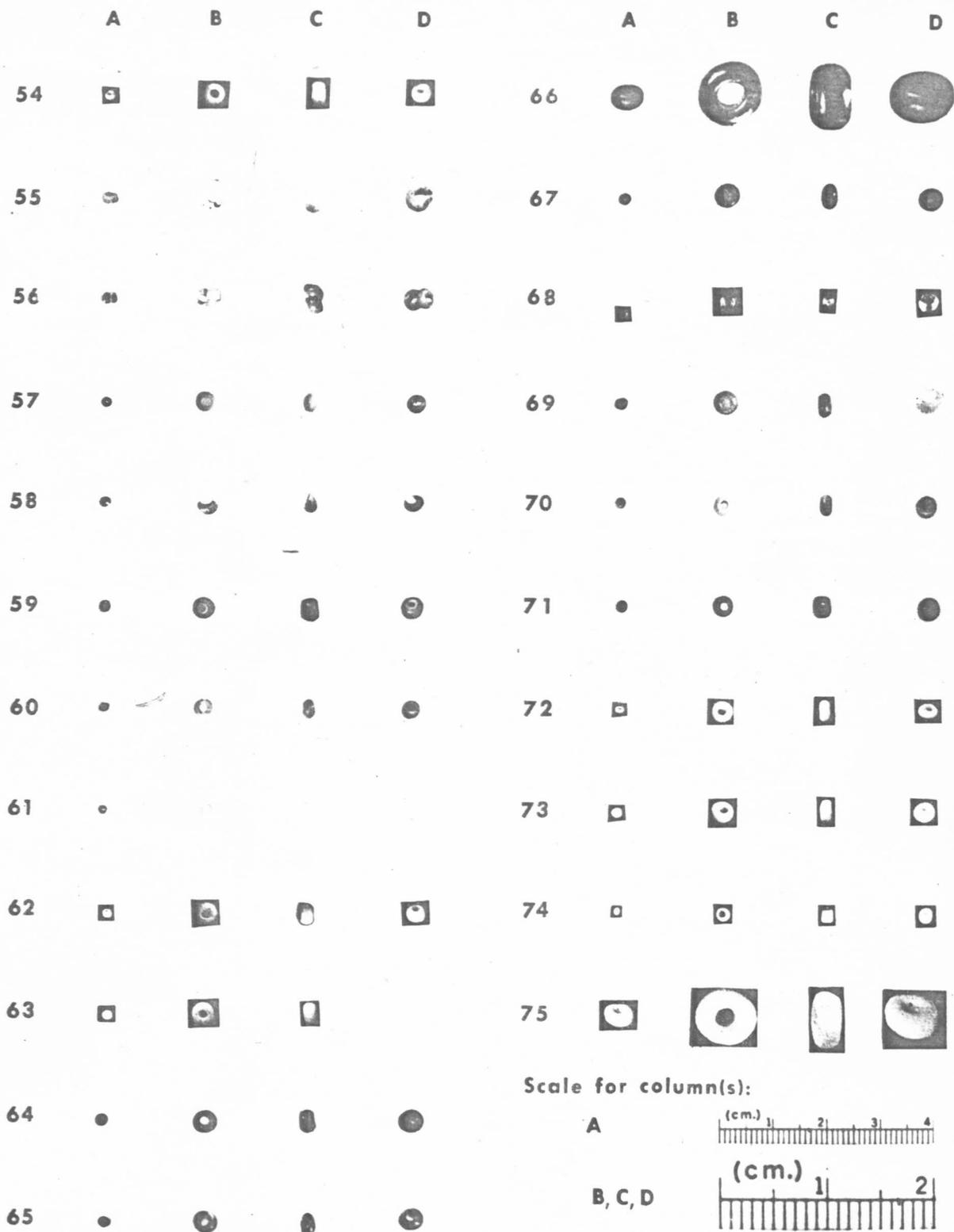


Figure 16. Ka-3 (Deer Creek Site) Glass Beads: 54-75. Bead Types 54-75 respectively. Scales as indicated.

- Bead Type No. 67 (Figure 16:67): 2 specimens (2WR)
 Dimensions: 2.10, 1.10, 0.90-2.30, 1.20, 1.00 mm.
 Description: These small slightly translucent Wedgewood Blue Dark beads are of simple construction. They are doughnut-shaped, and have a high surface luster (the high surface luster appearing on a number of beads is suggestive that these beads are of later origin (i.e., Period 4 or 5). (HC, T). This bead type has not been previously reported from the Wichita sites.
- Bead Type No. 68 (Figure 16:68): 1 specimen (WR)
 Dimensions: 1.80, 1.10, 0.60 mm.
 Description: This extra small translucent Dandelion bead is of simple construction. It is doughnut-shaped and has a high surface luster. (HC, T). This type has not been previously reported from the Wichita sites.
- Bead Type No. 69 (Figure 16:69): 1 specimen (WR)
 Dimensions: 2.30, 1.20, 0.90 mm.
 Description: This small slightly translucent Peacock Blue bead is of simple construction. It is doughnut-shaped, and its surface has a high luster. This bead type has not been reported from the Wichita sites. Since this bead has a luster which is sometimes seen in some Period 4 or 5 beads, it is possibly from one of these late periods.
- Bead Type No. 70 (Figure 16:70): 1 specimen (WR)
 Dimensions: 2.00, 1.10, 0.70 mm.
 Description: This extra small opaque bead is of compound construction having an opaque inner core of very, very light Brittany Blue and a slightly translucent outer layer of light Brittany Blue. The bead is short barrel-shaped with strongly convex sides, and still has surface luster. This bead type has not been previously reported. (HC, T).
- Bead Type No. 71 (Figure 16:71): 1 specimen (WR)
 Dimensions: 22.00, 1.60, 0.80 mm.
 Description: This extra small bead of simple construction is slightly translucent in strong light. It is a very dark blackish-wine color. It is short barrel-shaped with moderately convex sides and has a high surface luster. (HC, T).
- Bead Type No. 72 (Figure 16:72): 1 specimen (WR)
 Dimensions: 2.00, 1.00, 0.70 mm.
 Description: This extra small opaque doughnut-shaped bead is of compound construction. It has an opaque white inner core, a thick off-white very slightly translucent middle layer, and a thin white opaque outer layer. It has a high surface luster. (HC, T). This type has not been previously reported from the Wichita sites.
- Bead Type No. 73 (Figure 16:73): 1 specimen (WR)
 Dimensions: 2.10, 1.10, 0.70 mm.
 Description: This small opaque white doughnut-shaped bead is of simple construction. This bead type has not been previously reported from the Wichita sites although it is similar to WBTN 128. (HC, T).
- Bead Type No. 74 (Figure 16:74): 1 specimen (WR)
 Dimensions: 1.40, 1.15, 0.55 mm.
 Description: This extra small opaque white bead is of compound construction. It has an opaque white inner core and an off-white outer layer. It is short barrel-shaped with weakly convex sides and has a high surface luster. This type has not been previously reported from the Wichita sites although its surface luster suggests that it is a rather late bead type. (HC, T).
- Bead Type No. 75 (Figure 16:75): 1 specimen
 Dimensions: (5.20-5.65), 2.60, 1.70 mm.
 Description: This medium opaque white bead is of compound construction. It has an opaque off-white inner core and an opaque white outer layer. This badly weathered specimen is short barrel-shaped with strongly convex sides. (HC, T). This bead type has not been reported from the Wichita sites.

Discussion: The dates of usage presented for each of these 75 bead types is summarized in Table 3. Bead types 1-6 were restricted to a 1700-1767 period of usage. This would indicate that the Deer Creek site occupation began prior to 1767. Bead types 55-58 indicate an occupation of the site during Period 4 (1820-1836), and bead types 59-65 indicate an occupation in Period 5 (1836-1850). The answer to the question of Period 3 occupation is not elucidated by the bead data as all types used in Period 3 (types 8a-44) were also used in earlier and/or later periods. There are several possible interpretations of this data. It is conceivable that the site was continuously inhabited through all five periods. There is not strong support for this theory in the historical record or in the other artifacts. It is conceivable that there were several successive occupations of the site. This second proposal seems the most reasonable possibility.

Table 3. Dates of occurrence of bead types found at the Deer Creek Site.

Deer Creek Bead Type No.	Number of Specimens	% of Sample	WBTN ^a	P-1 ^b	P-2 ^c	P-3 ^d	P-4 ^e	P-5 ^f	Deer Creek Bead Type No.	Number of Specimens	% of Sample	WBTN	P-1	P-2	P-3	P-4	P-5
1	2	0.87	2	xxx ^g	xx				38	1	0.44	83	x	xx	xxx		
2	1	0.44	56	xxx	x				39a	1	0.44	80		xx	xx	xxx	
3	5	2.18							39b	1	0.44						
4	4	1.75	15	xxx	xx				40	3	1.31	-	?	?			
5	4	1.75	47	xxx	x				41	1	0.44	-	?	?			
6	1	0.44	13	xxx	xx				42	2	0.87	-	?	?	?		
7	1	0.44	-	?	?				43	1	0.44	-		?	?		
8a	3	1.31							44	7	3.06	177			x	x	xxx
8b	3	1.31							45	4	1.75	179			x	x	xxx
9	2	0.87	4.37	3	xxx	xx	x		46	1	0.44	-					
10	1	0.44							47	1	0.44	-			?	?	?
11	1	0.44							48	1	0.44	-			?	?	?
12	1	0.44	23	xxx	xx	x			49	2	0.87	-			?	?	?
13	1	0.44	40	xxx	xx	x			50	1	0.44	-		?	?	?	?
14	14	6.11	10	xxx	xx	x	x		51	1	0.44	-			?	?	?
15	5	2.18	11	xxx	xx	x	x		52	3	1.31	-			?	?	?
16a	1	0.44	4	xxx	xx	x	x		53	2	0.87	-			?	?	?
16b	3	1.31							54	1	0.44	-			?	?	?
17	1	0.44	2.62	5	xxx	xx	x	x	55	1	0.44	140					
18	2	0.87							56	2	0.87	159					xxx
19	2	0.87	51	xx	xx	xx	xxx		57	1	0.44	166					xxx
20	12	5.24							58	1	0.44	174					
21	9	3.93							59	7	3.06	178					xxx
22a	2	0.87	13.97	48	xx	xx	xx	xxx	60	1	0.44	175					
22b	7	3.06							61	1	0.44	180					xxx
22c	2	0.87							62	1	0.44						
23	1	0.44	50	xx	xx	xx	xxx		63	1	0.44						
24	1	0.44	49	xx	xx	xx	xxx		64	2	0.87						
25	2	0.87	46	xx	xx	xx	xxx		65	3	1.31						xxx
26a	2	0.87							66	1	0.44	-			?	?	?
26b	1	0.44	3.49	44	xx	xx	xx	xxx	67	2	0.87	-			?	?	?
26c	3	1.31							68	1	0.44	-			?	?	?
27	2	0.87							69	1	0.44	-			?	?	?
28a	4	1.75							70	1	0.44	-			?	?	?
28b	5	2.18							71	1	0.44	-			?	?	?
28c	5	2.18							72	1	0.44	-			?	?	?
29a	3	1.31							73	1	0.44	-			?	?	?
29b	6	2.62	20.96	45	xx	xx	xx	xxx	74	1	0.44	-			?	?	?
30	2	0.87							75	1	0.44	-	?	?	?	?	?
31a	1	0.44															
31b	10	4.37															
31c	1	0.44															
32	11	4.80															
33	1	0.44															
34	4	1.75	57		xxx	x											
35	1	0.44	61		xxx	x											
36	1	0.44	78		xx	?											
37	2	0.87	79		xx	xx	xx										

a. WBTN, Wichita Bead Type Number

b. P-1, Period 1, 1700-1740

c. P-2, Period 2, 1740-1767

d. P-3, Period 3, 1767-1820

e. P-4, Period 4, 1820-1836

f. P-5, Period 5, 1936-1850

g. "x" is used to signify relative frequency of occurrence of one particular bead type in the various Periods. xxx, high occurrence; x, low occurrence; xx, intermediate occurrence. These are relative, not absolute. A blank indicates that bead type was not present.

h. "?", suggested possible data of occurrence.

In considering this situation, a comment should be made about the localized results of surface hunting at the Deer Creek site. It is conceivable that a sampling error has occurred. Walt Rosborough (personal communication, 1973) relates that nearly all of his small beads (which included all of the late bead types) were found on the short eastern portion of the pasture road adjacent to the river (Figure 3:3). At least 75% of the author's small beads were also from this section of road whereas the rest are from the west part of the pasture road adjacent to the field. Thus, it is conceivable that the occupation represented by Bead Types 55-65 (possibly 28, 66, & 74?) was confined to the east edge of the site. As the majority of the other trade goods are from the field, the general lack of non-bead artifacts representing the later occupation could be due to a sampling error if the later occupation was confined to the east edge of the site. Thus, the lack of other diagnostic historic artifacts assignable to the later occupation implies it was a very minor occupation, but this cannot be known for certain due to the sampling problem.

The Deer Creek site glass trade bead sample indicates that there were probably two historic occupations, one encompassing at least portions of Periods 1 and 2 and another during Periods 4 and 5. It is conceivable that the initial occupation also ran through the early part of Period 3. In the concluding Discussion of this paper, the bead data along with other artifacts and the historical data will be considered. Based on this assimilated information, reasonable proposals about the site's occupations will be made. It should be noted that perhaps a Period 6, 1850-1875, will later be found to encompass some of the late bead types listed as not having been reported before.

Lead Bead (Figure 17:1)

This olive-shaped lead bead is 2.18 cm. long and has a maximum diameter of 1.40 cm. It weighs 24.359 grams (375.1 grains). The perforation runs length-wise, and there is an engraved groove near each end. There are small random cuts and scratches on the surface. Also, there are two regions on opposite sides of the bead which have 12-15 diamond-shaped impressions on them; these appear to be teeth marks resulting from the use of some sort of tool such as pliers used in forming this bead. In addition, what appears to be the remnant of a seam is located between these two sets of impressions. This specimen is not a modern fishing sinker. It does belong to the occupation at the Deer Creek site. Both Don Wyckoff and R. K. Harris have examined this bead and concur with my opinion (personal communication, 1973).

One bullet, flattened on two opposing sides, which was perforated for use as a bead is reported in the Pearson site report (Duffield and Jelks 1961:47, 51). One nearly spherical lead bead was reported from the Gilbert site (Harper et al. 1967:98). R. K. Harris (personal communication, 1973) relates having seen similar "pliers" marks on lead wire used in making bracelets.

The lead bead from the Deer Creek site is unusual both in its olive shape and in its engraved decoration. Both of these traits make it unlike other specimens reported from the region.

Sheet-brass Disc (Figure 17:2) (WR)

One roughly circular, perforated sheet-brass disc was found at Deer Creek. It is about 1.6 cm. in diameter and is made of 0.055 cm. sheet-brass. The hole was punched into the brass and is slightly off center. The very irregular outer edge of the bead is also evidence that the bead is of native manufacture; the material source was probably scrap kettle brass.

A sheet copper disc nearly twice the size of this specimen was reported from the Guebert site (Good 1972:87, 89). It is also related that three circular sheet brass discs were found in the skull region of an infant burial suggesting their use was either as hair ornaments or ear decorations (Morrell 1965:20, 45, 47, 61). Thus, the term "disc-bead" often applied to such specimens is apparently inaccurate.

Sheet-brass Cylinders (Figure 17:7-15) (NH, 8)

Number of specimens: 16; 14 complete; 2 broken.

Sixteen sheet brass cylinders, commonly referred to as cylindrical beads, were found at the Deer Creek site. Rectangular and trapezoidal blanks are represented about equally in this sample. The thicknesses of sheet brass present are: 0.035(2), 0.040(1), 0.045(1), 0.050(3), 0.055(1), 0.060(3), 0.065(1), 0.070(3), and 0.085(1) cm. The complete specimens range from 1.8 to 8.3 cm. long and up to 1.3 cm. in diameter. Fifteen sheet brass cylindrical beads were reported from Womack (Harris et al. 1965:305-306). The Gilbert site yielded five sheet brass cylinders (Harper et al. 1967:93-95). The Guebert site yielded large and small brass cylinders. Good (1972:87,